An Encyclopedia
of the

# GOLDEN AGE OF MODEL AIRPLANES

## Volume 1

**From early rubber power to the introduction of gasoline engines**

**1914-1935**

**Reproductions of Original Catalogs**

THE ULTIMATE PICTURE BOOK
FROM AN ERA LONG PAST

AN ENCYCLOPEDIA OF THE

# *GOLDEN AGE OF MODEL AIRPLANES*

## Volume 1

From early rubber power
to the introduction of
gasoline engines

1914 - 1935

Reproductions of Original Catalogs

AVAILABLE FROM THE PUBLISHER:
In The U.S.:
Frank H. Anderson
753 Hunan St. NE
Palm Bay, Florida
U.S.A. 32907-1604

In Canada:
Clarke's Collectables
200 N. Service Rd., Unit #1, Ste. 306
Oakville, Ontario
Canada L6M 2V1

Anderson Productions
Text and Illustrations Copyright 1997
by Frank H. Anderson
All Rights Reserved
No part of this publication
may be reproduced in any form
such as electronic or mechanical means
including information storage and
retrieval devices or systems
without the prior written permission
(Except for purposes of review)
from Frank H. Anderson

## A Dream of the Future

Going to School

**1911**

THE AMERICAN BOY
(MONTHLY MAGAZINE)

Printed and bound in the United States of America

## TABLE OF CONTENTS


| DATE | DESCRIPTION | PAGE |
|---|---|---|
| 1908 | Stevens Model Dockyard - (London, England) | 2 |
| 1911 | Ads From The Full Size 'Aircraft' Magazine | 3 |
| 1911 - 1915 | Model Airplane Ads | 4 |
| 1914 - 1915 | Ideal Aeroplane & Supply Company | 5 - 29 |
| 1916 - 1922 | Model Airplane Ads | 30 |
| 1920 | Ideal Aeroplane & Supply Company | 31 - 48 |
| 1920 | Ideal JN4D-2 Curtiss Training Plane Plan | 64 |
| 1928 | Ideal - How To Build & Fly Model Airplanes (& Supply Catalog) | 49 - 71 |
| 1927 - 1930 | Model Airplane Ads | 72 |
| 1929 | Michigan Model Airplane Supply Co | 73 - 87 |
| 1928 - 1931 | Model Airplane Ads | 88 |
| 1929 | U.S. Model Aircraft Corp | 89 - 110 |
| 1932 | Comet Model Airplane & Supply Company | 111 - 121 |
| 1930 - 1932 | Model Airplane Ads | 122 |
| 1932 | Selley Manufacturing Company Inc | 123 - 138 |
| 1932 | Ideal Aeroplane & Supply Company Inc | 139 - 149 |
| 1933 - 1935 | Model Airplane Ads | 150 |
| 1935 | Scientific Model Airplane Co | 151 - 159 |
| 1935 | Bill Brown Started Something | 160 |


NOTE: Many catalog pages have been retouched since the originals were poorly printed in some cases. Building supplies carried over from catalog to catalog have been deleted since they were repetitive.

## INTRODUCTION

Welcome to this first volume of an Illustrated History of the American Model Airplane.

We wouldn't have been able to produce these volumes were it not for a small sub-culture of model airplane collectors who collect old manufacturers catalogs, kits, and literature.

In my quest for engine literature and data for our 'Blue Book', I became more aware of this group of collectors since I also collect model airplane literature.

There is no question that, without the generous assistance of Walt Grigg (Orlando, Florida), a collector and prolific writer about kit manufacturers in his own right, we might have taken much longer to produce these very interesting and historical volumes. Walt also gave us an original copy of Ideal's JN4D-2 Curtiss Training Plane plan from 1920, which we've included after page 64 ... now this book is truly what Stu Richmond (one of my mentors) said, "this is an illustrated book of how we started!"

This first volume provides a 'picture book' look at our model airplane hobby from as far back as 1908 through 1935, just after mass (?) produced model engines appeared. Most pages have been retouched and adjusted in size for this book format.

We truly found it amazing that, although the Wright Brothers really hadn't divulged much about conquering powered flight until around 1907 in the U.S., and weren't high profile in Europe until 1908, the British already had 'fittings for model aeroplanes' in the 1908 Stevens Model Dockyard catalog (see page 2) !

The full size 'Aircraft' magazine in 1911 had numerous ads for 'model aeroplanes' in kit form and ready-to-fly (see page 3). The word 'Aeroplane' became 'Airplane' in 1917 ..... except for 'Ideals' name'.

A variety of magazines between 1911 and 1915 carried many model ads with the 'American Boy' (on page 4) being most prolific.

The evolution of models and accessories may be followed through the early Ideal catalogs, starting with 1914 -1915 and finishing with Scientific in 1935.

As you peruse these catalog adventures, make sure you are aware of the fact that in 1908, the Wright Brothers were paying the huge sum of $25 per week to a trusted employee and his salary didn't improve much in ensuing years (through the 1920's) ..... this for a 6 day week ! Now consider what the costs were for the model airplane kits in Ideals' 1914 -1915 catalog at $4 - 6, and as much as $20 for a complete model ready to fly !!

Studying full size aircraft magazines of 1915, one finds the Wright Brothers flying school fee was $250 ! ..... and they apparently had many students !!

We believe you will have as much fun, absorbing the stories these catalog pages tell, as we did in compiling this 'never before seen' grouping of historical model airplane *stories*.

Make sure you obtain Volumes 2 and 3 for the ongoing encyclopedia of an 'Illustrated History of the American Model Airplane'. Volumes 1 - 2 - 3 cover the first Golden Age of Model Airplanes ..... 'til 1949.

Much appreciation to my understanding wife, Vicki, who details these books; and Dan Vincent my friend, who has always given many late hours of his computer skills.

ENJOY ! Frank Anderson

# 1908 - STEVENS MODEL DOCKYARD

(LONDON, ENGLAND)

2 PAGES OF MODEL AIRPLANE ACCESSORIES TYPICAL OF THE ERA IN BOTH ENGLAND AND THE U.S.

No. 92

No. 91 Vacuum Break Pipe, 1/-, 1/3, and 1/6 each.

„ 92 Look-out Glasses and Frames for Locomotive Cabs. ¾-in. dia., 2/6, 1-in., 2/6, 1¼-in., 2/9, 1½-in., 3/- per pair.

Nos. 94 and 95.

No. 94 Plain Water Gauge Glasses, 7 sizes, 6-in. long, from ¼ to ½ in. diameter, 2d. and 3d. each. ⅝, ¾-in. 6d., ⅞ in. 9d. each.

„ 95 Patent Water Gauge Glasses with magnifying red line, so that the height of the water is shown at a glance, 7 sizes, 6-in. long, from ¼ to ⅝-in. diameter, 8d., from ⅞ to ¾-in. diameter, 6d. each.

„ 96 Lamp Cotton Wick, 1/- ¼-lb. Ball.

No. 97 COLLARS WITH SET SCREWS.

| Bore | ⅛ in. | ¼ in. | ⅜-in. | ½-in. | ⅝-in. | ¾-in. |
|---|---|---|---|---|---|---|
| Price | 3d. | 3½d. | 6d. | 8d | 7d. | 9d. each. |

No. 98 REDUCING SOCKETS. SCREWED INSIDE FOR PIPES.

| Size | ¼ in. | ⅜-in. | ½-in. | ¼-in. | ½-in. | ¾-in. |
|---|---|---|---|---|---|---|
| Price | 3d. | 3d. | 3d. | 4d. | 6d. | 6d. each |

No. 99 HEXAGON UNION NUTS.

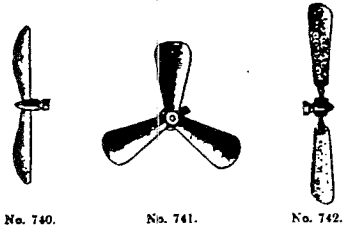
| Screwed | ¼-in. | ⅜-in. | ½-in. | ⅝-in. | ¾-in. Dia. fine thread |
|---|---|---|---|---|---|
| Price | 3d. | 3d. | 4d. | 6d. | 8d. each. |

No. 100 BRASS SAFETY VALVE WEIGHTS.

| Weight | 1½-oz. | 2-oz. | 3-oz. | 4-oz. | 5-oz. |
|---|---|---|---|---|---|
| Price | 1/2 | 1/6 | 1/9 | 2/6 | 2/6 each |

## FITTINGS for MODEL AEROPLANES.

### PROPELLERS.



No. 740. No. 741. No. 742.

No. 740 THE "ZEPHYR."

Aluminium Two Blades Propellers (our own make).

| | | | |
|---|---|---|---|
| Size 1 | 6 in. long | 9d. each | Postage 1d. |
| „ 2 | 7 in. | 1/- | „ 1d. |
| „ 3 | 8 in. | 1/3 | „ 1d. |
| „ 4 | 9 in. | 1/6 | „ 1d. |
| „ 6 | 10 in. | 1/9 | „ 2d. |
| „ 7 | 12 in. | 2/- | „ 2d. |
| „ 8 | 15 in. | 2/9 | „ 2d. |
| „ 9 | 18 in. | 3/6 | „ 2d. |
| „ 10 | 24 in. | 4/6 | „ 2d. |

No. 741 THE "ZEPHYR."

Aluminium Three Blades Propellers (our own make).

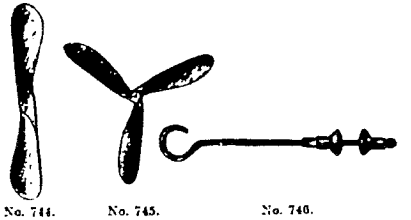
| | | | |
|---|---|---|---|
| Size 1 | 6 in. long | 1/- each, | Postage 1d. |
| „ 2 | 7 in. | 1/3 | „ 1d. |
| „ 3 | 8 in. | 1/6 | „ 1d. |
| „ 4 | 9 in. | 1/9 | „ 1d. |
| „ 5 | 10 in. | 2/- | „ 2d. |
| „ 6 | 12 in. | 2/6 | „ 2d. |

Larger sizes made to order.

No. 742 THE "ARIEL."

Aluminium Propeller, with Adjustable Blades (our own make).

| | | | |
|---|---|---|---|
| Size 1 | 8½ in long | 1/9 each, | Postage 1d. |
| „ 2 | 10½ in. | 2/3 | „ 1d. |
| „ 3 | 13 in. | 3/- | „ 1d. |



No. 744. No. 745. No. 746.

No. 744 THE "FEATHERWEIGHT."

Carved Wood Double Blade Propellers (our own make), very light and strong.

| | | | |
|---|---|---|---|
| Size 1 | 8 in. long | 1/- each, | Postage 1d. |
| „ 2 | 10 in. | 1/6 | „ 1d. |
| „ 3 | 12 in. | 2/- | „ 2d. |
| „ 4 | 15 in. | 3/- | „ 2d. |
| „ 5 | 18 in. | 4/- | „ 2d. |

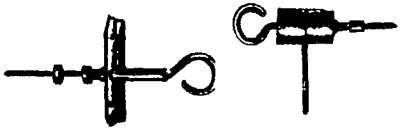
Larger sizes made to order.

No. 745 THE "FEATHERWEIGHT."

Carved Wood Treble Blade Propellers (our own make), exceedingly light, strong, and very efficient.

| | | | |
|---|---|---|---|
| Size 1 | 8 in. long | 2/- each, | Postage 1d. |
| „ 2 | 10 in. | 3/- | „ 1d. |
| „ 3 | 12 in. | 4/- | „ 1d. |
| „ 4 | 15 in. | 6/- | „ 2d. |
| „ 5 | 18 in. | 8/- | „ 9d. |

Larger sizes made to order.



No. 747. No. 748.

### PROPELLER SHAFTS.

With Hooks for Rubber Motors.

No. 746 Plain Steel Shaft, with Nuts, 6d. each. Postage 1d.

„ 747 Plain Brass Shaft, with Nuts, and aluminium fittings, 6d. each. Postage 1d.

„ 748 Plain Steel Shaft, with Nuts, with double ball bearing thrust block, 1/6 each. Postage 1d.

No. 749 MOTOR RUBBER ELASTIC.

Best quality pure Para Rubber for driving Aeroplanes and Flying Machines.

| | | | |
|---|---|---|---|
| ⅛ in. square | 1½d. per yard | 1/6 per doz. | Postage 1d. |
| ¼ in. „ | 3d. „ | 2/6 „ | „ 1d. |
| ½ in. „ | 6d. „ | 5/- „ | „ 1d. |
| ¾ in. „ | 10d. „ | 9/- „ | „ 1d. |

No. 750 AEROPLANE FABRICS.

No. 1 "THE BETA." Nonproof cotton fabric, made of the finest Egyptian cotton, very fine and light, 38 in. wide, 10d. per yard. Postage 1d.

No. 2 "THE PHANTOM." Proof union silk, made of a combination of cotton and silk, 38 in. wide, 1/4 per yard. Postage 1d.

THE "AERONA" is guaranteed made from pure natural proof silk, and is produced in four strengths. There is no doubt that this silk, with its beautiful surface, is the Aeroplane Fabric of the future, nothing else is so strong and light.

No. 3 is exceedingly light, and suitable for models only; price, 2/- per square yard.

No. 4 is suitable for large models and gliders; price, 3/- square yard. Postage 1d. per yard.

No. 751 GOLD BEATERS SKIN.

For making airships and flying machines, single thickness 3/-; double 4/6 per square yard.

### SUNDRIES.

No. 752 WHITE CORD, very light and strong, 5d. and 6d. per hank.

No. 753 SMALL BRASS SPRING HOOKS, 3d. per doz.

No. 754 SMALL BRASS SPRING HOOKS with Swivel, 3d. per doz.

No. 755 SMALL BRASS SCREW EYES, 3d. per doz.

No. 756 PLAIN HOOKS in aluminium, 3d. per doz.

No. 757 PLAIN EYES in aluminium for driving or clinching, 3d. per doz.

Small Brass Pulley for Cords, 1/- per doz.

Postage 1d. on all Sundries.

No. 758 WOOD FOR FRAMEWORK.

Light Pine Sticks, ¼ in. square.

18 in. lengths, 4d. for 12 feet. Postage 3d.

36 in. „ 6d. „ „

72 in. „ 6d. per length (this size cannot be sent by post)

No. 759 THIN WOOD SHEETING, 6d., 9d., 1/- per piece, for wings and planes.

No. 760 ROUND FLEXIBLE CANE, ¼ in. and ⅛ in. diameter, 3d. for 12 feet. Postage 3d.

No. 761 ALUMINIUM FLAT STRIPS, ANGLES, TEES, AND L PIECES.

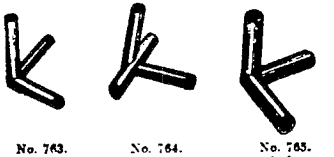
With holes drilled for Joining up Framework 6d. per doz. Postage 1d.

| No. 762 | | | Postage |
|---|---|---|---|
| SMALL STEEL NAILS | | in long, 1d. per box | 1d. |
| FINE BRASS | „ ¼ in., ⅜ in., ½ in. | 2d. „ | 1d. |
| FINE COPPER | ¼ in., ⅜ in., ½ in. | 5d. „ | 1d. |

### FRAMEWORK FITTINGS.

Most people have their own ideas as to what an aeroplane should be like, and would like to make a model, but the ordinary methods of construction are too tedious and difficult. With a selection of the corner pieces, sockets, and lugs drawn below, the most complicated designs become comparatively easy to construct. The illustrations below are drawn full size, and are made from a light tube, brazed or silver soldered and aluminium finished

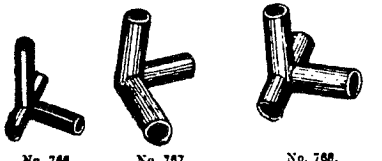
ANY PATTERN ROUND OR SQUARE.



No. 763. 2/- doz. 3d. each.

No. 764. 2/- doz. 3d. each.

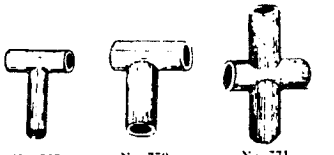
No. 765. 3/- doz. 4d. each.



No. 766. 3/- doz. 4d. each.

No. 767. 4/- doz. 5d. each.

No. 768. 4/- doz. 5d. each.



No. 769. 1/- doz. 2d. each.

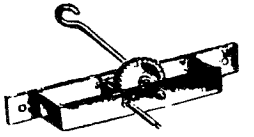
No. 770. 2/- doz. 3d. each.

No. 771. 4/- doz. 5d. each.

No. 772. 3/- doz. 4d. each.

No. 773. 3/- doz. 3d. each.

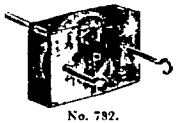
No. 774. 4/6 doz. 5d. each.



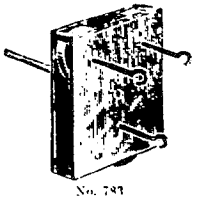
No. 781 GEARED MOTORS FOR ELASTIC.

Made in light Brass for 1 skein of rubber.

| | | Postage |
|---|---|---|
| Geared 1 to 7½ times | 2/- each | 1d. |
| Geared 1 to 3 „ | 1 6 „ | 1d. |



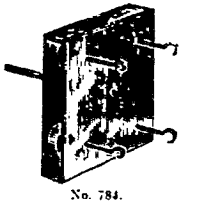
No. 782.



No. 783.

No. 785.

No. 786.



No. 784.

ALUMINIUM GEARED MOTORS FOR ELASTIC.

Our own make.

These motor gears are very light, being made of hard aluminium machine cut gear wheels, and aluminium frames; they are geared up, multiplying the speed on the propellers enormously. They are made for 2, 3, 4, 6 or 8 skeins of rubber, giving great power, and they can be used with one or two propellers.

| | | | | Postage |
|---|---|---|---|---|
| No. 782 | Double gear on shaft, for 2 or 4 skeins | | 3/9 each | 2d. |
| No. 783 | Triple „ „ „ | 3 or 6 „ | 4/9 „ | 2d. |
| No. 784 | Quadruple „ „ „ | 4 or 8 „ | 6/3 „ | 2d. |

Larger sizes or other arrangements of gear wheels in frames, all of aluminium, made to order.

# 3 Foot Model Aeroplane

**$2.25 POSTPAID**

*Learn something about this interesting subject* — *Not a plaything but a practical and instructive model*

## Bleriot No. 11, Cross Channel Type

It measures 3' 6" across planes, easily put together, every part numbered, illustrated drawings accompany each order.

**Anglo Model Aeroplane Mfg. Co.**

**151 West 75th St., New York City**

---

## SCALE MODEL AEROPLANES

## That Fly!

FLYING MODELS — EXHIBITION MODELS

Complete or in the rough

PROPELLERS, MOTORS AND OTHER SUPPLIES

*Blueprints and Directions for Building Models:*

| | |
|---|---|
| 3-Foot Antoinette Monoplane . . | $1.00 |
| 3 Foot Blériot Monoplane . . . . | 1.00 |
| 3-Foot Wright Biplane . . . . | 1.00 |
| 20-Foot Man-Carrying Glider . . . | 1.00 |

**CHICAGO AERONAUTIC SUPPLY CO.**

**Room 19, 6030 South Park Ave., Chicago, Ill.**

---

# Antoinette Monoplane

This monoplane flies about 100 ft. on its own power and is 25 ins. long and has a 22-in. spread, and is constructed on the same principle as a full sized machine with an aluminum propeller and rubber-strand motor. No putting together; all ready to fly.

**Complete $1.00 EXPRESS PAID Silk Covered $1.50**

*Send Coin or Money Order*

Flying and exhibition models built to order. Separate parts for model builders furnished.

*REMOVED TO OUR NEW FACTORY*

**THE CLARK AEROPLANE MFG. CO.**

**69 Liberty St., Brooklyn, N. Y.**

---

# A SUCCESSFUL BLÉRIOT MODEL

**$2 POST PAID**

## Will Fly About 200 Feet Rising From the Ground

In the March Issue of AIRCRAFT, this Blériot Model was published by scale drawing on page 17.

We will send you complete parts ready for use for $2. The outfit includes—A Perfect Wood Propeller, Split Bamboo, Aileron Bent, China Silk, Brass Wire Fasteners, Thread for Wrapping, Glue, 1/16 Inch Square Rubber Strand, Wheels, Ready Bearing, Motor Stick, and Working Scale Drawing—same size of model and instructions.

Portable models same as above can be had for the Antoinette and Demoiselle for $2. And same can be had for the Farman, Wright, and Curtiss machines for $3.25 complete and securely boxed.

*SEND TO*

**LATEINER & CUTTER**

**AEROPLANE MODELS and SUPPLIES**

**106 LIVINGSTON ST., BROOKLYN, N. Y.**

---

# A TWO-FOOT MODEL AEROPLANE $1.00

UPON receipt of $1.00 we will mail you postpaid a model of any of the following types of aeroplanes: **Bleriot, Curtiss, Wright, Antoinette, Santos-Dumont, Demoiselle or Farman.** All parts are furnished with simple instructions for every model. Your money returned if not satisfactory.

**Models built to order our specialty.**

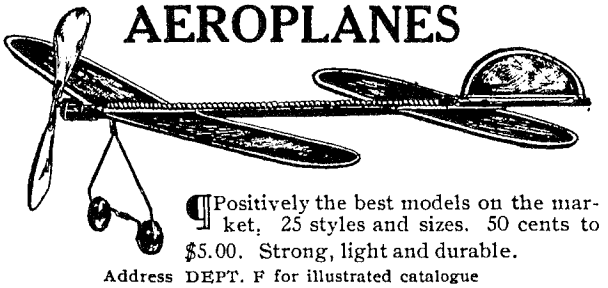
**BLUE PRINTS OF ALL THE ABOVE TYPES $2.00**

**NATIONAL AERO CO., Dept. A. 385 East 4th St., N. Y. C.**

---

TRADE-MARK **JUNIOR** TRADE-MARK

# AEROPLANES



¶Positively the best models on the market. 25 styles and sizes. 50 cents to $5.00. Strong, light and durable.

Address DEPT. F for illustrated catalogue

**ROYAL AERIAL MFG. CO.**

(Monroe Pl.), WEST NEW YORK, N. J.

---

APRIL
**1911**

## MODEL AEROPLANE SUPPLIES

Engines, ¼ H. P. Weight 4½ lbs.,—1 H. P. 6½ lbs. Very strong, powerful and efficient. Complete line of accessories, ball-bearing propellor shafts. Miniature pneumatic tire wheels, made in six sizes. Turn buckles, metal fittings, propellors, rattan, bamboo, all six sizes of selected woods, finest grade English Rubber Strand etc. **Correct Prices. Complete Catalogue sent on request.**

**THE WHITE AEROPLANE COMPANY**

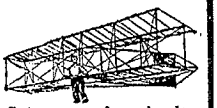
Office and Salesroom, 337 Madison St., Brooklyn, N. Y. Factory, 15 Myrtle Ave., Brooklyn, N. Y.

APRIL
**1911**

---

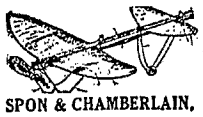
SOME ADS FROM THE FULL SIZE 'AIRCRAFT' MAGAZINE
PUBLISHED MONTHLY BY THE LAWSON PUBLISHING COMPANY
37-39 EAST 28TH STREET, NEW YORK, U.S.A.
ALFRED LAWSON, PRESIDENT AND TREASURER

## Flying Machines



Get a copy of our book "How to Build a 20-ft. Bi-Plane Glider" and fly in it. It gives full details, drawings and exact measurements. 25cts. postpaid.

**Plans and Models at LOW PRICES**

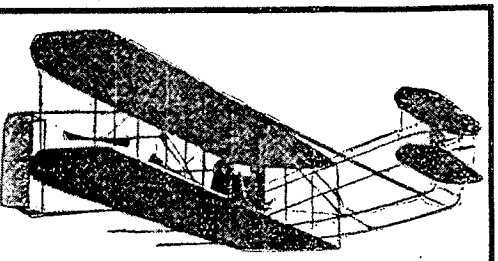


**Percy Pierce's Flyer**
Complete detail drawings and descriptive matter for building *an exact duplicate of this famous prize-winner.* - 15c postpaid.

SPON & CHAMBERLAIN, 123 A. B. Liberty St., N.Y.

---

# A 2-Foot Model Aeroplane $2.00



We will send postpaid a model of the **Curtiss, Wright, Bleriot** or **Santos Dumont** Flyers. They are made of durable materials, measuring two feet across the planes.

Easily put together by following very complete directions sent with model. Each part distinctly numbered and a plain drawing, with corresponding numbers accompany each order.

Practical, interesting and instructive miniatures of the popular aeroplanes.

Let your boy learn something about a real aeroplane. One of these models may suggest an idea which will yield a fortune. Prompt shipment insured. Send $2.00 stating which model you prefer, to **INTERNATIONAL AEROPLANE CO., Room 627, World Building, New York City.**

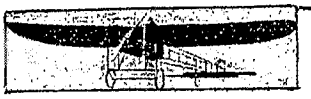
---

## MODEL AEROPLANES

Drawing and directions for building perfect three-foot model Bleriot Monoplane. Clear and simple. Only 15 cents. Complete supplies for model aero builders. Send stamp for Catalog.

**IDEAL AEROPLANE & SUPPLY CO.**
1198 Bedford Ave., Brooklyn, N. Y.

---



# Give Your Boy a Treat for $2.00

Buy him our 4 ft. Model Bleriot Monoplane, complete with drawing, instructions, propeller, canvas, wood, wheels, wire, tacks and axles. All ready to Be Put together.

This Model is a delight to any boy, and instructive as well, and is exceedingly graceful in flight. H. G. Carter, the designer and manufacturer, is a famous aviator, having made 27 flights in his own machine, and established an official record of 62 miles in 57 minutes.

*Write today, send $2.00 bill and we will send machine, prepaid.*

**Price $2.00**
In Knock Down Form.

CARTER & SON, Aviators and Mnfrs., 201 Bennett Building, New York City

---

*The White Flyer*

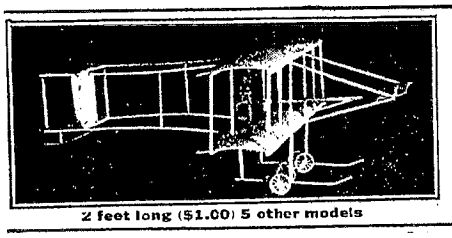
You build it .....$1.00
We build it .....$2.25
Postpaid.

## MODEL AEROPLANES

Complete handbook of Models and supplies **Free on Request**. A new Monoplane, the DEPEROUSSIN

**Wading River Mfg. Co., Wading River, N.Y.**
Successors to White Aeroplane Co.

---



2 feet long ($1.00) 5 other models

## A 2 Foot Model Aeroplane

We will send postpaid an exact model of any of the following popular machines Wright, Curtiss, Farman, Bleriot. Antoinette, Demoiselle. They are made of durable materials, measuring two feet across the planes. Easily put together by following very complete directions sent with each model. Each part distinctly numbered to correspond with detailed blue print. Machine built on scientific lines. A good chance to study aviation. You may suggest an idea that will yield a fortune. Prompt shipment insured. Be sure to state style desired. ($1.00) money order or stamps.

**$1**

**PICELLER AEROPLANE CO.**
1228 Fulton Street, Brooklyn, N. Y.

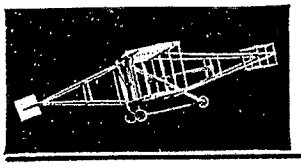
---

# Percy Pierce

**Sells the Best Model Aeroplanes THAT WILL FLY.** The Pierce Arrowplane flies 600 feet, has flown 1,200 feet. Express paid $1.25. Write for catalog of Models, Supplies and parts to make your own Flyer.

**5907X OSAGE AVENUE, PHILADELPHIA, PA.**

---



# BOYS, GET AN AEROPLANE

Mail $1.00 and we will send, postpaid, a **24-inch Model Curtis Biplane** or **Bleriot Monoplane** in knockdown. Printed instructions, blue print, numbered wood cut to size, wheels and propellor all complete.

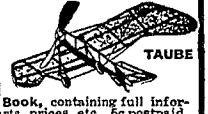
**MEROLD MODEL AEROPLANE COMPANY**
276 Washington Street, New York

---

## Build a WAR AEROPLANE

"Ideal" accurate Scale Drawings enable you to build EASILY exact 3 ft. Flying Models of those Aeroplanes, now used in European War. Study Aeronautics. Build a model man-carrying machine. We will send you 3 ft. Scale Drawings with building and flying instructions at following prices:

Curtiss Flying Boat.....25c
" Military Tractor....25c
" Hydroaeroplane.....35c
Nieuport Monoplane.....25c
Bleriot Monoplane .....15c
Taube Monoplane.....25c
Wright Biplane.....25c
Cecil Peoli Racer .....25c



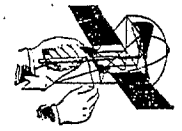

Complete Set of Eight, $1.60 Postpaid

Get our new 50-page **Aeroplane Book**, containing full information about model aeroplanes, parts, prices, etc., 6c postpaid.

IDEAL AEROPLANE & SUPPLY CO., 86 West Broadway, NEW YORK

---

## Lots of Fun and Exercise With These High Flyers



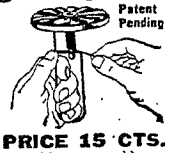
**TOY AEROPLANE**

The only All-Steel Aeroplane that actually flies. Will fly 150 feet over a 3 flat building with a pull of the starting cord. Scientifically correct in design and proportion. Yellow Body, Blue Propeller, Red Silk Wings.

**PRICE, $1.00**
Prepaid to any address.

**AERIAL TOP**

Will fly as high as a five story house.
Spins its way up in the air.
Can be spun in a room and on the floor.
Steel Top and Handle Complete With Cord.




**PRICE 15 CTS.**
Prepaid to any address.

EVERY BOY WILL BE DELIGHTED WITH THESE TOYS.
*Your Money Back If Not As Represented.*

**BENJAMIN-SELLAR MFG. CO., 557 W. Quincy St., CHICAGO, ILL.**

---

## TAUBE AEROPLANE

**for only 25 cents.** Just think—a genuine aeroplane with aluminum propeller and rubber motor all ready to fly. Don't delay, send 25c now for this wonderful model. We will send you also our GREAT MODEL AEROPLANE HANDBOOK—Catalogue 2 cents.

THE ARROW MODEL WORKS, 467 E. 137th St., N. Y. City, Dept. A.

---

Complete materials, including instructive plan and finished propellers, $2.00 prepaid, with Pat. Friction Winder $2.50. Get "Ideal" catalog containing everything for Model Aeroplanes. Has official rules for contests. 40 pp. 5c brings it. (None free.)

IDEAL AEROPLANE & SUPPLY COMPANY, 86 West Broadway, NEW YORK CITY

---

one guaranteed to fly 600 feet from ground. Can be built in a very short time. Building Plans and Instructions, 25c. Materials, Blueprint and Instructions for Building, $1.75. *Greatest* Handbook and Catalog, with FREE glider, 10c.

WALTER H. PHIPPS, 503a FIFTH AVENUE, NEW YORK CITY

---

**1911- 1915**

A few ads from the American Boy Magazine ..... sparse in the early years ..... long before this magazine became the focal point for some 375,000 young members of the Airplane Model League of America (A.M.L.A.), ..... under the guidance of Merrill Hamburg, in 1927.

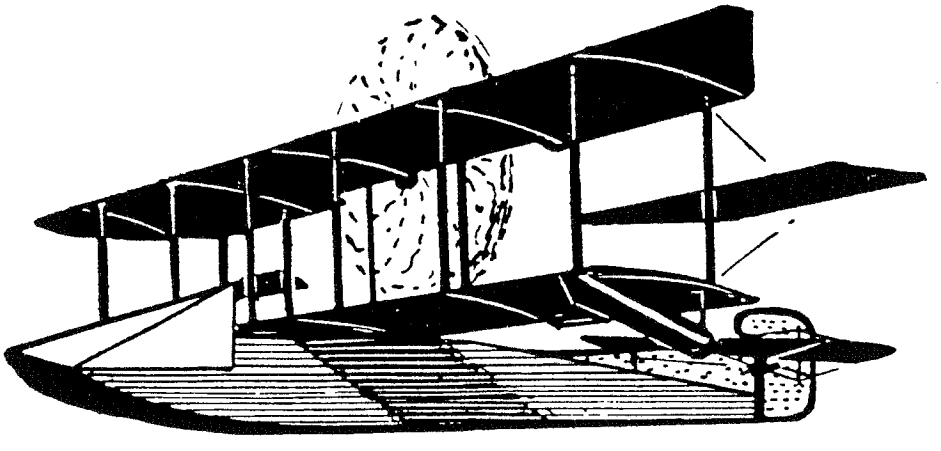
PRICE 5 CENTS

# "IDEAL"

# MODEL AEROPLANES

AND

# SUPPLIES



## 1914-1915

## Ideal Aeroplane & Supply Co.

**82-86 West Broadway**

at Warren and Chambers Sts.

**NEW YORK CITY**

COPYRIGHT, 1914, BY IDEAL AEROPLANE AND SUPPLY CO., NEW YORK

## A WORD OF CONGRATULATION

It is a matter of principle with us to furnish only supplies that are absolutely reliable and that have proven most suitable for the purpose for which they were designed, and to sell no plans for Models, completed Models, or knocked down parts that we cannot positively GUARANTEE TO FLY.

Many of you undoubtedly have had experience with some of the "fake" concerns who have in the past made a practice of advertising and selling so called Model Aeroplanes and Knocked Down parts, that never would fly, and were never intended to fly. We feel that everyone connected with Aeronautics should be congratulated on the fact that many of these concerns have discovered that unscrupulous methods are unprofitable, and have discontinued business.

Read these few letters, received by us, picked at random from among hundreds. They are our best evidence that our goods are all we claim for them.

*June* 14, 1913.

*"I have been one of your customers ever since September, 1911 and I will say that I have found your goods to be the best I have ever used, and have found you very prompt in answering orders, no matter how large or how small."*

*EARL C. KENTON,*
*206 E. 9th St., Los Angeles, Cal.*

*April* 21, 1913.

*"As you know, I purchased a set of parts for your Bleriot Monoplane. I want to say that I have had fine success in flying this machine, frequently obtaining flights of 100 feet and more."*

*Yours truly,*
*LOUIS M. KRAUSSE,*
*2306 Austin St., Houston, Texas*

*April* 9, 1913.

*"I certainly am pleased with the promptness in filling these orders. "Hurrah for the "IDEAL AERO CO."*

*HELMUTH SEMPER,*
*2541 North Avers Ave., Chicago, Ill.*

You may have *perfect confidence* that any orders given us will prove satisfactory to you.

**Bank Reference: Union Exchange National Bank, New York, N. Y.**
**Also Dun's and Bradstreet's Mercantile Agencies.**

**IDEAL AEROPLANE & SUPPLY CO.**
**82-86 West Broadway - New York, N. Y.**



THE great era of the self-propelled vehicle has produced such wonders as the Steam Boat, the Locomotive, the Automobile and the Dirigible Balloon, but nothing that has been so startling nor has shown such rapid development as the Aeroplane.

Only a comparatively short time ago that great American pioneer, Prof. Langley, set down the fundamental laws of Aeronautics. Since then experiments with gliders culminated with the bridge truss type biplane of Octave Chanute and all was ready for a sufficiently light motive power to make this gravity-defying machine fly. In 1904 Wilbur and Orville Wright placed a special gasoline engine on their biplane glider and the dawn of Aviation arrived

These great American scientists, by their faith and patience, have placed this country foremost in the field. Other nations have taken up the work with such zeal, that our standing is now threatened.

It is YOU, the young men of to-day, that we rely upon to become the great men of to-morrow, and keep our country up with the rest of the world in Aeronautics. NOW IS THE TIME for you to study Aviation, to read, to think and especially to experiment with FLYING MODELS.

Start RIGHT by building one of our Models and follow with others that conform to your own ideas. We will assist you in their development and, last but not least, will furnish you at moderate cost with all the necessary supplies.

The following pages show the most important of our products, which are all of the best quality procurable. We hope that they will so well meet your requirements, that this introduction will lead to a long acquaintance.

IDEAL AEROPLANE & SUPPLY CO

Copyright, 1914, by Ideal Aeroplane & Supply Co., New York, N. Y.

# "IDEAL" WOOD FOR MODEL MAKING

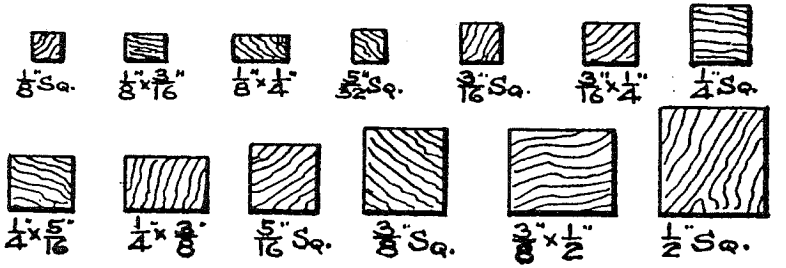
## BASS

**Well Seasoned Wood, specially selected, straight grained and free from all defects, same as used on all our own Models.**

"Ideal" Wood is a thoroughly dependable material for building Models. It is cut true, is rigid and of good quality.

The most useful size for the framing of small Models is 3/16 in. and 5/32 in. square and 1/8x3/16 in. or 1/8x1/4 in. may be used for the main spars on wings.

The jointing may be done by means of the various sockets illustrated in this catalogue, or may be screwed together, fastened with glue or fine brads, or bound together with wire. The pieces are easily fastened together, even by the most inexperienced. A strong and light Model can be built up in this way, especially when fine wire is used for bracing the framing together.




| Size | Price | Size | Price |
|---|---|---|---|
| 1/8 in. sq. ..... | 1 cent per ft. | 1/4 in. sq. .... | 2 cents per ft. |
| 1/8 x 3/16 in.... | 1 " " | 1/4 x 5/16 in. .. | 2 " " |
| 1/8 x 1/4 in.... | 1½ cents " | 1/4 x 3/8 in. ... | 2½ " " |
| 5/32 in. sq. ... | 1½ " " | 5/16 in. sq. .... | 2½ " " |
| 3/16 in. sq. .... | 1½ " " | 3/8 in. sq. .... | 3 " " |
| 3/16 x 1/4 in. ... | 1½ " " | 3/8 x 1/2 in. ... | 3 " " |
| | | 1/2 in. sq. .... | 3 cents per ft. |

This wood is sold *only* in 3 and 6 foot lengths. Where intermediate lengths are wanted, we cut from and charge for full lengths.

**Packing Charge, 5c., for lengths OVER 3 feet, 25c.**

When we are ordered to ship wood by mail, it *must* be cut to 1½ ft. lengths and is so sent at purchaser's risk only.

*Postage has to be added at pound rates. Ask your Postmaster.*

It is better to order wood shipped by express. See our special PREPAID express rates under "Directions for ordering."

## TEE SECTION

This is an excellent section for Model building and one that is commonly used in bridge construction. It combines great lightness with resistance to bending in any direction.

**Price per foot.....12 cents; 6 inches.....8 cents.**

Either ½ in. or 5/16 in. carried in stock.



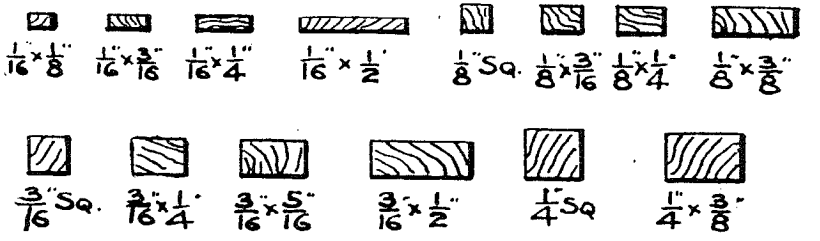


# "Ideal" Wood for Model Making, Continued

## SILVER SPRUCE

It is an established fact, that Spruce has been found by severe tests to be the "Ideal" Wood for the man-carrying Aeroplanes. Consequently we are making a specialty of it for the Model Builder.

We use carefully selected, fine straight grained Silver Spruce, making it the strongest and lightest wood obtainable for the purpose.




**Sold only in three foot lengths.**

| | | | |
|---|---|---|---|
| 1/16 x 1/8 in.....1½ cents per ft. | | 3/16 in. sq. ....2½ cents per ft. | |
| 1/16 x 3/16 in.....1½ " " " | | 3/16 x 1/4 in.....2½ " " " | |
| 1/8 in. sq. ....1½ " " " | | 3/16 x 5/16 in.....3 " " " | |
| 1/8 x 3/16 in.....2 " " " | | 3/16 x 1/2 in.....3½ " " " | |
| 1/8 x 1/4 in.....2 " " " | | 1/4 in. sq. ....3 " " " | |
| 1/8 x 3/8 in.....2½ " " " | | 1/4 x 3/8 in.....3½ " " " | |

**SPECIAL SIZES IN TWO FOOT LENGTHS ONLY.**

As used on Cecil Peoli Racer.

1/16 x 1/4 in., per length, 5c. 1/16 x 1/2 in., per length, 8c.

## WHITE HOLLY FOR RIBS

**Two foot lengths only.**

Selected stock, straight grain and pliable. Easily bent to any required curve by heating or steaming.

| | |
|---|---|
| 1/16 x 1/8 in.....1½ cents per ft. | 1/8 x 3/16 in.....2 cents per ft. |
| 1/16 x 3/16 in.....1½ " " " | 1/8 x 1/4 in.....2 " " " |

## MAPLE

**Two foot lengths only.**

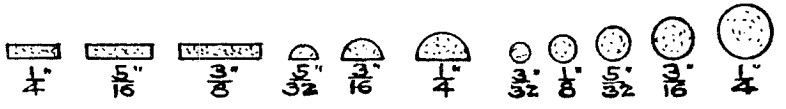
Maple, by reason of its straight and close grain, is an admirable wood for Wing making, either for ribs or spars.

| | |
|---|---|
| 1/16 x 1/8 in.....1 cent per ft. | 1/8 x 1/4 in.....2 cents per ft. |
| 1/8 x 3/16 in.....1½ " " " | 1/8 x 3/8 in.....3 " " " |

***For rates and packing charges see preceding pages.***

## REED (RATTAN)

For construction of wing frames, shock absorbers and skids, may easily be bent by hand or steamed into any shape.



| Size | 1/4 in. | 5/16 in. | 3/8 in. | 5/32 in. | 3/16 in. | 1/4 in. | 3/32 in. | 1/8 in. | 5/32 in. | 3/16 in. | 1/4 in. |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Price per. ft. | 1c. | 1c. | 1½c. | 1½c. | 2c. | 2½c. | 3c. | | | | |

| HALF ROUND REED | | | | FLAT REED | | | |
|---|---|---|---|---|---|---|---|
| Size | 5/32 in. | 3/16 in. | 1/4 in. | Size | 1/4 x 1/16 | 5/16 x 1/16 | 3/8 x 1/16 |
| Price per ft. | 1½c. | 1½c. | 2c. | Price per ft. | 1c. | 1½c. | 2c. |

Less than 10 cts. worth of Reed is not sold.

Postage, 3c. for 10 feet up to 3/16 in. or for 5 feet over 3/16 in.

## THIN BOARDS FOR PLANES

Perfectly smooth, selected, very light. Used for very small Models and for shooting gliders, ranging in size from 6 in to 2 ft.

**Poplar, 6x1/16 in., 10c. per foot; 9x1/16 in., 15c. per foot.**

**Very fragile. Should be ordered by express.**

**Extra packing charge for 1 ft. lengths 10c., for 2 ft. lengths 15c.**

## ROUND WOOD

For the body of a Model (FUSELAGE); the small, round sticks will make good, strong uprights for Biplanes.

| Size | 3/16 in. | 1/4 in. | 5/16 in. | 1/2 in. |
|---|---|---|---|---|
| Price per 3 ft. lengths | 2c. | 2½c. | 3c. | 4c. |

*See packing charge on page 4.*

**Small Round Sticks, 3/32x5¾ in.....5c. doz.; 3/32x12 in.....10c. doz.**

## WOOD FOR LAMINATING PROPELLERS

**Mahogany and Maple, ¼ in. x 1½ in. x 14 in.....each 5 cents**

## BAMBOO (ROUND)

**Size at butt about 3/16 in. 3 foot lengths .....4 cents**

## SPLIT BAMBOO (FLAT)

For Ribs and Shock Absorbers. In three foot lengths only.

**1/16 x ¼ in., per length....2 cts. ⅛ x ¼ in., per length....4 cts.**

*Less than five lengths are not sold.*

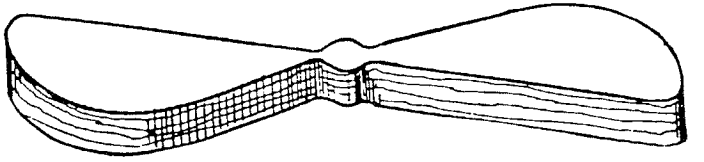
Bamboo should be ordered by express.



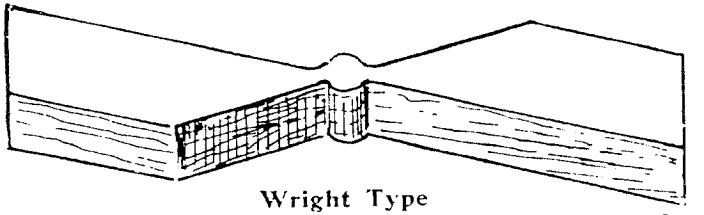


## "IDEAL" PROPELLER BLANKS

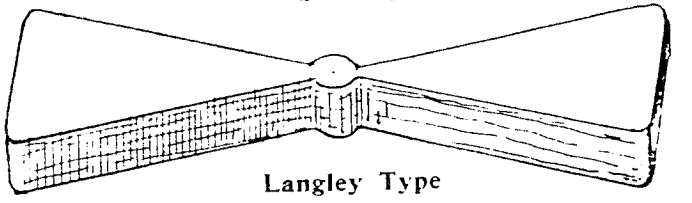
Poplar and West Indian Mahogany.



"IDEAL"



Wright Type



Langley Type

Our propeller blanks are made of carefully selected wood, are accurately designed and can easily be whittled to any pitch desired. It is very interesting and instructive to whittle your own Propellers. Our Propeller Knives are best adapted for that purpose.

| Size | "IDEAL" Poplar | "IDEAL" Mahogany | WRIGHT or LANGLEY |
|---|---|---|---|
| 6 in. | $0.10 | $0.12 | $0.12 |
| 7 in. | .10 | .15 | .15 |
| 8 in. | .12 | .18 | .18 |
| 9 in. | .15 | .20 | .20 |
| 10 in. | .18 | .25 | .25 |
| 12 in. | .20 | .30 | .30 |
| 14 in. | .30 | .50 | .50 |
| 16 in. | .45 | .75 | |
| 18 in. | .55 | .95 | |
| 20 in. | .75 | 1.25 | |
| 24 in. | 1.00 | 1.50 | |

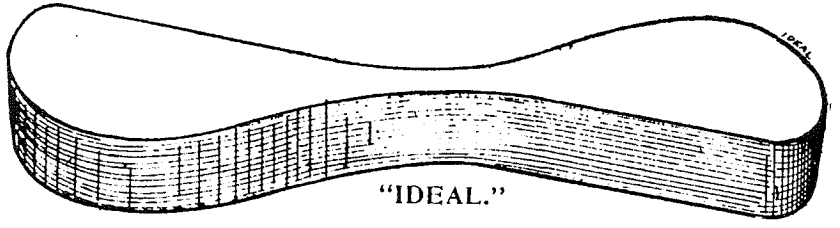
**Transportation Extra.**

**Add 20% for Wright or Langley Blanks in Mahogany.**

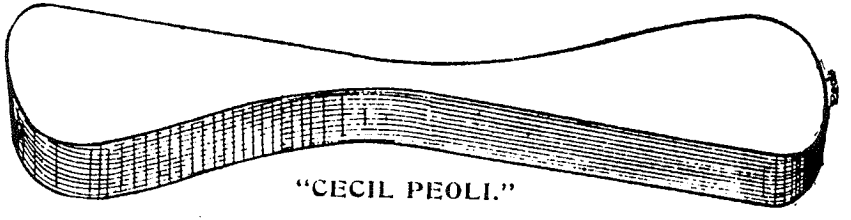
**Illustrated Treatise on Propeller Carving.....6 cents, postpaid**

# HIGH PITCH
# PROPELLER BLANKS FOR RACING MODELS

**Made of special kiln dried White Pine.**




"IDEAL."



"CECIL PEOLI."

In cutting your own Propellers from blanks, there is such an infinite variety of methods of procedure and such an indefinite number of results that can be obtained from a blank of correct shape and pitch, that it is surely one of the most fascinating details in the construction of Model Aeroplanes. The two styles shown here we believe to be the most up to date and efficient on the market. One of them was designed by our own Aeronautical Engineer, and the other by Cecil Peoli, who used it on his famous Champion Racer.

We sell them in pairs—5, 6, 7, 8, 9 in. Longer ones to order.

"IDEAL."

| | | | | | | | | |
|---|---|---|---|---|---|---|---|---|
| 5 | in. | Price | per | pair | 20c.—by | mail, | 6c. | extra. |
| 6 | " | " | " | " | 20c.— " | " | 6c. | " |
| 7 | " | " | " | " | 25c.— " | " | 7c. | " |
| 8 | " | " | " | " | 30c.— " | " | 7c. | " |
| 9 | " | " | " | " | 35c.— " | " | 8c. | " |

"CECIL PEOLI."

| | | | | | | | | |
|---|---|---|---|---|---|---|---|---|
| 6 | in. | Price | per | pair | 25c.—by | mail, | 6c. | extra. |
| 7 | " | " | " | " | 30c.— " | " | 7c. | " |
| 8 | " | " | " | " | 35c.— " | " | 7c. | " |
| 9 | " | " | " | " | 40c.— " | " | 8c. | " |

*In ordering, specify the kind required*

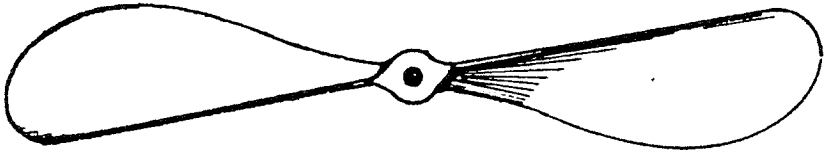




# "IDEAL" PROPELLERS

Our "Ideal" Propellers, besides being the lightest, strongest and most *efficient*, are *scientifically* made, not haphazardly to fit any Model. The pitch is accurately carved and shaped by hand according to the weight, size and model of the plane for which they are intended. Furnished left or right or in pairs.

We supply the ones to turn to the right only, unless otherwise ordered.



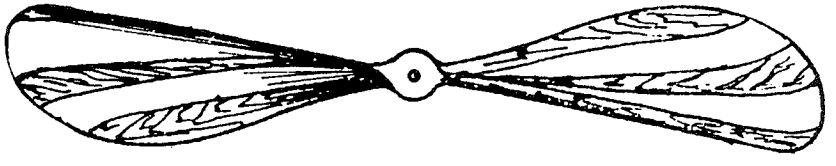
Do not try to save money on your propellers, as your success in flying a model depends on same. Our propellers are not the cheapest and should not be compared with some placed on the market which are made unscientifically. The consequent loss of dynamic thrust will not compensate for the small amount saved in cost. No similar propeller of equal pitch can compare with the "IDEAL" for price and efficiency.

*Transportation extra. Express is the safest.*

| *Size* | *Price* |
|---|---|
| 6 in.... | $0.45 |
| 7 in.... | .55 |
| 8 in.... | .65 |
| 9 in.... | .75 |
| 10 in.... | .85 |
| 12 in.... | .95 |
| 14 in.... | 1.35 |
| 16 in.... | 2.25 |
| 18 in.... | 2.75 |
| 20 in.... | 4.00 |
| 24 in.... | 5.50 |

**Propellers, 16 in. and larger, are made to order only.**

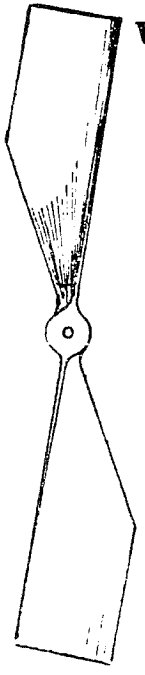
# LAMINATED PROPELLERS



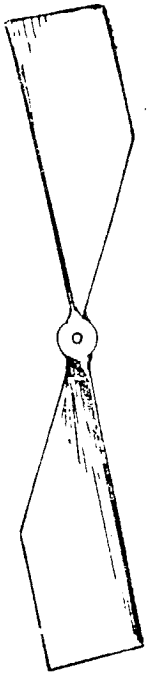
We use five or more laminations, according to the width of the blade. The highest grade propeller in America is handled by us. We guarantee these against imperfect workmanship and material. These propellers are designed and constructed with the greatest possible precision to insure full propulsion effort for the power used.

**Price from 6 in. to 8 in.....15 cents per inch.**
**Price from 9 in. to 12 in.....20 cents per inch.**
**Larger sizes quoted on application.**

We do not always have laminated propellers in stock. As a rule we make them *to order* only.



## WRIGHT TYPE PROPELLERS



The Wright Propellers are famous the world over for their efficiency. It should be understood that the success of a machine depends a great deal on the quality of the Propellers that are used. It is very essential to have scientific Propellers in order to get good results. Our Wright Propellers are made scientifically and are balanced. The pitch is made to create the necessary power to bring results.

We make these Propellers so that they can be used in pairs, both right and left.

| Size | Price singly | Price per pair |
|---|---|---|
| 6 inch | $0.55 | $1.00 |
| 7 " | .65 | 1.25 |
| 8 " | .80 | 1.50 |
| 9 " | .90 | 1.70 |
| 10 " | 1.00 | 1.90 |
| 12 " | 1.15 | 2.25 |
| 14 " | 1.40 | 2.75 |
| 16 " | 2.25 | 4.35 |
| 18 " | 3.00 | 5.75 |
| 20 " | 4.50 | 8.50 |
| 24 " | 6.00 | 11.50 |

10 in. size carried in stock; other sizes TO ORDER only.

## LANGLEY TYPE PROPELLERS

Same price as Wright type. For style see page 7.

## MAHOGANY PROPELLERS

Any size or style TO ORDER ONLY at the following prices:

**6 to 14 in. ....12½c. per inch  16 and 18 in. ....20c. per inch**

## ALUMINUM PROPELLERS

**With shafts attached.**

Extremely light and durable. The pitch can be bent according to the requirements of your Model.

Made in pairs, to turn right or left, to push or to pull.

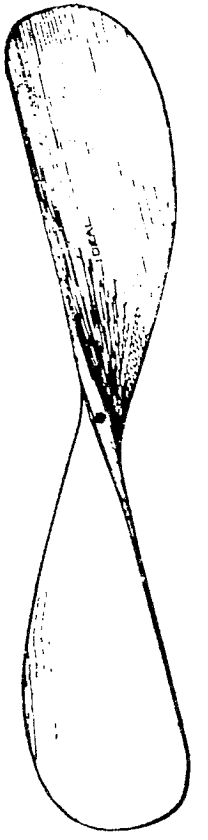
*In ordering, state which is required.*

**3⅝ in., each..... 10 cents; per pair ..... 20 cents**
**6 in., each ..... 15 " " " ..... 25 "**
**8 " " ..... 40 " " " ..... 75 "**

**By mail, 4c. extra per pair.**





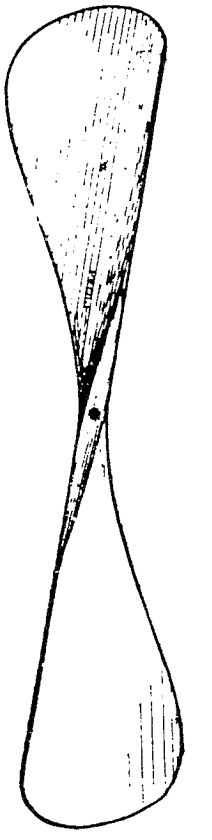


## "IDEAL" RACING PROPELLERS

**Sold in pairs only.**

Notwithstanding the great success and reputation our regular Propellers and Blanks have obtained in the past, we are always striving for progress in the art of flying and to that end have devised a number of forms of Propellers for the purpose of making straighter and longer flights with the later types of Racing Models. They have proved eminently successful and are favored and adopted by the best Model Flyers of the Country.

These propellers are the result of most careful study and exhaustive experiment on the part of our engineering department assisted by **Cecil Peoli.** They have the proper pitch for their diameter and for the weight model they are expected to propel. Only tough and straight grained wood of the finest quality is used in their construction.



"IDEAL"  "PEOLI"

THEY ARE HIGH PITCH FOR LONG FLIGHTS

**Made of special kiln dried White Pine.**

**5 in.....$1.25 per pair.  7 in..... .....$1.35 per pair.**
**6 in..... 1.25 " "  8 in..... 1.50 " "**
**9 in.....$1.75 per pair.**

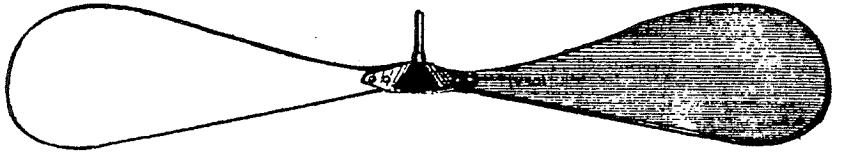
## "CECIL PEOLI" RACING PROPELLERS

This is the style designed and used by the Champion Model Flyer.

**Sizes and prices same as above.**
**Not made in 5 in.**

## "IDEAL" FIBRE RACING PROPELLERS

Brass Hubs  Shafts attached.  Extra light and strong.



A thoroughly reliable, practically unbreakable Racing Propeller.

One very desirable feature is, that their pitch can easily be changed to suit requirements by bending the blades.

**Sold in pairs only—to push.**

**6 in., as used on "IDEAL" 3 ft. RACER, Special, per pair....50c.**
**7 in., per pair .....65c.  8 in., per pair.....75c.**

**By mail, 5c. extra per pair.**

To properly mount these propellers on your racer, use our Solid Turned Bearings No. 4. For best results use our Racing (Aluminum) Propeller Hanger, with our No. 5 Solid Turned Bearing. Try this and note how smoothly your propeller runs.

## SMALL FIBRE RACING PROPELLFRS

**Shafts attached.**

These are the little Propellers used on our famous Speed-o-plane and on our wonderful Speed-o-flyer. They are truly marvels of accuracy.

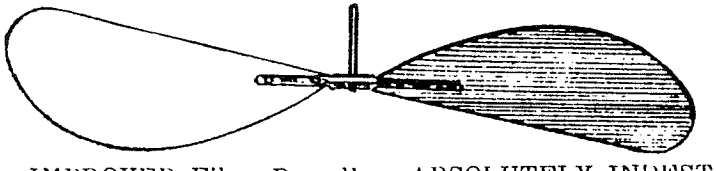
**To push only. In pairs.**

**Speed-o-plane Propellers, 3 in. long, price per pair.....15c.**
**Speed-o-flyer " 4½ " " " " " .....25c.**

**By mail 2c. extra per pair.**

## "IDEAL" FIBRE PROPELLERS

Solid Brass Hub.  Shaft attached.  Strong and light.



An IMPROVED Fibre Propeller; ABSOLUTELY INDESTRUCTIBLE. Produces remarkable results.

Made singly or in pairs, to turn right or left, to push or to pull.

*In ordering, state which is required.*

8 in.....35c.  10 in.....40c.  12 in.....50c. each

**By mail 5 cents extra.**





## "IDEAL" RUBBER STRANDS

Rubber is the simplest motive power for all scientific Models.

As you cannot expect to operate a large Aeroplane with a poor motor, so you cannot hope to succeed in flying a Model if you use poor rubber.

PURE PARA RUBBER IS THE ONLY MATERIAL TO USE. We keep the best quality of it in stock. It will stretch 7 times its normal length.

At great pecuniary sacrifice, various other methods have up to this writing been tried for propelling Model Aeroplanes and Flyers, but in vain. Nothing as yet can displace a Rubber Strand Motor for the ordinary size Model.

Just think—the latest recorded official flight of a Model was 2653 feet and another Model remained in the air 158 seconds. *All with a rubber strand Motor.*

⅛ in. square rubber has produced wonderful results lately, a six foot Wright Model weighing 27 ounces having been flown 106 feet.

Our standard square sizes are No. 16, No. 14, and ⅛ in. square.

*We have adopted the regular trade numbers on some; selling them by size, as heretofore, has been deceptive, the dimensions not agreeing.*

## SQUARE RUBBER

FULL SKEINS UP TO ABOUT 190 FEET.

**No. 16 (known as 1/16 sq.) 1c. per foot, $1.60 per full skein.**

FULL SKEINS UP TO ABOUT 125 FEET.

**No. 14 (known as 3/32 sq.) 1½c. per foot, $1.80 per full skein.**

Less than 20 feet are not sold.

**By mail add 3c. for each 40 ft., 10c. for full skeins.**

FULL SKEINS UP TO ABOUT 78 FEET.

**⅛ in. square 5c. per foot, per full skein ..... $3.50**

**By mail add 3c. for each 20 feet, 10c. for full skeins.**

## FLAT RUBBER

This is the kind used by the English Champions and recently adopted by the best flyers in America, as having ⅛ more power and giving 25% more turns than the square.

It should be understood that this is for very light racing Models weighing from 1½ to 4 oz's. It has not yet been tried on heavier models, but the matter is open to experiment.

| | Price per ft. | Price per 50 ft. | Price per 190 ft. |
|---|---|---|---|
| ⅛ in. Flat | 1c. | 45. | $1.50 |
| 1/16 " " | 1½c. | 65. | 2.25 |

**By mail add 3c. for 50 ft., 10c. for full skeins.**

*For Rubber Winders see Index.*

## RUBBER TUBING

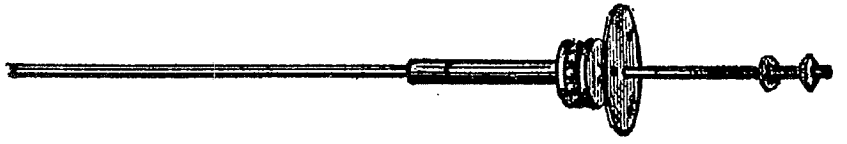
For covering ends of Rubber Hooks.

Price per foot, 10c.  Per ½ foot, 6c.

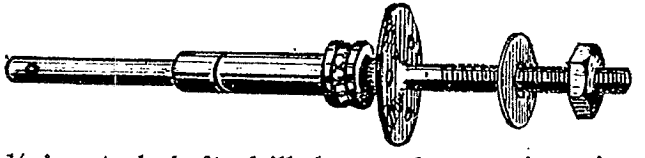
## "IDEAL" BALL BEARING PROPELLER SHAFTS

We have found it necessary to produce a Shaft which will run smoothly and without any friction whatsoever. After much experimenting this Ball Bearing Shaft was produced. The most exacting tests have shown it to fully meet all requirements of a non-friction shaft. Really it is a wonderful mechanical device. It is perfectly constructed, is extremely strong and durable, has solid turned bearings, and the finest Steel Balls and races. The flange is drilled for screws or brads so as to hold the Propeller. The end of the Shaft is threaded and supplied with nuts to make it doubly secure. **The flange and upper ball bearing case is one solid piece of brass, is not soldered and cannot break.**

Our Ball Bearing Shaft reduces friction to a minimum, and there results an increase in speed and a greater propeller efficiency.

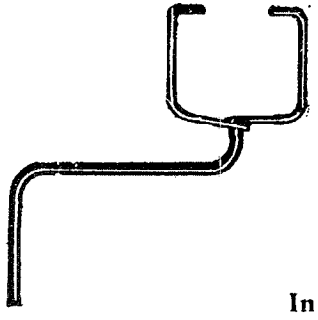


**No. 1.—⅛ in. steel shaft, furnished straight and can be bent to any size hook desired. Weight, ⅓ oz. Price, 50 cents. By mail 2 cents extra.**



**No. 2.—⅛ in. steel shaft, drilled on end to receive wire or hook for rubber strand. Weight, ½ oz. Price, 60 cents. By mail 2 cents extra.**

**No. 3.—⅛ in. steel shaft, flattened and drilled end for wire, to accommodate Propellers over 14 in. and up to 24 in., Price, 75c.**



## PROPELLER WINDER

Used only in connection with our Ball Bearing Shafts or with any other Shaft which sticks out ⅛ in. through Propeller.

All you have to do is to place it on your Propeller and turn it in the same manner as you would wind your Propeller by the old method.

**Price, 25 cents each.**

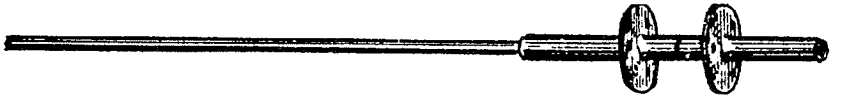
**In ordering state size of your Propeller.**



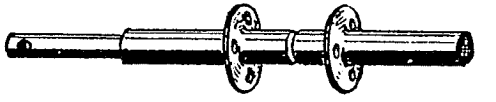


## "IDEAL" COMBINATION SHAFT AND BEARING

This combination is used for the same purposes as our Ball Bearing Shaft, where a less expensive article is required. It is complete and ready to fit any wooden Propeller. It is strong, durable and light. This shaft is made in two sizes.



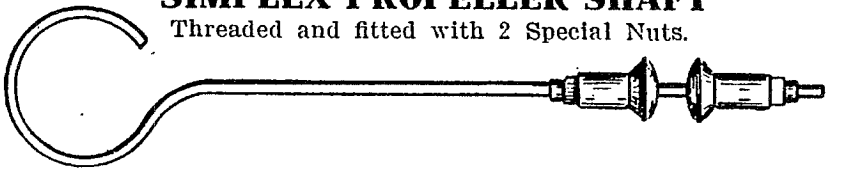
**No. 1.—⅛ in. steel shaft and solid turned bearing. Shaft is furnished straight and can easily be bent to any desired hook.....Price, 25 cents.**



**No. 2.—⅛ in. steel shaft and solid brass bearing. Shaft is drilled on end to receive wire or hook for rubber strand. Price, 30 cents.**

## SIMPLEX PROPELLER SHAFT

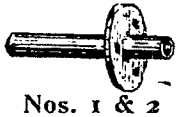
Threaded and fitted with 2 Special Nuts.



This shaft is very simple in construction but has great tensile strength. It grips the Propeller hard and works very easily. The Shaft is made of steel and will stand a great stress.

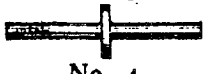
**Size, 4 inches. Weight, 1-6 oz. Price, 15 cents. By mail 2 cents extra.**

## SOLID TURNED BEARINGS



Nos. 1 & 2

No. 3



No. 4

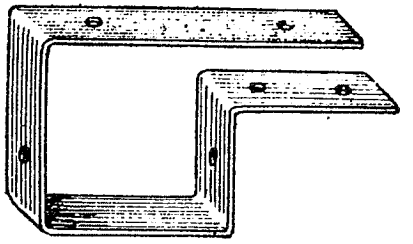
No. 5

These Bearings are turned out of one piece of brass and are very strong, durable and extremely light. They are NOT SOLDERED and will not come apart. Made in 5 styles, featherweight.

**No. 1—For ⅛ in. shaft, Price, 10 cents each**
**No. 2— " ⅛ in. " " 10 " "**
**No. 3— " ⅛ in. " " 10 " "**
**No. 4— " ⅛ in. " " 10 " "**
**No. 5— " ⅛ in. " (for racing blocks) 10c. per pair.**

**Postage 2 cents extra.**

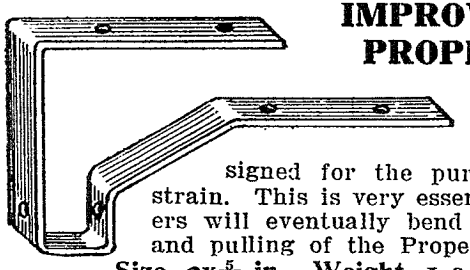
## ALUMINUM PROPELLER HANGER



In order to construct a perfect Model it is essential to use one of our Aluminum Propeller Hangers. They are light, strong and can easily be fitted to our Ball Bearing and Combination Shafts. Drilled so that it can be readily attached to your Motor Stick.

**Size, 1⅞x⅜ in. Weight, 1-9 oz. Price, 10 cents.**
**By mail 2 cents extra.**

## IMPROVED ALUMINUM PROPELLER HANGER

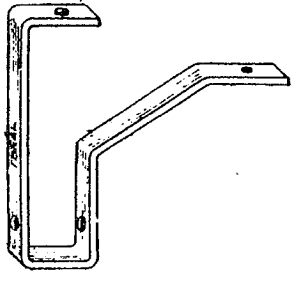


This Propeller Hanger is unique in appearance, but is remarkably strong. It is designed for the purpose of sustaining a greater strain. This is very essential, as many Propeller Hangers will eventually bend under the constant vibration and pulling of the Propeller.

**Size, 2x1⅝ in. Weight, 1-9 oz. Price, 15 cents.**
**By mail 2 cents extra.**

## RACING (ALUMINUM) PROPELLER HANGER

**To fit ¼ x ⅜ in. sticks.**



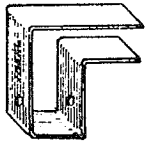
These Hangers being designed for long distance Racers, are to be attached to the outside of the motor sticks or fuselage, either by small screws, or thread same as our Blocks and Shafts on page 17. These hangers fit ¼ x ⅜ wood, are very handsome and durable, extremely light, and are suitable for 3-foot Models.

*Drilled to fit our No. 5 Bearings.*

**Sold in pairs only; per pair, 15c. Postage 2c.**

## BABY (ALUMINUM) PROPELLER HANGERS

**To fit ⅛ x ¼ in. sticks.**



Our Baby Hangers are intended for Racing Models of about 2 ft. size (either a little less or more) and have proved very successful for Baby Fliers; they are to be attached by thread with a coating of Ambroid (same as Blocks and Shafts on page 17).

**Sold in pairs only; per pair, 10c. Postage, 2c.**

## ALUMINUM STRIPS

For making Propeller Hangers.

**Width, ⅜x5 in. .....Price, 5 cents. Postage, 1c.**

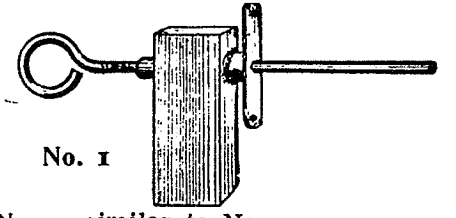




## "IDEAL" COMBINATION RUBBER HOOKS AND PROPELLER SHAFTS

**With Blocks Attached.**

These shafts are the latest ideas for Racing Models, and are to be attached to the outside of your Fuselage sticks by first coating the sticks and blocks with Ambroid Cement then binding around with thread and applying another coating of Ambroid over all. This makes an absolutely tight fitting.



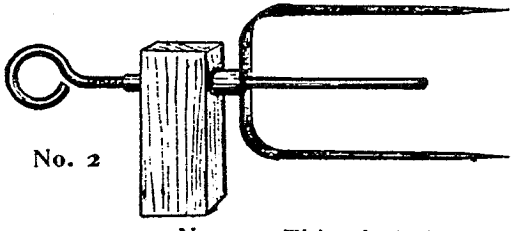
**No. 1**

**No. 1**, with Metal plate (a solid turned bearing No. 5 set into the block)—press your Propeller on to the shaft and fasten with 2 small brads.

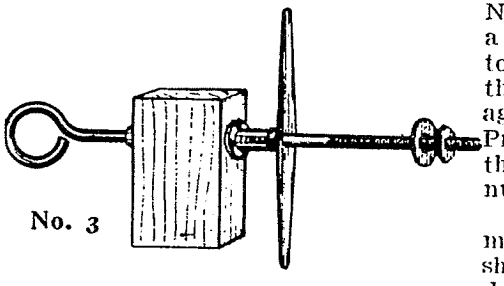
**Price, 35c. per pair.**

**No. 2**, similar to No. 1, except that the metal flange has long arms. You press the Propeller on the shaft and bend these arms around to the rear edge of the same.

**Price, 40c. per pair.**



**No. 2**



**No. 3**

**No. 3.** This shaft has our solid turned brass bearing No. 3 set into the block, has a brass flange, silver soldered, to turn over on the side of the Propeller to insure against slippage, and the Propeller end of the shaft is threaded and has washer and nut.

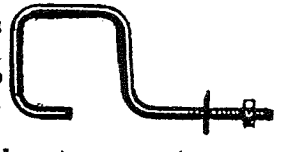
This is the easiest and most frictionless Propeller shaft, that has ever been produced for Racing Models.

**Price, 50c. per pair.**

**Postage 2c. extra per each pair.**

## REAR RUBBER HOOK

This hook is used to attach the rubber strands in the rear of the machine. It is made so that it can easily be attached and held fast. The rubber strands will not slip from the hook. Nuts are attached so that it can be securely fastened.

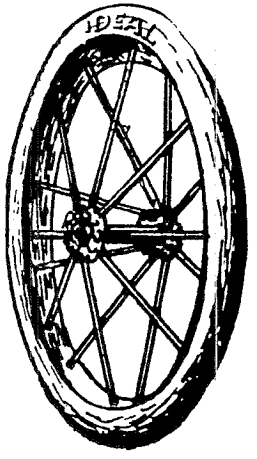


**Price, 10 cents. Without thread and nuts, 5 cents.**
**Postage 1c.**

# "IDEAL" MINIATURE Rubber-Tired WHEELS

These Miniature Wheels are of the very best construction.

*"Ideal" Wheels are made of solidly turned brass rings and are SEAMLESS.* They are durable and very light, fitted with pneumatic rubber tires, excepting the 1½ in. Wheel which has solid rubber tires. "Ideal" Wheels are made by expert mechanics and are in constant demand throughout the world. We are the only manufacturers of SEAMLESS rims. Made in five sizes. *Nickel plated finish.*




All sizes are furnished for ⅛ in. axle, excepting the 4 in. which is made for ⅛ in. axle.

| Size | Hub | Approximate Weight | Price |
|---|---|---|---|
| 1½ in. | ½ in. | ⅓ oz. | 30c. each |
| 2 " | ¾ " | ⅖ " | 30c. " |
| 2½ " | ¾ " | ½ " | 35c. " |
| 3 " | ¾ " | ¾ " | 40c. " |
| 4 " | 1 " | ⅞ " | 60c. " |

**Postage, 2 cents extra per Wheel.**

**We can furnish the 2, 2½ and 3 in. Wheels for ⅛ in. Axle also at an additional cost of 10 cents each.**

**Extra Rubber Tires, up to 2½ in. 10 cents, 3 in. 15 cents, 4 in. 20 cents.**

# "IDEAL" MINIATURE FORKS

Made of light brass tubing, silver soldered, strong and durable. Just right for "Ideal" Rubber Tired Wheels.

**For 1½ and 2 in. Wheels .....25 cents each.**
**" 2½ in. Wheels .....30 " "**
**" 3 " " .....35 " "**
**" 4 " " .....45 " "**

**By mail 3 cents extra.**

## SPRINGS

(Relaxed) (Stretched)

These spiral springs are made of the best spring wire and will always retain their resiliency. These springs are used on our forks, acting as shock absorbers.

We make Wire Springs in continuous spirals and furnish them **for 5c. per ¾ in. or 30c. for 5 inches.** ¾ in. when stretched suffices for forks up to two inches.

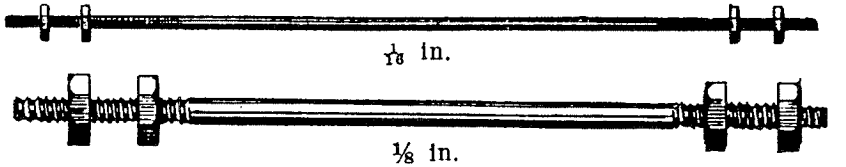
**For 4 in. Forks stronger Spiral Springs at 15c. per in.**





# AXLES

Made of Steel Rod.



⅛ in.

⅛ in.

**⅛ in. Axle, threaded, with Nuts complete,**
**Up to 6 in. 10c. From 7 to 10 in. 15c. From 11 to 15 in. 20c.**
**⅛ in. Axle, threaded, with Nuts complete,**
**Up to 6 in. 15c. From 7 to 10 in. 20c. From 11 to 15 in. 25c.**
**Postage 2c. extra.**

# BRASS NUTS

**For our own threads only.**
**⅛ in., 3/32 in., ⅛ in.....2c. each, 20c. per dozen.**

# TURNBUCKLES

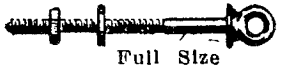
These Turnbuckles are made upon the same principle as those used on large Aeroplanes. They are made of brass and will stand a great stress. Are indispensable in tightening of guy wires.

Turnbuckle No. 1, has ¼ in. pull and is used on small machines. Weight, 1-50 oz. **Price.....5 cents.**

Turnbuckle No. 2, is solid, has ¾ in. pull, right and left threads, and will stand a strain of 200 lbs. Weight, 1-30 oz. **Price ..... 10 cents.**

Turnbuckle No. 3, a trifle heavier than No. 2. **Price.....15 cents.**

# EYEBOLTS



Full Size

Made out of turned steel. Complete with nuts and washers. **Price.....10 cents.**

*Letter Postage on Turnbuckles and Eyebolts.*

# TIN WHEELS

Exteremely light. Stamped in 2 sections and clamped together. Made in two sizes.

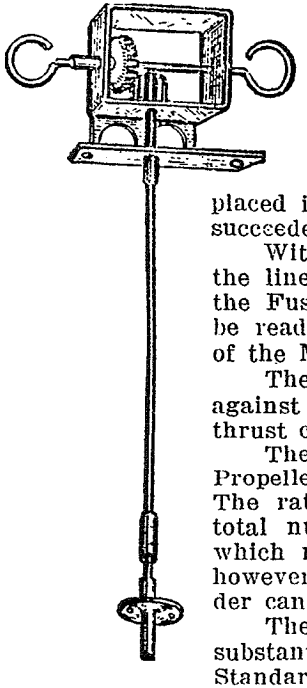
**1⅜ in. Dia. Hand Enameled, 5c. each.**
**1⅝ in. Dia. Bright Tin, 5c. each.**

# LAMINATED WOODEN WHEELS

These laminated wheels are made in 3 sections, glued and pressed together under great pressure. Drilled to take ⅛ in. Axle.
**Sizes, 1 in., 1½ in., 2 in.....5 cents each. Postage, 1c.**

## "IDEAL" MULTIPLE CONVERSION GEAR

**With attached propeller shaft and solid turned outboard bearing**



This gear, which originated and is manufactured solely by us, marks an epoch in the construction of flying Models of existing machines.

Our mechanical department has worked for some time on a device that would enable a rubber motor to be placed in a Model, just as the gasoline engine is placed in a man-carrying machine. It has finally succeeded and the result is this Conversion Gear.

With its use the rubber strands run along the line of the Planes and not along the line of the Fuselage and the position of the motor can be readily adjusted to secure the proper balance of the Model.

There are two rubber strands each pulling against the other and thereby eliminating the end thrust common to the regular type of Motor.

The Motor may be wound up by turning the Propeller or by winding the end of each strand. The ratio of the gears being 2 to 1, the same total number of turns are required, no matter which method is used. The latter method has, however, the advantage that a multiple gear winder can be employed and much time saved.

The gear is of brass and steel, light, neat and substantially made in accordance with "Ideal" Standards.

**Price .....$1.50, by mail 4 cents extra.**

## SINGLE GEARS

Our gears are clean cut and match accurately. They run smoothly and cause no friction. It is absolutely necessary when buying gears to see that they are made right. We take great care and spare no expense in making our gears.

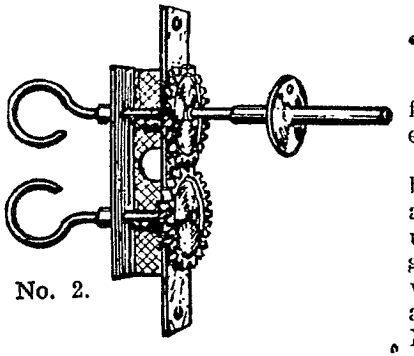
All these with $\frac{1}{16}$ in. hole. Can be furnished with $\frac{1}{8}$ in. hole at **10c. each** additional.

| Size | Number of Teeth | Pitch | Price |
|---|---|---|---|
| ⅝ in. | 18 | 32 | 15c. |
| 3-10 in. | 10 | 40 | 15c. |
| 11-20 in. | 20 | 40 | 20c. |
| ⅘ in. | 30 | 40 | 25c. |

**Postage, 2 cents.**







No. 2.

## "IDEAL" SHAFT GEARS

These Gears have been designed for the purpose of increasing the energy of the Propeller.

Our Gears are accurately cut by machine. They are so made that additional skeins of rubber can be used, thereby giving the Model greater propulsive energy. The weight of the Gears is only ½ oz. and can be fitted to any Model. Made in two styles, with two and three gears. Our triple Shaft Gear naturally permits a greater amount of rubber to be used, and is very efficient for larger Models. It has three hooks—a skein of rubber can be used on each hook.

Our double Shaft Gear has only 2 gears; therefore, 2 skeins of rubber only can be used. This Gear also stores considerable energy and is for use on smaller Models. These gears are perfectly set and cause no friction.

**Shaft Gear No. 1—3 Gears .....$1.00**
**" " No. 2—2 " ..... .75**

## "IDEAL" MULTIPLE SHAFT GEARS

Our Multiple Shaft Gears are used where a greater number of revolutions are necessary or where a short skein of heavy rubber is employed. We make these gears in various ratios so as to fill the requirements of our experimenters.

**GEAR No. 3**

Made with a ratio of 3 to 1 and will fit any Model.

**Price ..... 75 cents.**

**GEAR No. 4**

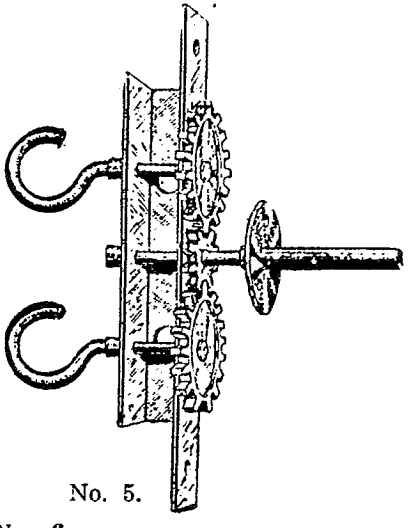
This Gear has a ratio of 2 to 1 and runs at double the speed of the ordinary shaft.

**Price ..... 75 cents.**

**GEAR No. 5**

A combination of the Shaft and Multiple Shaft Gears. Ratio of 2 to 1.

**Price ..... $1.00**



No. 5.

**GEAR No. 6**

Our No. 6 gear is built on the same principle as our No. 5 gear, except that the ratio is 3 to 1. This set of gears produces very high speed and also has great power.

**Multiple Shaft Gear No. 6, Price .....$1.00**

## "IDEAL" NIEUPORT RUNNING GEAR

No. 1

While designed for our Nieuport, to prevent a lot of unnecessary wiring and glueing, it can be used for a running gear for Models of one's own design. Silver soldered throughout from very best brass tubing. Nickel plated.

**No. 1, incl. a 1/16 in. axle, threaded with nuts, for 3 ft. Models, $ .50**
**No. 2, " a 1/8 in. " " " " " 6 ft. " 1.25**

**By mail, 4 cents extra.**

*(For Rubber Tired Wheels see Index).*

## "IDEAL" NIEUPORT WING SOCKETS

No. 1

Very easily attached to your Model by screwing and nailing. Made of best brass tubing, nickel plated.

**No. 1, for 3 ft. Models, to hold 3/32 in. Reed or Rd. Wood, per set of 4 ..... $ .30**
**No. 2, for larger Models, to hold 3/32 in. Reed or Rd. Wood, per set of 4 ..... $ .50**

**By mail, 2 cents extra.**

## "IDEAL" TERMINAL BRASS FITTINGS

No. 1

They are indispensable for fastening ribs, chassis, struts, etc., to the beams and give a very neat appearance to a Model.

**No. 1 for 1/8 in. Rd. Wood or Reed, per set of 6, $ .20**
**No. 2 " 1/16 in. " " " " " " " 2, .10**

No. 2

For Larger Models

**No. 3 for 1/16 in. Rd. Wood or Reed, per set of 6, $ .40**
**No. 4 " 3/8 in. " " " " " " " 2, .25**

Postage Extra.

## BRASS TEE AND CROSS PIECES

These fittings are made of the finest brass and are essential where accurate construction is required. They are extremely light and durable and form excellent joints for wood framing.

**To take 1/8 in. round, per doz. 25c.**

**Brass Tees only, to take 1/16 in. round, per doz. 40c.**

**By mail, 2c. extra per doz.**

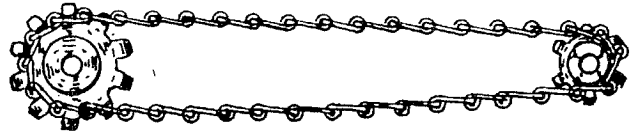
## STEEL BALLS FOR BALL BEARINGS

**Ar quality, 3/32 in., per doz., 10c., postage 2c.**





## BRASS SPROCKETS AND CHAINS



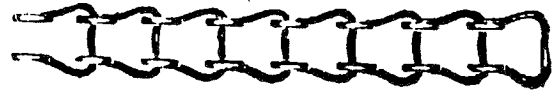
These sprockets and chains are made for use in Models, and consequently in designing them we have taken into consideration that they must be light, strong, durable, and consume a minimum amount of power.

Where there are two or more Propellers on a Model Aeroplane, they can be connected by a chain running over a sprocket on each shaft, like above cut. By using the same sized sprockets on each shaft, both Propellers will run at the same speed, there being no chance for slipping as with belts. It is desirable that they should both always run the same. When there is but one Propeller on the Model, by using different sized sprockets as cut, letting the larger be on the driving shaft, the speed can be increased, or by driving with the smaller sprocket, the speed reduced and the power increased.

**SIZE A.**
**Price, 10c. per foot.**

**(Full Size)**

**SIZE B.**
**Price, 15c. per foot.**



**(Full Size)**

## FINISHED BRASS SPROCKETS TO FIT "A" CHAIN

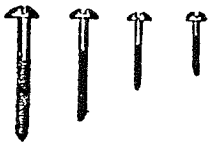
| No. Teeth | Hole | Price | No. Teeth | Hole | Price |
|---|---|---|---|---|---|
| 21 | 6 | 1/8 in. $0.30 | 24 | 10 | 1/8 in. 0.35 |
| 23 | 8 | 1/8 in. 0.35 | 25 | 12 | 3/16 in. $0.45 |
| | | | 28 | 20 | 3/16 in. 0.60 |

## FINISHED BRASS SPROCKETS TO FIT "B" CHAIN

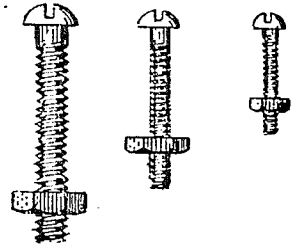
| No. Teeth | Hole | Price | No. Teeth | Hole | Price |
|---|---|---|---|---|---|
| 41 | 6 | 3/16 in. $0.35 | 47 | 12 | 3/16 in. $0.60 |
| 43 | 8 | 3/16 in. 0.40 | 51 | 20 | 1/4 in. 0.90 |
| 45 | 10 | 3/16 in. 0.50 | 53 | 24 | 3/16 in. 1.25 |

## SMALL SCREWS

Made of blued steel and have round heads. Specially adapted for use in our wood. Furnished in the following sizes:



**½ in. long, 5c. doz., 10c. for 3 doz., 30c per gross.**
**¾ in. long, 5c. doz., ½ in. long, 8c. doz.**
**⅝ in. long, 10c. doz.**



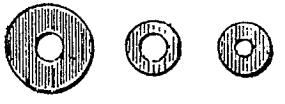
## BOLTS

Our bolts are made of solid brass and supplied with *nuts*. Furnished in 3 sizes.

**⅛x½....5c. each. 3/32x¾....3c. each.**
**⅛x1....3c. each.**

## WASHERS

Our washers are made in various sizes and can be used for many purposes, and are very handy for use between Propeller Shaft and Beam to prevent friction.



**Copper Washers, ⅛ in. inside, ¼ in. outside, 5c. per doz.**
**" " ⅛ " " ⅜ " " 10c. " "**
**Brass " ⅛ " " ¼ " " 5c. " "**

## SCREW EYES

Our screw eyes are made of best quality steel and brass and are neatly finished. These are the *smallest* obtainable.

**Steel.....5c. per dozen; Brass .....10c. per dozen.**

## MODEL MAKING NAILS

Our nails are put up in small envelopes and assorted sizes.

**Price per package.....5 cents; Postage .....2 cents**

*SPECIAL ASSORTMENTS FOR OUR K. D. OUTFITS AT SAME PRICE.*

## ALUMINUM RIVETS

Very handy for making strong models. Are very light and give a strong firm hold.

**Price per ½ oz.....10 cents.**

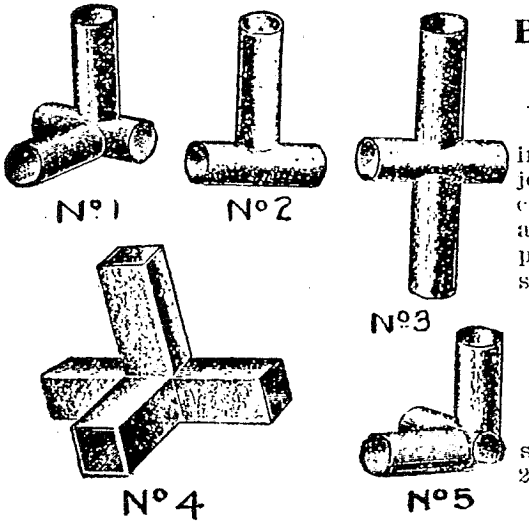
## EYELETS

Very light and strong. Used for lacing silk to the frame. Furnished in the following sizes:

**⅛ in., ⅛ in., 3/16 in., ¼ in., and 5/16 in. Price 10c. per pkge.**








## BRASS SOCKETS

**SILVER SOLDERED**

**Made 3/8 in. and ⅛ in.**

Brass sockets are made in different styles for all joints. They are perfectly constructed, are desirable and light weight. For a perfect model these brass sockets should be used.

| Inside Dia. | ⅛ | 3/8 |
|---|---|---|
| No. 1, 3 & 5 | 15c. | 20c. |
| " 2..... | 10c. | 15c. |
| " 4..... | 20c. | 25c. |

No. 5 is also made in square tubing at 15 and 20c. respectively.

**Postage extra.**

## MODEL AEROPLANE WIRE

This wire is used for stays, guys, and to bind joints. Is useful for many other purposes. It will stand a great stress, although very light. Can be used in connection with our turnbuckles. Comes in four different gauges, 28, 30, 32, 34, in small or large spools.

**Price for small size spool, any gauge ..... 5c.**
**Postage, 2 cents extra.**
**Price for large size spool (¼ lb.) any gauge..12c**
**Postage, 5 cents extra.**

## STEEL GUY WIRE

Our steel guy wire is the finest made. It is very durable—yet light weight.

**Coils of 25 ft. ..... 10 cents.**

## FLAT WIRE

**For Wings of Flying Models.**

By its use the outline and center rib can be made in one piece, the ends being bent to shape and fastened with thread and Ambroid.

Another method: File the wire on all sides until the blue or black disappears, then solder the two parts.

**Furnished in 2 sizes: 3/64 in. x 3/32 in. and 1/16 in. x 3/32 in.**
**Price for every ten feet, 10c. By mail 2c. extra.**

## "IDEAL" FABRIC FOR MODELS

FINE SILK.—We carry the finest grade of silk to be used in covering the wings. It is very light weight, yet will not tear or wear easily. Either white or blue. Weight, ¼ oz. per yard.

**Price per yard.....45c. Per ½ yard.....25c.**

TREATED FABRIC. No. 1.—Our treated fabric is very strong and will stand a tremendous strain. It is already treated when shipped and ready to place on Model. Width, 36 in.; Weight, 3.3 oz. per yard.

**Price per yard .....65c. Per ½ yard.....35c.**

*Add 5c. extra for packing Treated Fabric.*

## EXTRA LIGHT AERO FABRIC

**One grade only—untreated, 26 inches wide.**

Should be treated with "Ideal" Bamboo Varnish which will make it waterproof and remove all skin friction.

**Price per ½ yard, 20c.**
**Price per yard, 30c.**

## "IDEAL" BAMBOO PAPER

A new fabric formed with the Fibre of the Japanese Bamboo; naturally a very strong material and when coated with "Ideal" Bamboo Varnish will make a fine covering for planes, impervious to air and dampness; it can be stretched same as silk or other fabric.

**No. 1—Size of sheet 13 x 36, extra fine and clear.....10 cts.**
**No. 2— " " " 24¾ x 33½, clear and durable .....10 "**
**No. 3— " " " 17 x 22, finest quality vellum.....15 "**

**By mail, folded, 2c. extra per sheet.**

**In tubes, rolled, 7c. extra.**

## FIBERLOID

This is a new and very satisfactory material for wing-covering. In appearance it somewhat resembles celluloid, being transparent, but owing to its extreme flexibility, it is better for the purpose.

Fiberloid is very light, but quite tough. Can be bent easily in any direction without cracking or breaking, and can easily be cut and sewn. It is a thoroughly waterproof material.

**Price in sheet 6 x 20 in.....15 cts.**
**" " " 10 x 20 in.....25 "**

**By mail, 3c. extra.**





## ZEPHYR SKIN

**THE LATEST SUCCESSFUL COVERING FOR PLANES**

In our incessant search for the new things in supplies for Model Aeroplanes, we never lose sight of the practical end of it, and though many articles are brought to our notice, few of them can stand the tests we put them to before final adoption; hence it is seldom that we feel compelled to drop any of the items from our catalog by reason of their falling short of our requirements or as "not making good."

ZEPHYR SKIN IS A SPECIALLY PREPARED SKIN, SMOOTH AS A BABY'S FACE, LIGHTER THAN TISSUE PAPER AND TOUGHER THAN SILK.

*To use, glue the skin rather loosely on the Wing frame, with Ambroid Cement. When the glue has set, hold the wing over the steam of a tea kettle for a minute or so, and when dry, give it one coat of Bamboo Varnish on upper and lower side.*

As many skins as you may need can easily be glued together. to make the required surface.

**Grade A.—Size of skin about 6 x 24 inches. Price, each 15c. per Dozen $1.75**

**Grade AA1.—Size of skin about 8 x 33 inches. Price, each 25c. per Dozen $2.50**

**Postage, 2c. for one to twelve skins.**

**(Six skins of a kind at dozen price.)**

*We advise the purchase of the AA1 grade. It is of best quality, SPECIALLY SELECTED and proportionately cheaper.*

## FIBRE

For Planes of light Racing Types.

**Size of sheet, 4 x 30 inches. Price, each 15c., per doz., $1.50. Postage, rolled, 1c. per sheet.**

*If ordered FLAT add 10 cents for packing.*

## SHEET ALUMINUM

Furnished in 6-ft. lengths, 12 inches wide. Cut to any size.

| Gauge | Thickness about | Price sq. ft. | Price ½ sq. ft. |
|---|---|---|---|
| 34 | 1-160 in. | 15c. | 10c. |
| 30 | 1-100 " | 22c. | 14c. |
| 26 | 1-64 " | 28c. | 18c. |
| 22 | 1-40 " | 35c. | 20c. |
| 20 | 1-32 " | 45c. | 25c. |
| 18 | 1-25 " | 55c. | 33c. |

**Transportation extra. Larger sizes quoted on application.**

**Extra charge for packing: 3 ft. lengths, 10c., 6 ft. lengths, 25c.**

Sheet Aluminum is always furnished 12 inches wide.

## SEAMLESS
## BRASS, ALUMINUM and STEEL TUBING

All our Tubing is very light, being made with a $\frac{1}{64}$ in. wall; each size will telescope into the next larger one.

| Outside Dia. | Inside Dia. | Brass | Aluminum | Steel | per ft. |
|---|---|---|---|---|---|
| $\frac{1}{16}$ in. | $\frac{1}{32}$ in. | 10c. | | | " " |
| $\frac{3}{32}$ " | $\frac{1}{16}$ " | 12c. | 20c. | 25c. | " " |
| $\frac{1}{8}$ " | $\frac{3}{32}$ " | 13c. | 20c. | 25c. | " " |
| $\frac{5}{32}$ " | $\frac{1}{8}$ " | 15c. | 20c. | 28c. | " " |
| $\frac{3}{16}$ " | $\frac{5}{32}$ " | 17c. | 22c. | 30c. | " " |
| $\frac{7}{32}$ " | $\frac{3}{16}$ " | 18c. | 24c. | | " " |
| $\frac{1}{4}$ " | $\frac{7}{32}$ " | 20c. | 25c. | | " " |
| $\frac{9}{32}$ " | $\frac{1}{4}$ " | 22c. | 28c. | | " " |
| $\frac{5}{16}$ " | $\frac{9}{32}$ " | 25c. | 30c. | | " " |

**Square Brass Tubing, Outs. Dia. $\frac{3}{16}$ in., Ins. $\frac{1}{8}$ in. 15c. per foot**
**Orders for ½ foot lengths, ⅔ of above prices.**

We carry some Aluminum and Steel Tubing in stock which is of greater thickness than mentioned above; hence, if the tubes you require must telescope, it should be so stated on your order. We cannot guarantee our outside Diameter exactly.

*Better place your order stating inside Diameter:*

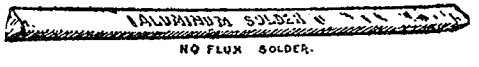
## BRASS, ALUMINUM and STEEL (DRILL) RODS

These Rods have great Tensile strength and are very light. They are useful to experimenters for a great many different purposes, especially for Axles, Masts and Tripods.

| Size, Dia. | Brass for 3 ft. lengths | Steel (Drill Rod) for 3 ft. lengths | Aluminum for 3 ft. lengths |
|---|---|---|---|
| $\frac{1}{32}$ in. | | 6c. | 3c. |
| $\frac{1}{16}$ " | 5c. | 6c. | 6c. |
| $\frac{3}{32}$ " | 8c. | 10c. | 8c. |
| $\frac{1}{8}$ " | 10c. | 15c. | 15c. |
| $\frac{3}{16}$ " | 20c. | 25c. | 25c. |
| $\frac{1}{4}$ " | 30c. | 40c. | 40c. |

**Sold only in full lengths.**

## ALUMINUM SOLDER




**Combination or Noflux Aluminum Solder, either, 25c.; by mail, 30c.**

For joining ALUMINUM to ALUMINUM only. In soldering other metals to aluminum, first tin the other metal (brass, copper, etc.) with COMBINATION SOLDER then solder the two pieces with NOFLUX ALUMINUM SOLDER.

## "IDEAL" BAMBOO VARNISH

*Prepared exclusively for us by the Ambroid Co.*

We desire especially to recommend this Varnish as being the best covering solution compound; it makes any fabric absolutely water and air proof and is the only varnish to be used in connection with "Ideal" Bamboo Paper and Zephyr Skin.

**Price for 2 oz. can, 25c; by mail 4c. extra.**
**Price for six 2 oz. cans, $1.25; by mail, 20c. extra.**
**Price for ½ pt. can, 75c; by mail, 15c. extra.**

## FABRIC COATING SOLUTION

A special compound which is applied to silk wings. It makes them airtight and waterproof. Sufficiently elastic to withstand any stretch of the Fabric, and will not become hard or sticky.

**Price for 2 oz. bottle, 15 cents. By mail 6 cents extra.**

## RUBBEROID

A chemical compound, used on the rubber strands to prevent their sticking together. It doubles the life of the rubber strands.

**Price for 2 oz. bottle, 25 cents. By mail, 6 cents extra.**

## AMBROID

Ambroid is waterproof. It is flexible and elastic. It is indispensable to the Model Aeroplane Maker for the wood and wing covering. Ambroid is ready for use and will set quickly.

**In Airtight Cans. Three Sizes.**
**Small, 10c. Medium, 25c. Large, 50c.**
**Postage 3c., 5c., and 8c. respectively.**

## HAND DRILLS

N° 1

N° 2

N° 3

N° 4

When making models it is absolutely necessary to drill the holes in the thin wood before nailing them, otherwise the wood is very liable to crack. These drills are very handy in numerous ways.

No. 1 Grooved Ebony Handle, 3¾ in. with No. 60 Drill....25c.
No. 2 Plain Ebony Handle, 4 " " " " " ....30c.
No. 3 Grooved Brass Handle, 3½ " " " " " ....35c.
No. 4 Grooved Steel Handle, 2⅝ " " " " " ....35c.

*For price of extra drills see below.*

## COMBINATION DRILL HOLDER

Brass Handle. Adjustable Steel Chuck.

This is one of the most convenient tools for Model Aero Builders. Interchangeable ends accommodate the smallest drill obtainable up to and including 3/32 in.

Price, 50 cents. Postage, 2c extra.

## TWIST DRILLS

No. 60 ..... 6 cents each; per dozen .....60 cents
1/16 in..... 8 " " " " .....80 "
3/32 in.....10 " " " " .....1.00

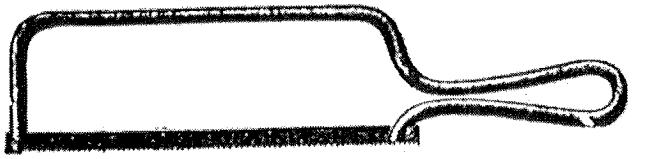
**Orders for three or six of a kind, filled at dozen prices.**

Postage Extra.





## HAND SAWS

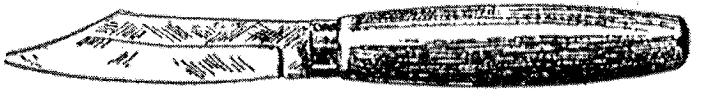


No. 1 Will cut metal tubes and rods as well as wood, complete with one 8 in. blade..... 25c.
No. 2 Finest quality, complete with one 6 in. blade..... 30c.
No. 3 For wood only, including 6 blades..... 25c.
Extra blades for No. 1 and No. 2, each..... 07c.
" " " " 3, per dozen ..... 10c.
Transportation 10c. extra.

## SCREW DRIVER

Swivel top. Works very easily. For small screws.
**Price.....10c. Postage 2c, extra**

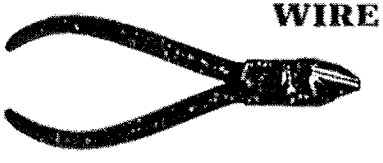
## PROPELLER MAKER KNIVES



These knives are especially adapted for whittling Propeller Blanks. They are made of the finest grade Steel and retain their keen edge for a long time.

**No. 1—50c. Postage 3c. extra. No. 2—75c. Postage 4c. extra.**

## WIRE CUTTERS



These wire cutters are made of the very best Steel and are very handy. We carry two sizes of this tool. No experimental kit is complete without one.

**No. 1, 3½ in.....60c. No. 2, 5 in.....75c.**
**Postage, 5 cents.**

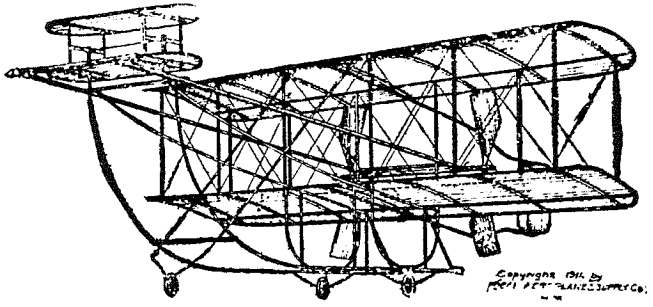
## ROUND NOSE OR FLAT NOSE PLIERS

Best grade steel. To bend Steel or Brass Rods.
**One size only, 3½ in. Price, 35 cents. Postage, 3 cents.**

In ordering, state whether *round* or *flat* nose is wanted.

# "IDEAL" WRIGHT BIPLANE

## THREE FOOT FLYING MODEL



This is the only 3 foot Model of the original Wright Aeroplane that will rise from the ground by its own power and FLY. This Model, which is of such historic value, presents a beautiful and imposing appearance. It has a great constructive value and the builder, when he completes it, will have an accurate conception of the build and appearance of this most perfect of Flying Machines. It possesses the same parts as the large Plane and is assembled in a similar manner.

In addition this machine, though it weighs 14 oz., will rise from the ground and fly as gracefully as a full size Aeroplane, thus affording an excellent opportunity to study flight of this character, an education in itself.

It is a fine Model for exhibition purposes and should find a place in the lecture room of all educational institutions.

### COMPLETE LIST OF MATERIALS FOR 3-FOOT "IDEAL" WRIGHT BIPLANE

In Knocked Down Form

*When ordering single items, delivery charges should be added to list price.*

| | |
|---|---|
| Wood and Reed, cut to proper lengths (75 pieces) | $1.50 |
| Fine Silk for covering | .50 |
| Three "Ideal" Miniature Rubber Tired Wheels 1½ in. | .90 |
| Two Ball Bearing Propeller Shafts | 1.00 |
| " Special Wright Propeller Blanks 10 in. | .40 |
| 64 feet Para Rubber 3-32 in. square | .96 |
| Package Model Making Nails | .05 |
| Spool No. 32 gauge Wire, Tinned | .05 |
| 1 Special Shaped 11 in. Axle, threaded with Nuts | .35 |
| 2 " " Aluminum Tube Braces for Wheels | .70 |
| 1½ feet Brass Rod for front Wheel and Propeller Stops and 7 in. Aluminum Rod 1-16 in. Diameter | .05 |
| 4 pieces ⅝ in. Aluminum Tubing ⅛ in. Diameter | .15 |
| Concise Working Drawing and Building Instructions | .25 |
| | $6.86 |

**Special Price, Complete, ready to assemble ..... $6.00**

*Express 40 cents extra.*

EXTRA SPECIAL, with two (2) CARVED OUT, WRIGHT Propellers INSTEAD of the blanks ..... $7.00

**COMPLETE MODEL, Guaranteed to Fly ..... 20.00**

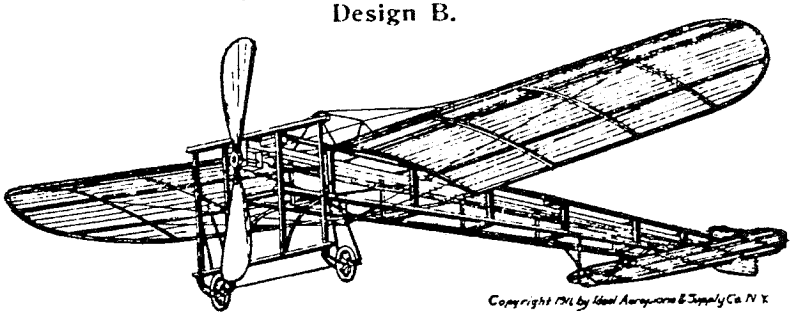




# "IDEAL" BLERIOT MONOPLANE

## THREE FOOT FLYING MODEL

Design B.



This, one of our most popular Models, is an EXACT SCALE REDUCTION of the famous BLERIOT XI, that made the first successful flight across the English Channel and has been the pattern after which a large number of Monoplanes have been constructed.

The Model is easily built from the perfect scale drawing and the precise directions furnished, and will make perfect flights with a little practice of 120 feet or more.

Its Silk Planes, its nickel plated pneumatic tired wheels, its other neat and substantial fittings—all combine to make this Model a marvel of beauty and of scientific value.

Up to this writing we have sold more than 2,500 of these "IDEAL" BLERIOT MONOPLANE outfits to satisfied purchasers, and many of them have written us of the gratifying results obtained.

### COMPLETE LIST OF MATERIALS FOR 3-FOOT "IDEAL" BLERIOT MONOPLANE

In Knocked Down Form.

*When ordering single items, delivery charges should be added to list price.*

| | |
|---|---|
| Wood and Reed, cut to proper lengths (72 pieces) | $1.00 |
| Fine Silk to cover Planes and Rudder | .35 |
| Two "Ideal" Miniature Rubber Tired Wheels, 2 in. | .60 |
| Ball Bearing Propeller Shaft | .50 |
| Improved Aluminum Propeller Hanger | .15 |
| 40 feet Pure Para Rubber, 1-16 in. | .40 |
| HAND-CARVED WOODEN PROPELLER, 12 in. | .95 |
| Brass and Aluminum Rod, Aluminum Sheet for Sleeves | .10 |
| Nails, Wire, Screw Eyes and Screws | .26 |
| Concise Working Drawing and Building Instructions | .15 |
| | $4.46 |

**Special Price, Complete, ready to assemble ..... $4.00**

You may have this outfit with a 12 inch Blank INSTEAD of carved out propeller for ..... $3.25

*Express in either case, 25 cents extra.*

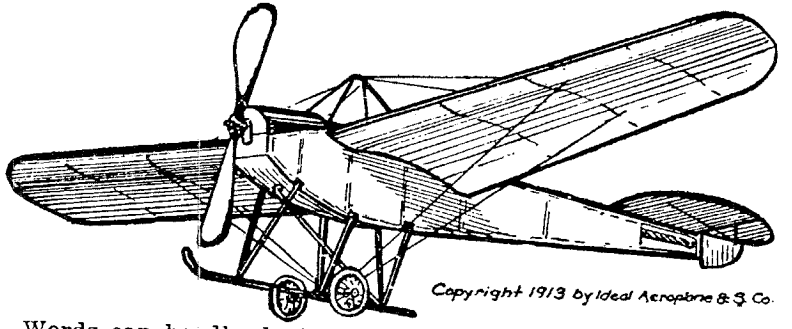
**Complete Bleriot Model, ready to fly after adjustment, packed in wooden box** (*Weight 8½ ounces*) ..... **$13.50**

Express at purchaser's expense. (Weight, boxed, 42 pounds.)

*For flying and adjusting see our Bleriot instruction sheet.*

# "IDEAL" NIEUPORT MONOPLANE

## A THREE FOOT FLYING MODEL




Words can hardly do justice to this most perfect and beautiful Model.

It is an EXACT SCALE REDUCTION of the famous NIEUPORT Monoplane and every detail consistent with a flying Model has been retained; thus the Aluminum Spray Hood, Pneumatic Rubber Tired Wheels, Guy Wires, Tighteners, etc.

The "Ideal" Nieuport is GUARANTEED TO FLY, if constructed properly, according to our Plan and Directions. IT WILL RISE FROM THE GROUND BY ITS OWN POWER. Thanks to the high efficiency of our Mechanical Department, the construction is so simple that any boy can build it.

No other scale Model combines ease of construction, pleasure in building, a beautiful appearance, speedy flying and exactness of reduction from the full size machine, to the extent that does this remarkable flyer.

A splendid exhibition Model; invaluable for lecture room use.

### COMPLETE LIST OF MATERIALS FOR

## 3-FOOT "IDEAL" NIEUPORT MONOPLANE

In Knocked Down Form.

*When ordering single items, delivery charges should be added to list price.*

| | |
|---|---|
| Wood and Reed, cut to size (79 pieces) | $1.00 |
| Ball Bearing Propeller Shaft, Special | .50 |
| Improved Aluminum Propeller Hanger | .15 |
| HAND CARVED WOODEN PROPELLER, 12 in. | .95 |
| 10 feet Pure Para Rubber, ⅛ in. square | .50 |
| 2 Sheets Bamboo Paper | .20 |
| 2 oz. Can Bamboo Varnish | .25 |
| 1 Set of 12 Special Nieuport Sockets, (4 for Wing, 8 others) | .60 |
| 1 NIEUPORT RUNNING GEAR with AXLE | .50 |
| 2 "Ideal" Miniature Rubber Tired Wheels, 2 in. | .60 |
| Aluminum and Steel Rod, Sheet Aluminum and Spool Wire | .13 |
| 1 Nieuport Sundry Envelope, containing necessary Nails, Escutcheon Pins, ¼ in. Screws, Eyelets, and Pins | .15 |
| Concise Working Drawing and Building Instructions | .25 |
| | $5.78 |

**Special Price, Complete, ready to assemble** ..... **$5.00**

*Express 25 cents extra.*

**Complete Nieuport Model, guaranteed to fly,** packed with Main Planes detached. (*Weight 8½ ounces*) ..... **$15.00**





# A SIX FOOT FLYER

To accommodate constant inquiries for 6 Foot Flying Scale Models, we are now able, after proper experiments, to offer

COMPLETE MATERIALS TO CONSTRUCT A

## 6-FOOT "IDEAL" NIEUPORT MONOPLANE

(*For illustration see preceding page.*)

The square wood, reed, etc., for this 6 foot Model is NOT cut to size, but is furnished of the proper dimensions in random lengths.

The Special Nieuport Running Gear necessary, as well as the Special Nieuport Wing and other Sockets will be MADE TO ORDER to accommodate this size Model.

30 ft. of ⅛ in. sq. Rubber are necessary for proper propulsion; so are two 4 in. Rubber Tired Wheels, four No. 2 Turnbuckles, and a 24 in. HAND CARVED PROPELLER of proper pitch.

The Outfit INCLUDES a LARGE BLUE PRINT, drawn half size, but no special directions will go with the same, as the directions for our three-footer will be ample, bearing in mind the different changes in sizes required.

The Complete Materials to construct a six foot "IDEAL" NIEUPORT MONOPLANE include the above mentioned materials, and IN ADDITION:

A special made to order ⅛ in. Ball Bearing Propeller Shaft, a special extra strong Aluminum Propeller Hanger, ½ pint Bamboo Varnish, sufficient Bamboo Paper, Aluminum and Steel Rod, Sheet Aluminum, Wire, Nails, Pins, etc.

**Price, Complete, with a 24 in. carved out Propeller** ..... **$18.50**

If we substitute a Blank INSTEAD of a Carved Out Propeller ..... $14.00

(*Boxing is included in either price*).

*Expressage payable by purchaser.*

———o———

### YOU CAN EASILY BUILD OTHER TYPES OF SIX FOOT MODELS

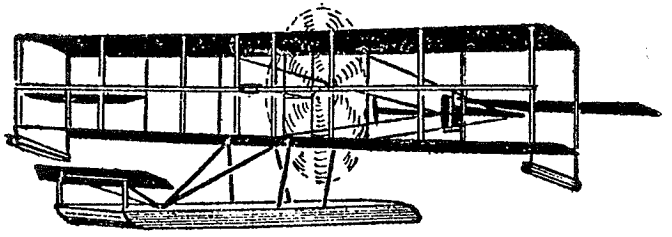
by following our regular three-foot directions and Scale Drawings; these have been so carefully and accurately drawn up, that anyone desiring a six-footer can use the same drawings and with proportionately larger sections of wood, etc., can produce a successful flyer. For the Main Planes it is better to leave the ribs the same size, and to keep them the same distance apart, requiring thereby twice the number.

**Our Mechanical Department is specially equipped for Special Work.**

Submit us your drawings and specifications. We will quote prices on request.

# "IDEAL" CURTISS Convertible HYDROAEROPLANE

## A THREE FOOT FLYING MODEL



This is an EXACT SCALE REDUCTION of the famous CURTISS AEROPLANE, or HYDROAEROPLANE (according to the chassis used) except for slight change required to accommodate a larger proportioned diameter Propeller.

It can be launched from land or water, the change from pontoons to land chassis being quickly made just as it is in the full size machines.

Its success depends in a large measure upon the use of the "IDEAL" MULTIPLE CONVERSION GEAR (see index) and also upon the fact that it is made absolutely waterproof.

The study necessary to produce so practical and yet so light and beautiful a Model has been well repaid by the complimentary letters we have received from those who have built them.

In order to render failure impossible, the drawings are carefully made to the smallest detail and the instruction pamphlet, which explains the construction step by step, constitutes in itself a practical treatise on Model building.

*(Weight, 8 ounces.)*

### COMPLETE LIST OF MATERIALS FOR "IDEAL" CURTISS Convertible HYDROAEROPLANE

In Knocked Down Form.

*When ordering single items, delivery charges should be added to list price.*

| | |
|---|---|
| *All necessary Spruce and Reed in 3 foot lengths, and special 3-32 in. Round Wood in foot lengths. A liberal amount in excess of what is actually required | $1.50 |
| 3 Sheets of Bamboo Paper | .30 |
| 3 "Ideal" Miniature Rubber Tired Wheels, 1½ in. | .90 |
| "IDEAL" MULTIPLE CONVERSION GEAR | 1.50 |
| HAND CARVED WOODEN PROPELLER, 12 in. | .95 |
| 40 feet Para Rubber No. 14 (usually called 3-32 in.) | .60 |
| 1 Special Threaded 7¾ in. Axle, with Nuts | .15 |
| 2 Rear Rubber Hooks | .20 |
| 2 feet Aluminum Tubing | .40 |
| 8 oz. can Bamboo Varnish | .75 |
| Aluminum Rod 1-16 in., 1 spool 34 gauge Wire, 2 "S." hooks, 3 doz. Screws and a few Escutcheon Pins | .25 |
| Concise Working Drawing and Building Instructions | .35 |
| | $7.85 |

**Special Price, Complete, ready to assemble ..... $7.00**

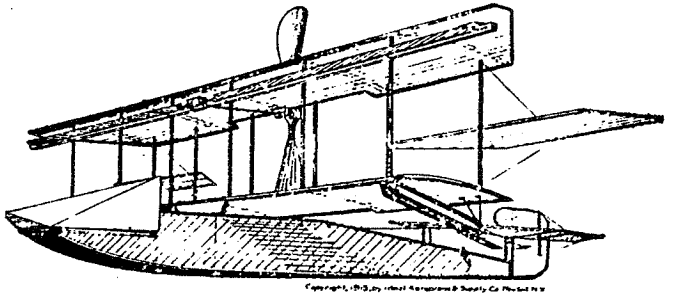
*Express 40 cents extra.*

**The wood for this outfit is furnished in original lengths to be cut as per plan. All of it is so small that it can easily be cut to size with an ordinary pen knife.*





# "IDEAL" CURTISS 3-FOOT MODEL FLYING BOAT



This Model is an EXACT SCALE REDUCTION of the famous CURTISS FLYING BOAT, that has made such a sensation in the field of Aeronautics.

In addition, it is an excellent flyer and, owing to its waterproof and sturdy construction, is unaffected by contact or impact with the water. It, therefore, makes a splendid and fast Motor Boat.

With its Aluminum Spray Hood, graceful hull, parabolic Planes, and the "Ideal" Conversion Gear, which latter suspends the rubber strands in the most inconspicuous position, this Model is a marvel of grace and beauty and is wonderfully well adapted to exhibition purposes.

It is absolutely GUARANTEED TO FLY, but not to rise from the water. If, however, the suggestions outlined in the directions are followed, this latter performance can be accomplished.

With the use of the "Ideal" Launching Chassis, the Model will rise from a smooth runway, and fly.

### COMPLETE LIST OF MATERIALS FOR "IDEAL" CURTISS 3-FOOT MODEL FLYING BOAT

In Knocked Down Form.

*When ordering single items, delivery charges should be added to list price.*

| | |
|---|---|
| Wood and Reed, cut to proper size (114 pieces) | $1.50 |
| CARVED OUT PROPELLER, 10 in. | .85 |
| 4 Sheets Bamboo Paper, No. 1 | .40 |
| 8 oz. Can Bamboo Varnish | .75 |
| "IDEAL" CURTISS CONVERSION GEAR | 1.50 |
| 2 Rear Rubber Hooks, with Nuts | .20 |
| 50 feet No. 14 Rubber (so-called 3-32 in. square) | .75 |
| Sheet Aluminum and Aluminum Rod | .12 |
| Washers, Asst. Screws, Nails, Wire and Corks | .30 |
| Concise Working Drawing and Building Instructions | .25 |
| | $6.62 |

**Special Price, Complete, ready to assemble ..... $6.00**

You may have this outfit with a 10-in. Blank INSTEAD of the carved out Propeller for ..... $5.35

*Express in either case 40 cents extra.*

**Complete 3 Ft. Flying Boat, in wooden box ..... $25.00**

*(Weight, 10 ounces.)*

"IDEAL" LAUNCHING CHASSIS, made of Brass Rod and including three 1½ in. Miniature Rubber Tired Wheels.... $1.25

# "CECIL PEOLI" RACER

## RECORD BREAKING MODEL OF CHAMPION FLYER CECIL PEOLI

*(For illustration see opposite page.)*

This is the very model that broke all American records for distance and duration in the air, at Contests held at Van Cortlandt Park, New York City, August 19th and September 16th, 1911, making a flight of 1,691 feet 6 inches in distance, and one of 48 4/5 seconds in the air. These are the official records in competition. Unofficially it has flown 2,500 feet, and remained in the air over a minute.

This is not just talk. The Cecil Peoli records are regular. We can prove them at any time. (See opposite page.)

Cecil Peoli is NOW A BALDWIN AVIATOR and has been since the summer of 1912; consequently his record of 1911 has been broken. There is, however, no other Champion Model developed, suitable for commercial purposes or one which could be built and flown successfully by others as *this, the* CECIL PEOLI RACER.

FURTHERMORE, WE ARE PUTTING THIS MODEL ON THE MARKET WITH THE SANCTION AND UNDER THE SUPERVISION OF CECIL PEOLI AND WITH HIS OWN INSTRUCTIONS AND ARE PROUD THAT WE ARE PRIVILEGED TO USE HIS NAME IN CONNECTION WITH IT.

WITH THIS MODEL OR THE PARTS, AND HIS INSTRUCTIONS, THERE IS NO REASON WHY YOU SHOULD NOT DUPLICATE HIS SUCCESS.

**Complete Model, ready and guaranteed to fly, Price.....$8.00**

*(Weight, 4 ounces.)*

**Plan and full instructions to build and fly this Model..... .25**

*The facsimile signature of Cecil Peoli appears on each authentic plan and direction sheet.*

# "CECIL PEOLI" RACER

## In Knocked Down Form.

COMPLETE OUTFIT, containing detailed plan and instructions to BUILD AND FLY this famous Model, Bamboo, all Wood, cut to proper size, 40 feet 3/32 in. Rubber, two No. 1 "Ideal" Combination Propeller Blocks and Shafts, Bamboo Paper, "Ideal" Bamboo Varnish, 1 PAIR OF CARVED OUT "PEOLI" RACING PROPELLERS, 2 S Hooks and Steel Rod for front rubber. **Price.....$3.50**

We have listed this outfit with carved-out propellers so that there will be no difficulty about flying it at once. If, however, you wish to carve out your own propellers, we will furnish the above outfit with "Peoli" Propeller Blanks **INSTEAD of carved out propellers, for..$2.50**

**SPECIAL INDUCEMENT.**

**Add 20c. to either outfit for prepaid express shipment to points East of Rocky Mountains, 25c. to Denver and Western Points.**

AMBROID is **NOT** included in this outfit, but should be used in preference to any other cement.

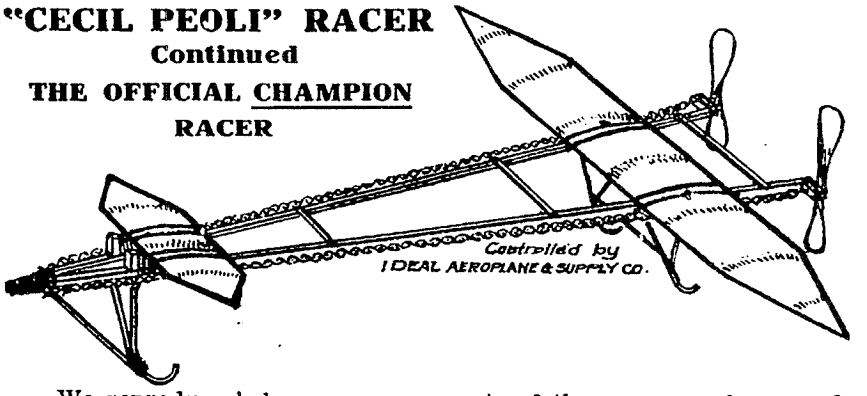




# "CECIL PEOLI" RACER

## Continued

## THE OFFICIAL CHAMPION RACER




We reproduce below some comments of the press on the record-breaking flight made by the Cecil Peoli Racer, in August and September, 1911. The unanimity of opinion with which these great periodicals proclaim the Peoli Model the Champion, puts into their proper place the claims advanced by a number of concerns that they control "the champion racer."

The New York *Herald*, (Sept. 16, 1911), says in part:—

"So far the longest flight made by an American boy is 1,691 feet, which distance was made at the Van Cortlandt Park Aerodrome several weeks ago by Cecil Peoli, a boy who has come to the front in model aviation in the last few months."

The *Evening Mail* of New York says in part:—

"Cecil Peoli, of New York City, has broken the Pierce record with a machine that flew 1,691 feet—about one-third of a mile.

"The distance made by young Peoli is remarkable."

*Extracts clipped from the leading Aeronautical publications:—*

*Aircraft* says:—

"A MODEL ENDURANCE CONTEST.

"Best time, 48 4/5 seconds.

"The contest held by the New York Model Aero Club at Van Cortlandt Park, on Saturday afternoon, September 16th, 1911, was a most interesting occurrence, and was witnessed by about 2,000 enthusiastic spectators. There were 17 entrants.

"One of the models entered by Mr. Cecil Peoli, **America's champion model-maker,** won to-day by a flight of 48 4/5 seconds. The distance record is also held by Cecil Peoli, as his model made a flight of 1,691 feet and 6 inches. As this distance is measured straight of way from the point of launching to the point of landing, irrespective of curves or circles, the distance of this flight is wonderful and shows the skill and perseverance of the holder of the record."

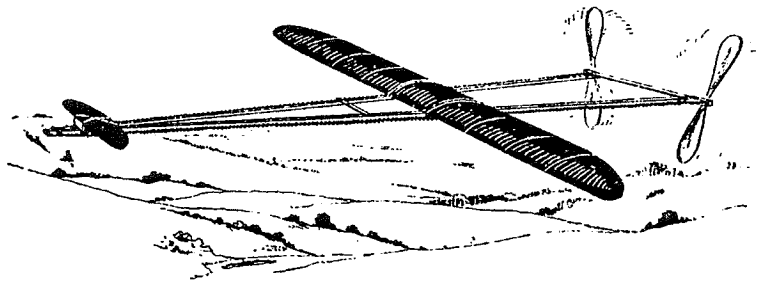
*Aero* says:—

"MODEL FLIES 1,691 FEET.

"New York, N. Y., Aug. 19.—A world's distance record for model aeroplane flights was reported made at the weekly tournament in Van Cortlandt Park today. The contest was for the Edward Durant Cup and Cecil Peoli won over 34 contestants with a distance of 1,691 feet 6 inches. The official record for America was previously less than 1,000 feet."

***The "Cecil Peoli" Racer is controlled EXCLUSIVELY by Ideal Aeroplane & Supply Co., N. Y.***

# "IDEAL" THREE FOOT RACER



This is the only three foot racing machine on the market that can compete with other racers in contests and seldom fails to win. IT IS GUARANTEED TO FLY 1,000 feet after due practice. Under favorable conditions and with extra rubber it will fly much further than the distance guaranteed.

(*Unofficial Record at Van Cortlandt Park*, 1,160 *feet.*)

The "IDEAL" three foot RACER is constructed of the very best and fully tested materials. The designer has brought the machine down to the utmost simplicity and succeeded in producing a marvelously staunch, sturdy and efficient flyer. Mark well, that the "IDEAL" three foot Racer is not a flimsy toy but is a durable record-breaking machine which can be flown for months without becoming damaged. This is one of the advantages which has resulted from simple design and painstaking construction.

The appearance of the "IDEAL" three foot RACER is a very neat one and the materials used render it practically indestructible.

**Complete Racer, ready and guaranteed to fly .....$3.00**

*By express, 50 cents extra.*

**Plan, with building and flying instructions ..... .15**

YOU CAN BUILD THIS

## "IDEAL" THREE FOOT RACER

IN ONE HOUR AND FLY IT over 1000 FEET

Think of it, a guaranteed flight of more than 5 city blocks.

COMPLETE OUTFIT, in knocked down form, containing detailed plan with building and flying instructions, all necessary wood, eleven feet of ⅛ inch square Para Rubber, 1 pair of "Ideal" Fibre Racing Propellers (6 in.), 1 pair Aluminum Racing Propeller Hangers, 1 pair No. 5 Bearings, 1 special Aluminum Brace, Fibre for Planes, Screws, etc., **and as a special inducement a No. 2 Patent Friction Winder. Special Price .....$2.00**

By express, 25c. extra.

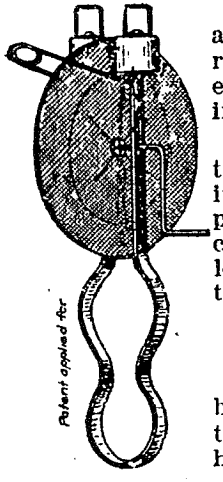




## "IDEAL" PATENT FRICTION WINDER

Patented, June, 1913.

This patented Winder will save you a lot of bother every time you fly your Model. It multiplies like a fishing reel.




No. 1

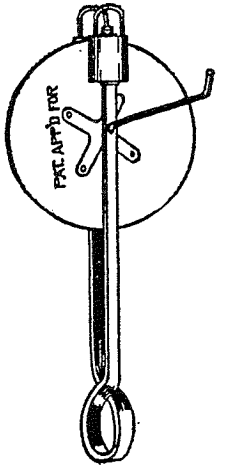
When you use this winder you are sure that each set of the rubber strands is wound an equal number of times. This is important for straight flights.

**No. 1.** Ratio 5 to 1. Every time you wind the handle once, it makes 5 turns on the propelling strands of your machine. It winds up both propellers at once in one-tenth of the time it takes to wind by hand.

PRICE, with instructions, postpaid ..... **50c.**

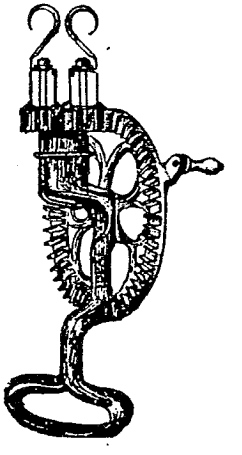
**No. 2.** Ratio 4 to 1. Winds up both propellers at once in ⅛ of the time it takes to wind by hand

PRICE, with instructions, postpaid ..... **35c.**




No. 2

## "IDEAL" WINDER FOR RUBBER STRANDS

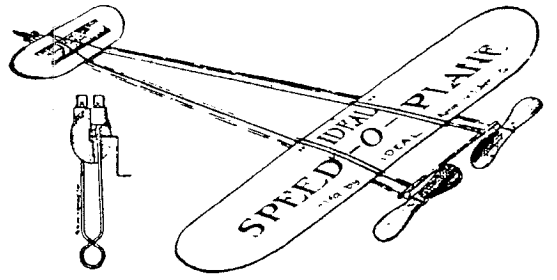


This is a neat and effective device for winding the rubber for twin propellers at one time, thus insuring the same number of turns on each one, and obviating the former tiresome operation of winding each set separately. It avoids the danger of miscounting, which has so often spoiled many a straight flight.

Can be used for single or double Propeller Models, the ratio being 5 to 1 for each set of strands, that is, one turn of the handle winds the rubber 5 times.

**Price complete.....75 cents**
**By mail in box....85 "**

## "IDEAL" SPEED-O-PLANE
### A ONE FOOT FLYER




HERE'S A WONDER FOR ITS SIZE AND COST!

Do you know that you can buy a GUARANTEED-TO-FLY midget racer, with double motor-strands and twin-propellers, INCLUDING a special size "Ideal" Patent Friction Winder for only *SIXTY-FIVE CENTS?* Did you ever hear of anything like that before?

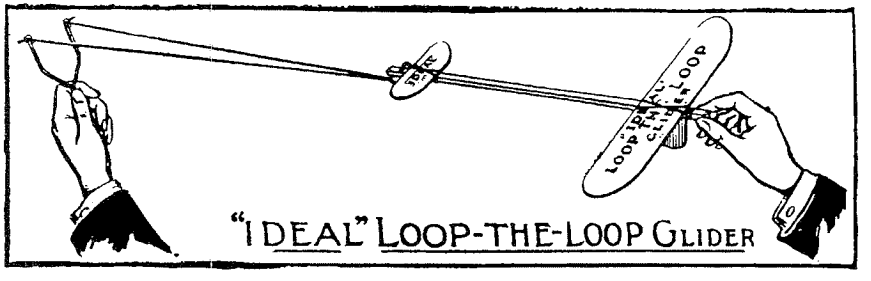
It required exquisite workmanship to turn out such small parts, and still retain the accuracy that insures perfect flight.

It has a very neat appearance, and is PRACTICALLY INDESTRUCTIBLE. From last reports received it has flown OVER 175 FEET.

The Speed-o-plane comes all set up, ready for instant flight.

**Price, Complete, with instructions and guaranteed to fly....65c.**
*By mail, 10 cents extra.*

## "IDEAL" LOOP THE LOOP GLIDER



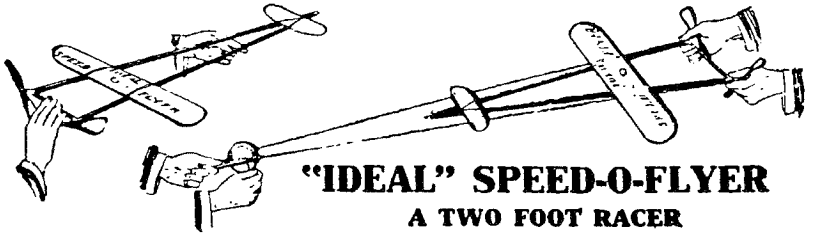

This aerial toy affords loads of fun for the whole family. It is a skeleton Flyer, propelled from a sling. It can be caused to either fly in a graceful curve for 250 feet straightaway, or perform a "Loop the Loop" or a "Dip the Dip," and countless other startling evolutions, just as did Pegoud, the intrepid French Aviator.

**Price, including sling, Fibre Planes .....25c.**
**" " " Wooden Planes .....45c.**
*By mail, 5 cents extra.*





### A GUARANTEED FLYER
## THE BEST VALUE EVER OFFERED



## "IDEAL" SPEED-O-FLYER
### A TWO FOOT RACER

"IDEAL" SPEED-O-FLYER is of a very simple design, but made from high-class materials. Considering its small size, its flight is remarkable, its glide being as beautiful as that of any other Racer made.

It will easily outclass other two footers even of more expensive construction and will outdistance many of the three foot types.

It is equipped with two special 4½ in. true pitch Fibre Propellers and is PRACTICALLY INDESTRUCTIBLE.

There is no longer an excuse for anybody to not own a record-breaking racer, the price of this being so nominal.

*RECORD at Van Cortlandt Park, New York City, 600 feet.*

**Sold Set Up, ready for instant flight, including a No. 2 "Ideal" Patent Friction Winder and Express prepaid..$1.50**

## "IDEAL" AERO-TOP

### A CLEVER LITTLE FLYING TOY
### Great Sport for Young and Old

Wind it up like a top—pull the cord—and Bzzz, the Propeller AND stem flies into the air like a miniature Aeroplane 300 to 400 feet up.

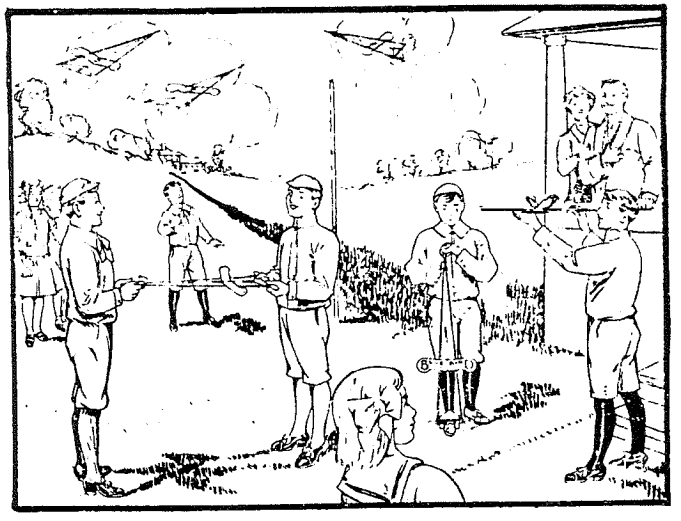
Illustrated directions on box.

Very simple, durable and easy to operate.

**Price, Postpaid, 25c.**

*Get it from your dealer in your town. He probably has it and can save you the postage cost.*

# BLUE BIRD
## RACING AEROPLANE



## THE FAMOUS, SWIFT FLIGHTED BLUE BIRD

A handsome, graceful, 22 inch flyer, **GUARANTEED TO FLY.** Will mount to a height of 100 feet or more and make flights of 500 feet and more.

Flexible frame with main plane cut from our indestructible fibre. Designed by a well known engineer to attain automatic stability.

Equipped with tail plane of burnished aluminum and twin propellers running on brass bearings. Only pure para rubber is used for motive power.

Complete outfit is packed in attractive box with our Patent Multiple Winder and our special Foot Gear, by use of which it is possible for one person ALONE to hold and wind the BLUE BIRD at the same time.

So simple to operate that any boy can do it by following the clear instructions. An intensely interesting and instructive toy.

**PRICE, COMPLETE** ..... **$1.25**

Packing and transportation **25c.** extra (if ordered by mail).

Blue Bird Propellers, per pair **25c.** Rubber Strands, per set **25c.**






# THE IMPORTANCE OF MODEL FLYING

By

**CHARLES V. OBST**

MODEL EDITOR "AIRCRAFT."

PRES. AERO SCIENCE CLUB OF AMERICA.

Organized Model flying has now been in existence for a number of years and has been firmly established both as a sport and as a science. The Flyers are recognized everywhere as students and experimenters in Aeronautics, working on the same principles and problems as the builders of man-carrying machines.

The scientific value of the Model is acknowledged by all the leading associations and authorities the world over. The same principles and laws apply to any Aeroplane regardless of its size, and for this reason Models offer an inexpensive and excellent opportunity for those who have new ideas and theories of flying machines, which they desire to work out and demonstrate.

The part that the scientific Model Aeroplane has played in the development and progress of Aeronautics is much greater than is generally supposed. Without the aid of the experiments conducted with Models, the Aeroplane would not have been developed to its present state of efficiency for some time to come. Noted scientists, men such as Maxim, Langley, Eiffel and others, who have done so much for the aeronautical progress by their numerous and valuable experiments, depended largely on Models and Model parts to obtain the desired results in their work.

Model flying is no longer a novelty or a pastime. The Model experimenters of today do not build their machines simply to throw into the air and fly, but to prove a new theory, to test new devices and principles, and to increase the efficiency of the machine in general. Those Models holding world's and American records at present are demonstrations

of this fact; they are not made just for flying, but to fly further, faster or for a greater length of time than did their predecessors.

The flying of Aeroplane Models is now regarded by the general public in quite a different light from what it was a few years back, when it had just started. Practically every well made Model, launched today, flies for considerable distance and duration, giving the onlookers no chance to consider its faults, but awakening their enthusiasm and interest. The modern Model Flyers are looked on with favor and approval as the result of the good performances of their improved machines.

The interest in Model Aviation centers about the clubs which bring the flyers together and organize the flying. There are Model Aeroplane Clubs in every country in the world in which any interest is shown in Aircraft. In this country the AERO SCIENCE CLUB OF AMERICA regulates and controls the American Model Flying. This national association is recognized as the ruling body by all. A group of five or more Model Flyers may be organized as a branch of the Aero Science Club in any city or town.

For the beginner in this great sport, who desires to become a good Model Flyer, patience and a good power of observation are the main requisites. Every flight is a lesson in itself, every turn, dip or fall, reveals some virtue or fault in the Model, which, by consistent study and observation, can be ascertained and corrected.

By joining a club in which every member can have full and clear explanations and demonstrations, a beginner can progress much faster than by working alone. He need not spend a great deal of time and work in studying those details which have already been gone over by others. By being a member of a progressive up-to-date club he can, in a comparatively short time, gain for himself the distinction of being a first-class Model Flyer and a winner in the competitions.

Consistent good flying is possible only with a well designed machine. The importance of planning the Model before building is not realized by all flyers. The design of a Model is even more important than construction or flying de-





tails. Fortunately the Model Builders in general are now giving more attention to their design, and improvements are rapidly being brought out. Designs already worked out and sold by reputable supply houses, are safest to start with.

In building, strength is the first consideration; while lightness is also very desirable, it should never be obtained by weakening any part of the Model. It must be light in design, but constructed of a combination of the strongest and best materials obtainable. Quality is what counts, not size. A thorough understanding of the strains and forces encountered in a flying Model, together with a good knowledge of materials enables the expert builder to construct a Model capable of withstanding all shocks, yet very light.

While they are building and learning about Model Aeroplanes simply for the fun of it, many Flyers are now laying the foundation for an education in Aeronautics. It is a scientific sport in which there is much to be gained by those interested.

*No attention can be paid to inquiries relating to this article unless these contain a self-addressed stamped envelope.*

## OUR SENTIMENTS EXACTLY

Extract from HARPER'S AIRCRAFT BOOK.

Copyright, 1912, by Harper & Brothers.

Those unfamiliar with Model Aeroplane work and the advances made in Model Aeroplane construction will be surprised if they will visit a dealer in Model Aeroplane Supplies.

In addition to selected materials, such as woods, fibres, bamboo, rattan, metal, etc., they will find a great variety of dainty carved propellers, metal propellers, and fibre propellers for machines of every sort and size.

Shafts, bearings, metal braces, and even ball-bearings, are constructed solely for Models, and an infinite variety of tiny rubber-tired wheels, axles, turnbuckles, gears, sprockets, and other parts are to be had ready-made, and as carefully finished as their larger counterparts used in real Aeroplanes.

In many cases better results may be gained by purchasing all such accessories ready-made, than by attempting to fashion them by hand, for they are wonderfully cheap, and unless you are well provided with a fine assortment of metal-working tools it is a difficult matter to produce accurate metal fittings for Models.

—By permission of Messrs. Harper & Brothers.

## "IDEAL" SCALE DRAWINGS

**If you are interested in Aeroplanes at all you should know how to read a mechanical Drawing. The construction of any machine should be preceded by a study of the Drawing, which is a concise indication as to the shape, size, and materials required.**

**We have spared no pains with our drawings and have had them made by engineers. They are superior to any others on the market. (All our drawings include full instructions.)**

| | | Scale | Price Postpaid |
|---|---|---|---|
| WRIGHT, 3 ft. Model | BIPLANE | 3 in. to 1 ft. | $ .25 |
| BLERIOT, " " " | MONOPLANE | " " " " " | .15 |
| NIEUPORT, " " " | " | half size | .25 |
| CURTISS, " " " | HYDROAEROPLANE | " " | .35 |
| CURTISS, " " " | FLYING BOAT | " " | .25 |
| CECIL PEOLI 3 ft. | CHAMPION RACER | " " | .25 |

**Complete Set of Six Postpaid, $1.25.**

## BLUE PRINTS

| | | Scale | Price Postpaid |
|---|---|---|---|
| WRIGHT, 3 ft. Model | BIPLANE | half size | $1.50 |
| BLERIOT, " " " | MONOPLANE | " " | 1.50 |
| NIEUPORT, " " " | " | full " | 1.50 |
| CURTISS, " " " | HYDROAEROPLANE | " " | 2.00 |
| CURTISS, " " " | FLYING BOAT | " " | 1.50 |
| NIEUPORT, 6 " " | MONOPLANE | half " | 2.00 |

## BOOKS

Since the last issue of our catalog there has been published a book on Aircraft, that so completely traces the development of the industry, that we are this year listing it in preference to all other books on Aeronautics.

*We have had an opportunity of examining the proofs of this valuable volume, and we unhesitatingly recommend it as the most authentic, the most complete, and most practical work of its kind; more complete than any of the volumes we have heretofore recommended.*

### HARPER'S AIRCRAFT BOOK FOR BOYS

WHY AEROPLANES FLY; HOW TO MAKE MODELS, AND ALL ABOUT AIRCRAFT—LITTLE AND BIG.

By

ALPHEUS HYATT VERRILL.

The object of this book is twofold: to explain in a simple, lucid manner the principles and mechanisms involved in human flight, and to tell boys how to design and construct model aeroplanes, gliders and man-carrying machines. The Author's purpose has been to furnish a book on aircraft not only accurate, but simpler, more comprehensive and up to date than anything yet written.

**260 pages, profusely illustrated with diagrams, photographs and drawings. Crown 8vo. Cloth, postpaid, $1.14.**





## NOTES

In the field of Model flying there are two distinct and separate types of Models being built.

The first type is an exact or approximate reduction of Models of existing man-carrying Aeroplanes, such as the Wright, the Curtiss, the Bleriot, the Nieuport, etc.

The second type comprises so-called "Racers" and "Flyers," which bear no resemblance to man-carrying types, but make very long and rapid flights.

Both types can be built in any dimensions from the full size man-carrying Aeroplane down to the smallest Model, but the three foot size is considered the best, as larger machines are difficult to handle.

To gain a knowledge of construction, you should BUILD a Model. You get far more knowledge from building, than from the flying of Models already built. Either type, preferably the Racer, which is easier to fly, will teach the young builder the principles and laws of flying.

In our opinion progress is more likely to be made by Model builders, who grasp their first principles of Aeronautics by building both kinds of Models, than by those, who confine their efforts to the racing type in the attempt to produce a record breaking Model.

---

It is easy enough for anyone to get together paper, rule, and ink, and slap down a "scale-plan" of an aeroplane. It is a wholly different matter, however, to make a Model from this plan that will actually fly.

We make these remarks because at present the market is flooded with inaccurate plans and drawings, which are represented to be exact, but which are far from being accurate. In contrast with these we offer "Ideal" Plans, which are absolutely and exactly accurate in every detail, and are accompanied by clear instructions, and which cost no more than the other kind.

**Send to-day for one of our plans, and start building a Flying Model.** If you need any advice or assistance, command our services. Enclose a stamp with your letter; we shall answer it at once.

---

*May 24th*, 1913.

*"Some time ago I purchased from you a plan and book of instructions on how to build a "hydro-aeroplane" and now I have completed my model, and my friends and relatives say it is the most perfect machine they have ever laid eyes on, and I wish to say one thing: that your plans are the most accurate and concise that I have ever worked by."*

*ERWIN BOWSER,*
*427 Falcon Ave., San Francisco, Cal.*

# FLYING MODEL AIRPLANES

÷JUST OUT÷

OUR NEW CATALOGUE 52 PAGES

Wading River Mfg. Co.

EST. 1909.

672 B-WAY B-KLYN, N.Y.

SEND 10 ¢. FOR ONE.

---

## AERO RACER

—a real model-aeroplane with aluminum propeller and rubber motor, all ready to fly. Don't delay, send only 25 cents and receive this wonderful model by return mail.

FREDERICK THIELE, 159 COOPER STREET, BROOKLYN, N. Y.

---

## BOYS YOU CAN BUILD These Wonderful Model AEROPLANES

They are exact scale duplicates of famous large aeroplanes. Start building one now. It's easy; fun to build and fly. Two complete full-size building plans and detail instructions show exactly how to cut and fit each piece; how to make the wings, propeller, wheels and all parts; and make it easy for you to build and fly these accurate miniatures of famous aeroplanes.

**NOW READY** { LOENING Racing MONOPLANE / S. E. V. SCOUT BIPLANE

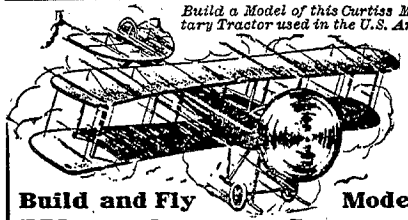
The most complete and easiest understood model plans ever presented, on sheets 24 in. by 36 in., either set sent postpaid for $1.00. (State which you want.)

Send 2c stamp and address of three interested friends for our new price list of guaranteed model aeroplanes and supplies.

**W. H. PHIPPS,** (Model Dept.) **Baldwin, Long Island, N. Y.**

*(Guaranteed as represented or money refunded)*

---



*Build a Model of this Curtiss Military Tractor used in the U.S. Army*

**Build and Fly Model**

## War Aeroplanes

that are perfect copies of real, war-famous airships; that rise from the ground by their own power and fly 50 to 100 feet in the air. It's easy! We furnish IDEAL Accurate Scale Drawings and Building and Flying Instructions which show how to construct a 3-foot Model Aeroplane that will fly.

**Send Today for These Drawings and Instructions**

| | | |
|---|---|---|
| Curtiss Military Tractor | **25c** | Wright Biplane |
| Bleriot Monoplane | | Curtiss Hydroplane |
| Nieuport Monoplane | EACH | Curtiss Flying Boat |
| Taube Monoplane | (8 for $1.75) | Cecil Peoli Racer |

*IDEAL Aeroplane Construction Outfits, containing all parts and materials needed to build these Aeroplanes, are sold by leading Toy, Sporting Goods and Department Stores. Ask your dealer for IDEAL Aeroplane Construction Outfits. They make building easy!*

**Send 5c for This Aeroplane Catalogue**

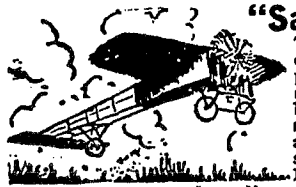
Tells about Model Aeroplanes and how they are built. About Racing Aeroplanes and Flying Toys. Lists all kinds of parts and supplies to build them with. 48 pages for five cents.

**Send for it today.**

**IDEAL AEROPLANE & SUPPLY CO.,**
86 West Broadway, New York

---

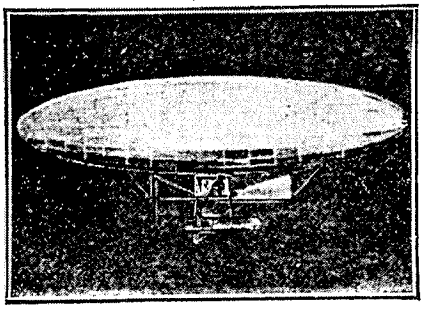
## I am a "Wonderplane" "Sail Me"



The most wonderful toy airplane made. No springs to break. It does stunts indoors and out impossible for the high priced machine. It loops the loop, dives and straightens itself. It glides and makes tail spins. Will circle around and return to your hand. Directions for these and many other stunts in each package. By mail, complete, **15c**

**Universal Distributors, Box 600, Stamford, Ct.**

---



## A Real Zeppelin Model Dirigible Airship

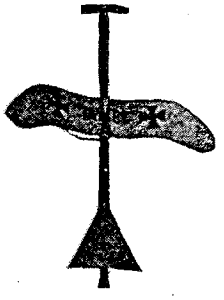
**FIVE FOOT Complete Airship $1.00 Prepaid.**

Every outfit is complete with large Parachute, Dropping Apparatus and equipped with Inflating Arrangement. **EVERY OUTFIT GUARANTEED TO FLY** One-Half Mile and drop Parachute from approximate height of 500 feet. Airship made from fabric tissue; is easily retrieved and may be flown numbers of times with a complete exhibition at each flight. Can be flown free, or on a still day, attached to light cord.

### It Will Amaze You!

Every outfit warranted to give satisfaction equal to that of any article in the aerial field. Shipped postpaid anywhere for $1.00. Money refunded if not satisfied.

## TAUBE Loop-the-Loop RACING AEROPLANE



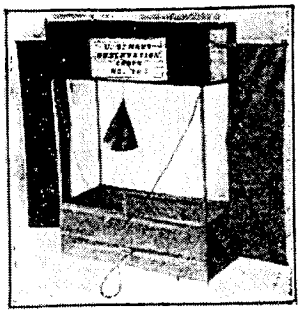
Complete Light Weight Model—looks and flies like the big machines. Will Loop-the-Loop or fly straight 200 feet.

**Each outfit complete with Launching Device, prepaid, - 50 cents**

## UNITED STATES WAR KITE

Cloth Planes Complete. One set of Side Ailerons, adjustable, Silk Parachute and Releasing Device. This Kite is of the Biplane Type and will carry aloft light Camera, Parachute and model Bombs at the same flight and drop them safely and with remarkable precision. Exact model of Man-Carrying Kites in use at the Front.

**Price, postpaid, $1.50**

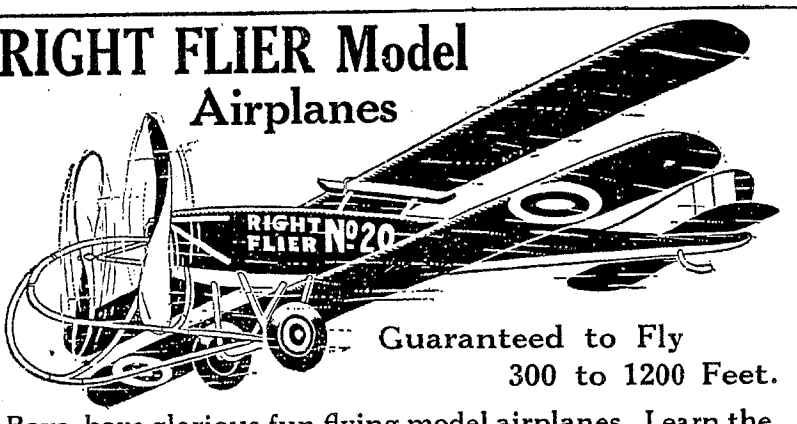


**All of the above Flyers prepaid to one address - - $2.75**

**THE AERO COMPANY, Dept. 20, BINGHAMTON, N. Y.**

---

## RIGHT FLIER Model Airplanes




**Guaranteed to Fly 300 to 1200 Feet.**

**Boys, have glorious fun flying model airplanes. Learn the principles of aviation—the greatest sport in the world.**

You can get RIGHT FLIERS in "rise-off-the-ground" and "hand launch" models; in monoplanes bi-planes, speed and racer styles; set up ready to fly, or knocked down if you want to build your own.

RIGHT FLIERS ARE THE FINEST TOY PLANES BUILT

Inexpensive, $3.75 to $9.00 and up.

No other model airplanes like them—made of a wonderful Central American wood that weighs only half as much as cork. RIGHT FLIERS are very light and strong—if any part gets broken it can be repaired easily and quickly at very small cost. The better stores are carrying complete stocks of RIGHT FLIERS and parts—go and see them.

WRITE FOR RIGHT FLIER ILLUSTRATED BOOK—IT'S FREE

Contains valuable information; describes and illustrates beautifully all models; gives prices, also lists parts for building model airplanes. Should your favorite dealer not have RIGHT FLIERS in stock tell him they can be had quickly thru his jobber, or we will supply direct. Just tell us the name of your dealer when sending for the book—we'll get the Right Fliers to him. The only time there is, is *now*. Begin at once to enjoy this great all-the-year-round sport—get *your* Right Flier and win the prizes.

RITCHIE-WERTZ COMPANY, Dayton, Ohio

"The Birthplace of Aviation"

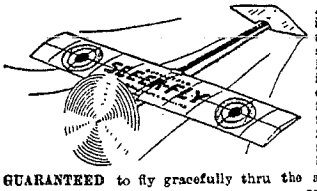
---

**1916 - 1922**

Ads from the American Boy Magazine ..... Ideal ads proliferated as the most active manufacturer throughout World War I and into1922 when Selley became equally active.

---

## Oh Boy! "Twist the Propeller and SEE-ER-FLY"




A real genuine Flying Airplane, strong, sturdy and scientifically built. Each part is correct in design, stamped out of steel and fibre, beautifully finished and comes fully assembled in a very attractive box.

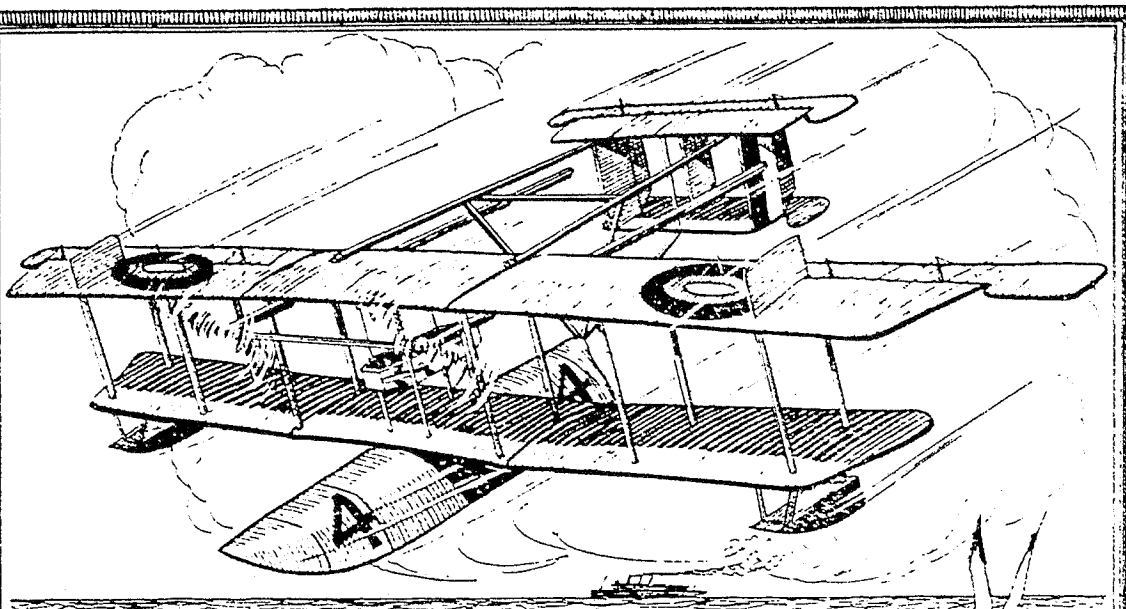
**GUARANTEED** to fly gracefully thru the air over 200 feet.

*Designed by America's foremost Model Flyer, Armour F. Selley, Holder of 5 World's Records.*

Ask your dealer or send direct to the factory. Long Distance Flyers made up on special orders. Satisfaction Guaranteed or Money Refunded.

**$1.35 Prepaid Canada, $1.50**

**A. F. SELLEY MANUFACTURING CO., Dept. S.**
**GENEVA, N. Y.**



# IDEAL Model Aeroplanes and Supplies

## 1920

PRICE 10 CENTS

IDEAL AEROPLANE & SUPPLY CO.
65-67 West Houston St.
Corner of Wooster Street
NEW YORK CITY

**Prices Subject to Change Without Notice**

COPYRIGHT 1919, BY IDEAL AEROPLANE AND SUPPLY CO., NEW YORK

## AMERICAN TOYS

The pennies spent on little toys
For Uncle Sam's own girls and boys
In turn, of course, go back again
To our own loyal working men
American—the Workman's Hand
American—'twas Built and Planned
American—in Spirit, too
America's Toy Gift to YOU

Sing to tune of "Maryland, My Maryland"

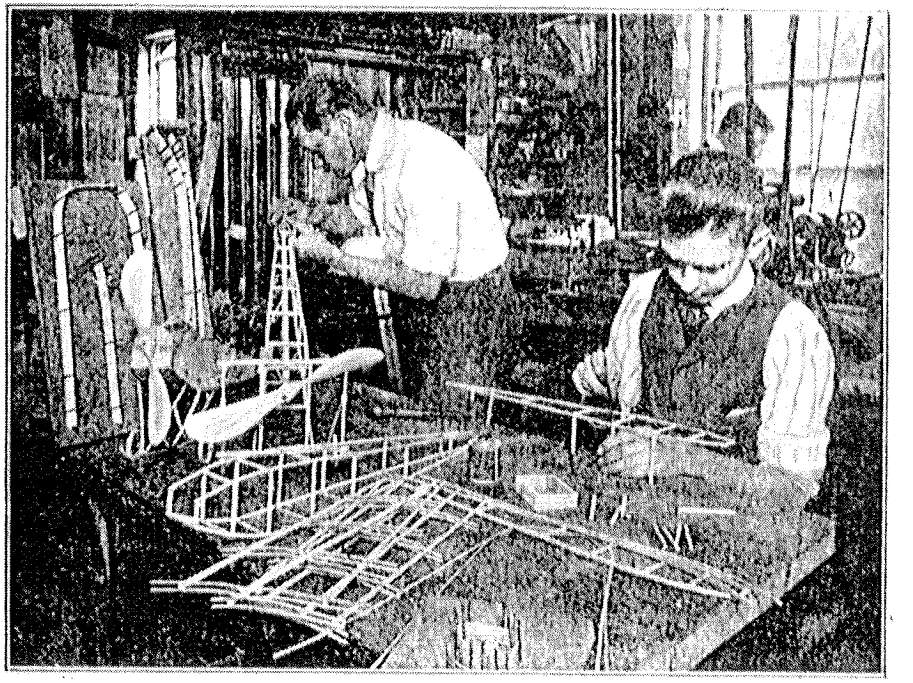
Trademark Registered
TOY MFRS. U.S.A.

Copyrighted 1918

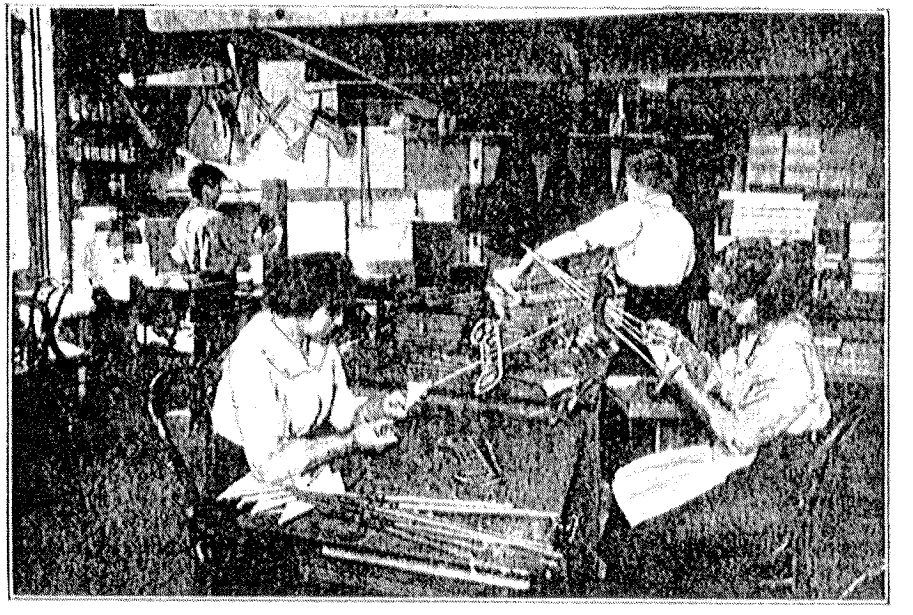
**Buy Toys Made in U.S.A.**

AMERICAN TOYS

IDEAL AEROPLANE & SUPPLY CO. NEW YORK



THESE actual photographs of the IDEAL factory show process of constructing and assembling IDEAL Model AEROPLANES and Flying Toys



## *What Some Ideal Model Builders Say—*

The great War has increased the interest in Aviation, and many boys and young men have taken up the study of Aeroplane Construction and operation with "IDEAL" Model Aeroplanes.

Their success has been so general, and they have written so many fine letters to us about their Models that we are devoting this page to reproducing a very few of their letters. These expressions of satisfaction, coming from the very boys themselves, tell better than anything else how perfect "Ideal" Model Aeroplanes are.

"Your CECIL PEOLI RACER is the finest flying model I have ever flown and that has ever been flown in Lancaster. I received my order two days ago. You are very prompt. I have built Model Aeroplanes six years, and your materials have outlasted and are better made than any other material procurable."

FLOYD FATIG,
641 E. Chestnut St., Lancaster, Ohio.

"I finished a Model reproduced from your plans, and made from your dependable material bought at Donaldson's in this city. **THREE CHEERS FOR IDEAL AEROPLANE SUPPLIES.**"

RALPH SPRUNGMAN,
170 Third Ave., North, Minneapolis, Minn.

"I would like to say that the Curtiss Military Tractor, that I made of your plans flew successfully SIXTY-FIVE FEET, and mounted to a height of nearly seven feet, I think however that I could have made it go higher by tilting the planes, and ailerons."

LLOYD E. PAWKETT,
1502 Rice St., Houston Texas.

"I received the material that I ordered from you some time ago. I made a model, using your material in most of the parts, with which I have made flights ranging well over a thousand feet and with a duration of 85 seconds. This certainly speaks for the Material."

ALATAN T. WILDE,
82 Judd St., Honolulu, Hawaii.

"I have made one of your NIEUPORT MONOPLANES, and was well satisfied as it flew ONE HUNDRED AND TWENTY FEET.

NELSON ADAMS,
111 Essex St., Cliftondale, Mass.



# *A Personal Word About Ideal Model Aeroplanes—*

AERONAUTICS—the Science of Flying—presents to young men to-day, opportunity to become great men to-morrow. Everyone with the least inclination in this direction should grasp this opportunity and begin this fascinating study.

IDEAL Instruction Drawings and Model Aeroplanes furnish an excellent start, and will save the experimenter much time and trouble. They furnish interesting, educational and inspiring pastime and will develop a true knowledge of the principles of Aeronautics. The satisfaction which follows the completion of an Aeroplane;—the thrill which comes, when the Model rises into the air and soars away, is one that will never be forgotten. Such experience is the finest inspiration for the later accomplishment of larger and better things along the same line.

You can build an "IDEAL" Model Aeroplane and in building and flying it, secure knowledge that will help you design and construct larger and more intricate flying machines, perhaps invent an entirely new one that will make you famous. But start right. Reap the benefit of our experience. Build an "IDEAL" Aeroplane; the simplest, easiest and most economical way to start.

"IDEAL" Aeroplanes are divided into two distinct classes, as follows:

### SCALE REDUCTION MODELS

These are practically exact duplicates, scaled down from actual size, of the best-known types of man-carrying Aeroplanes. They are true copies in every essential

feature of the large Aeroplanes of which they are models and are constructed in much the same manner, with the same parts and materials, only in miniature. Each type of Model Aeroplane is an authoritative copy of its original and when you select the particular Model Aeroplane you are going to build, you can be sure it will be a true Model of the real machine, and not a more or less inaccurate machine resembling the original in name only. Our Aeronautical Engineer, Mr. Montague Palmer, served the Aircraft Bureau of the United States Government during the War in designing and constructing the Aeroplanes used in the Army. His practical knowledge is authoritative and the "IDEAL" Models which are made under his direction are equally authentic and are not the result of guesswork.

In this issue of our catalog we offer two entirely new Scale Reduction Models which are the latest developments in Aeronautical Science and represent strictly American achievements. They are the **war-famous DE HAVILLAND Battle Plane, De H-4** (see page 8) and the **famous N C-4** the first Aeroplane to cross the Atlantic Ocean. (See pages 6 and 7). Both are real copies of the originals and faithfully duplicate the renowned machines.

All these Scale Reduction Models are furnished in sealed Construction Outfits. Each Outfit contains all material necessary to build the Aeroplane, including perfect Scale Drawings and full directions, and are so simplified that any boy with the slightest mechanical ability can construct a miniature of a real Aeroplane that will rise from the ground or water by its own power and fly in the air. Furthermore, in building the Model, he will learn more about Aeroplanes than he could learn by reading any number of books.

## RACER MODELS

These are distinctly speed machines. They are not patterned after any type of large Aeroplane, though they fly on the same principle, being built light, many features of the Scale Reduction Models purposely being omitted, they are capable of greater speed and longer and higher flights. The Cecil Peoli (See pages 12 and 13) has been made to fly 2,500 feet, almost half a mile. These Racing Models furnish splendid and exciting sport and also permit close study of wing forms, propellers and other features. In addition to the Cecil Peoli there are "IDEAL" 2-foot and 3-foot Racing Models, which, while less elaborate, make splendid flights. All these Racer Models are sold complete, ready to fly. The Cecil Peoli and the "Ideal" 3-foot Racer are also sold in "knock-down" form, ready to assemble quickly.

"IDEAL" Model Aeroplanes are all propelled by their own power. Strands of the finest grade "live" Para rubber of various weights and sizes for the different models are furnished with each. This rubber is wound up by twisting. In the Racer Models, this is done with a Patented Winder included with each outfit. Our extensive experiments have demonstrated beyond all doubt the absolute superiority of this method of securing power. It is the safe, reliable and inexpensive method. All our Aeroplanes are guaranteed to fly with the power furnished with each.

It is continual striving for the best that has made "IDEAL" Model Aeroplanes and their Supplies superior in every particular. We guarantee everything to be exactly as represented, and you may have **perfect confidence** that any goods supplied by our Dealers or ourselves will prove satisfactory to you. The testimonial letters reproduced on page 47 are the best evidence of the satisfaction which Amateur Aviators secure thru the use of "IDEAL" Model Aeroplanes and Supplies.

We publish a list of stores in many cities which sell "IDEAL" MODEL AEROPLANES and SUPPLIES and we prefer that you purchase our goods at your local store, if there is one near you which sells them. If you live in a locality where we do not now have a dealer, we will fill your orders direct until such time as we do have one.

More stores are becoming interested in "Ideal" Model Aeroplanes all the time, and are selling them. Ask **your** Toy or Sporting Goods store, or the Toy department of your department store, to get "IDEAL" goods for you.

**Bank Reference: Union Exchange National Bank, New York, N. Y. Also Dun's and Bradstreet's Mercantile Agencies.**

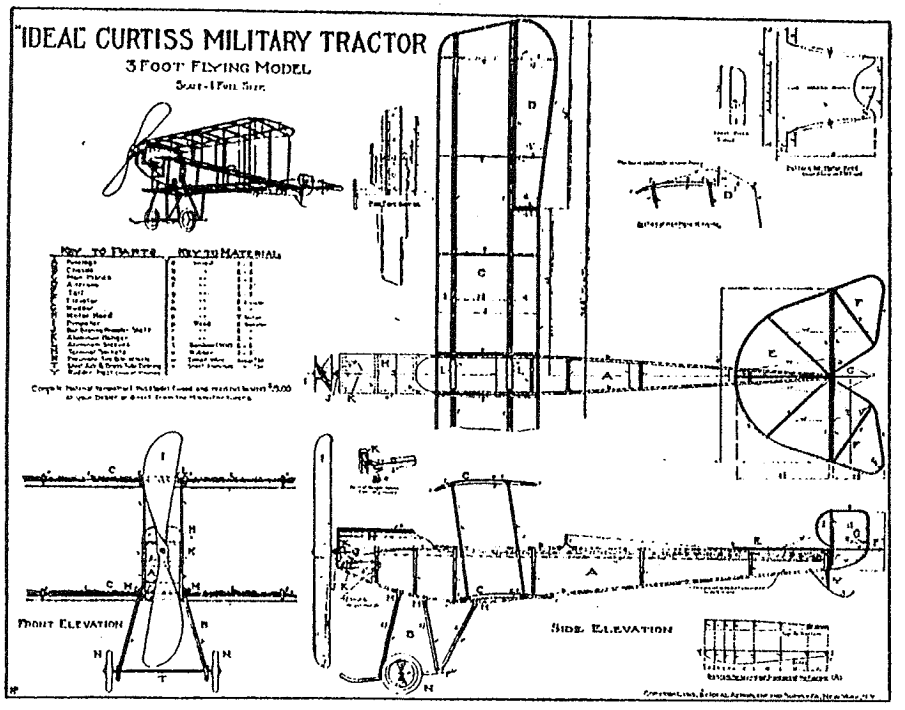
**IDEAL AEROPLANE & SUPPLY CO.**

**Established 1911.**

**NEW YORK, N. Y.**

# IDEAL SCALE DRAWINGS

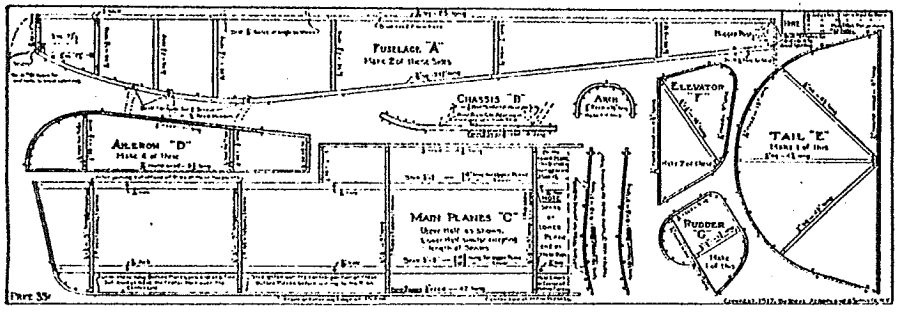
## THE SAFE GUIDE FOR MODEL BUILDERS




This is a greatly reduced reproduction of the Scale Drawing for the Curtiss Military Tractor.

# IDEAL

## FULL SIZE FORMING & ASSEMBLING LAYOUT




This is a greatly reduced reproduction of the "IDEAL" Forming and Assembling Layout furnished with the Curtiss Military Tractor Construction Outfit.





# "IDEAL" SCALE DRAWINGS

**With Full Building and Flying Instructions**

"IDEAL" Scale Drawings, with which are included complete Instructions for Building and Flying, are the secret of successful Model Building. They make Model Building easy; visualize the work, and show where and how every piece and part must go. They are superior to any others on the market, and are absolutely correct and accurate in every detail.

They are purposely made as simple as possible; yet wonderfully complete; and can be understood by any bright boy. Full printed Instructions are included with the Scale Drawings. They are furnished with each of the "IDEAL" Model Aeroplane Construction Outfits listed in this catalog.

| | Scale | Price Postpaid |
|---|---|---|
| NAVAL CURTISS, 4½ foot Model SEAPLANE (N C-4) | Half Size | $ .50 |
| DE HAVILLAND, 3 foot Model BATTLEPLANE | " " | .35 |
| CURTISS, 3 foot Model MILITARY TRACTOR | " " | .35 |
| BLERIOT, 3 foot Model MONOPLANE | " " | .35 |
| NIEUPORT, 3 foot Model MONOPLANE | " " | .35 |
| TAUBE, 3 foot Model MONOPLANE | " " | .35 |
| CECIL PEOLI, 3 foot Model CHAMPION RACER | " " | .25 |

## BLUE PRINTS

FULL SIZE Blue Prints, for either DE HAVILLAND, BLERIOT, NIEUPORT, TAUBE, CURTISS MILITARY TRACTOR, 3 foot Models ..... Postpaid each **$1.50**

FULL SIZE Blue Print, 43x67 inches, for 4½ foot Model N C-4, ..Postpaid **$3.00**

HALF SIZE Blue Print for either CURTISS MILITARY TRACTOR or NIEUPORT 6 foot Models .....Postpaid, each **$2.50**

## "IDEAL" FORMING AND ASSEMBLING LAYOUTS

The difficult part of Model Building is shaping, or forming the wood and reed parts, and putting them together, or assembling them accurately. This has been made easy by the greatest recent improvement in Model Aeroplane making—the "IDEAL" Forming and Assembling Layout. This is a specially designed diagram over which the wood and reed is bent to the proper shape, with positive accuracy and no danger of breaking.

The Layouts are FULL SIZE and show the particular curve of each of the important parts. They need only be followed carefully to assure success. The Layouts also simplify assembling, as they contain full size diagrams of the various steps in the work.

Forming and Assembling Layouts are also sold separately at **35c each, postpaid** for the following Models: DE HAVILLAND, CURTISS MILITARY TRACTOR, BLERIOT, TAUBE and NIEUPORT Monoplanes. **50c postpaid for the N C-4.**

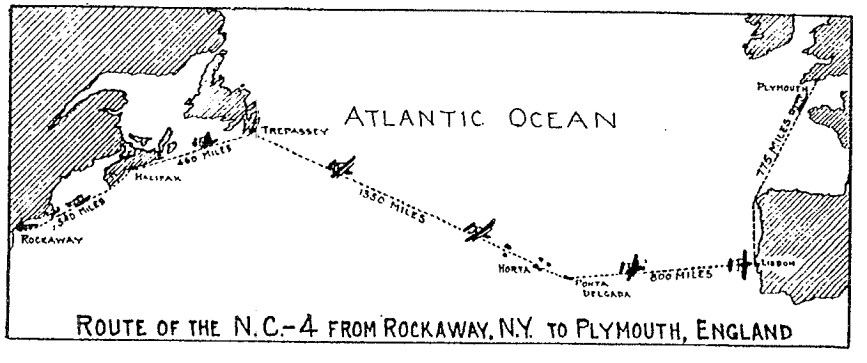
When a Scale Drawing and a Forming and Assembling Layout are ordered at the same time for the same Model, both will be supplied at the combined price of the two LESS 10c.

# *Build an "Ideal" Model Of The First Aeroplane That Crossed The Ocean*

AS soon as it was evident that the N C-4 would be the first Aeroplane to cross the Atlantic Ocean, our Engineering Department designed this Model so that every Amateur Aviator could easily construct a Model of that celebrated American Seaplane which would be an authoritative copy, true in every practical feature, and which would rise from the water by its own power and fly in the air. Here it is—and every boy and young man who reads the epoch-making record of the N C-4 can now build and fly his own Model of that 'plane.

This model is the result of much thought and scientific study by our Engineering Department. It is so like its gigantic original that a photograph of this model in flight was mistaken by a Naval Aviator for a photograph of the real N C-4! This "IDEAL" Model is 1/28 full size; 4½ feet (54 inches) spread across the planes and is 29 inches long. Has aluminum nacelle, and the twin, 10-inch propellers furnish ample power for fine flights. The picture on the opposite page shows the construction details.

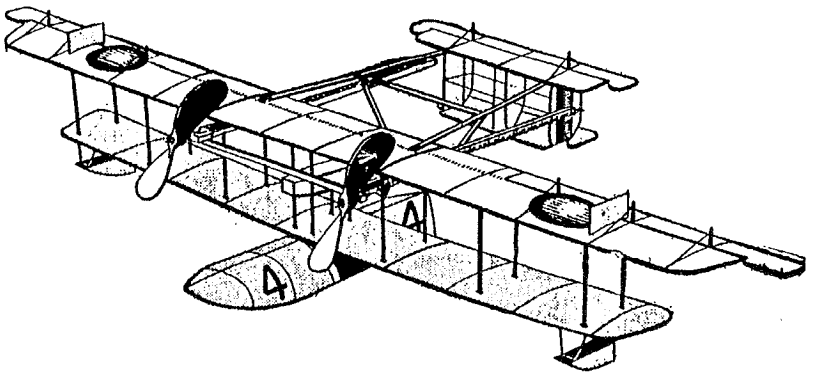
BE THE FIRST IN YOUR LOCALITY TO BUILD THE N C-4! LEARN WHILE YOU BUILD. FIND OUT HOW TO READ PLANS. LEARN HOW THE REAL N C-4 WAS BUILT. GET THE "IDEAL" N C-4 CONSTRUCTION OUTFIT (see next page) AND CONSTRUCT AND FLY YOUR N C-4 NOW.



ROUTE OF THE N.C.-4 FROM ROCKAWAY, N.Y. TO PLYMOUTH, ENGLAND







## "IDEAL" NAVAL CURTISS SEAPLANE

# NC-4

**A 4½ Foot Flying Model**

A faithful copy of the most famous American Aeroplane. Larger than other "Ideal" Models, and perfect in every particular.

(Weight, 14¼ ounces)

### COMPLETE LIST OF MATERIALS FOR A 4½ FOOT "IDEAL" N C-4

In Knocked Down Form

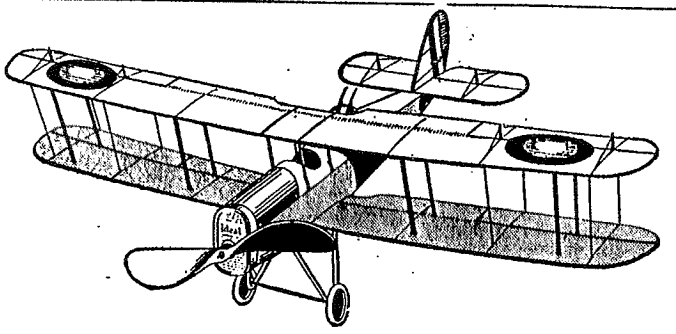
**When ordering single items, delivery charges should be added to list price.**

| | |
|---|---|
| Wood and Reed, cut to proper size | $2.50 |
| 2 Ball Bearing Propeller Shafts No. 1, hooks formed | 1.30 |
| 2 Aluminum Propeller Hangers No. 1 | .36 |
| 2 HAND CARVED WOODEN PROPELLERS, 10 in. | 2.00 |
| 4 oz. can Bamboo Varnish | .55 |
| 5 sheets Bamboo Paper No. 2 | .70 |
| Small Can Ambroid | .15 |
| 1 pair Rubber Motors | .90 |
| 8 Aluminum Sleeves, ⅛ x ¼ (4 regular, 4 bent) | .48 |
| 1 Set of six Aluminum Braces and one pair Aluminum Masts | .30 |
| 1 envelop with 3 Terminal Fittings No. 3, 1 Terminal Fitting No. 5, 2 Rear Rubber Hooks with Nuts, 4 Strap Fittings No. 1 | .78 |
| 1 pc. Sheet Aluminum No. 34, 4-in. x 6¾-in., for Nacelle | .10 |
| 1 envelope with 48 ¼-in. Screws, 2 ⅜-in. Screws, & 2 washers | .25 |
| 1 small Spool Wire and 1 pkg. Nails | .12 |
| 1 set of tools, comprising screw-driver and drills | .30 |
| 1 American Insignia Sheet in colors | .10 |
| 4 Numerals No. 4 | .05 |
| Concise Working Drawing and Building Instructions | .50 |
| FULL SIZE Forming and Assembling LAYOUT | .50 |
| | $11.94 |

**Special Price, Complete, ready to assemble ..... $10.00**

**50c. extra for Pacific Coast States**

At IDEAL Dealers in your city or state, or direct from us, **postpaid**, where we have no such Dealer.



# "IDEAL" DE HAVILLAND BATTLE PLANE

**A Three Foot Flying Model of the Famous De H-4**

(Weight, 10¼ ounces)

An exact scale Model, 1/14 full size, of the American made Airplane that fought the battles in the World War and which used the famous Liberty Motor. This is an exclusive "IDEAL" Model, has a miniature stamped aluminum radiator, aluminum and veneer engine and cockpit cowlings, veneer fuselage covering, colored insignias, aluminum disc wheels, ball bearing propeller shaft and other "IDEAL" fittings.

The miniature gun outfit from which miniature airplane guns and mount can be made and mounted over the rear cockpit, gives the Model a real "ready to fight" appearance.

Guaranteed to rise from the ground BY ITS OWN POWER and FLY. Build this Model DE HAVILLAND BATTLE PLANE and have the very latest land 'plane.

## COMPLETE LIST OF MATERIALS FOR "IDEAL" DE HAVILLAND 3-foot BATTLE PLANE (DE H-4)

In Knocked Down Form

**When ordering single items, delivery charges should be added to list price**

| | |
|---|---|
| Wood and Reed, cut to proper size (162 pieces), including Rudder Post with Rubber Hook attached | $2.25 |
| Material and directions for Miniature Airplane guns | .35 |
| Ball Bearing Propeller Shaft, No. 1, Hook formed | .65 |
| Aluminum Propeller Hanger, No. 1 | .18 |
| HAND-CARVED WOODEN PROPELLER, 12 in. | 1.10 |
| 1 Set pure Para Rubber for DE HAVILLAND | .55 |
| 2 oz. Can Bamboo Varnish and 2 Sheets Bamboo Paper No. 2 | .58 |
| 2 "IDEAL" Stream Line Rubber Tired Disc Wheels, 2 in. | .80 |
| Special Threaded 6 in. Axle with Nuts and Brass Tube Bing | .25 |
| 8 Aluminum Sleeves ⅛ x ¼, 4-Terminal Fittings No. 2 | .72 |
| Small spool Wire No. 34, 2 Doz. ¼ in. screws, 1 pkg. Nails | .24 |
| 2 pcs. Sheet Aluminum, 3½x1 and 3x3½ | .15 |
| 2 pcs. Ideal Veneer, 2 ply for fuselage, 3 ply for cowling | .25 |
| 1 Miniature Radiator | .50 |
| 1 Set of Tools, comprising screw-driver and drills | .30 |
| 1 American Aero Insignia Sheet in Colors | .10 |
| Concise Working Drawing and Building Instructions | .35 |
| FULL SIZE Forming and Assembling LAYOUT | .35 |
| | $9.67 |

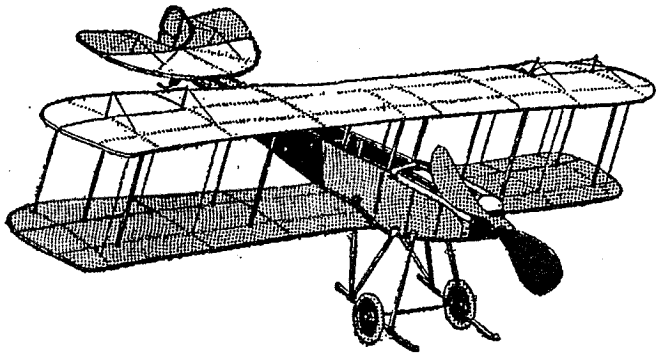
**Special Price, Complete, ready to assemble ..... $8.50**

**50c. extra for Pacific Coast States**

At IDEAL Dealers in your city or state, or direct from us, **postpaid**, where we have no such Dealer.







# "IDEAL" CURTISS MILITARY TRACTOR

**A THREE FOOT FLYING MODEL**

(Weight, 9½ ounces)

This Model represents the type now commonly followed by Aeroplane constructors all over the world.

It is an EXACT SCALE REDUCTION of those machines used so extensively both here and abroad to train the greatest pilots in the late war.

Equipped with Stream-line Aluminum Disc Wheels, Ball Bearing Shaft, Aluminum Motor Hood, it is GUARANTEED to rise from the ground BY ITS OWN POWER and FLY.

The Drawings are carefully made to the smallest detail and all parts are furnished, ready to use. This is an especially fine Model for exhibition purposes and should find a place in the lecture room of all educational institutions.

## COMPLETE LIST OF MATERIALS FOR "IDEAL" CURTISS 3-Foot Model MILITARY TRACTOR

In Knocked Down Form.

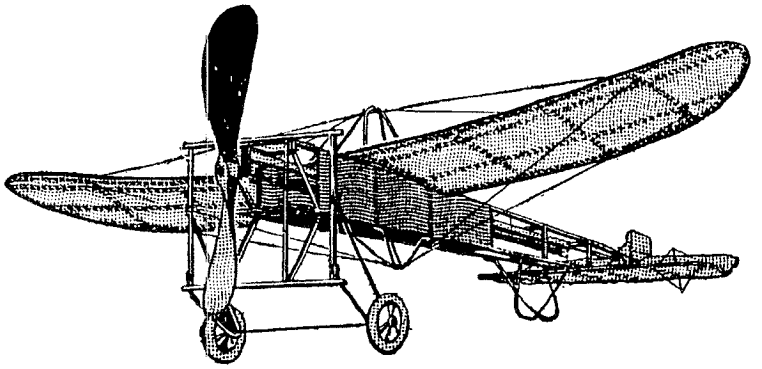
**When ordering single items, delivery charges should be added to list price.**

| | |
|---|---|
| Wood and Reed, cut to proper size (151 pieces), including Rudder Post with Rubber Hook attached | $2.10 |
| HAND-CARVED WOODEN PROPELLER, 12 in. | 1.10 |
| 2 "Ideal" Stream-Line Rubber Tired Disc Wheels, 2 in. | .80 |
| 1 Set pure Para Rubber for Curtiss Military Tractor | .60 |
| 2 oz. Can Bamboo Varnish | .30 |
| 3 Sheets Bamboo Paper, No. 2 | .42 |
| Ball Bearing Propeller Shaft, No. 1 | .60 |
| Aluminum Propeller Hanger, No. 1 | .18 |
| Spe. Threaded 6-in. Axle with Nuts and Brass Tube Bearing | .25 |
| 6 Terminal Brass Fittings, No. 2, 2 Aluminum Sleeves and 18 ¼ in. Screws | .56 |
| 1 small Spool Wire 34 gauge, and 1 pkg. Nails | .12 |
| Sheet Aluminum, 5 x 6 in. | .12 |
| 1 Set of Tools, comprising Screw-drivers and drills | .30 |
| 1 American Aero Insignia sheet in Colors | .10 |
| Concise Working Drawing and Building Instructions | .35 |
| FULL SIZE Forming and Assembling LAYOUT | .35 |
| | $8.25 |

**Special Price, Complete, ready to assemble ..... $7.50**

**50c extra for Pacific Coast States.**

At IDEAL Dealers in your city or state, or direct from us, **postpaid** where we have no such Dealer.



# "IDEAL" BLERIOT MONOPLANE

## A THREE FOOT FLYING MODEL

(Weight, 8¼ ounces)

This is an exact Model, 1/10 actual size of the famous BLERIOT XI, that first succeeded in flying over the English Channel and that competed with Curtiss in the first Aeroplane race held at Rheims, France, in 1909.

Its Silk Planes, Aluminum Pneumatic Tired Disc Wheels, together with the other neat and substantial fittings—all combine to make this a beautiful Model.

It is the simplest Ideal Scale Model to build and is guaranteed to rise from the ground by its own power and to make a perfect flight of 100 feet. With practice greater flights can be obtained.

The simplicity of construction and the appearance and flying qualities of this Bleriot are so improved, that it ranks with the best of our products.

### COMPLETE LIST OF MATERIALS FOR 3-Foot "IDEAL" BLERIOT MONOPLANE

In Knocked Down Form.

**When ordering single items, delivery charges should be added to list price.**

| | |
|---|---|
| Wood and Reed, cut to proper size (81 pieces) | $1.25 |
| Ball Bearing Propeller Shaft, No. 1 | .60 |
| Aluminum Propeller Hanger, No. 1 | .18 |
| HAND-CARVED WOODEN PROPELLER, 12 in. | 1.10 |
| 1 Set pure Para Rubber for Bleriot Monoplane | .55 |
| Fine Silk to cover Planes and Rudder | .70 |
| 1 Sheet Bamboo Paper, No. 2 | .14 |
| 2 "Ideal" Stream-Line Rubber Tired Disc Wheels, 2 in. | .80 |
| 1 Special 7¼ in. Axle | .06 |
| Aluminum Rod, Model Making Nails, Small Spool Wire, 32 ga. | .18 |
| 1 Envelope with 12 Screws, 12 Screw Eyes | .12 |
| 1 Envelope with 1 Rear Rubber Hook, 4 Aluminum Sleeves, (2 rd. 2 sq.), 4 small Hooks, 4 small Eyelets | .40 |
| Concise Working Drawing and Building Instructions | .35 |
| FULL SIZE Forming and Assembling LAYOUT | .35 |
| | $6.78 |

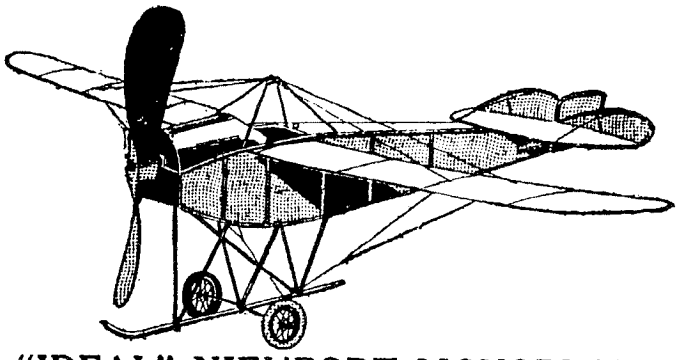
**Special Price, Complete, ready to assemble ..... $6.00**

**50c extra for Pacific Coast States.**

At IDEAL Dealers in your city or state, or direct from us, **postpaid** where we have no such Dealer.







# "IDEAL" NIEUPORT MONOPLANE

## A THREE FOOT FLYING MODEL

(Weight, 8½ ounces)

THIS MONOPLANE WAS ONE OF THE LEADING FRENCH SCOUT PLANES.

It is an EXACT SCALE REDUCTION of the famous NIEUPORT Monoplane and every detail consistent with a flying Model has been retained; thus the Aluminum Cowling, Pneumatic Rubber Tired Wheels, Guy Wires, Tighteners, etc., are included.

The "Ideal" Nieuport is GURANTEED TO FLY, if constructed properly, according to our Plan and Directions. IT WILL RISE FROM THE GROUND BY ITS OWN POWER. Thanks to the high efficiency of our Mechanical Department, the construction is so simple that any boy can build it.

It is an especially attractive model and is the type generally known as a scout machine.

### COMPLETE LIST OF MATERIALS FOR 3-Foot "IDEAL" NIEUPORT MONOPLANE

In Knocked Down Form.

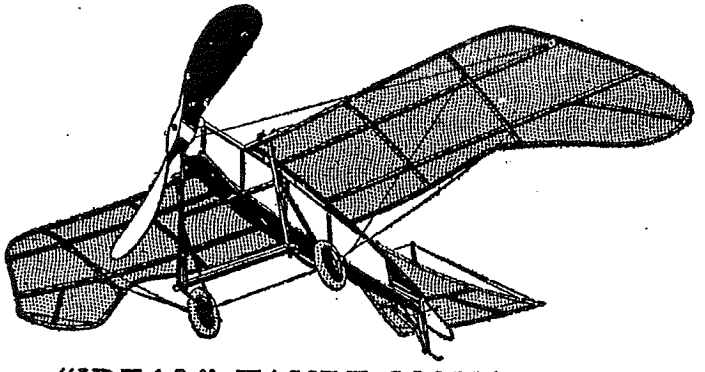
**When ordering single items, delivery charges should be added to list price.**

| | |
|---|---|
| Wood and Reed, cut to size (79 pieces) including Rudder Post with Rear Rubber Hook attached | $1.25 |
| Ball Bearing Propeller Shaft, special | .60 |
| Aluminum Propeller Hanger, No. 1 | .18 |
| HAND-CARVED WOODEN PROPELLER, 12 in. | 1.10 |
| 1 Set of pure Para Rubber for Nieuport Monoplane | .55 |
| 2 Sheets Bamboo Paper, No. 2 | .28 |
| 2 oz. Can Bamboo Varnish | .30 |
| 1 Set of 12 Special Nieuport Sockets (4 for Wing, 8 others) | .72 |
| 1 NIUPORT RUNNING GEAR with AXLE | .90 |
| 2 "Ideal" Miniature Rubber Tired Disc Wheels, 2 in. | .80 |
| Aluminum Rod, Sheet Aluminum and Spool Wire | .20 |
| 1 Nieuport Sundry Envelope, containing 2 doz. ¼ in. Screws, 4 Eyelets, 4 Hooks and Pins | .15 |
| 1 pkg. Nails and Escutcheon Pins | .06 |
| Concise Working, Drawing and Building Instructions | .35 |
| FULL SIZE Forming and Assembling LAYOUT | .35 |
| | $7.79 |

**Special Price, Complete, ready to assemble ..... $7.00**

**50c extra for Pacific Coast States.**

At IDEAL Dealers in your city or state, or direct from us, **postpaid** where we have no such Dealer.



# "IDEAL" TAUBE MONOPLANE

## A THREE FOOT FLYING MODEL

(Weight, 7 ounces)

This model is a PERFECT MINIATURE of the famous German and Austrian Military Machine that played such an important part in early part of the great WAR, and of which so much had been written at that time.

The interesting contour of wings and tail, bear a striking resemblance to a DOVE and give it its name. Capable of withstanding severe shocks, equipped with our new Disc Wheels, and the usual set of refined "Ideal" Fittings, this Model is guaranteed to RISE FROM THE GROUND BY ITS OWN POWER and FLY beautifully.

**That the constructor can possibly make no mistake, we furnish all parts ready to use. We have done all the difficult work. You need only put them together.**

### COMPLETE LIST OF MATERIALS FOR 3-FOOT "IDEAL" TAUBE MONOPLANE

In Knocked Down Form.

**When ordering single items, delivery charges should be added to list price**

| | |
|---|---|
| Wood and Reed, cut to proper size (68 pieces) including Rear Mast with Rubber Hook attached | $1.15 |
| Ball Bearing Propeller Shaft | .60 |
| Aluminum Propeller Hanger, No. 1 | .18 |
| HAND-CARVED WOODEN PROPELLER, 12 in | 1.10 |
| 1 set of pure Para Rubber for Taube Monoplane | .50 |
| 1 sheet Bamboo Paper, No. 2, and 2 oz. Can Bamboo Varnish | .44 |
| 2 "Ideal" Stream-Line Rubber Tired Disc Wheels, 2 in | .80 |
| 1 envelope with 2 Terminal Fittings, No. 1; 4 small Eyelets, 4 Hooks for Main Planes and 3 Aluminum Sleeves | .35 |
| 1 envelope with 12 Screws, 12 Screw Eyes | .12 |
| Special Steel Axle, Sheet Aluminum and Aluminum Mast | .25 |
| Small Spool 32 gauge Wire and Model Making Nails | .12 |
| Concise Working Drawing and Building Instructions | .35 |
| FULL SIZE Forming and Assembling LAYOUT | .35 |
| | $6.31 |

**Special Price, Complete, ready to assemble..... $5.50**

**50c extra for Pacific Coast States.**

At IDEAL Dealers in your city or state, or direct from us, **postpaid** where we have no such Dealer.





# "IDEAL" SIX-FOOT MODELS.

To meet the demand for larger Models to be used for experimental purposes as well as to provide a source of pleasure and industry to older boys and to men, we have prepared Blue Prints for SIX FOOT MODELS of the CURTISS MILITARY TRACTOR and the NIEUPORT MONOPLANE which are **half full size** and give dimensions of all material used. We anticipate getting out similar prints for our other Models in the near future, but meantime, builders can use the Drawing and Directions of our Three Foot Models and by increasing the cross pieces in the Fuselage, keeping the Ribs the same distance apart and increasing the wood sections used, they should get good results. We recommend our Blue Prints for this work.

In the CURTISS and NIEUPORT Models, the wood and reed is **not** cut to size, but is furnished in random lengths and in sufficient quantity.

150 feet of 3/16 in. Pure Para Rubber furnish the power necessary for flight and furnish the most simple form of motive power, although several Model builders have used small homemade Gasoline or compressed air engines.

A 24 inch hand carved propeller, No. 4 Aluminum Hanger, and a No. 3 Ball Bearing Shaft, complete the Rubber Motor.

All other fittings and parts are similar to those on the regular 3 foot Model, except that they are larger and stronger, for example 4 inch Pneumatic Tired Disc Wheels and ⅛ inch Axle are used.

In addition to the above, Sheet Aluminum, Wire, Aluminum Sleeves, Terminal fittings, Bamboo Paper, Bamboo Varnish, screws, nails, etc. necessary to complete the Models are included.

No special instructions are furnished as those for the three foot Model are sufficiently clear for the purpose.

**Materials, complete, including a 24 inch Carved Propeller,**

**To construct a Six Foot CURTISS MILITARY TRACTOR ..... $30.00**

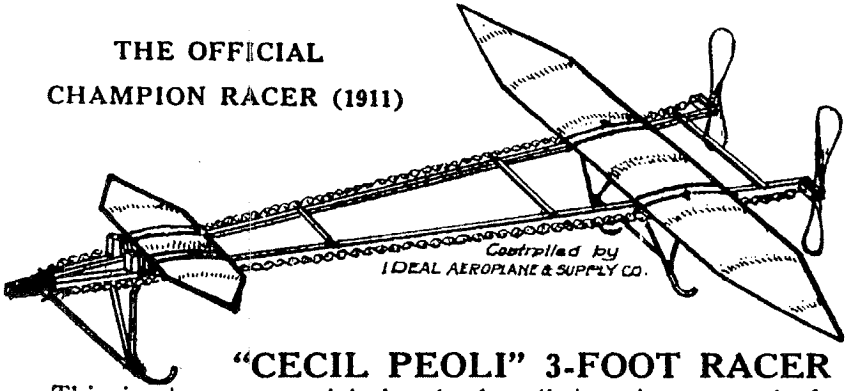
**To construct a Six Foot NIEUPORT MONOPLANE..... $25.00**

If you wish to carve your own propeller, a 24 in. blank will be furnished instead, at a reduction of $4.50 from the above prices.

(Boxing is included in either price)
Expressage payable by purchaser.

For Blue prints to build other six foot Models, see Index.

THE OFFICIAL
CHAMPION RACER (1911)




## "CECIL PEOLI" 3-FOOT RACER

This is the very model that broke all American records for distance and duration in the air, at Contests held at Van Cortlandt Park, New York City, August 19th and September 16th, 1911, making a flight of 1,691 feet 6 inches in distance, and one of 48 4/5 seconds in the air. These are the official records in competition. Unofficially it has flown 2,500 feet, and remained in the air over a minute.

Everyone should fly one of these models. Take one to the country with you. Its the greatest sport ever experienced. Both young and old will enjoy the remarkable, high and long flights of this remarkable aeroplane.

### COMPLETE LIST OF MATERIALS FOR "CECIL PEOLI" 3-Foot CHAMPION RACER

In Knocked Down Form.

**When ordering single items, delivery charges should be added to list price.**

| | |
|---|---|
| Wood (Spruce), Reed and Bamboo, cut to proper size and **Formed**, the frame pieces beveled and the extension sticks fitted with Aluminum Sleeves (44 pieces) | $1.50 |
| 1 Sheet Bamboo Paper, No. 1 | .12 |
| 2 oz. can Bamboo Varnish | .30 |
| 1 pair Combination Rubber Hooks and Propeller Shafts, No. 1 | .40 |
| 1 PAIR HAND-CARVED "PEOLI" RACING PROPELLERS, 6¼ in. | 1.60 |
| 1 set of Peoli Rubber Motors with skein hooks attached | .75 |
| "Ideal" Patent Friction Winder, No. 2 | .60 |
| Yoke, Escutcheon Pins and Rubber Bands | .10 |
| Special Piercing Tool | .06 |
| American Aero Insignia Sheet in Colors | .10 |
| Detailed Drawing, Building and Flying Instructions | .25 |
| | $5 78 |

**Special Price, Complete, ready to assemble ..... $5.00**

25c Extra for Pacific Coast States.
At IDEAL Dealers in your city or state, or direct from us, **postpaid** where we have no such Dealer.

**COMPLETE CONSTRUCTED CECIL PEOLI RACER, guaranteed to fly OVER 800 feet,** packed with planes detached, **including** a Patent Friction Winder, No. 2. (Weight, 4 oz.) ..... **$10.00**

**With "Ideal" Gear Winder instead of Friction Winder..... $10.50**

Express at purchaser's expense.

**The "Ideal" Winding Rig—Just right for the country—see page 17.**

The facsimile signature of Cecil Peoli appears on each authentic plan and direction sheet.





## "CECIL PEOLI" RACER

### THE RECORD BREAKING MODEL OF CHAMPION FLYER CECIL PEOLI

(For illustration see opposite page.)

There have since been a few models that have broken the Peoli records, but they have been more difficult to make and were considerably less durable, and therefore, we still offer the Peoli as a simple racer type that any boy can assemble and with which he can make flights of at least 800 feet.

CECIL PEOLI, one of America's foremost aviators, the designer of this Model, has since given his life in the cause of Aeronautics, to test out a Tractor biplane of new design, and this Model will ever remain as a silent tribute to the early work of this true American Hero.

WITH PRACTICE THERE IS NO REASON WHY YOU SHOULD NOT FLY THIS MODEL 1,500 FEET, ESPECIALLY SINCE THE INSTRUCTIONS ARE CECIL PEOLI'S OWN.

This is the best Model for contests and furnishes an excellent basis for making a model of your own design.

Aircraft says:—

A MODEL ENDURANCE CONTEST.
Best time, 48 4/5 seconds.

"The contest held by the New York Model Aero Club at Van Cortlandt Park, on Saturday afternoon, September 16th, 1911, was a most interesting occurrence, and was witnessed by about 2,000 enthusiastic spectators. There were 17 entrants.

"One of the models entered by Mr. Cecil Peoli, **America's champion model-maker,** won to-day by a flight of 48 4/5 seconds. The distance record is also held by Cecil Peoli, as his model made a flight of 1,691 feet and 6 inches. As this distance is measured straight of way from the point of launching to the point of landing, irrespective of curves or circles, the distance of this flight is wonderful and shows the skill and perseverance of the holder of the record."

The New York Herald, (Sept. 16, 1911), says in part:—

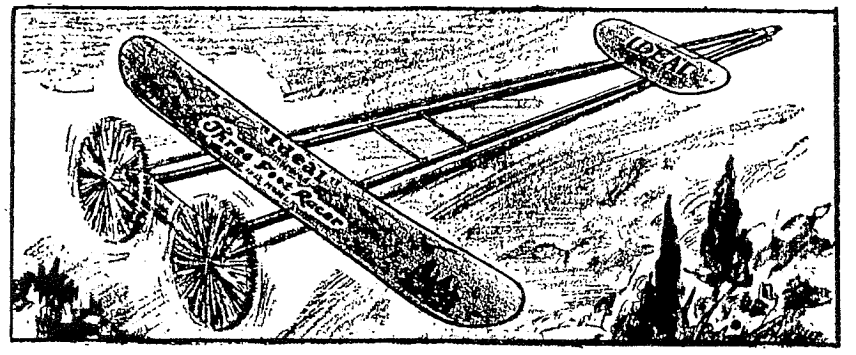
"So far the longest flight made by an American boy is 1,691 feet, which distance was made at the Van Cortlandt Park Aerodrome several weeks ago by Cecil Peoli, a boy who has come to the front in model aviation in the last few months."

The Evening Mail of New York, says in part:—

"Cecil Peoli, of New York City, has broken the Pierce record with a machine that flew 1,691 feet—about one-third of a mile.

"The distance made by young Peoli is remarkable."

**IF YOU KNOW ANY ONE WHO IS SKEPTICAL ABOUT FLYING MODEL AEROPLANES, FLY A "PEOLI" FOR HIM AND HE WILL SOON BE CONVERTED.**




# "IDEAL" IMPROVED THREE FOOT RACER

## The Final Word in "Ideal" Flyers

This Racer is not a flimsy toy; it is an ABSOLUTELY GUARANTEED Three Foot Aeroplane, competition size, that will make records for you.

So wonderfully constructed that it can be put together in less than 15 minutes, ready TO FLY OVER 600 FEET.

Beautiful in appearance, it is substantially made of thoroughly tested material. (See description of outfit.) Rubber bands are not used to hold the Planes to the frame; our new Patented Spring Plane Fasteners are an added advantage.

The Planes and improved Propellers are quickly attached and detached, and Aluminum Sleeves permit the frame to be pulled apart, so that the whole Racer can be carried in a small package.

Weight 4 ounces.

## This "IDEAL" Improved Three Foot RACER Outfit

**Contains the parts listed below, all of which can be duplicated by your dealer or by us at prices given, plus postage.**

| | |
|---|---|
| Complete frame, consisting of 1 "V" frame already shaped with eye hooks and aluminum noseing, 2 extension sticks, fitted with aluminum sleeves, 3 thin pieces spruce, to glue on planes | $ .75 |
| 2 Patent Spring Fasteners for Main Plane | .15 |
| 1 Patent Spring Fastener for Small Plane with Saddle (In outfit these are already attached in position to frame.) | .15 |
| 1 Aluminum Propeller Gear | .30 |
| 2 Aluminum Rod Braces, drilled, and 1 pkg. ¼ in. Screws | .15 |
| 1 pair improved 6 in. Fibre Racing Propellers, special pitch, hooks bent, and solid Brass Bearings in place (see illustration, page 26) | .90 |
| 1 set of Rubber Motors, with skein hooks attached | .75 |
| 1 set Fibre Planes (1 large, 1 small) | .35 |
| 1 No. 2 "Ideal" Patent Friction Winder | .60 |
| 1 detailed illustrated direction sheet | .10 |
| | $4.20 |

**Special Price, Complete, ready to assemble.....$3.50**

25c Extra for Pacific Coast States.

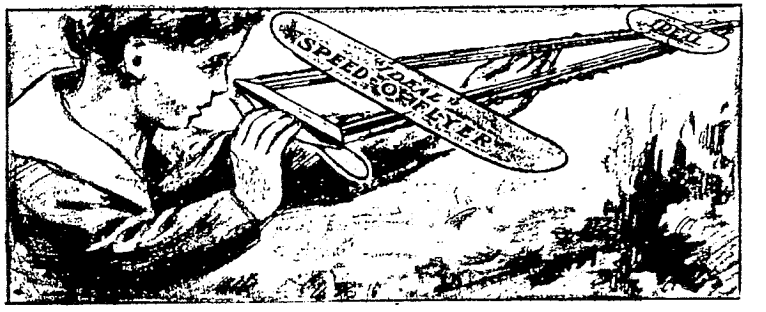
At IDEAL Dealers in your city or state, or direct from us, postpaid where we have no such Dealer.

**COMPLETE ASSEMBLED "IDEAL" 3-FOOT RACER, guaranteed to fly, including Winder and directions.....$5.00**

For Assembled Racer, add 60c. extra for packing and transportation.








# "IDEAL" SPEED-O-FLYER

## AN IMPROVED TWO FOOT RACER

This medium sized Racing Aeroplane is constructed of the best material, selected for lightness and strength; it is practically indestructible, and with reasonable care will outlive many other outdoor toys.

The Planes and Propellers which are scientifically shaped, are of genuine hard fibre. The Planes are held rigid in place by our new Patent Spring Fasteners, and are readily mounted and demounted in a second's time.

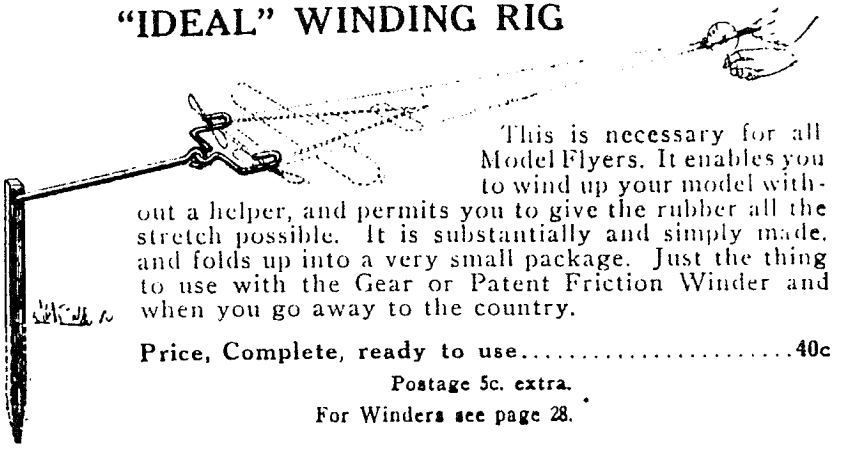
The motive power is the purest Para Rubber, which has maximum strength and great life. By the use of skein hooks, the Rubber can be quickly detached for use on the patent Winder.

Explicit Flying Directions, illustrated, make flying easy and pleasurable. YOU CAN FLY IT AT LEAST 300 FEET.

**Price, Complete, Ready for instant flight, including a No. 2 "Ideal" Patent Friction Winder ..... $2.50**

Packing and Transportation, 25 cents extra.

# "IDEAL" WINDING RIG



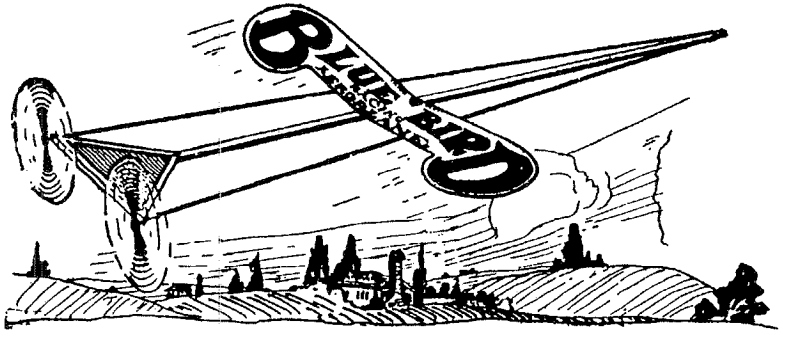
This is necessary for all Model Flyers. It enables you to wind up your model without a helper, and permits you to give the rubber all the stretch possible. It is substantially and simply made, and folds up into a very small package. Just the thing to use with the Gear or Patent Friction Winder and when you go away to the country.

**Price, Complete, ready to use.....40c**

Postage 5c. extra.

For Winders see page 28.

# BLUE BIRD
## RACING AEROPLANE




## The Famous, Swift Flighted Blue Bird

A handsome, graceful, 22 inch flyer, **GUARANTEED TO FLY.** Will mount to a height of 100 feet or more and make flights of over 300 feet.

Flexible frame with main plane cut from our indestructible fibre. Designed by a well known engineer to attain automatic stability.

Equipped with rear plane of burnished aluminum and twin propellers running on brass bearings. Only pure para rubber is used for motive power.

Complete outfit is packed in attractive box with our Patent Multiple Winder and our special Foot Gear, by use of which it is possible for one person ALONE to hold and wind the BLUE BIRD at the same time.

So simple to operate that any boy can do it by following the clear instructions. An intensely interesting and instructive Racer, thoroughly practical in every particular.

**Price, Complete, securely packed.....$2.00**

**Postage extra at three pound rate. Ask your Postmaster.**
**Save transportation by purchasing from your dealer.**

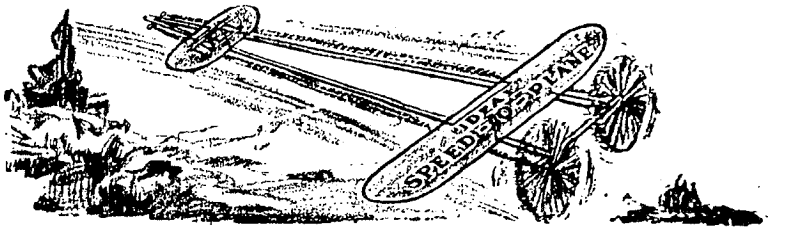
**BLUE BIRD PARTS—(For repairs only)**

| | | | |
|---|---|---|---|
| Rubber strands, per set..... | .30c | Propellers, per pair ..... | .35c |
| Main Stick, with noseing..... | .12c | Main Fibre Plane ..... | .25c |
| Rear Aluminum Plane ..... | .20c | Brass Plane Holder ..... | .15c |

**Main Stick, with Rear Plane, Noseing and Plane Holder Attached, 50c**
**Add 10c. extra for packing main sticks and postage at pound rate.**








## "IDEAL" SPEED-O-PLANE

**A ONE FOOT FLYER**

**A Real Wonder for Its Size and Cost.**

You can buy a GUARANTEED-TO-FLY midget racer, with double motor strands and twin-propellers, INCLUDING a special size Patent Friction Winder for only NINETY-FIVE CENTS.

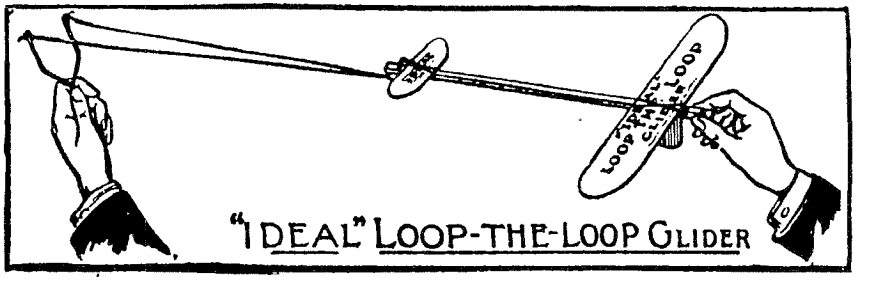
It required exquisite workmanship to turn out such small parts, and still retain the accuracy that insures perfect flight.

It has a very neat appearance, and is PRACTICALLY INDESTRUCTIBLE. You can fly it OVER 100 FEET.

The Speed-o-plane comes all set up, ready for instant flight, and is now furnished with our new Patent Spring Plane Fasteners.

**Price, Complete, with instructions and guaranteed to fly..... 95c**

Packing and Transportation, 25 cents extra
**Save these charges by purchasing from your Dealer**




## "IDEAL" LOOP THE LOOP GLIDER

This aerial toy affords loads of fun for the whole family. It is a skeleton Flyer, propelled from a sling. It can be caused to either fly in a graceful curve for 250 feet straightaway, or perform a "Loop the Loop" or a "Dip the Dip," and countless other startling evolutions, just as did Pegoud and Lincoln Beachey, the intrepid Aviators.

By the use of our new Patent Spring Fasteners, the Planes of this Glider are now held rigidly in place and any trouble likely from the use of rubber bands in so small a flyer is eliminated.

**Price, including sling, Fibre Planes ..... 45c.**
**Price, including sling, Wooden Planes..... 65c.**
**By mail, 5 cents extra.**

# "IDEAL" WOOD FOR MODEL MAKING

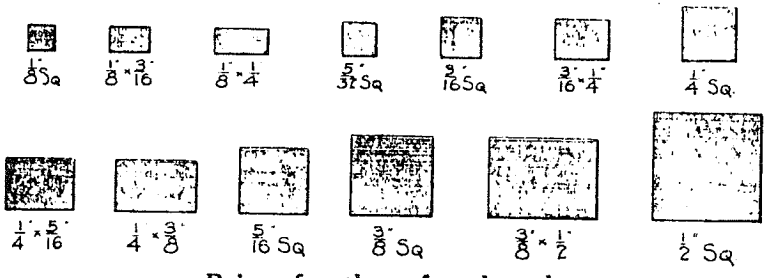
## BASS

**Well Seasoned Wood, specially selected, straight grained and free from all defects, same as used in all our own Products.**

"Ideal" Wood is a thoroughly dependable material for building Models. It is cut true, is rigid and of good quality.

The most useful size for the framing of small Models is 3/32 in. square and 1/8x1/4 in. for the main spars on wings.

The jointing may be done by means of the various articles illustrated in this catalogue, or may be screwed together, fastened with glue or fine brads, or bound together with wire. The pieces are easily fastened together, even by the most inexperienced. A strong and light Model can be built up in this way.




**Prices for three foot lengths.**

| | | | |
|---|---|---|---|
| 1/8 in. sq. | 4 cts. per length | 1/4 in. sq. | 7 cts. per length |
| 1/8x3/16 in. | 5 " " " | 1/4x3/16 in. | 8 " " " |
| 1/8x1/4 in. | 5 " " " | 1/4x3/8 in. | 8 " " " |
| 3/32 in. sq. | 6 " " " | 5/16 in. sq. | 10 " " " |
| 3/16 in. sq. | 6 " " " | 3/8 in. sq. | 10 " " " |
| 3/16x1/4 in. | 7 " " " | 3/8x1/2 in. | 12 " " " |

1/2 in. sq. ..... 15 cts. per length

**NOTE.** We reserve the right to substitute 35 inch lengths, as full three foot lengths are not always obtainable.

**Packing Charge, for Wood up to 3 ft., 15c.**

Six foot lengths are double the price and are subject to a packing charge of 50c.

When we are ordered to ship wood by mail, it **must** be cut to 1½ ft. lengths and is so sent at purchaser's risk only.

Postage has to be added at pound rate. Ask your Postmaster.
Lengths over 1½ foot by express only.

LESS THAN 50c WORTH OF WOOD IS NOT SOLD.

## TEE SECTION

This is an excellent section for Model building and one that is commonly used in bridge construction. It combines great lightness with resistance to bending in any direction.

**Price per foot.....12 cents; 6 inches.....8 cents.**

Either 1/2x1/8 in. or 1/8x3/32 in. carried in stock.

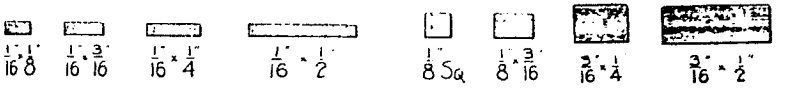




# "Ideal" Wood for Model Making—Continued

## SILVER SPRUCE

It is an established fact that Spruce has been found by severe tests to be the "Ideal" Wood for the man-carrying Aeroplanes. Consequently we are making a specialty of it for the Model Builder, as it is the strongest and lightest wood obtainable for the purpose. On account of present scarcity and expense we can only list a few sizes.




**Sold only in three foot lengths.**

| Size | Price | Size | Price |
|---|---|---|---|
| 1/8x1/8 in. | 5c per length | 1/8x3/16 in. | 7c per length |
| 1/8x3/16 in. | 5c " " | 1/8x1/4 in. | 9c " " |
| 1/8 in. sq. | 5c " " | 1/8x1/2 in. | 12c " " |

**SPECIAL SIZES IN TWO FOOT LENGTHS ONLY.**

As used on Cecil Peoli Racer.

**1/8x1/4 in., per length, 5c** **1/8x1/2 in., per length, 8c**

Add 15c. packing charge. Order by express.

# ROUND WOOD

For the body of a Model (FUSELAGE); the small, round sticks will make good, strong uprights for Biplanes.

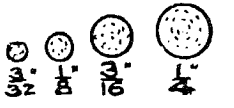
| Size | 1/8 in. | 1/4 in. |
|---|---|---|
| Price per 3 ft. length | 2½c | 3c |

Add 15c. packing charge. Order by express.

**Small Round Sticks, 1/16x12 in.....10c doz.; 3/32x12 in.....10c. doz.**

# ROUND REED

For construction of wing frames, shock absorbers and skids; may easily be bent by hand or steamed into any shape.




| Size | 3/32 in. | 1/8 in. | 3/16 in. | 1/4 in. |
|---|---|---|---|---|
| Price per length | 7c | 8c | 13c | 20c |

Sold only in SIX foot lengths.

# SPLIT BAMBOO (FLAT)

For Skids, Ribs and Shock Absorbers. In three foot lengths only.

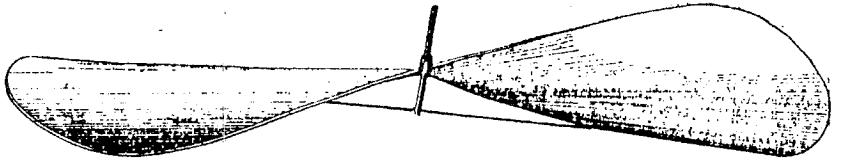
**1/8x1/4 in., per length.....4c** **1/8x1/2 in., per length.....8c**

Less than five lengths of Bamboo are not sold. Should be ordered by express.

**BAMBOO IS NOT NOW OBTAINABLE**

## "IDEAL" FIBRE RACING PROPELLERS

IMPROVED.



The most substantial and efficient fibre propeller. Made of hard fibre, hub reinforced with aluminum and with 1/8 in. diameter shafts attached. True pitch for high speed Models. Rigid and unbreakable.

**Sold in pairs only—to push.**

**6 in. only .....Special, per Pair.....60c**

Use any of our solid turned bearings for these Propellers.

As used on the "IDEAL" 3 ft. RACER (See Illustration below) with shafts already hooked and bearings in place.

**6 in. only .....Per Pair.....90c**

Postage 4c. extra per pair.

## SMALL FIBRE RACING PROPELLERS

SHAFTS ATTACHED

These are the little Propellers used on our famous Speed-o-plane, Speed-o-flyer and Blue Bird, and are also indestructible.

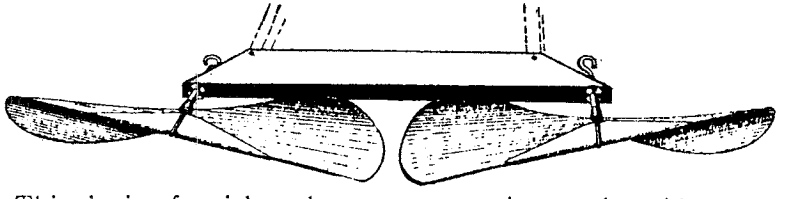
**Sold in pairs only—to push.**

**Speed-o-plane Propellers, 3 in. long, price per pair.....17c**

**Speed-o-flyer or Blue Bird } 5 " " " " " .....35c**

By mail, 2c. extra per pair.

## ALUMINUM PROPELLER GEAR



This device furnishes the most convenient and rapid means of forming the Propeller end of an "A" frame Model; it acts as a brace and at the same time as a rigid support for the Propeller bearings. Made of No. 26 gauge sheet aluminum.

**ALUMINUM PROPELLER GEAR.....Price, 30c**

**" " " Complete, with one pair of improved 6 in. Fibre Racing Propellers, shafts hooked and Brass bearings in place (See illustration)..Special Price, $1.15**

By mail at pound rate.





## MAHOGANY PROPELLERS

Any size or style TO ORDER ONLY at the following prices:

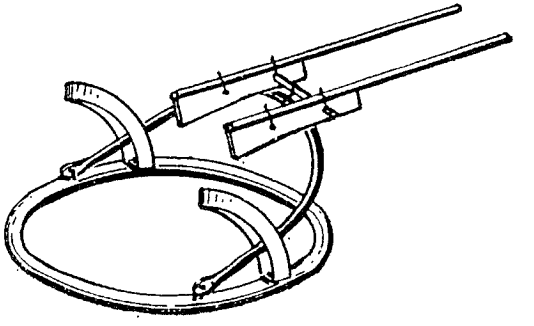
**6 to 14 in.....15c per inch** **16 and 18 in.....30c per inch**

## WOOD FOR LAMINATING PROPELLERS

**Mahogany and Maple, 1/8 in. x 1½ in. x 14 in.....each 7c**

## IDEAL MINIATURE AIRPLANE GUNS AND SCARF MOUNTS

In Knocked Down Form



These miniature guns are just the right size and weight for Models 1/12 to 1/14th full size, and are those used on our DE HAVILLAND BATTLE PLANE.

They are very easily and quickly made and assembled, and give the Model a real business-like look. They can be raised or lowered to any position just like the real ones, and in fact, are replicas of the guns on the big Battle Planes.

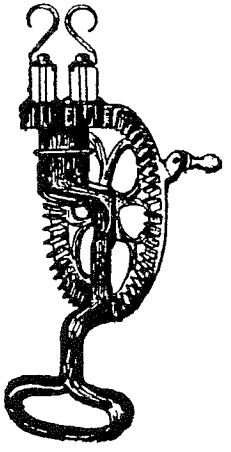
The Scarf Ring upon which the guns are mounted is 2⅛ inch outside diameter and the guns are 2⅝ inches long.

The materials consist of wood, reed and aluminum.

**Complete Materials with Illustrated directions to make Ideal Miniature Guns and Scarf Mount, postpaid.....$0.35**

# "IDEAL" GEAR WINDER

## FOR RUBBER STRANDS



This is the regulation contest form of winder and is used for long distance flights where over 1,000 turns are required. (200 turns of the winder.)

It is neat, compact, smooth running and substantial. Guaranteed to give equal turns per skein on twin propeller models.

**The hooks shown in illustration are now replaced by direct pull prongs, which make the winder stronger and more practical. A gear idler is also added to insure a uniformly smooth operation.**

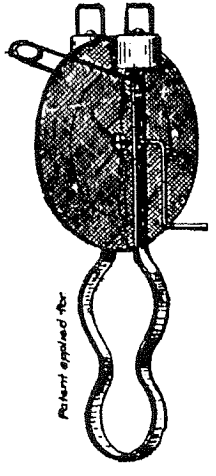
**Price complete.....85c**

Postage extra at pound rate.

# "IDEAL" PATENT FRICTION WINDER

Patented, June, 1913.

These are the patent Winders used for "cranking up" the rubber motors on all our twin Propeller racer models. Just the thing for small size racers. Good for the larger, high powered ones when but medium length flights are desired.




No. 1

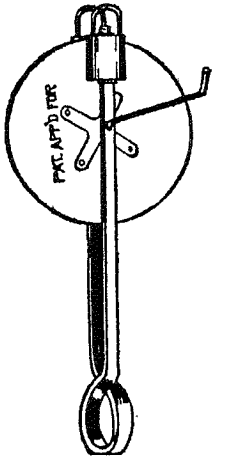
They are light and durable and will give perfect satisfaction.

**No. 1.** Ratio 5 to 1. Every time you wind the handle once, it makes 5 turns on the propelling strands of your machine. It winds up both propellers at once in one-tenth of the time it takes to wind by hand.

**Price, with instructions, postpaid ..... 75c**

**No. 2.** Ratio 4 to 1. Winds up both propellers at once in one-eighth of the time it takes to wind by hand.

**Price, with instructions, postpaid ..... 60c**



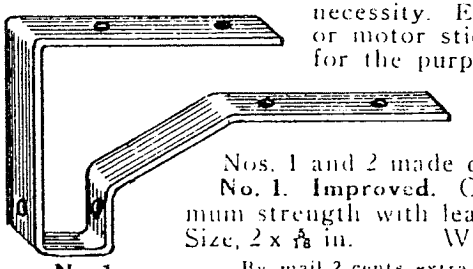

No. 2





# ALUMINUM PROPELLER HANGERS

To mount any of our bearings and especially our Ball Bearing Propeller Shafts, the use of these hangers becomes a practical necessity. Easily fitted to any framework or motor stick by means of holes drilled for the purpose, they furnish a compact, neat, light and reliable support for a bearing of any nature.



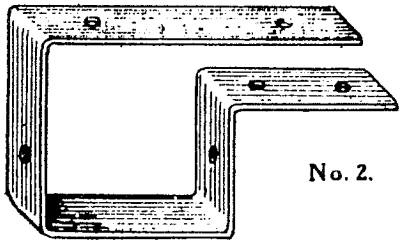
Nos. 1 and 2 made of 16 gauge Aluminum.

**No. 1. Improved.** Our latest design, gives maximum strength with least weight.

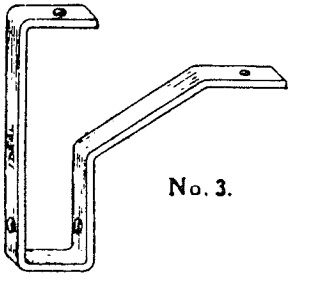
Size, 2 x ⅜ in. Weight, 1/9 oz. **Price, 18c**

By mail 2 cents extra.

**No. 1.**



**No. 2.**



**No. 3.**

**No. 2.** For lighter strains. Size, 1⅞ x ⅜ in. Weight, 1/9 oz. **Price.....12c**

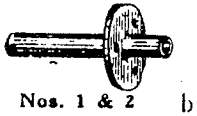
By mail 2 cents extra.

**No. 3.** Specially made for Racing Models. Made of 20 gauge Aluminum, to fit ¼ x ⅜ in. sticks, drilled to fit our No. 5 bearings. Sold in pairs only.....**Per pair.....18c**

By mail 2 cents extra.

**No. 4.** For six foot Models. Extra Strong...**Each.....30c**

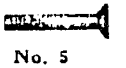
By mail 2 cents extra.



Nos. 1 & 2

No. 3

No. 4



No. 5

# SOLID TURNED BEARINGS

These Bearings are turned out of one piece of brass and are very strong, durable and extremely light. They are NOT SOLDERED and will not come apart. Made in 5 styles, featherweight.

| | | | | | |
|---|---|---|---|---|---|
| **No. 1**—For | 1/16 | in. shaft, Price, | 12 | cents | each |
| **No. 2**— " | 1/8 | in. " | 12 | " | " |
| **No. 3**— " | 3/16 | in. " | 12 | " | " |
| **No. 4**— " | 1/4 | in. " | 12 | " | " |
| **No. 5**— " | 1/16 | in. " | (for racing blocks) | 12c | per pair. |

Postage 1 cent each extra.

# "IDEAL"
# BALL BEARING PROPELLER SHAFTS

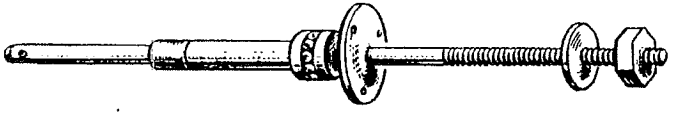
This is a perfect miniature Ball Bearing Shaft, made precisely like the Ball Bearings used on large machines. The most exacting tests have shown it to fully meet all requirements of a non-friction shaft. Really it is a wonderful mechanical device. It is perfectly constructed, is extremely strong and durable, has solid turned bearings, and the finest Steel Balls and races. The flange is drilled for brads to hold the Propeller. The end of the Shaft is threaded and supplied with nut and washer, to make it doubly secure. **The flange and upper ball bearing case is one solid piece of brass, is not soldered and cannot break.**

**Our Ball Bearing Shaft reduces friction to a minimum, and there results an increase in speed and a greater propeller efficiency.**

**No. 1.—⅛ in. steel shaft, furnished straight and can be bent to any size hook desired.** Weight, 1/3 oz. **Price, 60c**

**No. 1.—With hook already formed** **Price .65c**

By mail 2 cents extra.



**No. 2.—⅛ in. steel shaft, drilled on end to receive wire or hook for rubber strand.** Weight ½ oz.....**Price, 75c**

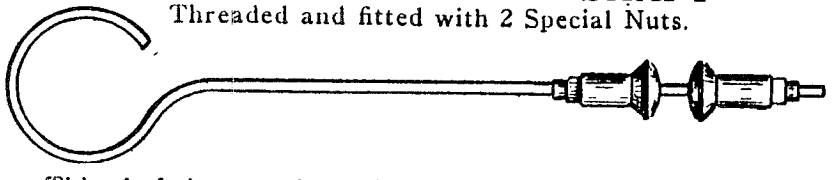
By mail 2 cents extra.

**No. 3.—⅛ in. steel shaft, for 14 to 24 in. Propellers; the motor end is flat and drilled for Rubber Hook.....Price, 90c**

By mail 2 cents extra.

## SIMPLEX PROPELLER SHAFT

Threaded and fitted with 2 Special Nuts.



This shaft is very simple in construction but has great tensile strength. It grips the Propeller hard and works very easily. The Shaft is made of steel and will stand a great stress. Can be used with our No. 1 solid Turned Bearing.

**Size, 4 inches.** Weight, 1/6 oz. **Price, 20c**

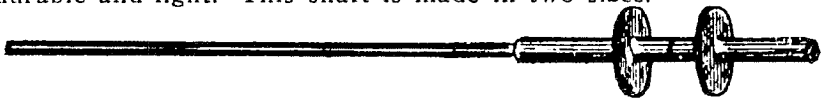
**By mail 2 cents extra.**



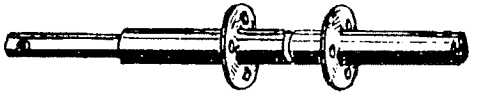


# "IDEAL" COMBINATION SHAFT and BEARING

This combination is used for the same purposes as our Ball Bearing Shaft, where a less expensive article is required. It is complete and ready to fit any wooden Propeller. It is strong, durable and light. This shaft is made in two sizes.



**No. 1.—1/16 in. steel shaft and solid turned bearing. Shaft is furnished straight and can easily be bent to any desired hook ..... Price, 35c**

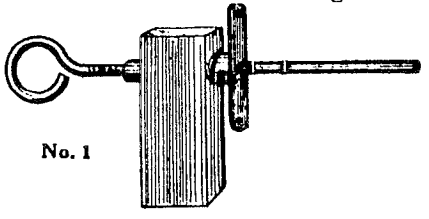


**No. 2.—⅛ in. steel shaft and solid brass bearing. Shaft is drilled on end to receive wire or hook for rubber strand ..... Price, 40c**

# "IDEAL" COMBINATION RUBBER HOOKS AND PROPELLER SHAFTS

WITH BLOCKS ATTACHED

These shafts are especially designed for Racing Models, and are to be attached to the end of your Fuselage sticks by first coating the sticks and blocks with Ambroid Cement then binding around with thread an applying another coating of Ambroid over all. This makes a tight fitting joint.



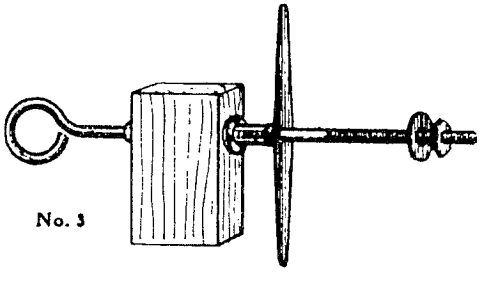
No. 1

**No. 1**, with Metal plate (a solid turned bearing No. 5 set into the block) —press your Propeller on to the shaft and fasten with 2 small brads.

**Price 40c per pair**

**No. 3**, This shaft has our solid turned brass bearing No. 3 set into the block, has a brass flange, silver soldered, to turn over on each side of the Propeller to insure against slippage. The Prpoleler end of the shaft is threaded and has washer and nut.

This is the handiest and best all around Propeller shaft for use on Racing Models.



No. 3

**Price, 60c per pair.**

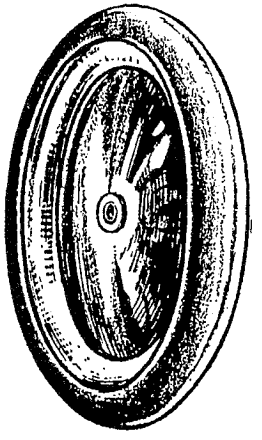
**Postage 2c. extra for each pair.**

# "IDEAL" MINIATURE Rubber-Tired WHEELS

## STREAM-LINE DISC WHEELS

These beautiful wheels are the latest in the Model world and are faithful miniatures of those now widely used on standard Aeroplanes. Discs are of burnished aluminum, hubs are of brass, and tires of high grade rubber,—pneumatic on the 2 and 4 inch. Durably and neatly built, they run absolutely true and are very light in weight.

All sizes furnished for $\frac{1}{16}$ in. axle, excepting the 4 in., which is made for $\frac{1}{8}$ in. axle.

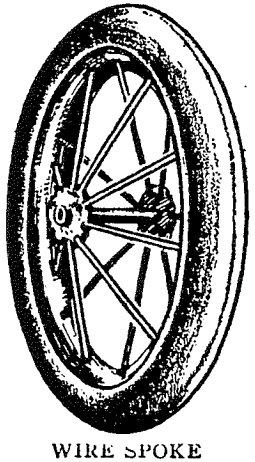


DISC

| Size | Hub | Approximate Weight | Price |
|---|---|---|---|
| 1 in. | ¼ in. | ⅛ oz. | $0.20 each |
| 1½ " | $\frac{1}{16}$ " | ¼ " | .30 " |
| 2 " | ⅜ " | ½ " | .40 " |
| 4 " | ⅞ " | 2½ " | 1.00 " |

## WIRE SPOKE WHEELS

These wheels are made of the best material procurable, are correct proportioned, and run absolutely true. Rims, spokes and hubs are of brass, nickel finished, and the tires, which with exception of the 1½ in. size, are pneumatic, are of high grade white rubber.



WIRE SPOKE

All sizes are furnished for $\frac{1}{16}$ in. axle, excepting the 4 in. which is made for ⅛ in. axle.

| Size | Hub | Approximate Weight | Price |
|---|---|---|---|
| 1½ in. | ½ in. | ⅓ oz. | $0.40 each |
| 2 " | ¾ " | ½ " | .50 " |
| 2½ " | ¾ " | ⅝ " | .60 " |
| 3 " | ¾ " | ⅞ " | .75 " |
| 4 " | 1 " | 1⅜ " | 1.25 " |

Postage, 2c. extra per wheel.

We can furnish the 2, 2½, and 3 in. Wheels for ⅛ in. Axle also at an additional cost of **15 cents** each. (Made to order only.)

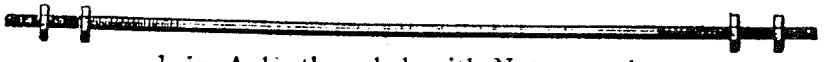
Extra Rubber Tires up to 2½ in. **12 cents**, 3 in. **18 cents**, 4 in. **25 cents.**



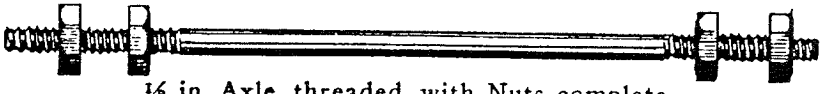


# AXLES

Made of best quality Steel Rod.



$\frac{1}{16}$ in. Axle, threaded, with Nuts complete,
**Up to 6 in. 12c. From 7 to 10 in. 15c. From 11 to 15 in. 22c.**



⅛ in. Axle, threaded, with Nuts complete,
**Up to 6 in. 17c. From 7 to 10 in. 23c. From 11 to 15 in. 30c.**
Postage 2c. extra.

# WOODEN WHEELS

Drilled to take $\frac{1}{16}$ Axle

**Sizes, 1½ in., 2 in.....6c each**
Postage 1c.

# STEEL BALLS FOR BALL BEARINGS

**A1 quality, $\frac{3}{32}$ in., per doz. 12c., postage 2c.**

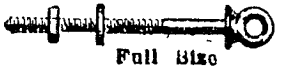
# TURNBUCKLES

These Turnbuckles are made upon the same principle as those used on large Aeroplanes. They are made of brass and will stand a great stress. Are indispensable in tightening of guy wires.

Turnbuckle No. 1, has ¼ in. pull and is used on small machines. Weight, 1-50 oz. **Price.....8 cents**

Turnbuckle No. 2, is solid, has ¾ in. pull, right and left threads, and will stand a strain of 200 lbs. Weight, 1-30 oz.
**Price.....12 cents**

Turnbuckle No. 3, a trifle heavier than No. 2. **Price.....18 cents**



Full Size

# EYEBOLTS

Made out of turned steel. Complete with nuts and washers. **Price.....12 cents**

**Letter Postage on Turnbuckles and Eyebolts.**
Under present conditions delivery of Turnbuckles and Eyebolts is not guaranteed.

## "IDEAL" NIEUPORT RUNNING GEAR

While designed for our Nieuport, to prevent a lot of unnecessary wiring and glueing, it can also be used for a running gear for Models of one's own design. Silver soldered throughout from very best brass tubing. Nickel plated.

**No. 1, incl. a 1/8 in. axle, threaded with nuts, for 3 ft. Models.... $0.90**
**No. 2, " a 1/8 in. " " " " " 6 ft. " ... 1.75**

**By mail, 4 cents extra.**
(For Rubber Tired Wheels see Index.)

## "IDEAL" NIEUPORT WING SOCKETS

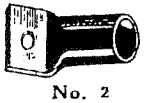
Very easily attached to your Model by screwing and nailing. Made of best brass tubing, nickel plated.

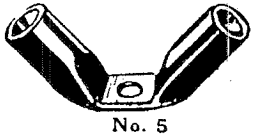
**No. 1, for 3 ft. Models. to hold 3/32 in. Reed or Rd. Wood, per set of 4..... $ .36**
**No. 2, for larger Models, to hold 3/32 in. Reed or Rd. Wood, per set of 4..... .60**

**By mail, 2 cents extra.**

## "IDEAL" TERMINAL BRASS FITTINGS

No.1


No. 2


No. 5

They are indispensable for fastening ribs, chassis, struts, etc., to the beams and give a very neat appearance to a Model. Nickel plated.

**No. 1, for 1/8 in. Rd. Wood or Reed, per set of 6.. $ .24**
**No. 2, " 1/16 in. " " " " " " " 2.. .12**

FOR LARGER MODELS

**No. 3, for 3/16 in. Rd. Wood or Reed, per set of 6 .. $ .48**
**No. 4, " 3/8 " " " " " " " " 2... .30**

FOR V CONNECTIONS

**No. 5, " 3/16 " " " " " " each .... .15**

**Postage Extra.**

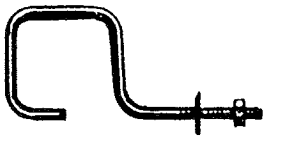
## "IDEAL" STRAP FITTING

For attaching Motor sticks to struts or for joining 3/32 in, round wood or reed to any crosspiece. Brass, nickeled.
Price per set of 4.....**15c**





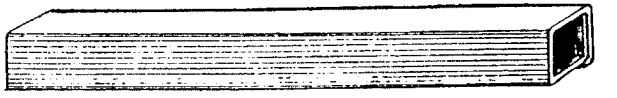
## REAR RUBBER HOOK



This hook is used to attach the rubber strands in the rear of the machine. By means of washer and nut, it can be readily attached and detached. Made of hard brass.

**Price, 12 cents. Without thread and nuts, 6 cents.**
Postage 1c.

## ALUMINUM SLEEVES

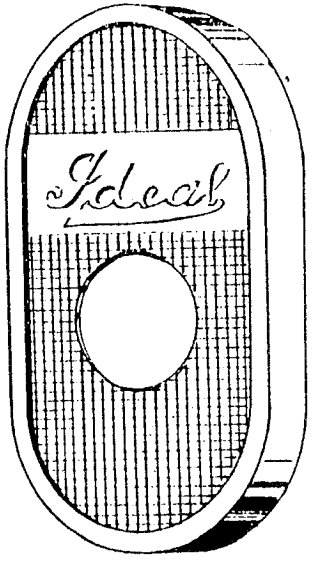


These form the most practical and rapid method for joining Model sticks together, so that they can be easily taken apart. For example: A 3 foot Model can be carried in a 1½ foot package.

Accurately machined and made of a gauge, giving suitable strength for the size of wood to be joined.

**No. 1.**—To fit 1/4 x 1/8 in. wood.....**Price, 18c. per pair**
**No. 2.**—To fit 1/8 x 1/4 in. wood..... " 12c. " "
**No. 3.**—To fit 1/8 in. sq. wood..... " 12c. " "
**No. 4.**—To fit 1/8 in. rd. wood or reed..... " 12c. " "

## "IDEAL" MINIATURE RADIATOR




A perfect reproduction in miniature of a DE HAVILLAND Liberty Motor Radiator, that will give any Model a real life like appearance, especially when used in conjunction with sheet aluminum or veneer cowling. It is 3½ in. high and 2 1/16 in. wide inside and is just right for three foot models.

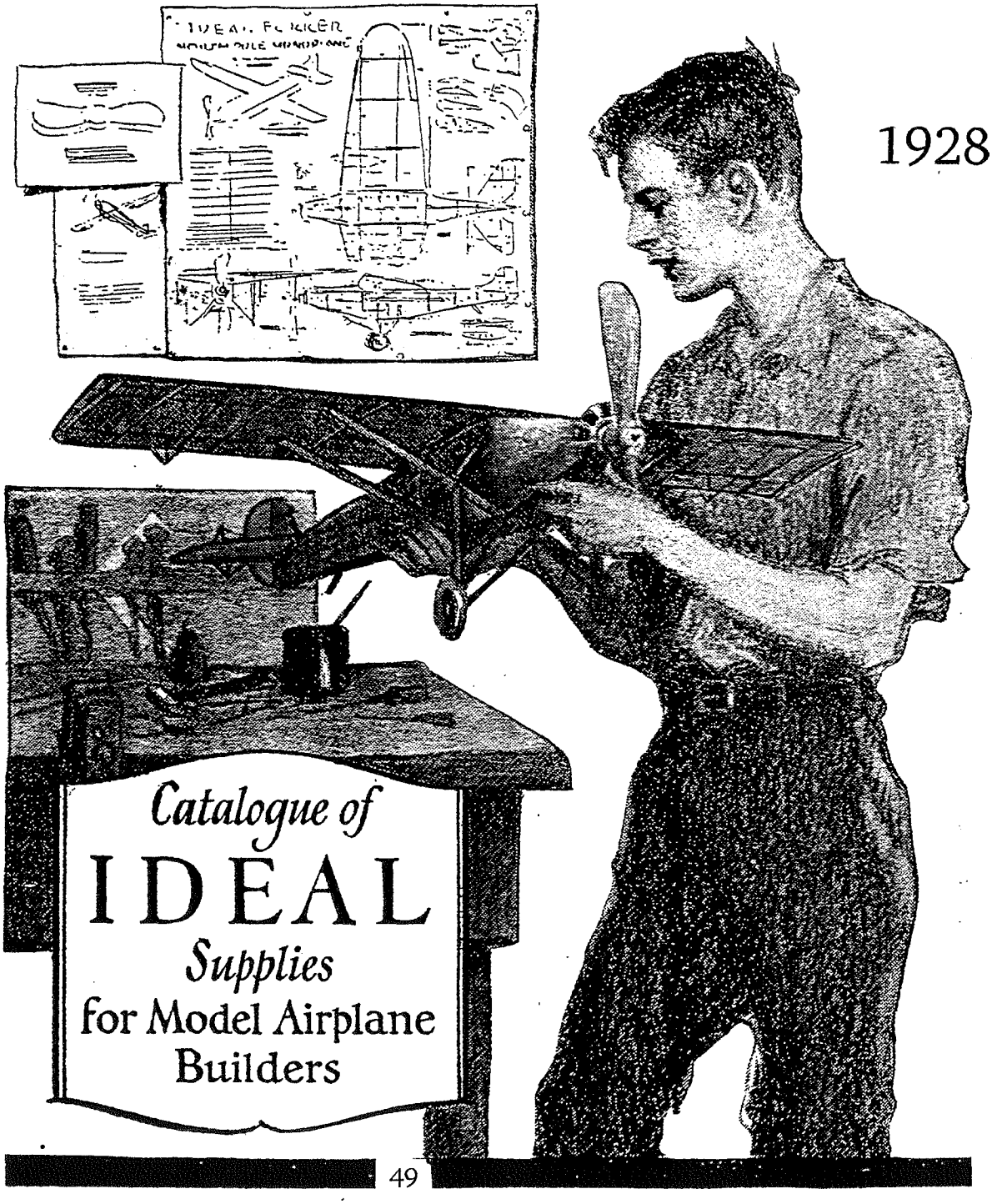
Made of bright aluminum, stamped from one piece with 7/8 in. opening left for propeller shaft. Attachment to fuselage made with 1/4 in. screws. No Model really finished without this Radiator. (Will not function as a Radiator.)

Weight 1/8 oz. ..... **Price 50c**

Postage 2c

# How to Build and Fly Model Airplanes

1928



# How to Build and Fly Model Airplanes

Containing Chapters on The History of Aviation; Airplane Types of the Present Day; How and Why Airplanes Fly; How Model Airplane Building and Flying Teaches the Principles of Aeronautics, with Plans and Directions for Building Gliders and Racers; and Information on Scale-Reduction Models of Well-known Airplanes.

Catalogue of

Model Airplane Construction Outfits

Racing Airplanes

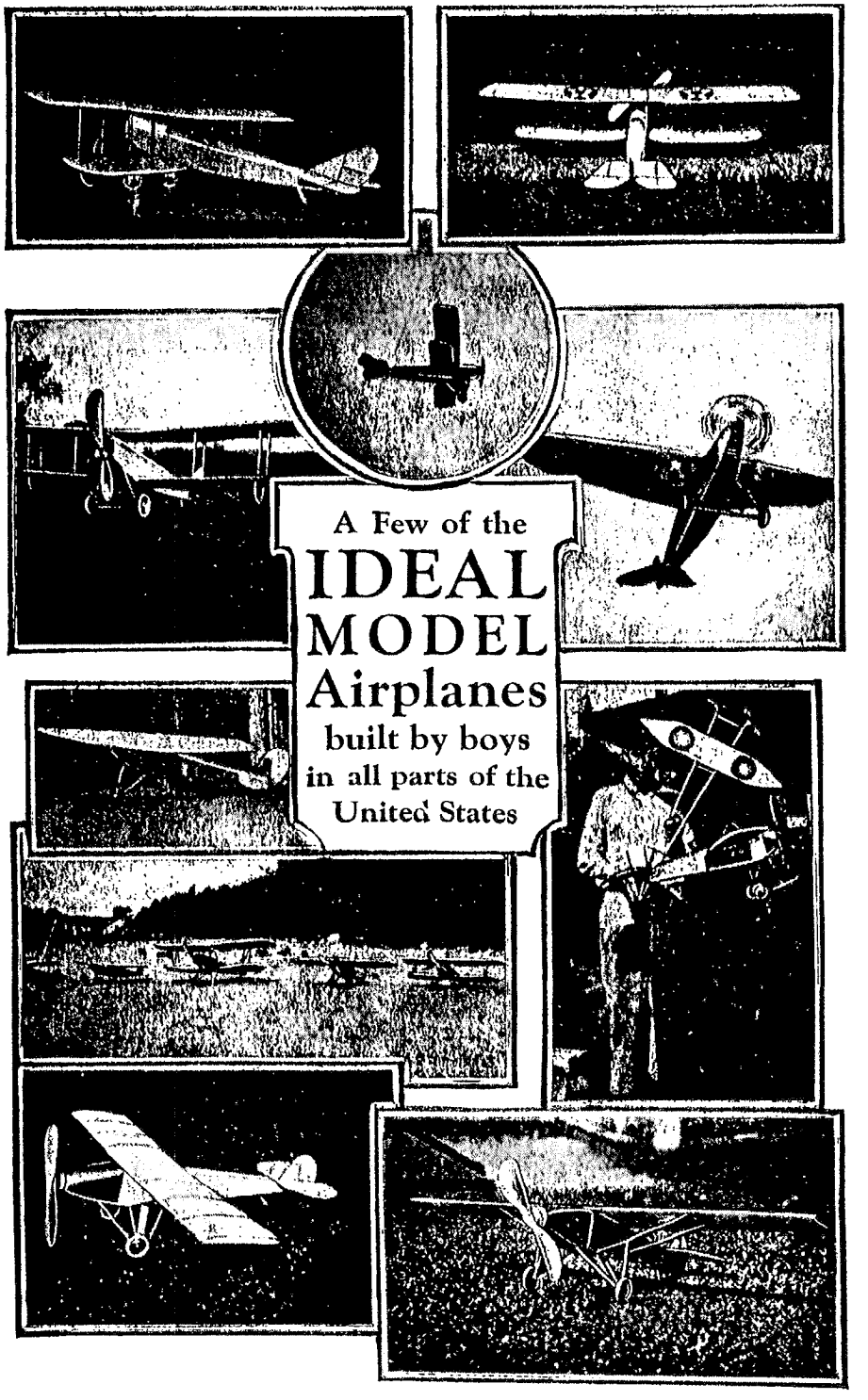
Parts, Supplies, Materials for Model Airplane Builders

Price 5 Cents

Published by
IDEAL AEROPLANE & SUPPLY CO., Inc.
22-28 West 19th Street
New York City

Copyrighted, 1928, by
Ideal Aeroplane and Supply Company, Inc., New York





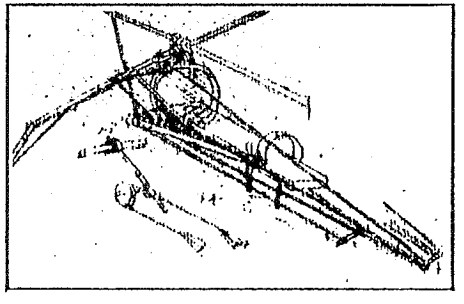
# The History of Aviation.

THE art of flying has occupied the attention of men for centuries; one of the stories of ancient mythology tells of Icarus and his wings of wax. The earliest known records of the thoughts of men on flying are contained in the works of Leonardo de Vinci, one of the foremost figures of his time. He was born in Italy in 1452, and, when he died in 1515, left records of his thoughts on aviation.

His ideas on flying were crude, but are of interest because they are the first known thoughts on the subject. The fact that "height means safety" in flying, as all aviators know today, was first stated by this man in his writings about 500 years ago!

Following de Vinci, various other theories were advanced and flying machines of many fantastic kinds proposed. None were practical, however, and it was not until 250 years later that man first succeeded in leaving the ground and returning safely. In 1783 two brothers, Michael and Raymond Montgolfier, made the first flight in a balloon filled with heated air, at Versailles, France.

For a long time following this event, balloons were considered the only means of ascent and practically all developments were along this lighter-than-air line. The introduction of the steam engine into general use, in the period of 1800 to 1850, caused numerous experiments to be made with that type of engine for a heavier-than-air machine. No actual flights were made, but two men named Stringfellow, father and son, did make a large model which really flew in the air. This was in 1866. Also at this time experiments were made with gliders. More modern constructional features were worked out from time to time and, not having suitable means of power, the designers had to content themselves with carrying out experiments without power; hence the gliders. Otto Lilienthal, a German, was foremost in this development. His experiments in the art of gliding opened the door



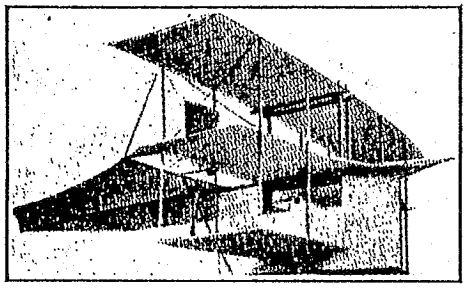
Plan of Flying Machine made by Leonardo De Vinci in 1500.





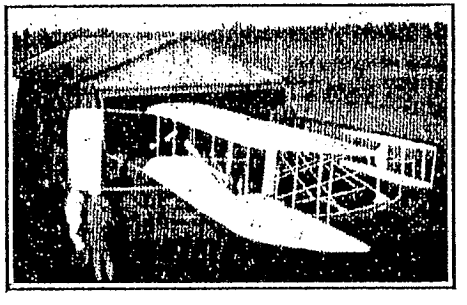
to the possibilities for flying a heavier-than-air machine even before suitable engines for such machines were available.

Three men stand out prominently in the development of heavier-than-air machines from this time forward. And all three of them were Americans. Samuel P. Langley, Wilbur Wright and Orville Wright are the men. As early as 1900, Langley was active in aeronautics, in the services of the Smithsonian Institute. Every scientific advantage of the times was placed at his disposal and he not only worked out the theory of flight but also built an airplane based on his theories. This airplane was ready to fly in 1903. Two attempts were made to launch it from the top of a houseboat in the Potomac River, both unsuccessful because of accidents to the airplane when taking off. Then the matter was left unfinished, and the veteran scientist gave it up. His airplane now rests in the Smithsonian Institute. Your father, or possibly your grandfather, will tell you how everybody laughed at these attempts and called the machine "Langley's Folly".



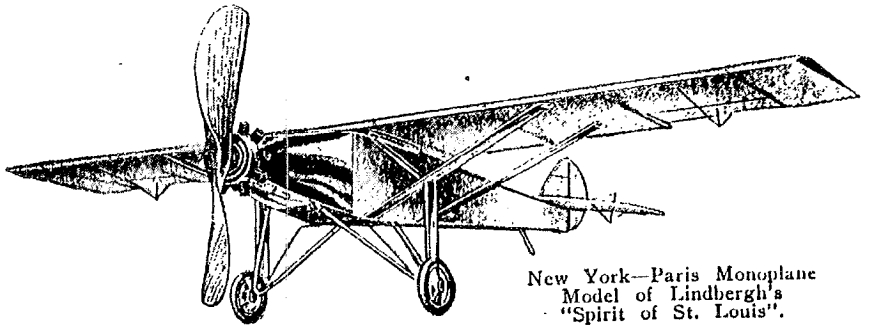
The Stringfellow Model of a Steam driven Airplane; made in 1866.

But while Langley was experimenting, two other men were also working. These men, Wilbur and Orville Wright, were busy at Dayton, Ohio, on much the same theory as Langley. But where Langley had every advantage which science could supply, the Wright brothers had little beyond their own inventive ability. But they experimented with everything they could get, on both machines and engines, and finally accomplished the great feat that men had dreamed of for hundreds of years; the first actual flight with a heavier-than-air machine! Even while Langley was trying to get his machine off its launching apparatus in the Potomac River, these brothers were doing exactly the same thing on the lonely sand dunes at Kitty Hawk, North Carolina. Langley's final failure to fly was on December 8th, 1903. Just nine days after that, on December 17th, Orville Wright made the first flight with a power-driven airplane.

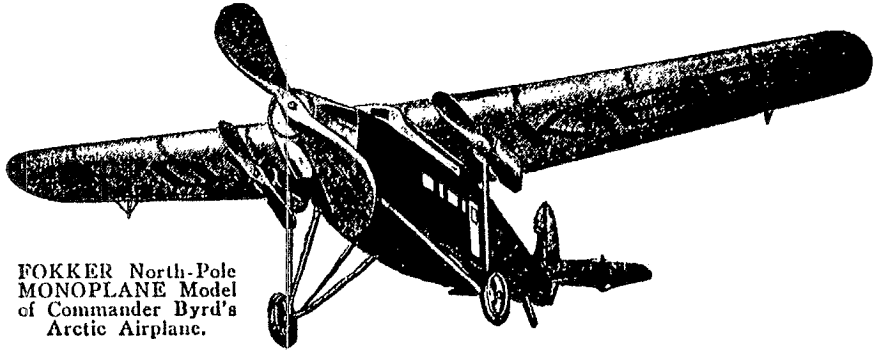


The Wright Bi-plane made the first flight in 1903.

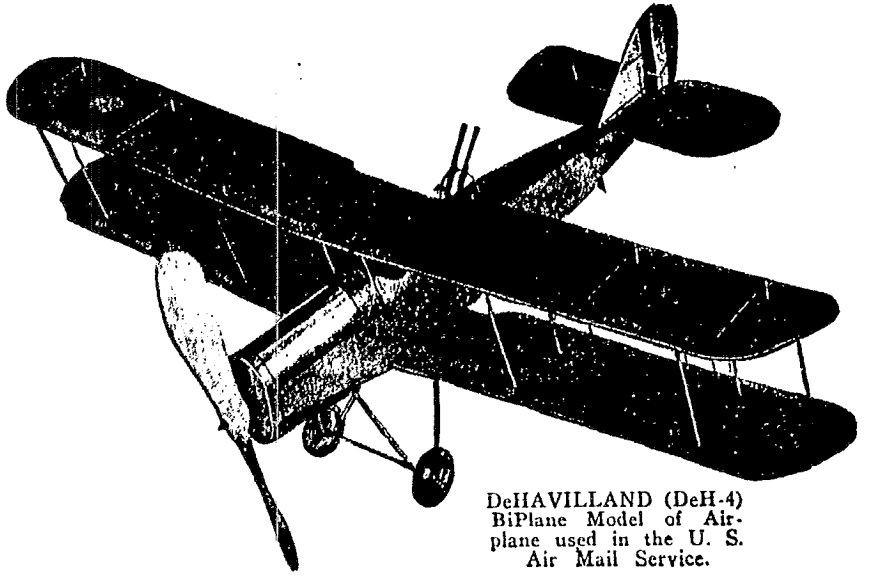
THESE actual photographs of IDEAL Model Airplanes, built with the Complete Construction Outfits described in this book, show the excellence of design and the realistic appearance of these miniature duplicates of real machines.



New York—Paris Monoplane Model of Lindbergh's "Spirit of St. Louis".



FOKKER North-Pole MONOPLANE Model of Commander Byrd's Arctic Airplane.



DeHAVILLAND (DeH-4) BiPlane Model of Airplane used in the U. S. Air Mail Service.





# Airplane Types of the Present Day.

SINCE the notable flights of the Wright Brothers in 1903, the science of aeronautics and the development of Airplanes have made very rapid progress. While the general interest in flying has not been as active during all this period as it has during the immediate past, developments have been extensive and the Airplanes you see in the air now are very different from those of even a few years ago.

Available pictures of the various types of Airplanes used during the development show a steady change toward the types that are now used. Most of the earlier types were of the "pusher" model. When the engine is placed in back of the main wings of the Airplane and the thrust of the propeller pushes the machine forward, it is called a "pusher" type. When the engine is set forward, and the thrust of the propeller pulls or drags the machine thru the air, the machine is called a "tractor" type. Practically all Airplanes are now of the "tractor" type; the seaplanes are frequently of the "pusher" type.

Airplane design from the early days to the present, has practically turned the Airplane around. In older types, the rudders, stabilizing features and skids were placed forward of the main wings. Now all these elements are at the rear. Earlier Airplanes had no landing gear. They had to take off from some kind of a track along which they could slide until flying speed was obtained. Instead of raising or lowering the ailerons in banking the machine for turning, the older pilots warped, or twisted the wings to obtain the same effect. In fact, many of the earlier machines could not make a turn; they could fly only straight ahead.

During the World War, Airplanes were designed and powered according to the work they were expected to do. There were Training Planes; slow flyers, strongly constructed to withstand the knocks of student pilots. Pursuit Planes; light and fast, easily manoeuvered. Bombing Planes; to carry heavy loads and frequently travel long distances and at fair speed. Observation and Photography Planes; stability the main consideration. Attack Planes; for the actual fighting and protection of slower types.

The principles governing the flight and operation of all Airplanes are the same. The different uses to which the machines are put requires different construction and different types of engines.

Airplanes used for war purposes lose their value for the private owner. War demands speed or weight carrying capacity, or both, regardless of cost of operation. Commercial, civilian or sport flying requires machines that can be operated economically.

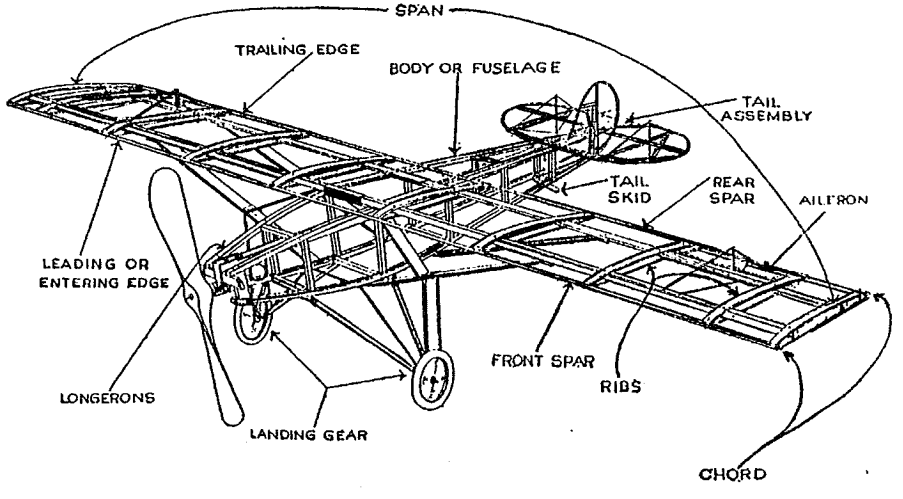
# The Parts of an Airplane

Airplanes are like birds in that they have bodies, wings, tails and legs. The Monoplane most closely resembles a bird, and the bi-plane has little resemblance. These are the two types that have proven most practical. The Monoplane has one single plane, called wings. The Bi-plane has two supporting surfaces, one above the other, which are called planes.

The wings, or planes, of an Airplane are its most important feature. The distance from tip to tip of the wings is called the "span"; not the length, as some people frequently say. The measurement from the front, or leading edge, of the wings to the rear, or trailing edge, is called the "chord".

The wings when covered are supporting surfaces, because they support the Airplane in its flight. A covered wing is also referred to as an "aerofoil". But when the fabric or other covering of the wing is removed, it is no longer a supporting surface. What remains is referred to as the "wing structure". It is nothing more than the framework over which the fabric supporting surface is placed. This frame work consists mainly of the "front spar", "rear spar" and "ribs". These are held together by internal bracing wires, by stays and other means.

Wings were originally designed with perfectly flat surfaces. The experiments of Otto Lilienthal, the German who experimented with Gliders, developed the knowledge that a "cambered" wing had greater lifting power than a flat wing. The curve in the wing from the entering edge to the trailing edge is referred to as the "camber".




This is an illustration of the structure of the Ideal New York-Paris Monoplane, in which the various parts and designations mentioned in this chapter have been identified. Every detail of the actual Airplane which is practical in a model, has been included in this Ideal model.





"Top camber" means the degree of curve on the top of the wing, and "bottom camber" to the curve on the bottom. "Mean camber" is the average of the two.

The body of an Airplane is called the "fuselage". The long members which form the outline of the body are called "longerons". There are generally four of these, two top and two bottom. These are properly shaped to the contour of the body, and secured with interior bulkheads, struts and bracing wires. This body structure is covered with fabric, thus making it a supporting surface. In earlier types, the fuselage was seldom covered. It was generally a light bamboo framework, securely braced. At the front of the fuselage is the engine housing, gas tank, radiator, and propeller. Immediately behind is the pilot's cockpit and place for passengers, if any. At the rear end are the elevators, stabilizers and rudders; known as the tail assembly.

The undercarriage, or landing gear, carries the wheels for landing on the ground, and the pontoons for landing on the water. This undercarriage also performs another function; it raises the front end of the machine up off the ground so the propeller can have full swing without hitting anything when the machine is traveling on the ground. Wires are used for operating the controls, for internal bracing, and for supporting the wings.

Speed is essential in an Airplane. All factors that retard speed must be eliminated. The earlier type of Airplanes show little attention at this point. In present types, streamlining is an important consideration. Anything that presents opposition to the flow of air decreases speed. The training planes of ten years ago were slow flyers. The Curtiss JN4D-2 (see illustration of model on page 29) is an example of design where speed was a secondary consideration. Compare it with pictures of any of the present fast machines and notice the difference. The present machines are smooth, sleek affairs with no protruding parts, no blunt surfaces to retard the passage of air.

A study of the gradual development of the Airplane, from crude machines of earlier days to the speedy, safe and luxurious planes of the present time, will be interesting and instructive to any model builder. Every change in design, every improvement in construction and betterment in all round performance has come as a result of careful study and experiment. The really interested model builder can follow these developments in model construction and thus learn how and why each was an improvement over what went before.

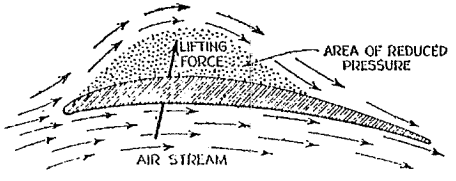
Somebody has said that for each Airplane in the air there are twenty men on the ground. That is probably true. Any intelligent person can learn to operate an Airplane in a reasonably short time, and with proper instruction and practice. But the care of the machine, and especially of the motor, is a task requiring long experience, real ability and practical knowledge. Airplane motors alone are a study in themselves, and a first class motor expert is a far more valuable individual than most people realize. Without him, with his expert knowledge and his corps of helpers, few Airplanes would remain in the air very long.

# How and Why Airplanes Fly.

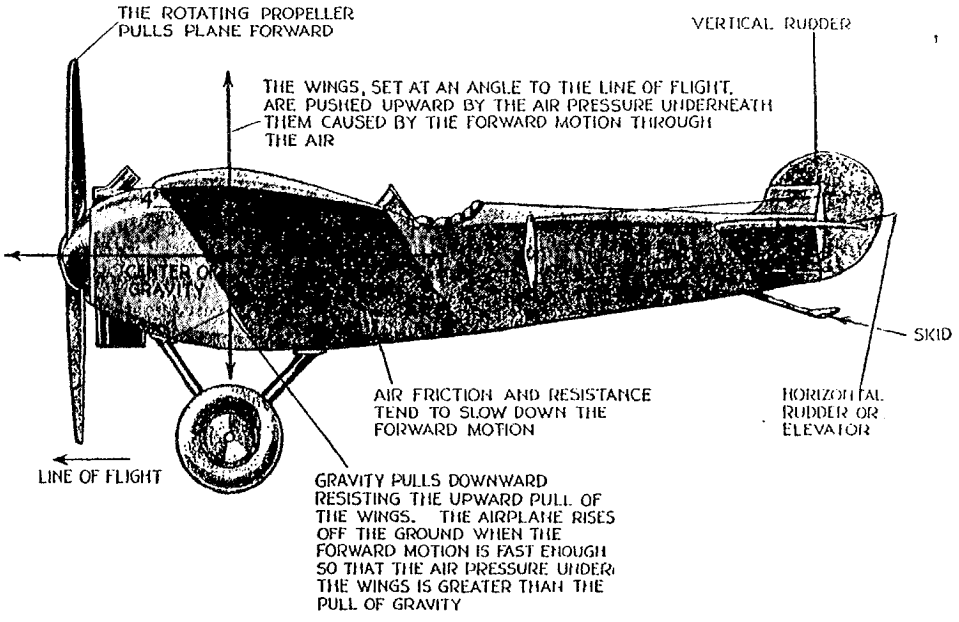
THE first principle to be learned in the study of how and why heavier-than-air machines can fly in the air, is that of Relative Motion. Everybody knows that the air has force; the force of the wind drives boats thru the water, even knocks over houses when it blows a gale. The air also has density, or mass, and is capable of supporting a foreign body such as an Airplane. 13 cubic feet of air weigh 1 pound.

You can stand perfectly still on a calm day and not feel the slightest breeze. But if you run, you will feel a breeze on your face. This breeze is the result of your Relative Motion thru the air. If you put your hand out the side of an automobile, or a railroad train, as it is moving rapidly, you will feel the rush of air. Then if you held a piece of cardboard in your hand broadside to the wind, it would probably be torn from your fingers. But if you held it edge on to the wind, the flow of air would pass over and under it, making very little impression on the cardboard. This cardboard would be the same as the flat plane which composed the airplane wings of earlier types of Airplanes.

If the forward edge, called the entering edge, of your cardboard was inclined downward the passing wind would strike on the top and force the card downward; while if the entering edge were inclined upward, the passing wind would exert a lifting force. Thus, by placing this flat plane at an angle in the line of motion, a lifting force is created upon it. An Airplane has wings, or supporting surfaces, built into it at an angle; spoken of as the Angle of Incidence; so that when the Airplane is driven thru the air at a great speed, these wings deflect the air downward. In addition, the rapid motion thru the air forms a partial vacuum over part of the upper surface of the wing. These two forces together exert a lifting power which enables the Airplane to rise in the air.




An Airplane will not rise from the ground until its speed thru the air creates lifting force sufficient to overcome the weight of the Airplane; in other words, the pull of gravity. This speed is called flying speed. After the Airplane has left the ground, it must maintain this flying speed in order to stay in the air. Flying speed varies with various types of Airplanes. Some machines will leave the ground at 40 miles an hour, others at 45, 50 or 60 miles. But the

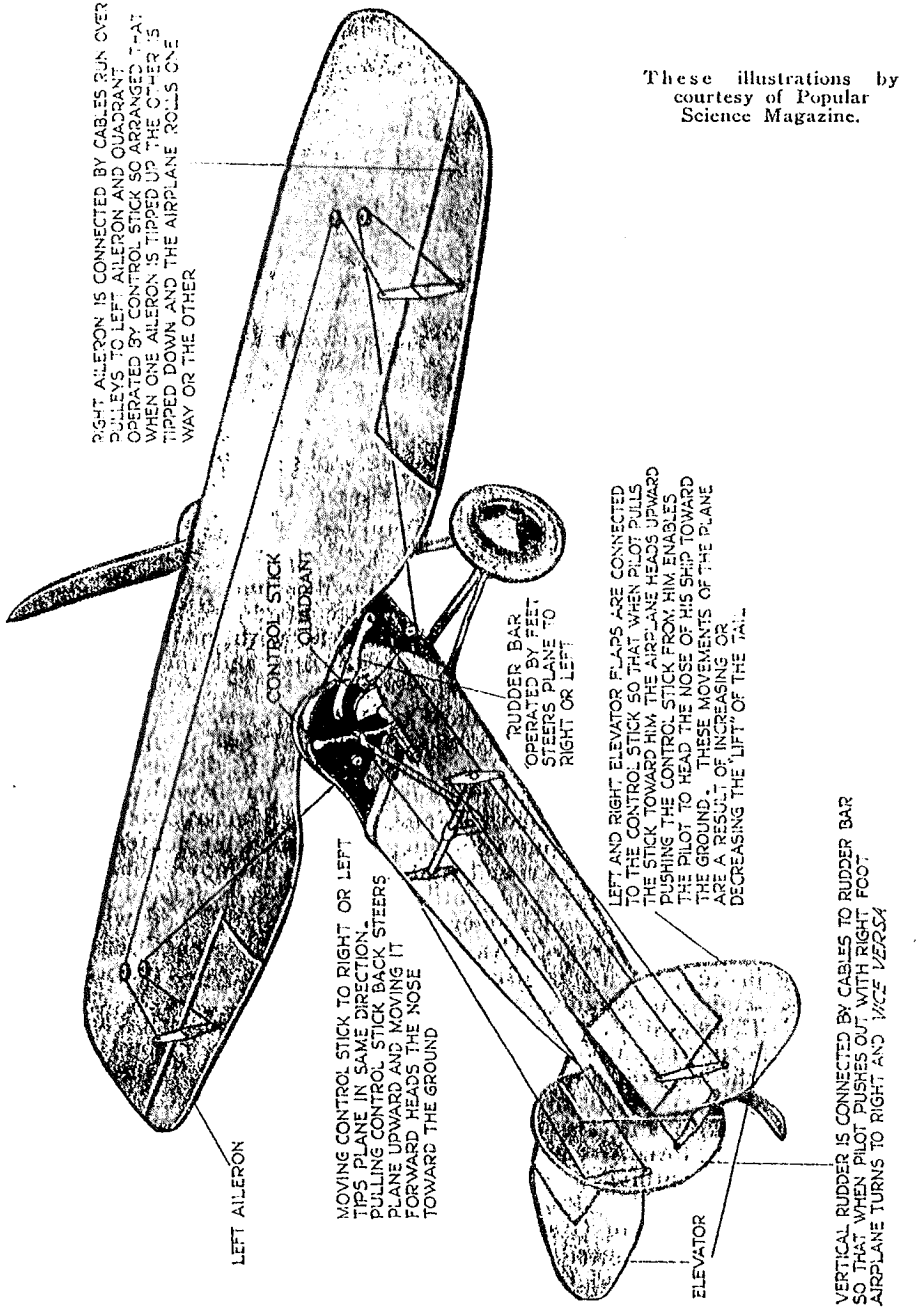



flying speed is the minimum speed that will maintain an Airplane in the air and enable it to respond to all controls.

Two other principles which have to do with maintaining an Airplane in the air are, the Center of Gravity, and the Center of Pressure.

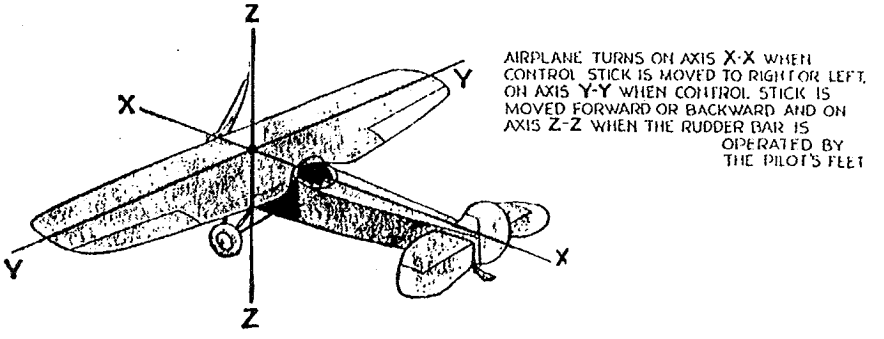
The Center of Gravity is a fixed point; expressed in engineering talk as follows: "The point in which a set of effects is assumed to be accumulated, producing the same effect as if all were concentrated at that point." If you will take a lead pencil with a rubber eraser and a brass tip on one end and balance it across your finger you will see that if you put your finger in the exact center of the pencil, it will fall off, heavy end first. But if you move your finger along toward the heavy end until you reach a point where the pencil will balance on your finger without falling off, you will then have found the Center of Gravity of the pencil. The Center of Gravity in an Airplane is usually where the pilot sits, or between that point and the engine.

The Center of Pressure is a moving point which varies according to the movement of the Airplane. You have seen how the air exerts a lifting force and raises the Airplane. When this lifting force first exerts its pressure against the wings, it does so immediately behind the forward, or entering edge. The point on the wing at which this force is exerted is called the Center of Pressure. As the Airplane continues to climb, this Center of Pressure moves backward on the wings. But if the Center of Pressure moves back beyond the Center of Gravity, the Airplane will lose its natural stability and its flying speed. It will start to drop head first, or "stall" as it is called. It will continue to drop until it again attains sufficient flying speed to bring it into control.




Stated in simple language, an Airplane is a combination of supporting surfaces, drawn or propelled thru the air by the thrust of the propeller, which derives its power from the engine of the machine. An automobile or boat can be directed only to the right or left. But an Airplane is subject to four directional controls; to right, to left, down and up.

The Airplane is controlled by rudders at the rear of the machine and by ailerons built into the wings. The vertical rudder controls the movement to the right or left. The horizontal rudder; or elevator, as it is frequently called; controls the movement up or down. An Airplane cannot make a circular turn and remain level. It must be tipped up on its side, or "banked". The ailerons control this movement. All controls are located in the pilot's cockpit and are operated by both hands and feet.




In the illustration the line X — X is called the longitudinal axis. The line Y — Y is called the lateral axis. The line Z — Z is called the vertical axis. When an Airplane swings off its course from right to left on its vertical axis, Z — Z, it is said to "yaw". When it moves up and down on its lateral axis, Y — Y, it is called "pitching". When it rolls from side to side on its longitudinal axis, X — X, it is called "rolling". As you will note from the illustrations, parts of both the vertical and horizontal rudders are stationary, and parts are movable. The stationary parts act as permanent controls. The stationary vertical rudder, called the stabilizer, prevents "yawing". The stationary horizontal rudder, prevents "pitching". "Rolling" is corrected by the ailerons, which are movable sections built into the outer ends of the wings on the trailing, or rear, edge. The accompanying illustrations explain the operation and effects of the various controls of an Airplane.

A good model Airplane has these same controls, and they will have the same effects on the movement of the model as they do on an actual Airplane. When flying a model, however, great care must be exercised in setting the controls before the flight because there will be no pilot in the cockpit to change them in case the model "yaws", "pitches" or "rolls".

# How Model Airplane Building and Flying Teaches the Principles of Aeronautics

THERE is real fun and useful interest in building and flying Model Airplanes. Many of the leaders in Aviation today, got their start by building models, and they all agree that model building and flying is the finest possible way to learn the principles of aeronautics, as well as the easiest.

There is hardly any other vehicle which can be reproduced so faithfully in model form as an Airplane. Its construction can be duplicated in miniature, with practically the same materials as are used in big machines. The method of control can be made the same, and the motive power, while not derived from the same engine, can, however, be applied in exactly the same way. The result is that the properly constructed Model Airplane will look exactly like the large one, be made of the same materials, operated and controlled in the same way, and fly in the air in just the same manner as will its original.

Building and flying Model Airplanes shows in the best and easiest way all the parts of real Airplanes; what each part is for; what it does; how real machines are assembled, erected, aligned and covered; what makes them fly; how they "take off" and land; and many other things that could be learned only by practical experience with a real machine.

Building and flying a Model Airplane is the next best thing to building and flying a real one. The model is exactly the same as the large machine, and lessons learned in flying a Model are just as valuable as those learned in actual flying.

Model Airplanes are usually divided into two general classes; Racing Models and Scale-Reduction Models.

Racing Models are not patterned after any particular type of Airplane, but are made as simple as possible, and of as light and strong materials as may be obtainable, in order to perform well as to distance, duration and direction. Practically all record holding Racing Airplanes are of the "pusher" type; that is, the propellers are at the rear end. They may be either single or double propeller models. They are always simple in construction, consisting of very few parts, but great skill and workmanship are required to obtain the light weight, strength and accurate balance necessary for a good flight. The Cecil Peoli Racer (see page 34), and Bluebird Racing Airplane (see page 35) are excellent example of this type of Racing Airplane. They are both wonderful flyers and perform gracefully when in the air.





Scale-Reduction Models are actual duplicates of large Airplanes. Various types of these Model Airplanes are illustrated on following pages. In most cases, the Model was made by reducing in scale the actual plans from which the large originals were made. The FOKKER North-Pole Monoplane for instance, (see page 27) was copied from the plans of the machine which Commander Richard E. Byrd flew to the North-Pole. The same plans were used to build this model as were used to build the original machine, except that where the plans called for measurements in feet, the model was built in inches. Scale-Reduction means reduced by scale.

These Models are naturally less spectacular in their action. They will rise from the ground under their own power and fly in the air, but they are not racing machines and will not make as long or as fast flights. They do, however, teach far more valuable lessons and show by practical example, the actual working of real Airplanes.

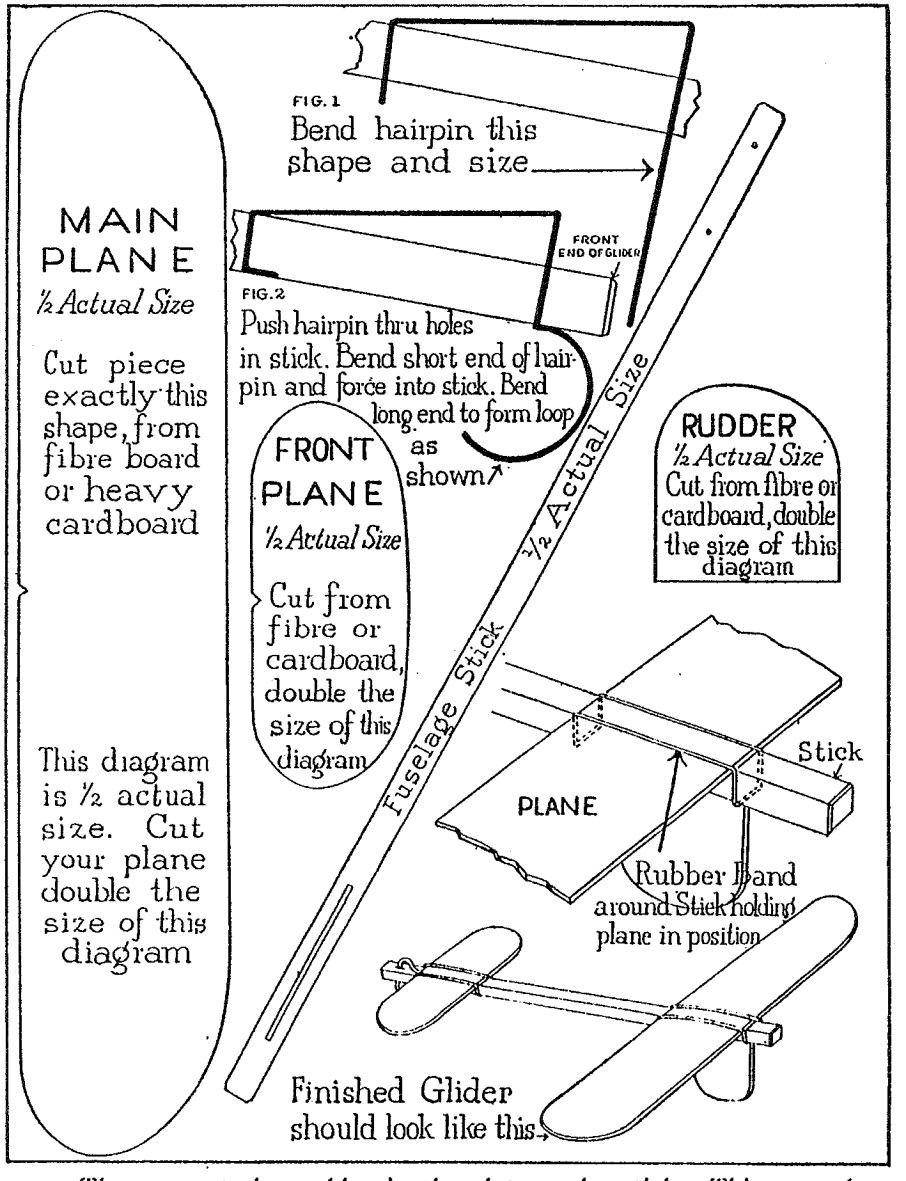
The effect of the supporting surfaces and controls of an Airplane, as explained in previous chapters, is shown better in a small Glider than in any other kind of a Model Airplane. Such a Glider can be shot into the air at great speed and will react to its controls quicker and more positively because of its speed. Those desiring to understand this element of Airplane operation will do well to build such a Glider and try it out. It can be made for a few cents, and will not only teach useful lessons but also be a source of great fun.

# How to Build and Fly "The Baby Glider"

The things needed to make this Glider are few and simple; a piece of smooth, straight-grained wood, 10¼ inches long, and ¼ inch thick; a sheet of heavy fibre board, or stiff cardboard, about 6 inches wide and 12 inches long; 2 or 3 ordinary wire hairpins and 2 strong rubber bands.

First prepare the stick of wood, which will be the fuselage of your Glider. Starting ⅝ inch from one end, cut a slot thru the center of the stick just big enough to take the fibre or cardboard you will use. Make this slot 1⅝ inches long. At the other end of the stick, exactly ¾ inch from the end and on the same side of the stick as the slot, drill a hole just large enough to take the hairpin you will use. Measure 1⅜ inches from this hole and drill another. This completes the fuselage for the moment.

Now bend the hairpin in exactly the shape shown by Fig. 1 in the plan. Be sure the size is exactly as indicated. Push the two ends thru the holes in the stick, as shown, bending the short end and forcing it into the wood. Next bend the long end in a curve as shown. The finished wire should look like Fig. 2. Now cut the planes and rudder out of the fibre board. Follow the diagrams accurately, but remember that these parts are shown one-half size and the diagrams must be doubled to get the full and correct size. Be sure to include the notches shown in both planes.




Then mount the rudder in the slot on the stick. This must be done so the rudder and the circular part of the hairpin are on the same side of the stick. Fasten it in place by driving very small nails thru the stick, bending over the ends and forcing them into the wood. Now mount the planes in place, holding them with the rubber bands as shown, and your Glider is complete. The forward, or entering edge of the smaller plane should come even with the top end of the hairpin, thus giving this plane the necessary angle. The notches in both planes must be exactly in the center of the stick.

For flying, you will need an ordinary sling-shot. Just hook the curved hairpin into the rubber, point the Glider into the air, and let her go. When you get the trick of it you can make your Glider do many interesting stunts in the air by changing the position of the forward plane and by increasing or decreasing its angle of incidence; raising or lowering the front end.

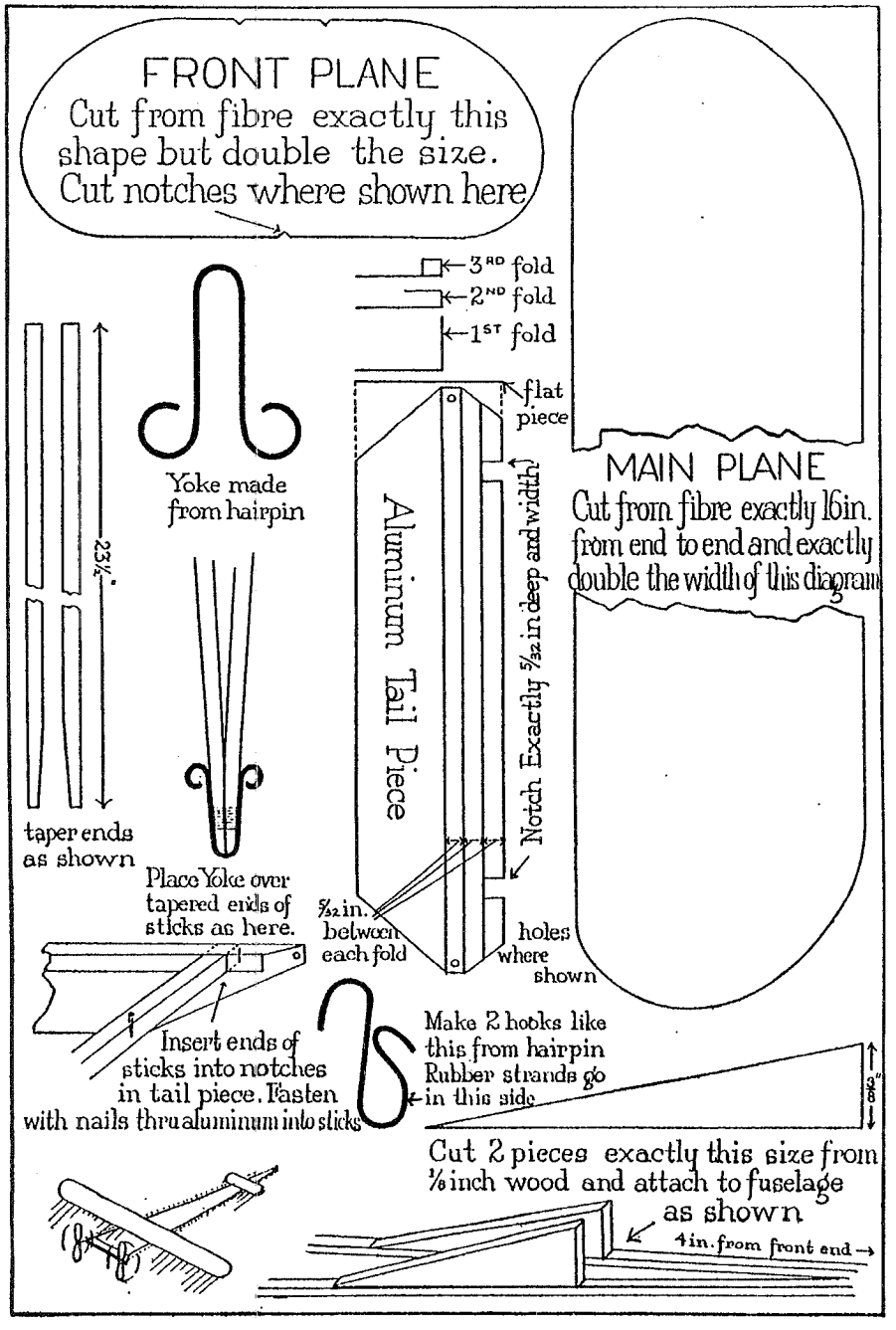
When you have mastered the principles of flight as shown by your "Baby Glider", you will be ready for further and more extensive sport and experiment with larger and more interesting flyers. As your second experiment, you can build and fly a double-propeller racing Airplane which will make good flights under power and which you can take out into the fields.

# How to Build and Fly "The Twin Racer"

The things you will need for this Airplane are equally simple, tho there are a few more. Two sticks, 5/32 inch size, each 23½ inches long; fibre board, or stiff cardboard, 18 inches long and 6 inches wide; one stiff, heavy hairpin; piece of aluminum 6 inches x 6 inches; 3 or 4 strong rubber bands; 26 feet of ⅛ inch flat rubber for motive power and two, 5 inch fibre propellers with bearings attached. You will probably have to buy the flat rubber and the propellers. They are listed in the catalog section.

First, be sure both sticks are exactly 23½ inches long. Then taper one end of each as shown in the plan. That's all with the sticks. Now make the aluminum tail piece. Cut out the sheet exactly as shown in the diagram. Diagram is one-half actual size. Punch holes and cut slots where indicated. Then fold into position, making the folds in the order shown in the diagram. Try to keep your folds square and even. If you spoil the first one, try it again. Then make a yoke by shaping part of a hair pin as shown. Make it actual size of this pattern. Put the tapered ends of the stick together, bind them securely with very thin wire, and slip the yoke over the ends as shown. Place your aluminum tail piece on the other ends of the sticks and fasten with very small nails thru holes in the aluminum. The ends of the sticks must fit tightly into the slots.

Now make two hooks by bending them into shape, using a piece of hairpin for each. Then attach the propellers, putting the hook ends thru the holes in the aluminum tail piece. The little brass bearings must go against the aluminum. Now you are ready for the rubber motor. The 26 feet must be cut into two pieces, each 13 feet long. Tie the ends of each piece together, so each forms a continuous loop. Then fold each piece together so you have eight strands of rubber in each piece, with loops at both ends. Hook one end over




the hook end of each propeller, and the other end on the hooks you made from the hairpin. Fasten these hooks into the loop ends of the yoke.

Next cut out the planes from fibre or cardboard. Shape them exactly as shown, and include the notches in proper places. Now make the two hangers for the front plane. Use ⅛ in. wood and shape them as shown. Glue and wire them to sticks exactly 4 inches from front end. Place the small plane on this hanger and secure with rubber bands placed around each stick as shown. Attach the rear plane (the large one) so the notches are forward and come exactly over the sticks. Fasten this one with rubber bands. Now your "Twin Racer" is complete.

The next step is to try it out. You will require some kind of a winding apparatus to wind up the rubber motor evenly on each side. The best thing is the IDEAL Patent Friction Winder described in the catalog section. Have someone hold the propeller end of the Racer, with fingers over the propellers holding them so they will not turn. Do the winding with the Racer turned upside down. Unhook the hooks on the ends of the rubber from the eyes in the yoke, and hook them into the loops on the winder. Draw out the rubber to about twice its normal length and turn the winder about 150 times, counting as you turn. Be sure to turn the handle of the winder toward you on the bottom, and away from you on the top, holding the winder in the left hand and winding with the right. Then replace the hooks.

Now grasp the Racer at the rear end with your right hand, holding the propellers so they do not turn, and place the fingers of your left hand on the under side up toward the front. Hold it up level with your eyes, point it slightly upward into the air, give it a fair push forward and let go quickly. If it is properly balanced it should fly straight and true.

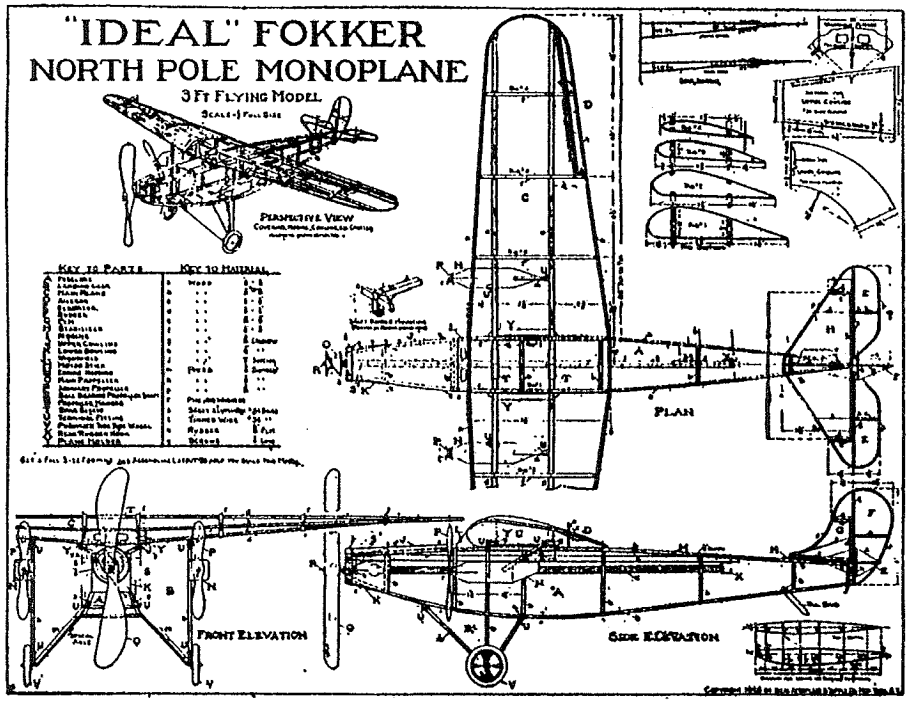
Practice launching without winding the motors until you can make it glide 20 or 30 feet. A little practice will enable you to make a perfect flight every time. If the Racer dives, push the large plane forward; if it climbs rapidly and slides backward, push the large plane back toward the rear. Remember what you read in previous chapters regarding Airplane controls, and apply the same principles to your Racing Model, thus learning by actual practice what effect each control has on an Airplane.

The building and flying of Scale-Reduction Models is a more advanced art, and is far more interesting to most model builders. These Models can be made from parts and materials obtainable from various sources, provided a good, clear plan and complete instructions are at hand. The easiest, most practical, and, in the long run, the least expensive way to build a Scale-Reduction Model Airplane is to secure a complete assortment of all the parts, materials, supplies and fittings required for the particular Model desired, which assortment will also include the plans and instructions, and build accordingly. Outfits of this kind are described in the following chapter.

# Scale-Reduction Models of Famous Airplanes.

THE most important thing in building a Scale-Reduction Model Airplane is a perfect plan to work from. A perfect plan will show all parts in detail, will give clear indications of where each part goes, show how each part is to be built into the Model, and give complete, easily understood directions for doing the work. In addition, and this is very important for the average Model builder, the plans will be entirely clear and so arranged that anybody can read and understand them.

"IDEAL" Plans are actual scale drawings made from the plans of the original machine. They are the secret of successful Model building. They visualize the work; show and explain each step in the construction; mention and identify each and every part; and include a "key to materials" which enables the builder to know just what size and kind of material to use in each place. Each Plan is "half scale"; one half the size of the finished Model.




This is a greatly reduced reproduction of the Plan (Scale Drawing) furnished for building the "IDEAL" FOKKER North Pole Monoplane. Every detail of construction and covering is clearly illustrated and described in this Plan and the accompanying Building-Flying Instructions.

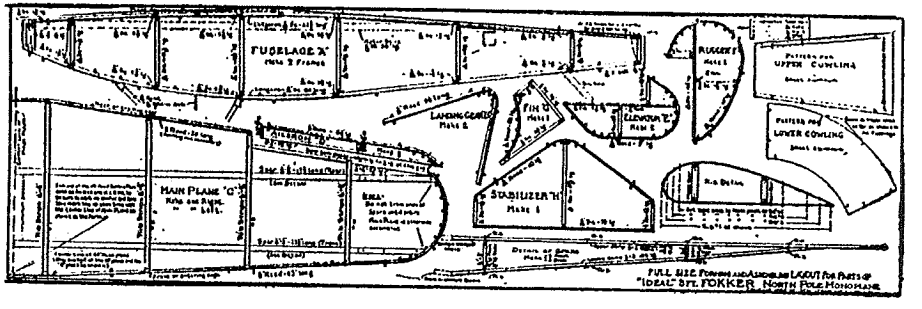
These plans are purposely made simple and clear, yet wonderfully complete and absolutely accurate. They can be understood by any bright boy. Each plan includes a separate Manual of Instruction for Building and Flying the Model Airplane. These Plans are furnished with each "IDEAL" Model Airplane Construction Outfit, and are also supplied separately for those who desire to study them in advance, or who wish to build with materials at hand or ordered at later time. The list of Plans available is as follows:

## Plans for Model Airplanes

(See Illustration page 21)

| | | |
|---|---|---|
| **New York-Paris Monoplane** | **3 -ft. Model** | **Price** |
| **FOKKER North Pole Monoplane** | **3 -ft. Model** | **25 cents** |
| **Naval Curtiss Seaplane (NC-4)** | **4½-ft. Model** | **per Plan,** |
| **DeHAVILLAND Bi-plane** | **3 -ft. Model** | **Postpaid** |
| **Curtiss JN4D-2 Bi-plane** | **3 -ft. Model** | |
| **Bleriot Monoplane** | **3 -ft. Model** | **(Set of 8 Plans,** |
| **Nieuport Monoplane** | **3 -ft. Model** | **$1.75 Postpaid)** |
| **Cecil Peoli Racing Airplane** | **3 -ft. Racer** | |

The most difficult part of Model building is the shaping, or forming, of the wood and reed parts, and their proper assembling, or putting together. This has been made easy by the greatest recent improvement in Model Airplane building. This is the "IDEAL" Forming and Assembling Layout. This is a specially designed




This is a greatly reduced reproduction of the Forming and Assembling Layout furnished with each "IDEAL" Model Airplane Construction Outfit. This Layout greatly simplifies the construction and assembling of the various parts.

diagram made in the full size of the Model and indicating without possibility of mistake, exactly where and how each formed piece must be shaped, and how all such pieces are to be put together. The use of this Layout has been greatly simplified and is fully explained on each sheet.

These Layouts need only be followed carefully to assure complete success in doing what heretofore was a difficult piece of work. This feature is exclusively "IDEAL" and cannot be found in any other Model building plans. In addition, these Layouts show in detail, and in full size, the most important parts of the assembling of the various units of the Model. They save time, assure correct bending of wood and reed and prevent breaking the material while doing these operations.

"IDEAL" Forming and Assembling Layouts are also included in each "IDEAL" Model Airplane Construction Outfit; and are supplied separately for those who may desire them. Layouts for the following Models are available:

## Forming and Assembling Layouts for Model Airplanes

(See Illustration, page 22)

**New York-Paris Monoplane**
**FOKKER North Pole Monoplane**
**Naval Curtiss Seaplane (NC-4)**
**DeHAVILLAND Bi-plane**
**Curtiss JN4D-2 Bi-plane**
**Bleriot Monoplane**
**Nieuport Monoplane**

**Price 35 cents per Layout, Postpaid**

(Where both Plan and Layout are ordered at the same time, for the same Model, both will be supplied for 50 cents).

The building and flying of a Model Airplane is an accomplishment of which any boy may well be proud. It is a tribute to his mechanical workmanship, to his patience, to his ability to read and interpret plans, and to his desire for practical knowledge of Airplanes and their construction and operation.

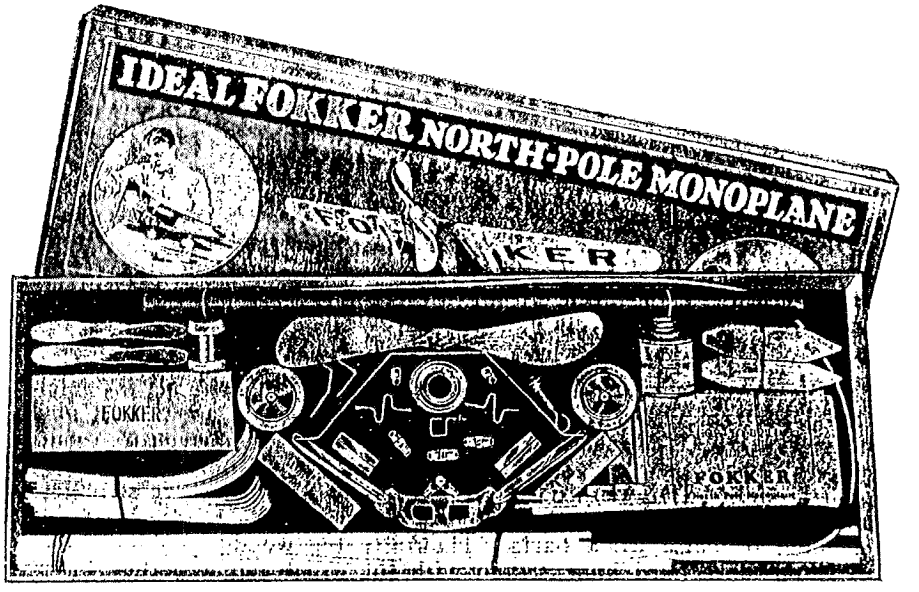
Thousands of boys everywhere have built and successfully flown "IDEAL" Model Airplanes. Countless prizes have been won by boy builders in contests in many states, and as the interest in Aviation continues, more and more contests are being held all the time, offering still greater opportunity for prize winning in both the building and flying of Models.

## Complete Construction Outfits for Ideal Model Airplanes

The easiest, quickest, most accurate and least expensive way to build a Model Airplane is with an "IDEAL" Model Airplane Construction Outfit. These Outfits contain everything—absolutely everything—required to completely construct the Model. The Models themselves are wonderful; exact duplicates of large machines. They have parts, fittings and features just like the originals. The parts furnished with each Outfit include hand carved wooden propellers, rubber tired disc wheels, aluminum radiators, engine and








"IDEAL" Model Airplane Complete Construction Outfits, such as illustrated above, provide the easiest, quickest, most practical and, in the long run, the least expensive way to build a Model Airplane.

cockpit cowlings, real ball bearing propeller shaft, completely shaped propeller hanger, special axle, pure Para rubber strands for motive power and other parts necessary in the construction. All the materials such as wood and reed, Bamboo paper for covering, Bamboo varnish for "doping" the same as large planes, wire, nails, glue, screws and such other items, are included in every Outfit. Even small Model making tools and the distinguishing Insignia markings of the large Airplanes are included.

Each Outfit comes in a strong box with everything carefully arranged and securely fastened. All any boy needs to build a perfect Model of his favorite Airplane is one of these Outfits and his own hands!

There are several wonderful Models to select from. The newest and most popular one of all is the New York-Paris Monoplane; a perfect duplicate of the plane which Colonel Charles A. Lindbergh flew from New York to Paris—the "Spirit of St. Louis". Another is the FOKKER Monoplane which Commander Richard E. Byrd made famous by his trip over the North Pole. This is the same type Airplane in which he and his companions recently flew from New York to the shores of France. Then there are others of as great importance to any boy who is interested in Aviation. All these Model Airplane Outfits are described in full on the following pages, and the contents of each Outfit are listed in detail.

# Why IDEAL Model Airplanes are the Most Perfect Copies of Real Airplanes.

IDEAL Model Airplanes are the most perfect copies of real Airplanes it is possible to make in models that will fly. They are identical in appearance, have the same constructional features, and are controlled in flight by moveable ailerons, elevators and rudder.

Light weight is an essential feature of flying models, yet a model that is extremely light does not perform in the air as well as one heavier. IDEAL Models when completed weigh from seven to about eleven ounces, as contrasted with others weighing only about four or five ounces. IDEAL Models are heavier because they are stronger and more substantially constructed, and because they have no light celluloid or balsa wood parts. Their greater weight enables them to stand more hard knocks, and with the greater power they have gives them a wider flying radius. IDEAL Models will also perform perfectly in a wind that would wreck a lighter model.

All parts used in constructing IDEAL Models are strong and heavy. Only the best grades of material are used and every item is thoroughly tested. All parts are carefully manufactured for the particular purpose for which they are to be used, and are accurately made and nicely finished.

Many exclusive features not found on any other Model Airplanes are furnished for IDEAL Models. The "close-up" view of the forward end of an un-covered structure (see page 23) shows ten reasons why IDEAL Model Airplanes are superior.

**No. 1—Carved Propeller:** IDEAL propellers are carved from solid blocks of hard wood, usually poplar wood, and accurately finished by hand. They are absolutely true, with uniform blade area and pitch on each half. Hole for propeller shaft is ready drilled.

**No. 2—Ball-Bearing Propeller Shaft:** these are made from a 1/16-inch steel shaft with threaded end to receive washer and nut to hold propeller in place. Solid turned bearings are used and the finest steel ball-bearings and ball races. The flange and upper ball-bearing case is one solid piece of brass, is not soldered and cannot break. This is the finest, strongest and most durable propeller shaft furnished for any Model Airplane.

**No. 3—Aluminum Propeller Hanger:** shaped from heavy, 1/16-inch strip aluminum; ready to attach to motor stick. Screw holes and propeller shaft bearing are ready drilled.





**No. 4—Wood Parts:** all wood parts are cut to exact size and many of them are machined to perfect shape. There are up to 144 individual pieces of wood and reed furnished with IDEAL Models, and every piece is carefully inspected and checked before being placed in the outfit. Only smooth, well-seasoned and straight-grained wood is used..

**No. 5—Finished Nose Struts:** for the difficult nose formation of models, completely finished nose struts are supplied. These assure a tight joint at the nose without troublesome labor.

**No. 6—Aluminum Sleeves:** for joining two halves of long wings, and for other similar construction, sleeves made from sheet aluminum are furnished. These are carefully manufactured so they fit accurately and form a strong connection.

**No. 7—Wheels:** these are manufactured entirely in the IDEAL factory. They are stamped from heavy aluminum, securely joined with a genuine brass axle bearing and equipped with pneumatic tires of live rubber. They are what is known as stream-line disc type—the very latest type used on all large Airplanes. 2-inch diameter wheels are supplied on all IDEAL Models. Celluloid wheels are not used.

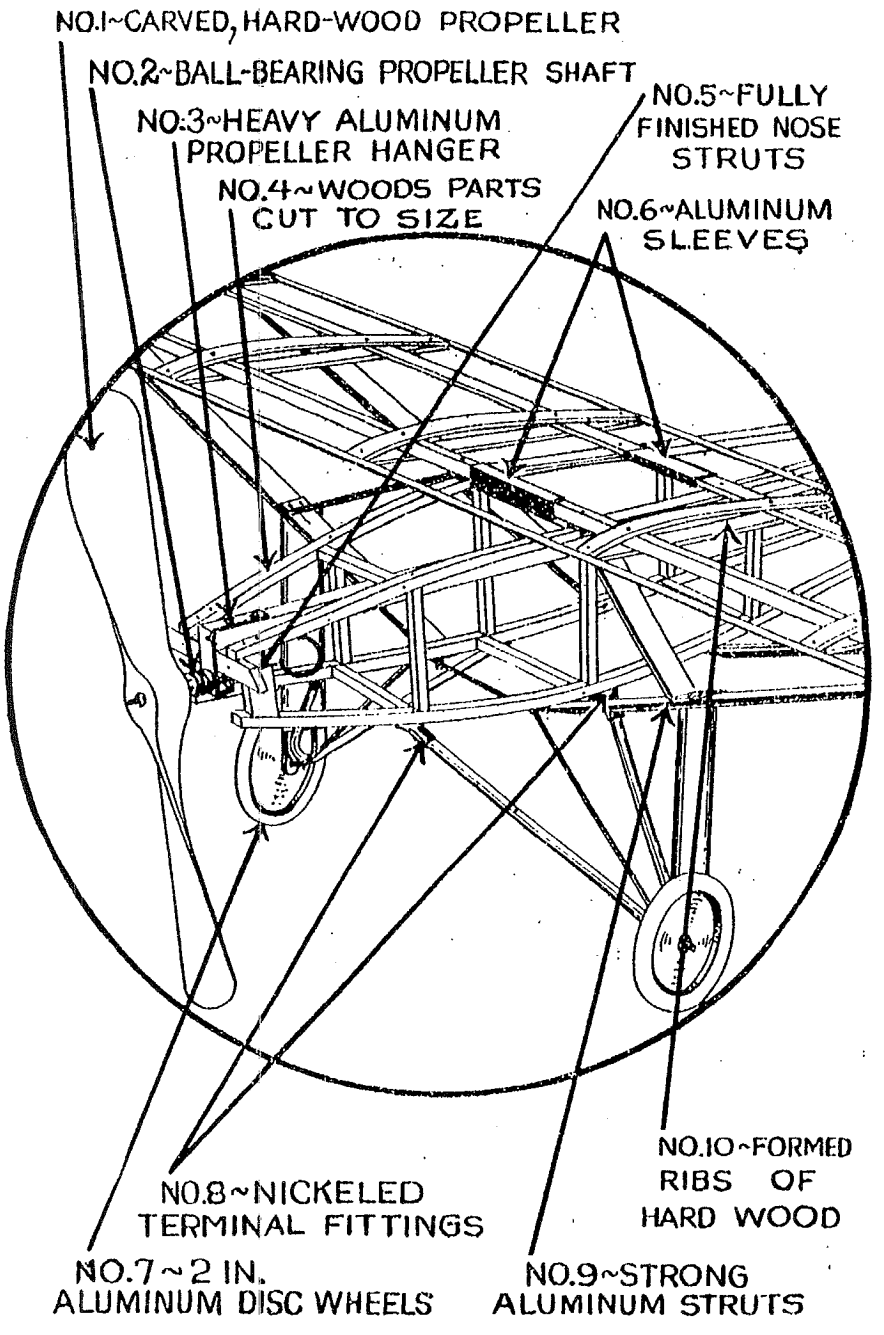
**No. 8—Terminal Fittings:** made of brass tubing, heavily nickeled, and shaped in accordance with their purpose. The most satisfactory way to attach struts, rigs, running gear, etc, to the body. These are little things, but indicate the thoroughness with which IDEAL Models have been designed.

**No. 9—Aluminum Struts:** the main wing support struts on the IDEAL Model of the "Spirit of St. Louis" (see page 26) are made of strong aluminum, shaped to give greatest strength and formed to give an appearance of substantial bulk.

**No. 10—Ribs:** some IDEAL Models are equipped with fully shaped ribs which are stamped out of sheets of selected maple wood; other Models have ribs built up from formed pieces. All such pieces are carefully heated and bent to accurate shape. They retain their shape and are ready for assembling into the wing structure when taken from the outfit. Stamped ribs are true and uniform, and follow closely the design of these found most satisfactory on large machines.

The above are merely the most important parts of IDEAL Model Airplanes. Many other items are included in each outfit according to the requirements of each individual Model, and every item is the finest possible to secure for its purpose.

IDEAL Rubber Motors have greater power than those supplied with other models. They are built up from 3/16-inch flat rubber, and while the number of strands varies according to the power required for each Model, each motor is capable of driving the Model for long, perfect flights and against wind and other conditions which would make a less effective motor fail.

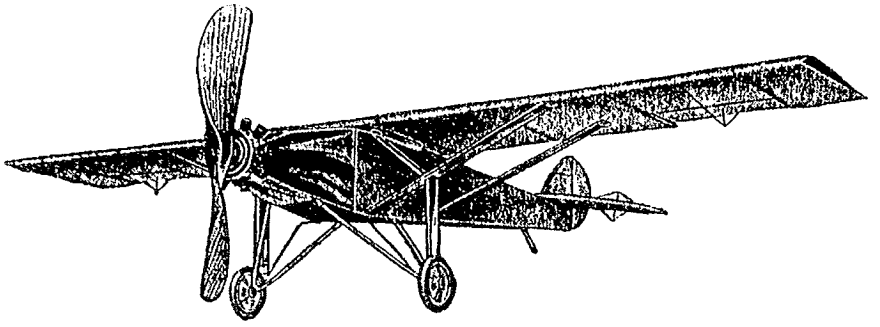


# Awards Given for Successful Flights with IDEAL Model Airplanes

TO encourage all model builders to greater accomplishment in the construction and flight of their models, the makers of Ideal Model Airplanes will present the above Certificate of Award for Proficiency in Model Aviation, together with the Ideal Silver Wings, to all who complete their models and secure creditable flights.

The Certificate is suitable for framing and the Wings are finished with pin on back for attaching to coat lapel. The Wings are the actual size shown above. An application blank explaining the awards and containing the very simple conditions under which they are given, is placed in each Complete Construction Outfit for which Awards are made.

This feature provides an added incentive to build and fly Ideal Model Airplanes and thus demonstrate craftsmanship and ability in their construction and flight.



# IDEAL
# New York-Paris Monoplane

A Three-foot Flying Model of
Lindbergh's "SPIRIT OF ST. LOUIS"

AN exact reproduction of the famous Monoplane in which Colonel Charles A. Lindbergh made his celebrated flight from New York to Paris. The constructional features of the original have been duplicated faithfully in this model, and the assembling is greatly simplified by the use of formed ribs in the wings. This Model is Guaranteed to rise in the air and fly under its own power when correctly assembled.

## Complete Construction Outfit
## Ready to Assemble - *Special Price* $7.50

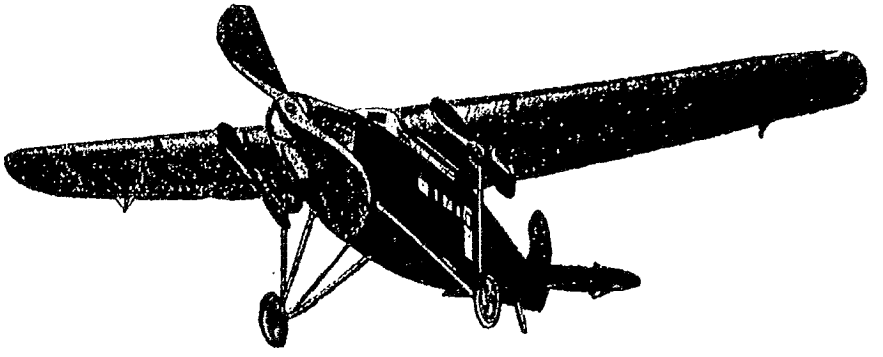
(Denver, Colo., West of Denver and in Canada, Price, $8.00)
For Sale by IDEAL Dealers in All Cities, or Direct from us, Postpaid.

**The Complete Construction Outfit contains the following materials. If desired, these materials may be ordered in units as listed below. See Page 38.**

| | |
|---|---|
| Wood and Reed cut to proper size with formed ribs (98 pieces) | $2.00 |
| Hand Carved propeller, 10 inch | 1.00 |
| Pure Para Rubber for motive power | .75 |
| Two IDEAL 2 inch Streamline Rubber Tired disc wheels | .90 |
| 1 Ball Bearing Propeller shaft with hook formed | .65 |
| 1 Aluminum Propeller Hanger No. 1 | .18 |
| 1 Special Axle Formed, with nuts, 11½ inches | .20 |
| 1 IDEAL nosing | .40 |
| 2 sheets Bamboo Paper No. 2; 2 oz. Can Bamboo Varnish | .65 |
| 1 Piece Sheet Aluminum 6 inch x 11 inch | .15 |
| 2 Aluminum Plane holders | .18 |
| 1 Set 2 alum. sleeves, Four fittings No. 2, Two No. 3, One Rear Rubber Hook | .66 |
| 1 set 6 Aluminum Wing Struts, 4 large and 2 small | .60 |
| 1 Spool wire and package nails | .14 |
| 1 Env. 30 ¼" Screws, 2 ⅜" Screws | .16 |
| 1 Set Special Tools | .30 |
| 1 Engine Form | .35 |
| Concise Working Drawing and Building Instructions | .25 |
| Full Size Forming and Assembling Layout | .35 |
| | $9.87 |







# IDEAL
# Fokker North Pole Monoplane

A Three-foot Flying Model

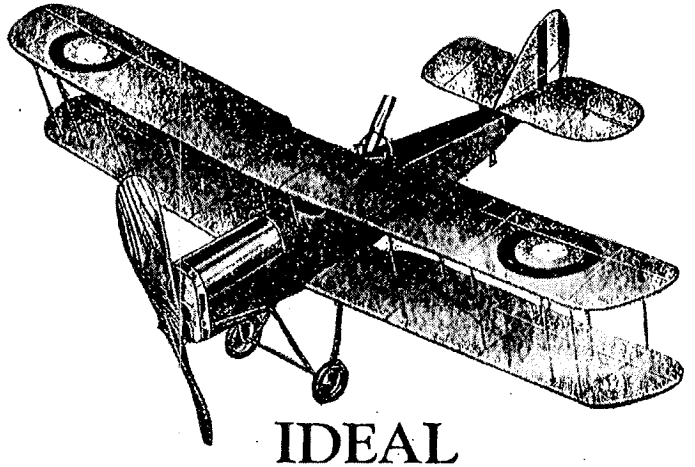
A PERFECT, scale-reduction model of the FOKKER tri-motored Monoplane in which Commander Richard E. Byrd made his famous North Pole Flight; and the same type of Airplane in which he more recently flew to the shores of France. The distinctive constructional features of the original have been copied in this model. The use of specially formed ribs greatly simplifies the wing construction. This Model is Guaranteed to fly when correctly assembled.

## Complete Construction Outfit
## Ready to Assemble - *Special Price* $8.50

(Denver, Colo., West of Denver and in Canada, Price $9.00)
For Sale by IDEAL Dealers in All Cities, or Direct from us, Postpaid.

**The Complete Construction Outfit contains the following materials. If desired, these materials may be ordered in units as listed below. See Page 38.**

| | |
|---|---|
| Wood and Reed cut to proper size (110 pieces) with formed Ribs | $2.00 |
| 2 Balsa Wood Engine Housings | .50 |
| HAND CARVED WOODEN PROPELLER 10 inch | 1.00 |
| Two 5" Aluminum Propellers | .40 |
| Pure Para Rubber for motive power | .75 |
| Two IDEAL 2-inch Streamline Rubber Tired Disc Wheels | .90 |
| 1 Ball Bearing Propeller Shaft No. 1 Hook Formed | .65 |
| 1 Aluminum Propeller Hanger No. 1 | .18 |
| 1 Special Axle, Formed, with nuts 11½" | .20 |
| 1 IDEAL FOKKER NOSING | .40 |
| Two Sheets Bamboo Paper No. 2; 2 oz. Can Bamboo Varnish | .65 |
| 1 Sheet two ply veneer 20 x 30 | .40 |
| 2 Pcs. Sheet Aluminum 6½" x 3", and 6" x 3⅜" | .15 |
| 1 Aluminum Windshield, two plane holders | .24 |
| 1 Set 4 aluminum sleeves, 6 fittings No. 2, two No. 3, two No. 6 and one Rear Rubber hook | 1.08 |
| 1 Spool Wire and package of nails | .14 |
| 1 Env. 30 ¼" Screws, 2 ⅜" Screws, 4 Washers, 2 pins | .25 |
| 1 Set special tools | .30 |
| 1 Set printed windows and word "FOKKER" | .10 |
| Concise Working Drawing and Building Instructions | .25 |
| FULL SIZE forming and Assembling LAYOUT | .35 |
| | $10.89 |



# IDEAL
# DeHavilland Bi-plane

A Three-Foot Flying Model

AN accurate Model, 1/14 actual size, of the Airplane in which the famous Liberty Motor of war days was installed; the type used by the U. S. Army Pilots in their flight around the world, and now used by the U. S. Air Mail Service. This IDEAL Model has many features not usually found in Model Airplanes, and is a wonderful example of the Bi-plane type. The Model is Guaranteed to fly when correctly assembled.

## Complete Construction Outfit
## Ready to Assemble - *Special Price* $7.50

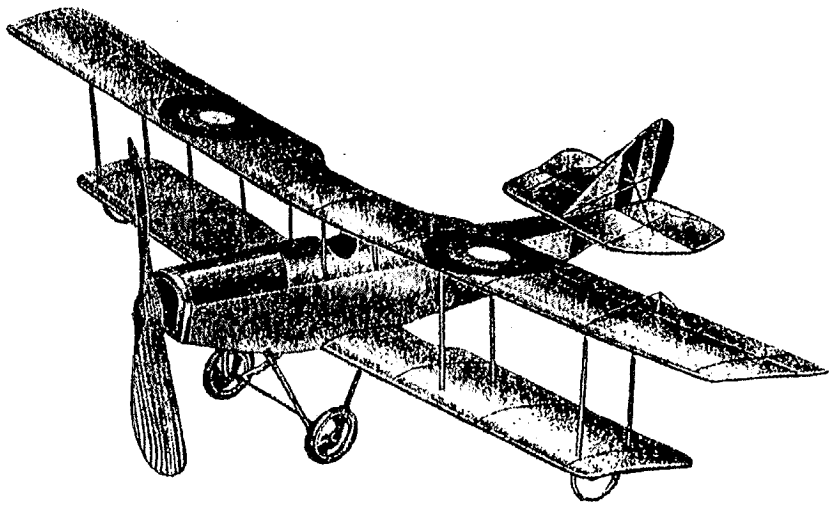
(Denver, Colo., West of Denver, and in Canada, Price $8.00)
For Sale by IDEAL Dealers in All Cities, or Direct from us, Postpaid.

**The Complete Construction Outfit contains the following materials. If desired, these materials may be ordered in units as listed below. See Page 38.**

| | |
|---|---|
| Wood and Reed, cut to proper size (144 pieces), including stamped-out Ribs, formed Center Spars, Rudder Post and Tail Skid | $2.25 |
| Material and directions for Miniature Airplane guns | .35 |
| Ball Bearing Propeller Shaft, No. 1, Hook formed | .65 |
| Aluminum Propeller Hanger, No. 1 | .18 |
| HAND-CARVED WOODEN PROPELLER, 12 in. | 1.10 |
| 1 Set pure Para Rubber for De HAVILLAND | .75 |
| 2 oz. Can Bamboo Varnish and 2 Sheets Bamboo Paper No. 2 | .65 |
| 2 "IDEAL" Stream Line Rubber Tired Disc Wheels, 2 in. | .90 |
| Special Threaded 6 in. Axle with Nuts and Brass Tube B'ing | .25 |
| 8 Aluminum Sleeves ⅛ x ¼, 4-Terminal Fittings No. 2 | .72 |
| Small spool Wire No. 34, 2 Doz. ¼ in. screws, 1 pkg. Nails | .26 |
| 2 pcs. Sheet Aluminum, 3⅝ x 4 and 3 x 3⅝ | .15 |
| 2 pcs. Ideal Veneer, 2 ply for fuselage, 3 ply for cowling | .25 |
| 1 Miniature Radiator | .50 |
| 1 Set of Tools, comprising screw-driver and drills | .30 |
| 1 American Aero Insignia Sheet in Colors | .10 |
| Concise Working Drawing and Building Instructions | .25 |
| FULL SIZE Forming and Assembling LAYOUT | .35 |
| | $9.96 |







# IDEAL
# Curtiss JN Type Bi-plane

A Three-foot Flying Model

AN exact copy, 1/14 actual size, of the Bi-plane used in training U. S. Army Aviators. This Model is true to the original. Planes are demountable, and fittings include many other items not usually found on Model Airplanes. This Model is Guaranteed to fly when correctly assembled.

## Complete Construction Outfit
## Ready to Assemble - *Special Price* $7.00

(Denver, Colo., West of Denver and in Canada, Price, $7.50)
For Sale by IDEAL Dealers in All Cities, or Direct from us, Postpaid.

**The Complete Construction Outfit contains the following materials. If desired, these materials may be ordered in units as listed below. See Page 38.**

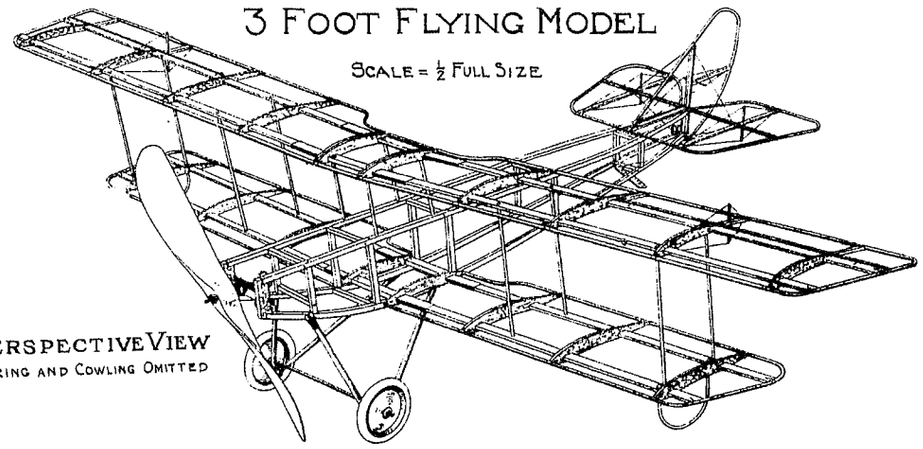
| | |
|---|---|
| Wood and Reed cut to size (116 pieces), including stamped-out Ribs, formed Center Spars, Rudder Post, Nose Struts and Tail Skid | $2.00 |
| HAND CARVED WOODEN PROPELLER, 10" | 1.00 |
| 2 Stream Line Rubber Tired (pneumatic) Disc Wheels 2" | .90 |
| Pure Para Rubber for Motive power | .60 |
| 1 Ball Bearing Propeller Shaft No. 1 (Hook formed) | .65 |
| 1 Special Propeller Hanger No. 5 | .18 |
| 1 Axle with Nuts and Brass Tube Bearing | .25 |
| 1 Miniature JN4D-2 Aluminum Radiator | .30 |
| 3 Sheets Bamboo Paper No. 2 and 4 oz. Can Bamboo Varnish | 1.05 |
| 8 Aluminum Sleeves, ⅛ x ¼, 4 Terminal Fittings No. 2 | .72 |
| 2 Pieces Sheet Aluminum 3" x 4" and 1-15/16" x 4½" | .15 |
| 1 Piece 3 Ply veneer 3" x 6½" | .05 |
| 1 Set of Special Tools, comprising Screw-driver and Drills | .30 |
| 1 Spool No. 34 Wire, 2 Doz. ¼" Screws, 1 Pkg. Model Nails | .26 |
| 1 American Aero Insignia Sheet in Colors | .10 |
| Concise Working Drawing and Building Instructions | .25 |
| FULL SIZE forming and Assembling LAYOUT | .35 |
| | $9.11 |

# "IDEAL" JN4D-2

## CURTISS TRAINING PLANE

### 3 FOOT FLYING MODEL

SCALE = ½ FULL SIZE

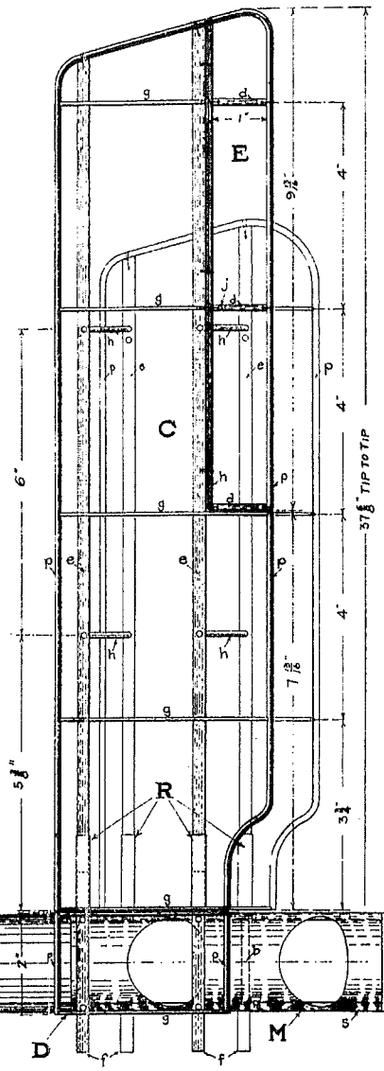


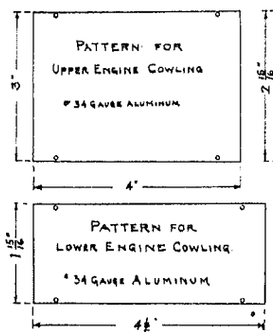
PERSPECTIVE VIEW
COVERING AND COWLING OMITTED

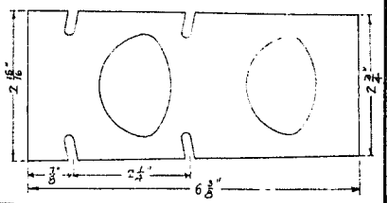
| KEY TO PARTS | |
|---|---|
| A | FUSELAGE |
| B | LANDING GEAR |
| C | MAIN PLANES |
| D | CENTER SECTION |
| E | AILERONS |
| F | STABILIZER |
| G | ELEVATORS |
| H | RUDDER |
| I | FIN |
| J | RADIATOR |
| K | UPPER ENGINE COWLING |
| L | LOWER " " |
| M | COCKPIT COWLING |
| N | PROPELLER |
| O | BALL BEARING PROPELLER SHAFT |
| P | SHAFT HANGER |
| R | SPAR SLEEVES |
| S | TERMINAL FITTINGS |
| T | PNEUMATIC TIRE DISC WHEELS |
| U | AXLE & BRASS TUBE BEARING |
| V | RUDDER POST |
| X | TAIL SKID |

| KEY TO MATERIAL | | |
|---|---|---|
| a | WOOD | 3/32" × 3/8" |
| b | " " | 3/32" × 1/2" |
| d | " " | 1/16" × 3/8" |
| e | " " | 1/16" × 1/2" |
| f | " " | 3/32" × 1/2" |
| g | " " | 1/16" |
| h | " " | 3/32" DIAMETER |
| j | " " | 1/16" " " |
| m | " " | T SECTION |
| n | REED | 3/16" DIAMETER |
| p | " " | 1/8" " " |
| r | " " | 3/32" " " |
| s | VENEER | 3 PLY |
| t | SHEET ALUMINUM | #34 GAUGE |
| x | TINNED WIRE | #34 " " |
| y | RUBBER | 3/16" FLAT |

GET AN "IDEAL" FULL SIZE FORMING AND ASSEMBLING LAYOUT TO HELP YOU BUILD THIS MODEL.

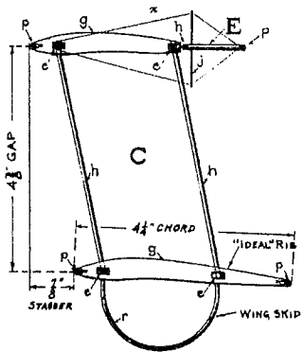


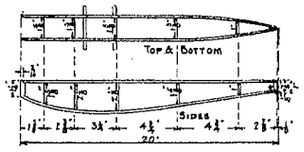




COCKPIT COWLING PATTERN
"IDEAL" 3 PLY VENEER

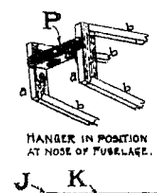
FUSELAGE COVERING DIAGRAM
SHOWS PAPER COVERING



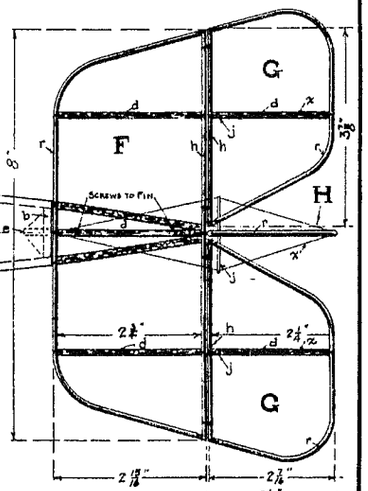

SECTION OF MAIN PLANES AT AILERON.

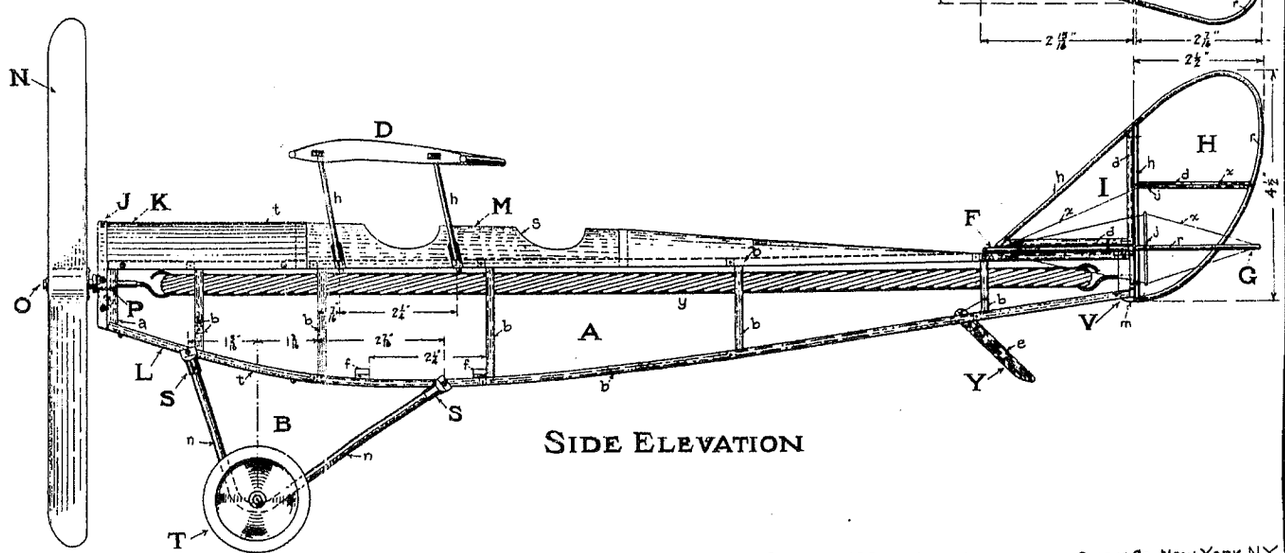



FUSELAGE FRAMEWORK DIAGRAM.

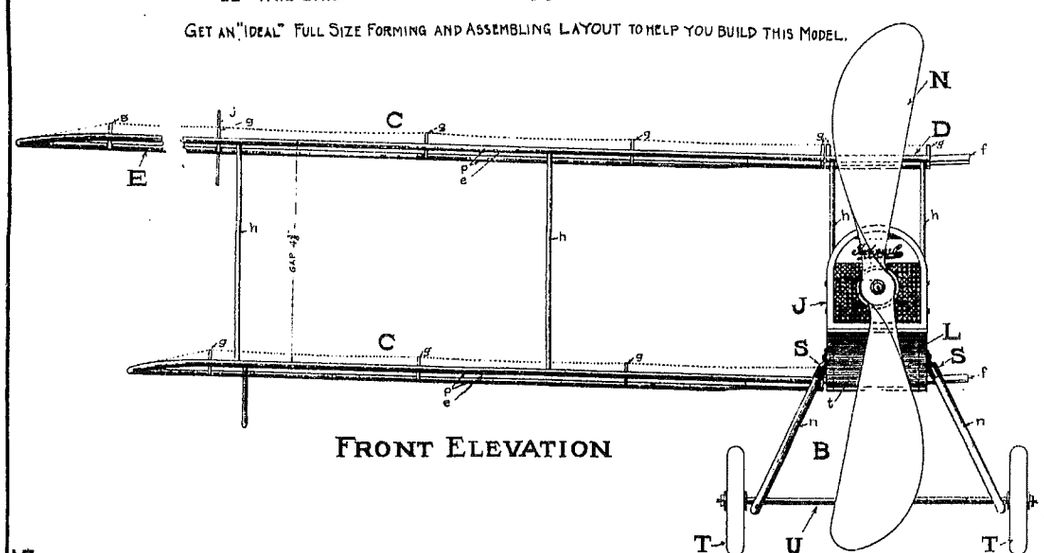



HANGER IN POSITION AT NOSE OF FUSELAGE.




PLAN

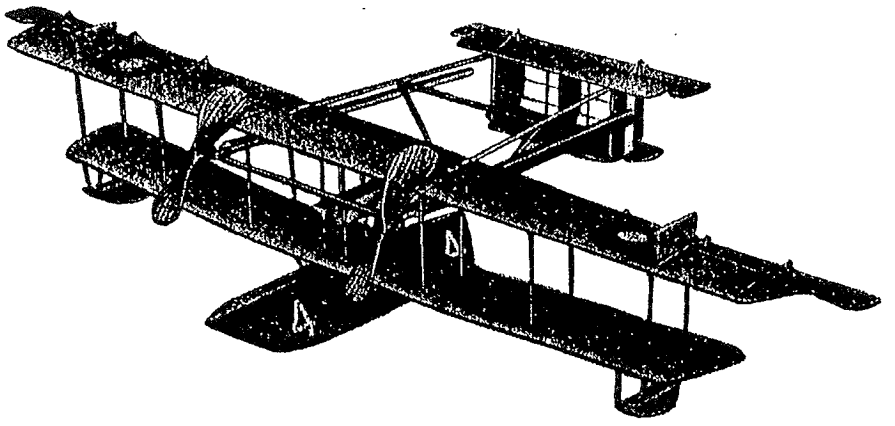



FRONT ELEVATION

SIDE ELEVATION

COPYRIGHT, 1920, BY IDEAL AEROPLANE AND SUPPLY CO., NEW YORK N.Y.

TYPICAL OF IDEALS' ½ SIZE PLANS CIRCA 1920
(Reduced to approx 1/4 size for this book)



# IDEAL
# Naval Seaplane N C-4

A Four-and-one-half Foot Flying Model

THIS is a faithful duplicate of the original American Seaplane which first succeeded in crossing the Atlantic Ocean. A large and imposing Model, yet very easily constructed and will make beautiful flights. This Model offers unusual opportunity for study and experiment by the builder. Like all IDEAL Models, the NC-4 is Guaranteed to fly in the air under its own power.

## Complete Construction Outfit
## Ready to Assemble - *Special Price* $10.00

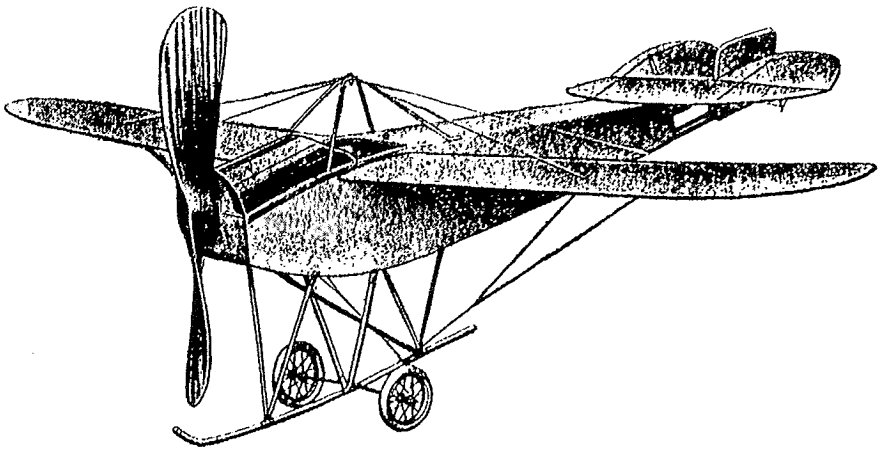
(Denver, Colo., West of Denver and in Canada, Price $10.50)
For Sale by IDEAL Dealers in All Cities, or Direct from us, Postpaid.

**The Complete Construction Outfit contains the following materials. If desired, these materials may be ordered in units as listed below. See Page 38.**

| | |
|---|---|
| Wood and Reed, cut to proper size, including stamped-out ribs | $2.50 |
| 2 Ball Bearing Propeller Shafts No. 1, hooks formed | 1.30 |
| 2 Aluminum Propeller Hangers No. 1 | .36 |
| 2 HAND CARVED WOODEN PROPELLERS, 10 in. | 2.00 |
| 4 oz. can Bamboo Varnish | .60 |
| 5 sheets Bamboo Paper No. 2 | .75 |
| Medium size Can Ambroid | .30 |
| 1 pair Rubber Motors | 1.20 |
| 1 Set of six Aluminum Braces, 8 Aluminum Sleeves, ⅛ x ¼ (4 regular, 4 bent), one pair Aluminum Masts and 2 Propeller Stops | .78 |
| 1 envelope with 3 Terminal Fittings No. 3, 1 Terminal Fitting No. 5, 2 Rear Rubber Hooks with Nuts, 4 Strap Fittings No. 1 | .78 |
| 1 pc. Sheet Aluminum No. 34, 4¼in. x 6¾-in., for Nacelle | .10 |
| 1 envelope with 48 ¼-in. Screws, 2 ⅜-in. Screws, and 2 washers | .25 |
| 1 small Spool Wire and 1 pkg. Nails | .14 |
| 1 set of tools, comprising screw-driver and drills | .30 |
| 1 American Insignia Sheet in colors | .10 |
| 4 Numerals No. 4 | .05 |
| Concise Working Drawing and Building Instructions | .25 |
| FULL SIZE Forming and Assembling LAYOUT | .35 |
| | $12.11 |







# IDEAL
# Nieuport French Scout Monoplane

A Three-foot Flying Model

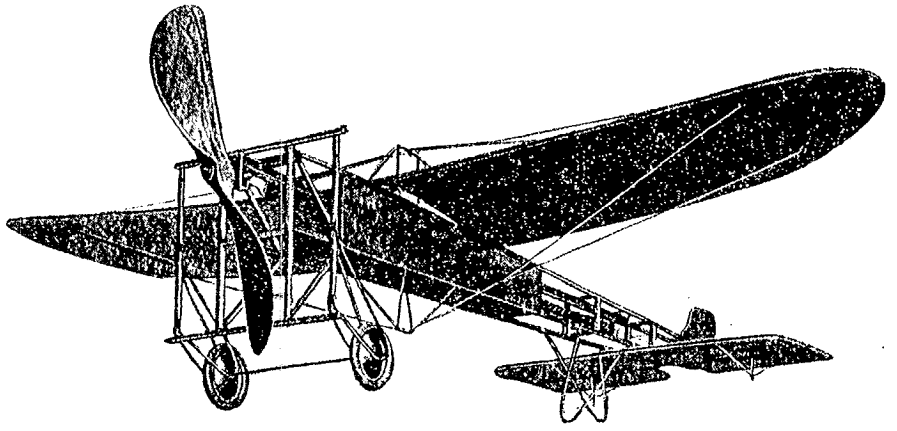
THIS is an accurate Scale-Reduction Model of one of the leading French Scout and Pursuit Planes. Its construction is so simple that any handy boy can build it. This Nieuport Monoplane is a graceful flyer; in fact, is Guaranteed to rise from the ground under its own power and fly in the air, when correctly assembled.

## Complete Construction Outfit
## Ready to Assemble - *Special Price* $6.00

(Denver, Colo., West of Denver and in Canada, Price $6.50)
For Sale by IDEAL Dealers in All Cities, or Direct from us, Postpaid.

**The Complete Construction Outfit contains the following materials. If desired, these materials may be ordered in units as listed below. See Page 38.**

| | |
|---|---|
| Wood and Reed, cut to size (79 pieces) including Rudder Post with Rear Rubber Hook attached | $1.25 |
| Ball Bearing Propeller Shaft | .60 |
| Aluminum Propeller Hanger, No. 1 | .18 |
| HAND-CARVED WOODEN PROPELLER, 12 in. | 1.10 |
| 1 Set of pure Para Rubber for Nieuport Monoplane | .75 |
| 2 Sheets Bamboo Paper, No. 2 | .30 |
| 2 oz. Can Bamboo Varnish | .35 |
| 1 Set of 12 Special Nieuport Sockets (4 for Wing, 8 others) | .60 |
| 1 NIEUPORT RUNNING GEAR with AXLE | .90 |
| 2 "Ideal" Miniature Rubber Tired Disc Wheels, 2 in. | .90 |
| Aluminum Rod, Sheet Aluminum and Spool Wire | .20 |
| 1 Nieuport Sundry Envelope, containing 2 doz. ¼ in. Screws, 4 Eyelets, 4 Hooks and Pins | .15 |
| 1 pkg. Nails and Escutcheon Pins | .08 |
| 1 American Insignia sheet in colors | .10 |
| Concise Working Drawing and Building Instructions | .25 |
| FULL SIZE Forming and Assembling LAYOUT | .35 |
| | $8.06 |



# IDEAL
## Bleriot Cross-Channel Monoplane

A Three-foot Flying Model

THIS is an exact Model, 1/10 actual size, of the famous BLERIOT XI, the first to fly across the English Channel, and one of the competitors in the first Airplane race held at Rheims, France, in 1909. This Model has silk covered wings and many neat and substantial fittings. It is easy to build, and is Guaranteed to fly in the air when correctly assembled.

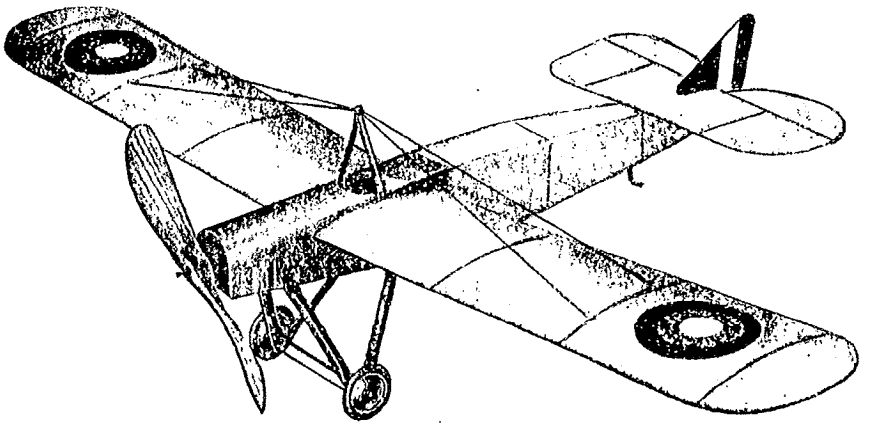
**Complete Construction Outfit**
**Ready to Assemble - *Special Price*** **$5.00**

(Denver, Colo., West of Denver and in Canada, Price $5.50)
For Sale by IDEAL Dealers in All Cities, or Direct from us, Postpaid.

**The Complete Construction Outfit contains the following materials. If desired, these materials may be ordered in units as listed below. See Page 38.**

| | |
|---|---|
| Wood and Reed, cut to proper size (81 pieces) | $1.20 |
| Ball Bearing Propeller Shaft, No. 1 | .60 |
| Aluminum Propeller Hanger, No. 1 | .18 |
| HAND-CARVED WOODEN PROPELLER, 12 in. | 1.10 |
| 1 Set pure Para Rubber for Bleriot Monoplane | .75 |
| Fine Silk to cover Planes and Rudder | .70 |
| 1 Sheet Bamboo Paper, No. 2 | .15 |
| 2 "Ideal" Stream Line Rubber Tired Disc Wheels, 2 in. | .90 |
| 1 Special 7¼ in. Axle | .06 |
| Aluminum Rod, Model Nails, Small Spool Wire, 32 ga. | .20 |
| 1 Envelope with 12 Screws, 12 Screw Eyes | .12 |
| 1 Envelope with 1 Rear Rubber Hook, 4 Aluminum Sleeves, (2 rd. 2 sq.) 4 small Hooks, 4 small Eyelets | .40 |
| Concise Working Drawing and Building Instructions | .25 |
| FULL SIZE Forming and Assembling LAYOUT | .35 |
| | $6.96 |





# *Every Boy's* IDEAL Airplane

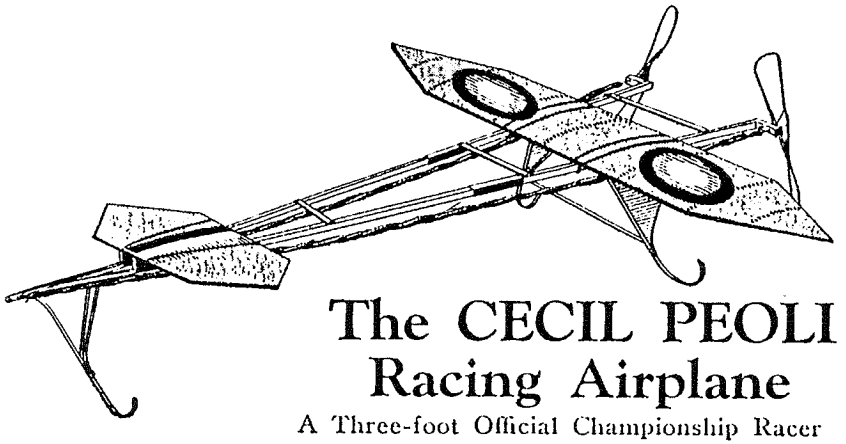
Patented April 11th, 1922.

THIS Airplane is an entirely new development in the construction of Flying Models. Its constructional features are unique and exclusive. The entire Airplane can be assembled and ready for flight in one-tenth the time required to build the usual scale-reduction Model. No plans are necessary; every part is completely finished and the Model need only be assembled and covered. No nails, wire, glue, solder or other difficult operations are necessary.

Everyboy's Airplane is a graceful machine, 3½ foot wing span, strong and sturdy in construction. Weight, 10¼ ounces complete. Made largely of aluminum and will not suffer from the shocks incident to trial flights. Equipment includes a 10 in. carved propeller, pneumatic-tire disc wheels, aluminum engine cowling, ribs, bulkheads and landing gear. Pure Para rubber motive power. Comes complete in strong box containing all parts and clear, complete directions for assembling and flying.

**EveryBoy's Airplane - *Complete* $6.00**

(Denver, Colo., West of Denver and in Canada, Price $6.50)
For Sale by IDEAL Dealers in All Cities, or Direct from us, Postpaid.



# The CECIL PEOLI Racing Airplane

A Three-foot Official Championship Racer

HERE is an American Racing Airplane that has broken records for distance and duration in the air. Its official distance is 1,691½ feet; duration is 48 4/5 seconds. Unofficially it has flown more than 2,000 feet, and remained in the air over a minute. This Airplane will give a good account of itself in any competition. The construction is not difficult; all parts being furnished ready to assemble.

Everyone should fly one of these Racing Airplanes. This one is an excellent example of this type of airplane and under favorable conditions will perform marvelously as to distance, time in the air and speed of flight.

## Complete Construction Outfit

### Ready to Assemble - *Special Price* $3.75

(Denver, Colo., West of Denver and in Canada, Price $4.25)

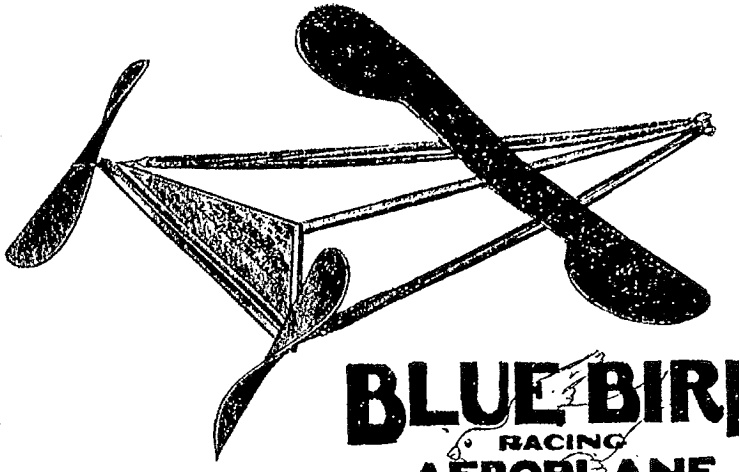
For Sale by IDEAL Dealers in All Cities, or Direct from us, Postpaid.

**The Complete Construction Outfit contains the following materials. If desired, these materials may be ordered in units as listed below. See Page 38.**

| | |
|---|---|
| Wood (Spruce), Reed and Bamboo, cut to proper size and Formed; the Frame Pieces bevelled and the extension sticks fitted with Aluminum Sleeves (44 pieces) | $1.50 |
| 1 Sheet Bamboo Paper, No. 1 | .13 |
| 2 oz. Can Bamboo Varnish | .35 |
| 1 Pair Improved, 6 in. Fibre Racing Propellers, special pitch, with shaft, brass bearings and blocks | 1.10 |
| 1 set Peoli Rubber Motors with skein hooks attached | .95 |
| 1 "IDEAL" Patent Friction Winder, No. 2 | .60 |
| Yoke, Escutcheon Pins and Rubber Bands | .10 |
| Special Piercing Tool | .06 |
| American Aero Insignia Sheet in Colors | .10 |
| Detailed Drawing, Building and Flying Instructions | .25 |
| | $5.14 |



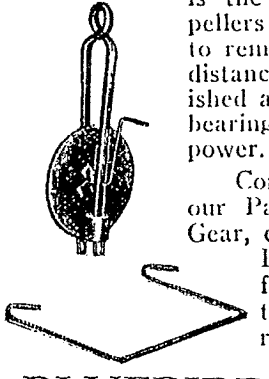




# BLUE BIRD RACING AEROPLANE

**The Famous, Fast Flying Blue Bird Racer**

THIS Racing Airplane is one of the fastest and most graceful flyers; will mount to 100 feet or more, and make flights of more than 300 feet. The single stick fuselage and one plane construction is the lightest and simplest known. The twin propellers develop unusual power, enabling the Blue Bird to remain in the air a long time and make fast, long-distance flights. The permanent rear plane is of burnished aluminum, and the twin propellers turn on brass bearings. Only pure para rubber is used for motive power.



Complete outfit is packed in attractive box with our Patented Multiple Winder and our Special Foot Gear, enabling one person alone to hold and wind the Bluebird at the same time. Clear directions are furnished. No building or assembling is required; the Bluebird is complete in every respect and ready for immediate use.

## BLUEBIRD Racing Airplane

### Complete-Ready for Flight, securely packed $1.50

(Denver, Colo., West of Denver, and in Canada, Price $2.00)

For Sale by IDEAL Dealers in All Cities, or Direct from us.

If ordered by mail, add 25c extra for postage

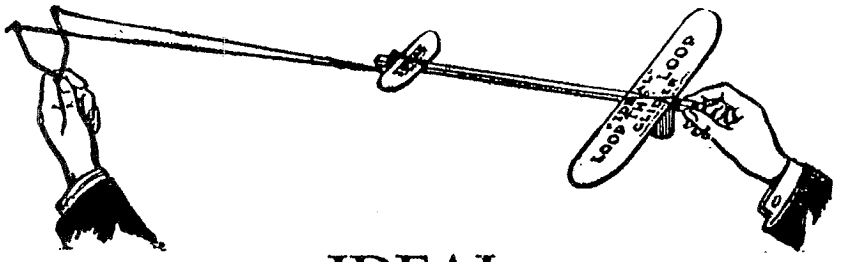
### PARTS FOR BLUE BIRD RACING AIRPLANE

**(Sold for Repair Purposes Only)**

Main Stick, with Rear Plane, Nosing and Plane Holder Attached, price 50 cents.

| | | | |
|---|---|---|---|
| Rubber Strands, per set | $ .40 | Propellers, per pair | $ .35 |
| Main Stick, with Nosing only | .12 | Main Fibre Plane | .25 |
| Rear Aluminum Plane | .20 | Brass Plane Holder | .15 |

(See Instructions for Ordering, Page 38)




# IDEAL
# Loop-the-Loop Glider

A REMARKABLE motorless Glider that demonstrates the principles of flight in a wonderful way; and an amusing, fun-creating flying toy that will interest children of every age.

Extremely simple to operate; simply shoot it into the air with the sling that is furnished with it. It will soar away like a bird, make a large loop and return. Set the front plane at different angles and it will hop, jump, loop or fly in circles. With a little practice, any youngster can make this Loop-the-Loop Glider perform amazing stunts in the air.

Made of durable material, it will withstand the knocks of many flights. Stiff, hard fibre board is used for wings, which are held by Patented Spring Fasteners. This Glider will outlast a dozen weak, cardboard ones.

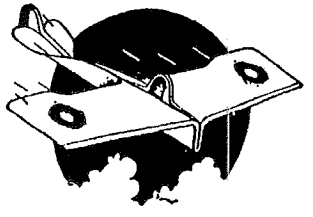
**Loop-the-Loop Glider Complete with Sling 30c.**

(By mail, 6 cents extra)

PATENTED

# ARROW-PLANE

TRADE MARK REG.



THESE Airplanes will do all the stunts a big airplane will—loop, come back, fly straight-away, spiral circle, dip, hop and other tricks. They are scientifically designed with supporting surfaces like a big machine. With half a dozen of these ARROW-PLANES, any boy can amuse himself and his friends with a Aerial Circus. As an advertising novelty, they are used in great quantities by large concerns. We have a special proposition for those who can use one hundred or more at one time. Write for complete details.

**By mail, Postpaid, 11 cents each**





# CATALOGUE SECTION

**Catalogue and Price List of**

**Parts, Fittings**

**Materials and Supplies for**

**Model Airplane**

**Builders and Experimenters**

FOR many years, since 1911, we have been manufacturing and selling Model Airplanes, Racing Airplanes and Flying Toys, and the various Parts, Fittings, Materials and Supplies needed in their construction.

Model Airplane builders and experimenters in every state in the United States, and in many foreign countries, have used "IDEAL" as the one reliable source of supply for anything required in connection with Model Airplanes. Many celebrated leaders in Aviation started their careers by building and flying models, and as boys and young men came to "IDEAL" for the various parts and fittings for their models. Our old order files contain the names of countless Aviators whose deeds have thrilled the world during recent years. "IDEAL" has been known as "Headquarters for Model Airplane Supplies" for many years!

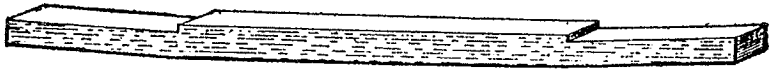
The following pages describe and price hundreds of items needed in the construction of Model Airplanes; not alone the models shown in the forward pages, but Model Airplanes of any type, size, or kind. Regardless of the particular kind of a model the experimenter may be building, he will find on the following pages exactly the parts, fittings, materials and supplies that will make his model more realistic, more true to correct constructional principles; enable him to complete it with less time and trouble; and actually save in its cost.

# "Ideal" Wood Ribs

Made of Veneer, 1/16 in. thick. Slots for 1/8 in. x 1/4 in. spars. Slip spars through, and wing structure is ready for outline piece.

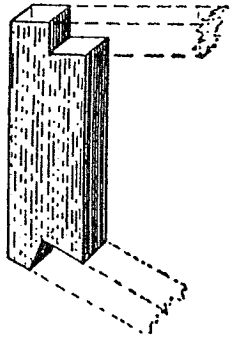
**No. 1—Packages of 20—4 in. long for JN4D-2 ..... 50c**
**No. 2—Packages of 18—4½ in. long for De H-4 ..... 50c**
**No. 3—Packages of 26—5 in. long for NC-4 ..... 75c**

# "Ideal" Center Spars



Correctly formed to give the proper camber to the Planes. Planes are attached by use of 1/8 in. x 1/4 in. sleeves.

**No. 1 Set of 4—3½ in. long for JN4D-2 ..... 15c**
**No. 2 Set of 4—3⅝ in. long for De H-4 ..... 15c**



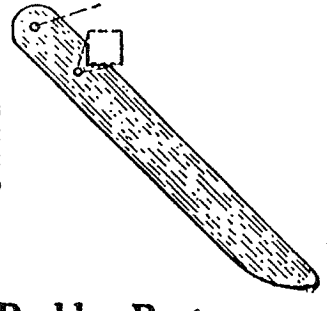
**Set of 2**

# "Ideal" Fuselage Nose Struts

A compact and simple nose construction for the fuselage. Ideal for use with No. 5 Nickel Brass Hangers.

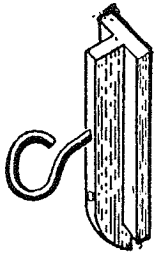
**Set of 2 ..... 10c**

# "Ideal" Tail Skid



The notch in this skid fits against lower crossbrace at rear of fuselage to which it is wired. Will fit any model.

**Price.....10c**



# "Ideal" Rudder Post

Just right to form the tail end of Fuselage and to secure rear end of rubber motor. Made of Tee Section with Rubber Hook firmly attached.

**Price for either—JN4D-2 or Nieuport, each, 10c**
**Price for either—De Havilland or Taube ea. 15c**



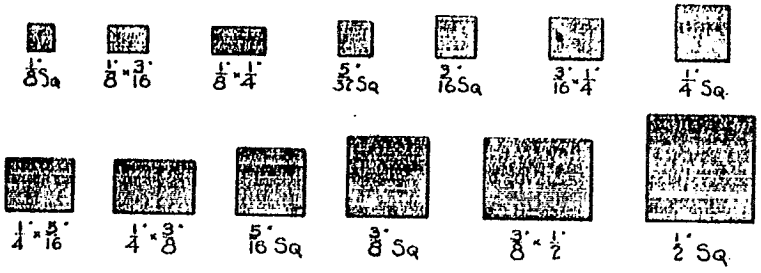


# "Ideal" Wood for Model Making

## BASS

**Well Seasoned Wood, specially selected, straight grained and free from all defects; cut true, is rigid and of good quality, same as used in all our own Products.**

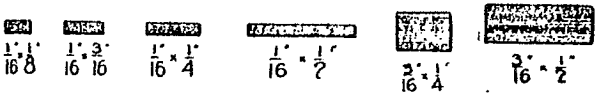
The most useful size for the framing of small Models is 3/32 in. square and 1/8 x 1/4 in. for the main spars on wings. The jointing may be done by means of the various articles illustrated in this catalogue, or may be screwed together, fastened with glue or fine brads, or bound together with wire. The pieces are easily fastened together, even by the most inexperienced. A strong and light Model can be built up in this way.




**Prices for three foot lengths.**

| | | | | | | | |
|---|---|---|---|---|---|---|---|
| 1/8 in. sq. | 4 | cts. | per length | 1/4 in. sq. | 7 | cts. | per length |
| 1/8 x 3/16 in. | 5 | " | " | 1/4 x 5/16 in. | 8 | " | " |
| 1/8 x 1/4 in. | 5 | " | " | 1/4 x 3/8 in. | 8 | " | " |
| 5/32 in. sq. | 6 | " | " | 5/16 in. sq. | 10 | " | " |
| 3/16 in. sq. | 6 | " | " | 3/8 in. sq. | 10 | " | " |
| 3/16 x 1/4 in. | 7 | " | " | 3/8 x 1/2 in. | 12 | " | " |

**½ in. sq.....15 cts. per length.**




## SILVER SPRUCE

It is an established fact that Spruce has been found by severe tests to be the "Ideal" Wood for the man-carrying Airplanes. Consequently we are making a specialty of it for the Model Builder, as it is the strongest and lightest wood obtainable for the purpose.

**Sold only in three foot lengths.**

| Size | | | Price | Size | | | Price |
|---|---|---|---|---|---|---|---|
| 1/16 x 1/8 in. | 5 | cts. | per length | 1/16 x 1/2 in. | 9 | cts. | per length |
| 1/16 x 3/16 in. | 5 | " | " | 3/16 x 1/4 in. | 9 | " | " |
| 1/16 x 1/4 in. | 7 | " | " | 3/16 x 1/2 in. | 12 | " | " |

# "Ideal" Wood for Model Making—Continued

### Balsa Wood

Balsa wood is twice as light as cork—four times lighter than spruce, and one half as strong in comparison to its weight.

It serves admirably for making wings, pontoons, and fuselages. Three sizes are carried in stock:

**1 x ¾ in. 10c per ft. 6 x ⅛ in. 25c per ft. 6 x 1 in. 75c per ft.**

SPECIAL FOR CONTESTS: BALSA WOOD can now be obtained in the same sizes as BASS—page 39—at double the price shown next to each size.

## Round Wood

For the body of a Model (FUSELAGE); the small, round sticks will make good, strong uprights for Bi-planes.

| | | |
|---|---|---|
| **Size** | **3/16 in.** | **¼ in.** |
| **Price per 3 ft. length** | **3½c.** | **4c.** |

**Small Round Sticks,..1/16x12 in.....10c doz; 3/32x12 in.....10c doz.**

**Packing Charge, for Wood up to 3 ft., 15c. on each order**
Postage extra at pound rate. Ask your Postmaster
LESS THAN 50c. WORTH OF WOOD IS NOT SOLD.

## Round Reed

For construction of wing frames, shock absorbers and skids; may easily be bent by hand or steamed into any shape.

| | | | | | |
|---|---|---|---|---|---|
| **Size** | **3/32 in.** | **⅛ in.** | **3/16 in.** | **¼ in.** | **⅜ in.** |
| **Price per length** | **8c.** | **9c.** | **14c.** | **10c.** | **15c.** |

3/32 in., ⅛ in. and 3/16 in. sold in Six Foot Lengths only.
¼ in. and ⅜ in. sold in Three Foot Lengths only.

## Split Bamboo (Flat)

For Skids, Ribs and Shock Absorbers. In 11-inch lengths only.

1/16 x ¼ in. per dozen lengths..... **20c**
1/16 x ⅛ in. per dozen lengths..... **10c**

**Postage, 3c per Dozen Lengths**

### Tee Section

This is an excellent section for Model building and one that is commonly used in bridge construction. It combines great lightness with resistance to bending in any direction.

**Price per foot.....12 cents; 6 inches.....8 cents.**
Either ½x⅛ in. or 1/16x3/32 in. carried in stock.

**Postage, 3c per foot**





# Ideal Propellers

ALTHOUGH simple in construction, the Propeller is an extremely vital part of an Airplane and as much care should be devoted to its design as is given the Airplane itself. The main factors entering into the design of any Propeller, are the number of revolutions it is to make, the speed of the Airplane it is to propel, and the thrust necessary to carry that Airplane through the air.

A propeller cuts its way through the air in the same manner that the cutting edges of a drill cut into wood or metal. Each blade of the Propeller or screw, as it is often termed, acts like an Airplane wing; and as a wing of an Airplane rises by being drawn horizontally through the air, so do the Propeller blades pull forward by being thrown around in a circular path.

Owing to the fact that the speed at which the Propeller revolves varies from nothing at the hub to a maximum at the tip, the blades must be twisted or warped to keep the pitch more uniform. When the pitch is exactly uniform throughout the entire length of the blade, the Propeller is called a "true screw".

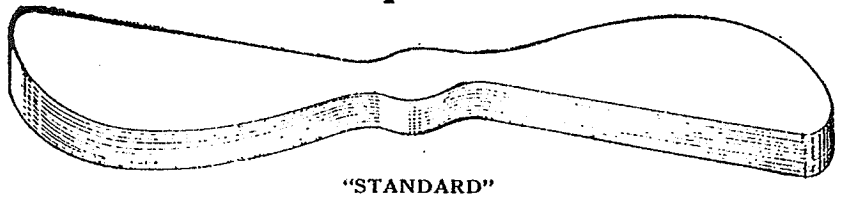
IDEAL PROPELLERS are the result of many years experience with models of all kinds and are of two general types, the STANDARD, and the RACER. They are carefully balanced and finished, and can be depended upon to do the work required, if properly selected.

The **STANDARD PROPELLER** is most suited for scale models with proportionately heavy motors. For each diameter, the best average pitch is used. This type has a heavy hub to fit our Ball Bearing shafts and is generally used on Tractor models.

The **RACING PROPELLERS** are higher pitched, are made of pine, and are light enough to withstand ordinary damage in landing. They are generally used as pushers. The CECIL PEOLI is a special type of RACING PROPELLER used first on the PEOLI RACER and now recommended on all models requiring higher thrust than the usual RACING PROPELLERS.

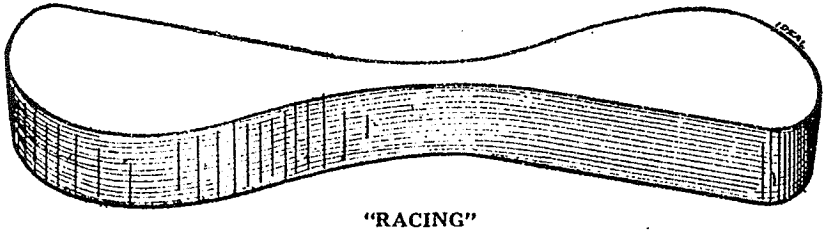
IDEAL Propeller Blanks are perfectly cut and in conjunction with our Propeller Carving Directions, make Propeller carving easy.

# Ideal Propeller Blanks

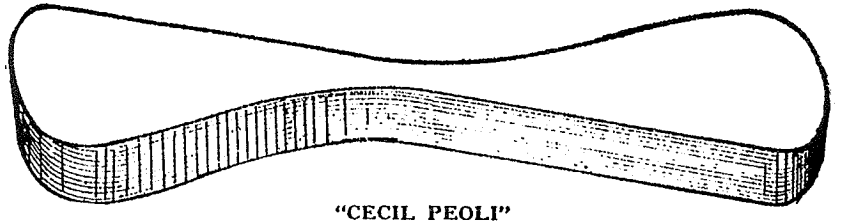


"STANDARD"

| Size | Poplar | Mahogany | Size | Poplar | Mahogany |
|---|---|---|---|---|---|
| 6 in. | $0.15 | $0.20 | 12 in. | $ .30 | $ .40 |
| 7 in. | .17 | .22 | 14 in. | .40 | .65 |
| 8 in. | .20 | .25 | 16 in. | .65 | 1.00 |
| 9 in. | .23 | .30 | 18 in. | .85 | 1.25 |
| 10 in. | .25 | .35 | 20 in. | 1.25 | 1.75 |
| | | | 24 in. | 1.75 | 2.25 |



"RACING"



"CECIL PEOLI"

## "RACING" AND "CECIL PEOLI"

Cut From White Pine

| | | | | | | | | |
|---|---|---|---|---|---|---|---|---|
| 6 in. | Price per pair | 25c.— | by mail, | 6c. | extra. |
| 7 " | " | " | " | 30c.— | " | " | 7c. | " |
| 8 " | " | " | " | 35c.— | " | " | 7c. | " |
| 9 " | " | " | " | 40c.— | " | " | 8c. | " |

In ordering, specify the kind required.

Special blanks as per your own design made to order—5c per inch additional.

Wood for Making Laminated Propellers

**Mahogany and Maple, 1/8 in. x 1½ in. x 14 in. .....per piece 7c.**

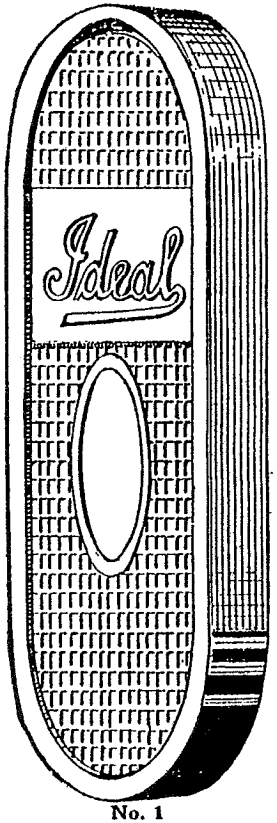
Transportation extra at pound rate

**Illustrated Instructions on Propeller Carving.....12 cents, postpaid**





# "Ideal" Miniature Radiators




No. 1

Perfect reproduction in miniature of Airplane Radiators that will give any Model a real life like appearance, especially when used with sheet Aluminum or Veneer cowling.

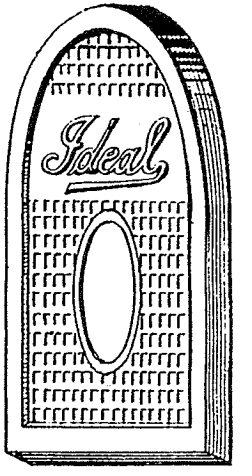
They are stamped from bright Aluminum and indented to simulate a real Radiator.

A large hole is provided to clear the propeller shaft and bearing.

No. 1—De Havilland type 3½ x 2⅛ in. Wt. 5/30 oz. Each 50c.

No. 2—JN4D-2 type 2⅛x1⅛ in. Wt. ⅛ oz. Each 30c.

**Postage, 2c each**

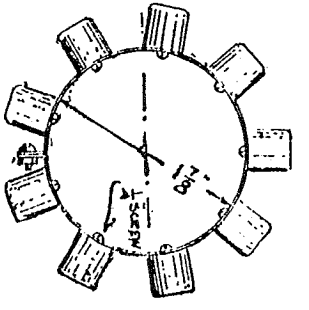


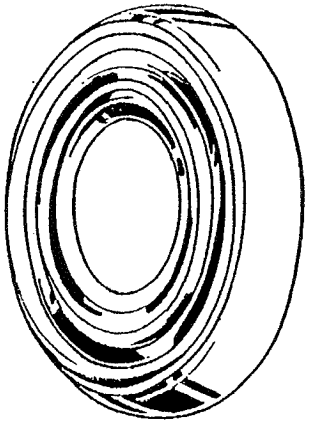

No. 2

## Ideal Engine Form

IDEAL engine form duplicates in miniature the appearance of the air-cooled engines of Airplanes. All materials, with illustrated directions, per set 35c

**Postage, 2c each**





## Ideal Engine Nosing

The perfect finishing touch for the front of fuselage on the new streamline models. Stamped from bright aluminum. 1¾ in. diameter. Each 40c

**Postage, 2c each**

# MODEL AIRPLANES

Given AVIATORS HELMET

25c to $10 Complete CONSTRUCTION SETS
Raw materials, blue prints, everything needed to make your own models.

Gliders—Tractors—Racers—Cabin Monoplanes
*Write for Illustrated Folder "A"*

*"SKY PIRATE" MODEL*

Amazing, sensational—takes off ground; flies fast, forward and far. Wing spread 20 in.; wheels and rudder of balsa wood; beautifully finished; wings silver; fuselage, green; rudder red; metal trimmings. Aviator's helmet GIVEN, packed with each "Sky Pirate" complete; postpaid **$1**

*Clip this adv. and enclose dollar bill.*
Satisfaction or money back—Order TODAY

BROADFIELD TOY CO., Hempstead, N. Y.
*Est. 1919* *Dealers Inquiries Invited*

Ready To Fly
**Postpaid $1**

FLIES!
GLIDES!
LOOPS!

**DOWAE STUNT PLANE**
"That Little Red Plane"
A scientific model which spirals and climbs.
**DOWAE TOYS, P. O. Box 1396, Springfield, Mass.**

# The SILVER ACE
## MODEL AIRPLANE

*Flies 800 feet*

(Wing Spread 30 in. Weight 3¾ oz.)

Thousands of scale model enthusiasts in every State of the Union and in many foreign countries know that the SILVER ACE is the best to buy and the simplest to build—Convertible Monoplane, Biplane, Seaplane.

Have you seen the wonderful new SILVER ACE Dummy Whirlwind Motor and the SILVER ACE Pontoons? Ask your local store to show you the latest SILVER ACE. Ready to Fly or Partly Assembled.

***Our new Content Kit costs only $5.00***

Catalog 10 cents
AERO MODEL COMPANY
329 Plymouth Court, Chicago

# Camp Charlevoix

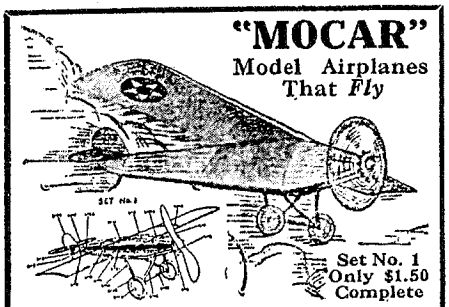
*On Lake Charlevoix, Michigan*

*For Boys 8 to 18*

MERRILL HAMBURG, Secretary of Airplane Model League of America, has charge of handicraft, airplane and boat modeling. The National Airplane Model contest winner will also be in Charlevoix this summer. Better enroll early. Archery under Michigan's leading archer. Riding, fencing, dramatics. Swimming, life-saving, athletics. Handling of boats and canoes taught. Scout work and forestry given. Complete equipment—11 buildings—78 acres. Resident physician. Fresh foods, home-raised. Catalog. L. C. Reimann, Director, Ann Arbor, Mich.

*A model sea-plane*

# "MOCAR"
## Model Airplanes That *Fly*



Set No. 1 Only $1.50 Complete

**BOYS** at last, here is a genuine aluminum model airplane that **really flies.** And at a small price

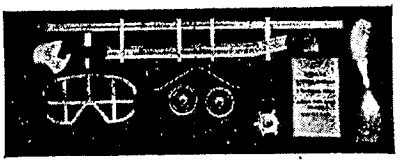
The "Mocar" monoplane—Set No 1—is a copy of the famous Spirit of St. Louis. Wing spread 18 in., fuselage 12 in. powerful motor, ball-bearing propeller, rubber-tired disc wheels Weight complete only about 2½ oz.

This is a practical, simple, real model plane that gives you a whole lot of fun for the moderate cost. The all-metal construction makes a sturdy plane that will stand a lot of abuse. The outfit is mounted on cardboard with all parts plainly marked and full instructions for assembly. Pliers only tool necessary Complete with rivets, bolts, wheels, wing and fuselage covering material, only $1.50 postpaid. (3 for $4.00.) **Order now.**

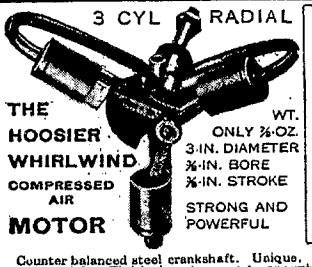
*Great fun, learn how to make and fly airplanes.*

**Jobbers, dealers and schools write for net prices.**

*The illustration below shows set mounted complete ready for assembly. Small cut above shows all metal skeleton ready for covering and the large illustration, actual cut of finished plane.*



The Mount Carmel Mfg. Co.
Dept. C, Mount Carmel, Conn.

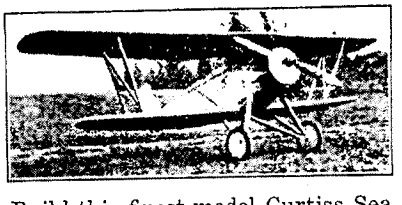



Hoosier Air Motors and Tanks Won All Air Model Prizes Louisville National Contest October, 1929

Counter balanced steel crankshaft. Unique. Flies 4½ ft. to 6 ft. models. Finished parts, easy to assemble, $2.90 postpaid. Completely assembled and tested $4.90 postpaid.
**COMPRESSED AIR TANK**—Gnatweight seamless high pressure, 3/4" diameter, 30" long, $7 postp'd, 24" long $6.50 postp'd.
**MOTOR AND 24-IN. TANK COMBINATION**—Wt. complete only 8½ oz! Send this ad. $13.90 postpaid.
**COMPLETE KIT FOR 5 FT. COMPRESSED AIR MODEL** with blueprint less tank and motor $4.90 postpaid. Have an air model for your next National Model Airplane contest. Order today! Be sure and enclose only money orders or drafts.
**RUBBER** 1-32"x¼" flat—full fresh skeins special price till July 1st only—75c post p'd (1-32" x 3-32" same price).
**BEST RUBBER LUBRICANT KNOWN**—Doubles winds. Used on all latest record models. Big 2 oz. can only 35c postpaid.
**SEND 10c AT ONCE FOR A NEW ILLUSTRATED LIST JUST OFF THE PRESS** showing all the latest and best materials as used by recent National contest winners of trips to Europe, etc., with surprising low prices on the best materials. **Schools, clubs, dealers write for terms. "Model Airplane Experts of Today are the Aviation Experts of Tomorrow."**

**PERU MODEL AIRPLANE SHOP**
Dept. A, PERU, INDIANA

# MODEL AEROPLANES



Build this finest model Curtiss Sea Hawk F-C-7. 32-in. wingspread. All new features, streamline fuselage, dummy radial motor, one-piece wings, disc wheels. The most life-like model on the market. Price, knockdown form, $12.00. Send 10c coin for illustrated catalogue.

MINIATURE AIRCRAFT CORP.
83 Low Terrace New Brighton, N.Y.

*"If You Wanner Win, Wannerize"*

# Airplanes That Fly!

**ATTENTION: Model Builders!**

Here's something new, a non-porous, highly glazed tissue, which is less than one-half the thickness of the finest super-fine. Think of the advantages! The saving in weight, elimination of the enormous drag, caused by the fuzz found on all other tissues, and the stopping of surface leakage. This means increased duration. It's your chance to win a contest! Don't pass it up! Verithin tissue, an exclusive Wanner product, is sold in packages only.

A package of six 4"x36" sheets.....$ .25
Five packages ..... 1.00

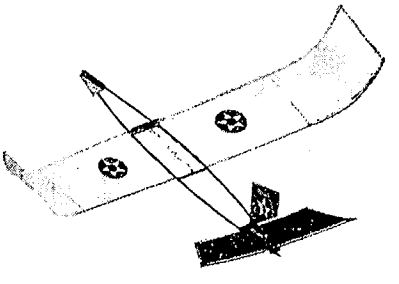
## Special $25.00 Club Offer

Material enough to supply 25 boys, each with sufficient supplies to construct the three most popular of the indoor planes, the Baby R.O.G., the indoor endurance, and the indoor cabin fuselage model. In addition to 25 beginners improved Baby R.O.G. official A.M.L.A. kits, the offer includes the following bulk supplies: 210 ft. ⅛"—30 pure para rubber, 25 special motors for No. 1 R.O.G., 75 sheets Japanese tissue, 6 large tubes Wanner Airplane Cement, 400 ft. of assorted sizes music wire, 100 hard brass washers, 50 half round drilled thrust bearings, 25 each 1"x1¼"x7¼" and 9/16"x1¼"x12" propeller blocks, 25 semi-finished 8" propellers for No. 4; 25 each 18" balsa strips 1/32"x½", 1/16"x1/16", 1/16"x1", 1/16"x2", and ⅛"x¼"; 25 strips 1/16"x¼"x12" jointless bamboo; 25 sheets 2"x4" cellophane for cabin windows.
No Stamps Accepted No C. O. D. Orders

Catalog on Request

**George D. Wanner & Co.**
Official A.M.L.A. Kit Manufacturer
300 Davis Ave, Dept. A Dayton, Ohio
*Wanner Kits Make Successful Planes!*

# Lieutenant Rowell's GLIDER WITH REMOTE CONTROL



Scientifically designed by former U. S. Army aviator. Stays in the air indefinitely—yet is constantly piloted by the Flyer. Offers more for the money in wing spread, performance and real pleasure than any other aviation toy at the same price. Gives actual knowledge of the principles of flying and landing.

Manufactured and guaranteed by the makers of LINCOLN LOGS and LINCOLN BRICKS.

*Ask for it at your dealer's; if unable to get it MAIL US THE COUPON.*

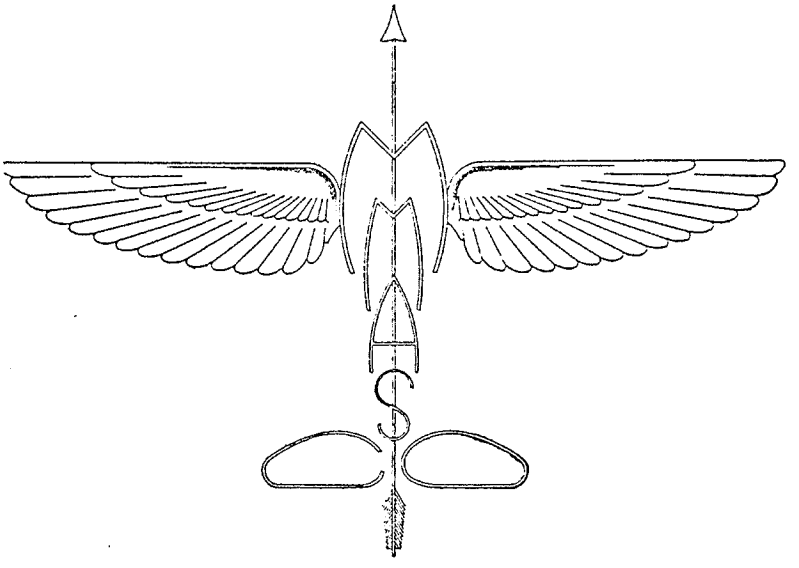
J. L. Wright, Inc.,
1443 R. Merchandise Mart, Chicago.
Please mail at once, postage prepaid
☐ "Set-up" Models ready to fly at $2.00
☐ "Semi-Kits" (partially assembled) at $1.50
☐ "Kits" (construction outfit) at $1.00
Enclosed is $.....for Gliders specified.
Money to be refunded if not satisfactory.

Name .....

Address .....


1927-1930
Ads from
The American Boy Magazine

*"Planes of the future will be built by the model makers of today"*



*"For you to have more of the best"*

1929

Michigan Model Airplane Supply Co.

4768 Grand River Avenue

Detroit Michigan

## INDEX


| | Page |
|---|---|
| Acetone | 35 |
| Aluminum—Sheet | 39 |
| Ambroid | 36 |
| Baby R. O. G. | 10, 11 |
| Baby R. O. W. | 12 |
| Balsa Wood Kit | 16 |
| Balsa Wood | 7, 8, 28 |
| Bamboo | 29, 30 |
| Banana Oil | 35 |
| Ball Bearings for Propeller Shafts | 41 |
| "Beginning to Fly" | 9 |
| Biplane R. O. G. | 11, 12 |
| Commercial Model | 18, 19 |
| Compressed Air Motors and Tanks | 40, 41 |
| Covering Material for Wings | 37 |
| Curtiss Hawk | 21, 22, 23 |
| Drills | 44 |
| Ford Tri-Motor | 24, 25 |
| Foreword | 3, 4 |
| Hydroplane—Outdoor | 17, 18 |
| Indoor Endurance Pusher | 12, 13 |
| Cambered Wing Tractor | 13, 14 |
| Insignia | 45 |
| Instructions and Drawings | 45 |
| Knife | 44 |
| Motors | 40, 41 |
| Nitrate Dope | 36 |
| Ordering | 5, 6 |
| Outdoor Hydroplane | 17, 18 |
| Outdoor Twin Pusher | 15, 16 |
| Plane—Block | 45 |
| Propellers | 42 |
| Pusher—Indoor Endurance | 13, 14 |
| Pusher—Outdoor Twin | 15, 16 |
| Reed | 30 |
| Rods | 38 |
| R. O. G. Baby | 10, 11 |
| R. O. G. Biplane | 11, 12 |
| R. O. W. Baby | 12 |
| Rubber | 30, 31 |
| Screws | 44 |
| Spirit of St. Louis | 25, 26 |
| Spruce | 30 |
| Stinson-Detroit | 20, 21 |
| Tanks | 40, 41 |
| Thrust Bearings and Washers | 39, 40 |
| Tires | 34 |
| Tool Kit | 43 |
| Tractor—Cambered Wing | 13, 14 |
| Tubing | 38 |
| Vought Navy "Corsair" | 27 |
| Wheels | 34 |
| Winders for Rubber Motors | 33 |
| Wing Dope—Natural and Colored | 35 |
| Wire | 37 |
| Woods for Model Building | 28, 29, 30 |






## FOREWORD

Building and flying model airplanes has been a hobby of many men and boys for years. The last twelve months have seen interest in the sport grow as it never grew before. Several thousands have been added to the new ranks of the model builders.

Much of the increased interest in model aviation has been due to the feats of Lindbergh, Chamberlin, Byrd, and other great aviators. About the time when their flights began to attract world interest, model airplane departments were instituted in a number of periodicals. There had been some attempt at publication of similar material, but a new school has grown up in the last two years.

The American Boy Magazine was the first in this new school. Since October, 1927, this famous boys' magazine has done more than any other organization to make the boys of America airminded. The magazine organized the Airplane Model League of America, with the guidance of Byrd, Stout, Chamberlin, Stinson, Rickenbacker, and others. It sent experts around the country to demonstrate their work and in-





struct others. In 1928, the magazine sponsored the greatest model contest of all time, the First National A. M. L. A. Contests in Detroit. The two winners were awarded trips to Europe, cash prizes, trophies, and medals. And each month the American Boy publishes articles about up-to-date scientific models.

With the advent of the new series of articles, the American Boy realized that boys would often have difficulty in building models because of the frequently excessive cost of balsa, glue, paper, and other materials, so it interested some Detroit men in financing a new factory wherein these supplies might be put up and sold at the lowest possible costs. This concern was called the Michigan Model Airplane Supply Company. It manufactured kits for each model described in the magazine, and they were sold to the model builders of the nation at cost, through the A. M. L. A.

The flying models described in this catalog are the ones which hold or have held most of the records established during the past two years. All the drawings and directions are either prepared by expert model builders or under their supervision.

## DIRECTIONS FOR ORDERING

1. U. S. postage stamps are accepted only in orders amounting to less than 25c.

2. For orders amounting to more than 25c, send cash, check, P. O. Money Order or Express Money Order. Post Office or Express Money Orders are preferred.

3. Orders amounting to 50c or less are subject to a postage and packing charge of 15c. To those amounting to $1.00 or less, add 20c, and from $1.00 to $5.00, add 10%. From $5.00 to $10.00, add 5%. Over $10.00, we pay all postage and packing charges. Price of kits includes postage.

   ***Canadian Postage Rate:*** Allow 14c, straight, per lb. All packages weighing over 8 ounces go via parcel post.

4. Order pieces of wood, reed, rod, or tubing, in the shortest possible lengths so that it may be more easily packed.

5. Wood orders of 10 board feet or more, will be shipped via Express, charges collect.





6. All assembled models, with the exception of the Baby R. O. G., are made to order only, so sufficient time for building should be allowed.

All orders of standard parts are filled as soon as possible and are shipped within 24 hours after receiving. Orders for parts which have to be made require somewhat longer to fill. Most of these orders can be filled and shipped within 48 hours after receiving.

All our orders are packed with extreme care. If by any chance your order should become broken, just get your Postmaster to sign a slip to the effect that it was damaged or send the damaged articles to us and we will replace it.

Send all inquiries addressed to "Information Dept." Enclose self-addressed, stamped envelope if you wish prompt attention.

We make a special offer to Schools, Clubs, and Y. M. C. A.'s. Write for information.

*Prices subject to change without notice.*

**Michigan Model Airplane Supply Co.**
4768 Grand River Avenue
***Telephone Walnut 2400*** **Detroit, Michigan**





## BALSA WOOD

Balsa wood was known to the world over four hundred years ago. The early explorers of South America learned of the extreme light weight of this wood from the natives, who used it to make rafts. This caused it to be called Balsa, the Spanish word for raft.

Balsa grows in the West Indies, Central and South America. The trees are very rapid in their growth, attaining their average full height of 36 feet in one year and becoming approximately 5 inches greater in diameter each year for 5 years. The tree is full grown at the end of 5 or 6 years, being 36 feet in height and about 25 inches in diameter.

The wood is made up of small egg-shaped cells, which are filled with air and have unusually thin walls. This cellular structure gives it extreme light weight combined with remarkable strength. Approximately 92% of the wood is cell space and the remaining 8% is substance. In fact, Balsa is the lightest and strongest commercial wood in the world. That is, it is strongest in proportion to its weight. There is one lighter wood, but it is too weak for any practical



75

purpose. Balsa is approximately half the weight of cork and half the tensile strength of Spruce, a wood of four times its weight. Warping, always a "bug in the ointment" when a model builder is using other woods, is unknown in Balsa. Unfortunately, owing to the fact that most of the wood grows in out-of-the-way places and transportation is difficult, if not impossible, the cost of the wood is still very high.

The only use of Balsa, until recent years, was to float the valuable hardwood logs down the river to the sea coast with Balsa rafts. The reason for there being no other uses was because of the rapidity with which the wood rotted after being cut down. A special process was devised, but recently, which kills the destructive bacteria and effectively stops decay.

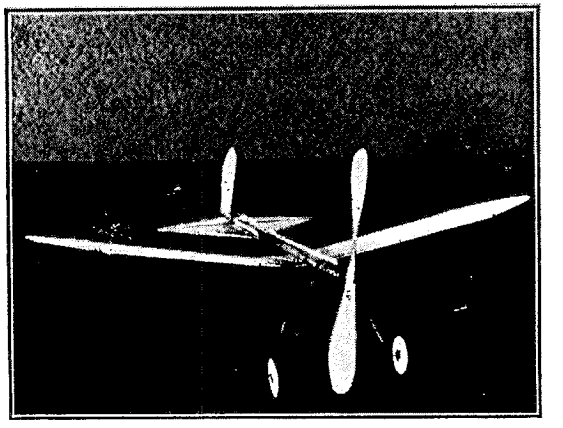
Since then, the popularity of this wood has increased by leaps and bounds, until its uses are too numerous to mention here. Its use in model airplanes is only one of many. It has practically revolutionized the building and flying of models. Records, established by the builders of the old type pine and spruce models and which were thought unbeatable, have been broken several times by mere novices, using Balsa wood.

**"BEGINNING TO FLY"**
***By Merrill Hamburg***

The most authentic book on model airplanes now on the market. Includes instructions for building most of the recent record breaking machines. Price.....$2.50







**THE BABY R. O. G.**

In spite of the fact that this model has a wing span of but 12 inches, it is one of the most interesting and instructive flying models that it is possible to build. It is one of the easiest of the flying models to construct and when properly assembled, the average flight is about twenty-five or thirty seconds. With a few minor changes, models of this same design have flown for over a hundred seconds indoors and two or three minutes outdoors.

More than 120,000 have been built by boys throughout the United States in the last year.

**BABY R. O. G. PRICE LIST**

| | |
|---|---|
| 2 Balsa Wing Spars | $0.05 |
| 2 Propeller Blocks | .06 |
| 2 Fuselage Sticks | .05 |



76

| | |
|---|---|
| 1 Piece Bamboo | .02 |
| 2 Fibre Wheels | .02 |
| 1 Thrust Bearing | .05 |
| 2 Washers | .02 |
| 2 Wing Clips (front and rear) | .10 |
| 1 Propeller Shaft | .05 |
| 1 Can | .05 |
| 1 Piece Wire for landing gear | .05 |
| 1 Rear Hook | .05 |
| 1 Sheet Japanese Tissue | .02 |
| 1 Small Bottle Banana Oil | .05 |
| 1 Small Bottle Ambroid | .05 |
| 1 Rubber Motor | .02 |
| 2 Bamboo Wing Tips, bent to shape | .05 |
| 1 Bamboo Rudder, bent to shape | .05 |
| 1 Semi-finished Propeller | .10 |
| Total Amount | $0.91 |
| COMPLETE KIT (Postage Paid) | .75 |

## THE R. O. G. BIPLANE

The R. O. G. Biplane is an interesting little ship that flies very slowly as a biplane or it can be fitted with a monoplane wing to do high climbing or stunting. The wing span is 12"; fusilage, 9".

### R. O. G. BIPLANE PARTS LIST

| | |
|---|---|
| 2 Balsa Wing Spars, 1/16x3/8x12" | $0.05 |
| 2 Propeller Blocks, 3/8x1/2x6" | .06 |
| 2 Fuselage Sticks, 1/8x1/8x9" | .05 |
| 1 Piece of Balsa for Wing Tips and Struts. | .02 |
| 2 Fiber Wheels | .02 |
| 1 Thrust Bearing | .05 |
| 2 Washers | .02 |
| 2 Wing Clips (front and rear) | .10 |
| 1 Propeller Shaft | .05 |
| 1 Can | .05 |
| 1 Rear Hook | .05 |





| | |
|---|---|
| 1 S Hook | .02 |
| 1 Sheet Japanese Tissue | .02 |
| 1 Small Bottle Banana Oil | .05 |
| 1 Small Bottle Ambroid | .05 |
| 1 Rubber Motor | .02 |
| 1 Semi-Finished Propeller | .10 |
| Total Amount | $0.78 |
| COMPLETE KIT (Drawing and Complete Instructions, Postage Paid) | .65 |

## THE BABY R. O. W.

The Baby R. O. W. is similar to the Baby R. O. G. with the exception that pontoons are substituted for the wheels. A great deal of fun can be had with the plane either indoors or outdoors. When correctly constructed it will take off the water, make flights of fifteen or twenty seconds, and land again on the water. Wing span, 12"; fuselage, 9".

COMPLETE KIT (Postage Paid) ..... $0.65

## INDOOR ENDURANCE PUSHER

*By Albert W. Mott*

This type of plane won first place in the Class A event at the National Indoor Contest held in Detroit June 30, 1928, making 3 consistent flights well over 5 minutes each.

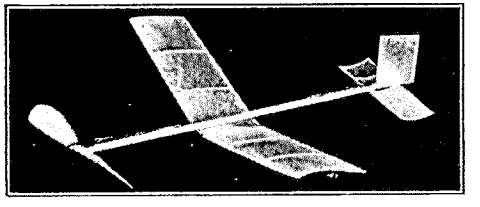
| | |
|---|---|
| 1 Balsa Block for propeller, 3/4x1 1/4x12" | $0.10 |
| 2 pc. for Ribs, 1/32x2x12" | .10 |
| 4 Balsa Spars for main wing, 1/16x3/32x10" | .12 |
| 2 Balsa Spars for elevator, 1/16x1/16x6" | .04 |
| 1 Balsa Stick for body, 1/8x1/4x15" | .04 |





| | |
|---|---|
| 1 Piece of Bamboo for elevator braces | .02 |
| 1 Sheet of Imperial Tissue, 10x21" | .10 |
| 1 Rubber Motor | .05 |
| 1 Thrust Bearing | .05 |
| 1 Can | .05 |
| 1 Front Hook | .05 |
| 1 S Hook | .05 |
| 1 Propeller Shaft | .05 |
| 2 Brass Washers | .02 |
| 2 Wire Wing Clips | .10 |
| 1 Sheet of Instructions and Drawings | .05 |
| 1 Bottle of Ambroid | .10 |
| 1 Bottle of Banana Oil | .10 |
| Total Amount | $1.19 |
| COMPLETE KIT (Postage Paid) | $1.00 |

## CAMBERED WING TRACTOR



Up to the present time most indoor tractors have had flat wings. However, since the sensational record of 354 seconds made in the National Indoor contest in 1928 with a cambered wing tractor, there has been a great public demand for such a model. This is similar to the record breaker and a flight of over five minutes is quite possible if the model is well made.

## CAMBERED WING TRACTOR PARTS LIST

| | |
|---|---|
| 1 ¾x1¼x12 Prop. Block | $0.10 |
| 1 U-shaped Motor Stick | .15 |
| 1 Solid Motor Stick, ⅛x¼x15 | .03 |
| 2 Wing Spars, 1/16x⅜x10 | .05 |
| 1 1/32x1x15 Bulk Heads and Top of Motor Stick | .04 |
| 2 1/32x2x12 for Tail Assembly and Rudder | .10 |
| 1 Thrust Bearing | .05 |
| 1 Can | .05 |
| 1 Prop. Shaft | .05 |
| 1 S Hook | .05 |
| 1 Rear Hook | .05 |
| 2 Wing Clips | .10 |
| 2 Washers | .02 |
| 1 Bottle Glue | .10 |
| 1 Bottle Banana Oil | .10 |
| 1 Sheet Paper | .05 |
| 1 Sheet Drawing and Instruction | .05 |
| 1 Rubber Motor | .05 |
| Total | $1.19 |
| The Complete Kit | $1.00 |

Tractor of all Balsa construction with a record of 266 seconds.

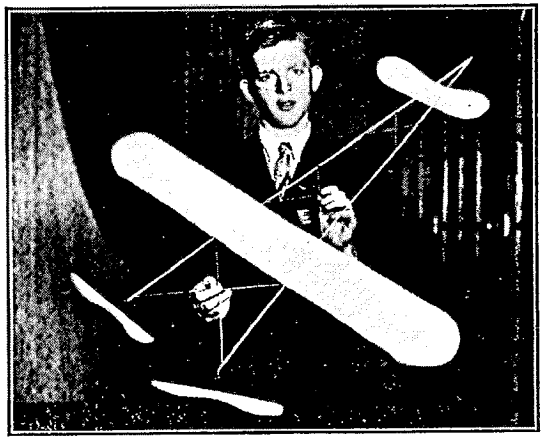
COMPLETE KIT (Postage Paid) ..... $0.75

We cut a special "U" shaped motor stick for this kit, which is extra. All it requires is the putting in of the bulkheads and top.

Price ..... $0.15
(Postage 5c extra)







## THE OUTDOOR TWIN PUSHER

After all, most of the model flying is done outdoors and most of the important contests with the best prizes are also held there. To see a model circling upward and fading into the blue sky, gives one a thrill which cannot be experienced indoors. Flights of from one to ten minutes' duration are easily possible with this model. Several of the same design have passed from sight after being up nine or ten minutes. Whether this model has a maximum flight of one or ten minutes depends entirely on the accuracy with which it is constructed and the conditions under which it is flown.





## OUTDOOR TWIN PUSHER PARTS LIST

| | |
|---|---|
| 2 Propeller Blocks | $0.14 |
| 2 Motor Sticks | .14 |
| 2 Wing Spars | .08 |
| 2 Leading Edges | .08 |
| 13 Ribs, finished | .50 |
| 5 Pieces Bamboo | .15 |
| 3 Sheets Japanese Tissue | .15 |
| 2 Thrust Bearings | .12 |
| 2 Propeller Shafts | .12 |
| 6 Cans | .36 |
| 1 Front Hook | .06 |
| 2 S Hooks | .10 |
| 4 Brass Washers | .05 |
| 4 Wing Clips | .24 |
| 1 Special Elevator Band | .02 |
| 2 Rubber Motors (each eight-strand tied) | .60 |
| 1 Can Ambroid, 2 ounces | .30 |
| 1 ounce Acetone | .15 |
| 1 ounce Banana Oil | .15 |
| Total Amount | $3.51 |
| COMPLETE KIT (Postage Paid) | $3.00 |

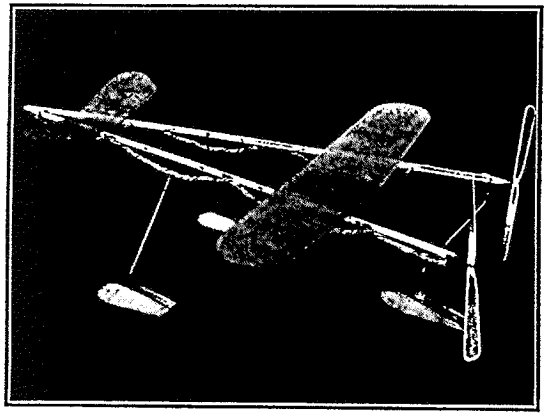
## BALSA WOOD KIT

All Balsa Wood Kit for Glider and Pusher.

Glider wing span, 12¾"; elevator, 5¾"; length over all, 14⅝".

Pusher wing span, 12¾"; motor stick, 10".

COMPLETE KIT (Postage Paid) ..... $0.65



## THE OUTDOOR HYDROPLANE

The Hydroplane is an excellent model to have at the summer cottage It is strong and will stand enough bumping around so that it may be flown either on land or water. This Hydroplane is also a contest model and a record-breaker. In the 1927 national contest at Memphis, Tennessee, a model of this type won first place in the hydroplane class.

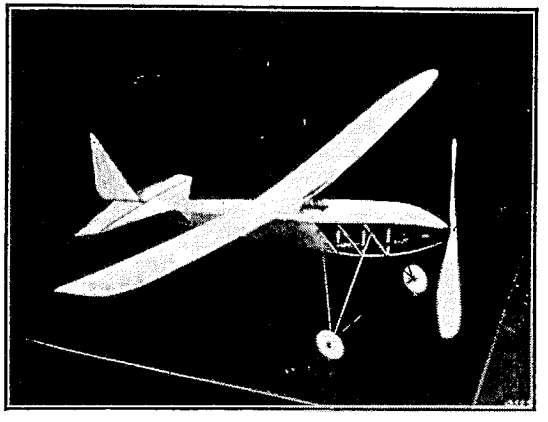
| | |
|---|---|
| 2 Balsa Motor Sticks, 3/16x½x38" | $0.14 |
| 2 Balsa Propeller Blocks, 9/16x1¼x11½" | .14 |
| 4 Wing Spars, 5/32x¼x14" | .08 |
| Flat Balsa, 1/16x1½x12" | .05 |
| 6 Cans | .36 |
| 2 Propeller Shafts | .12 |
| 1 Yoke | .06 |
| 2 S Hooks | .10 |
| 2 Thrust Bearings | .12 |





| | |
|---|---|
| 4 Washers | .05 |
| 1 2-ounce Bottle of Banana Oil | .20 |
| 1 1-ounce Bottle of Acetone | .15 |
| 1 2-ounce Can of Ambroid | .30 |
| 3 Strips of 12" Bamboo | .06 |
| 3 Strips of 15" Bamboo | .09 |
| 2 Rubber Motors, ten strands each | .60 |
| 2 Sheets Japanese Tissue Paper, 21x31" | .20 |
| Total Amount | $2.82 |
| COMPLETE KIT (Postage Paid) | $2.50 |

## THE COMMERCIAL MODEL



The Commercial model is an unusually consistent flier and is the general type used in England by the Society of Model Airplane Engineers in most of their contests. The idea of the Commercial model is to have a resemblance to a real airplane by





having an enclosed fuselage and yet be simple and light so that flights of long duration may be obtained.

Interest in Commercial model flying is rapidly increasing in the United States and one or two national contests for Commercial models have already been held.

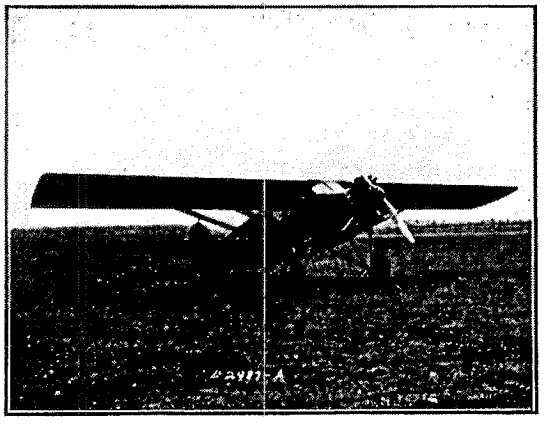
This model combines the best features together with several new ones of all the models built before it. It has a wing span of thirty inches. Flights of two minutes are easily accomplished indoors.

### LIST OF PARTS FOR COMMERCIAL MODEL

| | |
|---|---|
| 1 3/16x¼x20" Balsa Motor Stick | $0.05 |
| 6 1/16x⅛x24" Longerons and Bracing | .24 |
| 1 ⅛x1¾x6" Flat Balsa for wheels | .05 |
| 1 ⅞x1¼x10" Propeller Block | .08 |
| 2 ⅛x⅜x26" Wing Spars | .10 |
| 2 ⅛x¼x4" Bars, to fasten wing clips to | .02 |
| 1 ⅛x¼x6" Bar, to fasten wing clips to | .01 |
| 3 15" Bamboo Strips for Bamboo Parts | .09 |
| 1 ounce Bottle Banana Oil | .15 |
| 1 2-ounce Can Ambroid | .30 |
| 2 Sheets Japanese Tissue, 21x31" | .20 |
| 1 Propeller Shaft, flattened | .10 |
| 1 Slotted Thrust Bearing | .10 |
| 2 Washers | .02 |
| 1 Rear Hook | .06 |
| 1 Spring Anchor Support | .06 |
| 3" of Wire for Axles | .02 |
| 10 Feet of ⅛x1/32" Rubber | .10 |
| 3 Wing Clips | .18 |
| Total Amount | $1.93 |
| COMPLETE KIT (Postage Paid) | $1.75 |



79



## THE STINSON-DETROITER

This is a model of the famous plane that Schlee and Brock used in their famous flight from Detroit, across the Atlantic and all the way across Europe and Asia, to Tokio. In the same type of plane Eddie Stinson and George Haldeman established a world's duration record of 53 hours.

### STINSON-DETROITER PARTS LIST

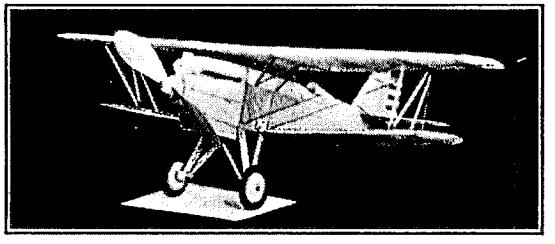
| | |
|---|---|
| 2 Sheets Japanese Tissue, 21x31" | $0.20 |
| 1 Rubber Motor | .05 |
| 1 Propeller Shaft | .05 |
| 1 Thrust Bearing | .05 |
| 1 Rear Hook | .05 |
| 1 S Hook | .05 |
| 2 Wing Clips | .10 |
| 2 Brass Washers | .02 |
| 1 Ft. Music Wire | .01 |
| 2 Strips Flat Balsa | .08 |
| 2 Balsa Leading Edge Spars | .08 |
| 1 Balsa Motor Stick | .03 |
| 15 M-6 Balsa Ribs | .50 |





| | |
|---|---|
| 1 Bottle Ambroid | .10 |
| 1 Bottle Banana Oil | .12 |
| 2 Strips Bamboo | .04 |
| 1 Balsa Propeller Block | .07 |
| 1 Strip Flat Balsa for wheels | .02 |
| A. M. L. A. Manual | .05 |
| Instructions | .02 |
| Total Amount | $1.69 |
| COMPLETE KIT (Postage Paid) | $1.50 |

## THE CURTISS HAWK



The Army Pursuit plane, which is the peer of all pursuit planes the world over, makes an excellent model. This model is scaled down accurately to a 24" wing span. When assembled it is unusually good looking and will make flights of from twenty to thirty seconds. A model of this plane, built to our plans, won the national scale model contest held in Detroit in 1928.

### FLYING SCALE MODEL CURTISS HAWK

| | |
|---|---|
| 6 Pieces 1/8x1/8x13½" for longerons and cross bracing | $0.18 |
| 1 Piece 3/16x5/16x12" for motor stick | .03 |
| 1 Piece ¾x1⅞x3" for engine cowling top | .02 |
| 1 Piece lower cowling top block | .02 |
| 1 Piece ⅞x⅞x4 for triangular blocks | .03 |





| | |
|---|---|
| 1 Piece 1/8x1x7 for propeller blades | .02 |
| 2 Pieces 1/8x½x3" for landing gear struts | .02 |
| 2 Pieces 3/16x¼x9½" for upper leading edge, right and left | .04 |
| 2 Pieces 3/16x¼x8" for lower leading edge, right and left | .04 |
| 2 Pieces 3/16x¼x5½" for center leading edge, upper and lower | .03 |
| 8 Pieces 1/16x¼x10" for wing spars and ailerons | .10 |
| 4 Pieces 1/16x2x12" for ribs and bulkheads and small parts | .20 |
| 1 Piece ½x½x1¾" for headrest | .01 |
| 2 Pieces 1/32x2x12" for building around pilot's cockpit, radiator and small parts. | .10 |
| 1 Piece ⅜x⅜x5" for shock absorber | .03 |
| 1 Piece 1x1x8" for Balsa propeller (to be carved) flying model | .06 |
| 1 Piece ½x2x4" for Balsa wheels | .03 |
| 5 Pieces 12" Bamboo for all Bamboo Parts. | .10 |
| 1 Propeller Shaft | .05 |
| 1 Rear Hook | .05 |
| 1 Thrust Bearing | .05 |
| 2 Brass Thrust Washers | .02 |
| 10 Feet of 1/32x⅛" Rubber | .10 |
| 1 Can Ambroid, 2 ounces | .30 |
| 1 Piece of Brass Tubing ⅛x12" for exhaust pipe | .10 |
| 2 Sheets of Japanese Tissue | .20 |
| 1 ounce of Banana Oil | .15 |
| 1 ounce of Acetone | .15 |
| 1 Balsa Spinner | .25 |
| 1 Spool Thread | .05 |
| 1 Piece No. 6 Music Wire for S Hooks | .01 |
| 1 Card Dress Snaps | .05 |
| 1 Piece Celluphone for windshield | .01 |
| 1 Set of Instructions and Drawings for flying model | .50 |
| Total Amount | $3.10 |
| COMPLETE KIT (Postage Paid) | $3.00 |



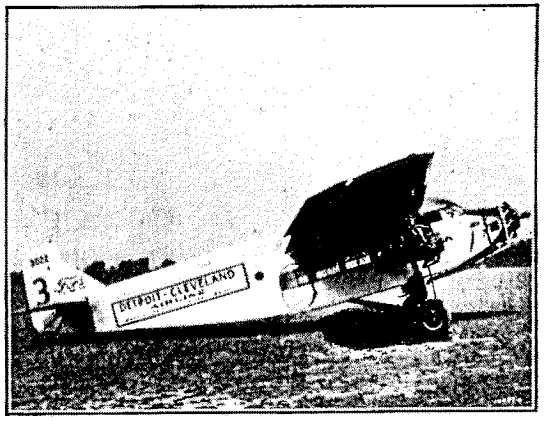
80

## NON-FLYING SCALE MODEL CURTISS HAWK

| | |
|---|---|
| 1 Piece 5/8x4¾x24" for upper wing | $0.40 |
| 2 Pieces ½x4x10" for lower wings | .40 |
| 1 Piece 1¾x3¼x15" for fuselage | .40 |
| 1 Piece ¼x4x9" for stabilizer and elevators | .15 |
| 1 Piece ⅛x3x4" for rudder | .05 |
| 1 Piece ⅛x1½x2½" for fin | .03 |
| 2 Pieces ⅛x½x8" for landing gear struts | .04 |
| 1 Piece ⅛x2x12" for making small wing and landing gear struts | .05 |
| 1 Piece ⅛" Brass Tubing | .10 |
| 1 Piece 1x1¼x7" for propeller | .06 |
| 1 Piece ⅜x⅜x5" for shock absorbers | .03 |
| 1 Can Ambroid | .30 |
| 1 Spool Tinned Wire | .10 |
| 2 Wheels, Aluminum Centers | .40 |
| 1 Piece Celluloid | .01 |
| 1 Outline Scale Model Drawing | .20 |
| TOTAL AMOUNT | $2.72 |
| COMPLETE KIT (Postage Paid) | $2.50 |








## THE FORD TRI-MOTOR

The Ford Tri-motor was the first successful all-metal airplane in the country and is one of the best and most efficient commercial airplanes that we have today. Commander Byrd is using a Ford Tri-motor on his South Pole Expedition, and Colonel Lindbergh is going to use several of them on his Transcontinental Airlines. This is for scale model only.





## FORD TRI-MOTOR PARTS LIST

| | |
|---|---|
| 2 Pieces Balsa Wood 1x1x2" for engine blanks | $0.02 |
| 6 Pieces ⅜x15¾" longerons at .05 each | .30 |
| 1 Piece 1/16x2x12" for bulkheads at .05 each | .05 |
| 2 Pieces 1/16x1¾x15" for 10 ribs at .05 each | .10 |
| 1 Piece ⅜x⅜x5½" for C leading edge at | .03 |
| 2 Pieces ⅜x⅜x9" leading edge at .05 each | .10 |
| 3 Pieces 1/16x¼x15" Bamboo at .03 each | .09 |
| 2 Pieces 1x1x2¼" at .03 each for 2 motor caulings | .06 |
| 1 Piece 2x2x3" for cowling (engine) | .07 |
| 1 Piece ¼x3x1½" rudder | .03 |
| 1 Piece ¼x1½x2" fin | .03 |
| 1 Piece ¼x1¼x6¼" for stabilizer | .05 |
| 1 Piece ¼x⅞x3" elevators | .03 |
| 4 Pieces ¼x⅜x12" for wing and landing gear struts at .05 | .20 |
| 3 Propeller Blocks, 3", at .03 each | .09 |
| 2 Sheets window materials, 1x6", at .05 each | .10 |
| 2 Wheels | .10 |
| 4 Sheets of paper at .10 per sheet | .40 |
| 2 2-ounce cans Ambroid at .30 each | .60 |
| 1 2-ounce bottle Banana Oil | .20 |
| 1 1-ounce bottle Acetone | .15 |
| TOTAL AMOUNT | $2.80 |
| COMPLETE KIT (Postage Paid) | $2.50 |

## THE SPIRIT OF ST. LOUIS

The Ryan New York-to-Paris Monoplane which Colonel Lindbergh has flown so much now reposes in the Smithsonian Institute. It is, perhaps, with the possible exception of the Wright brothers' first plane, the most famous airplane the world has ever known.

This model is accurately scaled down to a wing spread of 24" from the original plans of the Spirit of St. Louis.

At present we have only Scale Model drawings, but in the hands of an experienced model builder, they can be used to construct a flying model.

| | |
|---|---|
| 2 Spars, 1/8x1/4x24" | $0.08 |
| 3 Pieces 1/16x1/2x12" for ribs | .06 |
| 1 Piece 5/16x5/16x24" for leading edge | .06 |
| 2 Pieces 15" Bamboo for trailing edge | .06 |
| 2 Pieces 3/8x1/2x5" for wing tips | .06 |
| 2 Pieces 1/16x2 1/4x12 1/2" for sides | .10 |
| 1 Piece 1/8x1 3/4x9" for bulkheads | .04 |
| 1 Piece 1/16x1 1/2x5 1/2" for stabilizer | .03 |
| 2 Pieces 1/16x1 3/8x2 5/8" for elevators | .04 |
| 1 Piece 1/16x1 3/4x2 1/2" for rudder | .02 |
| 1 Piece 1/16x1x1" for fin | .06 |
| 4 Pieces 1/8x3/16x2 1/2 for tail brace | .04 |
| 1 Piece 5/16x5/16x12" for motor stick | .04 |
| 4 Pieces 1/8x1/2x7" for wing struts | .08 |
| 4 Pieces 3/32x1/2x2 1/2" for Vee struts | .04 |
| 2 Pieces 1/16x1/4x2 1/2" for follow-through struts | .02 |
| 2 Pieces 1/4x3/4x1 1/2" for shock absorbers | .02 |
| 2 Pieces 1/2x1x3" for wheel centers | .02 |
| 1 Piece 5/8x7/8x6" | .05 |
| 2 Tires | .20 |
| 2 Sheets of Japanese Tissue | .20 |
| 1 2-ounce Can Ambroid | .30 |
| 1 1-ounce bottle of Banana Oil | .15 |
| 1 1-ounce bottle Acetone | .15 |
| 1 Piece 3x6" Aluminum for cowling | .05 |
| 1 Propeller Shaft | .05 |
| 1 Rear Hook | .05 |
| 1 Thrust Bearing | .05 |
| 2 Brass Washers | .02 |
| Drawing | .20 |
| Total Amount | $2.34 |
| COMPLETE KIT (Postage Paid) | $2.25 |





## VOUGHT NAVY "CORSAIR"

This kit furnishes all of the materials necessary to build a non-flying model of the Vought Navy "Corsair." This is an exact scale model of the plane that holds four world's records. The trim lines and beautiful orange and aluminum paint job make this a wonderful display model.

### VOUGHT NAVY CORSAIR PARTS LIST

| | |
|---|---|
| 1 Pc. Balsa 2 1/2"x2 3/4"x15" for Fuselage | $0.40 |
| 1 Pc. Balsa 1/4"x2 3/4"x8 1/4" for Elevators and Stabilizers | .10 |
| 1 Pc. Balsa 1/4"x2 1/2"x3 1/2" for Fin | .05 |
| 1 Pc. Balsa 1/4"x1 3/4"x2 1/2" for Rudder | .04 |
| 1 Pc. Balsa 1/2"x1/2"x6" for Cylinders | .05 |
| 1 Pc. Balsa 1/8"x2"x12" for Under Carriage and Tail Skid | .05 |
| 1 Pair 1 5/8" Wheels, Alum. Centers | .40 |
| 1 Pc. Balsa 1/2"x3 3/4"x6" for Propeller | .05 |
| 1 Pc. Celluloid 1"x3" for Windshield | .03 |
| 1 Pc. Balsa 1/2"x3 1/4"x22" for Lower Wing | .40 |
| 1 Pc. Balsa 1/2"x3 3/4"x26" for Upper Wing | .40 |
| 1 Pc. Balsa 1/16"x2"x12" for Struts | .05 |
| 1 Pc. Balsa 1/2"x1/2"x3 1/2" for Headrest | .03 |
| 1 Spool of Soft Tinned Wire | .10 |
| 1 Pc. of 1/8" Tubing for Machine Guns | .10 |
| 1 Can of Ambroid | .30 |
| 1 Outline Scale Drawing | .20 |
| Total | $2.75 |
| COMPLETE KIT | $2.50 |





## WOODS FOR MODEL BUILDING

### Balsa

We maintain one of the largest supplies of Balsa Wood in the country and are in an excellent position to quote prices on quantities of wood for schools or clubs. All our Balsa is specially selected and is the best obtainable for model work. Bulk orders are always filled in 42" lengths unless otherwise specified, as it makes shipping easier and is large enough for all model work.

Wood in bulk is shipped by Express, charges collect, unless specified differently.

Balsa, per board foot ..... $0.50
Balsa, ten board feet or more, per board foot .35

The following standard sizes may be ordered or we will quote prices on any special sizes up to 42" in length:

**Sheet Balsa**

| Size | Per 12" length | Per 24" length | Per 36" length |
|---|---|---|---|
| 1/32x2" | $0.05 | $0.10 | $0.15 |
| 1/16x2" | .05 | .10 | .15 |
| 1/8x2" | .07 | .14 | .20 |
| 1/32x3" | .10 | .20 | .30 |
| 1/16x3" | .10 | .20 | .30 |
| 1/8x3" | .10 | .20 | .30 |

**Strip Balsa**

| | | | |
|---|---|---|---|
| 1/8x6" | .20 | .35 | .50 |
| 1/8x1/8" | .03 | .04 | .05 |
| 1/8x3/16" | .03 | .04 | .05 |
| 1/8x1/4" | .03 | .04 | .05 |
| 1/8x3/8" | .04 | .06 | .08 |
| 1/8x1/2" | .04 | .06 | .08 |
| 3/16x3/16" | .03 | .05 | .06 |

| | | | |
|---|---|---|---|
| 3/16x1/4" | .03 | .05 | .06 |
| 3/16x5/16" | .04 | .06 | .08 |
| 3/16x3/8" | .04 | .06 | .08 |
| 3/16x1/2" | .04 | .06 | .08 |
| 1/4x1/4" | .04 | .06 | .08 |
| 1/4x3/8" | .04 | .06 | .08 |
| 1/4x1/2" | .04 | .06 | .08 |
| 3/8x3/8" | .04 | .06 | .08 |
| 3/8x1/2" | .05 | .08 | .10 |
| 1/2x1/2" | .05 | .08 | .10 |

Balsa must be well packed to insure safe delivery, so an extra packing charge of 10 cents must be added to each order.

### Spruce—White Pine

Some model builders prefer Spruce for all or just certain parts of their models. Spruce has an advantage over Balsa in that it will stand slightly more shock. We can supply Spruce or White Pine in the same standard sizes and prices as listed under strip Balsa; however, Spruce and White Pine can not be furnished in the sizes listed under sheet Balsa.

### Split Bamboo

Bamboo has been one of the most inconvenient woods for model builders to obtain because that usually found in fishing poles and the like has knots so close together. This made it difficult to get pieces which were sufficiently long. Short sizes were also difficult to obtain because of the irregularity with which Bamboo splits. In order that model builders can obtain the wood that is easily shaped by heating we





supply the following convenient sizes at low prices:

| | |
|---|---|
| 12", per strip | $0.02 |
| 12", per doz. | .20 |
| 12", per lb. | .75 |
| 15", per strip | .03 |
| 15", per doz. | .25 |
| 15", per lb. | .75 |

One pound contains about 100 pieces of 12" and 85 pieces of the 15" Bamboo.

### Reed

We supply reed in the following sizes for use in scale model construction:

| Sizes | Per Foot |
|---|---|
| 1/16" | at $0.01 |
| 5/64" | at .01 |
| 3/32" | at .01 |
| 1/8" | at .01 |
| 3/16" | at .01½ |

## RUBBER

Dependability in an aircraft motor is undoubtedly the first mark of quality. Like the world famous "Whirlwind," our rubber motors are "good to the last turn." We have made sure of this dependability by trying, under flying conditions, the products of the leading rubber companies of





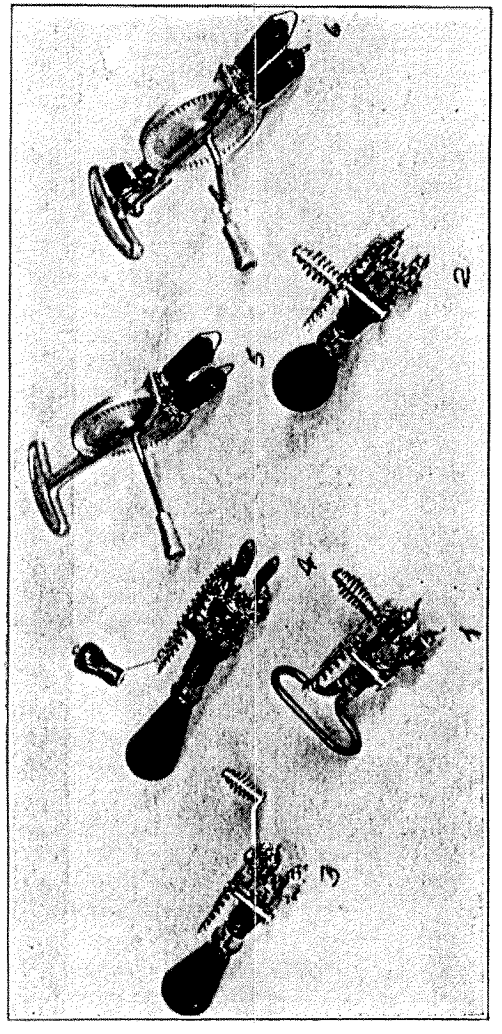
America and deciding on the best. Most of the recent records have been established with this rubber because of its ability to stand more turns without breaking and because of its long life. We carry in stock all of the necessary sizes for different types of planes from the Baby R. O. G. to the large outdoor models. The prices also make it possible "for you to have more of the best."

| | Per Foot |
|---|---|
| .035 Square Rubber | $0.01 |
| 3/32 Flat Rubber | .01 |
| .045 Square Rubber for R. O. G. Baby Planes | .01 |
| 1/32x1/8 Tractors, Pushers | .01 |
| 1/32x3/16 for Scale Models | .01½ |

Full skeins can be had, containing about 210 feet, at the following prices:

| | Per Skein |
|---|---|
| .035 Square | $1.25 |
| 3/32 Flat | 1.25 |
| .045 Square | 1.25 |
| 1/32x1/8" | 1.25 |
| 1/32x3/16 | 1.50 |

Add 5 cents on orders up to 50 cents and 10 cents on full skeins for postage and packing.



WINDERS FOR RUBBER MOTORS





## WINDERS FOR RUBBER MOTORS

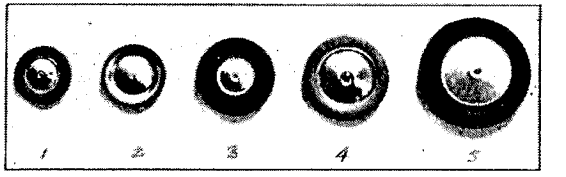
Winders for model airplane motors have become almost as necessary as the planes themselves. The present records would have been impossible with hand wound planes because so many more turns may be put on the rubber with a winder. Up to the present, however, the price of a good winder has been quite high for most fellows. Now we are able to offer the following winders at very reasonable prices. Numbers 1, 2, 3 and 4 are new winders of good construction and will make winding a plane as easy as watching one fly.

Numbers 5 and 6 are the supreme in winder performance and appearance. Numbers 1-2-3-4 have a ratio of 4 to 1. Numbers 5 and 6 have a ratio of 5 to 1.

| | |
|---|---|
| No. 1 for all types of indoor models | $0.35 |
| No. 2 for all types of indoor models | .50 |
| No. 3 for all types of indoor models | .75 |
| No. 4 for outdoor planes* | 1.00 |
| No. 5 Aluminum Beauty outdoor winder | 2.50 |
| No. 6 Aluminum Beauty with counter | 5.00 |
| *No. 4 can also have a counter mounted at, extra | 3.00 |







## WHEELS AND TIRES

These models are excellent for scale models. The tires may be fitted with Balsa centers for scale or flying models.

### Tires

| | Each |
|---|---|
| 1⅝" diam., solid | $0.05 |
| 2" diam., balloon | .10 |
| 3" diam., balloon | .10 |

### Wheels With Aluminum Centers

| No. | Diam. | Axle Hole | Price Per Pair |
|---|---|---|---|
| 1 | 1⅝" | 3/32" | $0.40 |
| 2 | 1¾" | 1/16" | .40 |
| 3 (balloon tires) | 2" | 3/32" | .50 |
| 4 | 2¼" | 3/32" | .60 |
| 5 (balloon tires) | 3" | 1/8" | .60 |

No. 2 is made especially for flying models weighing only 3 grams each.

### Fibre Wheels

Fibre Wheels for R. O. G. and small planes, 1/32x¾", with an .018" hole for axle:

1 doz ..... $0.10

### BANANA OIL

Banana Oil is the best adhesive with which to stick Japanese tissue paper to wood. It is light and colorless. It may be used in doping wings, also. It makes an excellent waterproof coating for pontoons.

| | |
|---|---|
| 2 dram bottle at .05 each, per doz | $0.50 |
| ½ ounce bottle | .10 |
| 1 ounce bottle | .15 |
| 2 ounce can | .20 |
| ½ pint can | .40 |
| 1 pint can | .75 |

### ACETONE

Acetone is used to shrink the paper on outdoor wings and on pontoons.

| | |
|---|---|
| ½ ounce bottle | $0.10 |
| 1 ounce bottle | .15 |
| 2 ounce can | .20 |
| ½ pint can | .40 |
| 1 pint can | .75 |

### WING DOPE

Wing Dope is a special preparation used to dope the wings on outdoor models.

| | |
|---|---|
| ½ ounce bottle | $0.10 |
| 1 ounce bottle | .15 |
| 2 ounce can | .20 |
| ½ pint can | .40 |
| 1 pint can | .75 |

### COLORED WING DOPE

This may be used instead of Wing Dope and makes a very attractive plane.

Blue, Red, Green or Orange

| | |
|---|---|
| 1 oz. bottle | $0.20 |
| 2 oz. bottle | .35 |





### NITRATE DOPE

Nitrate Dope is used to dope models that are covered with fabric, such as silk or cotton.

| | |
|---|---|
| ½ ounce bottle | $0.10 |
| 1 ounce bottle | .15 |
| 2 ounce can | .20 |
| ½ pint can | .40 |
| 1 pint can | .75 |

## "AMBROID," THE MODEL BUILDER'S FRIEND

Ambroid is a flexible glue and dries rapidly. It is tough, waterproof, elastic, and durable, and is unexcelled for airplane and boat construction. It comes in the following convenient sizes:

| | |
|---|---|
| 1 dram bottle at | $0.05 |
| 2 dram bottle at | .10 |
| 4 dram bottle at | .15 |
| 2 ounce can at | .30 |
| 4 ounce can at | .50 |
| 1 pint can at | 1.50 |





## COVERING MATERIAL FOR WINGS, ETC.

Japanese Tissue is by far the best material for covering the wings, rudders, fuselages, pontoons, etc., of model airplanes. It is tough, similar in structure to the material that paper currency is printed on, but extremely light in weight. All of the following grades are especially well adapted to model construction:

Superfine Tissue, sheets 18x24".
Hakone Tissue, sheets 21x31".
Japanese Imperial Tissue, sheets 21x31".

All grades, 10c per sheet; 5c per sheet if ordered five or more sheets at one time.

For large scale models:

China Silk, 27" wide ..... $1.25 yd.

## WIRE

### Music Wire

Music Wire is very stiff for its weight and will hold most any shape it is bent into, against a great strain.

| Gauge | Size | Per Lb. Roll | Per ¼ Lb. Roll |
|---|---|---|---|
| 00 | .0085 | $2.25 | $0.75 |
| 0 | .009 | 2.00 | .75 |
| 1 | .010 | 1.75 | .75 |
| 5 | .014 | 1.50 | .55 |
| 6 | .016 | 1.25 | .55 |
| 8 | .020 | 1.20 | .50 |
| 11 | .026 | 1.10 | .45 |
| 14 | .032 | 1.00 | .45 |
| 16 | .036 | 1.00 | .45 |

Music Wire will be cut and shipped any length over five feet at 1c per foot.

**Soft Annealed Tinned Wire**

Used to wrap joints and also for guy wires on scale models.

Put up in small spools, Nos. 26, 30, 32, 34, and 36 gauge.

| | |
|---|---|
| 1 ounce spool | at $0.10 |
| 2 ounce spool | at .20 |
| ¼ lb. spool | at .30 |

**Aluminum Wire**

| Size | Per Ft. |
|---|---|
| .032 | $0.01 |
| .045 | .01 |

## TUBING

You will find many uses for tubing in model airplane construction, making realistic exhaust pipes, etc.

**Brass Tubing**

| Inside Diam. | Outside Diam. | Per Foot |
|---|---|---|
| 1/16" | 3/32" | $0.10 |
| 3/32" | 1/8" | .15 |

**Aluminum Tubing**

| Diam. | Per Ft. |
|---|---|
| 3/16" diam., .020 wall | $0.10 |
| ¼" diam., .020 wall | .10 |
| 5/16" diam., .020 wall | .10 |
| ⅜" diam., .020 wall | .10 |

## RODS

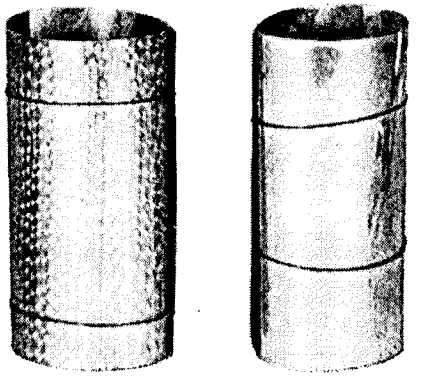
**Brass, Steel Drill and Aluminum**

| Diam. | Per Ft. |
|---|---|
| ⅛" | $0.10 |
| 3/16" | .10 |
| ¼" | .12 |
| 5/16" | .15 |
| ⅜" | .20 |

All Rods and Tubing will be shipped in 1 foot lengths to make easier mail shipment, unless otherwise ordered.







## SHEET ALUMINUM

| | |
|---|---|
| Aluminum, .005 or .007 | $0.25 per sq. ft. |
| .012 | .30 per sq. ft. |
| .015 | .30 per sq. ft. |
| .020 | .35 per sq. ft. |
| Scrolled Aluminum for engine cowling | 1.50 per sq. ft. |
| Less than 1 sq. ft | .02 per sq. in. |

*Add 10c extra for postage for orders west of the Mississippi and Canada.*

## THRUST BEARINGS

Our Thrust Bearings (sometimes called Propeller Hangers) are the lightest and strongest that can be made. They are made of steel, half round in shape, with a small true hole drilled in one end. The flat side is to be glued to the Motor Stick.

| | |
|---|---|
| 1/16" flat size with .025 hole for shaft.. | $0.05 each |
| 1/16" flat size with .025 hole for shaft.. | .35 doz. |
| 3/32" flat size with .035 hole for shaft.. | .06 each |
| 3/32" flat size with .035 hole for shaft.. | .35 doz. |





## THRUST BEARING WASHERS

These washers go on the Propeller Shaft between the Propeller and the Thrust Bearing. They are made of hard brass and are very tough and durable. The small size is used for indoor planes and large size for outdoor planes.

| | Per Doz. |
|---|---|
| 5/32" outside diam., .025 hole and .005 thick. | $0.10 |
| 3/16" outside diam., .035 hole and .005 thick. | .10 |

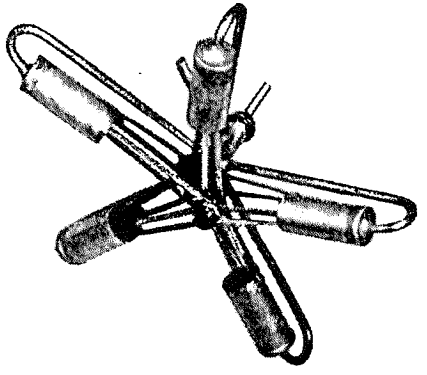
## STEEL BALLS FOR PROPELLER SHAFTS

| | Per Doz. |
|---|---|
| 1/16" | $0.10 |
| 3/32" | .10 |
| 1/8" | .15 |

## COMPRESSED AIR MOTORS AND TANKS

These motors are the lightest and most powerful for their weight of any made and may be used in either model airplanes or model boats. The tanks are made especially for airplanes. All motors—Bore, ½ inch: Stroke, ⅝ inch. 6 inch diam. over all.

The three cylinder motor will swing a propeller of from 12 to 16 inches. All motors will turn about 1500 R.P.M. The more cylinders, the more powerful they are. The 6 cylinder will revolve a 22 inch propeller at the required number of revolutions, easily. The cylinders are stationary and the shaft revolves.



**3 Cylinder**

All parts ready to assemble—price.....$3.00
Assembled, ready to run—price.....$4.50

**4 Cylinder**

All parts ready to assemble—price.....$3.50
Assembled, ready to run—price.....$5.50

**5 Cylinder**

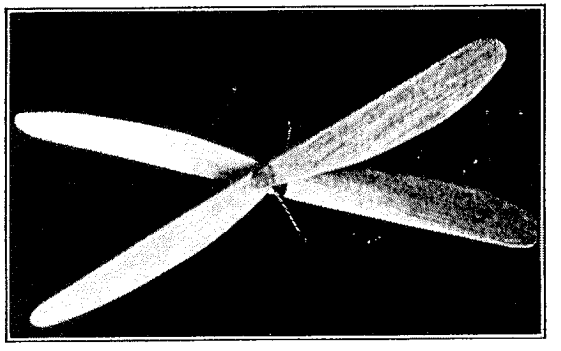
All parts ready to assemble—price.....$4.00
Assembled, ready to run—price.....$6.50

**6 Cylinder**

All parts ready to assemble—price.....$5.00
Assembled, ready to run—price.....$7.50
Tanks—3″ diam., 30″ long.....$7.50







## PROPELLERS

Ours are the lightest, most efficient and lowest priced propellers for the maker of modern model airplanes. A whole year of intensive experiment finally resulted in a highly perfected machine which effects a permanent and perfect bend in a specially cut piece of Balsa Wood. All propellers come equipped with washers and piano wire shaft.

| Propeller sizes and prices | Each |
|---|---|
| 5″ propellers for R. O. G. | $0.25 |
| 6″ propellers for R. O. G. High Climb | .30 |
| 7″ propellers for Indoor Pusher | .35 |
| 8″ propellers | .40 |
| 10″ propellers for Indoor Tractor | .50 |
| 11″ propellers for Tractor | .55 |
| 12″ propellers for Tractor | .60 |
| 10½″ Twin Pusher propeller, per pair | 1.00 |

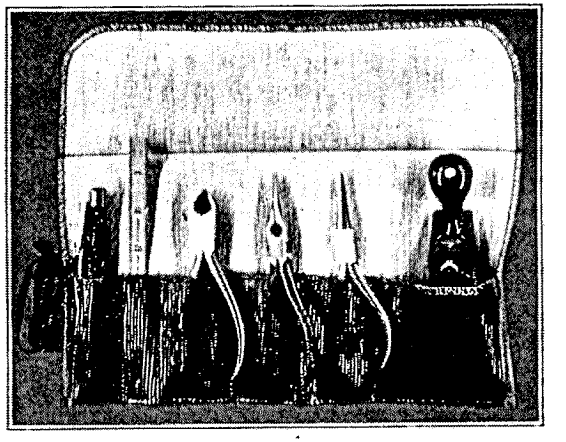
Hand Carved Balsa Propellers finished at 10c per inch, including shaft and washers. Specify whether scale model or duration.

## SOLID BALSA SPINNERS

1″ diam. solid balsa Spinners.....$0.25
2″ diam. solid balsa Spinners..... .50







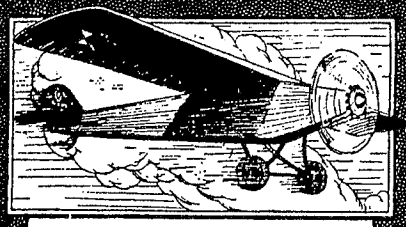
## THE CHAMPIONSHIP TOOL KIT

The Brand-new Championship Tool Kit is specially selected for Model Workers. It gives a fellow everything he needs to do expert model work—and it saves him money, too. He will make better use of his material, and he gets the tools for less in the Kit than if he bought them separately.

1 Extra fine, hand-forged jack knife (imp.).$2.50
1 Pair half-round-nose pliers..... .60
1 Pair round-nose pliers..... .60
1 Pair cut-off pliers..... .75
1 3″ block plane ..... .50
1 6″ flexible rule ..... .60
1 Brown roll case ..... .15

Total Amount .....$5.70
COMPLETE KIT (Postage Paid).....$4.95
(Pin Chuck and 3 Assorted Drills, $1.00 Extra)

# The MOCAR



## MODEL AIRPLANES
## That Fly Only $1.50 *Complete Postpaid*

BOYS: Here's the greatest value you've ever seen. A genuine aluminum model airplane that *really flies*, at a small price.

The "Mocar" monoplane—Set No. 1—is a copy of Lindbergh's famous *Spirit of St. Louis*. Wing spread 18 inches, fuselage 12 inches, powerful motor, special propeller, rubber-tired disc wheels. Weight complete only about 2½ oz.

This is a practical, simple, real model plane that gives you a whole lot of fun at a very moderate cost. The all-metal construction makes a sturdy plane that will stand a lot of abuse. The outfit is mounted on cardboard with all parts plainly marked and full instruction for assembly. Pliers only tool necessary. Construction Set No. 1 complete with rivets, bolts, wheels, wing and fuselage covering material, only $1.50 postpaid (3 for $4.00). Model L made up ready to fly $2.25 (3 for $6) postpaid.

***Great fun, learn how to make and fly airplanes.***

ORDER NOW OR SEE YOUR DEALER

**THE MOUNT CARMEL MFG. CO.**
**Dept. C, New Haven, Conn.**

# Champion Model Builders Use Championship Tools!

*Aram Abgarian, World's Indoor Champion, and Ernest McCoy, Builder of the First Successful Cambered Wing Tractor, Grin as They Use These Tools.*

"Boy!" said McCoy. "Here's a knife with a whale of a blade—and it holds its edge because it's hand-forged."

"It's the kind I've always used," replied Abgarian. "The tools they put in the Championship Tool Kit are just what I have for model building. You can do anything from wire-bending to the most delicate kind of balsa-trimming with them. And you don't need any others, either."

The brand-new Championship Tool Kit is specially selected from the workbenches of such builders as Abgarian and McCoy. It gives a fellow everything he needs to do expert model work—and it saves him money, too. He will make better use of his material, and he gets the tools for less in the Kit than if he bought them separately.

HERE'S WHAT THE CHAMPIONSHIP TOOL KIT CONTAINS:

| | | | |
|---|---|---|---|
| 1 extra fine, hand-forged jack-knife (imported) | $2.50 | 1 three-inch block plane | .50 |
| 1 pair half-round-nose pliers | .60 | 1 six-inch flexible rule | .60 |
| 1 pair round-nose pliers | .60 | 1 brown roll case | .15 |
| 1 pair cut-off pliers | .75 | | $5.70 |

***The Complete Kit, Postpaid, $4.95***

Specially selected balsa wood, in bulk or cut to order—standard sizes in 24-inch and 36-inch lengths carried in stock. Special attention to school and club orders.

EVERYTHING FOR THE MODEL BUILDER
SEND FIVE CENTS FOR CATALOG.

**MICHIGAN MODEL AIRPLANE SUPPLY CO.**
Address Department B 4768 Grand River Avenue Detroit, Michigan

## FLY THIS 12-INCH MONOPLANE!

A very realistic model of *Lindbergh's Spirit of St. Louis*. Will rise from ground by own power and fly 40 ft. or more. Easily built without tools. Construction set, with all parts and full directions, postpaid in U.S. and Canada, only 50c. (No stamps). Satisfaction or money back. Order today.

**MANN & BENTON, Box H, CHILLICOTHE, OHIO**

## 3 FOR ONLY 65¢

Boys—send 65c. Big kit includes 3 famous SOLAR Detroit Model Airplane Fliers Club plans and complete instructions for building Biplane, Tractor and Pusher, plus all materials for making all 3—balsa blocks and sticks for blades, spars, ribs, fins; Japanese paper; rubber motor; wire; glue; banana oil—everything. Great fun to build; guaranteed to fly. Send money order TODAY (65c); no stamps.

**COLLINS PLOW COMPANY, Dept. 100, Quincy, Ill.**

## *The Plane LINDY FLEW!*

LOCKHEED SIRIUS 2-ft. Flying scale model built from National set. One of the newest of our many scale models.

| | |
|---|---|
| Complete construction set | $ 3.00 |
| Built ready to fly | 12.00 |
| Blue print only | .60 |

*Send 5c today for 32-page illustrated catalogue.*

**NATIONAL**
**MODEL AIRCRAFT AND SUPPLY CO., Dept. B1**
**29 North Ave., New Rochelle, N. Y.**

## FLYING SQUADRON for $2.00

*New Construction*

*Great Bargain*

**Five (5) Flying Airplanes for $2.00 That Perform Like the Real Thing!**

Not construction sets but nearly assembled Planes. Guaranteed to fly.

1) **LONE EAGLE BOMBER**—28-inch non-breakable Wing—7-inch aluminum Propeller—shock absorbing Landing Gear—300 ft. flights—weight 3 1 4 ozs.
2) **LONE EAGLE SCOUT**—20 inch non breakable Wing—5 1-2 inch aluminum Propeller—Flexible Landing Gear—150 ft. flights—weight 2 1-2 ozs.
3) **LONE EAGLE MOTH**—16 inch Balsa Wood Wing—3 3-4 inch metal Propeller—100 ft. flights—weight 1-2 oz.
4) **GREAT EAGLE GLIDER**—16 inch non-breakable Wing—cabin type Fuselage—Big Value.
5) **LONE EAGLE STUNT GLIDER**—12 inch Balsa Wood Wing—cabin type Fuselage—Does all Stunts.

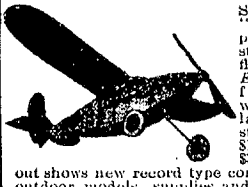
Each Set in Individual Boxes; all packed in one shipping carton. Complete with interesting Instruction Booklet.

**All Five (5) for $2.00**
*Postage Paid*

**Aircraft Model Div.—Wilder Mfg. Co.**

711 N. Main St. St. Louis, Mo., U. S. A.

## MODEL AIRPLANES

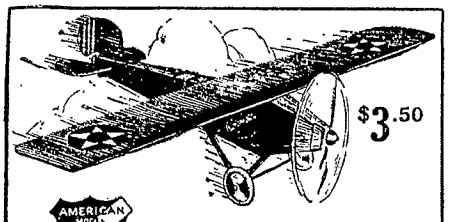


Send for this big 19 in. "Whirlwind" cabin plane, all balsa construction, capable of flights of 1000 ft. *New Easy Construction* with finished propeller, wheels, stamped fuselage parts, etc. Construction set postpaid $1.95, set up ready to fly $3.95. New catalog just out shows new record type commercial, indoor and outdoor models, supplies and parts at very reasonable prices. Send 5c for catalog.

PIONEER MODEL AIRPLANE SUPPLY CO., Champaign, Ill.

**1928 - 1931**

After Lindbergh's flight to Paris in 1927, every boy in America wanted to fly and the American Boy advertising carried ads from many unlikely company such as ..... the 'Collins Plow Company' !



**$3.50**

AMERICAN MODEL AIRPLANE

## *Designed Like and Flies Like a*
# *Real Airplane*

Will fly beautifully and is extremely *durable* . . . good for many hundreds of flights without damage.

Has all-metal motor mount, sturdy wings, scientifically designed aluminum propeller and shock-absorber landing gear with rubber-tired wheels.

The Scout Model shown above, well packed, will be sent prepaid anywhere in the U. S. for $3.50. Other splendid American Models are: Spirit of St. Louis, Fairchild and Fokker at $5, and the Bremen at $7.50. Every plane tested at the factory and guaranteed to fly and land like a regular plane. Order now and let the fun begin!
*Glider Given With Catalogue 10c*

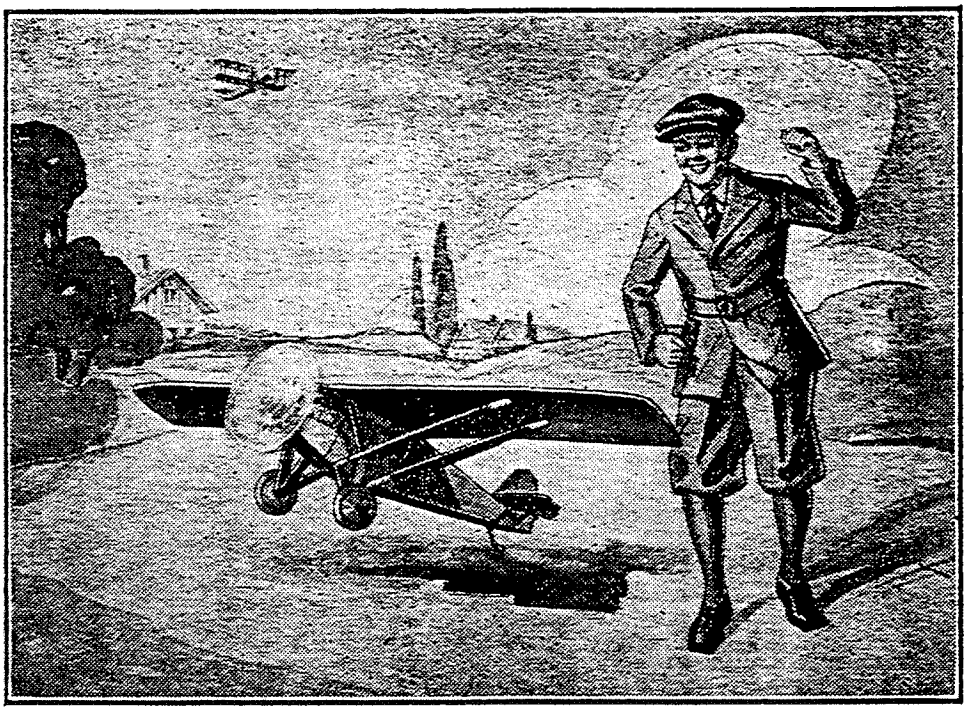
**American Model Aircraft Co.**
**Dept. 4,**
**P. O. Box 1492, New Haven, Conn.**

**our MODEL AIRPLANE supplies** are reasonable in price, excellent in quality and we guarantee immediate shipment of all orders. Send 5 cents for our latest catalogue.

**SIMPLEX AIR MODEL CO., AUBURN, MASS.**

# FLYING MODEL AIRPLANES

## SUPPLIES & ACCESSORIES



SECOND EDITION 1929

PRICE TEN CENTS

U·S·MODEL·AIRCRAFT·CORP.

397 BRIDGE·ST·BKLYN·N·Y·

AERONAUTICAL PIONEERS SINCE 1909

Copyrighted U. S. Model Aircraft Corp., MAY 1929

## PERSONAL FOREWORD

Aviation, despite the great progress made in the last decade, has not attained perfection by any means. The feats of Lindbergh, Chamberlain, Byrd and other great flyers are indeed wonderful, but there are still greater achievements to follow. The fascination of aeronautics for the youth of this country is evinced by the rapid increase in flying schools and the demand for models to fulfill the needs of students of aeronautics, learning the rudiments of artificial flight.

Aviation is a vast field of endeavor which is far from being crowded. It offers many opportunities both from the commercial and scientific viewpoints. It is a field in which fortunes can still be made.

However, advancement in the science of aviation requires more than a mere interest in the subject; it requires the study of books supplemented by actual experience in model-building and flying. Books impart knowledge of fundamentals, and model-building and flying put into practical application the theories learned from the books. After the attainment of sufficient mastery of standard models, the earnest student seeks to crystalize his own ideas by designing and constructing models embodying these original ideas. But something more than a thought and the skill to execute is required. Good materials are indispensable to a fine workman. Plans accurately drawn to scale and parts which are perfect in every detail make it possible for the student to produce a model which will prove and illustrate the theories of the maker.

Since 1909, the Wading River Manufacturing Co., and its successor, the present U. S. Model Aircraft Corporation, has supplied and is still supplying models for experimental purposes to the world's greatest contributors to the advancement of aviation.

It has always been the policy of the U. S. Model Aircraft Corporation to keep pace with the development of aviation, and our catalogs in the past have always contained the very latest tested models. In our present edition, continuing our policy, we are offering the "Spirit of St. Louis," "Bellanca - Columbia," "Fokker-Universal," and the "Junkers - Bremen," the four greatest planes of the present day. Our models of these planes have been constructed with absolute fidelity by a competent and highly-trained staff of engineers, thus assuring to the student faultless reproductions.

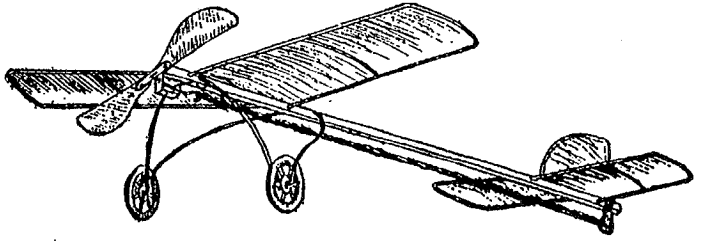
WHEN BETTER MODELS ARE BUILT THE U. S. MODEL AIRCRAFT CORP. WILL BUILD THEM.

U. S. MODEL AIRCRAFT CORP.
BROOKLYN, N. Y.



# "MISS AMERICA, JR."
# THE WHITE FLYER

Sold in complete K. D. set only



A really new and original offering is the White Flyer.

The Flyer is built on the lines of an aeroplane, is provided with strong planes and chassis, and is not easily damaged.

It affords the beginner ample opportunity to practice building before starting on a more expensive model, and its flying qualities are beyond question. It will give any boy a great deal of pleasure.

When flying, wind the propeller 50 to 75 times, steady it with left hand, holding the rudder with the right hand, and throw it gently forward into the air.

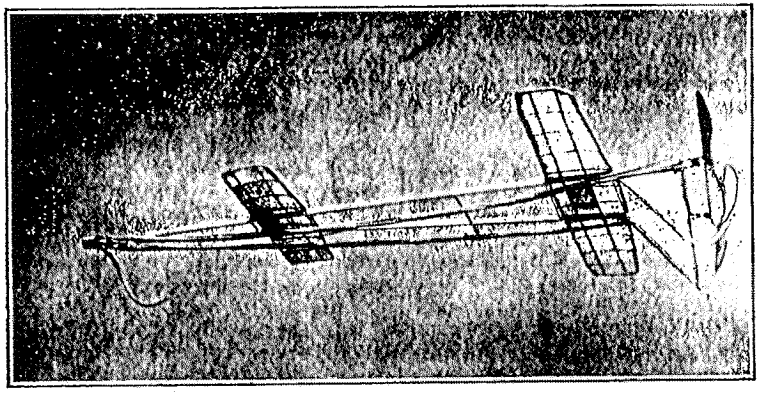
Complete material for building this Flyer with full plans and instructions $1.50 Postpaid.

Built in the factory and ready to fly, $3.00.

This is our most popular cheap set and is selling by the hundreds.

Assembled Model, ready to fly. Sent only by express, F. O. B.

U. S. MODEL AIRCRAFT CORP.
BROOKLYN, N. Y.



## THE WHITE RACER

An Exact Copy of the Record, Duration and Distance Flyer of the World.

Our Racer has made itself world famous, owing to the remarkable distance, altitude and duration records it has established during the past season.

The Flyer complete weighs just six ounces, and is constructed in such a manner as to render it unbreakable. Spruce, holly and split bamboo only are used and the planes are double surfaced with our Bamboo Fibre Fabric and coated with our Liquid Bamboo, which positively weather-proofs the covering, giving the model long life and reduces the skin friction to a minimum.

This flyer is extremely simple to construct, having very few parts, and is remarkably well thought out in every detail.

### Specifications

| | |
|---|---|
| Length (over all) | 36 in. |
| Main Plane | 24 in. x 4 in. |
| Forward Plane | 14 in. x 3½ in. |
| Propellers (Expanding Pitch) | 2, 7 in. |
| Width of Frame at Rear | 6 in. |
| Skids (3) 1 Front, 2 Rear | 4¼ in. |

### Records

| Unofficial | | Official | |
|---|---|---|---|
| Altitude | 350 feet | Altitude | 350 feet |
| Distance | 1,890 feet | Distance | 1,643 feet |
| Duration | 58 sec. | Duration | 48 sec. |

### Complete List of Material

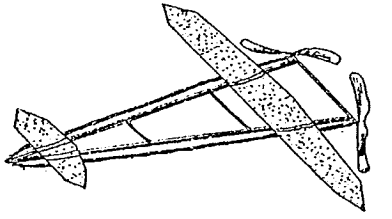
For Assembling the White Racer

| | |
|---|---|
| Complete Woodwork (Cut to Length) | $ .85 |
| 48 Feet 3/32 in. Square AA1 Rubber Strands | .72 |
| 1 Sheet 24 in. x 34 in. Bamboo Fibre Fabric | .14 |
| 1 2 oz. Bottle Liquid Bamboo | .25 |
| 1 Pair White Type Racing Propeller Blanks | .25 |
| 2 Propeller Shafts, with Bearing and Blocks | .50 |
| 1 Length 1/32 in. Steel Rod | .06 |
| 6 in. Rubber Tubing to protect rubber strands on front and rear hooks | .05 |
| One complete Sheet of Drawings for assembling this Record Holder | .20 |
| 1 Spool No. 32 Gauge Wire | .10 |
| Complete Material as Given Above ....Postpaid | 3.10 |
| Finished Racer Ready to Fly and Guaranteed to Fly | 10.00 |

Complete unassembled set with Carved Propellers sent Postpaid. $4.00.







## CHAMPION RACING MODEL

Equipped with all the latest devices, such as wire frames, Goldbeater skin covering for the planes and Bentwood propellers.

This model has been designed and built for us by Mr. Harry Schultz, Model Editor of Aeronautics Magazine, the highest authority on this subject in America.

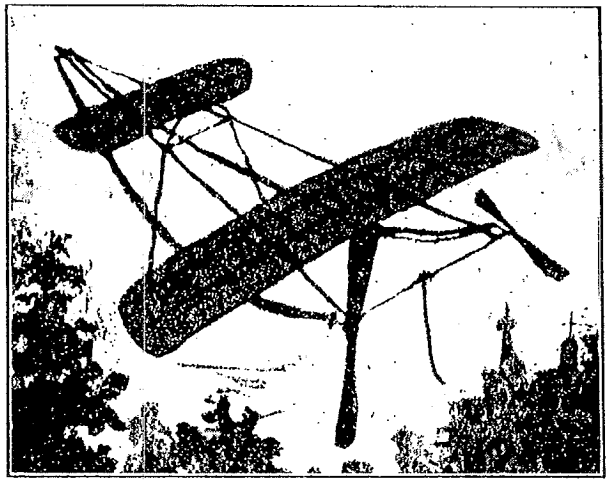
The official records obtained with this Racer; in its Official Competative Flights by Mr. C. P. the winner of the Title "Champion Racer" were as follows.

| Records | | Specifications |
|---|---|---|
| Altitude | 287 ft. | Length over all 36" |
| Distance | 1691 ft. | Maine plane 26" |
| Duration | 47¾ Sec. | Forward Plane 12" |
| Unofficial Flights | 1798 ft. | Width of Frame at front 9¾". |

### Complete List of Material Required

(Any of this can be purchased separately.

| | |
|---|---|
| Scale Drawing by Mr. Schultz, with Instructions | $ .25 |
| Complete Woodwork Cut to Length | .50 |
| Two Coils Steels Wire | .20 |
| Two Goldbeater skins | .60 |
| Two Birch Propeller Blanks | .15 |
| Tubings and Fittings Cut to Length | .25 |
| 80 Feet Flat Rubber | .80 |
| Bottle Bamboo Varnish | .25 |
| Can Ambroid Cement | .15 |
| Complete outfit as listed above, postpaid | $3.00 |
| Unassembled Model with Hand carved 7" Propellers (Expanding Pitch) ....Postpaid | $4.25 |
| Built Model guaranteed to fly sent by Express Charges O. B. | $10. |



## The Lauder 40 in. Racing Model

Although this Model was designed a few years ago it is still in line with the best Models of to-day. Wonderful results have been obtained with this model and at the NATIONAL COMPETITION ITS OFFICIAL WORLDS BREAKING RECORD WAS A FLIGHT OF 3,537 Ft. at a duration of 195 seconds. It will therefore be noted that this model is both a distance and duration flyer. Both qualities being seldom found in one model.

Specifications

| | |
|---|---|
| FRAME LENGTH (OVER ALL) | 40" |
| SPAN OF MAIN PLANE 28½" | Chord 6½ |
| SPAN OF FORWARDING PLANE 15" | Chord 4¾ |

List of Materials for Building.

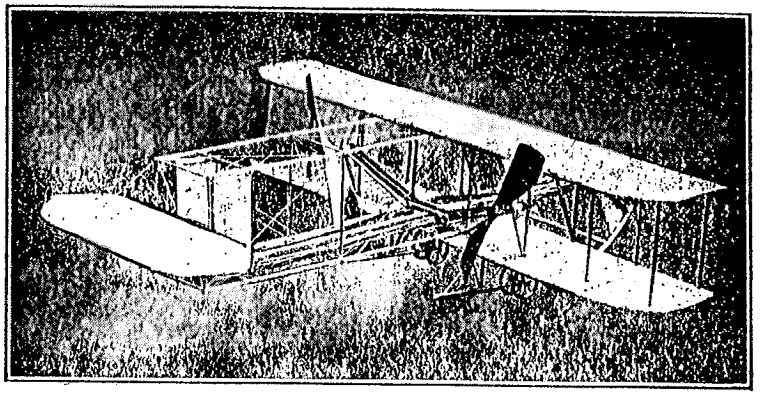
| | |
|---|---|
| Complete Woodwork cut to Length and Steel Wire | 1.00 |
| 2 Lauder Propeller Shafts and Bearing | .50 |
| 1 Pair 12 inch Lander Propellers, Carved | 2.00 |
| 1 Spool Wire | .06 |
| 1 Spool Silk Thread | .15 |
| 80 Feet ⅛ Flat Rubber | .80 |
| 2 Sheets 18x24 Bamboo Paper Silk Paper | .28 |
| 1 Can Bamboo Varnish | .30 |
| 1 Can Rubberine | .25 |
| 6 Inches Rubber Tubing | .06 |
| 1 Blue Print with instructions | .25 |
| Total, | 5.70 |

Special Price for Complete Set Unassembled; Sent by Express, F. O. B. ..... $5.00

Model Assembled Ready to Fly F. O. B. ..... $12.50

Frame Work and Propellers may be ordered in Balsa Wood Price $5.50.

U. S. MODEL AIRCRAFT CORP.
Brooklyn, N. Y.



## THE WRIGHT BIPLANE

Double Chain Drive. (Headless). Three Foot Flying Model.

This is the only scale Wright Flying Model on the market and the **only** flying model operated by genuine chain and sprocket drive.

This model was the outcome of many months of careful planning and designing on the part of our experimental department, and we are entirely satisfied that we are offering the public the finest value obtainable in any model now on the market. Our Wright Flying Model is as honest as all our productions, having a highly educational value as well as its other merits, and it has flown 165 feet; but we guarantee its flight between 75 and 100 feet when constructed of our material and to our specifications.

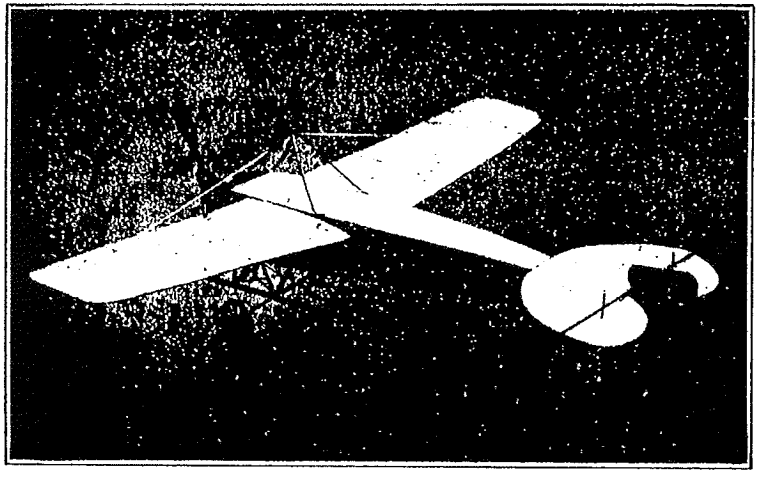
All the wood as well as the metal fittings are of the finest selected material that can be made or obtained, and each set of the complete material and parts for this remarkable flyer are carefully inspected and tested before leaving our factory. The brass gears are highly burnished to insure smooth running, and owing to our method of construction there is little or no lost power in the arrangement of the transmission.

The whole model is built with but two purposes—first, to be an accurate reproduction of the wonderful American Biplane, and, second—to fly.

### Complete List of Material for Assembling

| | |
|---|---|
| Complete Woodwork, Cut to Length | $ 1.00 |
| 50 Feet 1-16 inch Square AA1 Para Rubber Strands | .50 |
| 4 Five Tooth Gears and 3 Foot Driving Chain | 1.75 |
| 4 2 inch Wheels | 1.00 |
| 8 ¼ inch Solid Turned Bearings | .80 |
| 2 10 inch Wright Propeller Blanks | .40 |
| 2 Propeller Shafts | .30 |
| 2 Driving Gear Shafts | .20 |
| 4 Rubber Strand Hooks | .40 |
| 2 2 inch Axles, with Nuts | .20 |
| 2 Sheets Bamboo Fibre Fabric | .20 |
| 1 Bottle Liquid Bamboo | .25 |
| ½ dozen ½ inch Blue Steel Screws | 05 |
| 1 3 Foot Length 3-32 inch Brass Rod | .10 |
| 1 3 Foot Length 1-32 inch Steel Rod | .06 |
| 1 Spool No. 30 Gauge Wire | .06 |
| 1 Complete Working Drawing for Assembling Wright Flying Model, with Booklet of Instructions | .20 |
| Complete Material for Constructing 3 Foot Wright Flying Model | 7.00 |
| Complete Assembled Model, Ready to Fly, F. O. B. Factory | 20.00 |

Complete Outfit, sent Postpaid.



## NIEUPORT MONOPLANE
### 32-Inch Speed Model

This remarkable Flyer bids fair to eclipse the wonderful sale of our famous Bleriot and is our own original product. It is the first Nieuport to be placed on the market in complete and knocked down form.

Flights have been made with this model ranging from 100 to 250 feet in length at the wonderful speed of 36 feet in one second.

We have equipped the Nieuport with ⅛ inch square rubber strands, and with the knocked down material a hand carved propeller is given to insure the same results as our experiments have shown.

### COMPLETE MATERIAL FOR CONSTRUCTING THE 32-INCH NIEUPORT MONOPLANE

| | |
|---|---|
| Complete Woodwork (cut to length) | $ 1.00 |
| 3 Sheets Bamboo Fibre Fabric | .30 |
| 1 2-oz. Bottle Liquid Bamboo | .25 |
| 1 1/16-in. Ball Bearing Propeller Shaft | .50 |
| 1 Aluminum Propeller Hanger | .10 |
| 1 ⅛-in.. 8-in Steel Axle (threaded with nuts) | .15 |
| 2 2-in. Rubber Tired Wheels | .50 |
| 1 10½-in. Hand Carved Nieuport Propeller | .95 |
| 1 Special Nieuport Running Gear Fitting | .45 |
| 4 Nieuport Wing Bar Sockets | .60 |
| 1 Spool No. 30 Wire | .06 |
| 1 3-ft. Length 1/16 in. Brass Rod | .06 |
| 1 Rear Hook with Flange | .10 |
| 12 Feet Rubber Strands (Racing Size) | .60 |
| 1 Hand Drill for Drilling Ribs, etc. | .35 |
| 1 Small Package of Blue Steel Screws | .06 |
| 1 Complete Scale Drawing for Assembling 32-in- Nieuport Speed Model | .20 |
| Complete Material as Stated Above | 6.33 |
| Finished 32-in. Nieuport Ready to Fly, F. O. B. Factory | 18.00 |

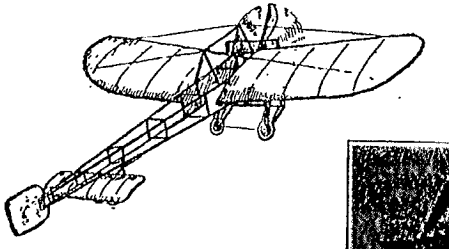
**Special Price Complete Unassembled Outfit, Postpaid** ..... $5.50

## FLYING MODELS OF HISTORICAL MACHINES.

WRIGHT, BIPLANE, BLERIOT, ANTOINETTE, DEPERDUSIN, AND GERMAN WAR TAUBE each of those Models in their days and like the SPIRIT OF ST. LOUIS, COLUMBIA, FOKKER, JUNKERS, BREMEN AND OTHERS of to-day aroused the world with their record flights. It is of much interest to students of aviation to build one of those old type models and to compare and study the great aviation progress up to the present time.

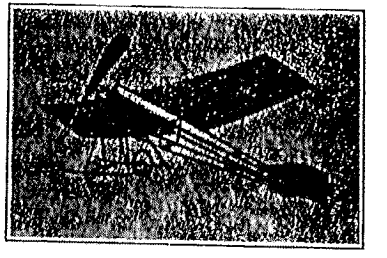
We are offering COMPLETE CONSTRUCTION OUTFITS WITH DRAWINGS AND INSTRUCTIONS FOR THE FOLLOWING MODELS.

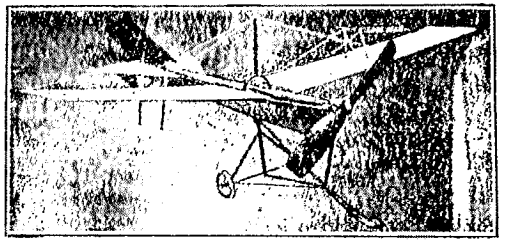
ALL GUARANTEED TO FLY 100-200 FEET UNDER ITS OWN POWER.



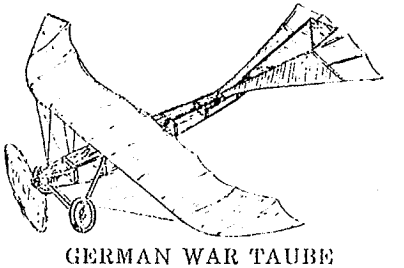
BLERIOT MONAPLANE

DEPERDUSIN





ANTIONETTE



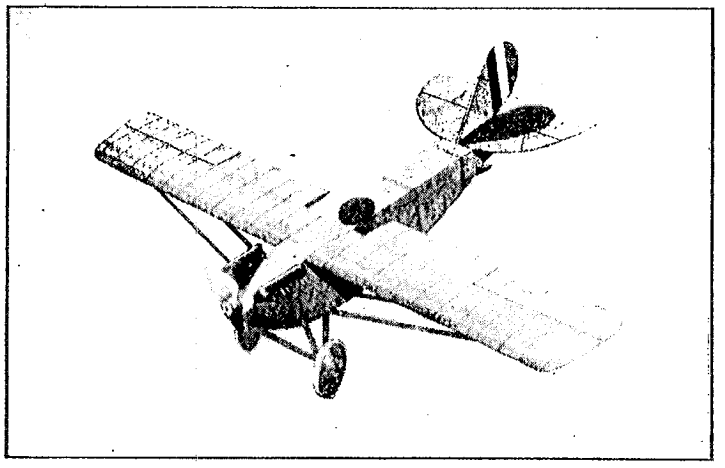
GERMAN WAR TAUBE

SPECIAL PRICE ON ANYONE OF THOSE MODELS POSTPAID ..... $4.50

FOR SHIPMENT TO 6-7-8 POSTAL ZONES AND FOREIGN COUNTRIES ADD .50 EXTRA.

## U. S. MODEL AIRCRAFT CORP.

BROOKLYN, N. Y.



**33-in. Wingspread Flying Model**
"Loening Monoplane"

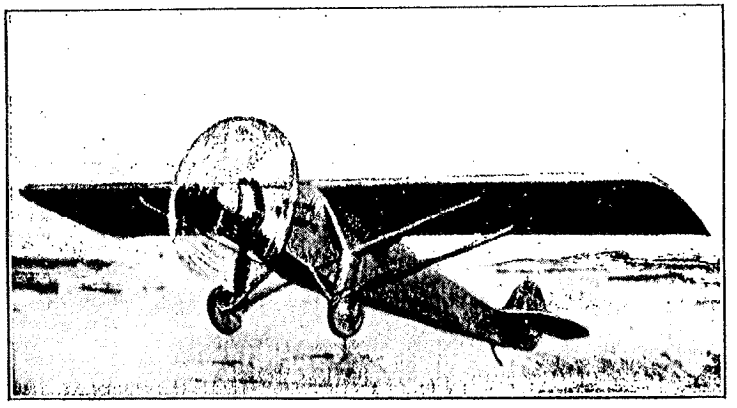
One of America's best Battleplanes in the late war. This monoplane is equipped with a Hispano-Suizo motor and is considered to be the prettiest and most distinguished monoplane in the U. S. service.

We have reproduced this excellent machine into a 33" Flying Model, accurately to scale and we could honestly state that this beautiful Model will rise off the ground and fly under its own power 150 ft. or more when correctly constructed according to our Detailed Drawing.

**Complete Material Necessary for Building**
(Could be purchased separately)

| | |
|---|---|
| Woodwork cut to size, Solid Ribs | $1.50 |
| 1 pair 2" Disc wheels, Rubber Tired | .50 |
| 1 6" ⅛ dia. Axel | .15 |
| 2 sheets Bamboo Paper | .28 |
| 1 2-oz. can Bamboo Varnish | .30 |
| 1 Hand Carved Loening Propeller 10½-inch | 1.00 |
| 1 Ball Bearing Propeller Shaft | .50 |
| 1 Aluminum Hanger | .10 |
| 8 Brass Fittings (Wing Support) | .32 |
| 4 Aluminum Fittings (Chassis) | .20 |
| 1 Spool Wire | .07 |
| 1 Pack Nails | .05 |
| 1 Hand Drill with point | .37 |
| 1 Rear Hook | .05 |
| 1 Set ⅛ Flat Rubber | .30 |
| 1 Motor Hood (No Motor Attached) | 1.00 |
| 1 Detailed Drawing | .50 |
| Total, | 7.19 |
| Special price, complete unassembled Model sent Postpaid | 6.50 |
| Built Model ready to fly F.O.B. Brooklyn | 22.00 |





N. Y. — PARIS "SPIRIT OF ST. LOUIS"
(A TRUE PHOTO OF OUR BUILT FLYING MODEL)
Weight of Constructed Model about 8½ oz.

OUR 20 years experience in BUILDING MODEL AIRPLANES helped us to produce this PERFECT MODEL. We have scaled it down to 36 inches, direct from the original plans of the FAMOUS LINDBERGH "SPIRIT OF ST. LOUIS" MACHINE. The construction of this beautiful model differs from all others.

The fuselage with its SIDE RIBS and ROUND FRONT forms a perfect STREAMLINED BODY. The WING HAS SOLID RIBS AND BALSA WOOD TIPS. Entering edge is of a SOLID OVAL SHAPED "T" BEAM, trailing EDGE OF WHITE HOLLY which makes it a light STRONG AND PERFECT PLANE. The UNDER-CARRIAGE IS A REAL SPLIT TYPE.

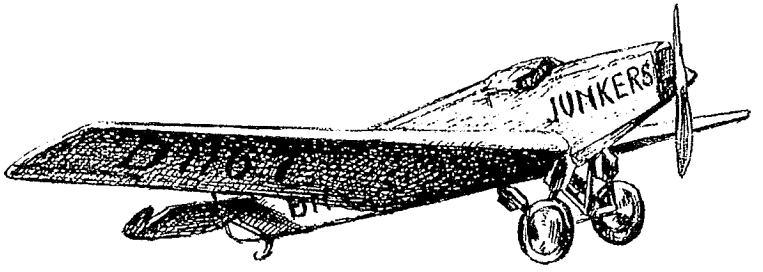
LIST OF PARTS FURNISHED FOR THIS MODEL

| | |
|---|---|
| Woodwork with Solid ribs, Special Beam, Balsa Wing Tips | 2.50 |
| 1 Lindbergh type Propeller with Front Plate | 1.20 |
| 1 WHIRLWIND Motor (DUMMY) SHAFT attached | 1.25 |
| METALIC (SILVER) PAPER FOR MOTOR HOOD | .10 |
| PARA RUBBER 1/16" sq. | .35 |
| 1 Pair 2" Wheels Balloon Tires | .60 |
| 2 Sheets Bamboo Paper 24 x 34 | .28 |
| 1 Can Bamboo Varnish 2 oz. | .30 |
| 1 Can Silver Coating Dope 2 oz. | .35 |
| 1 Tube Ambroid | .15 |
| 1 Tube Model Making Glue | .15 |
| 2 Pieces of Celaphone for windows | .15 |
| 1 Special Skid with Spring | .20 |
| 1 Package Screws and Nails | .18 |
| 1 Drill Holder with drill | .37 |
| 1 Complete Set of Fittings, Split Axle with Balsa | 2.00 |
| Blue Print ½ full size with Instructions | .60 |
| Total, | $10.63 |

Complete Construction Outfit
Ready to Assemble Special Price **$8.50**

Built Model ready to fly F. O. B. Factory . . . . . $40.00

## U. S. MODEL AIRCRAFT CORP.
BROOKLYN, N. Y.




THE BREMEN "JUNKERS" FLYING MODEL.

A TRUE and SKILLFUL REPRODUCTION of the GREATEST GERMAN MONOPLANE. It has been scaled to a 40" Wing Spread Model by Our Competent Engineering Department. She is doped with our SILVERIZER DOPE and the Sides of the Fuselage are painted in Black the words "BREMEN JUNKERS" under the Wing the Registration number D-1167 is painted in big black lettering. A test flight made with this model was great. She made a short hop from the ground and flew over 125 feet appearing like a bird in the air.

When preparing this description the News came that Captain H. Hermann Koehl Commander of the Bremen with his co-flyers Col. James Fitzmaurice and Baron Ehrenfried von Huenefeld had completed their non stop flight across the Atlantic Ocean and landed, at GREENLY ISLAND, CANADIAN LABRADOR.

COMPLETE LIST OF MATERIALS FOR BUILDING MODEL

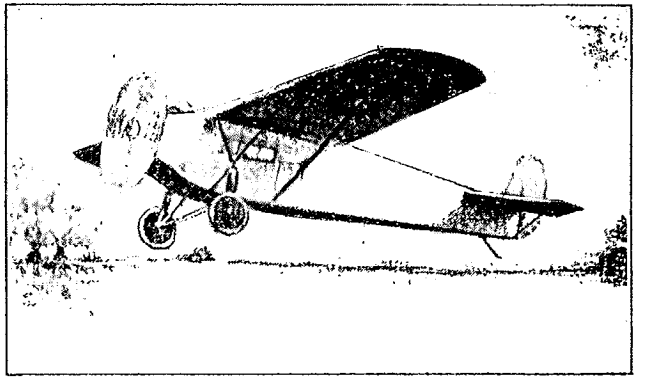
| | | |
|---|---|---|
| | Woodwork cut to Sizes with formers and Junkers type Solid Ribs | $2.75 |
| 1 | Ball Bearing Prop. Shaft | .50 |
| 1 | JUNKERS TYPE PROPELLER | 1.10 |
| 1 | Rear Hook with Flange | .10 |
| 1 | Set of Para Rubber | .40 |
| 3 | Sheets of Bamboo Paper | .42 |
| 1 | 5 Oz. Can of Silverizer Dope | .80 |
| 1 | Set Wing Sockets | .40 |
| 1 | Pair of 2" Wheels Balloon Tires | .60 |
| 1 | Landing Gear and Junkers Axel Streamlined | 1.00 |
| 1 | Tail Skid with Spring and Brass Tubing | .20 |
| 1 | Tube "Ambroid" Cement for Wood | .15 |
| 1 | Tube Model Making Glue | .15 |
| 1 | Package Nails, Screws, Screw Eyes | .10 |
| 1 | Spool of Wire | .07 |
| 1 | Sheet Celluloid for Windows | .10 |
| 2 | Turnbuckles for fastening Wings to Fuselage | .12 |
| 4 | Tubes to set on Wing Spars drilled to receive turnbuckles | .10 |
| 1 | Blue Print, ¼ Full Size of Model | .60 |
| | Total | $9.66 |

Special Price, Complete Ready to Assemble ..... **$8.50**

Built Model F. O. B. Factory Ready to Fly ..... $45.00

U. S. MODEL AIRCRAFT CORP.
BROOKLYN, N. Y.





THE FOKKER "UNIVERSAL" FLYING MODEL.

A true Reproduction of the World Famous FOKKER 5 passenger, one motor Monoplane, Scaled direct from Original Blue Prints, by our Engineering Staff. This Model has a 36" Wing Spread.

No Reed is being used in the main wing construction. The FOKKER TYPE WING RIBS are nicely cut hollow for lightness and notched to receive 1/8" double spars, entering edge. Trailing edge of 1/16 x 3/16" stock, and wing tips (Semi Circle) of Split Bamboo. The Fuselage is built of 1/8" Spruce and a specially designed 9 Cylinder Whirlwind Motor (Dummy) at the front, forming a fine STREAMLINED and STRONG BODY. The Model when constructed properly according to our detailed Blue Print weighs only about 11 ounces and is guaranteed to fly under its own power about 100 feet or more..

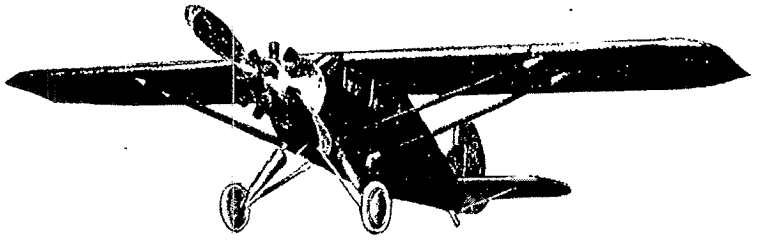
Complete Materials necessary for Building.

| | | |
|---|---|---|
| | Woodwork cut to proper sizes with solid ribs shaped and hollowed also Streamline Struts | $2.25 |
| | Special 9 Cylinder Motor (DUMMY) and Shaft | 1.25 |
| 1 | Set Universal Split Axels with Fittings and 10 Terminals to receive Wing and Axel Struts | 1.00 |
| 2 | Special Fittings | 1.00 |
| 1 | Pair of 2" Wheels Balloon Tires | .60 |
| 1 | FOKKER TYPE Propeller 10" with Round Hub | 1.20 |
| 1 | Drill Holder with drill point | .37 |
| 1 | Rear Hook with Flange | .10 |
| 1 | Tail Skid with Spring and Brass Tubing | .20 |
| 2 | Sheets of Bamboo Paper | .28 |
| 1 | 5 oz. Can of Bamboo Varnish | .65 |
| 1 | 2 oz. Can of Bamboo SILVERIZER DOPE | .35 |
| 1 | Tube of Ambroid | .15 |
| 1 | Tube of Model Maker Glue | .15 |
| 1 | Set of Para Rubber | .40 |
| | Celluloid for Windows | .10 |
| 1 | Package of Nails | .05 |
| 1 | Blue Print ½ Full Size with instructions | .60 |
| | Complete Outfit as listed above TOTAL | $10.15 |

Construction Set in ONE SHIPMENT SPECIAL PRICE ..... **$8.50**

Built Model Ready to Fly F. O. B. NEW YORK $40.00

U. S. MODEL AIRCRAFT CORP.
BROOKLYN, N. Y.



## THE BELLANCA "COLUMBIA" FLYING MODEL.

A TRUE COPY of the ORIGINAL GREAT "COLUMBIA" RECORD BREAKER. April 12, 13, and 14, 1927 the Columbia sustained in the air making a record DURATION FLIGHT of 51 hours 11 minutes and 20 seconds.

June 4, 1927 at 6:05 A. M. Clarence D. Chamberlain and Charles A. Levine Started their non stop flight from ROOSEVELT FIELD NEW YORK, ACROSS THE ATLANTIC and REACHED EISLEBEN GERMANY AT 12:35 A. M. June 6, 1927 making the record distance flight of 3923 Miles in 42½ Hours.

Our engineering department with its thorough knowledge of MODEL DESIGNING AND CONSTRUCTION brought this 36" Wing Spread Model forth complete in every detail. Weight of constructed Model about 8½ oz. GUARANTEED TO FLY 100 FT. or MORE IF PROPERLY CONSTRUCTED ACCORDING TO OUR BLUE PRINTS AND INSTRUCTIONS.

### COMPLETE LIST OF MATERIALS OFFERED FOR CONSTRUCTING SAME.

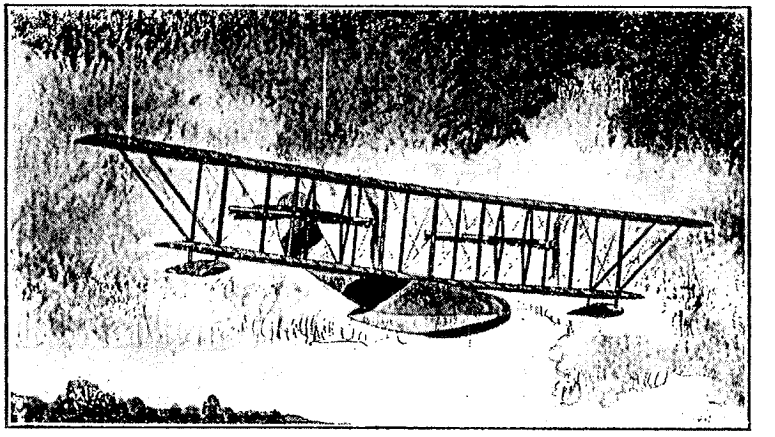
| | | |
|---|---|---|
| | Woodwork cut to lengths, Solid Ribs, Balsa Wing Tips and Streamlined Struts | $2.50 |
| 1 | 9 Cylinder Wirlwind Motor (DUMMY) and shaft | 1.25 |
| 1 | Bellanca Propeller with Round Streamlined Hub | 1.20 |
| 1 | Pair of 2" Wheels Balloon Tires | .60 |
| 1 | Sheet of Celluloid for Windows | .10 |
| 2 | Sheets of Bamboo Paper | .28 |
| 1 | 5 oz. Can of Bamboo Varnish | .65 |
| 1 | 5 oz. Can of Bamboo SILVERIZER DOPE | .80 |
| 1 | Tube of Ambroid | .15 |
| 1 | Tube of Model Maker Glue | .15 |
| 1 | Package Model Maker Nails | .05 |
| 1 | Drill Holder with drill point | .37 |
| 1 | Tail Skid with Spring and Brass Tubing | .20 |
| 1 | Rear Rubber Hook flanged | .10 |
| 1 | Set of Para Rubber | .40 |
| 4 | Wing Sockets, 2 No. 1 Turnbuckles | .52 |
| 2 | Special fittings and 4 to be doubled for chassis | .60 |
| 4 | Special Strut fittings for Wing Support | .20 |
| 1 | Split Type Axel Balsa Shock Absorbers | 1.00 |
| 1 | Blue Print with instructions | .60 |
| | Complete Outfit as listed above | $11.27 |

Construction Set in ONE SHIPMENT SPECIAL **$9.00**

Built Model Ready to Fly, F.O.B. Brooklyn..... **$45.00**

All parts for 6 ft. Bellanca Model **$30.00**





### Curtiss Type Flying Boat

"H. S. 2L" (48" wing spread)
Weight about 15 oz.

This Typical machine of late design is being used extensively for passenger carrying with great comfort and safety.

It has to its credit quite a remarkable performance record. Our model is an exact reproduction of this famous machine and will absolutely rise from the water under its own power and fly about 100-150 ft., if properly constructed according to our plans.

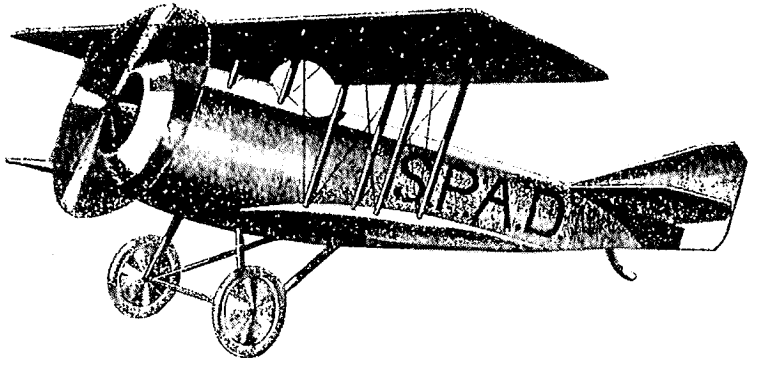
### List of material required for building this model

(Can be purchased separately)

| | | |
|---|---|---|
| | Woodwork cut to size with solid ribs | $1.75 |
| 2 | Blocks of Balsa wood, 3x3x24, marked for carving Hull | 1.50 |
| 2 | Ball Bearing Shafts | 1.00 |
| 2 | Aluminum Hangers | .24 |
| 2 | Rear Hooks Flanged | .20 |
| 2 | Spools wire | .12 |
| 2 | sets of rubber | .50 |
| 2 | Sheets (Bamboo) paper | .28 |
| 1 | 5-oz. can Model Aero Dope | .65 |
| 1 | 5-oz. can Waterproofing Varnish | .70 |
| 1 | Package Waterproof Cement for glueing Hull | .25 |
| 1 | pair H. S. 2 L. propellers, carved | 2.00 |
| 32 | Upright and 4 double Fittings | 2.00 |
| 1 | Drawing | .60 |
| | Total, | $11.79 |

Complete unassembled Model, Special price, Postpaid . 10.00
Assembled model, ready to fly (expressage on buyer) .. 35.00

U. S. MODEL AIRCRAFT CORP.
Brooklyn, N. Y.




The Spad Military Biplane.
35 inch. Wingspread Flying Model.

This beautiful and sturdy MODEL was Scaled from the Famous "SPAD" of the French Air Forces which had the honor to be the first in carrying THE AMERICAN FLAG OVER THE BATTLE LINES IN THE LATE WORLD WAR.

As a FLYING MODEL she meets with a big demand on account of her WONDERFUL PERFORMANCES.

IT has been designed by the head of Our Engineering Department who is a recognized authority on Aircraft designs and Flying Models.

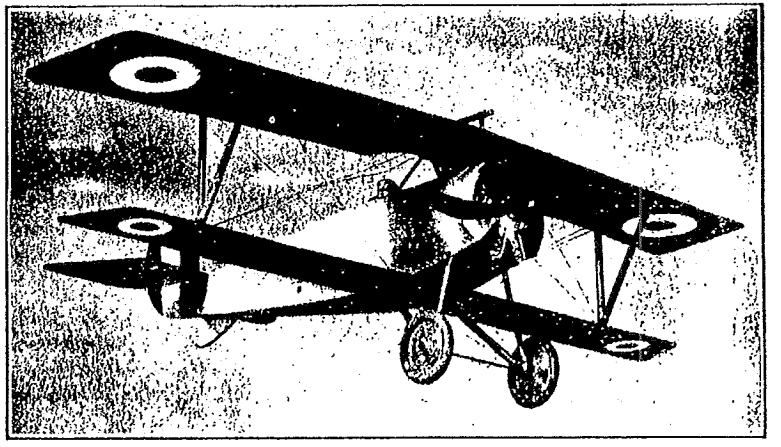
Weight of constructed model—is about 12 ounces and we guarantee that flights of over 150 feet were made by this Model.

**Material Necessary for Building This Model.**

| | |
|---|---|
| Complete Woodwork with Solid Ribs | $2.25 |
| Hand Carved Propeller 11 inches | .95 |
| Propeller Hanger | .10 |
| Propeller Shaft Ball Bearing | .50 |
| 35 ft. 1-16 sq. Rubber | .35 |
| 1 Pair 2 Inch Rubber Tired Wheels | .50 |
| Hand Drill for Drilling Ribs | .37 |
| 8 Sheets Bamboo Paper | .42 |
| 1 Can Bamboo Varnish | .65 |
| 1 Spool Wire, 1 Pack Nails, Screw Eyes, Small Screws | .20 |
| 24 Terminal Fittings | 1.20 |
| 4 fittings for connecting bottom Wings to Fusalage | .40 |
| 1 Axel for Wheels ⅛ dia. | .15 |
| 1 Rear Hook for Rubber Strands | .10 |
| Blue Print ½ Full Size | .60 |
| 1 Front Cowl (Radiator) | .75 |
| Total | $9.45 |
| Special Price for Complete Set, Postpaid | 8.00 |
| Complete Assembled Model Ready to Fly, F. O. B. | 30.00 |

U. S. MODEL AIRCRAFT CORP.
Brooklyn, N. Y.





A True Photo of The Nieuport Biplane Flying Model

Owing to the enormous demand for a Nieuport Scout, we have spent considerable time and money to place this 3 foot flying model on the market.

This beautifully designed model is a true reproduction 1-10 actual size of the famous French Scouting Plane and weighs about 11 ounces.

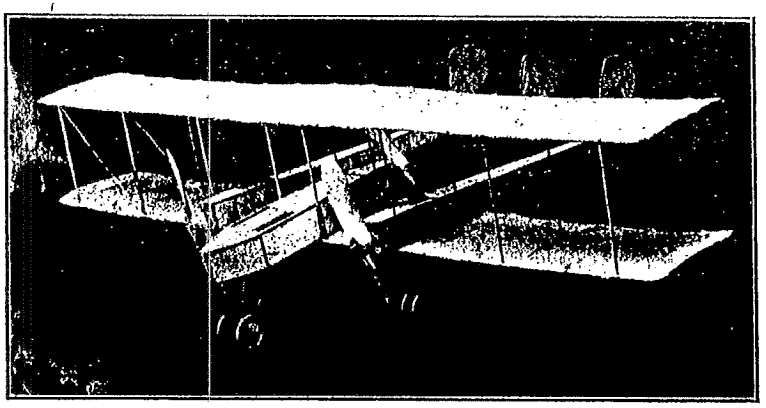
This model we guarantee to fly 150-180 ft. if properly constructed to our blue prints and specifications.

**Material Required for Building**

| | |
|---|---|
| Complete Woodwork with Solid Ribs | $2.00 |
| Carved Propeller 11 in. | .95 |
| Propellor Hanger | .10 |
| Propeller Shaft and Dummy Rotary Engine attached | 1.00 |
| 35 ft. 1-16 sq. Rubber | .35 |
| 1 Pair 2 inch Wheels (Rubber Tired) | .50 |
| Hand Drill for Drilling Ribs | .37 |
| 3 Sheets Bamboo Paper | .42 |
| 1 Can Bamboo Varnish | .65 |
| 1 Spool Wire, 1 Pack Nails | .11 |
| 1 Front Cowling | .65 |
| 1 Axel for Wheels ⅛ | .15 |
| 1 Rear Hook for Rubber Strand | .10 |
| 2 Special Fittings and 12 Terminal Fittings | .90 |
| 2 Bottom Wing Connectors | .20 |
| 2 Sloping fittings for Top Wings | .20 |
| Blue Print, ½ Full Size | .60 |
| Total, | $9.10 |
| Special Price for Complete Unassembled Set, Postpaid | 8.00 |
| Complete Assembled Model ready to Fly | 30.00 |

Transportation at Purchaser's Cost.

U. S. MODEL AIRCRAFT CORP.
BROOKLYN, N. Y.



True Photo from Caproni Biplane Model

## Caproni Bombing Biplane

A beautifully designed model having the best flying qualities acquireable, having three rubber strand motors drawing 3 specially designed propellers and weighing only 16 ozs.

The wing spread is 4 feet and is about 1/15 the actual size of the original.

This model will absolutely fly 150—200 feet if properly constructed to our plan.

LIST OF MATERIAL FOR BUILDING
*(Can be Bought Separately if Wanted)*

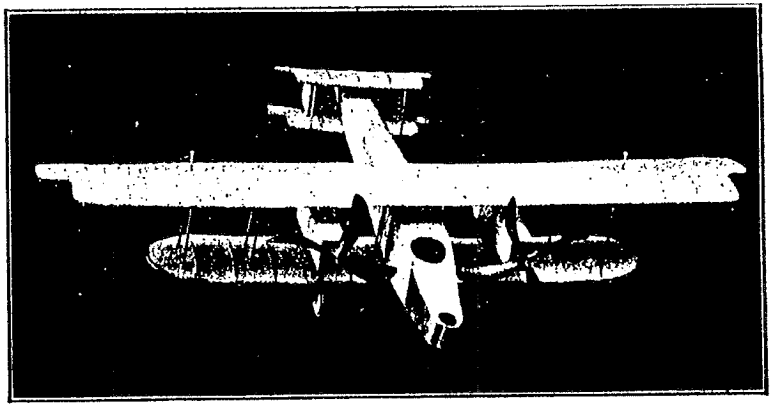
| | |
|---|---|
| Woodwork (cut to length) | $2.50 |
| 3 Ball Bearing Shafts No. 1 | 1.50 |
| 3 Hangers for Shafts | .30 |
| 3 Axels ⅛ inch Diameter | .45 |
| 3 Rear Hooks | .15 |
| 6 Two-inch Disc Wheels (wood) | 1.50 |
| 3 Sets 3/16 Flat Rubber | .90 |
| 6 Sheets Bamboo Paper | .60 |
| 2 Two-ounce Cans Bamboo Varnish | .60 |
| 2 Spools Wire | .12 |
| 2 Packs Nails | .10 |
| 1 Hand Drill and Point | .35 |
| 35 Terminal Fittings | 1.75 |
| 2 Propellers, 9 inch, Special Design—One Left, One Right to pull | 1.80 |
| 1 Propeller, 9 inch Special Design to Push | .90 |
| 1 Blue Print | .60 |
| Total, | $14.47 |

Special Price for Complete Unassembled Set;
Postpaid ..... $12.50

Complete Model Ready to Fly, Crated for Expressage, Weight, About 50 lbs. ..... $40.00

Transportation at Purchaser's Cost.





A True Photo of our built Flying Model

## The Handley-Page Bombing Biplane

The most beautiful construction is exercised in this machine. It is equipped with two four-bladed propellers, operated by gears and rubber strand motors enclosed in the small bodies.

The designer of this model is the well-known Aeronautical Engineer Mr. J. F. McMahon.

It will absolutely fly about 100 feet if accurately constructed according to our blue prints.

LIST OF MATERIALS FOR BUILDING 40 IN. MODEL.

| | |
|---|---|
| Complete Woodwork Cut to Size | $2.50 |
| 2 Gears with Shafts to Hold Propellers Attached | 2.00 |
| 3 Sheets Bamboo Paper, 20x40 | .45 |
| 2 Cans Bamboo Varnish | .60 |
| 2 Spools Wire | .12 |
| 2 Packages Nails | .10 |
| 20 Feet Flat Rubber, 3/16 | .30 |
| 2 Rear Hooks | .10 |
| 4 Two-inch Wooden Disc Wheels, Rubber Tired | 1.00 |
| 24 Terminal Fittings and 8 Special Fittings | 2.00 |
| 2 ⅛ Axels for Wheels | .30 |
| 2 Four-bladed Propellers, 7½ inches | 3.00 |
| 1 Blue Print | .60 |
| Total, | $13.07 |

Special Price for Complete Unassembled Set; ..... 11.00
Sent by Express F. O. B.

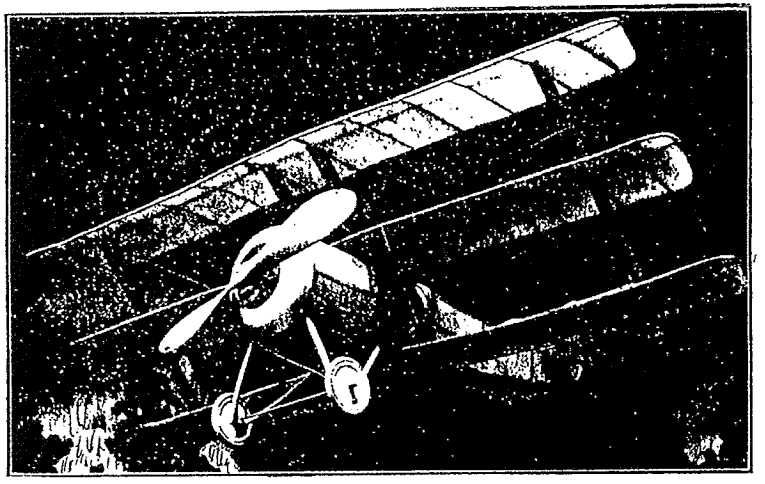
60 inch Set with 10½ inch 4-Bladed Propellers ..... 20.00

Complete Built 40 inch Model Ready to Fly ..... $40.00

Freight on Buyer

# U. S. MODEL AIRCRAFT CORP.

BROOKLYN, N. Y.



## Sopwith Triplane

39 inch Flying Model

This is a correct reproduction of the famous English scouting machine which has been a great factor in bringing to the world a democratic peace. We are greatly proud of being in a position to introduce to our thousands of patrons such a model which will give them a great help in developing their minds in aeronautics.

The weight of this constructed model is about 16 ounces. Flights obtained by many Model builders ranged nearly 200 feet.

LIST OF MATERIALS FOR BUILDING THIS BEAUTIFUL MODEL.

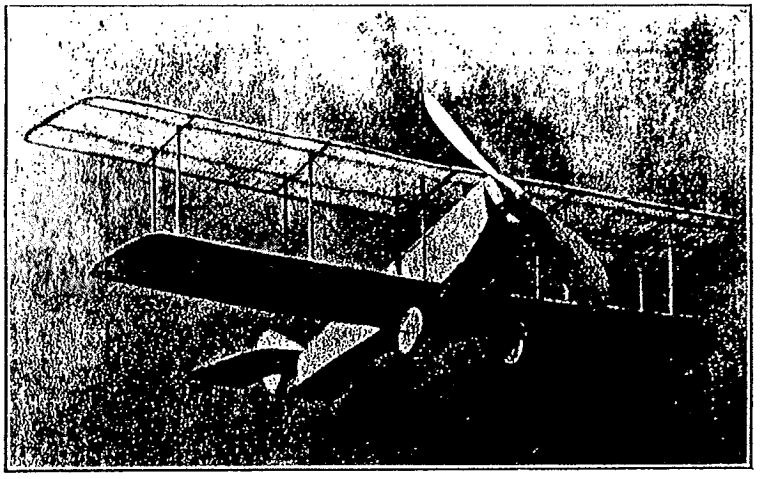
| | |
|---|---|
| Woodwork Cut to Lengths | $2.50 |
| 1 Front Cowling, Nails and Wire | .85 |
| 1 Hand Carved Propeller 14 inch (Special Design) | 1.50 |
| 1 Rotary Dummy Engine and Shaft | 1.00 |
| 1 Hand Drill and Drill Point | .37 |
| 1 Pair 2 inch Rubber-tired Wheels | .50 |
| ⅛ inch Diameter Axel | .15 |
| 50 Feet 1/16 inch Square Rubber | .50 |
| 4 Sheets Bamboo Paper | .48 |
| 2 Cans Bamboo Varnish | .60 |
| 1 Propeller Hanger | .10 |
| 1 Rear Hook Flanged | .10 |
| 4 Special Fittings | .40 |
| 1 Blue Print and Instructions | .60 |
| Total, | $9.75 |

Complete Unassembled Model; Special Price ..... $9.00

Built Model Ready to Fly ..... $10.00

Transportation at Purchaser's Cost

U. S. MODEL AIRCRAFT CORP.
Brooklyn, N. Y.



Curtiss JN 4B Military Biplane.
36" Wingspread Flying Model
(A true photo of built Model)

This is an accurate and faithful reproduction of the Famous War machine Curtiss "Jennie", scaled to about 1/14 actual size of the big Machine. Although we furnish with the set 24 Terminal Fittings to receive our streamlined wing struts and 4 Fittings for bottom wing connection to fuselage, the model when completed weighs only about 10 ounces.

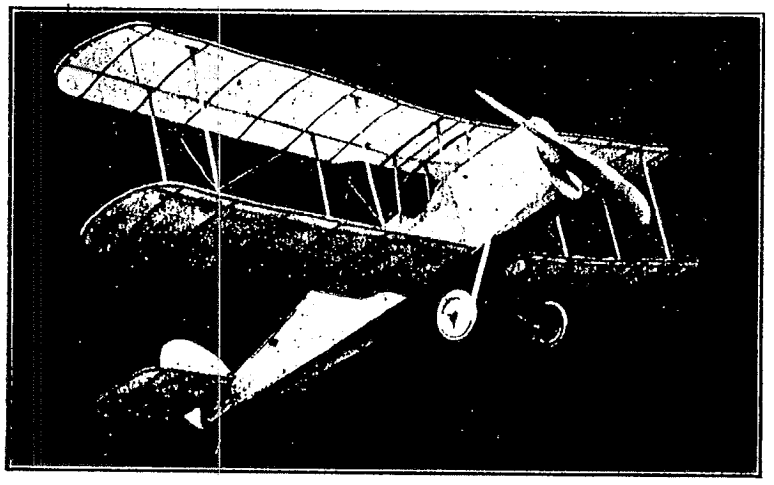
We guarantee this Model to fly 150—175 ft. or more if properly constructed according to our Blue-prints and instructions.

**Complete List of Materials for Building.**

| | |
|---|---|
| Woodwork cut to size, including solid ribs | $1.75 |
| 1 pair 2-Inch Rubber Tired Wheels | .50 |
| Special Hand Carved Propeller 11 Inch | .95 |
| 1 Rear Hook | .05 |
| 35 ft. 1-6 sq. Rubber | .35 |
| 1 Canboo Varnish, 2 oz. | .30 |
| 3 Sheets Bamboo Paper | .42 |
| 1 Ball Bearing Shaft | .50 |
| 1 Aluminum Hanger for Shaft | .10 |
| 1 Axel for Wheels | .10 |
| Brass Sleeves for Planes | .10 |
| 24 Upright Terminal Fittings | 1.20 |
| 1 Spool of Wire | .06 |
| 2 Pieces Aluminum (34 Gauge) Shaped | .15 |
| 1 Drill Handle and Drill Point | .37 |
| Blue Print ½ Full Size | .60 |
| Total, | $7.50 |

Special Price for Complete Material ..... Postpaid 6.75
Assembled Model Ready to Fly ..... $27.00
Transportation at purchaser's cost.

U. S. MODEL AIRCRAFT CORP.



A True Photo of our built Flying Model

## The De Haviland 4 U. S. Battle Plane

As our aim is to give a real course in Aeronautics and Technical Study in constructing Airplanes, we did not care for the enormous expense to have this wonderful machine scaled down to about 1/12 of actual size.

This model is a correct reproduction of the real machine. It has a wing spread 40 inches and when completed weighs only 12 ozs., and is absolutely guaranteed to fly, 150—200 ft. if carefully built according to our plans and instructions.

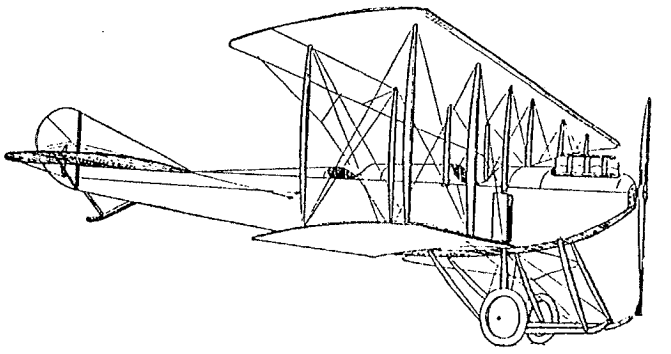
ENTIRE LIST OF MATERIALS NECESSARY FOR BUILDING THIS MODEL.

| | |
|---|---|
| Woodwork Cut to Length with Solid Ribs | $2.00 |
| 1 Ball Bearing Shaft | .50 |
| 1 Aluminum Hanger | .10 |
| 1 Rear Hook with Flange | .10 |
| 1 Pair Rubber Tired Disc Wheels, 2 inches | .50 |
| 1 ⅛ Diameter Axel | .15 |
| 24 Terminal Fittings, ⅛ | 1.20 |
| 4 Special Fittings for connecting bottom wings to Fuselage | .40 |
| 3 Sheets of Bamboo Paper, Extra Fine | .42 |
| 2 Cans of Bamboo Varnish | .60 |
| 1 10½ inch Special Hand Carved Propeller | 1.00 |
| 1 Set 3/16 Flat Rubber | .50 |
| 1 Hand Drill and Drill Point | .35 |
| 2 Spools Wire | .12 |
| 1 Pack Nails | .05 |
| 1 Blue Print ⅓ Full Size | .60 |
| Total, | $8.59 |

Special Price for Complete Set; Postpaid ..... 7.00

Built Model Ready to Fly; Crated for Shipment F.O.B. $35.00

U. S. MODEL AIRCRAFT CORP.
Brooklyn, N. Y.



STANDARD MILITARY TRACTOR BIPLANE

36 Inch Wings Spread.

A practical course in aeroplane construction.

Our new military biplane is not a flying model, but an actual duplication of a real machine, reduced in scale to about three feet. It is designed to teach the construction of an aeroplane and to assist the student of aeronautics to master the principles of aviation. All the usual fittings, such as sockets and turnbuckles, are included, though the engine is of course a dummy as also the gasoline tank. The propeller is nearly and properly carved to scale.

Not only do we furnish all the necessary blueprints and instructions for building, but we supply a short descriptive account of each part, showing its use and method of operation, so that the builder has a practical course in aviation, all except actual flight.

The price of this set is within the reach of all, because we sell it in sets or parts, each part with its own blueprint and instructions, so that the builder can commence with Part 1 and order the rest as he progresses, knowing that he will receive the next set by return mail.

These sets are arranged as follows:

No. 1—Fuselage complete, showing stream line crown and engine bed.

No. 2—Landing gear, engine installation and covering of engine housing, mounting of propeller and tail skid.

No. 3—Control, wiring, starting arrangement, tail and rudder building.

No. 4—Wings complete and ailerons, showing wiring and bracing.

---

U. S. MODEL AIRCRAFT CORP.

BROOKLYN, N. Y.

## MATERIAL FOR STANDARD MILITARY BIPLANE

PART No. 1—

| | | |
|---|---|---|
| | Complete Woodwork & Formers for Turtle Deck and Fuselage | $2.00 |
| 1 | Hand Drill Holder with Drill | .50 |
| 1 | 2 oz. can of Amroid | .30 |
| 1 | Spool of Wire, 1 Package of small nails | .12 |
| 1 | Full size Blue Print with Instruction | 1.25 |
| | | $4.17 |

Postage extra at pound Rate

PART No. 2—

| | | |
|---|---|---|
| | Chassis; Brass Tubing Shaped & Drilled (Nickled), to receive Axel | .60 |
| 3 | Pieces (34 Guage) Brass for Motor Hood | .45 |
| 1 | Dummy wooden Motor (6 Cylinder Type) | 2.00 |
| 2 | Blocks " Shaped as Gas Tanks | .20 |
| 2 | Disk Wheels 2" | .50 |
| 1 | Axel with Nuts 1/16 x 6" | .10 |
| 1 | Carved Propeller 8 1/2" Polished | 1.00 |
| 1 | Skid Fitting, and 1 Combination. Shaft (Spec) | .30 |
| 1 | Full Size Blue Print with Instructions | 1.25 |
| | | $6.40 |

Postage extra at pound Rate

PART No. 3—

| | | |
|---|---|---|
| | Complete Woodwork For Tail, Rudder, etc. | .50 |
| 2 | Seats Built. and 2 Steering Wheels 1 1/2" | .60 |
| 3 | Fittings for Tail Flaps and Rudder | .40 |
| 1 | Type "Dep." Control Arrangement | 2.00 |
| 6 | Specially Built Double Duty Hinges for Tail and Rudder | .60 |
| 2 | Finished Foot Bars | .10 |
| 1 | Package of Nails | .05 |
| 1 | Full Size Blue Print with Instructions | 1.25 |
| | | $5.50 |

Postage extra at pound Rate

PART No. 4—

| | | |
|---|---|---|
| 49 | Shaped Solid Ribs for Wings | $1.50 |
| 12 | Streamlined Struts | .35 |
| 16 | "T" and 8 "L" Fittings to receive Struts and Guy Wires | 1.75 |
| 34 | No. 1 Turnbuckles | 2.00 |
| 4 | Small Hinges for Ailerons | .20 |
| 8 | Double Wing Clamp Connectors | .40 |
| 1 | Spool of Wire and 1 Package of Nails | .13 |
| 1 | 3/4 Yards of Japanese Silk | 2.30 |
| 1 | 2 Oz. Can of Ambroid Cement | .30 |
| 1 | 5 Oz. Can of Model Dope for Silk | .70 |
| 1 | 2 Oz. Can of Prima DeLuster Varnish | .30 |
| 1 | Full Size Blue Print with Instructions | 1.25 |
| | | $11.18 |

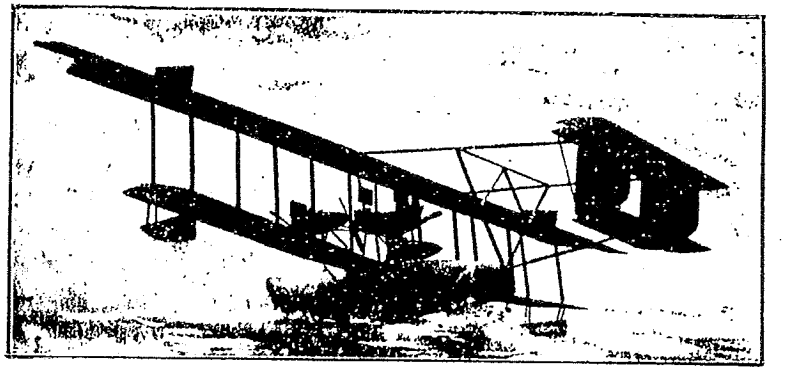
Postage extra at pound Rate

| | |
|---|---|
| Total Amount | $27.25 |
| SPECIAL PRICE. All the Four Sets in One Shipment Only (Postage paid by us.) | $22.00 |
| Built Model to Order Only;— Price F. O. B. | $150.00 |
| The Set of 4 Blueprints Sent Postpaid for | $5.00 |

This Model in its Excellency is very useful for School Lectures on Aeronautics, Home, Office or Club Decoration.

U. S. MODEL AIRCRAFT CORP.
Brooklyn, N. Y.





(A true photo of our built Model)
The N. C. 4 Transatlantic Seaplane

One of a series of Seaplanes designed by U. S. Naval Aircraft Engineers, and constructed under their supervision at the Curtiss factories.

The main purpose of designing this plane was the proposed flight across the Atlantic Ocean which was so successfully performed.

Starting out at the Rockaway Beach Naval Aircraft Station it made its trip across, stopping for fuel and inspection at the following designated points. (Consult map below.)

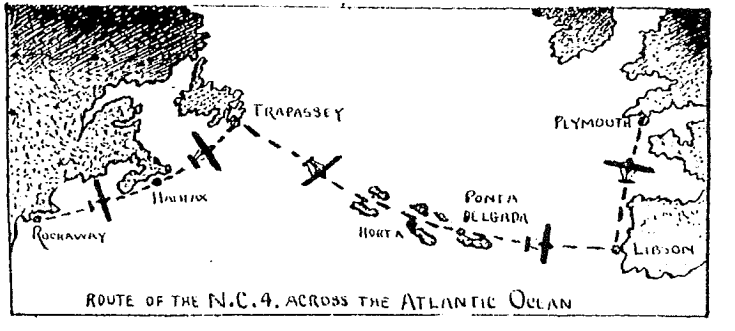
As we felt it our duty to place upon the market a perfect model of the N. C. 4, we set our Engineering Dept. to work, and the result was:

A model so perfect in every detail, that a photograph of the constructed model would absolutely be mistaken for that of the large machine.

This model is equipped with complete controls, dummy Liberty engines and scaled Paragon propellers, etc., and it has a 48-in. wingspread.

The construction of this model has a great educational value and the builder will learn all about this wonderful machine.

As in our Standard Military Biplane, we have divided the complete construction outfit into three sets of parts, each part with its own blueprint and instructions, so that you can start with Part No. 1 and send for the rest as you progress, knowing that the next part is ready for delivery.




ROUTE OF THE N.C.4. ACROSS THE ATLANTIC OCEAN

## N. C. 4 SETS

This part No. 1 as small as it appears is of great value but the following sets No. 2 and No. 3 consist of such a long list of materials it would take two pages to list and describe all the parts in the catalogue. We are therefore compelled to make the listing short. The parts for Set No. 2 and No. 3 are most important and valuable and come with the sets to complete the entire Model.

Complete Woodwork with shaped formers for the Main Boat, Side Pontoons and full sized blueprint. Price.. $6.00

PART No. 2—

Complete woodwork for main planes, tail planes and rudders, streamlined ribs and struts, 4 dummy Liberty motors, radiators, motor naceles, and formers, fittings, hinges and full sized blueprint. Price.....$12.00

PART No. 3—

Outrigger woodwork, complete set of controls, pulleys, seats, steering wheels, fittings and joints, 4 Paragon propellers with shaft and front plates, complete set of turnbuckles, wire, sufficient Jap. Silk (Golden Brown) Model Airplane Dope, water proved Varnish for finishing Model and full sized blueprint. Price.....$10.00

Total $28.00

ALL SETS SENT POSTPAID

Special price all Three sets in one shipment, Price.....$25.00
Blueprints without the material. Price per complete set.... 3.75

Built Model: An important medium for School lectures on Aeronautical Technology, excellent for Store Window display, Home, Office or Club Decoration.
Crated for Shipment F.O.B. Factory ..... .....$175.00

**Built model to order only, and one half of price must be paid with order.**



SPECIAL OFFER !

The U. S. MODEL AIRCRAFT CORP. Scale Drawings (containing a set of 11 U. S. Model Aircraft Corp. Models and how to build them).

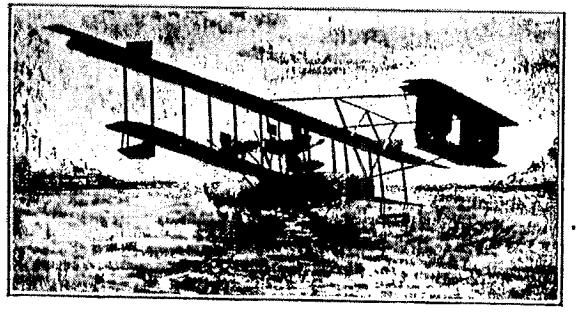
This set consists of accurately scaled historical models as follows:

In this set are the NIEUPORT MONOPLANE, BLERIOT, CURTISS HYDROAEROPLANE, ANTOINETTE, LANGLEY TANDEM MONOPLANE, GERMAN WAR TAUBE, DEPER DUSIN, WRIGHT BIPLANE, WHITE RACER, WHITE FLYER and CHAMPION RACER. This entire set of 11 large sheets each with a booklet of instructions will be sent to you upon receipt of $1.50.

Single Drawings with complete instructions of the above, 20c.

Man Carrying Glider Detailed Blue Print 60c Postpaid.

Blue print for Compressed Air Motor 75¢ Postpaid.

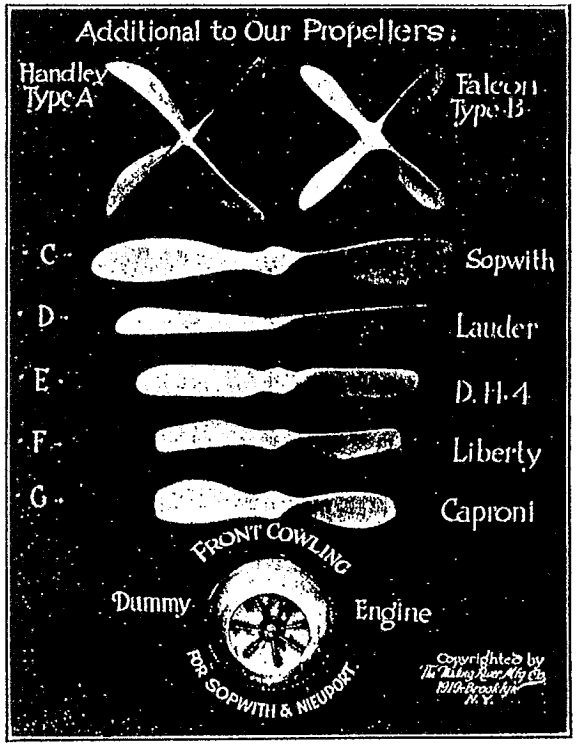


EXHIBITION MODELS

The Department which we have built up in the line of special work and Exhibition Models is probably the largest of its kind in the world. Our Experimental Department is equipped with trained workmen and a splendid accompaniment of high class machines and special tools especially adapted to this type of work. And we are only too glad to submit prices upon request. Mention type and size of model desired.

Address Special Work Department.

——OO——




**Our New Type Propellers**
(Carefully Designed and Hand Carved)
**Wood Poplar**

Types A. and B. Four Bladed—7½ in. . .$1.50; 10½ in...$2.25
State whether wanted to turn clockwise or anti-clockwise.
Type C—Made only in 14 inch .....Price. $1.50
Type D—Made only in 12 inch and sold in pairs.....Pair. 2.00
Type E—Made only in 10½ inch .....Price. 1.00
(Other sizes could be ordered)
Type F—All sizes at following prices:

| | | | | | |
|---|---|---|---|---|---|
| 6 inch..... | .60 | 7 inch..... | .65 | 8 inch..... | .75 |
| 9 inch..... | .80 | 10 inch..... | .90 | 11 inch..... | $1.00 |
| 12 inch..... | $1.10 | 14 inch..... | $1.50 | 16 Inch..... | 2.50 |
| 18 inch..... | 3.50 | 20 inch..... | 4.50 | 24 inch..... | 6.50 |

Type G—Made only in 9 inch and sold in sets of three.
Price per set.....$2.70
If highly polished are ordered, add 25c extra on Propellers from 6 to 11 in. and 50c. extra on Propellers from 11 to 24 in.

**Mahogany Propellers**
(For prices see page 29)

Aluminum Front cowling for Sopwith and Nieuport Scouts, size 5¼ inch and front opening about 3 inch. Price 65c.
Rotary Engine, (dummy) shaft attached ..... Price $1.00
We make all sizes Propellers for Boats, Sleds, Buggies, etc.
When inquiring describe purpose, character of your motor and we will quote prices.

## ANTOINETTE PROPELLER BLANKS
(With Reduced Hubs.)

The Antoinette Propellers are well known for their efficiency and our Blanks are fashioned after the full sized propellers and are exactly as good in their miniature capacity. The Blanks are well designed and balanced and drilled with the Hub reduced to lessen the side resistance.

Poplar Propeller Blanks. All types up to 14 inches are sold at 2c. per inch; 14 inch, 35c; 16 inch, 60c; 18 inch, 75c; 20 inch, $1.10, 24 inch $1.50; 30 inch, $2.50; 36 inch, $3.50. Mahogany, up to 12 inch, 3c per inch; 12 inch, 35c; 14 inch 50c; 16 inch, 75c; 18 inch, $1.00; 20 inch, $1.25; 22 inch, $1.50; 24 inch, $2.25; 30 inch, $3.00 36 inch, $4.50.

## LAMINATED PROPELLER BLANKS

Exceedingly strong and made of Honduras Mahogany and Spruce, carefully cut and laminated from our own special stencils.

Price ..... 8 cents per inch up to 12 inches
Over 12 inches ..... 10 cents per inch.

## WHITE TYPE RACING PROPELLER BLANKS
(Expanding Pitch)

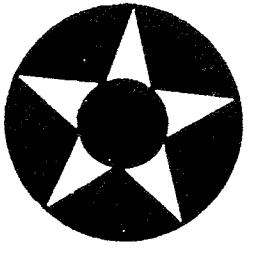
These are the Blanks that our Racing Propellers are cut from, and we can guarantee that every one has been inspected as to balance and outline before leaving our factory.

| Size | Price per pair |
|---|---|
| 7 in. ..... | .....25c. |
| 8 in. | .....30c. |
| 10 in. | .....45c. |
| 12 in. | .....50c. |

## DUOART DOPE

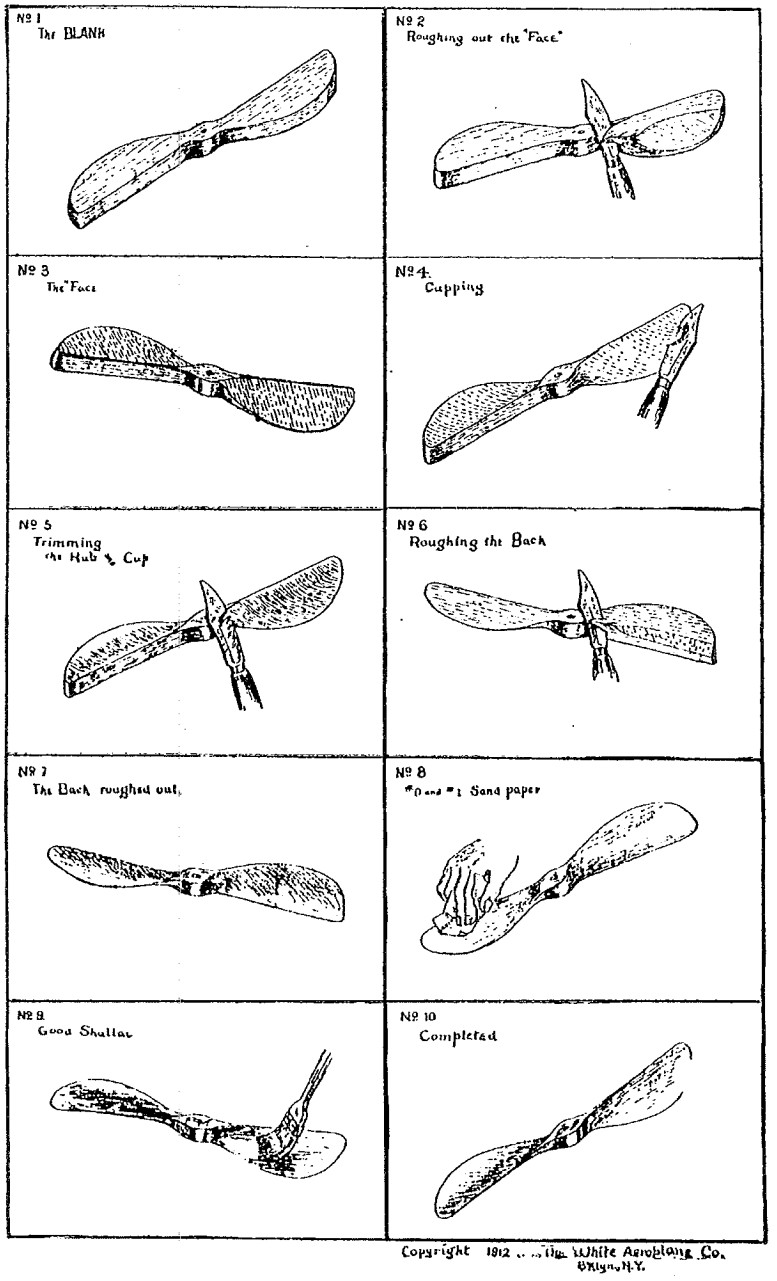
## AMERICAN INSIGNIAS

4 Stars and
1 Set of Stripes
in colors
Price 10c
Postpaid



**Our new development in doping model airplaines.** It shrinks the model covering (Silk or Bamboo Paper) and at the same time it gives a beautiful color. Furnished in the following attractive colors: Navy gray, Cobalt blue, Flag Red, Orange, Yellow and Fine Gold.
Prices per 2 oz. can 30c.; 5 oz. can 65c.; Fine Gold 2 oz. can 35c.; 5 oz. can 80c. Postage extra.
This wonderful solution adds very little weight to the model and it beautifies the model to the highest extent.
Bamboo Varnish and Airplane dope thinner Price per 2 oz. can 20 cents; 5 oz. can 45 cents.

U. S. MODEL AIRCRAFT CORP.




Copyright 1912 ... The White Aeroplane Co. Elmira, N.Y.



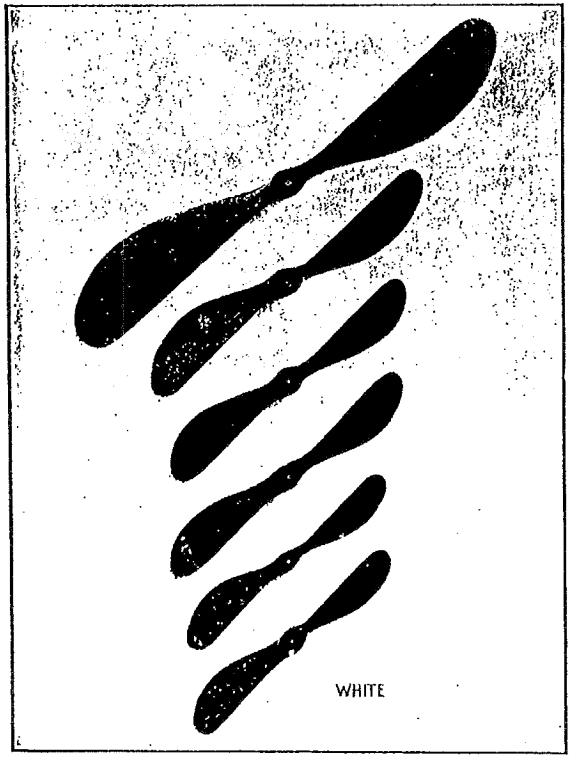
## MODEL PROPELLERS

Hand Carved, Highly Finished, Correct Design.

A great deal of time and study has been given to the problem by our Propeller Department, and we claim that no finer Model Propellers can be made than ours.

The success of every model depends mainly upon the amount of intelligence put into the construction of its propeller, and therefore the propeller is an accessory not to be neglected.

All of the propellers made in our factory are highly finished and cut to accurate stencils, which have been designed by men who thoroughly understand the necessity of an efficient propeller to make a successful model.




**Mahogany Propellers**

Up to 8 inch, prices same as Poplar

8 in., 85c. 9 in., 95c. 10 in., $1.25. 11 in., $1.35.

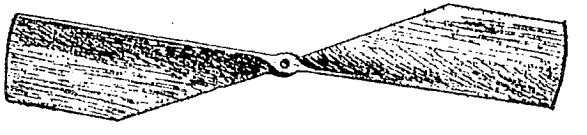
Highly Polished

12 in., $1.50. 14 in., $1.75. 16 in., $2.85. 18 in., $3.75. 20 in., $5.50. 24 in., $7.50.

**Poplar Propellers**

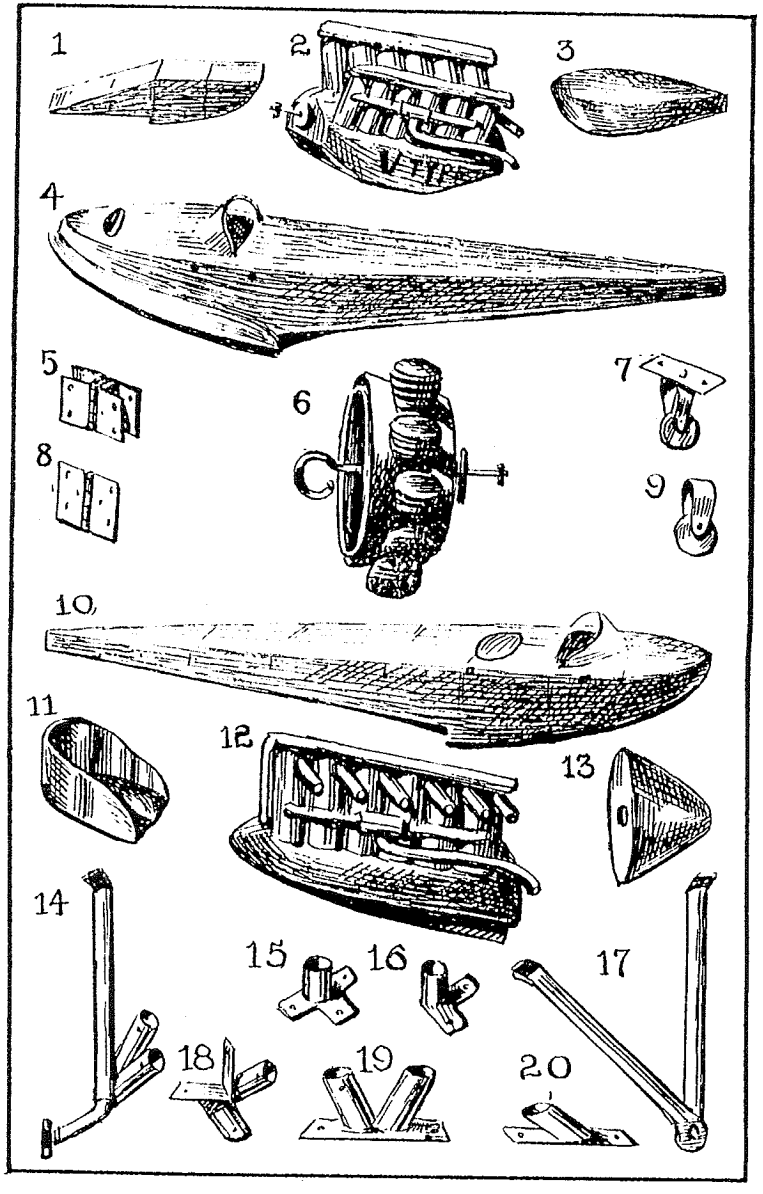
| Size | | Price |
|---|---|---|
| 6 | in.... | $ .50 |
| 7 | in.... | .60 |
| 8 | in.... | .70 |
| 9 | in.... | .80 |
| 10 | in.... | .90 |
| 10½ | in.... | .95 |
| 11 | in.... | 1.00 |
| 12 | in.... | 1.00 |
| 14 | in.... | 1.25 |
| 16 | in.... | 2.25 |
| 18 | in.... | 3.00 |
| 20 | in.... | 4.50 |
| 24 | in.... | 6.00 |

## WRIGHT TYPE PROPELLERS



Prices the same as our regular Propellers.

# U. S. LATEST DEVELOPMENTS




U. S. MODEL AIRCRAFT CORP.
BROOKLYN, N. Y.

## U. S. ACCESSORIES ARE USED FOR PERFECT MODELS

See Illustrations on Page No. 36

No. 1 Pontoons made in the following sizes
6" Long x 2" Wide x 1½" Deep ..... $ .70
12" Long x 3" Wide x 2¼" Deep ..... 1.00
No. 2 Liberty (Dummy) Motor 2½" High 1½" x 3½ Long. Propeller shaft attached ..... $2.00
No. 3 Wing Pontoons made of BALSA WOOD HOLLOW and polished
Size 4½ Long x 1½ Deep x 1-1/8" Wide ..... .50
No. 4 Main Hull for FLYING BOATS
Carved hollow of BALSA WOOD Thickness of Walls about 3/16" nicely finished and polished. Guaranteed Water Proof. Size 5" Wide 3" Deep 23" Long Weight about 4 oz. Equipped with fittings for attaching planes. Price $10.00
No. 5 Special two way Hinge for Airlrons tail & Rudder will fit 3/16 & ¼ Spars ..... $ .12 Each
No. 6 9 Cylinder Whirlwind Dummy Motor ..... $1.00 Each
Same Motor with Shaft as used on our Models; Lindbergh, Bellanca and Universal Fokker ..... $1.25 Each
No. 7 Pullies Swivel Top Sizes 3/16 & ¼" ..... .15 Each
No. 8 Plain Little Hinges ..... .05 Each
No. 9 Pullies Plain ..... 3/16 & ¼" ..... .10 Each
No. 10 Flying Boat Hull built and covered with Silk and Varnished, Size as No. 4 ..... 8.00
Covered with Bamboo Paper ..... 7.50
No. 11 Aluminum Back Wooden Seat in Sizes Up to 2" .25 Each
No. 12 Standard Motor 3x1-1/8x4 ..... 1.50 Each
No. 13 Streamline Propeller Front Aluminium ½" Dia. ..... .20
" " " " " " ¾" .25, 1" .35
No. 14 Split Type Axel made of Brass Tubing for our Models Lindbergh, Bellanca, and Fokker, Price per Pair ..... $1.00
No. 15-16 T and L Fittings for Struts in Biplane Construction Sizes 5/32, 3/16, ¼ price ..... .07 Each
No. 17 Finished Aluminum Chassis drilled for 1/16 or 1/8 Axel, Price per set ..... .50
No. 18-19 Fittings—Fine Wall Brass Tubing, Sizes 5/32, 3/16, Price ..... .15 Each
No. 20 Fitting for Wing Struts ..... .10 Each

POSTAGE PER POUND RATE

In ordering the above give Nos., Sizes and name of Model.

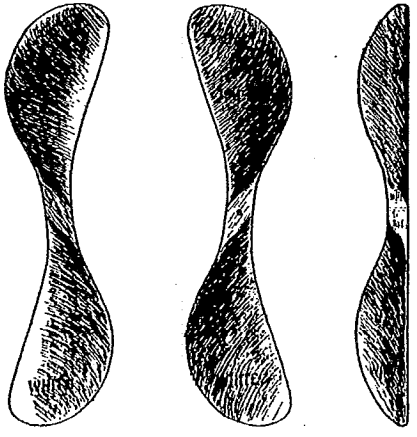
U. S. MODEL AIRCRAFT CORP.
BROOKLYN, N. Y.

## ANTOINETTE TYPE PROPELLERS

This propeller is a copy of the famous French design that has proved its efficiency as a model propeller. Prices the same as our regular propellers.

## WHITE TYPE RACING PROPELLERS

(In Pairs)



These propellers are designed for long distance flying and are copies of the propellers used on our Record Holder.

The blades are broader and the straight edge is used for the entering edge, while the large curved side gives a good distributing quality to the thrust. These propellers are cut very thin and light and have proved their efficiency by flying our model for a distance of over 1800 feet.

| Size | Price per pair |
|---|---|
| 7 in. diam. | $1.50 |
| 8 in. diam. | 1.65 |
| 10 in. diam. | 2.00 |
| 12 in. diam. | 2.50 |

## LAMINATED PROPELLERS

Our Laminated Propellers are made of Oregon Spruce and Honduras Mahogany. Five laminations are used, three of mahogany and two of spruce. The combination makes a strong, durable and beautiful propeller.

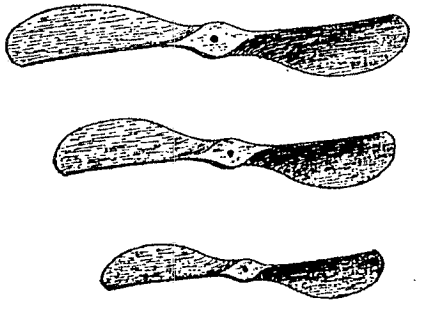
Price, from 6 in. to 14 in.....30 cents per inch

## WOOD FOR LAMINATED PROPELLERS

1 in. x ⅛ in. thick x 14 in. long.

Honduras Mahogany and White Holly, each.....5 cents

## NIEUPORT PROPELLERS



These propellers are very fine for Speed Models, and great care has been taken with their design and construction.

Made in six sizes.

| Size | Price |
|---|---|
| 8 in. | $0.70 |
| 9 in. | .80 |
| 10 in. | .90 |
| 10½ in. | .95 |
| 11 in. | 1.00 |
| 12 in. | 1.10 |

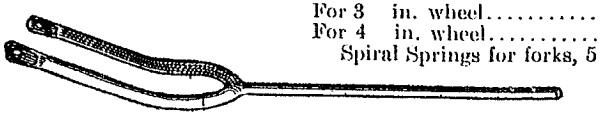


## MINIATURE FORKS

Constructed of light brass tubing and are very strong.

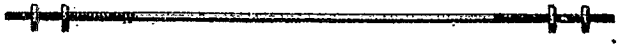
| Size | Price |
|---|---|
| For 1½ in. wheel | 35 cents |
| For 2 in. wheel | 35 cents |
| For 2½ in. wheel | 45 cents |
| For 3 in. wheel | 45 cents |
| For 4 in. wheel | 50 cent |

Spiral Springs for forks, 5 cents each.



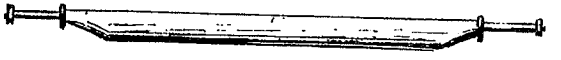
## AXLES

1/16 in. axles, threaded; with nuts, complete; any length from ½ in. to 10 in. Price 10 cents each. Over 10 in. 20 cents each.



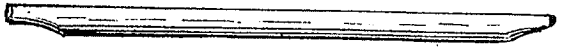
⅛ in. axles, threaded; with nuts, complete, length same as above, 15 cents each; over 10 in. 25 cents each.

## STREAMLINED AXELS



Made of Wood and 1/16" Brass Rods set into Ends.
Threaded, with nuts and washers to receive wheels.
Price per Axel any size from:
4" to 7"----------.20 Ea. 7" to 10"-------.25 Ea.

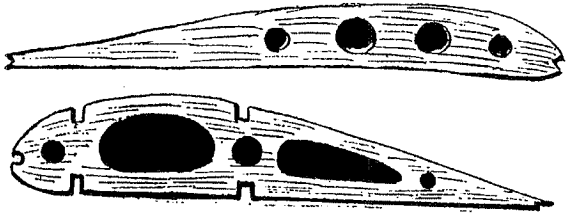
## STREAMLINED WING STRUTS



Made in Sizes as follows; 1/8 x3/16, 1/8 X ¼ and 3/16 x ¼, price in lengths.
Up to 6"----------@.03 Ea. 6" to 8"---------@.04

Solid Ribs for Model wing construction made to order in any curve and size. Price up to 6 in. 3c each, from 6 in. to 8 in. 4c each from 8 in. to 12 in. 10c each.

Could be made of 1/16 or 3/32 of Poplar stock. (All holes drilled round and any size in proportion.)



Prices on this type Ribs are double.

U.S.MODEL AIRCRAFT CORPORATION BROOKLYN NEW YORK.

### SCREW EYES

Strong, well made of one piece of steel.

| Size | Price per doz. |
|---|---|
| ⅛ in. outside—(brass) | 10 cents |
| 3-16 in. outside | 5 cents |

These are very useful for control guides, etc.

### EYELETS

Made of polished brass and nickel and can be used as ferules for strut ends, which increases the beauty of the model without any noticeable extra weight. They are especially adaptable for lacing cloth to frame.

| Size | Price | Size | Price |
|---|---|---|---|
| 1-16 in. | 10 cents per box | ¼ in. | 10 cents per box |
| ⅛ in. | 10 cents per box | 5-19 in. | 10 cents per box |

3-16 in., 10 cents per box

### SMALL SCREWS

These screws are very small and have round heads. Furnished in the following sizes:

| Size | Price per doz. | Size | Price per doz. |
|---|---|---|---|
| ¼ in. long | 5 cents | ¾ in. long | 10 cents |
| ⅜ in. long | 6 cents | ½ in. long | 8 cents |

## MODEL AEROPLANE FABRICS

### GOLD BEATER SKIN

**This covering is now extensively used in racing models. It is stronger and lighter than Bamboo Fibre fabric. It comes from the makers in sheets about 8 by 32 inches. It is sometimes given fancy names by other dealers. These skins can be glued together to cover any required space.**

Price per Skin .....30 cents
Three Skins .....85 cents

### BAMBOO FIBER FABRIC

(Imported)

**This Fiber Fabric when treated with Liquid Bamboo makes an air tight, water proof and shock proof covering that has no equal for a model.**

No. 1—Size of Sheet 13x36 (clear).....$ .12
No. 2—Size of Sheet 24x34 (clear)..... .14

### KOREAN TISSUE FIBRE "RICE PAPER"

A VERY LIGHT AND STRONG COVERING FOR RACERS AND WHEN TREATED WITH BAMBOO VARNISH IT BECOMES AIRTIGHT AND WATERPROOF.

Quality # A1.—12x18"—each .05 (per doz. ..... .45)
Quality No. A1 18x24—each .10 (per doz. ..... $1 00)

### KOREIAN SILK PAPER

A fine transparent covering very strong and durable and when coated with our Bamboo Varnish takes on the appearance of our GOLD BEATTERS SKIN and becomes as tight as a drum skin.

18x24"—each .12 (per doz. ..... 1 30)

### BEST MODEL AEROPLANE COVERING

Guaranteed Japanese Silk, Finest Quality. Weight per yard ¼ oz.

No. 1a Pure White, width 36", per yard.....$1.35
No. 2b Light Blue, Orange, width 36", per yard.... 1 25
No. 3c Golden Brown, light Green, width 36", per yd 1.25
No. 4d Red, Yellow, width 36", per yard ..... 1.25
No. 5e Light Gray, width 36" per yard .....1.15



### RUBBER STRANDS

Finest Grade Para Rubber.

A lot of money has been expended in trying various methods of propelling a model areoplane and all have been speedily rejected except the Rubber Strand Motor.

This contrivance has proved its efficiency under the most trying conditions, and models have been flown upwards of half a mile and remained in the air for nearly a full minute, with nothing but a simple Rubber Strand Motor. We therefore advise every experimenter to adopt this motive power as one that has proved its fine qualities and will remain the most efficient for some time to come.

Made in the following sizes.

Sold in any quantity.

### FLAT RUBBER

This kind of Rubber is generally used for light Racing Models.

| | Price | | Price |
|---|---|---|---|
| No. 1—1/8—Flat | per ft. 1¢ | No. 2—3/16 Flat | per ft. 1½¢ |
| | 50 ft. 50¢ | | 50 ft. 75¢ |
| | 100 ft. 90¢ | | 100 ft. 1.45 |
| Skein | $1.80 | Skein | $2.80 |

(Full Skein contains about 200 ft.)

### SQUARE RUBBER

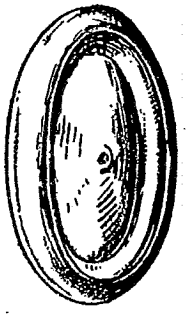
| | Price | | Price |
|---|---|---|---|
| No. 1—1/16 Sq. per ft. | 1¢ | Full Skein about 165 ft. | 1.65 |
| No. 2—3/32 Sq. per ft. | 1½¢ | Full Skein about 150 ft. | 2.10 |
| No. 3—1/8 Sq. per ft. | 4¢ | Full Skein about 130 ft. | 5.00 |

Our engineering department in our long experience in Model Building warrants us in stating that the square rubber has slightly higher tension then the flat rubber and we have found it to be very good for scale flying models of heavier duty than racing models. BUT THE FLAT RUBBER CAN ALSO BE USED FOR SAME MODELS BY GIVING IT A FEW EXTRA LOOPS.

### RUBERINE

A preparation which, when applied to the elastic of model aeroplanes will prevent the strands from sticking together; insure perfect winding and unwinding; it also adds to the life of the rubber. All successful duration fliers are using this preparation.

Price, per 2 oz. bottle .... 25 cents.



No. 1

## U. S. MODEL MINIATURE WHEELS No. 1

**Pneumatic Rubber Tired**

These Wheels are correctly designed in Miniature from the wheels used on the big Aeroplanes. No. 1 ALUMINUM Streamlined Disc made of the finest material and are guaranteed to run absolutely true to its axel. Made to take a 1/16 and ⅛ axel.

Size 2 inches only. Price per pair 80 cents.

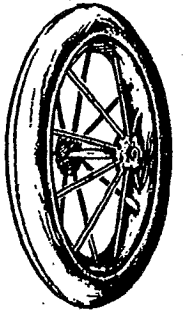
## WIRE SPOKE WHEELS No. 2

Built in five sizes.

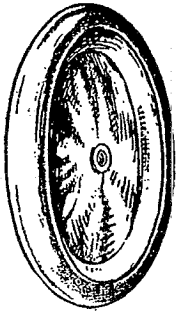
| Size | Hub | Weight | Price per pair |
|---|---|---|---|
| 1½ in. | 1/16 in. hole x ½ in. long | ¼ oz. | $.80 |
| 2 in. | 1/16 in. hole x ½ in. long | ⅓ oz. | 1.00 |
| 2½ in. | 1/16 in. hole x ¾ in. long | 5/12 oz. | 1.10 |
| 3 in. | 1/16 in. hole x ¾ in. long | ½ oz. | 1.40 |
| 4 in. | ⅛ in. hole x 1 in. long | ¾ oz. | 2.40 |

Any of the above sizes can be furnished to order with a ⅛ in. hole (hub) at an additional cost of 10 cents each.

The 4 in. wheel is made with a ⅛ in. hole (hub) unless otherwise ordered.



No. 2



No. 3

## WOODEN DISC WHEELS

**No. 3**

Designed as our Aluminum wheels, light and strong. Fitted with Pneumatic Rubber Tires. Made in 6 sizes, Natural or painted Silver Gray.

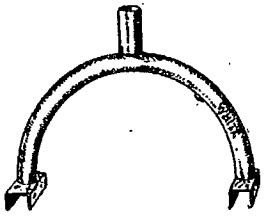
Size 1 in. per pair.....30c.; 1½ in. 40c.
2 in. per pair.....50c.; 2½ in. 65c.
3 in. per pair.....70c.; 4 in. 85c.

## EXTRA TIRES FOR OUR WHEELS ALL HOLLOW

(Finest grade of Rubber)

1 inch Solid ring.....Price each 8c.
1½ in., 2 in. and 2½ in. "Hollow"..... 15c.
3 in. "Hollow" ..... 18c.
4 in. "Hollow" ..... 25c.



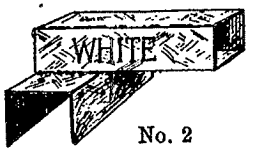


## ANTOINETTE MAST SOCKET

A compact, highly finished metal fitting which enables the builder to run the rubber strands on top of the motor bar, as is desired in many of the later types of flying models.

Price.....60 cents

No. 1




No. 2

## SPECIAL WING BAR SOCKETS

Designed to do away with drilling the frame of a model, thereby strengthening the construction and making the model easy to take apart for packing, shipping or carrying. Very light and strong.

Size No. 1—⅜ in. square tubing. Price each.....15 cents

Size No. 2—¼ in. square tubing. Price each.....20 cents

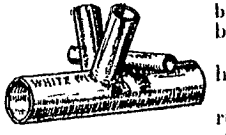
## TERMINAL FITTINGS

These useful fittings are built up and silver soldered, are very light and strong. They overcome many of the difficulties encountered in attaching outriggers and running gear uprights.

⅛ in. inside diameter.....5 cents
5/16 in. inside diameter.....6 cents
¼ in inside diameter.....7 cents

## NIEUPORT FITTING

(Running Gear)

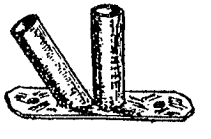



This special fitting has proved its worth many times over, as it does away with a lot of unnecessary binding and glueing, which always detracts from the beauty of the trim lines of the Nieuport.

It is silver soldered throughout and made from hand filed tubing, and is very strong and light.

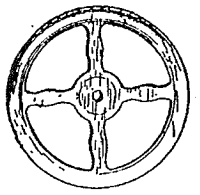
The fitting is so designed that it adapts itself to the running gear, securing the main skid, the diagonal struts and at the same time provides a firm bearing for the axle. Price 45 cents

## PONTOON FITTINGS



The pontoon fittings are a new departure in built-up fittings, but are rapidly coming into extensive use on account of the thousants of model hydroaeroplanes now in the course of construction all over the country.

Silver solder is used, as in all of our fittings, which insures strength, and our special designs render them applicable in many ways which simplify the work and improve the appearance of any model. Price 25 cents

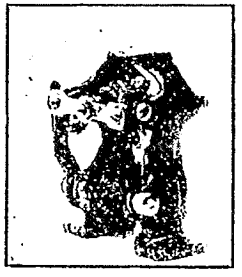


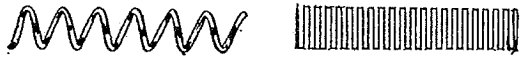
## LAMINATED WOODEN STEERING WHEELS

Made of three laminations, very strong, light and showy. Made in three sizes for Curtiss, Bleriot and Antoinette type models.

| Size | Price |
|---|---|
| 1½ in. | 15 cents |
| 2½ in. | 25 cents |
| 3½ in. | 35 cents |

SPRINGS FOR FORKS





Stretched Relaxed

They are made of fine steel snd are furnished in all sizes.
¾ in. 5c or 5 in. 30c Stronger Spiral Spring at 7cper in.

## ELECTRIC MOTOR

Will run on 1 to 3 dry cells at a high speed. Very good for exhibition models. Extra light.

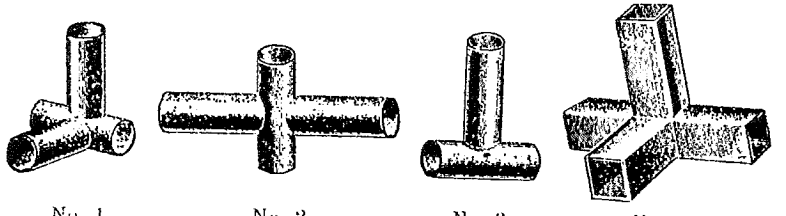
Price.....$1.75

Designs Not Guaranteed

## JOINTS AND FITTINGS

Best Grade Brass Tube, Highly Finished.

These fittings are all from our own design and were built to stand the wear and tear of flying models and to enhance the beauty of the various exhibition models. Almost any design of frame can be fitted with these handy joints without increasing the weight of the model to any marked degree. Made in five styles and made to order in any size.



No. 1 No. 2 No. 3 No. 4

Silver soldered, strong and light. Made in 3/16 in. and ¼ in.

Price, either size, Nos. 1, 2, 5.....15 cents each

Price, either size, No. 3.....10 cents each

Price, either size, No. 4.....20 cents each

No. 3 is also made in square tubing at 15 cents each.

No. 5

## UPRIGHT SOCKETS

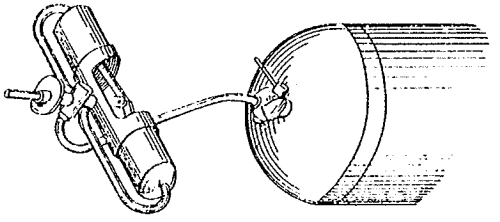
Three sizes

| Size | Price each |
|---|---|
| ⅛ in. | 5 cents |
| 3/16 in. | 6 cents |
| ¼ in. | 7 cents |

## SIMPLEX COMPRESSED AIR MOTORS

Made to Order Only.

These Motors are especially designed for model aeroplanes. The engine has two or four cylinders, connected to a tank of compressed air. The model is built around the tank as shown in the cut of our monoplane. The tank is charged by a bicycle or automobile pump.

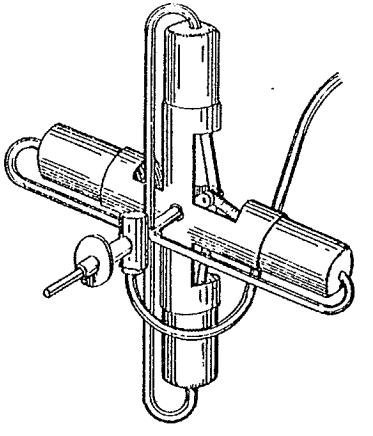


## TWO-CYLINDER OPPOSED COMPRESSED AIR MOTOR

Suitable for light models having about 3 square feet of surface and weighing not more than 7 ozs., less power plant.

(Description)— This engine is ⅝-inch in bore and ⅝-inch stroke, 4½-inch in width and 2¼ inches long, and weighs 2 ozs. When blown up by an ordinary single barrel pump this outfit will spin a 14-inch propeller about 1,000 R. P. M.

Price, complete, $15.00.



## FOUR-CYLINDER RADIAL COMPRESSED AIR MOTOR

Suitable for large models, having 6 square feet of surface and not weighing over 10 ozs., less power plant.

(Description)—This engine is the Radial Type, and measures ⅝-inch bore by ⅝-inch stroke, is 4½ inches wide by 2¼ inches in length and weighs only 3 ozs. The air container is 2½ inches by 24 inches and weighs 12½ ozs., making a total weight for the entire plant of 15½ ozs. This outfit when blown up by a bicycle pump will spin a 16-inch propeller about 1,500 R. P. M.

Price, complete, $20.00.

Postage on buyer.

We only supply one type of drawing and instructions, and that for the 2-cylinder opposed Motor. The 4-cylinder Motor could be constructed by following the same blue print and instructions as the principal is the same.

The parts are nicely finished and so adjusted that by purchasing the complete set of parts every one can easily put them to-gether, and have a fine working motor.

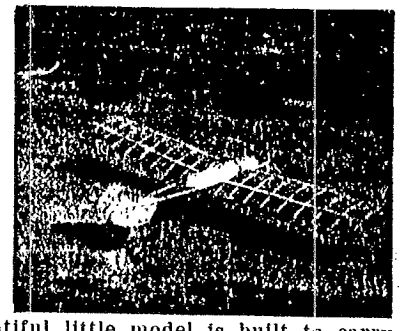
## PARTS FOR BUILDING ABOVE MOTORS

| For Two Cylinder Engine | | For Four Cylinder Engine. | |
|---|---|---|---|
| 2 Cylinders .... .60 each .... | $1.20 | 4 Cylinders .... .60 each .... | $2.40 |
| 1 Tappered Sleeve Valve .... | .75 | 1 Tappered Sleeve Valve .. | 1.25 |
| 1 Crank Shaft-Flanged .... | .75 | 1 Crank Shaft Flanged .... | .75 |
| 2 Pistons Aluminum ..... | 1.00 | 4 Pistons Aluminum ..... | 2.00 |
| 1 Crank Case ..... | .50 | 1 Crank Case ..... | 1.00 |
| 2 Connecting Rods ..... | .20 | 4 Connecting Rods ..... | .40 |
| Complete Shaped Pipping | .40 | Complete Shaped piping | .60 |
| Total | $4.80 | Total | $8.40 |
| Material for Tanks | | Material for Tanks | |
| 2 Caps 2¼" Diameter .... | 1.00 | 2 Caps 2⅝" Dia. ..... | 1.00 |
| 1 Air Valve ..... | .75 | 1 Air Valve ..... | .75 |
| 1 Light Tire Valve ..... | .35 | 1 Light Tire Valve ..... | .35 |
| Copper Foil for 18" Tank | 1.00 | Copper Foil for 24" tank | 1.50 |
| Steel Piano Wire ..... | .35 | Steel Piano Wire ..... | .50 |
| Total | $3.45 | Total | $4.10 |

Blue Print with Instructions for building Motor and Tank.... .75

Size of Completed Motor 2 Cylinder is 4¾" from tip to tip.
Size of Cylinders 1⅝ Long by 9/16th dia. and weighs 2 oz.
Same diamensions for 4 Cylinder Radial. Weight 3 oz.

## MOTOR DRIVEN SCOUT MONOPLANE PUSHER TYPE



This beautiful little model is built to carry our two-cylinder Simplex Improved Compressed Air Motor. It has a wing spread of nearly six feet. The frame is built mostly of steel, and the propeller is 13 inches, specially carved for this model.

When the trigger of the engine is pulled it will rise from the ground, soaring gracefully through the air. It weighs, complete with engine, under sixteen ounces.

Material, without engine, complete for building monoplane, in knockdown form, with carved propeller, postpaid, 5.50.

Special Propeller for 2-cyl., 13½ inches, $1.50.

Special Propeller for 4-cyl., 16 inches, $2.25

Postage on Buyer.

U. S. MODEL AIRCRAFT CORP.
Brooklyn, N. Y.



# WHAT OTHERS SAY ABOUT OUR MODELS

COLLEGE OF THE CITY OF NEW YORK

Gentlemen:

Referring to your letter of December 10th, I am very glad to comply with your request for some notes about your Standard Aeroplane Model.

This model was an exceedingly accurate reproduction of the Standard J1 machine designed by the Standard Aircraft Corporation and manufactured by them and their licensed plants. We found this model very useful in lecturing to our classes in aeroplane mechanics. As our laboratory equipment includes two large machines of this design, your model was of particular interest to our students.

The miniature controls for the rudder and elevators work in excellent fashion. The entire model was a very neat piece of workmanship and very creditably represents the class of work turned out by your concern.

We have been very favorably impressed with the models manufactured by you and shall be glad to answer any inquiries regarding your work.

Yours very truly,
D. C. Steinman
Professor of Engineering.

DBS/JVH.

Dear Sirs.
I have built several of your models, namely Handley-Page Bombing Biplane, Spad Military Biplane and Curtiss JN4B Military Biplane, and so now I intend to build your Bellanca "Columbia" Monoplane.'
I have had fine results from the planes I have built. The Spad flew 153½ feet and winning a distance race with scale models.
C. J. GOTTHARDT.
887 Boulevard, Bayonne, N. J.

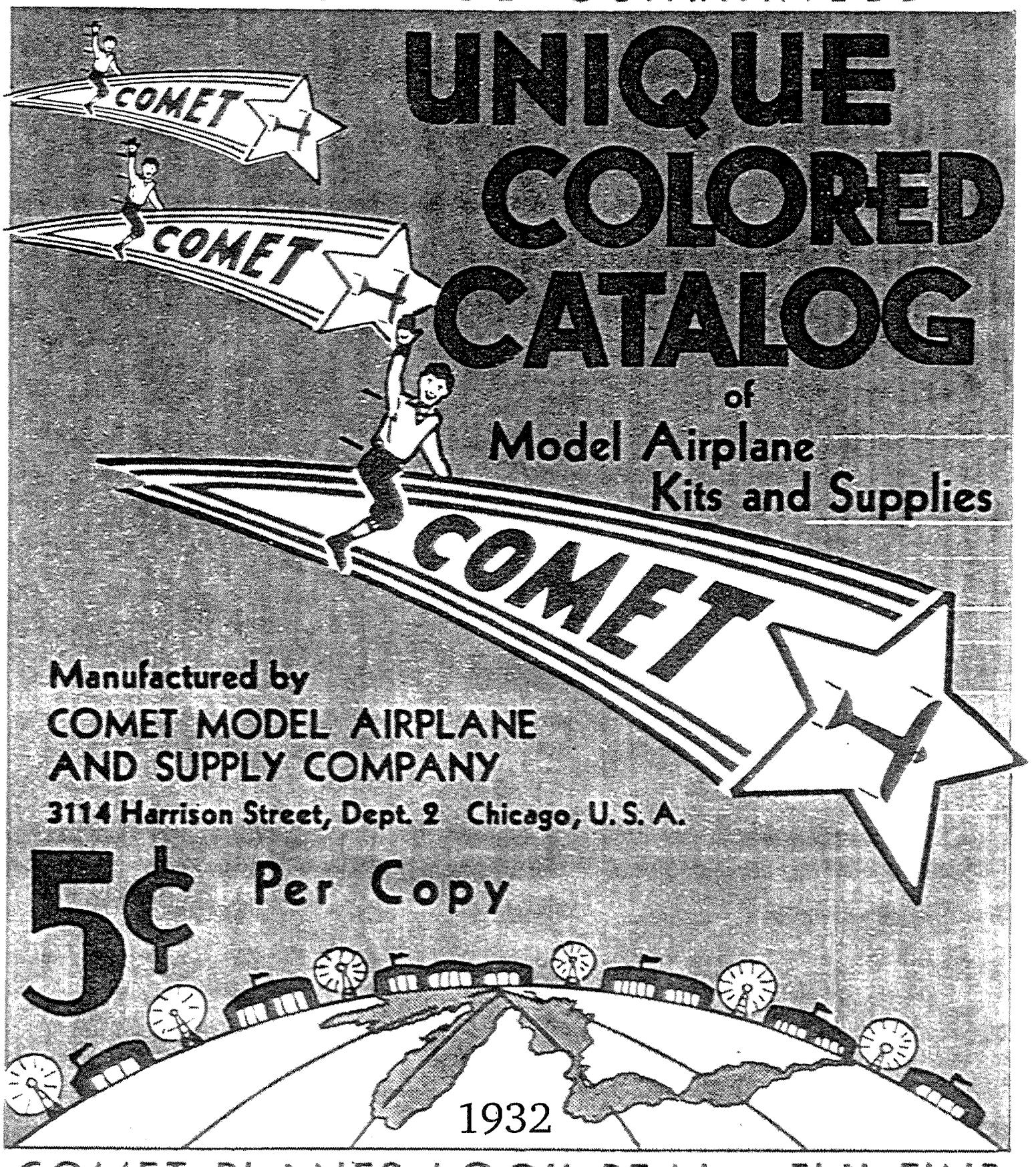
Dear Sir:
I've had a great time building my Curtiss Jenny. It is the first time I have ever tried to do anything of the sort, and I did it all myself. Berne's instructions in the New York Telegram were not too exhaustive, for which I was very grateful. His instructions were just right for aiding any one who wants to learn constructional details. I had to pore over the blue print for two days, and the result is I think I could almost build a Model Jenny with my eyes blindfolded.
And, by the way, I learned something which should be a help to me at Curtiss Field if I keep it in mind, and it is this: pay attention to detail and do exactly as you are told! If you are disobedient and do things in your own way, you're apt to get into trouble.
When attaching the landing chassis to the body, I measured with my eye instead of using a ruler, and when I put the plane on the ground, I found that the propeller dragged. Then I measured (too late!) and was put to the trouble of doing it all over again. I broke the reed in taking off the chassis and had to obtain more reed, and it was a lesson I hope I won't forget in a hurry.
Very sincerely,
HAZEL MARJORIE BROWN
Chester, W. Va.

U. S. MODEL AIRCRAFT CORP.,
Brooklyn, N. Y.
Received model sets of famous airplane models for Antarctic Expedition.
Yours truly,
C. E. LOFGREN,
Secy. to Comm. Byrd.

Dear Sirs:
I received the shipment a few days ago containing the model Fokker and other parts O. K. and have built the Fokker and tested it out, and it takes off just fine.
It flies practically perfect, at least to the extent that my friends and I are satisfied with it to the highest.
The plane complete weigh 9½ ozs. and left the ground in 11 feet and flew a distance of 49 feet, making 59 feet from start to finish. It lifted about six feet in a moderate wind.
The first test was made without any mishap, but the second one, when the picture was taken, the landing gear was slightly damaged, but was easily repaired.
Yours very truly,
ORVILLE Z. FRAZIER.
411 Avondale Ave., Elkhart, Ind.

U. S. Model Aircraft Corp.
Brooklyn, N. Y.
Dear Sirs:
Received my order for one Bellanca construction set and am pleased with model built from it.
The Bellanca is a beautiful little ship. I have not tried to fly it, as model building is only a hobby with me and I use the completed models for ornaments about my house.
Sincerely yours,
EUGENE H. RICE.
21st Infantry Post, Ft. San Antonio,
San Antonio, Texas.

RETURN POSTAGE GUARANTEED . . .




COMET PLANES LOOK REAL—FLY FINE

ARE EASILY BUILT AND COST SO LITTLE

# A Personal Letter To You

*from The Comet Kid . . .*

"Dear Model Builder:

"Here's your personal copy of the most amazing model airplane catalog you have ever seen—the new and better kind you've been waiting for!

"Printed in five beautiful tints on rich, smooth enamel paper, it shows *each* and *every* Comet plane in *all* its smashing, bright, true colors! Now you'll *know before you buy* exactly *how* your Comet kits will look when you have built them! I think you'll appreciate this 'all-color' feature.

"My unique, *modern* Color Catalog gives you another *very important* advantage over ordinary ones. Just think! Below each genuine full-color photograph of each Comet plane (photos of planes *built by builders from Comet Kits*), I have carefully listed ALL materials you get in the kit . . . the kind of materials . . . and the size of the parts! I did this because I wanted you to know BEFORE YOU BUY—that Comet gives you FULL VALUE. My wonderful supplies are also carefully described in words and by actual photographs.

"Notice how *low* all Comet prices are! How COMPLETE each kit is! How each kit is packed in a beautiful, strong, brightly colored box! How we manufacture *flying* model kits only! And how our materials are of finest quality!

"My plain, unvarnished guarantee is 'Satisfaction or Replacement Made or Your Money Refunded!' It means just what it says. If my kits and supplies do not satisfy you, send them back to be replaced without cost—or if you'd rather have your money back—just say so. You alone are to be the judge of satisfaction.

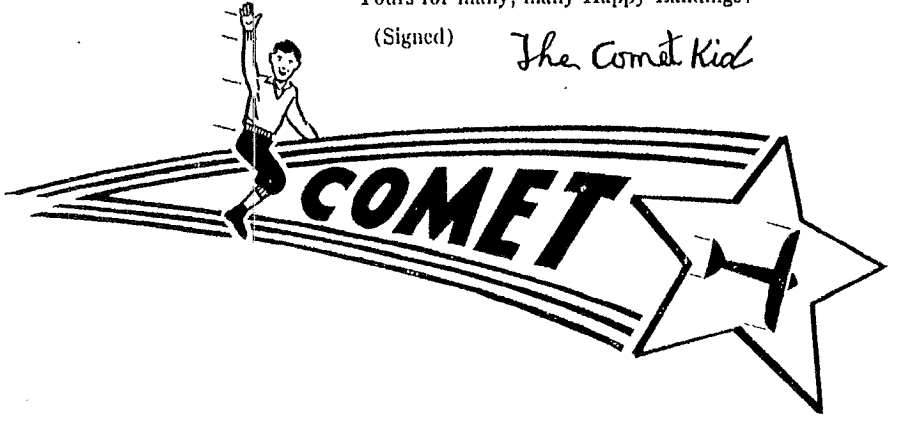
"I want you to make good use of this gorgeously colored catalog. Read it thru, buy our kits and supplies—put it in a safe place and KEEP IT. You'll receive additional pages from time to time with new models, new supplies listed, also new order blanks.

"I wish you'd always order from your Comet Dealer. If there's none near you or in your city, *please help me get one!* Send me his name, address. I'll do the rest. Until you DO have a Comet Dealer, *order direct from me using the Order Blank enclosed!*

"Tell your friends if you like my supplies and kits. They too, will be glad to do business with a *dependable,* truthful, business-like company.

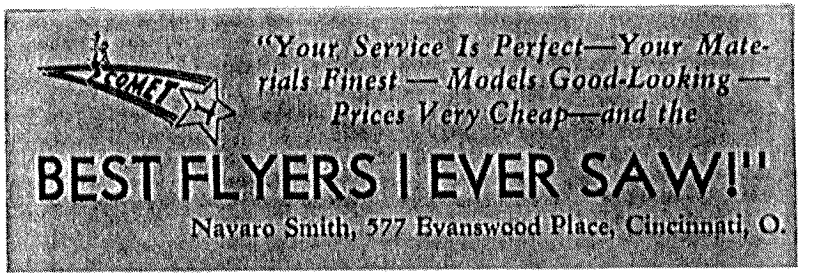
"Yours for many, many Happy Landings!"

(Signed) The Comet Kid






# *"Read This Page First!"*




Every Comet customer is impressed with the way our planes FLY. We have received thousands of letters from model builders all over the world stressing this ALL IMPORTANT flying feature. We believe YOU, TOO, will want to build planes that not only look good, cost little, are easy to build but that also fly and fly and fly! What an ever-new thrill it is to see your Comet plane rise into the blue, and hum along above the house tops to hundreds of feet distance—then gracefully glide to a perfect 3 point landing! It's FUN to build 'em—More fun to FLY 'em!

## Our Planes EASIEST to Build and SPECIALLY Designed to FLY FINE!

Our creative engineer (really a genius) has these significant words hung on the wall above his designing table: "DESIGN EVERY COMET PLANE TO BE 'EASILY BUILT' AND A GOOD FLYER!" So many beautiful kits on the market are hard to build—so many will NOT fly! ALL Comet kits are EASY to build—*look beautiful* and ALL FLY like birds! Fix this fact in your mind—you can depend on Comet planes to have remarkable, fundamental "flyability" always! Get your kits now—nothing like a *personal* test to convince you!

### *Comet Conceals Nothing! Comet Lists All Kit Contents!*

We *want* you to know the number of parts, size of those parts, and EVERYTHING that goes into each kit—because we are proud of the generous values we give for your money. We were perhaps THE FIRST to adopt this sensible method. We did it because *we knew* model builders would appreciate it.

### *ORDER NOW—Our Kits Cost So Little—Give So Much!*

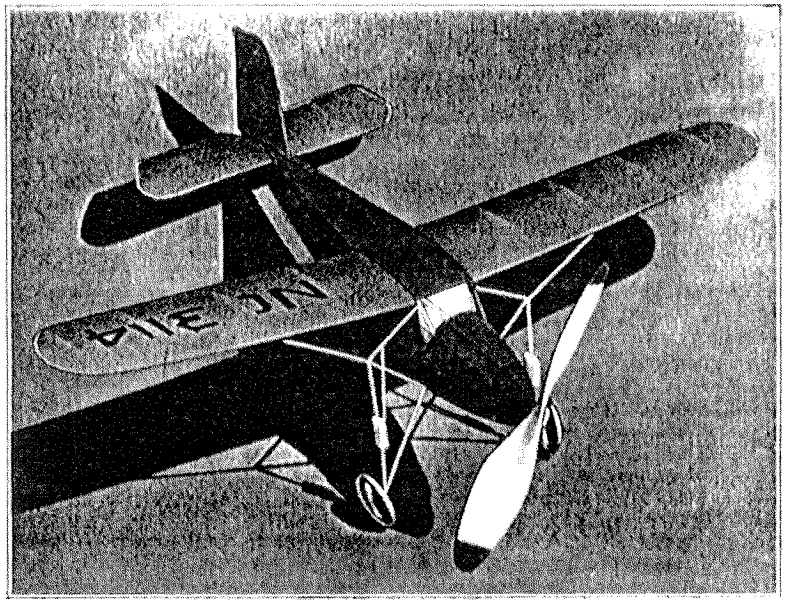
Hundreds of model enthusiasts wonder why we price our high-quality, complete kits so LOW. They insist that our kits are the greatest bargains of all. Here's why we do: We believe YOU would rather buy and build *three* REAL *FLYING* COMET PLANES for what it would ordinarily cost you to buy and build only *one* expensive plane, and that *one* high price plane would probably give you *disappointing* flights. So read through the catalog now, then buy the planes that FLY!

BIG NEWS!

AMAZING NEW INVENTION—*The Bates Jr. Colored Celluloid Propeller—Included FREE with Each $1 and $1.50 Comet Kit!!* This is an EXTRA and FREE feature! This revolutionary, new propeller is *already formed*—ready for the shaft! Has Greater pulling power—perfect balance, permanent, ideal camber—correct pitch—is *indestructible*—realistic looking—featherweight—strong—will fly models better—and does away with propeller carving! Easy to put on plane! Free(with shaft)with each $1 and $1.50 kit only.

May be ordered for other kits (each propeller in Glassine bag) as follows: 5" size, 12c each; 6" and 7" size, 15c each. Choose any one of these COLORS: Red, Green, Yellow, Chalk-white. Get yours quick!

*Comet Kits Score the Hits*



Wing-span: 17½"—Length: 14"

# CURTISS ROBIN CABIN

## Comet's FLYING Scale Model Good for 1500 Feet!

Isn't she a beauty? Bright red fuselage and rudder—everything else in attractive orange. A Curtiss Robin type—one of the surest model FLIERS you will ever own—and of course, dead easy to build—because it's a Comet-crafted ship! This sky-bird is, in fact, as easy to build-up as our world-famous Dipper. Here's a humdinger of a sure flyer—and the price *could be twice as much* for the splendid value as you will see when you read through the complete list of contents below.

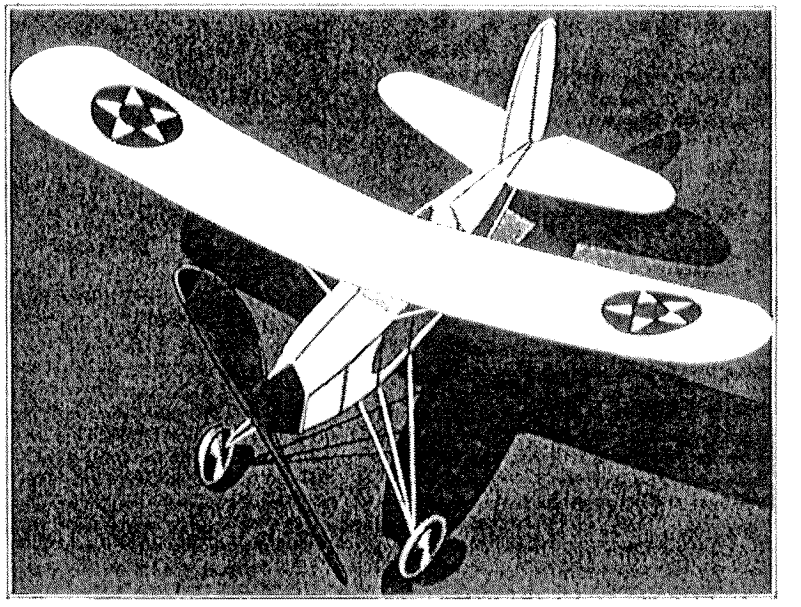
*You Get ALL This in Kit:*

And what a *complete* kit it is! Here you are: Stamped rib sheet; 7 balsa strips 1/20" x 3/16" x 15"; sandpaper; 22" length of 1/8" flat rubber; balsa leading edge 3/32" x 3/32" x 15"; pair 1 3/16" dia. black celluloid wheels; propellor block 1/16" x 7/8" x 7"; 3 shredded bamboo; noseblock 1/2" x 7/8" x 1 5/16" with bevel; tube cement; banana liquid; 6" length No. 9 music wire; cellophane 2" x 6"; waxed tissue; red tissue 6 5/8" x 12"; orange tissue 8" x 10¼" with printed numerals. One package holding prop shaft, rear hook, 2 washers, head, 10 pins. Balsa tailskid piece 1/8" x 1/8" x 3/8"; tailpiece 3/32" x 3/16" x ¼"; balsa for shock absorbers 1/16" x 3/8" x ¾". FULL-SIZE plan, illustrated instructions.

**$1.00** POST PAID OR AT YOUR DEALER

*Comes Packed in Beautiful, Big, Orange and Red Box—Get Yours!*

*Comet Kits Guaranteed to Satisfy*



Wingspan: 12½"—Length: 9½"

# "MY DIPPER FLEW 900 FEET!"

ROBT. E. LATAS (Colo.)

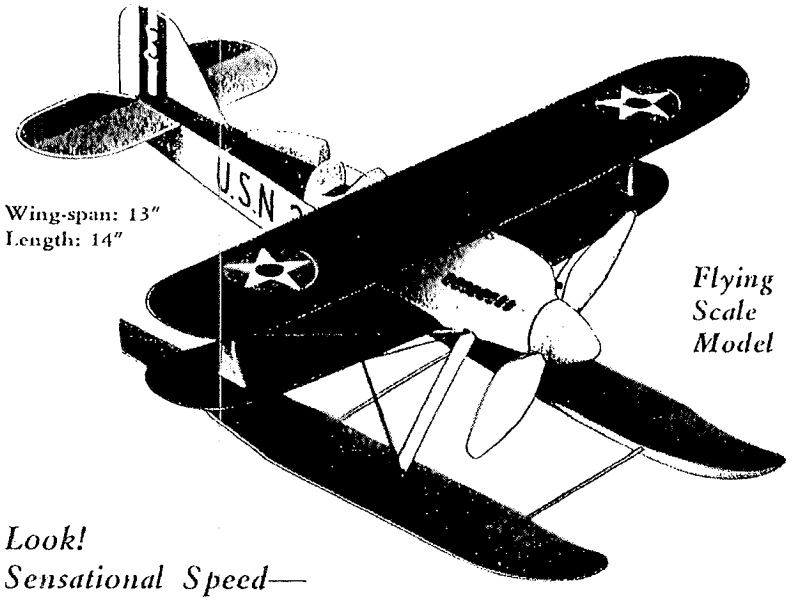
Yes, this extraordinary Comet-crafted, original Comet-design plane is the most sensational flyer thousands of builders ever flew! Weighs less than one-half ounce, rises off ground under own power (as ALL Comet planes do)—can be built in 3 or 4 hours EASILY. Beginners and old-timers are crazy about The Dipper. Looks pretty as a picture in its colors. (See actual photo above.) Get yours now. You will thrill thru and thru when you see it climbing up into the blue skies—its all-balsa propeller whirling—its white wings gleaming! Biggest bargain ever!

*Just Read These Kit Contents!*

Complete as can be. Look! You get all this: 1 printed sheet with all formers, ribs, etc. 2 army star insignia 1 piece fine sandpaper 1 length of 1/8" flat rubber 14" long one 3/32" x 3/16" x ¾" balsa 1 pair disc wheels 1 balsa propeller block 1/2" x ¾" x 6" 6 balsa strips 1/20" x 1/8" x 12" 1 balsa wing spar 1/20" x 1/8" x 12" 5 pieces shredded bamboo 1 special balsa noseblock tube model cement bottle banana liquid 1 piece music wire 1 propellor shaft 1 rear hook all washers plenty of pins 4 pages of illustrated instructions 1 FULL SIZE plan 1 sheet 6½" x 21" Japanese tissue 1 strip blue tissue 1 sheet waxed tissue.

*Everything You Need Packed in Attractive, Colored, Stout Box!*

**50c** POST PAID OR AT YOUR DEALER




Wing-span: 13"
Length: 14"

*Flying Scale Model*

*Look!*
*Sensational Speed—*

# U. S. NAVY R-A-C-E-R

There's the snap and tang of the salty sea—the bright colors of The Flag We Love in this Comet-crafted U. S. Navy Racer. This FLYING Scale Model FLIES! As you watch it swiftly skim the water, glide up into its sky-home, and RUSH along until it slips down to a perfect water-landing—you'll feel more than repaid for the short time you spent building this easy-to-build navy beauty. Colored red, white and blue! May be hand-launched and will land without damage to the pontoons. It's a whole lot of plane for a little bit of money! Get yours now and enjoy some real sport!

*Read These Complete Kit Contents:*

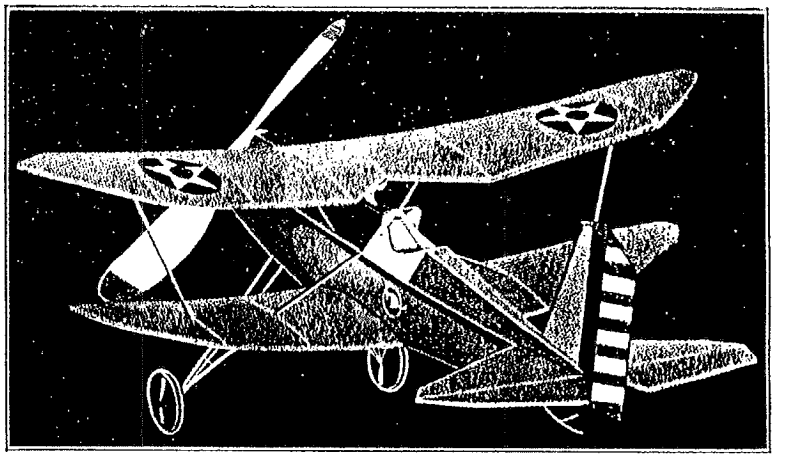
Stamped rib sheet; 10 balsa strips 1/16" x 1/16" x 16 1/8"; 2 pair 1½" Navy wing insignias; sandpaper; 34" length 1/8" flat rubber; 2 bal. strips for leading edge 3/32" x 3/32" x 12"; propellor block ½" x ¾" x 5"; 8 shredded bamboo; noseblock 5/8" x 1¾" x 2¾"; spinner block 1" x 1" x 1" with ¼" groove; headrest block 3/8" x 3/8" x 2". Tube cement. Large banana liquid. 30" length black thread; balsa for struts, pontoons 3/32" x 3/16" x 16"; 6" length Bakelite tubing 3/32" dia. Package containing: propellor shaft, rear hook, 2 washers, bead, 6 pins, spec. aluminum disc, celluloid for windshield. Waxed tissue; white tissue with printed insignia 10¼" x 12"; blue tissue 5⅛" x 12"; red tissue 12" x 20½". Rudder bars on gummed paper. FULL-SIZE plan, illustrated instructions.

**$1.50** POST PAID
OR AT YOUR DEALER

*Comes in "Our Flag" Box—*
*Red, White and Blue—Order It!*







Wing-span: 15"—Length: 12¼"

*Comet's Own Creation—*

# ARMY C-I-PURSUIT

*Flies 1300 Feet!*

*"Your Pursuit Made a Record Flight For Me of* **1300** *Feet"* writes Clyde Kowalka of Ohio, one of hundreds of builders who have made amazing flights with this beautiful 5-color plane! Look at that color photograph above—that's how she looks—and you KNOW how she flies! Clear, detailed drawings make it dead easy to build—like ALL Comet-crafted planes. The C-I-Pursuit speeds along the ground, climbs into the sky—spirals up . . . and up . . . then gradually glides to a perfect 3-point landing! So *cleverly* is FLYABILITY built-in that it flies with upper or lower wing only! Your Pursuit is waiting for you! Buy it.

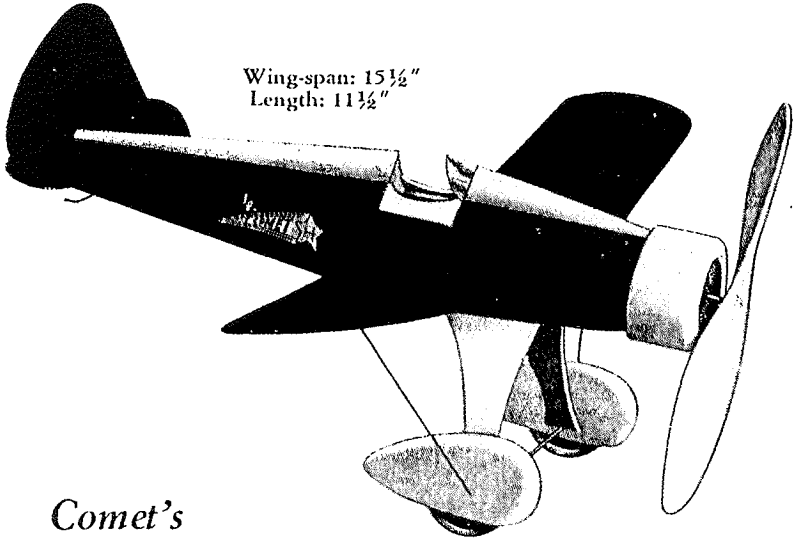
*Here's What You'll Get—EVERYTHING:*

1 printed sheet balsa with all ribs, formers, etc. 2 army star insignia 1 pair squadron insignia 1 balsa propellor block 7/8" x 7/8" x 7" 1 piece fine sandpaper 12 balsa strips 1/16" x 1/16" x 13¼" 2 balsa wing spars 3/32" x 3/32" x 12" 3 pieces shredded bamboo 3 feet of 1/8" flat rubber 1 pr. 1 3/16" celluloid wheels 1 balsa 3/32" x 3/16" x 1¼" celluloid for windshield brass washers pins 1 propellor shaft 1 rear hook bottle banana liquid tube model cement special balsa nose-block 4 pages detailed instructions 1 FULL SIZED plan 1 sheet orange Jap tissue 8" x 20" 1 sheet brown Jap tissue 6⅛" x 12" 1 sheet waxed tissue.

**75c** POST PAID
OR AT YOUR DEALER

*Packed in Big, Showy, Yellow and Black Box—Buy Yours Today!*

*Comet Flying Scale Models FLY*




*Comet's*

# RED R-A-C-E-R

*Our Original Design*

Quick as a flash Comet's Red Racer shoots up into the air, levels off and goes s-t-r-e-a-k-i-n-g along to new speed records! Say you can almost imagine yourself riding inside the Red Racer's cockpit its flight is so real, so life-like, so *thrilling!* This is Comet's original, exclusive model. No one else has it or can have it. But YOU can get it and build it easily and quickly—and it will FLY LIKE SIXTY! The low price will please you. Act now—get *your* Red Racer!

*COMPLETE Kit Contents:*

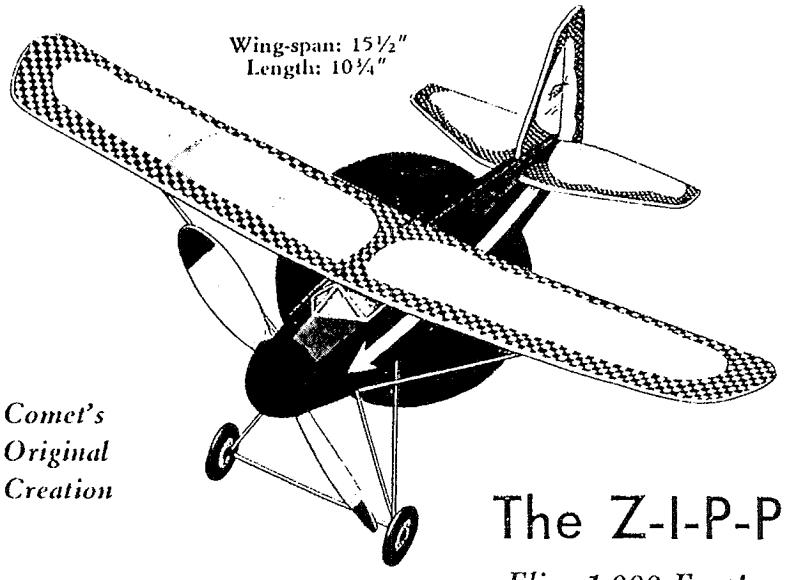
**$1.00** POST PAID

OR AT YOUR DEALER

Everything you need: 2 stamped rib and former sheets; 2 special balsa pant pieces ¼" x 1" x 2 9/16" for wheel; 6 balsa strips 1/16" x 1/16" x 15". Sandpaper. 32" length ⅛" flat rubber; 13" length 3/32" x 3/32" leading edge balsa; pair 1⅜" dia. black celluloid wheels; balsa prop block ½" x ¾" x 6"; 4 shredded bamboo; special finished cowling; tube cement; banana liquid; waxed paper; red tissue; white tissue. Package containing: propellor shaft, rear hook, special aluminum disc, ¼" length of 3/32" Bakelite tubing, 10 pins, windshield celluloid ⅜" x 1¼"; 2 washers. FULL SIZE plan, illustrated instructions. *What a kit!*

*You Get It Neatly Packed in Red, White and Black Box!*

*Comet Planes Are Easy to Build*




*Comet's Original Creation*

# The Z-I-P-P

*Flies 1,000 Feet!*

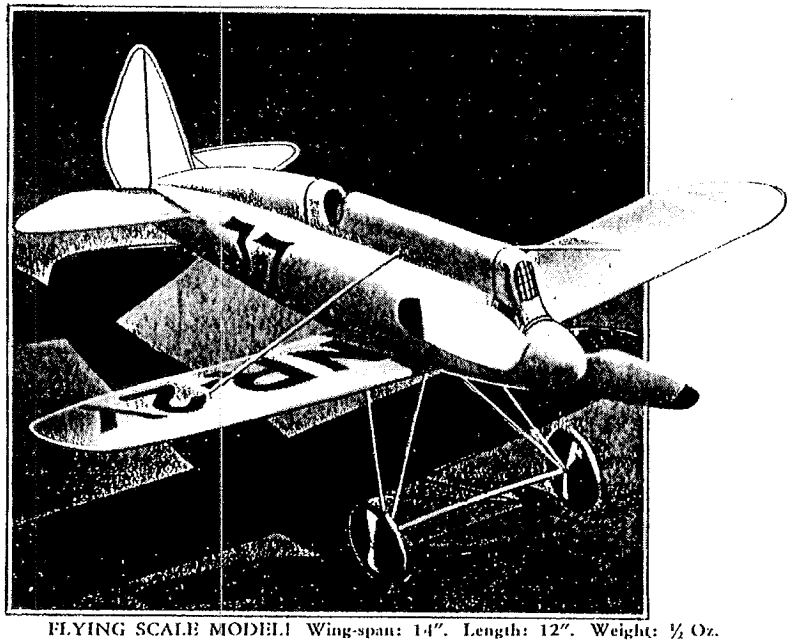
Here's another famous FLYING MODEL originated and designed only by Comet. This trim baby should fly 1,000 feet! The Zipp's gleaming, colored cabin windows, checkered blue and white designs on wings make it a gorgeous sight. It's easy to build—and lives up to its name. We're proud to tell you it's *Comet-crafted.* The price is unusually modest—only three two-bit pieces and she's yours to build, fly and enjoy. Get the Z-I-P-P now!

*Of Course the Kit's Complete!*

All Comet kits are. Look: stamped rib sheet; balsa strips 1/16" x 1/16" x 12"; sandpaper; 15" length ⅛" flat rubber; balsa leading edge 3/32" x 3/32" x 13¾"; propeller block ½" x ¾" x 6"; 3 shredded bamboo; spinner block ⅞" x 1¼" x 1¼" with groove; tube cement; banana liquid; cellophane 2" x 6"; waxed tissue; white tissue with printed blue checkered design and arrows; blue tissue 6" x 10¼"; printed balsa wheels. Package containing: prop shaft, rear hook, 2 washers, bead, 8 pins, spec. aluminum disc; tailpiece 3/32" x 1/16" x ⅞". FULL-SIZE plan, illustrated instructions. *Get yours!*

*Packed in Strong, Handsome, Colored, Cardboard Box*

**75c** POST PAID OR AT YOUR DEALER



FLYING SCALE MODEL! Wing-span: 14". Length: 12". Weight: ½ Oz.

# THE HOWARD RACER

"FLEW IT NEARLY 900 FEET—150 FEET HIGH!"

EDWIN M. FARVER (Ohio)

What a thrill—the thrill of a lifetime—is in store for you when you quickly and easily build and fly this speedster! It's the spittin' image of Howard's famous racer—perfectly streamlined—acts like a real plane! The best bargain and biggest value in Howard *flying* scale models; You get it—build it—and judge for yourself. This COMET Howard Racer will rise off ground—s-h-o-o-t thru the air like a bullet—and DO all the things you always *wanted* other scale models to do! Build it!

**75c**

POST PAID
OR AT
YOUR DEALER

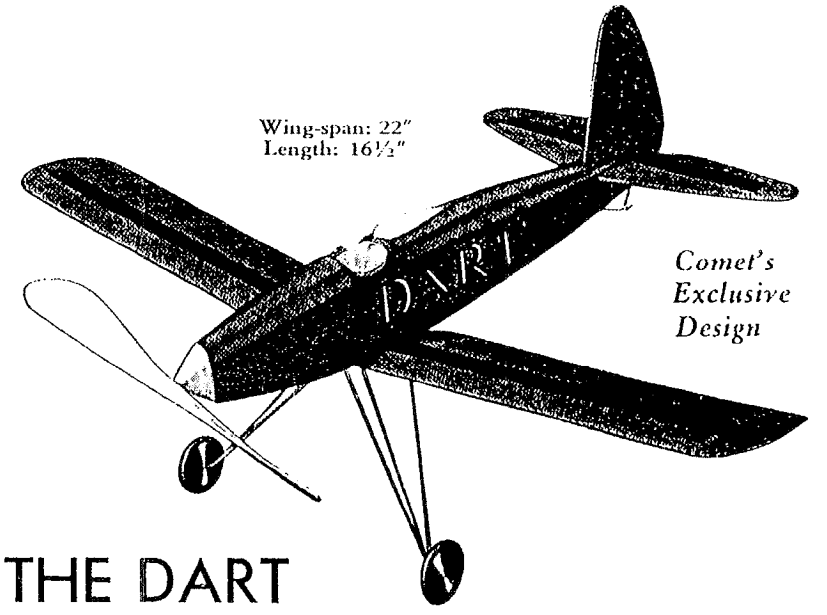
*The Complete Kit Contents:*

1 printed sheet balsa of all formers, ribs, etc. all wing, body numbers on gum paper 1 piece sandpaper 1/8" rubber 17" long one 3/32" x 3/16" x 10" bal. strip pair celluloid wheels balsa propeller block 10 bal. strips 1/16" x 1/16" x 10" bal. leading edge 3/32" x 3/32" x 11" 5 shredded bamboo 3/8" x 3/4" x 1" bal. radiator block—spec. cut bal. spinner block tube Comet cement bottle banana liquid music wire prop. shaft rear hook 3/32" x 3/16" x 3/4" balsa washers pins spec. aluminum spinner-piece thin sheet balsa for cowling complete illustrated instructions FULL-SIZED detailed plan big sheet White Jap Hakone tissue.

*Carefully, Neatly Packed in*
*Big, Tinted, Stunning, Box*

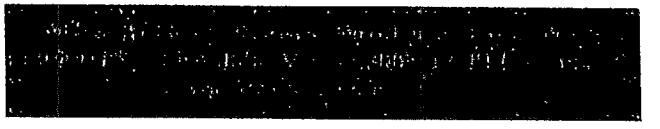







*Comet's Exclusive Design*

# THE DART



What a flyer! And one of the slickest looking—sweetest flying ships you will ever build! Look at those low, shapely wings—detachable, too! that classy little cockpit streamlined nose that graceful, thoroughbred appearance that simply spells "class" and long flights. It's a big plane and it FLIES! And mighty easy to build with Comet-crafted, clear instructions. The photo shows you how it looks—now YOU build and fly it!

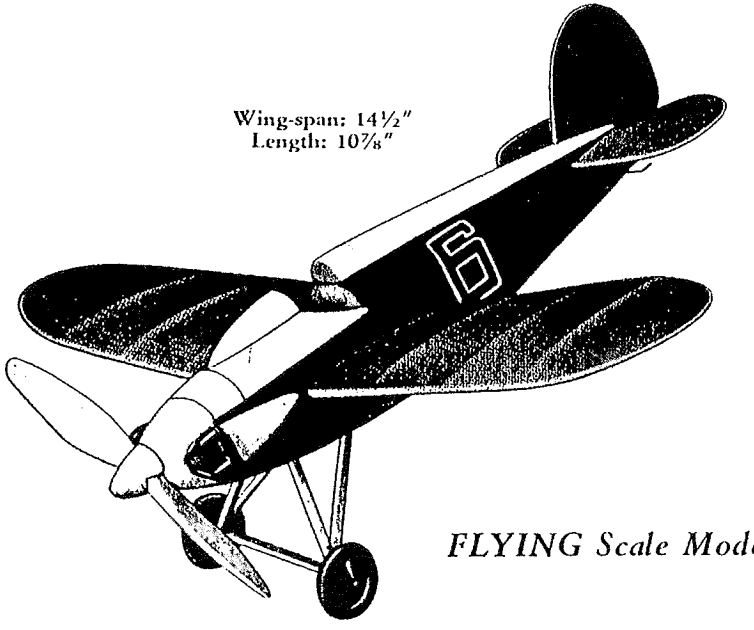
*Get This COMPLETE Kit Now!*

1 printed sheet balsa with all ribs, formers, etc. 2 army stars 1 balsa propellor block 3/4" x 1 1/8" x 8" 1 piece fine sandpaper 1 reed 6" long 1 piece music wire 1 balsa piece for headrest 1/2" x 1/2" x 2 1/2" 9 balsa strips 1/16" x 1/16" x 16 1/2" 1 balsa noseblock 3/4" x 1" x 1 3/8" 9 pieces shredded bamboo 2 balsa wing spars 3/32" x 3/8" x 11" 4 balsa wing spars 1/16" x 1/8" x 10 1/2" 50" length flat rubber 1/4" wide. 1 pair 1 3/8" celluloid wheels tube model cement bottle banana liquid large FULL-SIZE plan with instructions 1 sheet Jap mange tissue 20 1/2" x 24" 1 sheet waxed tissue 1 propeller shaft 1 rear hook 2 pieces brass tubing 1/16" diam. and 1 3/8" long pins celluloid for windshield 1 balsa 3/32" x 1/16" x 3/4" brass washers. Insignia.

*Packed in Artistically-Designed,*
*Richly Colored, Strong, Box*

**$1.00**

POST PAID
OR AT
YOUR DEALER




*FLYING Scale Model*

# HEATH BABY BULLET

Carefully modeled to look like the world-famous Heath Baby Bullet—this Comet-crafted FLYING Scale model will delight you with its *built-in flyability* and striking streamlines! Colored blue and orange. Look at that picture above! Wouldn't YOU like to fly it? You can build it easily and fly it like a falcon with our easy instructions and complete, full-value Comet Kit! What a bargain! You want it? Then get busy and get it now!

**$1.00 POST PAID**
**OR AT YOUR DEALER**

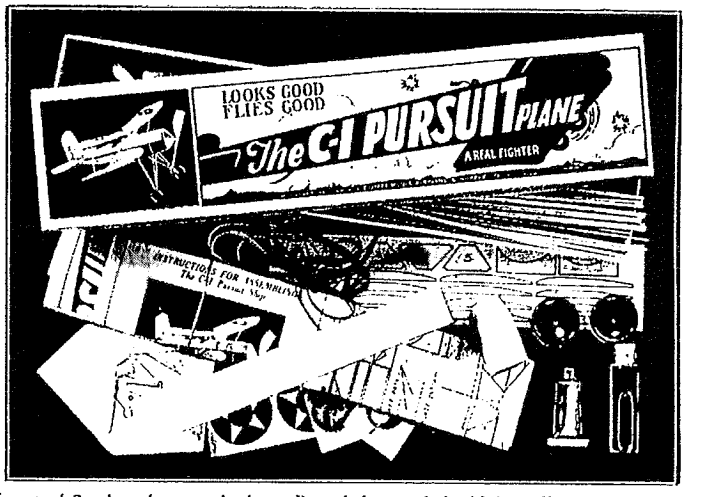
*Complete List of Kit Contents:*

Rib sheet; 1/64" x 1¾" x 3" printed balsa sheet for cowlings; sandpaper; gummed numetal sheet; 15" length ⅛" flat rubber; 3/32" x ⅜" x 12" balsa for landing gear struts and tailpiece; leading edge balsa 3/32" x 3/32" x 10"; balsa strips 1/16" x ⅛" x 12"; pair 1" dia. black celluloid wheels; 2 celluloid motor cylinders; propellor block ½" x ¾" x 5"; 4 shredded bamboo; spinner block ⅝" x ⅝" x ¾"; headrest ½" x ½" x 5½"; head fairing block ½" x ½" x 1½"; 2 engine fairings ⅜" x ½" x 1⅜"; noseblock ⅛" x ⅛" x 1⅝". Tube cement. Banana liquid. Waxed tissue. Orange tissue 10¼" x 12". Blue tissue 4" x 10⅛". Package containing; propellor shaft, rear hook, 2 washers, head, 6 pins. FULL-SIZE plan, illustrated instructions. A VALUE OF VALUES! Get it!

*You Get It ALL in Sturdy, Gloriously Colored Box*



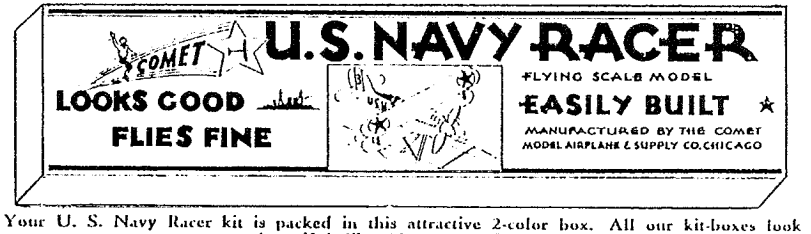





**This actual 2-color photograph shows Pursuit box and the high-quality materials inside.**

## Each Comet Kit Is Packed in Strong, Beautifully-Designed, Colored Box!

Each Comet Kit is *neatly*, scientifically packed inside of strong, durable, crisply-printed, handsomely-colored card-board BOXES! Comet NEVER uses awkward, bulky "mailing tubes" or cheap, flimsy "corrugated paper wrapped" packages! It costs us more to pack each kit the Comet-way—but it gives YOU more value for your money. An actual photograph of the built-up plane is printed on each box-top. Our Comet Kid picture on each box identifies it as a genuine Comet product. Always look for his picture, then buy with *confidence*.




**Your U. S. Navy Racer kit is packed in this attractive 2-color box. All our kit-boxes look beautiful, like this sample picture.**

*"Comet SERVICE Is Unparalleled!"*

PHILIP LAWRENCE (Ohio)

Besides giving you quality, colored kit-boxes finest materials, and unusually low kit and supply prices—Comet *leads* in giving you SERVICE! Every model builder "wants what he wants when he wants it!" Literally THOUSANDS of builders all over the world have told us that our service was PERFECT. We *specialize* on giving you what you want just as fast as is humanly possible. Ten minutes from the time your order is received, our efficient employees are filling you order. It goes out to the post-office WITHIN TWO HOURS! Where else can you secure this quick service without extra charge!

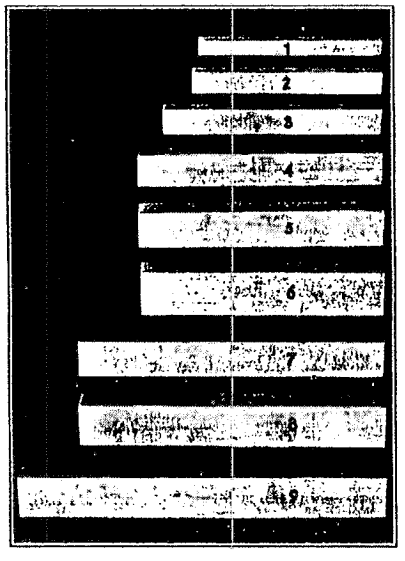
*Comet Kits Are Inspected for Quality and Completeness!*

# SUPPLIES

"Enclosed is money order for $4.71 from members of Gardner Model Airplane Club. Wanted to tell you I have ordered from YOU because

**YOUR BALSA IS THE STRAIGHTEST, SMOOTHEST, CORRECTEST IN SIZE AND THE BEST QUALITY!"**
WM. H. HATTON, Jr., Treasurer *(Address on file)*

*Thank you,* Mr. Hatton. It's a genuine pleasure to get such letters from you and other builders all over the world. It shows us that YOU builders appreciate the painstaking inspection and careful quality buying we do. It PROVES that we have accomplished our aim—and that is to furnish all Comet customers with the best model airplane supplies at unusually reasonable prices. Our SERVICE on supplies is just as FAST as on kits. Read through the Supply Section now—and order what you want with full confidence that you can DEPEND on getting quality, correct sizes, experienced craftsmanship, perfect packing and Special Fast Service—all at our remarkably LOW prices!



Comet's Quality "Prop" Blocks

## BALSA WOOD

Balsa wood comes from the West Indies, Central and South America. Comet buys only the best—that which is "cultivated" (grown under careful supervision) and uses this kind exclusively in Comet Kits and Comet Supplies. This magically light wood is watched over by experts during growth and the trees cut at the ideal time to insure full strength and light weight. Not only does Comet buy the best balsa but Comet has the equipment and the knowledge to insure a nice, smooth, perfect cut. Every piece is uniformly machined. And you'll never find a worm-hole, a knot or pith in a piece of our balsa because we use only straight-grained, white, and highest quality balsa. Try Comet balsa once and you'll always use it.

## Aluminum Sheets

Sheet aluminum .006 in. thick 6" x 4" size..5c

## Standard Propeller Blocks

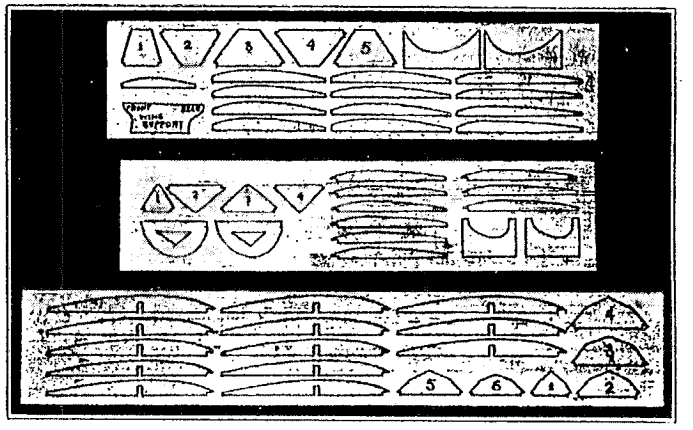
Look at the photo above showing different size Comet balsa prop blocks! Each is smoothly finished on all sides, true to dimensions, and precisely squared by special machinery. They make carving a genuine joy. Order by number.

| | in. | in. | in. | |
|---|---|---|---|---|
| No. 1 | ½ | x 5/8 | x 6 | 1c |
| No. 2 | ½ | x ¾ | x 6 | 2c |
| No. 3 | 5/8 | x ⅞ | x 7 | 3c |
| No. 4 | ¾ | x 1⅛ | x 8 | 4c |
| No. 5 | ¾ | x 1¼ | x 8 | 5c |
| No. 6 | ¾ | x 1¼ | x 10 | 7c |
| No. 7 | 1 | x 1½ | x 8 | 8c |
| No. 8 | 1 | x 1½ | x 10 | 10c |
| No. 9 | 1 | x 1½ | x 12 | 12c |

Can furnish other sizes to order.







## Printed Balsa Sheets

Our printed balsa ribs (see photo above) are a joy to work with. Each part accurately printed in clear, black lines exactly corresponding to our model plans. Each sheet inspected for thickness, grain and finish before and after printing. They will satisfy your most rigid requirements.

Upper Balsa Sheet (For C-I Pursuit)..... 5c
Middle Balsa Sheet (For Dipper)..... 5c
Lower Balsa Sheet (For Dart)..... 5c
Rib Sheet with Formers (Howard Racer).... 5c
Rib Sheet with Formers (Set of 2, for Red Racer)..... 10c
Rib Sheet with Formers (For Zipp)..... 5c
Rib Sheet with Formers (For Curtiss Robin). 5c
Rib Sheet with Formers (For Heath Bullet).. 5c
Rib Sheet with Formers (U. S. Navy Racer). 10c

## Plain Sheet Balsa

Comet sheet balsa is perfectly cut. No variation in thickness on entire piece. Finished to a sanded-like smoothness. Straight-grained; entirely free from hairy surfaces. Ready for instant use. How you'll like it! (Other sizes furnished to order.)

| | 24" | 36" | | 24" | 36" |
|---|---|---|---|---|---|
| 1/32" x 2" | 5c | 8c | 1/16" x 2" | 12c | 18c |
| 1/16" x 2" | 6c | 9c | ¼" x 2" | 14c | 21c |
| 3/32" x 2" | 8c | 12c | 1/16" x 3" | 8c | 12c |
| ⅛" x 2" | 10c | 15c | 1/16" x 4" | 14c | 21c |

## Strip Balsa

Comet strip balsa is uniformly cut. Each piece perfect in every way. And because our balsa strips have no weak spots and are of uniform weight and strength—you will eliminate the usual trouble of building frameworks that warp. Use Comet balsa—a word to the wise is enough.

| | 24" | 36" | | 24" | 36" |
|---|---|---|---|---|---|
| 1/16" x 1/16" | 1c | | 3/32" x 3/32" | 3c | 4c |
| 1/16" x ⅛" | 2c | | ⅛" x ¼" | 3c | 5c |
| 1/16" x ¼" | 2c | | 1/16" x 3/16" | 3c | 5c |
| 3/32" x 3/32" | 2c | | ¼" x ¼" | 4c | 6c |
| ⅛" x ⅛" | 2c | 3c | ⅛" x ⅜" | 5c | 7c |

Can furnish other sizes to order.

## BAMBOO

Our bamboo is imported from the Far East and we accept only the best jointless pieces for Comet kits and supplies. This bamboo is cut from choicest part of bamboo plant giving great strength with lightness and satisfactory bending qualities. We furnish bamboo in two types: split and shredded.

| SHREDDED | SPLIT |
|---|---|
| 12" long by about 1/32" x 1/16"..... 2 for 1c | 1/16" x ¼" x 12"..... 2 for 3c<br>1/16" x ¼" x 15"..... 2c |

## Banana Liquid (New Handy Bottle)

Comet Special Banana Liquid holds the tissue tight to your framework. *It leaves no color!* Warning! Don't confuse our brand with the ordinary painter's bronzing liquid. Thru careful experimentation we have learned what is best for model airplane use. We offer you this clear, quality Comet brand with the certainty you'll find it perfect. The NEW container has wide opening to permit easy use of brush. Comes this way in 1 ounce size only.

1 ounce Special bottle..... 10c  2 ounce bottle..... 15c

## Blue Prints

Comet blueprints are so clear—so detailed—that any builder can easily and quickly construct his model. Mr. William Bibichkow, expert head of our model engineering department, has learned through years of experience how to design prints that are detailed yet easy to follow. For instance, every Comet blueprint has top, side and front views of the model. Moreover, they are priced low to give you double-value for your money. All notations are easily read. Once you use Comet blueprints, you'll say they're great!

## Comet-Crafted Flying Models

Dipper ..... 5c
C-1 Pursuit ..... 5c
Butterfly (34 in. span cabin monoplane) ..... 20c
Dart with instructions ..... 10c
Red Racer with instructions ..... 10c
Zipp with instructions ..... 10c

## Scale Model Blueprints

The low prices give no hint of the big value in each one. Sizes indicate wing span.

Curtiss Hawk P-1, 5¼" ..... 5c
Great Lakes Trainer, 6½" ..... 5c
Waco Taper Wing, 9" ..... 5c
Boeing Army Fighter, 5" ..... 5c
Pitcairn Mail-Wing, 4½" ..... 5c
Sikorsky Amphibian, 10¾" ..... 5c
Travel Air Mystery Ship, 17½" ..... 20c
Graf Zeppelin, 24" long ..... 20c
Vought Corsair, Navy Fighter, 24" ..... 30c
S.E.-5, 24" ..... 30c
City of Chicago (Stinson Detroiter), 24" ..... 30c
Curtiss Hawk P-6, 24" ..... 30c
Boeing Pursuit, 24" ..... 30c
Ford Trimotor, 38¾" (Super-size) ..... 50c

## *FLY*ing Scale Model Blueprints

Howard Racer, 14" ..... 5c
U. S. Navy Racer 13", with instructions ..... 10c
Heath Baby Bullet, 14¼", with instructions ..... 10c
Curtiss Robin, 17½", with instructions ..... 10c

## Carving Knives

Highest grade steel and "easy grip" handle makes propellor carving a pleasure when you use this knife. This brand carefully selected after actual tests of several different kinds. You will like this. Get one now.

Length over all, 6¼"; blade length, 2¼" ..... 60c

## Cement (Quick Drying!)

Comet cement is famous among model builders. Here's why: It dries quickly—holds fast when dry—is light in weight—transparent—waterproof—won't shrink—and does not require a second coat! Comet's special automatic filling and closing machine operating under pressure guarantees a full tube of cement without a single air bubble! Comes in bright yellow-black tube (see photo). AGAIN WARNING! Comet Cement is made and intended only for model airplane building. It will not mend chairs, etc. No *real* model cement will.

Big Tube Comet Cement ..... 10c
(Note: We carry ambroid at 10c a tube but strongly urge the use of Comet Cement for best results.)

## Celluloid Motor Cylinders

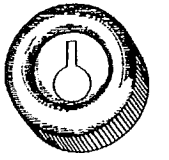
Constructed of *feather-weight* celluloid, these black cylinders look like the real thing! Get yours! Each ..... 4c

## Celluloid Sheets

Transparent Celluloid Sheets, 4" x 5½" .... 5c







## Cowlings

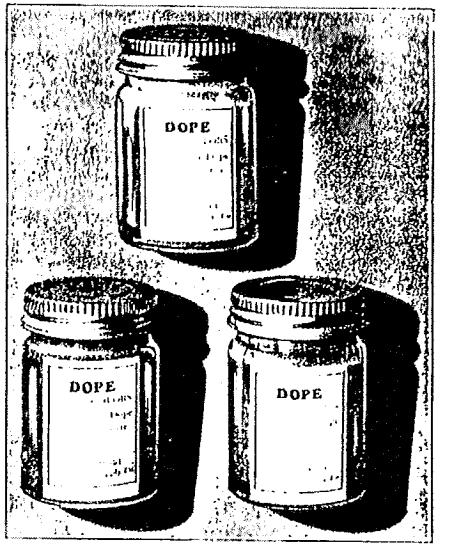
Realistic celluloid cowlings to improve the appearance of your models. Comet quality! 2¼" and 3" ..... each 35c

## Colored Dope (In New Jars)

How you'll like Comet colored dope—in the new "open-mouth" jars permitting quick, easy insertion of brush! Our dope is secretly mixed to give correct tissue shrinkage and uniform, opaque coloring. Leaves no streaks, dries quickly, light in weight. Best for Jap tissue, silk, balsa wood. Gives very smooth finish and a little goes a long way. One coat of Comet's famous Dope is plenty!

Colors listed come in 1 oz. "open-mouth" jars ..... each 15c
White, Black, Brown, Drab, Green, Orange, Red, Yellow, Blue

Dope Thinner, 1 oz. ..... 10c



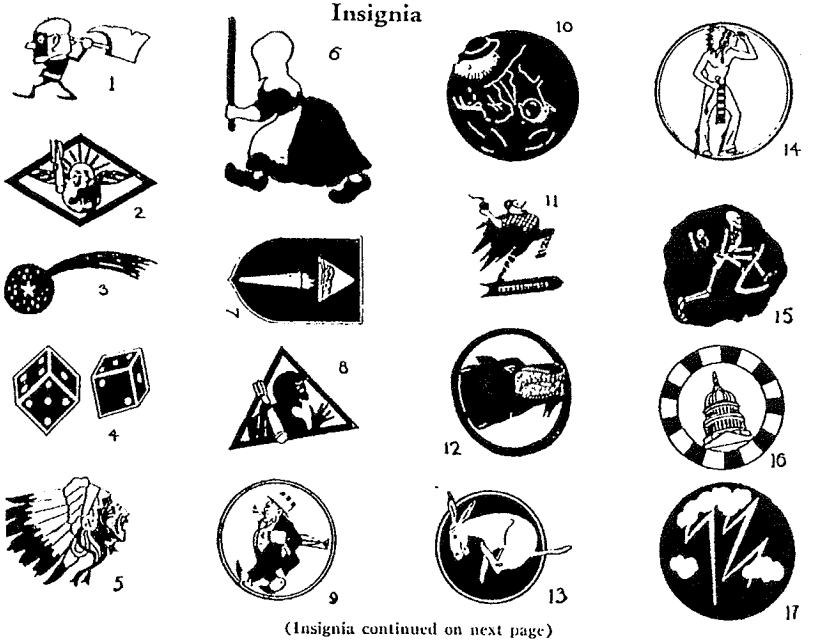

## Dowel Rods

1/16" dia., 24" length ..... each 2c
1/8" dia., 30" length ..... each 3c

## Glider

All-balsa Sling-Shot Glider, loops, glides, stunts! 10-second assembly, complete glider with steel hook, rubber bands, illustrated instructions ..... each 5c

## Insignia

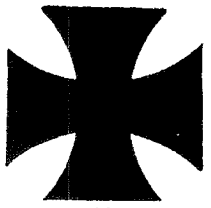



(Insignia continued on next page)

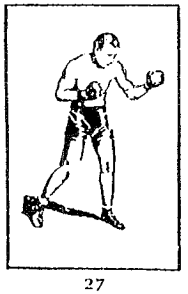
## Insignia (continued)

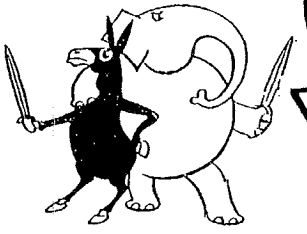
Comet insignia offers you a wide range of interesting and unusual subjects. Our insignia comes in pairs and bright colors. Each pair is gummed and is PACKED IN GLASSINE BAGS to preserve the gum. Just moisten the insignia-backs and they'll stick forever! Our way of packing just another example of Comet FULL VALUE. Select those you desire now and ORDER BY NUMBER! Price per pair... 2c

No. 18—British Bull's-eye, 3¾" dia.
No. 19—British Bull's-eye, 1⅞" dia.
No. 20—Rudder Stripes for S.E.-5.
No. 21—Army Star, 2½" dia.
No. 22—Army Star, 1½" dia.
No. 23—Army Star, ¼" dia.


30

25


27

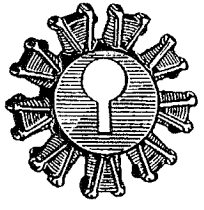

28

29

24

26

31



## Motor

Note the special low price on the light-weight, celluloid radial motors! Only a limited number at this low price. When they are gone, our price will go up, so act now. Order at least four because only 1,000 are left and they're going fast!

Black, 9-cyl., 1½" and 3"—either size.....25c
Black, 2" .....30c

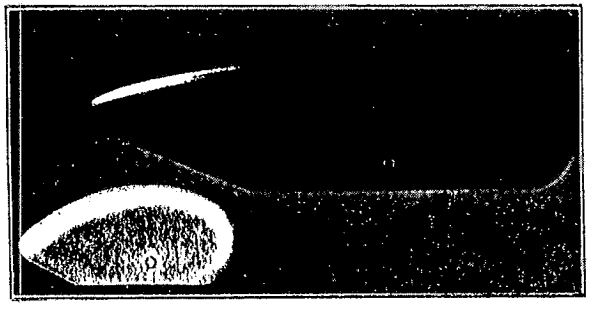
## Motor Sticks

⅛" x ¼" x 15" White Pine.....each 2c

## Pants (For Wheels)

Celluloid Comet Pants on your wheels will make any plane look twice as life-like, especially the racers! Light-weight! The large size takes our 1⅞" and 1¾" wheels. The small size pants take our ¾" and 1" wheels. Order by number and color.

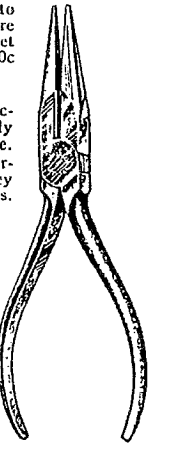
No. 1 Pants (black only) per pair...35c
No. 2 Pants (Red, Blue, Green, Black, Yellow) per pair..20c



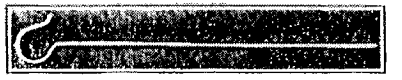


## Pliers

These pliers will save you lots of time. They're sturdy, yet so constructed as to handle model-building jobs easily, and skillfully. Suitable for bending music wire to any shape. The picture shows you what a great, big bargain they are! Get yours today! .....50c



## Propeller Shafts



Our propeller shafts are accurately made of tough, highly polished No. 9 music wire. Use Comet shafts to save yourself time and trouble. They may be also used as rear hooks.
2 for 3c

## Reed

1/16", 3/32" and ⅛" dia. in 3 ft. lengths.....each 3c

## Rubber (Always Fresh!)

It's hard to realize your model airplane flies through the air using trees as motors, but it's true! Rubber, as you know, and the best grade of rubber such as Comet always gives you—comes fromе the sap of the rubber trees in South America. It is refined from sap to rubber by experts, cut and trimmed to correct sizes and is then ready for your use. This pure Para rubber stretches over 7 times its own length and returns to original size without loss of elasticity. Use Comet rubber the kind that gives those extra prop-turns which often creates new endurance and speed records! Our rubber is always fresh. Order now!

| | Per ft. | | Per ft. |
|---|---|---|---|
| 1/32" x 1/16" | ½c | 1/32" x ⅛" | 1c |
| 3/64" x 3/64" (No. 20) | 1c | 1/32" x 3/16" | 1½" |

## Sandpaper

Especially selected for model airplane use. Packed in packages of ten sheets each measuring 3" x 3⅝". 5 sheets for roughing 5 for fine finishing work.

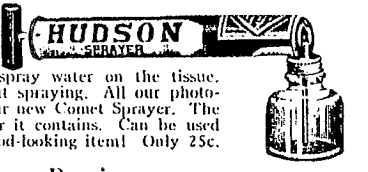
Per 10-sheet package..... 5c

## Silk

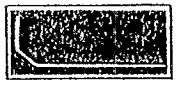
Imported Japanese silk. Light texture. Excellent for covering scale models or where extra strength is desired.

18" x 36".....45c Square yard.....80c

## Sprayer




For "professional" looking COVERING jobs, always spray water on the tissue. It's almost impossible to get a neat, smooth job without spraying. All our photographed models shown in this catalog were sprayed by our new Comet Sprayer. The glass container shows you at all times how much water it contains. Can be used to spray Comet colored dopes, too. You NEED this good-looking item! Only 25c.



## Thrust Bearings

These extremely light-weight but sturdy thrust bearings will stand plenty of pull. Small hole accurately drilled to fit our prop shafts. See photo. Handsome looking. Each.....3c

## Imported Tissue Paper

We import our Tissue direct from Japan. We use this special-imported Jap tissue paper because it is strongest for its weight! Its fibers are long with great tensile strength, which prolongs life of your model. Do not confuse this with the cheap, American machine-made tissues as our Comet Jap tissue is all HAND-MADE! Colors are vividly bright.

Superfine Quality Tissue (for championship contests) 18" x 24", per sheet.....10c
White Hakone Tissue, 19" x 26", per sheet..... 5c
Hakone Tissue in Blue, Red, Orange, Khaki, Black, Yellow, each sheet in 20½" x 24" size, per sheet ..... 5c

## Tubing

Comet seamless tubing is unusually suitable for exhausts, bushings and bearings. You'll find it accurate in size and of course the usual Comet quality. (Longer sizes to order.)

ALUMINUM

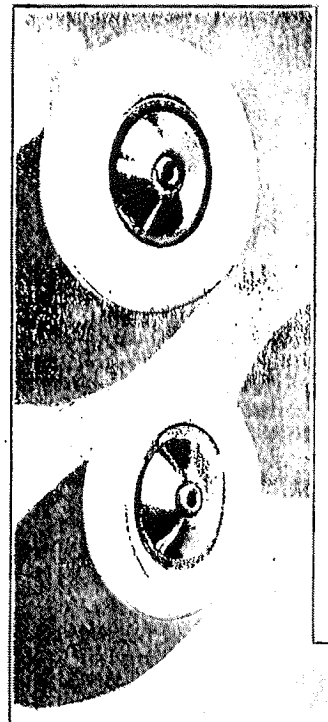
1/16" dia. x 6".....5c 3/32" dia. x 6".....5c ⅛" dia. x 6".....5c 3/16" dia. x 6".....7c

BRASS

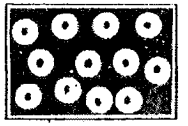
1/16" dia. x 6".....5c 3/32" dia. x 6".....6c ⅛" dia. x 6".....7c

HARD RUBBER

1/16" dia. x 6".....3c 3/32" dia. x 6".....3c



## Washers



Comet washers (see photo) are manufactured from our own dies to 5/32" outside diameter. Made to fit our propeller shafts. Guaranteed best results. Made of brass to give best wearing surface, smoothest operation and long life. 12 washers to each envelope. Per envelope.....5c

## Wheels

Comet's celluloid wheels are extremely light in weight to permit use on flying models. They are realistic in looks, proportion and performance—and accurately center-marked. Large choice of brilliant colors.

Comet rubber-tired aluminum wheels are perfect miniatures of wheels used on big ships, having bushings, and come ready to slip on axle. Tires are very springy to absorb landing shocks and give longer model life.

CELLULOID

Black, White, Blue, Red

3/4" dia. .....10c pr. 1" dia. .....10c pr.
Black 1 1/8" dia. .....10c pr.

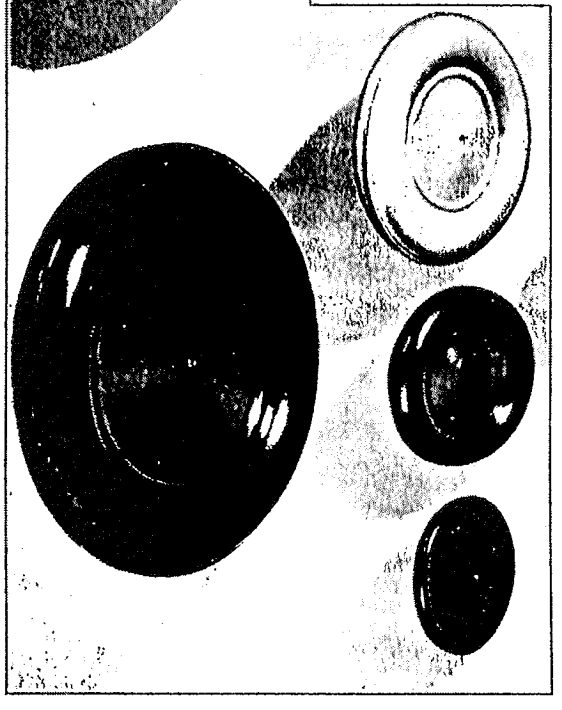
Black, White, Blue, Green, Yellow, Colors

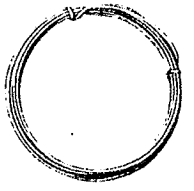
1 3/8" dia. .....15c pr. 1 7/8" dia. .....25c pr.
Black, 3" dia. ..... 35c pr.

RUBBER-TIRED ALUMINUM

1 1/4" dia. .....20c pr. 1 3/4" dia. .....25c pr.
2" dia. .....30c pr.

Axles to fit alum. wheels, threaded at each end. 4 nuts come with each axle. 4", 5", 6" lengths.....10c ea.
Special lengths to order at 5c extra.





## Aluminum Wire

This Comet aluminum wire is soft and can be flattened for use as streamlined brace-wires. Get your big, 5 foot coil now (see photo).....3c

## Wire

Highly polished music spring wire straightened and cut to 2 foot lengths at 3c per length in these sizes:

No. 6.....016"
No. 8.....020"
No. 10.....024"
No. 12.....029"
No. 14.....033"



# HOW TO ORDER

## *Comet's Way Is the Easy Way!*

Read these few, simple rules on ordering. The rules are clear. Please follow them and you will secure the highest, fastest type of SERVICE it is possible to secure.

### U. S. AND POSSESSIONS

1. *Order From Your Comet Dealer.* If you have none in your locality, mail in your order to us TODAY on the *simplified* Order Blank enclosed! Or just write us. Use Order Blank for best results!
2. *Print Name and Address Clearly.* Also clearly write down items ordered as this will enable you to get our fastest service.
3. *Send No Money—Use C.O.D. Order Method.* WE ACCEPT C.O.D. orders. Simply write on Order Blank what you want, then you pay postman on delivery for items ordered and few cents postage, C.O.D. fee.
4. *We Pay Postage On All Kits* provided you send *cash* with order.
5. *Remit Cash by Money Order Always!* Send coins always by registered mail. Add 15c extra to remittance for exchange and tax *if you send check.*
6. *We Pay Postage on Cash Supply Orders* amounting to $1. If your order is under $1, add 15c extra for packing and shipping. *If you order supplies C.O.D.,* you pay C.O.D. fee and few cents postage, also 15c packing and shipping charge *on orders under $1.* Over $1, you do not pay 15c packing and shipping charge.

### CANADA AND FOREIGN COUNTRIES

Send 20% extra with your remittance. Always send *international* money orders. No stamps accepted. No C.O.D. Ask *your* postmaster about *international* money orders and how much the cost will be when exchanged into U. S. money. You pay customs charges if any.

### SERVICE

Your order will be shipped within TWO HOURS from receipt. We pride ourselves on giving you the best and quickest shipping service—at no extra cost to you. That's *another* Comet feature.

## GUARANTEED!

The Comet Line of construction kits and supplies is guaranteed against defects whether sold by mail or by your dealer. We guarantee satisfaction, or will replace defective parts free of charge, or return your money. Whoever you are, wherever you are, we want you to be satisfied and to know YOU CAN DEPEND ON COMET KITS AND SUPPLIES.

COMET

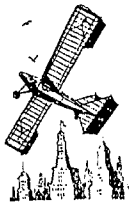
COMET MODEL AIRPLANE & SUPPLY CO.
3114 Harrison St., Dept. 2, Chicago, Ill., U. S. A.

This is our latest price list. Disregard all previous lists. We reserve right to change prices without notice. Copyrighted, 1932, by CMAS Co.

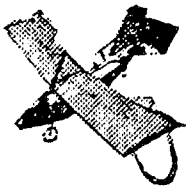
*BOYS! . . . Believe it or not*
An AUTOMATIC Pilot
that actually works every airplane control in a model plane. Ascends any altitude you decide. Once in the air it flies itself—performs marvelously in maneuvers and flights. All the combined thrills of sport along with serious instruction.
*Be the first with the latest. Build and fly the Pilot-Plane.*
**NEW ORIGINAL AND DIFFERENT**
Send 25c (no stamps) for beautiful illustrated booklet in colors containing complete information about this new invention. Address
**ELTON-McCARDLE CO.**
**Dept. A. B. 12 566 Seventh Ave., New York City**

# Flies for Miles

The only model plane with Automatic Pilot. Rights itself in full flight. No wonder it *rises higher* (500 feet or more) *and flies more miles* than any other. Also has a Parachute Drop! Giant 7 foot wing spread! Details, specifications, and beautiful color print to frame on your wall for only 10 cents.



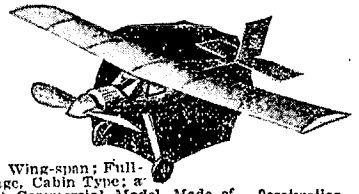
**ELTON McCARDLE CO.**
**566 Seventh Ave., New York, Dept. AB-3**



*BOYS! . . . Believe it or not*
An AUTOMATIC Pilot
that actually works every airplane control in a model plane. Ascends any altitude you decide. Once in the air it flies itself—performs marvelously in maneuvers and flights. All the combined thrills of sport along with serious instruction.
*Be the first with the latest. Build and fly the Pilot-Plane.*
**NEW ORIGINAL AND DIFFERENT**
Send 25c (no stamps) for beautiful illustrated booklet in colors containing complete information about this new invention. Address
**ELTON-McCARDLE CO.**
**Dept. A. B. 12 566 Seventh Ave., New York City**


Elton-McCardle advertised this automatic pilot in 'The American Boy' between December 1930 and March 1931 ..... does anyone know, nearly 70 years later, how this 7 foot model airplane was controlled ?

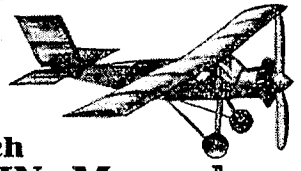

# Get the NEW IDEAL EAGLET for Christmas!



20 in. Wing-span; Full-fuselage, Cabin Type; a-perfect Commercial Model. Made of Readi-cut Balsawood (not cardboard); built-up wings with cambered ribs; formed Balsa propeller with nosing; wood wheels; finished metal parts; everything ready for construction. Demountable wing; weighs 1 oz. complete. Flies with the best of them! Finest little ship you ever saw!

Construction Outfit **50c**

Order direct or ask your dealer for the "EAGLET".



## 24 inch ROBIN Monoplane

Another winner in any crowd! A high-class Model of the endurance record-breaker "City of Chicago." 24 in. Wing-span; stamped Balsa fuselage sides; built-up wings with stamped, cambered ribs; formed Balsa propeller with nosing attached; radial engine mounting; 2 in. wheels with steel axle and aluminum brace; cellophane windows; varnish, dope, cement and everything included full-size plans, diagrams and instructions ..... **$3.50**

The FALCON MONOPLANE—a modified "V" type fuselage Model that's a winner in any company. Kit contains everything required for construction ..... $1.50

The AMERICAN EAGLE—a low-wing, fast-flying Model that will still fly when more delicate Models are junked. 26 in. Wing-span. Construction Set ..... $2.50

"EVERYBOYS" Airplane—a dandy 42 in Model; easy, quick construction. Complete ..... $6.00

DeHAVILLAND Bi-plane—3 ft. Scale Model of the famous War flier. Complete Set..... $7.50

"FLOYD BENNETT" Monoplane—3 ft. Scale Model of Admiral Byrd's South Pole Plane. Complete Set ..... $8.50

Ask your Dealer for any of these IDEAL Construction Sets, or send your order direct to us. We guarantee satisfaction.

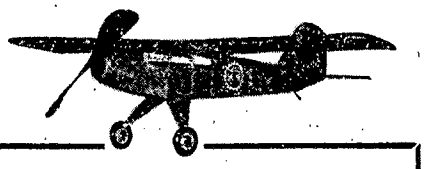
*Get the big, 48-pg. IDEAL Catalog and New Christmas Circular Showing the Latest Models, 5c postpaid.*

**IDEAL AEROPLANE & SUPPLY COMPANY, Inc.**
**22 West 19th Street, New York City.**

**MOST EASILY BUILT MODEL ON MARKET**

This realistic 12-inch model of the British Sopwith fighter will rise off ground and fly 100 ft. or more, and will give more real satisfaction than expensive models. Set includes aluminum propeller, special rubber band motor, streamlined wheels, machine-turned nose-block, ready-cut struts, etc. Clear building and flying instructions. No tools needed. Mailed in unbreakable container, postpaid in U. S. and Canada, only 50c. Order one or more today.
**THE MIDLAND MODEL WORKS, Dept. Y, Chillicothe, Ohio**
(No stamps. No C. O. D's. No catalogue. Give full address.)

# SILVER ACE



*TheBestChristmasGifts*

**Deluxe flying models and building kits, from 50c to $11.50.**

*Boy Scouts of America Official Kits*

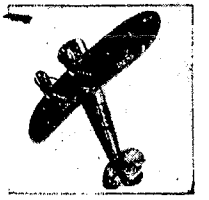
**Junior Air Service Ground Course of 50 Booklets, with 2000 pictures, teaching all about Aviation — $24.50 per set.**

*Catalog 5c*

## AERO MODEL Co.

**Dept. A32, 111 N. Wacker Drive, Chicago**

The bold, rocket-like climb of this

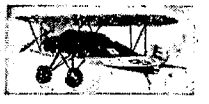


*Cleveland-Designed*

## TRAVEL AIR MYSTERY SHIP

is the most thrilling thing you've ever seen. Brilliant red and batlike coloring. ¾" scale. 22" span. Flies at 30 m. p. h. for a distance of 500 ft or more. Full size detailed drawings with all needed parts and supplies complete in kit. Easier to build than Sport Trainer. Order Kit SF-20, only $5.50 postfree.

Be sure to get this ¾" near-scale
**BOEING FIGHTER**



22½" span. Far-flying, and swift as a swallow. Very popular. Full size drawings, and all materials supplied. *Ask for Kit CB-1C.* Only $3 postfree until March 10th.

### Other Sensational Cleveland-Designed Kits

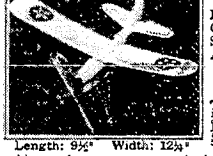
Famous 20" Great Lakes Sport Trainer, Kit SF-1E, $5.50. 29" Span Cleveland Trimotor, modeled after Ford, Kit FL-302, $3.30. 27" Cleveland (Sikorsky) Amphibion, Kit FL-301, $3.30. Twelve profile fuselage Scale Models, $1.10 each. *All Cleveland-Designed models are beautifully colored, easy to make, exceptional flyers.*

### Send for new 1931 Notebook-Catalog NOW

The book every aeromodelist wants. Striking views in color of entire line Cleveland-Designed models, ranging from 49c to $5.50; and famous Blue Diamond *engineered* supplies. Send at once, enclosing 25c (no stamps).

**CLEVELAND MODEL & SUPPLY CO., Inc.**
*Model Engineers,* 1866A West 57th St., Cleveland, O.

# FLIES 600 feet! GIVEN!



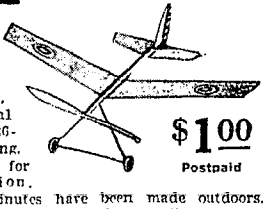
Length: 9½" Width: 12¾"

Big sling-shot, all-balsa Glider GIVEN with Dipper Plane Kit. Soars, loops, glides. Fun galore! Act! Hurry!

**DIPPER** Post Paid **50c**

The Dipper flies 600 feet, weighs ½ oz., takes of ground. Complete Kit in big, strong box 50c Postpaid. Sensational! Thousands built, flown! You get everything: banana oil, rubber, rice paper, cement, balsa parts, balsa prop block, wire, wheels, drawings, EZ instructions, etc. Guaranteed satisfaction! Only limited supply at low price of 50c so order Dipper now and we'll also send you a Glider. No C.O.D. Send 4c extra for GIANT Catalog. Order quick! **COMET MODEL AIRPLANE & SUPPLY COMPANY, 3114 Harrison St., Dept. AB 42, Chicago, Illinois.**

# HIGH CLIMB R.O.G.



This high climbing R.O.G. model is the latest design of Jack Loughner, winner of National Model Contest 1926-27. It is a strong, fast flyer noted for its long duration.

**$1.00** Postpaid

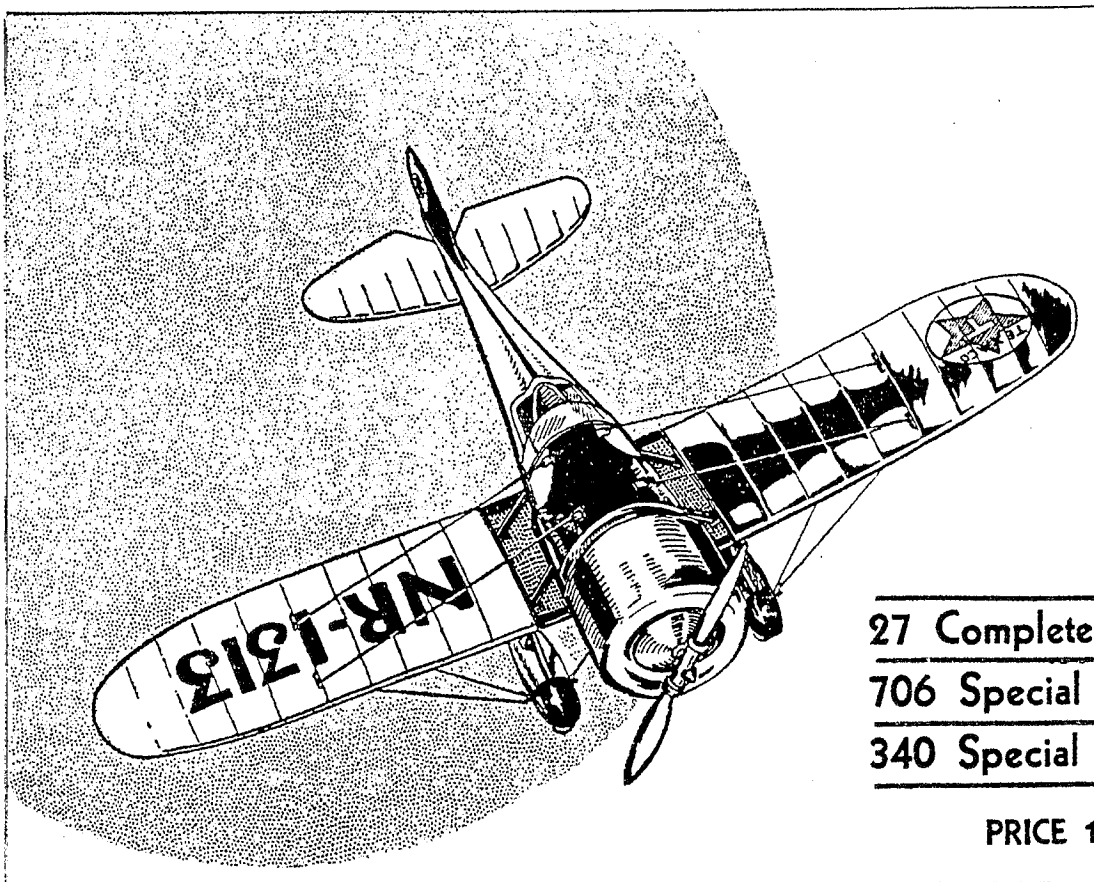
Flights of 10 minutes have been made outdoors. It is beautifully designed and carefully built by model experts. Assembled, ready to fly, only $1.00 postpaid.

### 42 page Catalog FREE

Send at once for our big 42-page catalog illustrating and describing many other stick and scale models and complete line of model parts and materials at low prices. Write today!

**MICHIGAN MODEL AIRPLANE SUPPLY COMPANY**
**4768A Grand River Ave., Detroit, Mich.**


**1930 - 1932**
Ads from
The American Boy Magazine




27 Complete Models
706 Special Supplies
340 Special Parts - -

PRICE 10c

"SELLEY"

1932

# Selley MODEL AIRPLANES and ACCESSORIES

**Selley Manufacturing Company, Inc.**
1377 Gates Avenue, Brooklyn, N. Y.
Largest Model Airplane Supply Manufacturers in the World

## • The Story of a Pioneer

IT WAS in 1902 that the Wright's first took to the air in their "powered box kite." Lots of things have happened in these 30 short years. New principles and new achievements have followed each other with machine gun rapidity. But it was from among those early experimenters that today's big figures of aviation have come. Glenn Curtiss, the Wright brothers, Fokker and DeHaviland—leaders by 1909 and leaders today.

By 1909, too, Bleriot had astonished the world by flying the English Channel. This and the feats of other air pioneers cast their spell over the boys of two continents, and the science and sport of model flying were born. It was in this world of pioneers reaching toward the skies that a boy named Armour Selley built his first model airplane in Flatbush, Brooklyn. It wasn't much of a model as models are judged now, but it flew. And because it flew, other models followed it. Armour Selley studied the plans of big planes. He read about aerodynamics and the theory of flying, and applied what he learned to model building. He experimented and he won contests. Then in 1912 he did what no one had ever done before—smashed 5 world's records at once. The hand launched distance record he raised from 1814½ feet to 2653. The duration record he jumped from 89 seconds to 158-4/5 seconds. An editorial in "Aircraft", the leading aeronautical magazine of the time, called him the "Champion Model Flyer of the World."

The secret of his unheard-of feat was a brand new idea in model construction. You boys are so familiar with the slow-turning propeller on duration models that you probably never stopped to think who originated it. It was Armour Selley in that memorable contest of 1912. Up to that time, only small, high-speed propellers had been used on contest models. But it remained for Armour Selley to revolutionize the whole sport of model flying with the introduction of the modern, slow-turning prop.

THAT was the first of many important contributions which Armour Selley has made to the model flyer's craft.

We could tell you a lot about the next few years—how during the war Selley, as an aircraft inspector in the Government plant at Springfield, Mass., saved many a pilot from certain death by catching fatal defects in the primitive machines of the time—how he became an expert builder of propellers—how he has been technical advisor on many aeronautical problems and has built wind tunnel models for inventors, engineers, designers and big airplane companies.

But let's skip over all that. Through all these years models have been Mr. Selley's first interest. For the past several years he has made them also his business, selling the finest model airplane kits it is possible to produce. Armour Selley is now the only model airplane manufacturer whose experience dates back to the pioneer days of model flying. The boy who, in 1912, broke every existing model flying record, is now president of his own company, with the world's largest model airplane factory.

HERE Mr. Selley goes right on experimenting, studying, improving—designing new and better models for you to build and fly. You'll find him almost any day—and many a night, too—bent intently over his bench. There'll be a cigar between his teeth, but it will have long since gone out in his absorption in some new fitting or wing section he is working out. It's a fascinating place, this workshop of Mr. Selley's with its hundreds of tools and drawings and bits of balsa and wire, spread out in orderly confusion under the glare of the green shaded light. Here are created the originals of the beautiful models which eventually reach you in complete kit form. Here you'll find the hundreds of special dies from which *Selley* model accessories are made on the whirring lathes and the crunching power and foot presses which line all of one side of the ground floor of the two-story *Selley* factory. In one corner is the woodworking room, where the balsa parts are cut to size, and tricky nose-blocks shaped by machine. The main floor is lighted by huge 10x12 foot fenestra windows around three sides. In its center are the four big assembly tables, where 250 kits can be packed at once. In front of one big window is the draftsman's table, with its square and slide rules and protractor lying beside a half inked-in drawing.

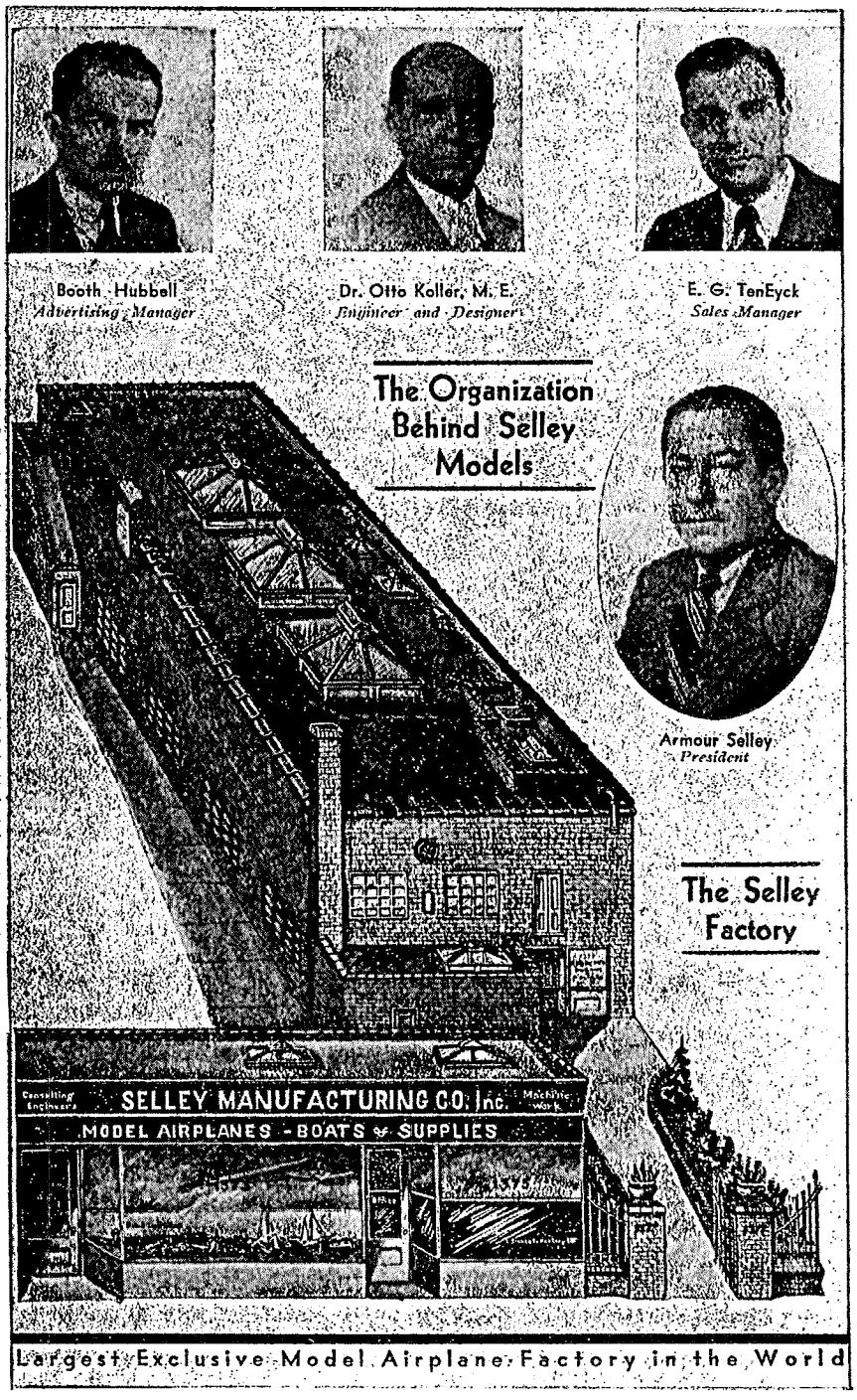
Beyond a partition is the busy shipping room, with its neat stacks of brightly taped, shiny black boxes, and its dozens of sizes of corrugated cartons. Wrapping paper and packing board hangs from the ceiling in huge rolls, and orders to be filled are stacked beside the big books of delivery records. Here come daily the parcel post and express men for their daily load of packages. Around the walls of the shipping room are high black-lacquered racks filled with different sizes of wood, and tiers and tiers of boxes containing the hundreds of parts and supplies that make up the most complete line of model airplane accessories in the world.


"SELLEY"

IT IS *Selley's* aim to supply in realistic miniature any part of a big ship. So whatever tricky accessory you want, if you can find it anywhere, you'll find it at *Selley's*. New items are constantly being added to fill new requirements. For thousands of model enthusiasts, the name *Selley* has come to mean *highest possible quality at lowest possible prices*. *Selley* has never tried to undersell competitors if by so doing he had to cheapen the quality of his merchandise. He has never made extravagant claims in advertising that couldn't be backed up by actual facts. He has guaranteed complete satisfaction and given it.

*Selley* parts are made accurately by special machinery in which thousands of dollars have been invested. *Selley* kits are carefully planned, and contain only the best of materials. It would be easy for us to throw together a few sticks of balsa and a slipshod drawing in a box, call it a construction kit and sell it at some ridiculously low price. But that isn't the *Selley* way of doing things. If we did, you wouldn't be able to make a satisfactory model and your money and time would be wasted. We believe that consistent honesty with our customers—good quality at fair prices—is the only policy to pursue. This has been our guiding principle.

Just as the aviation pioneers of the early days are the leaders of the industry today, so *Armour Selley*, pioneer model flyer, leads the world of model airplanes with the largest and finest stock of supplies you can find anywhere. And he is still pioneering—still working out new ideas to make model flying an even more fascinating study for you.



# INDEX


A
Adjustable Pitch Propeller...18
Advanced Glider Kit..... 9
Airbus, Bellanca 2 in 1 Kit..12
Air Wheels .....16
Albatross, Contest Model Kit. 8
Albatross, Replica Model Kit.15
Aluminum, *see Metal*
Anti Drag Rings .....20
Axle Fittings .....16
Axles .....16
Axles, Split Type .....25
B
Balloon Tired Wheels, Aluminum .....16
Balloon Tired Wheels, Celluloid .....16
Balsa Wood .....26
Bamboo .....24
Bamboo Paper .....23
Basswood Sticks .....26
Battery .....31
Bellanca Columbia, Flying Model Kit .....11
Bellanca 2-in-1 Kits, Sky Rocket .....12
Blanks, Propeller .....25
Blueprints, *see Plans*
Bolts .....21
Brass, *see Metal*
Bushings .....21
Bushings, Featherweight ....17
Bushings, Wood .....25
C
Celluloid Parts .....17
Celluloid, Sheet .....24
Celluloid Tubing .....24
Cement .....23
Colored Dope .....23
Compressed Air Motor.....30
Condor, Curtiss-Wright Model Kit ..... 4
Contest Model Kits..... 8
Corrugated Metal .....24
Covering Materials .....23
Cowlings, Aluminum .....29
Cowlings, Celluloid .....17
Curtiss Ace, Flying Model Kit 11
Curtiss-Wright Finishing Materials .....23
Curtiss-Wright Model Kits...3 7
Cylinders, Celluloid Motor...17
D
Die Cast Propellers ..... 9
Dies, Machine Screw.....27
Dope .....23
DO X Model Kit .....13
Doughnut Wheel .....16
Dowels .....24
Drag Rings .....20
Drills .....27
Dry Cell .....31
E
Eaglet, Advanced Glider Kit.. 9
Electric Motors .....31
F
Falcon, Replica Model Kit....14
Falcon, Curtiss-Wright 2 in 1 Model Kit ..... 7
Featherweight Contest Models 8
Featherweight Parts .....17
Files .....27
Finishing Materials .....23
Fittings, Axle .....16
Fittings, Special .....21
Fittings, Hinge & T-Pin.....21
Fittings, Tubular .....21
Fokker D-7, Replica Model Kit .....15
Foot Rest .....20
Formed Tail Outlines.....28
Fuselage Sides .....29
G
Gliders ..... 9
German Silver, *see Metal*
Glue .....23
Gold-Beaters' Skin .....23
Gull, Contest Model Kit..... 8
H
Hakone Tissue .....23
Hangers, *see Propeller Hangers* .....18
Hardware .....21, 26
Hawk, Curtiss-Wright Model Kit ..... 6
Hawk, Replica Model Kit....14
Helldiver, Curtiss-Wright 2-in-1 Kit ..... 7
Helldiver, Replica Model Kit.15
Heron, Contest Model Kit.... 8
High-Lift Ribs .....20
I
Insignia .....30
J
Japan Tissue—silk .....23
Junkers Bremen, Flying Model Kit .....11
K
Knives .....27
Knurled Metal .....24
L
Lacquer .....23
Landing Gear .....28
Lark, Contest Model Kit.... 8
Lockheed Sirius, Replica Model Kit .....15
Louvered Sides .....20
M
Machine Bolts .....21
Machine Gun, Dummy.....20
Machine Screws .....21
Machine Screw Taps & Dies.27
Metal, Corrugated & Knurled.24
Metal, Sheet .....24
Metal Tubing and Rod.....24
Model Nails .....26
Model Maker's Knife.....27
Motors, Cast Metal Dummy..19
Motors, Celluloid Dummy....17
Motors, Electric .....31
Motors, Rubber .....30
Motors, Spring .....31
Motor Plate .....20
Motor Stick Unit .....25
Music Wire .....24
Mystery S, Curtiss-Wright Model Kit ..... 5
Mystery S Cowl .....20
N
N.A.C.A. Cowlings, *see Cowlings*
Nails .....26
Nose Blocks, Formed.....26
O
Official Curtiss-Wright Models .....3-7
Outboard Motor .....31
P
Pants, Semi-Finished .....25
Pants, Celluloid Wheels With.17
Paper .....23
Pedestal Base .....25
Photographs .....23
Pins, Model .....26
Pin Vise .....27
Plane, Wood .....27
Plans .....22
Plywood .....28
Pontoon Sides .....28
Primary Glider Kit..... 9
Printed Balsa Sheets.....28
Propellers, Adjustable Pitch..18
Propellers, Die-Cast .....19
Propellers, Flying Model.....18
Propellers, Scale Model.....19
Propellers, Stamped Aluminum .....19
Propeller Blanks .....25
Propeller Blocks, Balsa.....26
Propeller Hangers .....18
Propeller Hangers, Feather-weight .....17
Propeller Kits .....25
Propeller Shafts .....18
Propeller Shafts, Feather-weight .....17
Propeller Spinners, Aluminum.19
Propeller Spinners, Wood....25
Pulleys .....21
R
Racing Type Propellers.....18
Radiator, Dummy .....20
Rasp, Wood .....27
Reed .....24
Replica Models .....14-15
Ribs .....29
Rod, Metal .....24
R.O.G. Parts .....17
Rubber .....30
Rubber Tubing .....24
S
Saw .....27
Screws .....21
Semi-Constructed Models..10 11
Shackles .....21
Shafts, *see Propeller Shafts*
Sheet Celluloid .....24
Sheet Metal .....24
Silk .....23
Skyrocket, Bellanca 2-in-1 Kit.12
Sloyd Knife .....27
Soaring Glider Kit..... 9
Solid Wood Kits.....14-15
Spad, Replica Model Kit.....15
Spinners, *see Propeller Spinners*
Spirit of St. Louis, Flying Model Kit .....10
Split Type Axle .....25
Spring Motors .....31
Stinson Detroiter, Flying Model Kit .....11
T
Tail Outlines .....28
Tail Wheel .....16
Tank, Compressed Air.....30
Taps, Machine Screw.....27
Three-Bladed Propeller, Adjustable Pitch .....18
Three-Bladed Propeller, Die-Cast .....19
Three-Ply Aircraft Plywood..28
Tools .....27
Toothpick Propeller Blanks..25
Towner Ring .....
Transmission Unit, Gearless..19
Treaded Wheels .....16
Tubing, Celluloid .....24
Tubing, Metal .....24
Tubing, Rubber .....24
Turnbuckles .....21
Two-in-One Model Kits.3, 7, 12
V
Veneer, Japanese Wood.....23
Vise, Pin .....27
W
Washers .....21
Washers, Featherweight .....17
Wheels, Celluloid .....16
Wheels, Featherweight .....17
Wheels, Metal .....16
Wheels with Pants.....17
Winders .....27
Wing Covering .....23
Wire, Music .....24
Wire Parts, Featherweight...17
Wood, Balsa and Bass.....26
Wood Crack Filler.....23
Wood Parts .....25
Wood Veneer, Japanese.....23




# The Curtiss-Wright Flying Service

Helped us to Produce These DeLuxe

Curtiss Official Wright

## SCALE REDUCTION MODELS

●

WHEN a great airplane company like Curtiss-Wright co-operates in the designing of model airplanes, that is big news, and you can be sure that the result will be something decidedly out of the ordinary. That is exactly what happened when these Official Curtiss-Wright models were created. Thousands of boys all over the country had written to the Curtiss-Wright organization, asking for plans and information about models of Curtiss-Wright ships. But it was found that there were no models then on the market worthy of Curtiss-Wright's endorsement. So we co-operated with their engineers in developing a series of perfectly finished, accurate, absolutely authentic scale-reduction models that would be as perfect miniatures of these great ships as ingenuity and skill could produce. As a result, an entirely new standard of model design and construction has been set. There simply is nothing on the market that can compare with them in any way.

Three of the models are non-flying, for it was felt that flying models usually depart too radically from the design of full-size ships to be of value in teaching the principles of airplane design. For boys who insist on flying models, there are two 2-in-1 kits, from which you can build either exact scale-reduction models or flying scale models.

We could not possibly tell you in mere words how far superior these model kits are to anything you have ever seen. You have to see them. But here are a few features of the series that you will want to know about.

### 7 Remarkable Features of Curtiss-Wright Kits

**1.** Designed with a more rigid fidelity to detail than anything you have ever seen in kit form. The kits include many new and special realistic accessories designed especially for these models—special die-cast propellers, special spun aluminum cowls, special rubber-tired wheels and pants. All insignia are supplied, either as decalcomanias, or printed in true colors and designs on gummed paper, all ready to be applied to the finished model.

**2.** Everything possible has been done to make it easy for you to build an *accurate* model that reproduces the true lines of the original ship. One of the trickiest parts of the nose, is supplied in the first three kits as a completely formed balsa block, accurately cut by special machinery to exactly the correct contours. Many other parts are supplied completely formed.

**3.** There's no tedious tracing of ribs from the plans—all ribs, bulkheads, etc., are printed accurately from special plates on 1/8" balsa sheets, ready to be cut out with a sharp knife or razor blade.

**4.** Full-size blue prints—the clearest, most detailed, most easily followed plans and many detail drawings of special parts, they show you every single detail of construction and assembly as clearly as though you were looking at the finished model. And to make doubly sure, detailed printed directions in every kit tell you every step of construction from the moment you open the sealed kit, to the time when you finally stand back and admire your finished work. You simply *can't go wrong!*

**5.** All models are assembled by means of special new type fittings, neat and realistic, which at the same time make it easy for you to disassemble your model quickly when you want to store it or carry it.

**6.** Each kit includes special colored Curtiss-Wright Lacquer, Curtiss-Wright Cement and Curtiss-Wright Dope, as well as all balsa, reed, paper, wire and all other materials for your model.

**7.** And last but not least, every kit bears the Official seal of Curtiss-Wright—your guarantee of quality and authentic design.

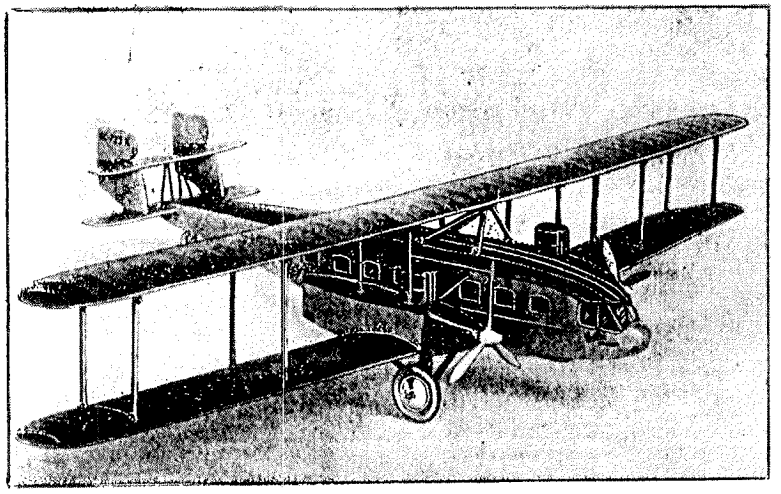
### 3 Special Features of 2-in-1 Kits

**1.** Each kit will build either an exact scale-reduction model or a flying scale model—you can take your choice after you open your kit.

**2.** 2-in-1 plans, just as detailed and accurate as those above, give all details of construction for both models. Complete detailed directions for building both models are also supplied.

**3.** In addition to the parts for the scale reduction model, each kit includes special flying model propeller all parts for new *Selley* removable motor unit, and rubber for flying model motor.

**These are the only models of Curtiss-Wright ships that have the Official seal of approval of the Curtiss-Wright Flying Service—your guarantee of the unqualified endorsement of one of the great organizations of modern aviation. Be sure you get the genuine Official kits, made only by Selley, and fully illustrated and described on the four pages following.**



# CURTISS CONDOR TRANSPORT PLANE

**Wing Span—34 Inches**

IF YOU'RE a beginner, you'll surprise yourself with the striking and unusual model you can build so easily from this kit. And if you're an expert, you'll find the Condor a model that's worthy of your best efforts.

This is the first authentic model kit of this famous ship to be introduced. With a wing span of more than 91 feet, the big 18-passenger Curtiss Condor transport plane is one of America's largest air cruisers. In speed, safety, comfort, climbing ability and general efficiency in the air, the Condor has set an enviable standard in transport ships. And the Condor model is no less distinguished in its own field.

The unusual lines and construction of the Condor—its bird-like nose, its airy pilot's cabin with unobstructed three-way view, the wide sweep of its wings, the compact landing gear, the twin motor nacelles, each with its three-bladed propeller—are all faithfully reproduced in this striking 34-inch model. Every detail has been approved by Curtiss-Wright! Here's the model to make them sit up and take notice when you enter it in the next scale model contest!

You might think that such a painstakingly detailed model would be hard to build. But it isn't—not a bit of it. For with the full-size blueprints and detailed direction booklet everything is made so clear to you that you simply can't go wrong.

What is more, all the difficult work has been done for you. The distinctively shaped nose—the hardest part for the average builder to make correctly—is supplied already shaped. The flat parts—ribs, fuselage sides and bulkheads, nacelle parts—are all printed on thin balsa strips in their exact shape and size. And the three-bladed propellers are supplied ready made from die-cast metal.

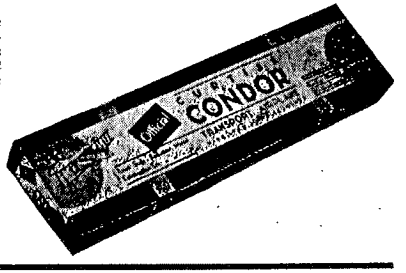
The complete kit includes, of course, all parts, materials and supplies to make the most impressive scale model ever offered in kit form.

**$7.00**

*(Postage 25 cents)*

Curtiss Official Wright

*This is the sealed black box with the red, yellow and black label in which Curtiss-Wright kits are packed. Look for the official seal.*





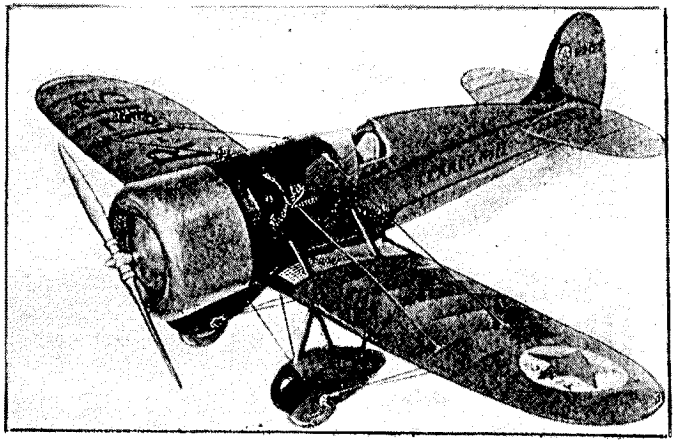

See Ordering Instructions on Page 32

# TRAVELAIR MYSTERY SHIP

## RACING TYPE AIRPLANE

**Wing Span—25 Inches**

Curtiss Official Wright



GLISTENING red in the sun, a low-wing monoplane seemed to mount like a rocket into the skies. It turned and dived, and banked up again like a swallow. That thrilling exhibition at the National Air Races at Cleveland in 1929 introduced the world to a new high-speed single-place plane of unprecedented maneuverability—The Travelair Mystery S." Since then, its lines have become familiar to every American aviation enthusiast. Under the hands of Capt. Frank Hawks, and bearing the familiar Texaco Star, it has swooped majestically down to almost every landing strip in the country.

And what a model this plane makes! We won't attempt to describe it for you. Look at the picture—an actual photograph of the completed Curtiss-Wright model—*just look at it!* You just can't help wanting to build it for yourself.

Whether you're an expert or a beginner, your Mystery Ship model, with all the graceful zip of the original, will spring into form out of your Official Curtiss-Wright kit almost before you know it. The full-size blue prints and 12-page direction booklet make every detail as clear as though you were looking at the finished model itself.

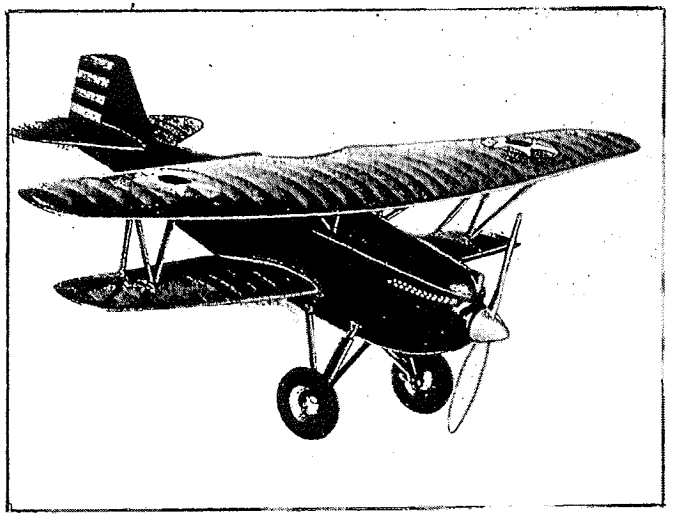
You don't have to trace ribs from the plan—all the flat parts are printed for you on thin balsa strips. And the most difficult jobs have been done for you—you get a balsa nose block, already turned to just the right shape, special die-cast metal propeller, special spun aluminum cowling, rubber-tired aluminum disc wheels. And of course, the kit includes all the necessary balsa pieces cut to size, two colors of special model lacquer, celluloid for windshield, special knurled aluminum for the steps, and all other materials.

If ever there was a model worth an expert's time, and at the same time, easy for the beginner to build, *this is it!* Don't wait. Send in your order *now.*

**$5.50**

*(Postage 25 cents)*

For Plans of These Models see Page 22



Curtiss

Official

Wright

# CURTISS HAWK

## PURSUIT PLANE

### WING SPAN—25 Inches

THE Curtiss Army Hawk needs no introduction to model builders. Originally developed for the United States Army Air Service, it is widely recognized for the easy maneuverability at high speeds that makes it so useful for military purposes. The rakish lines of its tapered, setback wing assembly, and the distinguishing shape of its nose are as familiar to aviation enthusiasts as the name Curtiss-Wright itself.

Every detail of the original lines has been preserved in this Official, authentic scale-reduction model, even to the engine exhausts and the cockpit, complete with windshield and headrest. It is beautifully finished in orange and olive drab high-gloss lacquer, set off by colorful decalcomania insignia.

And the best part of it is that even a beginner can build it without trouble. The nose—the hardest part for the average model builder to make correctly—is already shaped for you from easily worked balsa. The propeller is made for you of die-cast metal. And all the flat parts—ribs, fuselage sides and bulkheads—are printed on balsa strips in their exact size and shape. There's no tedious tracing from drawings—just cut them out from the thin balsa. The kit includes, too, all balsa, reed, paper, wire, cement, dope, lacquer, rubber-tired aluminum disc wheels, and all fittings.

In addition every kit contains a set of the crystal clear blueprints and direction booklet that have made so many friends for these models among beginners and experts alike.

While the Hawk is sold as a non-flying model, the expert model builder will find it easy to adapt the design to make it a flying model.

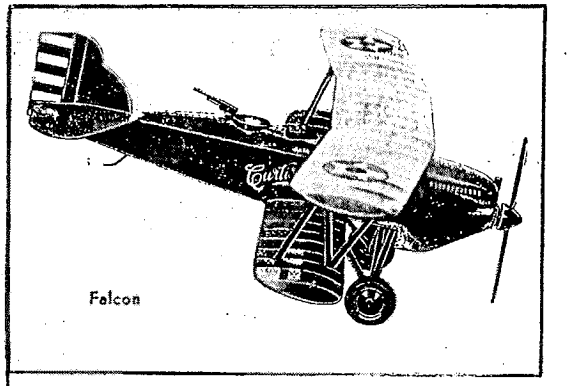
**$5.00**

*(Postage 25 cents)*

*This is the sealed black box with the red, yellow and black label in which Curtiss-Wright kits are packed. Look for the Official seal.*

For Plans of These Models see Page 22






TWO GREAT

Curtiss

Official

Wright

2-in-1 MODEL KITS

## U. S. ARMY FALCON COMBAT PLANE

### WING SPAN—18 Inches

YOU simply can't beat this 2-in-1 kit for looks, performance and value! It took a lot of experimenting to develop this model, which may be built either as an exact scale reduction model, or as a flying model of this speedy Curtiss-Wright ship. We offer this kit, with all the exclusive, distinctive features of Official Curtiss-Wright ships at the low price of $1.50 because we want every boy interested in models to know the exceptional merit of this deluxe series of models.

Built as a flying model, this little Falcon shows an amazing performance. Models constructed by our factory experts have been tested and flown consistently over 400 feet.

The same painstaking care has been spent on the 2-in-1 plans for this model as on those for the more expensive models. The kit contains only the best grade materials, including special wood turning and parts for our new type of removable motor stick, and printed standard army insignia, and printed form of flat balsa parts. At $1.50, you can't possibly go wrong on this combination of Curtiss-Wright design and *Selley* quality.

**$1.50**

*(Postage 25 cents)*

## U. S. NAVY HELLDIVER

### SHIPBOARD FIGHTER

### WING SPAN—24 Inches

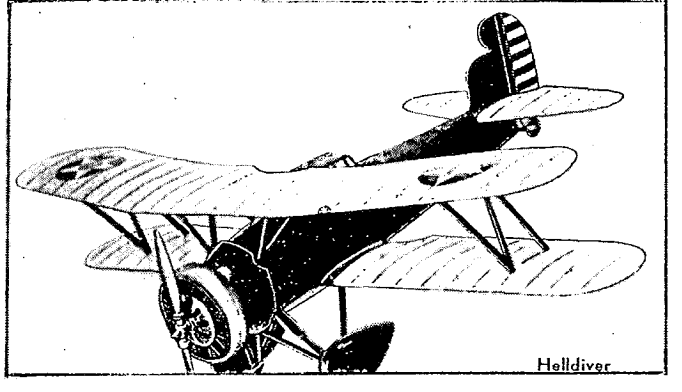
PRIDE of the Navy—the ship with which the massed power dive attack on enemy ships was developed—that's the Helldiver, created by Curtiss-Wright, and reproduced with their complete approval by *Selley*.

Duplicating this ship in a flying scale model is an accomplishment we are particularly proud of. A flying model built at the factory flew over 465 feet, and averaged consistently over 400 feet. This performance can be duplicated by any experienced model builder.

Every kit includes a full-size 2-in-1 plan, showing every detail of construction for either scale-reduction or flying model. The kit contains a number of special new and original realistic accessories, designed expressly for this model, including celluloid dummy motor, aluminum drag ring, metal motor plate and light celluloid wheels, special semi-finished counterbored wheel pants. Flat balsa parts are printed on four large sheets of 1/16" balsa. Special wood parts are supplied for flying model, including all parts for our new removable motor stick assembly. Selected balsa sticks, colored insignia for wings and rudder. Curtiss name plate, rubber, Japanese tissue, and other first grade *Selley* supplies complete this super-construction kit.

**$4.00**

*(Postage 25 cents)*

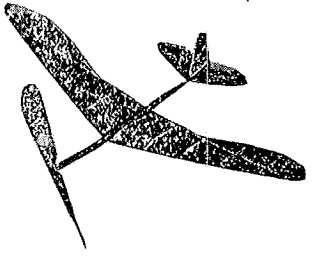


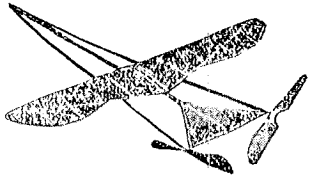

These exclusive features are obtainable only in Official Curtiss-Wright model kits: full-size 2-in-1 plan, showing all details of both scale-reduction and flying model; all parts necessary to build either model; new type *Selley* removable motor stick assembly; special, exclusive realistic accessories; official approval of all details by Curtiss-Wright.

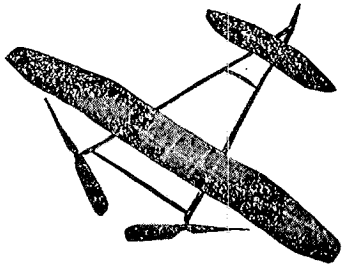
# FEATHERWEIGHT CONTEST MODELS

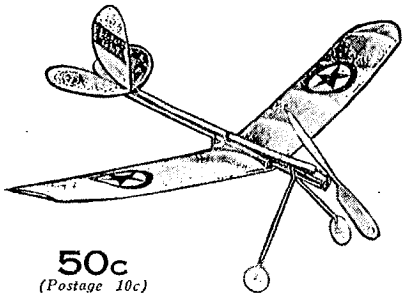
HERE are four great flyers to win contests with! Retaining the fundamental principles of popular featherweight designs, *Selley* has added the new bird-like cambered wing, the most efficient type for endurance models, and a number of other new features found only in these *Selley* models.

With ordinary care in construction, you will get flights of from 2 to 3 minutes with them. Many boys have done even better. They are easy to build, for the hardest part of all—the propellers—ready-carved for you by machine from light, durable balsa. And each kit includes full-size working drawings with details clearly shown in perspective, and easy-to-follow step-by-step directions.









**50c**
*(Postage 10c)*

## LARK

Wing Span 18"

A DANDY flyer that weighs only ⅝ oz. The best-selling model we ever produced! A real all-round contest model—indoors or out, hand-launched or off the ground, this little beauty always comes through. Flights of over 90 seconds duration are nothing unusual with the Lark. And it's simplicity itself to build. Wing clips, propeller shaft, tail and landing gear are all formed from the best grade of music wire. The rudder and stabilizer are formed and soldered to proper shape. Printed balsa ribs, full size plan and printed instructions, cement dope, printed Jap tissue in colors, and formed Balsa wood propeller complete this wonderful little kit. At this price you'll want a whole fleet of Larks.....50c

## GULL

**$1.50**
*(Postage 15c)*

Wing Span 30"

FLY this 30" endurance tractor indoors or out Bird-like sweep-back cambered wing with pronounced dihedral and slightly up-turned wing tips (a new *Selley* feature for greater stability.) Small bird-like tail surface and 12" slow-turning carved balsa propeller. New shape of wing is strong, light and more efficient.

## HERON

**$2.00**
*(Postage 15c)*

Wing Span 30"

A 30" twin pusher. Cambered wing sets far back near the fan-shaped tail, so no rudder is needed. Single-stick fuselage, too, saves weight so you can use longer rubber motor for duration flights. Pair of 10" carved balsa propellers supplied with each kit. Scientifically designed for contest flying.

## ALBATROSS

**$2.50**
*(Postage 15c)*

Wing Span 38"

THE king of them all! A 38" wing, A-fuselage twin pusher. Set the adjustable rudder and fly it in wide, soaring circles so you won't lose it. Has detachable fuselage struts, so it will fold together for safe and easy carrying. Double surface cambered bird-like wings. Pair of 12" carved balsa propellers supplied. An advanced type of outdoor flyer, yet simplicity itself to build.



6' Foot Wing Span

# SOARING GLIDER

Adjustable Dihedral and Angle of Incidence

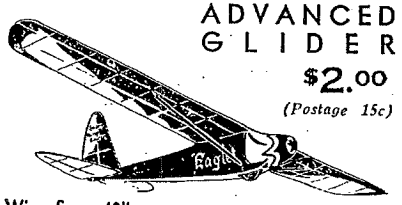
**$5.00**
*(Postage 25c)*

ABSOLUTELY the last word in gliders! Full 72" wing span — adjustable throughout—launched either by hand or with launching cord, like a kite—many specially designed fittings —and long actual *soaring* flights! Soaring glides *of over 4 minutes* are not uncommon with this king of glider models, first introduced by *Selley*. You can launch it from your hand from a slight elevation, or you can attach a cord to the bottom of the fuselage, get it up into the air currents as you would a kite, and then let the cord drop off while the model sails away on the breeze. This is a model that will appeal especially to the advanced model builder who wants something strikingly new and different. With its long, narrow wings, slim fuselage and its many new and original features, it will be the envy of every model fan you know. Simple, strong metal fittings enable you to change the angle of incidence and the dihedral of the wings for experimenting until you find the most efficient combination for long soaring glides. The rudder, too, is movable to allow for directional control. The nose block is cut to shape for you, with a cavity drilled to hold shot for adjustable balance weights. The entire model can be completely disassembled for carrying by four special small-size machine screws with hex nuts.

Kit includes full-size plan, all balsa parts cut to proper size and shape, cement, dope, covering, and all special metal fitting completely made. Weight complete, 6 oz.

## "EAGLET" ADVANCED GLIDER

**$2.00**
*(Postage 15c)*



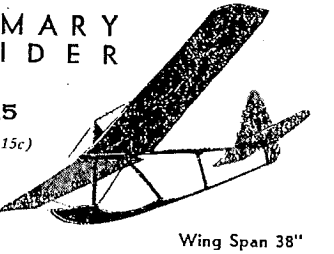

Wing Span 42"

YOU'LL want this advanced type glider, patterned after the famous "Eaglet" that carried Captain Hawks on his record-making tour across the continent. The enclosed fuselage is made of balsa, strongly glued over bulkheads, and the nose is of solid balsa, with a cavity to hold the shot for weighting. You can vary the balance-weights until you get just the right amount for your particular model. A single rubber-tired landing wheel is set into the bottom of the fuselage. The high gliding ratio of this model makes possible exceptionally long glides when merely launched from the hand. Construction set includes all materials, parts, plans and directions.

SCALE MODEL GLIDERS were originated by *Selley*. Since they were introduced, they have been copied by others, and a number of imitations are now on the market. But only *Selley* gliders are scientifically designed with the highest possible gliding ratio. No others have such complete, clear plans and directions as come with every genuine *Selley* glider kit, or original feature of adjustable balancing. And how they do glide—long, flat glides . . . wavy glides into the wind along the ground . . . soaring glides on rising air currents. Don't miss this new thrill of model flying!

## PRIMARY GLIDER

**$1.25**
*(Postage 15c)*



Wing Span 38"

BE sure and try this 38" scale model of the training, or primary, type glider. It's simplicity itself to build, and a great performer. The frame is of light bass and balsa, scientifically braced for strength. It is weighted with shot placed in a cavity in the skid. This gives just the right balance in just the right place. You can vary the weighting to suit your own particular glider or different flying conditions. It has a double-surfaced built-up wing and tail assembly. Every model builder should experiment with this glider—you'll learn more about aerodynamics by watching it perform than you will in any other way. Construction set includes all materials, parts, plans and directions.

For Plans of These Models see Page 22

# Selley SEMI-CONSTRUCTED FLYING SCALE MODELS

THESE famous models need no introduction to model fans! For over three years, thousands of our satisfied customers, throughout the world, have ordered and re-ordered these models.

Although we discontinued the national advertising of this line over 18 months ago, repeat orders, letters and testimonials come in daily, praising these fine kits for their simplicity of construction, ease of assembly and excellent flying performance. In short, they are as popular with model builders today as they were three years ago.

The explanation is simple. They are today, as when they were introduced, the most easily assembled scale models that really fly satisfactorily. Realistic—easy to build—they really fly—popular prices—those are the four big points of superiority which won them the popularity they so well deserve. They are especially good for the beginner in model craft—they contain a number of unusual features of construction which testify to *Selley's* ingenuity in making the beginner's task a simple one.

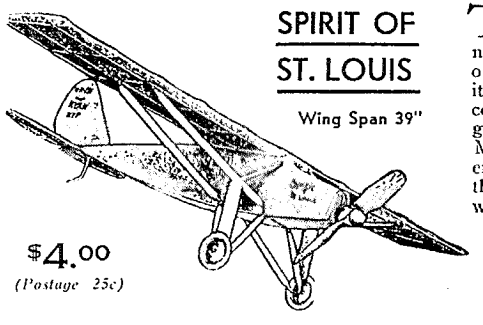
These are of the heavier type of flying model, constructed entirely of basswood. This sturdy construction will stand up under rough flying much longer than the more fragile balsa.

## 10 Special Features of Excellence

1. The individual parts are formed, all ready for assembly.
2. The fuselage sides are completely shaped and built.
3. The stabilizer, rudder and landing gear are supplied with their contours already formed.
4. The models are easily assembled and disassembled. Each is composed of five separate units—wings, fuselage, tail surfaces, landing gear and power plant. By means of ingenious *Selley* fittings, each unit may be detached easily, the whole model being thus dismantled for safe and easy carrying.
5. The power plant (motor stick) is readily detachable for the inspection and replacement of the rubber strands.
6. The wings are in knocked-down form—all parts are already accurately shaped, ready for assembly.
7. Adjustable pitch aluminum propellers, especially designed for these models, are supplied with each kit. They are very efficient, unbreakable, and most realistic.
8. The landing gear is fitted with latest aluminum disc wheels with sponge rubber tires.
9. The rudder and stabilizer are adjustable to control flights.
10. A full-size working drawing, with complete, simple, easily understood directions, is supplied with every kit.

## SPIRIT OF ST. LOUIS

Wing Span 39"



$4.00
*(Postage 25c)*

THIS accurately proportioned model of Colonel Lindbergh's gallant plane is noted for its striking likeness to the lines of the original. Of course, we do not claim it to be an exact reproduction, since it could not fly if it were. This model is a great flyer and has a 39" wing spread. Mr. William P. Sullivan, famous aviation engineer, says "I was very pleased to find that you have gotten out a model plane which looks like the airplane it represents."

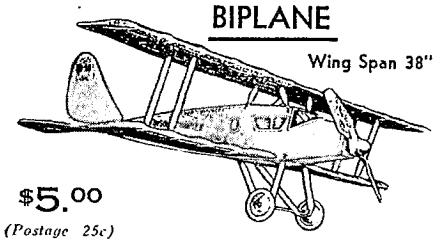
Weight 7 oz.
Height 8¾ in.
Wing Span 39¼ in.
Flies 100 to 250 feet.



See Ordering Instructions on Page 32

## STINSON DETROITER BIPLANE

Wing Span 38"



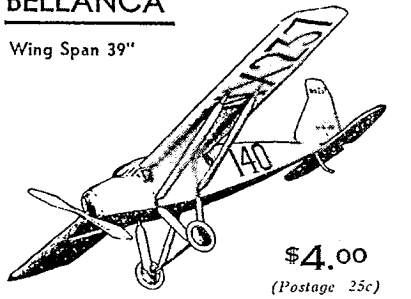
$5.00
*(Postage 25c)*

HERE'S a handsome biplane model that really flies. It is a close copy of the first plane brought out by "Eddie" Stinson, the famous test pilot. You'll like its trim, clean-cut lines. The many distinctive points of the original which we have retained in this miniature plane will make it easily recognizable to those who have seen the "Detroiter."

Weight 7½ oz.
Height 10¼ in.
Wing Span 38¼ in.
Flies 75 to 200 ft.

## BELLANCA

Wing Span 39"



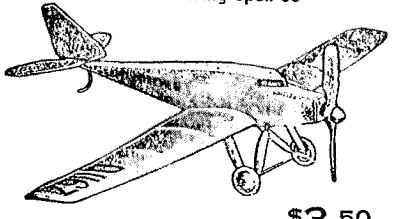
$4.00
*(Postage 25c)*

HERE is a flying model that retains the handsome appearance and trim lines of the famous plane in which Col. Clarence D. Chamberlin made his record-breaking flight to Germany. Col. Chamberlin, himself, says "I have seen no models that can compare favorably with your copy of the "Columbia." It is a little gem." You will have a lot of fun building and flying this model.

Weight 6½ oz.
Height 8¼ in.
Wing Span 39¾ in.
Flies 100 to 300 feet.

## JUNKERS

Wing Span 36"



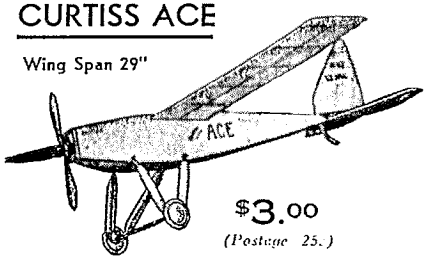
$3.50
*(Postage 25c)*

EVERY model fan will want to build the famous "Bremen"—the first plane successfully to cross the North Atlantic from East to West. The unique lines that characterize this Junkers plane, its low wing and smart cabin arrangement, are adhered to as closely as is possible in a flying model. A fine flyer with a 36 in. wing span.

Weight 5½ oz.
Height 8½ in.
Wing Span 36 in.
Flies 150 to 350 ft.

## CURTISS ACE

Wing Span 29"



$3.00
*(Postage 25.)*

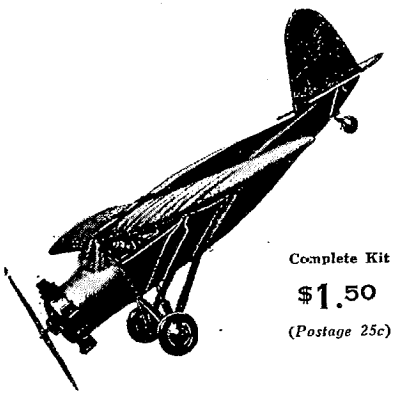
THE many unusual features that are found in Curtiss planes have been copied closely in this flying model, with its 28" wing spread. Flying against the sky, an experienced aviator would immediately recognize this model as a Curtiss airplane. Because of the newest principles of model design used, you will find the "Ace" one of the best flyers anywhere.

Weight 4 oz.
Height 6⅞ in.
Wing Span 28 in.
Flies 150 to 400 ft.

For Plans of These Models see Page 22

# TWO NEW BELLANCA MODELS IN 2-in-1 KITS

IKE the Curtiss-Wright series, these models represent the ultimate in fine model design and construction. The revelous simplicity of their construction, together with the beautiful detail and smart, isual lines, exceeded even our own high ectations. Once more our engineering staff, ded by Dr. Otto Koller, has produced two dels that are simply beyond our power to cribe adequately. Each kit contains all parts l materials for either an exact scale-reduc- n model or a flying-scale model, and the ertly drawn plans and complete building ections show you every detail of construc- n for either type of model. You can take ir own choice.



Complete Kit

$1.50

*(Postage 25c)*

## BELLANCA SKYROCKET

Wing Span 18"

THIS dandy little model certainly is a knock-out when you see it in flight. With its 18" wing span, its trim rakish lines, and all-over bright red finish it is a real masterpiece. Its original—the many-carrying Bellanca Skyrocket—is a trim ship recognized for its high efficiency. No other ship of its size can equal it in flying performance, and it holds many records for duration flying.

This model has been thoroughly tested by our factory experts, and found to be a capable and consistent flyer, often flying well over 200 feet—a remarkable performance, considering the very short and stubby fuselage.

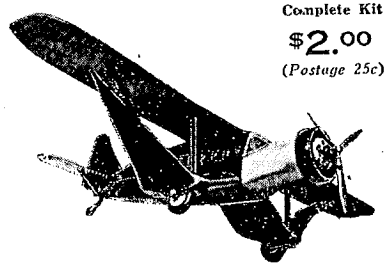
Like the Airbus model, this model was designed from the original plans by an internationally known aeronautical designer. You can easily recognize his master's touch in the beautifully detailed plans, which show every detail so clearly that any boy can follow them easily. This, too, is a 2-in-1 kit, containing all parts, plans and directions for either an exact scale-reduction model or a fling scale model. The best of materials, many special parts, and complete directions are supplied.

## BELLANCA AIRBUS

Wing Span 22"

THE Airbus is the latest creation by Guiseppe Bellanca, famous aeronautical engineer, and designer of the transatlantic ship, Columbia. It is admitted by many experts to be the most highly perfected, most efficient transport plane in the world today. This ship carries the same pay-load and excels in performance the large tri-motored planes that are flying our air lines today.
After much careful study and experimenting, we have perfected an authentic model of this novel transport ship. Built as an exact scale reduction model, it is one you will be proud to own and exhibit. Its unusual lines give it a powerful appeal for the most expert craftsman. Yet it is simple enough in construction that even the beginner can build it without trouble. Built as a flying model, it will distinguish itself for its beautiful and realistic appearance in flight. Due to its tricky design and short fuselage, its flights will average about 150 feet, according to factory tests.

The kit is complete with large full-size 2-in-1 plans with complete building instructions, colored dope, cement, best selected balsa wood, Japan paper, celluloid wheels, propellers for both types of model, and power plant assembly. Flat parts are printed accurately on 1/16" balsa sheets ready to be cut out.



Complete Kit

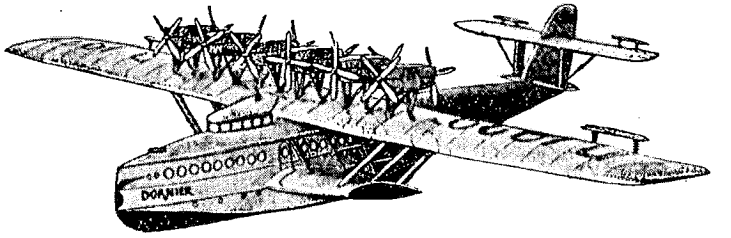
$2.00

*(Postage 25c)*

Airbus



# The LEVIATHAN of the AIR



## The First and Only Practical Scale-Reduction Model of the Giant

# DO-X

Wing Span - 30"

THE intricate and unusual design of this gigantic "Leviathan of the Air," and the obvious difficulties of resolving its many details into terms of practical model construction, has discouraged many model builders from attempting it, and until now has prevented the designing of a satisfactory set of plans for a model of this epoch-making ship.

When you think of the immensely complicated mechanism of the DO-X, you will realize what a task confronted our engineering department when they undertook to design a simple model, reduced to a scale of 1/50 of the dimensions of the original, which would at the same time give the impression of miraculous, inexorable power that one experiences on seeing the great, massive liner actually lift its unnumbered tons of sheer weight into the air and fly.

Yet they have done it! Just look at the illustration—an actual photograph of a model made from this masterly *Selley* kit! Doesn't it give you a thrill to think that you, too, can build such an accurate replica of this flying giant, the greatest aeronautical achievement that man has yet accomplished? You bet it does! And you can build it, too. For our expert model engineers have successfully worked the amazingly complicated design of the DO-X into a simple, practical, easily constructed model that still retains the massive impressiveness of the original, even though it is but 30" across the wings instead of 150 feet!

The hull is constructed from thin sheet balsa, cemented over bulkheads which are accurate scale-reduction cross sections of the hull of the original ship. The deck is solid, and shaped to the correct hull design. The wing surfaces are of the built-up, double surface type, with ribs spaced very close together. This feature not only enhances the realistic appearance of the model, but adds to its strength, as well. The balsa motor nacelles are cut to exact size and slotted for cross-braces and struts. The most difficult part of all for the average model builder would be the 12-four-bladed propellers. But we solved this difficulty by designing a brand new model propeller, made from heavy sheet aluminum, 12 of which are supplied with your kit in finished form, complete with special shaft and spinner.

We haven't space here to tell you about the marvelously accurate, clear, detailed plans, all drawn full-size, which are supplied with this kit. But they are as painstakingly worked out, as expertly drawn, as conscientiously cross-referenced as any set of model airplane plans you will ever see. With their help, even the veriest amateur will be able to build this prodigy of model craft.

Complete Kit

$5.00

*(Postage 25 cents)*

**DO-X Plans**—for description and prices of plans alone, see page 22.

**DO-X Propellers**—Our original DO-X propellers are obtainable separately. They are fully described and illustrated on page 19.



130

## • Military Series $1.50 & $1.75 Each

# Selley

# SOLID BALSA REPLICA MODELS

### Mount Them on Pedestal Bases

### 12 Inch Wing Span

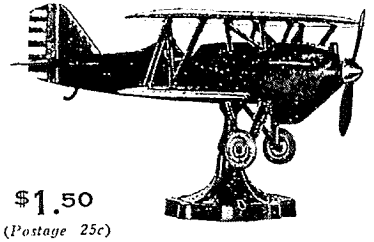
NO modern boy's room or den is complete without at least one of these beautiful little models. With its glistening prop and wheels, and brightly colored wings, it's an ornament to any radio, bookcase or desk—not only in a boy's room, but in the library, too. You can build them yourself, and then use them as gifts, too.

This new and original series of small, solid-wood models of famous ships was developed in response to the increasing interest in the building of really fine non-flying models for decorative and display purposes. The neat, trim lines of these little gems—they're all 12 inches across the wings—will be a joy to the master model craftsman, and yet they're simple enough for even the beginner. Made of solid balsa, they are exact scale reduction replicas of the ships they represent.

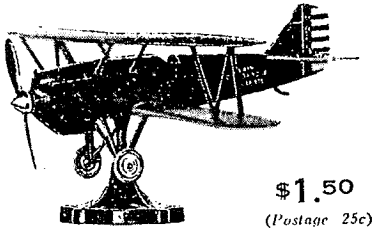
The first three models are replicas of three famous Curtiss-Wright ships — the Curtiss Army Hawk, the Curtiss Army Falcon and the Curtiss Navy Helldiver. These solid miniatures are designed with the same care as the larger Official Curtiss-Wright models described on a previous page.

A full-size plan, showing all details of construction, with cross-sections of wing and fuselage, is supplied with each kit. The fuselage, wings, rudder and other parts are already shaped and sawed exactly to size. A special die-cast metal propeller with special shaft bushing, and small realistic aluminum disc wheels with rubber tires add distinction to the finished models. All materials, including authentic, colored Army or Navy insignia, special colored dopes, etc., are supplied with each kit. Each kit, **$1.50.**
*(Postage 25c)*

A specially designed, heavy, die-cast white metal pedestal base and fitting for mounting may be purchased, finished in black lacquer, at an additional cost of 75c each.



**$1.50**
*(Postage 25c)*
Curtiss Army Hawk



**$1.50**
*(Postage 25c)*
Curtiss Army Falcon





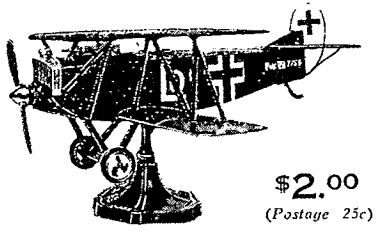


## • War-Time Series $2.00 Each

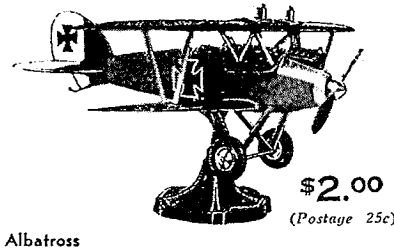
THREE famous war-time planes in authentic replica, sent to you in kits just as fine and complete as the Curtiss-Wrights kits on the opposite page. You would hardly believe that such fine and accurate detail could be incorporated in models of only 12 inches wing span. They would be a worthy addition to any collection of historical models.

First, there is the Fokker D-7, made famous by the German war ace, Undit. The second of the series is the German Albatross pursuit plane. And the third is the Spad, the plane that carried Capt. Eddie Rickenbacker to fame in the World War. These beautiful models were designed for us by an internationally known aeronautical engineer who has designed over a hundred successful planes. In fact he is the designer of the original Albatross, and co-designer of the Fokker D-7, and in these models he has produced in miniature the same ships he himself designed. They are marvels of completeness, these war bird models. Exhaust stacks, dummy radiators, tiny machine guns, motors—in fact everything characteristic of the original is carried out in faithful miniature. Complete kit includes all parts and materials, and full-size plan with complete building instructions. Price, each kit, **$2.00.**

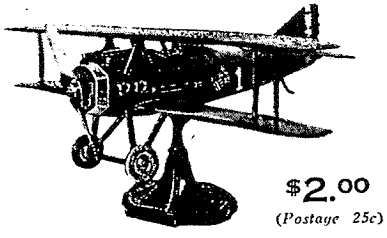
*(Postage 25c each)*



**$2.00**
*(Postage 25c)*
Fokker D-7



**$2.00**
*(Postage 25c)*
Albatross

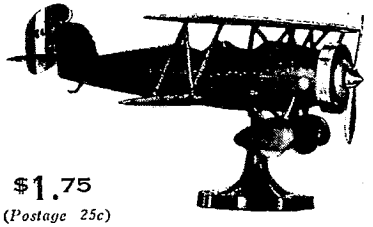


**$2.00**
*(Postage 25c)*
Spad

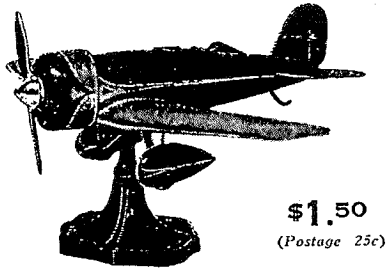
### Lockheed Sirius

One more beautiful 12-inch replica model —Col. Lindbergh's personal speed plane in which he smashed so many records. Kit contains all materials, parts, plans and directions, at the special price of **$1.50.**

*(Postage 25c each)*



**$1.75**
*(Postage 25c)*
Curtiss Navy Helldiver



**$1.50**
*(Postage 25c)*
Lockheed Sirius

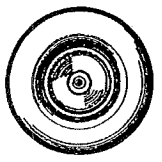
For Plans of These Models See Page 22

# WHEELS

"SELLEY"

## Largest Assortment of Model Airplane Wheels Anywhere

### Balloon Tired Aluminum Disc Wheels



Realistic and light, for scale or flying models. Of polished aluminum with light brass hub. Tires are of live sponge rubber. This popular item is the type of wheel used on Official Curtiss-Wright scale models. In three sizes, sold only in pairs.

1¼" per pair....25c
1¾" per pair....30c
2" per pair....40c
*(Postage 4c per pr.)*

### Treaded Wheels

You couldn't find more realistic wheels than these for scale models. Aluminum disc wheels, complete with brass bushing, are fitted with real rubber, special-treaded tires which reproduce accurately the actual treads of well-known brands of tires. Made in six sizes.

1¼" U. S. Royal Cord, per pair.....30c
1½" Goodrich Heavy Duty Cord, per pair....40c
2" Goodrich Silvertown Cord, (illustrated) per pair .....50c
3" Vulco Balloon Cord, per pair.....60c
5⅜" All State Balloon, per pair.....$1.00
6⅝" Lee Truck-Bus, per pair.....$2.00
*(Postage 6c per pair)*

### Doughnut Wheels

A brand-new, realistic miniature of the large-tired wheels used on so many of the latest planes. *Exclusive with Selley* — there's nothing else like it. Small aluminum disc, with large sponge rubber tire. In two sizes.

1" per pair.....25c
1¼" per pair.....30c
*(Postage 4c per pr.)*

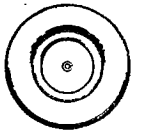
### Tail Wheels

A small rubber tired wheel for tail wheel of scale models of transport ships —or use it for your small-sized models. You'll be surprised how it dresses them up. Aluminum disc with solid rubber tire. *Exclusive with Selley.* In seven sizes.

| | | |
|---|---|---|
| ½"...10c | each...20c | per pair |
| ⅝"...10c | each...20c | per pair |
| ¾"...10c | each...20c | per pair |
| ⅞"...10c | each...20c | per pair |
| 1"...12½c | each...25c | per pair |
| 1¼".12½c | each...25c | per pair |
| 1¼".12½c | each...25c | per pair |

*(Postage 2c on each wheel)*

### Balloon Tired Celluloid Wheels



If you want to add *color* to your flying model, here's the way to do it. This is the same design wheel as the balloon tired aluminum wheel. Has soft sponge rubber tires, with bright celluloid discs, and takes a 3/32" axle. Of course, it's lighter than the aluminum wheel. In black or colors—red, orange, cerise or blue. In three sizes.

1½" per pair...30c
1¾" per pair...35c
2" per pair.....45c
*(Postage 4c per pr.)*

### Untired Celluloid Wheels

An extra light wheel that's great for flying models—they just don't come any lighter, and there are small sizes for your smaller models, too. Made hollow, of thin celluloid. Shaped to imitate rubber tired wheel, though without the added weight of an actual tire. In black, or red. In five sizes.

¾" per pair.....10c
1" per pair.....12c
1⅜" per pair.....15c
1⅞" per pair.....20c
3" per pair.....50c
*(Postage 4c per pr.)*

### Axles

*(For Split-Type Axle see Small Wood Parts)*

It will pay you in time and trouble saved to use ready-threaded axles. These are strong and light, made of 3/32" Bessemer steel rod. Threaded and provided with nuts, washers and spacer-bushings. These axles may be used for all wheels listed on opposite page except small tail wheels. In ten standard lengths.

1⅛", 2½", 5", 6".....10c
7", 8", 9".....12c
10", 11", 12".....15c
*(Postage 2c each)*

### Axle Fitting

A strong, light-weight fitting, of nickel-finished metal, to fit over ⅛" reed landing gear. Provided with 3/32" hole for carrying axle, and smaller hole for attaching truss wires.

Per pair .....5c
*(Postage 2c per pair)*

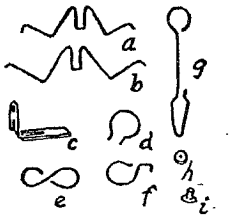


### Featherweight R. O. G. Wheels

Exceptionally light and strong, made from selected balsa wood 1/16" thick. Supplied with brass bushing 1/32" in diameter. Just the thing for your light models. Wheels may be cemented together for heavier flying models. In three sizes, in either balsa or red fibre.

¾", pair .....2c
1", pair .....2c
1¼", pair .....3c
*(Postage 2c per pair)*

### Featherweight Wire Parts




These parts are accurately made by machine with special wire-forming tools, and only the best grade tempered steel music wire is used. They are the lightest and strongest fittings obtainable for endurance models.

a-b. Wing clips, front and rear, per pair.....3c
c. Propeller hanger, each .....3c
d. Rubber can, each .....1c
e. S-hook .....2c
f. Rear rubber hook, each.....1c
g. Propeller shaft, each.....2c
h. Washer, doz. .....5c
i. Bushing eyelet, doz. .....5c
*Special*—Wire landing gear with wheels.....15c
*Special*—Shaped and soldered rudder and stabilizer outlines .....15c
*(Postage 2c on one or all parts)*

### New Type Propeller Hanger

This is the newest type of featherweight prop hanger, and it's a big improvement over the old ones. It is stamped from light gauge special Kanner steel by machine, and has a special strengthening ridge to prevent bending out of shape. Bright finish, drilled with small hole for shaft, and has a wide surface to cement to motor stick. Very stiff and light. Illustrated under c, above.

Each .....3c
*(Postage 2c)*

### Featherweight Propeller Hanger

Especially good if you are experimenting with featherweight model building. Made from half-round steel wire, formed to shape and drilled with small hole for shaft. The B hanger is slightly heavier for use on twin pushers and larger endurance models. Both are unusually resistant to strong pull from the rubber motor.

A. Light hanger, each.....2c
B. Heavier hanger, each.....3c
*(Postage 2c)*

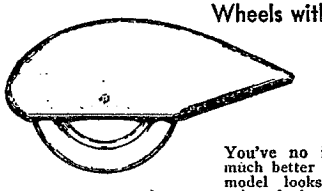
### Featherweight Washers & Bushings

Selley is the only supply house able to furnish these extremely small, "no-weight" washers.

H. Washers ⅛" diameter, 1/32" hole, aluminum, per dozen .....5c
H. Washers, ⅛" diameter, 3/64" hole, brass, per dozen .....5c
I. Bushings, flanged, 3/32" long, 1/32" hole, brass, per dozen .....5c
I. Bushings, flanged, 3/32" long, ⅛" hole, brass, per dozen .....5c
*(Postage 2c per dozen)*

# CELLULOID and other FEATHERWEIGHT ACCESSORIES

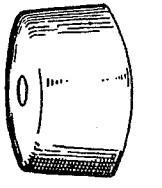
### Wheels with Pants



You've no idea how much better any scale model looks with a pair of these bright, brand new streamlined wheel cowls. They add distinction and realism to models of any of the modern ships. The cowls or "pants" are made of celluloid and are 8¾" long. Wheels are hollow celluloid, shaped with tire contour, 1⅞" in diameter. Both wheels and pants are unbelievably light, and may be used on flying models. In black, red or orange.

Per pair .....60c
Pants alone, per pair .....40c
*(Postage 3c per pair)*

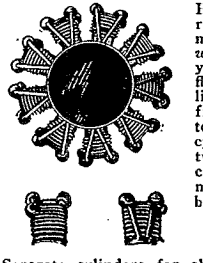
### Celluloid N. A. C. A. Cowlings



A realistic featherweight accessory that certainly gives "class" to round-fuselage models. It makes them look like real, high-speed planes. And it's light enough for your flying models. It is 2⅞" in diameter, 1⅝" deep, and has a ¾" hole for the propeller shaft. Fits neatly over front of fuselage. In black only. (For aluminum cowlings, see page 20).

Each .....20c
*(Postage 3c)*

### Celluloid Dummy Motors

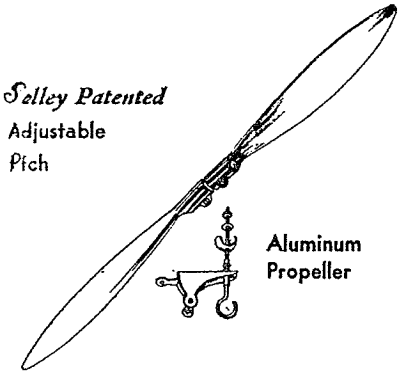


Here's the most realistic reproduction of a radial motor you can find *anywhere*. And what's more, you can use it on your flying models, too — it's light enough. Moulded from thin black celluloid to resemble closely a 9-cylinder radial engine. In two sizes. 1⅛" diameter comes with Special Aluminum Cowl plate and bushing .....25c
3" diameter ....40c
*(Postage 3c each)*

Separate cylinders for above motors—from them you can make motors of any number of cylinders you wish. In two sizes.

⅝"x⅝"x½", each .....5c
⅛"x⅛"x¼", each .....4c....
*(Postage 3c per doz.)*

# PROPELLERS for FLYING MODELS



*Selley Patented*
Adjustable
Pitch

Aluminum
Propeller

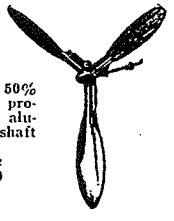
No more broken props on your flying models n you use this *exclusive Selley* innovation. *Selley* adjustable pitch aluminum propel--the first of its kind ever introduced—is *olutely unbreakable.* It may be used on type of flying model, for it is *adjustable ny pitch angle.* It is *reversible* to either it or left-hand rotation. *Lighter* than a den propeller. Gives *more pull* with less ber, because it can be adjusted until the t efficient pitch angle is found for that icular model. With blades of sheet alu- um, .025″ thick, it gives a finished and istic appearance to scale models. Made wo, three and four-blades.

## Two-Bladed

The two-bladed "prop" is the most popular, for t can be used on almost any flying or scale nodel realistically. Blades are fitted and clamped over a light dowel hub, which in turn fits on a shaft with an arc-flange. In two sizes.

8″ diameter .....35c
10″ diameter .....50c
Shaft and hanger complete.....25c
(*Postage 3c*)

## Three-Bladed



Specially designed for builders of the heavier type of flying models. Very efficient — 50% more pull than two-bladed propeller. Blades are fitted on aluminum hub complete with shaft and spinner. In two sizes.

8″ diameter .... 85c
10″ diameter ....$1.00
(*Postage 5c*)

## Four-Bladed

This "prop" is available for special scale model work. Like the three-bladed propeller, complete with shaft, aluminum hub and spinner. In two sizes.

8″ diameter .....$1.10
10″ diameter ..... 1.25
(*Postage 5c*)

## Racing Type Propellers

These are the props that give you that slow steady power that wins endurance contests. Specially designed for featherweight endurance models. A high-pitch slow-speed propeller for duration flights. Machine carved from light selected-balsa only. Sold in pairs, right or left, or singly. When ordering, single props, specify whether right or left prop is desired. In two sizes.

10″.. 85c each ..$1.50 per pr.
12″..$1.00 each ..$1.75 per pr.
(*Postage 3c each, 5c per pr.*)

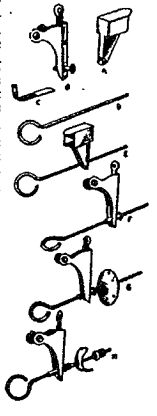
## Standard Propellers

Standard shape balsa or basswood propellers are usually the most efficient for flying models. May be used on scale or contest models with equal effectiveness. Scientifically designed and machine carved by a special process which insures accuracy and proper balance. Made from first-grade stock only, selected for its straight grain and freedom from defects.

| | Basswood | Balsa |
|---|---|---|
| 6″ | 36c | 45c |
| 7″ | 42c | 52c |
| 8″ | 48c | 60c |
| 9″ | 54c | 68c |
| 10″ | 60c | 75c |
| 11″ | 66c | 83c |
| 12″ | 72c | 90c |

(*Postage 3c each*)

## Propeller Shafts and Hangers

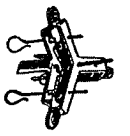


A. Cup hanger of bright-finished steel, for larger flying endurance models. Takes 1/8 or 3/32″ shaft.5c
B. Standard hanger of strong special bright metal with bushing. Takes 3/32″ shaft .....10c
C. Special hanger for featherweight models. Takes music wire shaft .....3c
D. Plain hooked shaft. 1/8″ or 3/32″ thick .....3c
E. Plain 1/8″ shaft with steel cup hanger .....8c
F. Plain 3/32″ shaft, bushing and standard hanger. Complete .....13c
G. Plain 3/32″ shaft with disc flange, bushing, hanger, complete .....20c
H. Threaded 3/32″ shaft, bushing and hanger complete with arc flange washers and nuts.....25c
(*Postage 2c each*)



See Ordering Instructions on Page 32





## Gearless Transmission Unit

This multiple rubber band transmission gives the power of a direct drive with twice the endurance, for you can get 4 times as many turns as when strands are all twisted together. Four strands or less of 1/8″ flat rubber may be used on each of the three crankshafts. The unit may be glued to motor stick or fuselage. No special winder needed. Weight, 1/25 of an ounce.

Each .....75c
(*Postage 3c*)

## Standard Steel Type Propeller *(Die-Cast)*

This exact replica of the most popular propeller type used on commercial plans may be used on any scale model—and how real it looks! Supplied with threaded shaft and nut, brass bushing, and turned wood plug, all complete and ready to assemble on your model. In two sizes.

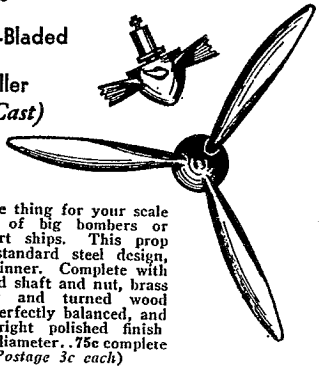
3¼″ .....35c complete
6¾″ .....75c complete
(*Postage 3c*)

## Hawk Type Propeller *(Die-Cast)*

There's nothing like these props for fine non-flying scale models. They're far more realistic in design than any propeller designed for a flying model. Die-cast from bright-finish metal, perfectly balanced and true-running. Complete with threaded shaft, hex nut and washer, brass bushing, and special wood plug that makes it easy to fit to any model. In two sizes.

3¼″ .....35c complete
6¼″ .....75c complete
(*Postage 3c each*)

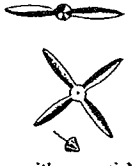
## Three-Bladed Type Propeller *(Die-Cast)*



Just the thing for your scale models of big bombers or transport ships. This prop is of standard steel design, with spinner. Complete with threaded shaft and nut, brass bushing and turned wood plug. Perfectly balanced, and with bright polished finish 5″ in diameter..75c complete
(*Postage 3c each*)

# PROPELLERS for Fine SCALE MODELS

## Stamped Aluminum Propellers



Here's an exclusive *Selley* accessory that will be a big time and trouble-saver to you DO-X builders. The four-bladed prop is supplied with the *Selley* DO-X kit. And the two-bladed style is just the thing for those miniature scale models that everybody's building these days. Both styles are stamped from heavy sheet aluminum, and sold together with a special push pin with spinner-shaped head for shaft. Sold singly or in sets of twelve for DO-X models.

Two-bladed, each .....10c
Four-bladed, each ....10c per dozen $1.00
(*Postage 2c each, 6c dozen*)

Brass-headed spinner pins separately,

1/4″ diameter, each.....2c
3/8″ diameter, each.....2c
1/2″ diameter, each.....2c
1/8″ diameter, each.....2c
(*Postage 2c each, 4c dozen*)

## Cast Metal Motors

Another *Selley* special, for finely finished small non-flying scale models. Made of die-cast aluminum, with black finish. The 1½″ size has seven cylinders, and is sold complete with a nickel finished aluminum propeller and spinner. The 1″ size has nine cylinders, no propeller.

1″ .....50c
1½″ with propeller...$1.00
(*Postage 3c each*)

## Aluminum Propeller Spinners

(*See also Wooden Parts*)

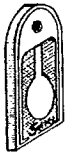
If you want to modernize your scale models, see that one of these spun aluminum spinners is attached to each propeller. You'll be surprised how much this one little accessory adds to its appearance. Easily attached, and adds very little weight. Can be used on flying or non-flying models. In five sizes, diameter

1/2″ .....15c
5/8″ .....15c
3/4″ .....20c
7/8″ .....20c
1″ .....25c

# ACCESSORIES for SCALE MODLES

## • Finishing Touches That Give Your Model That "Million Dollar Look"

### Dummy Radiators

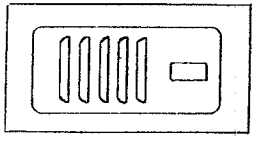


ives a remarkably neat finish to the ose of a flying or scale model fuselage. stamped from light aluminum, and pro- ided with hole for attaching to motor tick, and clearance hole for propeller haft. Size 1⅜"x2⅛".

Each .....15c

*(Postage 2c)*

### Louvered Sides



There's noth- ing like these snappy engine housing sides for dressing up a flying or scale model. *Exclusive with Selley.* Very light, stamped rom .004" thick aluminum, with louvers and door utline. Size 2¼" x 3⅝". Extra large to allow imming to fit any model.

Per pair .....25c

*(Postage 2c)*

### Dummy Machine Guns

nother exclusive *Selley* spe- ialty to make your military nd war-time models look as ough they meant real busi- ess. Made from die cast etal, finished in black lac- uer. Gun is mounted on ecial swivel metal fitting of ightly finished metal, allow- g it to turn in any direc- on. Can be fitted to any odel. Gun is 1½" long. Each, complete .....35c

rsuit Type Machine Gun, without swivel gun ount, to be mounted on cowl.

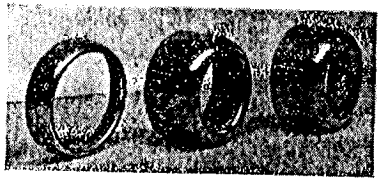
Each .....15c

*(Postage 6c)*

### oot Rest

Another *Selley* specialty to give your scale models that professional look. Made of bright, nickel-finished metal and can be fitted in place on any fuselage. ⅜" wide.

Per pair .....10c



### N. A. C. A. Cowlings

For round-fuselage scale models, there's nothing more "dressy" and realistic than these snappy, authentically designed N. A. C. A. cowlings. Made from light gauge spun aluminum, brightly finished, and fitted with cupped washer and brass bushing. In six sizes, diameters as follows:

| | | | |
|---|---|---|---|
| 1¼" | .....30c | 3" | .....50c |
| 2" | .....35c | 3¼" | .....60c |
| 2¼" | .....40c | 4" | .....65c |

*(Postage 10c)*

### Open-Faced Cowls

Also authentic and realistic, this snappy accessory is spun from light aluminum, with a neatly rolled edge that exposes the motor behind it. Fits directly over the nose of the model. In six sizes, as follows:

| | | | |
|---|---|---|---|
| 1¼" | .....30c | 3" | .....50c |
| 2" | .....35c | 3¼" | .....60c |
| 2¼" | .....40c | 4" | .....65c |

*(Postage 10c)*

### Drag Rings

A brand new scale model item, also called the Towner Ring, that will make your model a real professional job. *Exclusive with Selley.* Made from brightly finished spun aluminum, with a thin neatly rolled edge exposing motor. Sizes:

| | | | |
|---|---|---|---|
| 1¼" | .....25c | 3" | .....45c |
| 2" | .....30c | 3¼" | .....55c |
| 2¼" | .....25c | 4" | .....60c |

### Split Drag Rings

Towner Ring for 3" Celluloid Motor.
Split open on one side.....25c

*(Postage 6c)*

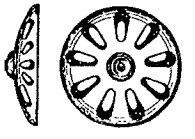
### Mystery S Cowl

The only one on the market. It took *Selley* to bring you this *authentic* Mystery Ship cowl. A realistic spun aluminum cowl *tapered toward the rear* just like the real thing. Diameter 3¼" in front and 3⅛" at the rear. 2⅛" deep. Complete with bearing.....75c

*(Postage 10c)*

### Aluminum Motor Plate

Another special *Selley* accessory—the final touch of realism that makes your scale model a real professional job of model building. Stamped from light gauge aluminum, with nine slotted holes, and fitted with special cupped washer and brass bushing for propeller shaft. Large size. Fits perfectly on standard 3" celluloid dummy motor, and can be used for either flying or non-flying scale models. Two sizes.



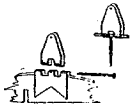
⅞" diameter ....10c
1¾" diameter ...15c

*(Postage 3c)*





### Hinge and T-Pin Fittings

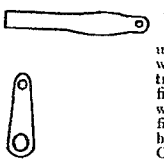


This *exclusive Selley innovation* will do more to simplify model airplane construction than any other development in years! Because the two parts of the fitting come apart so easily that assembling and disassembling a model is the work of but a moment. It makes a strong, light, neat joint for any part of a model. Ideal for movable parts—rudder and elevator surfaces, ailerons, etc.—and for attaching wing struts and landing gear. This is the fitting that gives the "clean" finish to all the Official Curtiss Wright Models. Made of thin gauge aluminum, with clevis pins or T-pins.

Double hinge fittings..2 for 5c per dozen 25c
T-pin fittings .....2 for 5c per dozen 25c
T-pins alone, per package of 2 dozen.....10c

*(Postage 2c)*

### Special Fittings



Has many uses in scale model construction. Can be used for truss wire terminals, wing hinges, movable controls. Two together of No. 1 fitting make fork for tail wheel. Made from brightly finished metal, and can be bent, soldered and cemented. Cut is actual size....4 for 5c

*(Postage 2c)*

### Tubular Fittings

Made of nickel-finished metal, these make a neat and finished joint for attaching struts, landing gear, etc. Cut shows how they may be bent or used together to solve almost any fitting problem. Made to fit ⅛" round reed or wood.

.....2 for 5c

Per dozen .....25c

*(Postage 2c per dozen)*

### Pulleys, Turnbuckles, etc.

Pulley Block #105.
Can be used for workable controls, etc. Finished in brass, complete with housing and movable pulley, ⅝" in diameter. Each.30c
*(See illustration full size above)*

Pulley Wheels or Sheaves #113.
Made of brass, grooved to carry control wires, etc. Diameter 3/32". Each..... 4c
Per dozen .....40c

Turnbuckles #511.
For guy wires on larger scale models. Has ½" take-up. Each.....25c
*(See illustration full size above)*

Turnbuckles #533.
Same as above, with fork end. Each....30c

Dummy Turnbuckles #532.
Inexpensive, but just the thing to give added realism to the appearance of your scale models. Made of brass, in three sizes ¼", ⅜" and ½". Each.....10c
Per dozen .....$1.00

Brass shackles #276.
Another realistic accessory. Each.....10c

*(Postage 3c on each item)*

# FITTINGS • and • HARDWARE

### Flanged Bushings

Very light and handy for wheel or propeller bushings, or for dummy exhaust stacks. Made from light gauge brass, flanged one end. In four sizes.

1/32" diameter, 1/16" long, doz..... 5c
1/32" diameter, ⅛" long, doz..... 5c
3/32" diameter, ⅛" long, doz..... 5c
3/32" diameter, 5/16" long, doz.....10c
3/32" diameter, ½" long, doz.....20c
3/32" diameter, ⅛" long, doz..... 5c
3/32" diameter, ⅜" long, doz.....10c
3/32" diameter, ½" long, doz.....20c

*(Postage 3c per dozen)*

### Washers

Small washers, complete range of sizes to fill any need in model work, but important for a smooth, neat job.

Washers, pinhole, per dozen .....5c
Washers, 1/32" hole, per dozen.....5c
Washers, 1/16" hole, per dozen.....5c
Washers, 3/32" hole, per dozen.....5c
Washers, ⅛" hole per dozen.....5c
Washers, 5/16" hole, per dozen.....5c

*(Postage 2c dozen)*

### Machine and Wood Screws

Machine screws, brass, with hex nuts
2/56" x ¼" .....2 for 5c
2/56" x ½" .....2 for 5c
Hex nuts, to fit above screws....3 for 5c
Wood screws, brass, No. 0, dozen.....5c
Wood screws, brass, No. 1, dozen.....5c

*(Postage 3c per dozen)*

### Machine Bolts

For accurate model work, there's nothing like these special machine screws, made from nickel alloy steel, accurately made correct to standard limit gauges.

Hex machine bolts with hex nuts:

| | Bolts alone | Hex Nuts |
|---|---|---|
| 5/16" diameter x ⅜" long. | 35c doz. | —25c doz. |
| 3/32" x ½" | 40c doz. | —25c doz. |
| ⅛" x ⅝" | 45c doz. | —25c doz. |

Fillister Head machine screws
5/16" x ⅜" .....25c doz.
3/32" x ½" .....30c doz.
⅛" x ⅝" .....35c doz.

*(Postage 3c per dozen)*

# PLANS

If there is one thing for which *Selley* is justly famous among model builders, it is for his model airplane plans. That's why we want to take a bit of extra space to tell you about them.

No model can possibly be a success unless it is properly planned. And no plan is worthy the name unless it shows *you*, the model builders, exactly how every last detail of the model is put together. That is why we take such particular pains with these plans. It is our endeavor to offer the very finest, clearest, most accurate plans it is possible to produce. *Selley* plans are not to be compared with the ordinary, amateurish model plans you buy, which always seem to leave the tricky details to your own ingenuity. Nor are they to be compared with the immensely complicated reproductions of plans for full-size ships, which are of little use to the model builder. *Selley* plans are literally in a class by themselves.

*Selley* models are designed by experts, and *Selley* plans are drawn by expert draftsmen. One series of these plans, for instance, was drawn by an aeronautical engineer and designer of international experience. *Selley* plans leave nothing to your imagination. There's nothing hit-or-miss about them. Three complete views of each ship are given. And additional detail drawings of individual parts show exactly how the model is constructed. Every detail is shown, whether the model be a simple "flying stick" or a twin-motored Curtiss Condor. Everything is drawn full size. Full explanations on the plan itself tell you just what every part is, how it is made, and where and how it is attached. But you really have to see these plans to realize fully how marvelously complete and clear they are.

For specific facts about individual models, the plans for which are listed below, see the section of this catalogue on Selley model kits. There, each ship is described in detail.

## Approved Curtiss-Wright Plans

These are absolutely the best scale model plans available today. Every last detail has been approved by the Curtiss-Wright organization. What better guarantee could you have? Separate, complete written instructions are included with each plan. Illustrated on Pages 4, 5, 6 and 7.

18" Falcon, flying model.....25c
24" Helldiver, flying model.....75c
25" Curtiss Army Hawk, non-flying scale reduction model.....50c
25" Travelair Mystery S, non-flying scale reduction model.....75c
32" Curtiss Condor Transport, non-flying scale reduction model.....75c

## Contest Model Plans

Full size plans, expertly drawn, of these improved, tested contest models. Many new, improved ideas in featherweight construction. Separate printed instructions with each plan. Illustrated on Page 8.

Lark, 18" wing R. O. G.....15c
Gull, 30" wing Tractor.....25c
Heron, 30" wing Twin Pusher, fan-tail type.....25c
Albatross 36" wing Twin Pusher, with collapsible A-frame.....25c

## Glider Plans

These plans for scale model gliders are the result of weeks of experimenting and testing. A brand-new idea introduced by Selley. Complete printed instructions with each plan. Illustrated on Page 9.

Primary Type Glider, 38" wing span..25c
Advanced Glider (Eaglet), 42" wing span.....25c
6-foot Soaring Glider (modified Bowlus type).....75c

## Selley Flying Scale Model Plans

This series will appeal especially to the beginner. The clearness of the plans, and the simple construction and excellent flying performance of the completed model will give the budding model builder ample encouragement. Illustrated on Pages 10 and 11.

Curtiss Ace.....25c
Junkers Bremen.....25c
Bellanca Columbia.....25c
Spirit of St. Louis.....25c
Stinson Detroiter Biplane.....25c

## Bellanca Model Plans

These plans for flying or exact scale reduction models of these famous ships were designed and drawn by the same aeronautical engineer who produced the Curtiss-Wright plans above. They exceeded even our own high expectations. We can think of no better testimonial to the ability of our engineering staff. Many new and original features of construction are incorporated in these new advanced type models. Illustrated on Page 12.

Bellanca Airbus.....50c
Bellanca Sky Rocket.....50c

## Replica Model Plans

Here is a brand new idea in model building. These plans show the full details of the models described on pages 14 and 15.

12" Helldiver.....25c
Hawk.....25c
Falcon.....25c
Fokker D7.....25c
Lockheed Vega.....25c
Albatross.....25c
Spad.....25c
Nieuport.....25c

## Non-Flying DO-X Plans

It took a lot of time and effort and considerable expense to develop these plans, made after a careful study of the plans of the original Leviathan of the air. But at last we perfected a practical scale reduction model of this great ship, complete in detail, but so clearly and cleverly shown that any model builder can build without difficulty. Illustrated on Page 13.

30" wing span DO-X plans, full size..75c

*(Postage 3c on each Plan)*



See Ordering Instructions on Page 32



## Curtiss-Wright Dope (Clear)

Paper surfaces on wings and fuselages should be painted with dope. It shrinks the paper over the frame, making a smooth, drum-like surface. At the same time it preserves and strengthens the covering, protecting it from dust, dampness and wear. May be used on Japan Tissue, Bamboo paper, or silk. Brush supplied with each 2 oz. glass jar.25c

*(Postage 3c)*

## Curtiss-Wright Lacquer

A specially prepared high-gloss lacquer for finishing fine models. Used on all Curtiss-Wright models. It should not be used for flying models, however. (For this purpose *Selley* Colored Dope is recommended.)

Orange Light Green Black
Yellow Khaki Red

Brush supplied with each 2 oz. jar.....30c

*(Postage 3c)*

## Curtiss-Wright Cement

If you want to see how strong this cement is, join two pieces of wood with it, then try to pull the joint apart. The wood will break first! It's quick drying, waterproof, light in weight. Sets hard in 30 minutes. Prepared especially for Official Curtiss-Wright models. Clear or colored. In 2 oz. glass jars.30c

*(Postage 3c)*

## New Selley Colored Dope

After extensive experimenting we have perfected a new and complete line of colored semi-gloss pigmented dopes. These are positively the best colored dopes obtainable—easily brushed, and add almost no weight. Your choice of 11 different beautiful standard airplane colors.

| | | | |
|---|---|---|---|
| Black | Red | Clear | Khaki |
| White | Orange | Maroon | Green |
| Grey | Yellow | Silver | Blue |

1 oz. Vial.....10c
2 oz. Can.....20c
2 oz. Jar and Brush.....25c

*(Postage 3c per item)*

## Selley Cement

Selley Cement is a quick drying waterproof cement, specially prepared for model airplane use.

1 oz. vial.....15c
2 oz. can.....25c
1 pint can.....$1.10

*(Postage 3c)*

## Wood Crack Filler

Selley Wood Crack Filler, per package.....10c

## White Shell Glue

This is the best material for glueing wing covering to frame. Per package.....5c

*(Postage 2c)*

# FINISHING MATERIALS

## • Proper Finishing Protects Your Model

## Wing Coverings

We carry a complete line of covering materials for all kinds of model airplanes. Our special paper and silk we import direct from Japan, thus assuring you of the best quality of real Japan papers and silk it is possible to obtain.

**Bamboo Paper** is used for covering heavier and larger types of models. Very strong and tough when treated with dope. In two weights.

Heavy, per sheet 24" x 37½".....10c
Light, per sheet 20" x 25".....5c

**Hakone Tissue** is the strongest tissue paper known. Used extensively for small and featherweight models, both contest and flying scale models. You can give a lot of class to your models by using colored Hakone tissue—it comes in Black, White, Red, Orange or Green.

Per sheet, 20" x 24".....5c

**Gold Beaters' Skin** is the strongest covering obtainable for larger contest models and flying scale models. Very light, very tough. More resistant against puncture than tissue. May be doped, and comes in a choice of colors—White, Red or Yellow. Exclusive with *Selley*.

Per sheet, (approximate size only)
8" x 30".....30c

**Silk** is one of the all-round best coverings for fine flying models. It is extremely light and tough, and when doped has great resistance against tears and punctures. This is the finest grade of Japanese silk obtainable for model purposes, and the lightest in weight—one yard weighs only 2/7 oz. White only.

Per square yard.....60c

Wood Veneer, double-faced Japanese veneer, card thickness, for decks, wings, cowlings and round fuselages. May be stained just like wood.

Per Sheet 10"x15".....10c
20"x15".....20c
20"x30".....30c

*(Postage 2c one or six of each above)*

## Aviation Photographs

Just the photos you've been waiting for—beautiful pictures for decorating your room or for a collection.

Air maneuvre flight pictures, set of 8, size 11" x 14", per set.....75c
Racing and military planes, set of 25, per set.....25c
World War pictures, set of 16, per set.25c
Insignia of military fighting squadrons, set of 28, per set.....25c
Rotogravure pictures, size 11" x 14"
Dornier DO-X in flight, each.....25c
Dornier DO-X on water, each.....25c
Col. Lindbergh's Lockheed Sirius, each 25c
Post and Gatty's Winnie Mae each...25c

*(Postage 6c per set)*

Read Story on Page 1

# SUPER —LATA "SELLEY" BALSA

Balsa, the lightest wood known, is three times lighter than cork. Also it is easily carved, trimmed or bent. It is therefore ideal for many uses in model building, and should be used wherever lightness is of first importance.

Do not be mislead by advertisements offering balsa wood at absurdly low prices—it is usually pithy, bias-grained or otherwise unfit for model work. ***Selley*** model building wood is specially selected for strength and lightness Only first grade, clear stock is used—every piece is straight-grained, clean-edged, accurately cut to size. This balsa is the lightest and strongest grown—kiln-dried, and free from defects.

## Sticks

*In 36" lengths*

| | | | |
|---|---|---|---|
| 1/16" x 1/16" | 1c | 3/16" x 3/16" | 3c |
| 3/32" | 1c | 1/4" | 3c |
| 1/8" | 1c | 5/16" | 4c |
| 3/16" | 1c | 3/8" | 4½c |
| 1/4" | 1c | 1/2" | 5c |
| 5/16" | 2c | 3/4" | 6c |
| 1/2" | 2½c | 1/4" x 1/4" | 4c |
| 3/4" | 3c | 1/8" | 4c |
| 3 32" x 3 32" | 2c | 3/8" | 4½c |
| 1/8" | 2c | 1/2" | 5c |
| 7/32" | 2½c | 3/4" | 6c |
| 1/4" | 3c | 3/8" x 3/8" | 5c |
| 1/2" | 3c | 1/2" | 6c |
| 1/8" x 1/8" | 1½c | 3/4" | 6½c |
| 1/16" | 2c | 1/2" x 1/2" | 7c |
| 1/4" | 2½c | 3/4" | 9c |
| 3/16" | 3c | 3/4" x 3/4" | 12c |
| 5/16" | 3c | *(Postage 10c dozen)* | |
| 1/2" | 3½c | | |
| 3/4" | 6c | | |

Basswood sticks may be obtained in the above sizes at prices of 1c more per stick than the balsa prices.

## Sheets

| *36" long* | | 1/16" x 1" | 7c |
|---|---|---|---|
| 1 32" x 1" | 4c | 2" | 14c |
| 2" | 8c | 3" | 21c |
| 3" | 12c | 6" | 42c |
| 6" | 24c | 1/4" x 1" | 7½c |
| 1/16" x 1" | 4½c | 2" | 15c |
| 2" | 9c | 3" | 22½c |
| 3" | 13½c | 6" | 45c |
| 6" | 27c | 1/8" x 1" | 8c |
| 3 32" x 1" | 5c | 2" | 16c |
| 2" | 10c | 3" | 24c |
| 3" | 15c | 6" | 48c |
| 6" | 30c | 1/2" x 1" | 10c |
| 1/8" x 1" | 6c | 2" | 20c |
| 2" | 12c | 3" | 30c |
| 3" | 18c | 6" | 60c |
| 6" | 36c | 3/4" x 1" | 13c |
| | | 2" | 26c |
| | | 3" | 39c |
| | | 6" | 78c |

*(Postage 10c on one or dozen)*

*Important:* All wood orders carry a packing charge of 15c, even for one or two strips. The same rate must be used to ship one piece as 100 pieces they cannot be packed with other supplies, but must be separate. All sticks are cut in 36" lengths, *but will be shipped in 18" lengths unless specified and* 10c *additional packing charge is remitted for special handling.*

## Logs

| *36" long* | | 2" x 4" | $0.90 |
|---|---|---|---|
| 1" x 1" | 20c | 3" x 3" | $1.15 |
| 1" x 1½" | 25c | 3" x 4" | $1.30 |
| 1" x 2" | 30c | 4" x 4" | $1.60 |
| 1" x 3" | 45c | 1" x 6" | $1.00 |
| 1½" x 1½" | 30c | 2" x 6" | $1.50 |
| 2" x 2" | 60c | 3" x 6" | $2.25 |
| 2" x 3" | 75c | 1⅜" x 6" | $1.15 |

*(Postage 10% additional)*

## Propeller Blocks

| | | | |
|---|---|---|---|
| 1/2" x 3/4" x 5" | 2c | 7/8" x 1 1/8" x 9" | 8c |
| 1/2" x 3/4" x 6" | 3c | 1 1/8" x 1 3/8" x 10" | 10c |
| 1/2" x 3/4" x 7" | 4c | 7/8" x 1 1/8" x 11" | 9c |
| 1/4" x 1 1/4" x 8" | 5c | 1 1/8" x 1 3/8" x 12" | 12c |
| 5/8" x 1 7/8" x 8" | 6c | 1 1/8" x 1 3/8" x 12" | 11c |
| 3/4" x 1 1/4" x 9" | 7c | | |

*(Postage 3c)*

## Nose Blocks, Formed

Made especially for Official Curtiss-Wright Models from selected balsa, machined and cut exactly to the right size and shape. They'll save you a lot of work and worry.

Hawk Nose Block ..... 50c
Mystery S Nose Block ..... 40c
Condor Nose Block ..... 45c

*(Postage 3c)*

## Model Nails

Small nails are an important part of all model construction. The following very small sizes are especially recommended for model use.

.024 steel, 3/8" long, flat head, per package ..... 5c
.024 steel, 1/2" long, flat head, per package ..... 5c

*(Postage 2c)*

## Model Pins

These pins can be used for the most delicate model—use them even on 1/8" square wood without fear of splitting. Round head, 3/8" long.

Per package ..... 5c

*(Postage 2c)*



# FLYING MODEL MOTORS and INSIGNIA

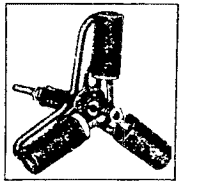
## Rubber

It makes a lot of difference what kind of rubber motor you use in your models. It often means the difference between winning and losing a contest. ***Selley*** new special duration rubber strand is absolutely the finest rubber you can buy for model airplane power plants. It is made from the finest perfect quality natural growth pure Para rubber. It will increase the winding turns of any model 25%—and thus increase the duration of its flights. Its tensile strength (of a single strand of 44 gauge) is 7 lbs., and its elongation is 700%. It is specially prepared with self lubricating properties, so that it will unwind freely and without sticking —thus you get every last ounce of power in the motor.

1/8" flat, per yard ..... 2c
3/16" flat, per yard ..... 3c
1/8" flat, full skein ..... $1.00
1/16" flat, full skein ..... $1.50
(No less than 5 yards sold)

R. O. G. Rubber
1/32" square, per yard ..... 1½c
3/64" square, per yard ..... 1½c
(No less than 10 yards sold)
*(Postage 6c)*

## Compressed Air Motor



A powerful 3-cylinder motor for flying models of from 4 foot to 9 foot wing span. Develops about 10 oz. of thrust, enough to swing a 14" to 18" propeller. The total load they will carry, including weight of model and motor, is about 2½ lbs. Duration is from 35 to 55 seconds. The safe air pressure for tanks is 110 lbs. Both motor and tank are sold either knocked down or completely built.

Motor in knocked down kit, all parts bent and formed ready for assembly, no machine work necessary. Each ..... $1.25
Knocked-down tank kit, with enough material for a 24" or 30" tank, including heads, cylinder wrapped with wire, main feeder pipes to motor, and three mounting brackets. Each ..... $2.00
Finished motor, each ..... $2.95
Finished tank, either 24" or 30" long, each ..... $4.95
Complete motor and tank, attached and ready to run ..... $8.40
*(Postage 10c)*

## Decalcomania Insignia

These quality insignias will put the finishing touch on your finest scale models. They are true standard government colors and designs, reproduced for us at great expense by a special process—three films of paint processed on a special gelatinized paper. You simply place them in a dish of water until design releases from the paper.

Star and circle insignia, 1⅛" dia. ..... 10c pr.
Star and circle insignia, 2⅛" dia. ..... 15c pr.
Stripes for rudder—13 red and white stripes, and one vertical blue stripe, 2"x3½" ..... 15c pr.
Standard name insignia—"Curtiss" ..... 10c pr.
"Curtiss Hawk" ..... 10c pr.
"Curtiss Condor" ..... 10c pr.
"Travel Air Mystery" ..... 10c pr.

## Printed Insignia

The following insignias are printed in regulation colors on gummed paper. Made in three sizes. Just right for your small scale models.

Star and circle insignia, ¾", 1⅛" or 1¾" diameter, any size ..... 2 for 5c
Wartime red, white and blue circles, same sizes, any size ..... 2 for 5c
Printed insignia sheet, inexpensive. Two stars and circles, 2¼" diameter, with red and blue strips for rudder. Printed on Japanese tissue paper, to be cut out and pasted on. Each sheet ..... 2c

## Rudder Stripes

Rudder Stripes. Printed on gummed paper, in true Red, White and Blue colors. Accurate reproductions of regulation rudder insignia. One pair Army and one pair Navy to each set. Made in two sizes, for 12" Model size. Per set ..... 5c
24" Model size. Per set ..... 10c

## German War-Time Insignia

As used on the earlier war-time ships. Printed on thin gummed paper. Solid black cross with white and black outline. In two sizes, set of four crosses.

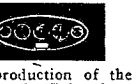
¾" x 1¼", per set ..... 5c
1½" and 2", per set ..... 8c
Insignia as used on later German planes. 6 to a set, Fokker D7 ..... 10c

## Spad Insignia

Printed in colors on Gummed paper. Wing circles and number, rudder stripes, wheel stars and hat in ring.

Complete set ..... 10c

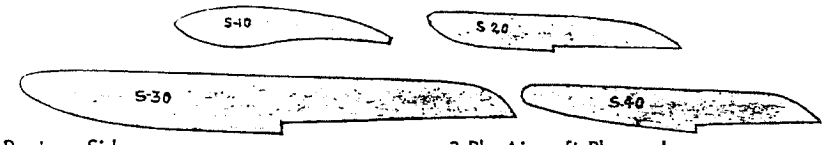
## Instrument Board



Instrument board—a genuine reproduction of the famous Pioneer instrument board. Printed on paper, ready to trim to fit your scale model. 4 sizes, 1", 1¼", 1¾", and 2¼". Per set..5c

*(Postage on all insignias 2c)*

# Selley SPECIAL




## Pontoon Sides

These pontoon sides are correctly designed for flying R. O. W. models. They are already cut to shape from selected $\frac{1}{8}$" thick balsa.

#S-10 Porpose, $\frac{3}{4}$"x4$\frac{1}{4}$", set.....15c
#S-20 Standard, $\frac{3}{4}$"x5", pair.....20c
#S 30 Navy, 1$\frac{1}{8}$"x10$\frac{1}{8}$", pair.....25c
#S 40 Racing, $\frac{1}{8}$"x6", pair.....20c

*(4 sides to set)*

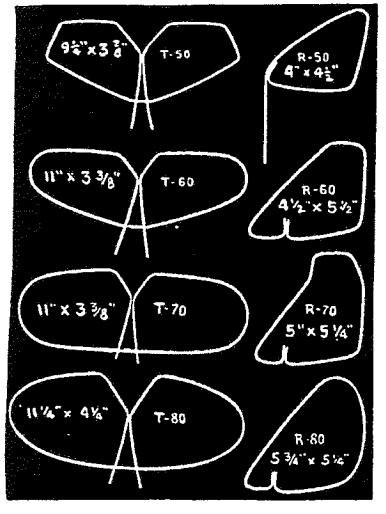
## Formed Landing Gear

Landing chassis, $\frac{1}{8}$" dia. rud. already formed, with streamlines attached ready to be cemented and sandpapered to shape. Complete.25c
Metal fitting for above, with screws, extra....15c

## Formed Tail Outlines

A variety of stabilizer and rudder outlines, for almost any type of scale model. Made from $\frac{1}{32}$" hard-surfaced polished reed, stem formed to proper shape. Sold in sets, stabilizer and rudder. Shapes and sizes as in illustration. Order by number.
Per set .....15c

*(Postage 3c per set)*




## 3-Ply Aircraft Plywood

Light, strong and waterproof, this plywood has many uses for model airplane and boat work. Can be used for ribs, bulkheads, decks, cowling, fuselage slides, etc., as well as for man-carrying gliders. Designed specifically for aircraft use, and will pass all Army and Navy specifications. Four weights, prices per square foot.

1/32" .....35c  $\frac{1}{8}$" .....28c
1/24" .....30c  3/32" .....35c

*(Postage 5c per foot)*

## Printed Balsa Sheets of Flat Parts

No more tedious tracing of small parts when you build your model from ***Selley*** plans and printed sheets. Each of these sheets contains complete layouts of all ribs, stabilizer and rudder parts, bulkheads and other flat balsa parts necessary to build some fine ***Selley*** model, as listed below. Printed accurately from specially made plates on best selected sheet balsa. You just cut out the parts with a sharp knife. This is one of the features that have made ***Selley*** model kits so popular.

#100 Lark, ribs and wing tips, 1/32"x1¾x11½" .....10c
#102 Gull, wing ribs and elevator parts, $\frac{1}{8}$"x3"x9¾" .....15c
#101 Heron, wing ribs and parts, $\frac{1}{8}$"x3"x8" .....15c
#106 Albatross, main wing ribs, $\frac{1}{8}$"x3"x13¼" .....20c
#107 Albatross, elevator ribs and angle block $\frac{1}{8}$"x2$\frac{1}{8}$"x12¼" .....15c
#103 Primary Glider, ribs, wing tips, all parts, $\frac{1}{8}$"x3"x17" .....25c
#104 Advanced Glider, stabilizer parts and bulkheads, $\frac{1}{8}$"x3¾"x16¼" .....25c
#105 Advanced Glider, fuselage sides, main
#150 Hawk, fuselage sides and bulkheads, $\frac{1}{8}$"x6"x16" .....25c
#151 Hawk, ribs for both wings, $\frac{1}{8}$"x6"x20" .....35c
#155-1 Mystery S, wing ribs, rudder, stabilizer, $\frac{1}{8}$"x6"x16" .....25c
#156-2 Mystery S, fuselage sides, bulkheads, $\frac{1}{8}$"x6"x16" .....25c
#151-1 Condor, fuselage parts, $\frac{1}{8}$"x6"x18" .....30c
#152-2 Condor fuselage parts, $\frac{1}{8}$"x6"x18" .....30c
#153-3 Condor, ribs, $\frac{1}{8}$"x6"x18" .....30c
#154-4 Condor, ribs, $\frac{1}{8}$"x6"x18" .....30c
wing ribs, $\frac{1}{8}$"x3$\frac{5}{8}$"x16$\frac{1}{8}$" .....25c
#157-1 Falcon, fuselage parts, 3/64"x3"x15" .....20c
#157-2 Falcon, Ribs, etc., 3/64"x3"x15" .....20c
#158-1 Helldiver Ribs, $\frac{1}{8}$"x3"x20" .....23c
#158-2 Formed Balsa Blocks Ribs, $\frac{1}{8}$"x3"x20" .....23c
#158-3 Helidiver, Bulkheads, etc., $\frac{1}{8}$"x3"x16¼" .....20c
#158-4 Helldiver, Bulkheads, etc., $\frac{1}{8}$"x8"x16¼" .....20c

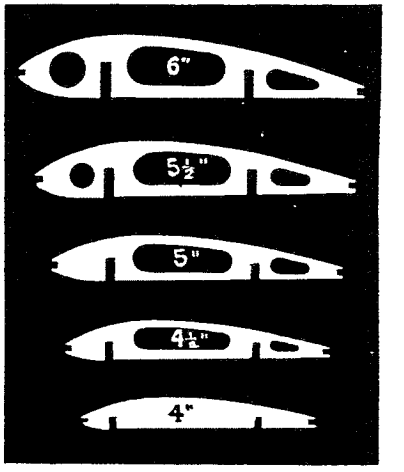
*(Postage 5c)*





# FORMED PARTS

Flying models especially should be built with correctly designed ribs that are both strong and light—light for long flights, and strong to prevent breaking of the wings in case of a crash. These ribs for flying models are die stamped from $\frac{1}{8}$" thick selected white holly—a strong, resilient wood—and are made lighter by holes cut out from their centers. Spar slots are $\frac{1}{8}$" wide, and leading and trailing edge slots are 3/32" x$\frac{1}{4}$".



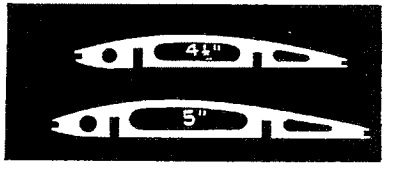

## High Lift Ribs

This is the thick airfoil section used on many of the bigger ships—Fords, Fokkers, Junkers and others. These ribs come in five graduated sizes, and may be bought by the dozen, or in assorted sets for building tapered wings.

4" chord .....25c per dozen
4½" chord .....25c per dozen
5" chord .....30c per dozen
5½" chord .....30c per dozen
6" chord .....35c per dozen
Set of 12, assorted.....35c per dozen

*(Postage 3c per dozen)*

*(For ribs for special models, see "Printed Balsa Sheets" Page 28)*

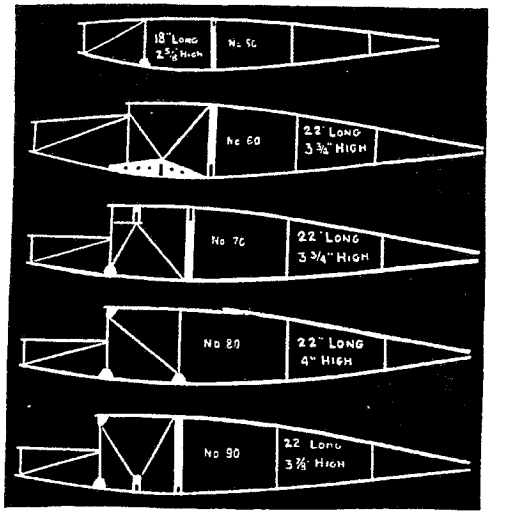


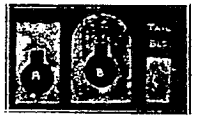

## Standard Ribs

This is the most commonly used airfoil section, and is highly efficient for most flying models. In two sizes.

4½" chord .....25c per dozen
5" chord .....30c per dozen

*(Postage 3c per dozen)*




## Built-Up Fuselage Sides

These are just the thing for the beginner who wants to design and build his own plane. Sides are completely assembled, with wing spar sockets already in position. You may buy them in pairs, or buy one and build the other to match. Anchor plates are provided for the landing chassis, nosepiece and tail block.

#50 Racing type.....25c ea.
#60 Low wing monoplane 30c ea.
#70 Cabin monoplane ...25c ea.
#80 Upper wing fuselage 25c ea.
#90 Biplane fuselage ...25c ea.

*(Postage 6c pr.)*

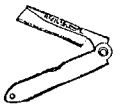
Nose piece, 3-ply veneer, and tail block, for use with above sides, per set.....15c

*(Specify Type A or B illustrated above)*

# TOOLS

Good tools make better models. The following simple and inexpensive tools are practically a necessity for any model builder's workshop. They are intended especially for model work.

## Model Maker's Knife



Here's one of the handiest, most useful tools a model builder can have. A razor-sharp blade is firmly set in a strong metal handle, and can be folded together for safety when not in use. You'll want it for carving, trimming or cutting out flat parts from balsa or any other model wood.

Each .....18c
*(Postage 3c)*

## Sloyd Knife

Here's a good, keen steel blade that will last you a life time. A most handy type of knife for carving or whittling. Blade 2½" long.

Each .....50c
*(Postage 3c)*

## Wood Plane

A miniature plane, especially made in our own shop for model work. It is the smallest practical tool available. Use it for shaping and finishing small struts, leading and trailing edges of wings, etc. Made entirely of brass, accurately set with a good steel blade that will hold its edge. Size ¾" x 2".

Each .....$1.00
*(Postage 5c)*

## Saw

A specially made small size saw for model work. Has tapered frame and replaceable blade. Can be used for cutting metal parts, balsa or hard wood.

Saw and blade, complete, each.....25c
Extra blades, each 10c per dozen....$1.00
*(Postage 5c)*

## Files

These small American Swiss files are handy for filing any small metal part, and have many uses where a larger file could not be used. Each is 5" long, made from best grade materials. A complete set should be in the model worker's tool kit.

Pillar file, regular $\frac{7}{16}$" x 9/64".....35c
Round rat-tail file, tapered, $\frac{7}{16}$" diam..35c
Square file, tapered, $\frac{7}{16}$".....35c
Triangular file, tapered, $\frac{7}{16}$".....35c
Knife-edge file, tapered, $\frac{7}{16}$".....35c
Slim half-round file, tapered, ½" x 5/32" .....35c
*(Postage 3c)*

## Wood Rasp

One of the handiest tools you could own. You'll find lots of uses for it, like roughing to size balsa blocks for fuselages, propellers, etc. Much more satisfactory for this purpose than carving with a knife.

Each .....75c
*(Postage 3c)*

## Drills

Small drills for making neat, workmanlike holes in either wood or metal. In five sizes.

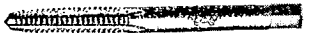
1/64", 1/32" or $\frac{1}{16}$", each.....10c
3/32" or ⅛", each .....12c
*(Postage 3c on one or dozen)*

## Pin Vise

A most handy tool for holding small drills and other tools.

Each .....50c
*(Postage 3c)*

## Machine Screw Taps and Dies



With these fine taps and dies you can thread your own nuts, bushings, axles, shafts, etc.

Taps, Acme Standard
#1, 64 thread, .073 diam., each.....50c
#2, 56 thread, .086 diam., each.....45c
#3, 48 thread, .099 diam., each.....40c
#4, 40 thread, .112 diam., each.....40c
Tap wrench and chuck, 2½" long, weight, 3 oz., each .....75c
*(Postage 3c)*

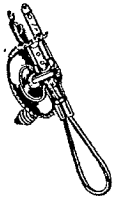
Dies, #329, 13/16" diameter

#1, 64 thread, each .....80c
#2, 56 thread, each .....70c
#3, 48 thread, each .....60c
#4, 40 thread, each .....50c

#1850 die stock 5" long, weight 2 oz., each .....75c
*(Postage 5c)*

## Winders

You'll want one of these dandy winders if you fly any twin-motored model. It insures equal windings on the two motors, and incidentally saves a lot of time and energy. It's efficient, smooth running, handily designed—in fact, the most practical winder on the market for twin pushers or any other model. Ratio of 4¼ to 1. Small size bright nickel finish .....35c
Large size, nickel finish and red handle..75c



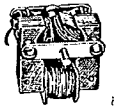
*(Postage 10c)*

## Dry Cell

A small, compact dry cell for driving our electric motors. Also suitable for small cabin electric lights, flashlights, etc. 1½ volts.

Each .....15c
*(Postage 6c)*

## Electric Motors



Very small and compact, but powerful, electric motors—just the power plant for non-flying working model airplanes, for boats, locomotives or any other model work. Precision built of finest materials, and designed to give maximum power from least bulk. Many superior features of construction such as laminated armature and field, three-pole armature, bronze bearing, self-lubricating brushes, and machined commutator. In two sizes.

*Midget:*
Size, 1¼" x $1\frac{5}{16}$" x 1½"
Shaft, ⅛" diameter
Weight, 3 oz.
Runs on 4 to 8 volts, A.C. or D.C., or 3 or 4 flashlight cells
Price .....$1.75

*Midget-Senior:*
Size, 1¼" x $1\frac{5}{16}$" x 1¾"
Shaft, ⅛" diameter
Weight, 4½ oz.
Runs on 6 to 12 volts, A.C. or D.C., or 4 to 8 flashlight cells.
Price .....$2.75

*(Postage 10c)*

## #117 Electric Motor

This is our best-selling electric motor. It is very powerful and is generally used for model boats, airplanes, locomotives and many other models. Very small and compact. Operates on 6 to 8 volts D.C. or can be connected to 4 flashlight cells in series. Speed, 6000 R.P.M. Weight, 5½ oz.

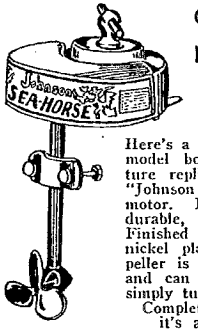
Each .....$4.25
*(Postage 6c)*

## Ajax Electric Motor

A very popular and inexpensive power unit for all kinds of model work. Well built, with plenty of power when operated on two dry cells. Mounted on hard wood base.

Each .....$2.25
*(Postage 6c)*

## Outboard Motor

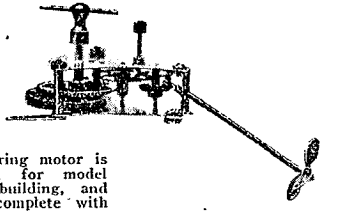



Here's a distinctive item for the model boat builder—a miniature replica of the well-known "Johnson Sea Horse" outboard motor. It is equipped with a durable, strong spring motor. Finished in bright colors and nickel plated throughout. Propeller is driven by bevel gears and can be readily steered by simply turning propeller.

Complete with propeller, it's a wonderful value at .....$2.50
*(Postage 6c)*

# MOTORS
## for Model Boats or DISPLAY MODEL AIRPLANES

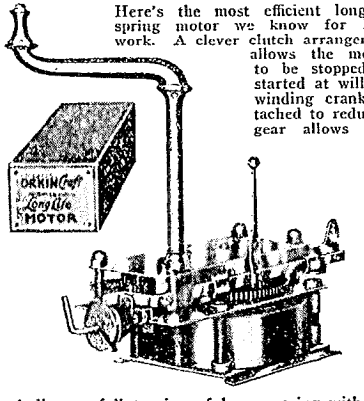
## Spring Motor



This spring motor is intended for model boat building, and comes complete with brass boat propeller, shaft and special key for winding, but the ingenious craftsman will find many other uses for it in general model work. It is reliable, efficient and long-running. Actual running time, 4 minutes. Has strong spring and heavy brass gears set in heavy steel frame.

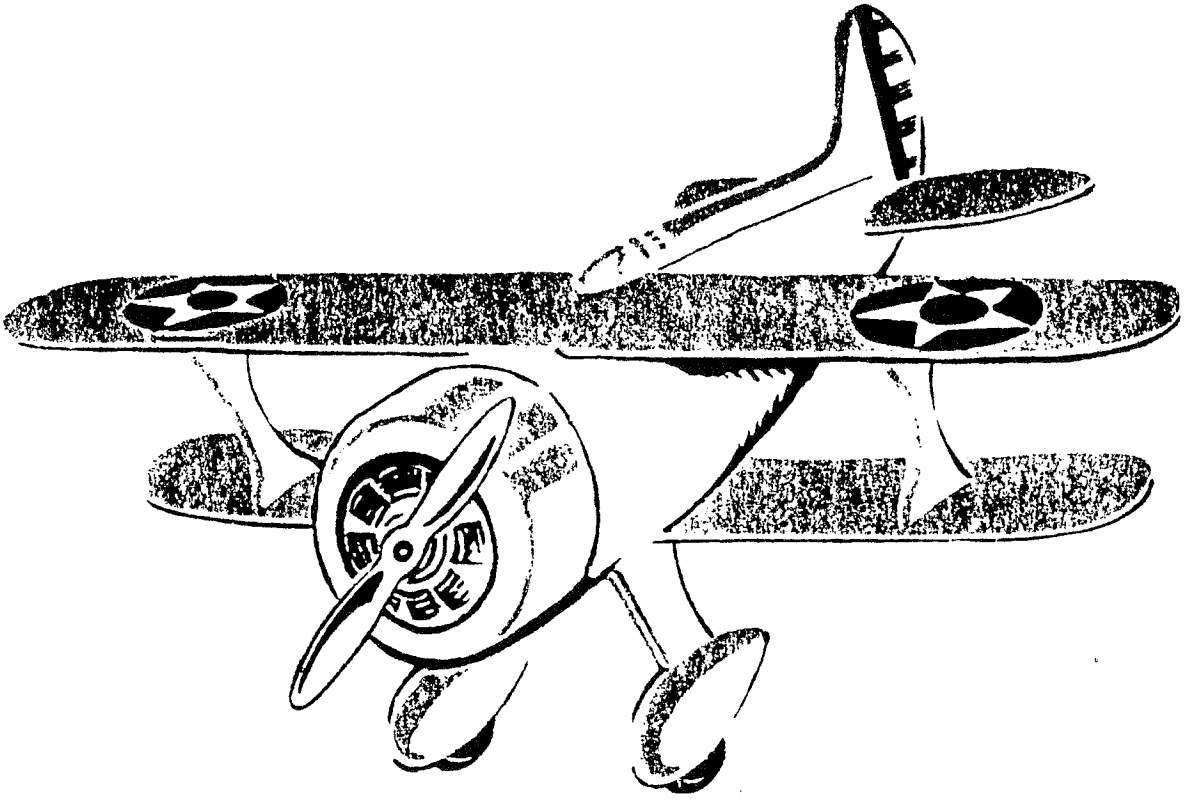
Complete .....$1.25
Propeller alone .....10c
*(Postage 6c)*

## Long-Life Spring Motor




Here's the most efficient long-life spring motor we know for Boat work. A clever clutch arrangement allows the motor to be stopped or started at will. A winding crank attached to reducing gear allows easy winding to full tension of heavy spring with perfect ease and safety. Has universal joint which allows full transmission of power without fine adjustments; grooved pulley and power take-off gear are attached to shaft for operating mechanical hoists derricks, etc. A heavy steel spring, 1" wide, develops high power with quick winding.

M-1, packed in special carton, each..$5.00
M-2, same as M-1, except with slightly smaller spring, each....$3.50
*(Postage 15c)*



# Ideal MODEL AIRPLANES and ACCESSORIES

1932

IDEAL AEROPLANE & SUPPLY COMPANY, Inc.
22-28 West 19th Street, New York, N. Y.

# TWENTY YEARS OF *Ideal* MODEL AIRPLANES

●

TWENTY YEARS is a long time; twenty years ago Aviation was just getting started. The Wright Brothers had made their celebrated flight in a powered glider and both American and European developments had started Aviation on the wonderful path of progress along which it has since traveled.

Twenty years ago, in 1911, Louis Bleriot performed a feat which in those days was just as thrilling and dangerous as the deeds of Lindbergh, Chamberlain, Byrd and other present day airmen. In 1911, Bleriot, a Frenchman, piloted his ship from the coast of France to the coast of England, across the English Channel. That was the first extensive flight, and the first ever undertaken over a large body of water. The world acclaimed this feat, just as it did those of our own day.

Before 1911, Model Aviation was unknown. Few people thought of flying real ships; nobody thought of flying Model Airplanes. But the achievements in the air attracted so much attention, and were discussed everywhere and by everybody, that the idea of reproducing miniature copies of the ships then popular was conceived, and the Ideal Aeroplane & Supply Company introduced the first successful Models ever offered in a commercial way.

The earliest catalogues show the Wright Biplane, the Curtiss Hydroaeroplane and Curtiss Flying Boat, as amphibian planes were called at that time, the German Taube Monoplane and also a beautful Model of the Bleriot Cross-Channel Airplane, as the productions by IDEAL.

Since 1911, IDEAL has been supplying the requirements of Model builders continually. Many important contributions to the science of Model building and flying have originated in the IDEAL factory; in fact, practically every feature of Model Airplanes which is now so familiar to all builders had its inception or development in the IDEAL work rooms. The introduction of newer and better practice has always been an IDEAL watchword.

IDEAL was the first to introduce Scale Reduction Models of Famous Airplanes. In the preparation of these, actual plans were secured and scaled down to Model size, thus duplicating in miniature the exact constructional features of the large original ships. Thousands of boys have built these Models and enjoyed many happy hours both constructing and flying them, as well as learning valuable lessons in the science of aerodynamics. Almost every popular type of airplane has been reproduced in IDEAL Scale Models, from the early Wright Brothers experimental Biplane to the present day passenger transport ships which carry passengers on regular schedule day after day.

Countless small fittings and parts were invented by IDEAL especially for these Models, and many of the little articles which are now used on Models by all builders were first thought of and produced in the IDEAL factory during this more than twenty years' experience. IDEAL has always directed activities toward making Model building easier and Model flying more thrilling and efficient.

In the development of present day types of Models, IDEAL has kept in the lead. Now Models are more realistic than ever, better, faster and longer flights are obtained. IDEAL has pioneered in furnishing builders with every imaginable kind of item required in this development. The latter pages of this book list and describe hundreds of things every Model builder must have, many of which are exclusive with IDEAL.

IDEAL Construction Kits have also maintained that standard of excellence which was established more than twenty years ago when the first of these Kits were offered. The following pages describe the IDEAL productions of the present time; a variety of Kits that will provide ample opportunity for selection, and types and sizes of Models covering all modern aviation practice. There are completely finished Models, also, for those who prefer flying to building; semi-complete types for those desiring a little construction and a lot of flying; and Kits containing parts and plans for those who wish the pleasure of both constructing the Model and flying it.

IDEAL productions offer value; regardless of the price paid, the article will provide greater value at its price than can be obtained anywhere else. More than twenty years' experience has taught IDEAL how to supply the best at the lowest cost.

IDEAL has been the most reliable name in Model Aviation for More than Twenty Years; when you order something—anything—from IDEAL you can be absolutely positive that you will get exactly what this catalogue says you should get, that you will get it promptly and that when you do get it, it will be exactly as you expected.

Look over the following pages, select your preference of the various Kits listed and let IDEAL show you what real service can be.

COPYRIGHT, 1932, BY IDEAL AEROPLANE & SUPPLY CO., INC.

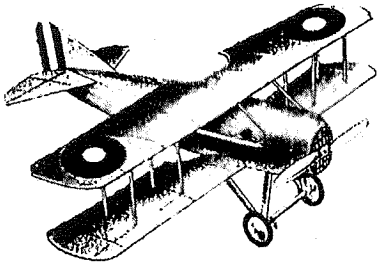


## CATALOGUE INDEX

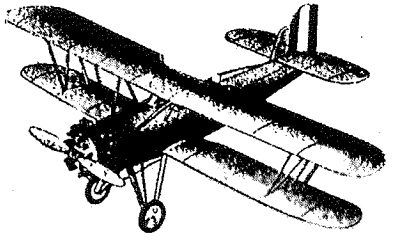

| | Page |
|---|---|
| Accessories, General | 19 |
| Airplane Dope | 22 |
| American Eagle Airplane | 10 |
| Army Falcon Biplane | 4 |
| Axles | 18 |
| Bleriot Monoplane | 11 |
| Boeing Biplane | 4 |
| Cement | 22 |
| Columbia Airplane | 9 |
| Combination Kits | 4-5 |
| Covering Materials | 22 |
| Cowlings (Motor) | 19 |
| Curtiss Fledgeling | 6 |
| Curtiss Hell Diver | 7 |
| Curtiss Hawk (P6 E) | 7 |
| Curtiss J. N. Biplane | 11 |
| DeHavilland Biplane | 7-11 |
| Directions for Ordering | 14 |
| Dummy Motors | 19 |
| Eaglet Airplane | 8 |
| Everboy's Airplane | 10 |
| Fittings & Hardware | 20-21 |
| "Floyd Bennett" Monoplane | 11 |
| Fokker D-7 Biplane | 5 |
| Fokker Monoplane | 11 |
| Gee Bee Sporster | 6 |
| Ideal O-Craft Kits | 6-7 |
| Insignia Markings | 23 |
| Laird Super Solution | 6 |
| Lockheed Sirius | 4 |
| Lockheed Vega | 5-7 |
| Model Airplane Materials | 15-24 |
| Model Machine Guns | 19 |
| Motor Plates | 19 |
| Motor Winder | 23 |
| Napier Supermarine | 7 |
| NC 4 Seaplane | 11 |
| Nieuport Biplane | 7 |
| Nieuport Monoplane | 11 |
| Pitcairn Autogiro | 6 |
| Plans for Model Airplanes | 12-13 |
| Propellers | 16 |
| Propeller Accessories | 17 |
| Propeller Blanks | 16 |
| Radiators | 19 |
| Rubber | 23 |
| Scale Model Airplanes | 11 |
| Simplified Assembly Models | 10 |
| Spad Biplane | 4-6 |
| "Spirit of St. Louis" Monoplane | 11 |
| Supplies | 22 |
| Tools | 24 |
| Travelair Mystery Plane | 5 |
| Victory Airplanes | 3 |
| Vought Corsair | 4 |
| Waco Taper Wing Biplane | 5 |
| Wheels for Models | 18 |
| Wood for Models | 15 |

# Ideal Three-in-One COMBINATION KITS

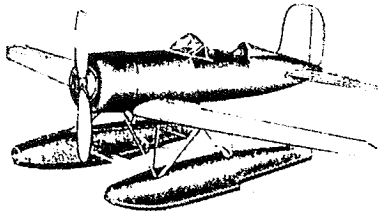
TRIPLE VALUE FOR ONE PRICE



SPAD BIPLANE
Included in Kit No. 3



VOUGHT CORSAIR
Included in Kit No. 3



LOCKHEED SIRIUS
Included in Kit No. 3

## 3 Big, 15 in. Flying Models of Famous Planes in Each

IDEAL pioneered the way in giving Model Builders the greatest value ever offered in any type of Model Airplanes. The idea of combining three wonderful Models into a single Construction Kit, and offering that Kit at a popular price, makes it possible for you to get the thrill of Model building without the expensive sets heretofore offered.

By placing three Models in one Kit, IDEAL eliminates the cost of extra boxes, extra packing, extra labels and many other items. This saving is put into the Models themselves, and you get Triple Value for One Price!

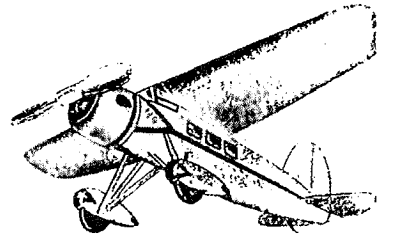
Look at these dandy Models! Nine of the most wanted ships of the present day. Beautiful jobs, every one of them, and don't forget that they are FLYING Models. They are full-fuselage Models, too, not just "side-view" ships that resemble real ones. Think of the fun you can have in building three Models at one time; you can work on one while another is drying; you can build all three in almost the same time it would take to build one the usual way. You can have a whole squadron of fliers and put them into the air in competition with each other; you can hold a Contest all by yourself!

Kit . . $1.50 PER KIT of Three Models Postage: 15c each

Each Kit contains every item required to build the three Models it contains. The materials consist of Balsa blocks and strips as required by the plans; Bamboo pieces where necessary; Jap Tissue Paper, Wood Veneer for covering; all Ribs for "built-up" wings stamped out of sheet balsa and ready for use; Wheels, Model Pins, Wing Clips, Rubber Hooks, Propeller Shafts; Eyelets, Thrust Bearings, Washers, and all other hardware is also included and ready shaped for assembling; finest Fresh Rubber as needed for each Model; Cellophane for windows; one Propeller Block ready for carving, and also materials for forming propeller blades from fibre; Cement and Dope for construction and finishing; in fact, every single item you could possibly need for a fine job is in these Kits.

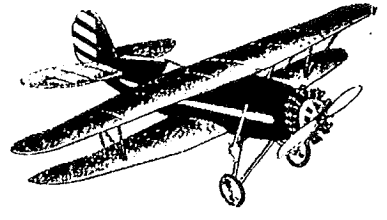
And — in addition — each Model is described and pictured accurately in a full 15-in. size Plan; three such Plans are in each Kit, together with clear and complete Constructing Directions explaining exactly how to do the work. When we designed these Kits we had in mind the novice who never before built a Model Airplane, and we made it all so simple anyone can do it.

Just look over these Models; pick the Kit you like best and get to work at once! Remember there are three different Kits: No. 1, No. 2 and No. 3. You must order the three planes as listed in any one Kit.



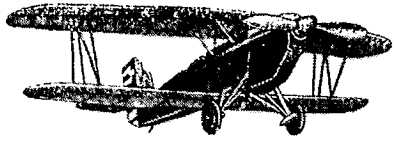
LOCKHEED VEGA
Included in Kit No. 2

FOKKER D-7 BIPLANE
Included in Kit No. 2

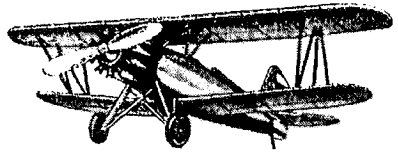


WACO TAPERWING BIPLANE
Included in Kit No. 2

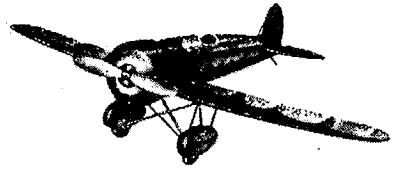
ARMY FALCON BIPLANE
Included in Kit No. 1



BOEING BIPLANE
Included in Kit No. 1



TRAVELAIR MYSTERY PLANE
Included in Kit No. 1



**Remember These Are**

FLYING MODELS

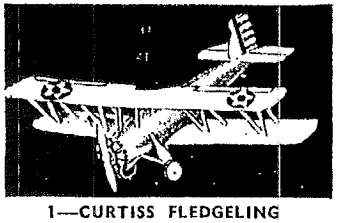
**15-inch Wing Span**

Here are The NEW

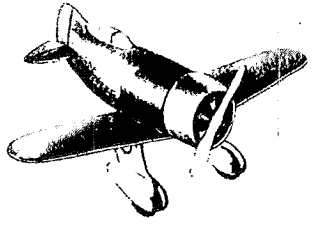
# *Ideal-O-Craft Kits*

## Solid Balsa, Hand Carved, 6 in. size

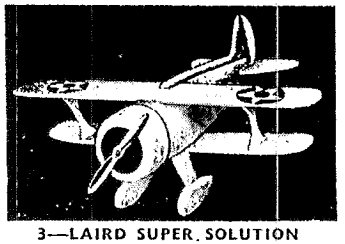
# MINIATURE REPLICA MODELS



1—CURTISS FLEDGELING



2—GEE BEE SPORSTER



3—LAIRD SUPER. SOLUTION

THESE beautiful little replicas of war and peace time Airplanes represent the very newest idea in Modeldom. Every boy likes to have examples of his handicraft for display in his room, his den, his workshop, to take to school, to put on his bookcase, radio or any other place. And these wonderful Miniature Models of Famous Ships are exactly the thing. You can make them yourself, in hardly any time at all, and decorate them to suit your fancy. They're the most beautiful things you ever saw; glistening props of shiny aluminum, brightly enameled wings, fuselages and tails; radiators, motor plates and dummy motors painted in place to look like the real thing. In fact, Ideal-O-Craft Miniatures are the last word in Models for display and decorative purposes.

Bodies are carved from solid balsa blocks; just think how perfectly every detail can be carved into the soft balsa with a sharp razor blade. All flat surfaces such as wings, tail assembly and struts are cut from balsa sheets. Miniature wheels are furnished with each Kit, and landing gear struts are cut from sheet balsa. You just sandpaper the parts to shape and size and cement them together; could anything be easier!

Each Replica Model measures 6 inches across the wings, and the entire Model is an exact scale reproduction of its original. You experienced model makers will appreciate the accurate designing in these Models.

There are twelve (12) different Models to choose from, all illustrated here. Each one comes complete in a Construction Kit with everything required to make the finished Model. We have made it easy for you; the wings, tails, struts, landing gear, dummy motors, pants and such parts are printed in outline on sheets of balsa, you just cut them out to shape and sandpaper them smooth. Coloring and decorating materials are also included so you can dress up your Models just as you want them. Cement, sandpaper and any necessary wire parts are in each Kit. Also a full-size, three-view Plan of the original Model showing exactly how your Replica Model should look, together with full directions for doing the carving and assembling.

Make your selection from these twelve (12) Models:

**Your Choice of**

**6 Models**

**FOR**

**$1.50**

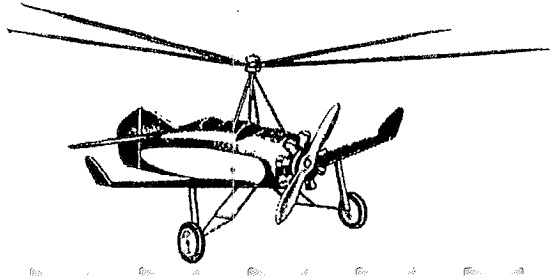
**Postage: 15c extra**

**Your Choice of**

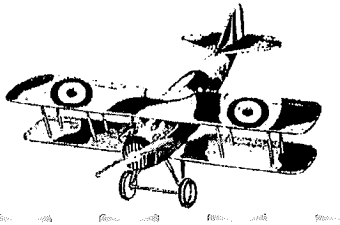
**Two Models**

**FOR 60¢**

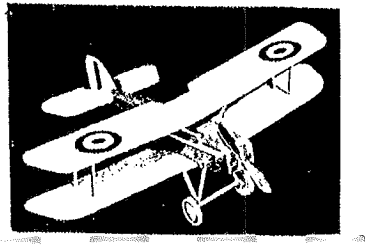
**Postage: 5c extra**



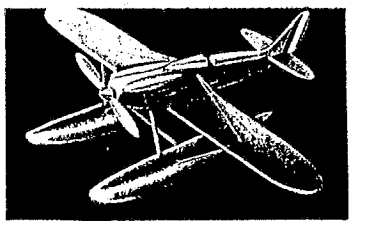
4—PITCAIRN AUTOGIRO



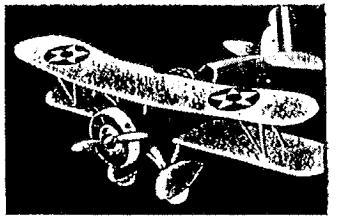
5—SPAD BIPLANE



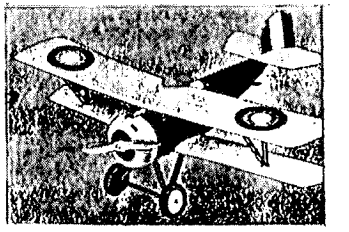
6—BRITISH S E—5



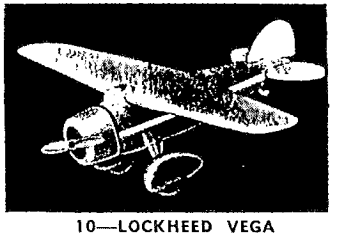
7—NAPIER SUPERMARINE



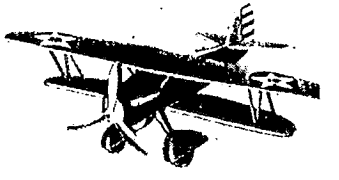
8—CURTISS HELL DIVER



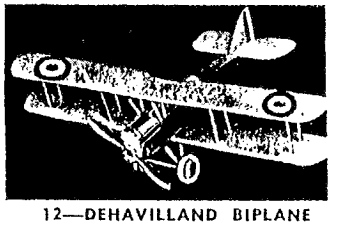
9—NIEUPORT BIPLANE



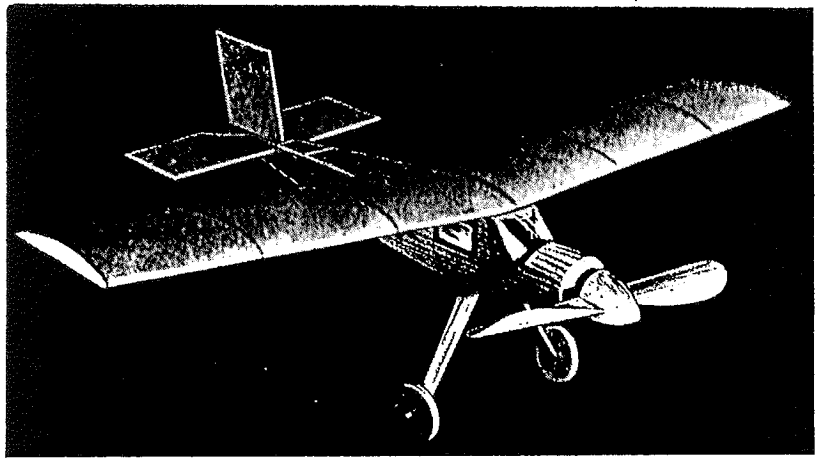
10—LOCKHEED VEGA



11—CURTISS HAWK—P6-E



12—DEHAVILLAND BIPLANE



Ideal

# EAGLET

## Cabin Type, Featherweight Model
## 20-inch Wing Span

This is one of the most remarkable Models ever developed. It is extremely easy to construct and very interesting because it flies perfectly. Made entirely of balsa, and weighs only 1 oz. complete. The wing is the "built-up" type, using eight high-lift, cambered ribs and balsa spars. It is made in two sections and joined in the center, securing just the right dihedral angle for both halves. It is covered with Japan paper and is attached to the fuselage with a special wing clip; and its position on the fuselage may be adjusted as desired.

Fuselage is in two sides, stamped from sheet balsa. Tail assembly parts are made from Balsa strips. Landing gear struts are solid balsa, with 1 ¼ inch wood wheels and metal axles. A 7½ inch formed balsa propeller of special pitch is included, with spinner ready for shaping and attaching. All wire parts are ready formed.

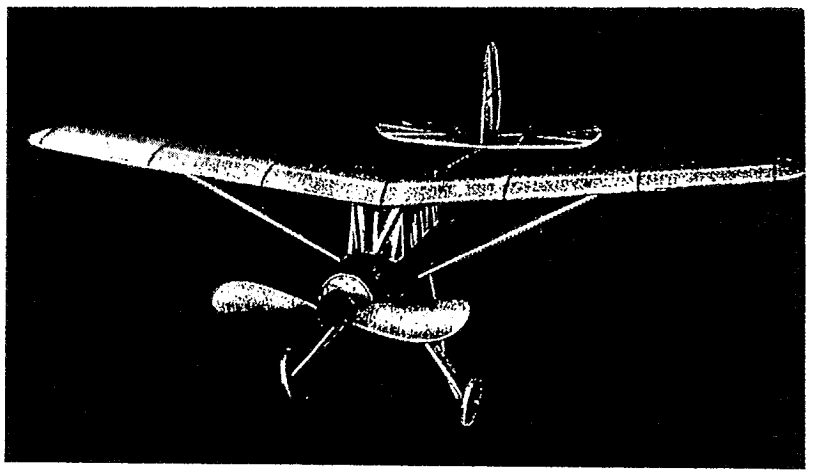
Everything required to construct this fine Model is included in the Construction Kit; the builder need supply only glue and such coloring material as may be required to dress up the Model. Plans and full Instructions are also included.

# Construction Kit 50¢

**Denver, Colo., West of Denver and in Canada, Price, 65c**

**For Sale by IDEAL Dealers in all Cities, or Direct from us**
**If ordered by mail, add 6c extra for postage**





Ideal

# COLUMBIA

## Model of the Trans-Atlantic Flyer
## 26-inch Wing Span

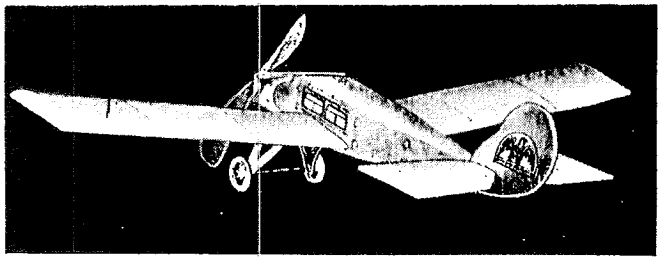
This is a correctly proportioned miniature of the celebrated Trans-Atlantic Airplane, and a Flying Model of the plane in which Col. Clarence D. Chamberlain made his famous flight to Germany. Even though the price is almost unheard of for a Model of this type, it is remarkably realistic and a wonderful flyer.

Construction is entirely of balsa; the Model weighs only 1½ oz. when complete. All fuselage parts are supplied ready stamped to shape and require only assembling. Wings are "built-up" construction, with ribs furnished ready to use and spars cut to exact size. The wing tips are ready to be attached to the constructed wing. Propeller is ready formed, of fibre, and has nosing ready to be shaped and attached. Parts to construct the dummy motor are also included, and all wire and metal parts are completely finished. In fact, you need only put this ship together. Full size Plane and Instructions accompany every Kit.

# Construction Kit $1.00

**Denver, Colo., West of Denver and in Canada, Price, $1.25**

**For Sale by IDEAL Dealers in all Cities, or Direct from us**
**If Ordered by Mail, add 10c extra for postage**



Ideal

## SIMPLIFIED ASSEMBLY MODELS

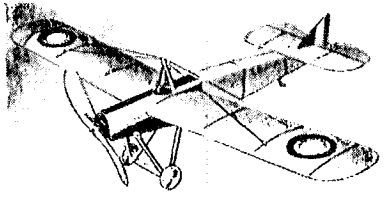
# AMERICAN EAGLE

**26-inch Wing Span** **3¼ oz. Weight**

A DIFFERENT type, light-weight, fast-flying Model developed by IDEAL for builders who desire flying performance rather than construction detail. This is an assembly Model; the parts are furnished completely finished and the builder does an assembling job instead of a construction job. Fuselage is made with Balsa sides and aluminum bulkheads secured with clips, and all other parts are equally simple. The low-wing design is very attractive, and the Model can be launched by hand or from the ground. The motor can be wound by hand, or with a winder without completely removing from the fuselage. Kit contains all parts, including coloring materials to make a fine looking finished job. No plans are required; full instructions for assembling are included.

## Assembly Kit $2.50

**Denver, Colorado, West of Denver and in Canada, Price is $2.75**
**For Sale by IDEAL Dealers in all Cities, or Direct from us, Postpaid**



Every Boy's IDEAL

# Airplane

**42-inch Wing Span**

THIS Model is a further development in the IDEAL Assembly Kit idea. The entire Model can be assembled and ready for flight in a couple of hours. No plans are required; every part is completely finished and the Model need only be assembled according to the detailed directions included in the Kit.

EveryBoy's Airplane is a graceful flier, large in size, remarkably strong and substantial in construction, and very light for a Model of this size. Made largely of aluminum and will not suffer the shocks incident to trial flights. Equipment includes a 10-inch carved propeller, pneumatic tire disc wheels, aluminum engine cowling, ribs, bulkheads and landing gear. Finest Rubber for motor. Comes in complete Kit ready for immediate assembly.

## Assembly Kit $5.00

**Denver, Colorado, West of Denver and in Canada, Price is $5.50**

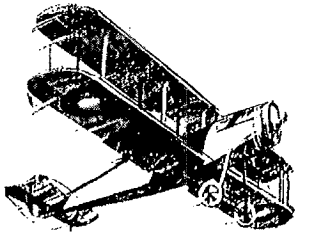
**For Sale by IDEAL Dealers in All Cities, or Direct From Us, Postpaid.**



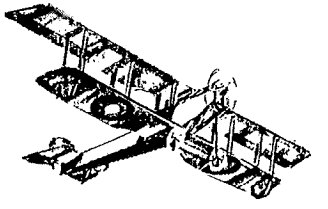
Ideal

# 3 ft. Scale Models of FAMOUS AIRPLANES

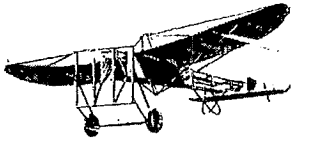
## GUARANTEED TO FLY



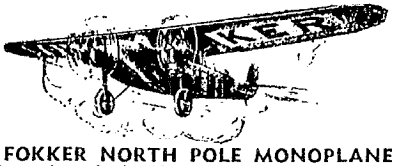
**DeHAVILLAND WORLD WAR FIGHTING PLANE**
An accurate Model, 1/14th actual size, of the fighting ship used in Europe, and by the U. S. Army Pilots in the flight around the world. Complete Construction Kit.
**3 ft. Model** ..... **$5.00**



**CURTISS "JENNIE" TRAINING PLANE**
A Model reproduction of the Airplane used in training U. S. Pilots for war service. Guaranteed to fly when correctly constructed. Complete Construction Kit.
**3 ft. Model** ..... **$4.75**



**BLERIOT MONOPLANE A CELEBRATED AIRPLANE**
If you want to know how ships were designed in earlier days, build and fly this Model. This was the first plane to fly across the English Channel, in 1911. Complete Construction Kit.
**3 ft. Model** ..... **$3.75**



**FOKKER NORTH POLE MONOPLANE**
A perfect Scale Model of the ship in which Admiral Byrd and Floyd Bennett flew over the North Pole in 1925. Complete Construction Kit.
**3 ft. Model** ..... **$5.75**

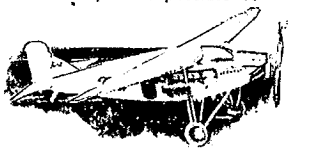
These are the well known IDEAL Model Airplanes furnished in Complete Construction Kits to thousands of boys. More than twenty years ago IDEAL began building Models of the Airplanes popular at that time, and these ships are the present day productions of this type of Model which IDEAL originated. These are accurate, scale-reduction Models of the original Airplanes; every one the most perfect copy of the real ship it is possible to make.

Each Model comes complete in a Construction Kit containing every item required to build the Model; including Scale Drawings of every part and Complete Instructions for Building and Flying. A layout-diagram for all parts which must be formed, is also included. These Models are guaranteed to rise from the ground, and fly in the air, when correctly constructed.

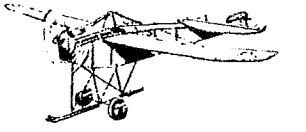
**Sold by IDEAL Dealers in all Cities, or Direct from IDEAL.**

**Direct Orders will be Delivered Postpaid.**

**(Denver, Colo., West of Denver, and in Canada, prices are 10% higher.)**

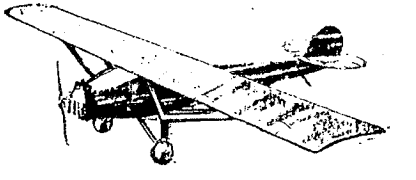


**TRI-MOTOR MONOPLANE THE "FLOYD BENNETT"**
A wonderful 36 in. Model of the powerful plane in which Admiral Byrd made his observations over the South Pole. A very realistic Model that really flies. Complete Construction Kit.
**3 ft. Model** ..... **$5.75**



**NIEUPORT MONOPLANE FRENCH SCOUT PLANE**
An accurate Model of an earlier French type, used for scouting and observation purposes. Has unusual construction features and will fly perfectly. Complete Construction Kit.
**3 ft. Model** ..... **$4.00**

**THE FAMOUS NC-4 NAVAL-CURTISS SEAPLANE**
A remarkable Model of one of the Navy ships which flew to Europe in 1919. This is a 54-in. Model, and a perfect copy of this type of seaplane. Complete Construction Kit.
**54 in. Model** ..... **$7.00**



**NEW YORK-PARIS MONOPLANE**
A flying Model of the most famous Airplane in the world---"The Spirit of St. Louis." An easy one to build and a wonderful flyer. Complete Construction Kit.
**3 ft. Model** ..... **$5.00**

# Ideal Plans for MODEL AIRPLANES

THE most important factor in building any kind of a Model Airplane is a good Plan and clear Instructions to work with. Any kind of a Flying Model, and especially Scale Models, require careful workmanship and accurate measurements according to Plan. Most builders are careful to follow Plans, but if the Plans are inaccurate all the work is wasted and the Model can never be true.

IDEAL Plans are one secret of the successful performance of IDEAL Model Airplanes. They visualize the work, show and explain every step in construction, mention and specify each part and enable the builder to know exactly what he is doing all the time. The Plans for the larger Models are specially valuable; thousands of boys have built these Models with IDEAL Plans. IDEAL Construction Kits, as described in this catalogue, are complete with Plans and Instructions, but many builders will desire to construct these Models using their own materials; others prefer to secure their materials from time to time as Construction progresses. For such builders we supply Plans and Instructions.

IDEAL Plans are available for all IDEAL Model Airplanes described in this Catalogue, and for several additional Models some builders may desire. Full and complete building Instructions are included with every Plan.

### Plans for the IDEAL Series of Graduated Instruction Models

These comprise a series of six feather-weight Models, designed to provide progressively instructive construction detail for the novice, as well as interesting lessons in the principles of flight. The Models are those known as "Duration" fliers, and are practical for both indoor and outdoor use. Each Model is a unit in itself and the series of six provide graduated steps in construction, the builder advancing from the simplest to the more difficult operations.

The six Models are as follows:

**The Wasp:** a small, all-balsa, Duration Model for beginners. Plans and Instructions....**6 cents**

**The Junior:** a single-stick Duration Model requiring tail, rudder and wing construction. Plans and Instructions.....**6 cents**

**The Performer:** another single-stick Model requiring the use of ribs, spars and landing gear detail. Plans and Instructions.....**6 cents**

**The Cambered Tractor:** a larger Model requiring the previous operations on a larger scale, and with cambered wing surfaces. Plans and Instructions .....**6 cents**

**The Twin Pusher:** a large Model of the popular "A" design showing the construction of pusher-type Racing Models. Plans and Instructions **6 cents**

**The Commercial:** a modified fuselage Model having still more advanced construction detail. Plans and Instructions .....**10 cents**
(For those desiring all six Plans at one time: Six Plans) .....**30 cents**

### Plans for IDEAL-O-CRAFT Miniature Replica Models

These are the Miniatures of Famous War and Peace Time Airplanes described on pages 6 and 7. Plans are furnished for those desiring to make these Models in larger than the 6-inch size furnished in our Kits, and with materials other than those we furnish. Each Plan comprises a three-view drawing of the Model in the 6-inch size with Instructions on the same sheet. To make a 12-inch Model from these Plans simply requires doubling the size measurements on these Plans. The Models are as follows:

**Curtiss Fledgeling**
**Curtiss Hell-Diver**
**Curtiss Hawk (P6E)**
**Pitcairn Autogiro**
**Laird SuperSolution**
**Gee Bee Sportster**
**Lockheed Vega**
**Napier Super-Marine**
**British S E 5**
**Spad Biplane**
**Nieuport Biplane**
**DeHavilland Biplane**

**Plans and Instructions**
**5¢**
**each**
**(12 for 50)**

### Plans for the IDEAL Series of 15-inch Flying Models

These are the Flying Models described on pages 4 and 5. The Plans in the list are furnished for builders desiring to construct one or more of these interesting and wonderfully performing jobs, using their own materials. Many builders follow the practice of securing the Plans in advance to get an idea of what the Models are like before starting construction. Each plan is a full-size; 15-inch; working Drawing showing many views and detailing all complicated parts, reproduced on a sheet 22 x 32 inches, and including full instructions for doing the work. The Models are as follows:

**Boeing BiPlane**
**Army Falcon BiPlane**
**Travelair Mystery Ship**
**Waco Taper Wing Biplane**
**Fokker D-7 War Plane**
**Lockheed Vega**
**Spad Biplane**
**Vought Corsair**
**Lockheed Sirius**

**Plans and Instructions**
**12¢**
**each**
**(9 for $1.00)**

### Plans for the IDEAL "COLUMBIA" Trans-Atlantic Model

These Plans indicate every construction requirement of this celebrated ship, which you will find described fully on page 9. The Plans are reproduced in full, 26-inch size on a sheet of strong paper that will stand lots of handling, and complete Instructions are included. You can build this ship from these Plans, securing your parts and materials as you require them. Plans and Instructions.....**10 cents**

### Plans for the IDEAL "EAGLET" 20-inch Featherweight Model

This remarkable little flying Model is described fully on page 8. It is a very interesting plane to build, yet extremely easy. It flies perfectly and is so light that you will marvel at the time it will remain in the air. Plans are printed on heavy paper, one-half actual size, and complete Instructions accompany them.
Plans and Instructions.....**6 cents**

### Plans for IDEAL "ROBIN" MONOPLANE

This is one of the most remarkable lightweight Models ever constructed. It is large size, 24-inch wing span, and patterned after the well known Fairchild sport planes. The completed Model weighs only 2½ ounces, and has wings that are both adjustable and demountable. Equipped with our dummy motor, shown on page 19, and with the celluloid wheels listed on page 18, this is indeed a beautiful job; and it flies as dandy as it looks! With the exception of the motor and wheels, the materials required are always on hand in any model maker's work shop. Plans are full, 24-inch size, reproduced on heavy paper, and include complete Instructions.
Plans and Instructions .....**12 cents**

### Plans for IDEAL 36-inch SCALE MODELS of Famous Airplanes

These are the wonderfully perfect copies of real Airplanes described in greater detail on page 11. Many thousands of boys have constructed these Models in years past, and have secured many thrilling flights. Being large in size, and perfect copies of the well known originals, they offer interesting and instructive work to all builders. The Plans are the most perfect available today. They are reproduced in one-half size (18 inch Plans for 36-inch Models) on heavy paper with every detail clearly indicated in their proper positions. Also, detailed building and flying Instructions are printed in a separate pamphlet which is sent with each Plan. Plans are available for the following Scale Models:

**Floyd Bennet Monoplane:** a perfect copy of the Tri-motored ship which Admiral Byrd flew over the South Pole on his celebrated expedition.

**New York-Paris Monoplane:** a scale Model of the most famous Airplane in the world—The Spirit of St. Louis.

**Fokker North Pole Airplane:** a miniature duplicate of the plane which Admiral Byrd and Floyd Bennett flew over the North Pole in 1925.

**NC-4 (Naval-Curtiss SeaPlane):** this is a 54-inch Model; Plans are one-half size; of the seaplane flown to Europe by Navy Pilots in 1919.

**DeHavilland BiPlane:** a perfect Model, 1/14th actual size, of the American fighting ship of the World War.

**Curtiss JN Type BiPlane:** modeled after the well known "Jennies" so popular as training ships for Army Pilots.

**Bleriot Monoplane:** a model of the first airplane to fly across the English Channel; flown by Louis Bleriot in 1911.

**Nieuport Monoplane:** the French War time Scout Plane.

Plans and Instructions for any of the above Models ..... Each 25 cents

### Plans for the IDEAL CECIL PEOLI RACER

These Plans show in detail how to build a 3-foot Racing Airplane patterned after one which took the Official Championship and broke all records for distance and duration. Plans comprise a detailed drawing, one-half actual size, and full Instructions.
Plans and Instructions.....**25 cents**

**All IDEAL Plans are mailed Postpaid at the prices listed above.**

Ideal

## MODEL AIRPLANE

# MATERIALS

MODEL Airplane builders in every state in the United States, and in many foreign countries, have considered "IDEAL" as the one reliable source of supply for anything required in the construction of Model Airplanes. Many well known leaders in Aviation started their careers by building and flying Model Airplanes, and as boys and young men come to IDEAL for the different parts, materials, fittings and supplies for their Models. Our old order files contain the names of many of these men whose deeds have thrilled the world during recent years.

Various of the fittings and accessories which are now built into almost every Model Airplane were originated by IDEAL. For more than twenty years, we have been furnishing ambitious builders with articles needed to make their Models more realistic, to secure better performance and to make the builder's work easier.

The following pages describe and price many items needed in the present day construction methods. Regardless of the particular type or size of Model you are building, you will find herein exactly the things needed in its construction. They will enable you to complete your Model with less time, work and trouble, and actually save money in its cost.

Every item is guaranteed to be exactly as represented, and the IDEAL reputation for giving a square deal every time stands behind this guarantee.



## DIRECTIONS FOR ORDERING

**Read the following ...tructions carefully before writing your order. Be sure to write your name and address plainly on all orders and letters.**

**TERMS:** Cash with Order. We do not make C. O. D. Shipments. Send the full amount to cover your order, plus any postage or other charges as listed below. Send New York Draft, Express or Postal Money Order. Do not send money (coins or bills) by regular mail; have your letter registered. United States Stamps (unused and in good condition only) will be accepted instead of cash in amounts up to $1.00. Canadian or foreign stamps or money not accepted.

**SHIPMENTS:** All shipments are made by either Express or Parcel Post. We will pay the express or parcel post charges if your order amounts to more than $2.00. If less than $2.00, you must pay these charges. Required postage, as listed in this catalogue, must be included with your order for all goods to be shipped by parcel post; express shipments will be made charges collect.

**INSURANCE:** We cannot be responsible for goods lost or damaged in shipment. F.. your own protection, have parcel post shipme..ts insured. Send 5 cents extra to cover Insurance Fee.

**PACKING CHARGES:** Shipments of wood require special packing to prevent breakage. Add 15 cents to your order for any quantity of wood in pieces longer than 12 inches.

**SMALL ORDERS:** We do not accept any order for less than 25 cents. All orders from 25 cents to $1.00 require careful handling, for which a charge of 10 cents per order is made. Include 10 cents extra if your order is under $1.00. Canadian shipments, 25 cents extra. Shipments outside Canada and United States, 50 cents extra.

**PROMPT SHIPMENTS:** All orders will be shipped within three days following their receipt, except goods made to order. When we cannot ship within that time we will write advising when shipment will be made.

**CORRESPONDENCE:** We are always glad to hear from Model Builders, and all correspondence should be addressed to Information Bureau and be written on separate paper. Enclose stamped and addressed envelope if you desire general information.

**GUARANTEE:** We guarantee every item listed in this catalogue to be exactly as represented; read descriptions carefully. IDEAL Model Airplanes and Supplies are sold by Department Stores, Toy and Sporting Goods Stores. We do not appoint any special agents.

Write All Drafts and Money Orders to

**IDEAL AEROPLANE & SUPPLY COMPANY, Inc.,**
**22-28 West 19th Street, New York, N. Y.**

Ideal

# WOOD

## For MODEL MAKERS

**BALSA**
**BASS**
**SPRUCE**

**Well seasoned, specially selected for Model Moking purposes, straight grained and free from defects; cut true and nicely finished, exactly the same as used in all Ideal Airplanes.**

### BALSA WOOD

36 Inch Pieces, Sizes as Follows:

| | | | | | |
|---|---|---|---|---|---|
| 1/16x1/32 | $.00½ | 1/8 x1/4 | $.02 | 3/16x3/4 | $.04½ |
| 1/16x1/16 | .00½ | 1/8 x1/2 | .03 | 1/4 x1/4 | .03 |
| 1/16x1/8 | .00¾ | 1/8 x3/4 | .03½ | 1/4 x3/8 | .04 |
| 1/16x3/16 | .01 | 5/32x5/32 | .02 | 1/4x 1/2 | .04 |
| 1/16x1/4 | .01 | 3/16x3/16 | .02 | 1/4 x3/4 | .04½ |
| 1/16x1/2 | .02 | 3/16x1/4 | .02 | 5/16x1/4 | .03½ |
| 1/8 x1/8 | .01 | 3/16x5/16 | .03 | 5/16x5/16 | .03½ |
| 1/8 x3/16 | .01½ | 3/16x1/2 | .04 | 3/8 x3/8 | .05 |
| 1/2 x1/2 | | .06 | 1/2 x3/4 | .08 | |

### SHEETS AND PLANKS

36 Inch Pieces, Sizes as Follows:

| | | | | | |
|---|---|---|---|---|---|
| 1/32x1 | $.03 | 3/16x1 | $.05 | 3/4 x2 | $.20 |
| 1/32x2 | .04½ | 3/16x2 | .09 | 3/4 x3 | .30 |
| 1/32x3 | .08 | 3/16x3 | .15 | 1 x1 | .17 |
| 1/16x1 | .04 | 1/4 x1 | .06 | 1 x2 | .28 |
| 1/16x2 | .05½ | 1/4 x2 | .11 | 1 x3 | .33 |
| 1/16x3 | .09 | 1/4 x3 | .18 | 1 x6 | .55 |
| 1/8 x1 | .05 | 1/2 x1 | .12 | 2 x2 | .40 |
| 1/8 x2 | .07 | 1/2 x2 | .18 | 2 x3 | .55 |
| 1/8 x3 | .10 | 1/2 x3 | .24 | 2 x6 | .90 |
| | | 3/4 x1 | .10 | 3 x6 | 1.50 |

### PROPELLER BLOCK SIZES

| | | | | | |
|---|---|---|---|---|---|
| 3/8x1/2x5 | $.01½ | 5/8x1 x 7 | $.02 | 7/8x1 1/2x12 | $.07 |
| 3/8x3/4x6 | .01½ | 5/8x1 x 8 | .02½ | 1 x1 3/8x12 | .08 |
| 3/8x3/4x7 | .02 | 7/8x1 1/2x11 | .06 | 1 x1 1/2x13 | .10 |
| 3/4x3/4x7 | .02 | 3/4x1 1/8x10 | .05 | 7/8x1 1/2x14 | .10 |
| 1/2x3/4x5 | .01½ | 3/4x1 1/8x11 | .05 | 1 x1 3/8x16 | .13 |
| 1/2x3/4x6 | 3 for .05 | 5/8x1 1/4x12 | .06 | 1 x1 1/2x16 | .15 |
| | | 5/8x1 1/8x10 | .04 | | |

### BASS WOOD

36 Inch Pieces, Sizes as Follows

| | Per piece | | Per piece | | Per piece |
|---|---|---|---|---|---|
| 1/8 in. sq. | $.04 | 3/16 in. sq. | .06 | 5/16 in. sq. | $.10 |
| 1/8x3/16 in. | .05 | 3/16x1/4 in. | .07 | 3/8 in. sq. | .10 |
| 1/8x1/4 in. | .05 | 1/4 in. sq. | .07 | 3/8x1/2 in. | .12 |
| 5/32 in. sq. | .06 | 1/4x5/16 in. | .08 | 1/2 in. sq. | .15 |
| | | 1/4x3/8 in. | .08 | | |

### SPRUCE WOOD

36 Inch Pieces, Sizes as Follows:

| | Per piece | | Per piece | | Per piece |
|---|---|---|---|---|---|
| 1/16x1/8 in. | $.05 | 1/16x1/4 in. | $.07 | 3/16x1/4 in. | $.09 |
| 1/16x3/16 in. | .05 | 1/16x1/2 in. | .09 | 3/16x1/2 in. | .12 |

### ROUND WOOD

| | Per piece | ROUND STICKS | Per dozen |
|---|---|---|---|
| 1/8 in. Diameterx36 in. | $.03 | | |
| 3/16 in. Diameterx36 in. | .03½ | 1/16 in.x12 in. | $.10 |
| 1/4 in. Diameterx36 in. | .04½ | 3/32 in.x12 in. | .10 |

### ROUND REED

| Diameter: | 1/32 in. | 1/16 in. | 3/32 in. | 1/8 in. | 3/16 in. | 1/4 in. | 3/8 in. |
|---|---|---|---|---|---|---|---|
| Price per foot: | $.01 | $.01 | $.01 | $.01 | $.01½ | $.02 | $.03 |

### SPLIT BAMBOO-FLAT

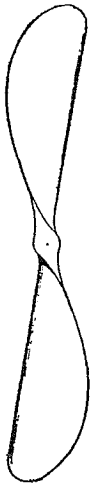
**Useful for Skids, Ribs and Shock Absorbers**

| | Per piece | | Per piece |
|---|---|---|---|
| 1/16 in.x1/4 in.x15 in. long | $.01 | 1/16 in.x1/4 in.x18 in. long | $.01½ |

Ideal

. . . Carved . . . Formed . . .
. . . Die Cast Metal . . .
. . . Stamped Aluminum . . .

# PROPELLERS



It it false economy to use anything but the best propellers, because the success of any Model that flies depends upon propeller efficiency. The "Standard" shape propeller, of balsa or poplar, is the most popular and usually gives the best results. "Toothpick" types are also desirable and will "dress up" Models of the newer ships more realistically. IDEAL propellers are scientifically designed and carved by machinery specially developed for the purpose. They are true and accurate to the utmost degree. Carved from finest balsa or poplar. Suitable for Scale Models and all large and heavier ships; no similar propeller of equal pitch can compare with IDEAL for price and efficiency.

## STANDARD and TOOTHPICK TYPES

Regular Sizes as follows: 14 inch and larger are carved to your order.

| Size | Balsa or Poplar |
|---|---|
| 6 inch | $.45 each |
| 7 " | .52 " |
| 8 " | .60 " |
| 9 " | .68 " |
| 10 " | .75 " |
| 12 " | .90 " |
| 14 " | 1.00 " |
| 16 " | 1.25 " |
| 18 " | 1.60 " |
| 20 " | 2.25 " |
| 24 " | 2.60 " |

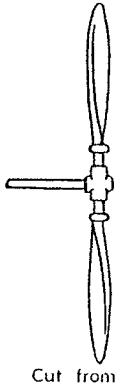
**Postage: 3c each**

Prices for larger sizes quoted upon application.
Above prices for Right Hand Propellers.
Left Hand Propellers made to order at 10 cents each additional.

### FORMED BALSA PROPELLERS

Made of light-weight Balsa, formed with special pitch, and very efficient on all type of feather-weight Models.

**5 inch size** .. $.05 ea. **7½ inch size** .. $.08 ea.
**9 inch size** .... $.10 ea.
**Postage: 2c each**



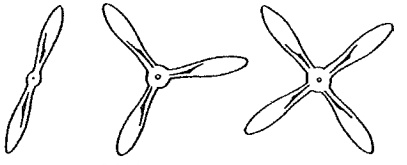
### STEEL TYPE TOOTHPICK PROPELLERS

**Die Cast Metal Alloy**

A miniature duplicate of the exact prop used on modern planes. Looks like the real thing when used on any Scale Model. Die cast from metal in three sizes for use on Models from 12 inch to 36 inch wingspan.

| | |
|---|---|
| 3½ inch size | $.30 each |
| 5 " " | .35 " |
| 6½ " " | .40 " |

**Postage: 3c each**



### STAMPED ALUMINUM PROPELLERS

A new IDEAL accessory and exactly the thing for the miniature Scale Models so popular just now. Made in two-, three- and four-blade styles and stamped from heavy sheet aluminum with hole punched in hub. 1¾ inch dameter. Can be attached with an ordinary pin, or with a special IDEAL Spinner pin.

| | |
|---|---|
| 2 Blade | $.03 each |
| 3 " | .04 " |
| 4 " | .05 " |

**Postage: 1c each**

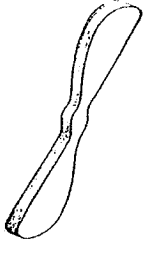
**IDEAL Spinner Pins** ..... **$.01 each**

## PROPELLER BLANKS FOR CARVING

Cut from selected woods of uniform weight and ready for those desiring to carve their own props.

| Size | Balsa or Poplar | Mahogany | Size | Balsa or Poplar | Mahogany |
|---|---|---|---|---|---|
| 6 inch | $.09 | $.15 | 12 inch | $.18 | $.30 |
| 7 " | .11 | .17 | 14 " | .25 | .40 |
| 8 " | .12 | .20 | 16 " | .40 | .65 |
| 9 " | .14 | .23 | 18 " | .50 | .85 |
| 10 " | .15 | .25 | 20 " | 60 | 1.00 |

**Postage: 3c each**



**Illustrated Instructions on Propeller Carving** ..... **$.12 postpaid**

Ideal

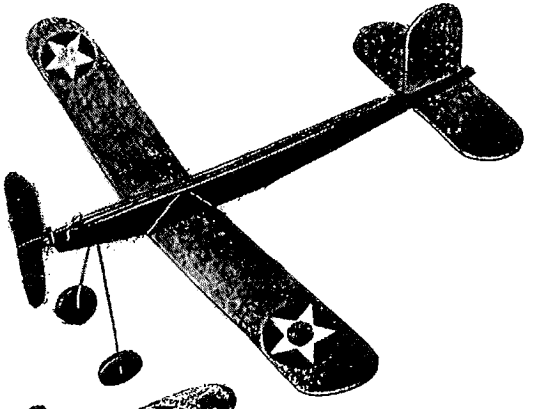
Ready to Fly

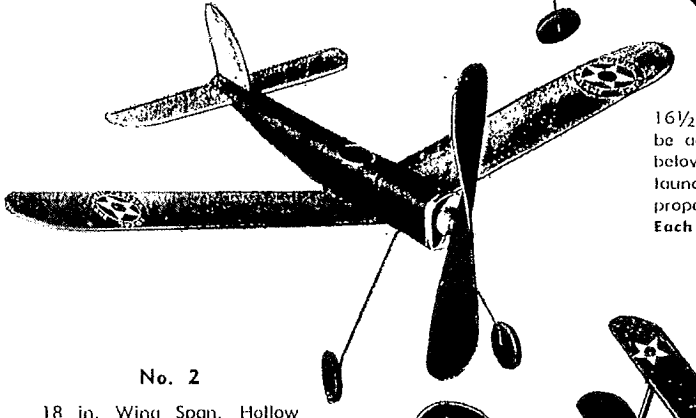
# VICTORY AIRPLANES

**SHOCK-PROOF BALSAWOOD CONSTRUCTION**

Adjustable—Removable Wings . . . Non-breakable Propellers . . . One-piece Landing Gear . . . Bright Red Bodies, Natural Balsa Wings and Tail Assembly.

**GUARANTEED TO FLY**





### No. 1

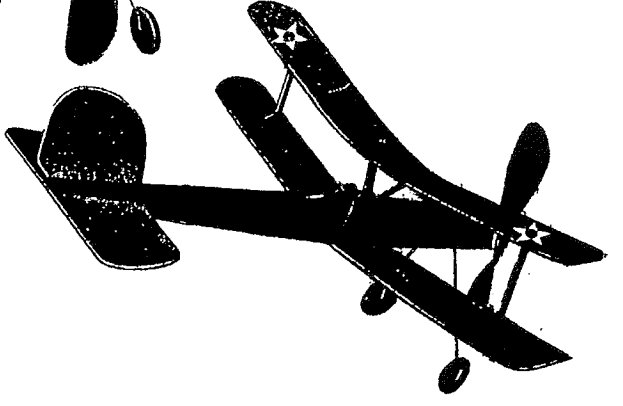
16½ in. Wing Span. Wings can be adjusted for flight above or below fuselage R. O. G, or hand launched. Equipped with 6 in. propeller.

**Each** ..... $.50

### No. 2

18 in. Wing Span. Hollow fuselage with open cock-pit. metal radiator and propeller shaft bearing. Equipped with 7 in. propeller.

**Each** ..... $1.00



### No. 3

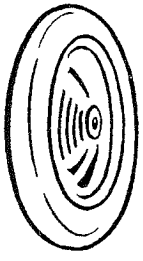
Biplane Model; 16 in. Wing Span. Hollow fuselage. Specially designed wing struts, with center strut permitting wing to pivot, thus minimizing breakage. Equipped with 7 in. propeller.

**Each** ..... $1.50

**Victory Airplanes Are Sold by IDEAL Dealers in All Cities. Denver, Colorado, West of Denver and in Canada, Prices Are: No. 1, 65c; No. 2, $1.25; No. 3. $1,75.**
**If Ordered by Mail, Add 12c to Each Price Above for Postage.**

# WHEELS

### Stream-Line
### ALUMINUM DISC WHEELS

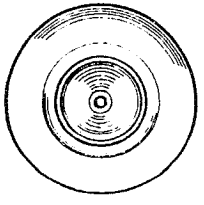


Very realistic and light weight. Suitable for all Models; the smaller sizes are just right for tail wheels for transport Models. Burnished aluminum disc with brass hub bearing; for 1/16-inch axle; standard rubber tires. Sold only in pairs.

| | | |
|---|---|---|
| ½ | inch | $.15 per pair |
| ¾ | " | .15 " " |
| ⅞ | " | .18 " " |
| 1 | " | .25 " " |
| 1½ | " | .30 " " |
| 2 | " | .40 " " |

**Postage: 3c per pair**

### Balloon-Tired
### ALUMINUM DISC WHEELS



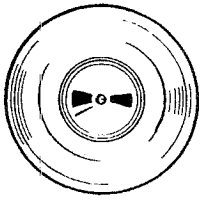
The most beautiful of all disc-type wheels; for use on scale or flying Models. Disc of burnished aluminum; hub bearings of brass; for 1/16 inch axle; white rubber balloon size tires. Sold only in pairs.

| | | |
|---|---|---|
| 1½ | -inch | $.25 pair |
| 1¾ | " | .30 " |
| 2 | " | .40 " |

**Postage: 4c per pair**

### CELLULOID WHEELS

Very light weight and specially designed for flying jobs. An all-celluloid wheel, disc type, with balloon tire contour. Hub drilled for 1/16 axle and can easily be enlarged if required. Glossy black finish. Sold only in pairs.



| | | |
|---|---|---|
| ¾ | inch | $.07 pair |
| 1 | " | .08 " |
| 1⅜ | " | .10 " |
| 1⅞ | " | .18 " |

**Postage: 3c per pair**

### TURNED HARD WOOD WHEELS

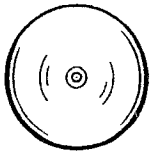
For replica or flying Models. Stamped to resemble disc wheels. Hole drilled for 1/16 inch axle.

| | | | | | |
|---|---|---|---|---|---|
| ½ | inch | $.03 pair | 1¼ | inch | $.04 pair |
| 1 | " | .03 " | 1⅜ | " | .04 " |

**Postage: 1c per pair**

### DOUGHNUT WHEELS

The very latest, a realistic miniature of the shock-absorbing wheels used on so many of the newest planes. Brass hub bearing with small aluminum disc and sponge rubber tire. Takes 1/16-inch axle. Sold only in pairs.

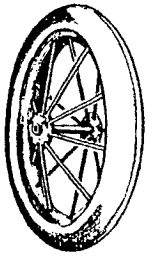


| | | |
|---|---|---|
| 1 | inch | $.20 pair |
| 1¼ | " | .25 " |
| 1¾ | " | .35 " |

**Postage: 3c per pair**

### WIRE SPOKE WHEELS

IDEAL made; finest materials; correctly proportioned, run absolutely true. Rims, spokes, and hubs of nickled brass, with white rubber pneumatic tires. For Models requiring spoke wheels, these are the best to be had. The 1½, 2, 2½ and 3-inch wheels take 1/16-inch axle; Sold only in pairs.



| | | |
|---|---|---|
| 1½ | inch | $.50 per pair |
| 2 | " | .65 " " |
| 2½ | " | .75 " " |
| 3 | " | .90 " " |
| 4 | " | 1.75 " " |

**Postage: 4c per pair**

### FLAT BALSA WHEELS

Light and strong for featherweight R.O.G Models.

| | | | | | |
|---|---|---|---|---|---|
| ¾ | inch | $.02 pair | 1½ | inch | $.06 pair |
| 1 | " | $.04 " | 2 | " | .08 " |

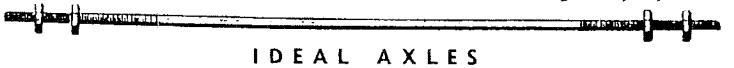
**Postage: 1c per pair**

### BALSA PANTS

Made of two halves already cemented together and cut out to hold wheel. Simply sandpaper to shape, insert axle and wheel and these pants are ready to be installed on your Model. Sold only in pairs.

| | | |
|---|---|---|
| For 1 | inch wheels | $.20 per pair |
| For 1¼ | " " | .25 " " |
| For 1½ | " " | .30 " " |
| For 1¾ | " " | .30 " " |
| For 2 | " " | .35 " " |

**Postage: 4c per pair**



### IDEAL AXLES

Made of finest steel rod, 1/16 and ⅛-inch size, ends threaded, complete with nuts.

| | | | | | | | |
|---|---|---|---|---|---|---|---|
| 1/16 inch: | 6 | inch long | $.10 | 7 to 10 | inch | $.12 | 11 to 15 inch $.18 |
| ⅛ | " | 6 | " " | .17 | 7 to 10 | " | .23 11 to 15 " .30 |

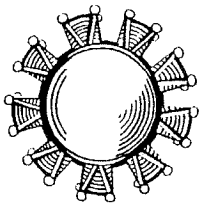
**Postage: 3c each**





# ACCESSORIES

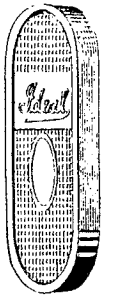
### DUMMY MOTORS — CELLULOID



The most realistic finishing touch for any Model, and light enough for flying jobs. Moulded of thin black celluloid into a perfect reproduction of a 9-cylinder radial motor. 1½-inch size for Models up to 15 inch, with ⅞-inch fuselage; 3-inch size for larger Models, with 1¾-inch fuselage.

**1½ inch size 20c each**
**3 inch size, 35c each**
**Postage: 3c each**

### MINIATURE RADIATORS




Perfect miniature duplicates of the radiators used on famous planes; stamped from burnished aluminum with all the markings to simulate the originals. With large hole to clear propeller shaft and bearing. Type No. 1 as illustrated for DeHaviland Models, size 2 1/16 x 3½ inches. Type No. 2 for Curtiss J N (Jennie) Models, size 1 15/16 x 2⅛ inches.

| | |
|---|---|
| **Type No. 1** | **$.15 each** |
| **Type No. 2** | **.10 each** |

**Postage: 2c each**

### FOOT RESTS

Another accessory that will "doll up" your Models. Made of aluminum and can easily be attached in any fuselage or wing 5/16 inch size.

**Per Pair** $.05

**Postage: 1c per pair**

### INSTRUMENT BOARD

A miniature reproduction of a standard instrument board. Printed on gummed paper with margin for trimming to exact size required. Four sizes on one sheet -1, 1¼, 1¾, and 2¼ inch.

**Sheet Containing 4 Sizes** $.05 each

**Postage: 2c each**

### CELLULOID PANTS

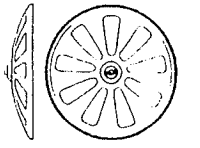
These bright wheel cowls add the final touch of realism to your Model. Made of black celluloid, 3 inch size and furnished with or without wheels. Our 1⅞ inch Celluloid wheel will fit these pants.

**Pants only, per pair** $.40
**With Wheels Mounted, including axle, per pair** .60

**Postage: 3c per pair**

### ALUMINUM MOTOR PLATES

Stamped from light gauge aluminum and fitted with brass bushing for propeller shaft. Can be used with or without dummy celluloid motor and on replica or flying models. 1¾-inch size fits 3-inch motor. 1¼-inch size fits 2-inch motor; ⅞-inch size fits 1½ inch motor.



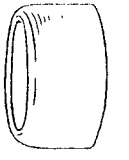
**⅞-in. dia., $.08 ea.**
**1¼-in. dia., .10 ea.**
**1¾-in. dia., .12 ea.**

**Postage: 3c each**

### ALUMINUM COWLINGS

**Open and Closed**

Accurate miniatures of standard N. A. C. A. cowlings that will make your round fuselage Models look like professional jobs. Spun from light gauge aluminum and weigh so little you can use them on flying Models. Supplied in either **open** or **closed** type. Open type has rolled edge and exposes motor. Closed type fitted with washer and brass bushing for propeller shaft.



| | | |
|---|---|---|
| **1½-in. size fits 1½-in. Motor** | **each** | **$.20** |
| **2-in. size fits 2-in. Motor** | **each** | **.25** |
| **2½-in. size fits 2½-in. Motor** | **each** | **.30** |
| **3-in. size fits 3-in. Motor** | **each** | **.35** |

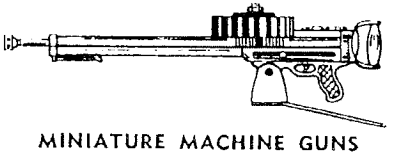
**Postage: 3c each**

### ANTI-DRAG RINGS

No modern Model is complete without one of these Towner Rings. Spun from bright aluminum with neatly rolled edge exposing motor.

**1½-in. size fits 1½-in. Motor** each $.20
**2-in. size fits 2-in. Motor** each .25
**2½-in. size fits 2½-in. Motor** each .28
**3-in. size fits 3-in. Motor** each .30

**Postage: 3c each**



### MINIATURE MACHINE GUNS

**Three Types**

Remarkably perfect reproductions of the Lewis, Vickers, or Spandau guns. Finished in black lacquer and equipped with swivel mounting for attaching to fuselage or cowling. Gun is 2 inches long.

**Each, complete** $.20

**Postage: 3c each**

Ideal

# MISCELLANEOUS SUPPLIES

## WOOD VENEER

For those wishing to conform as closely as possible to actual practice, this Wood Veneer is the only covering material which is correct for the fuselage of certain Models. It is also useful for cowlings, decks, cockpit openings and wherever a realistic wood effect is required. The wood is beautifully grained and can be left natural or finished with shellac or varnish. Should be glued to frame while damp, and will stretch tightly when dry. Furnished in two weights.

**2-ply Sheet 10x30 inches** **Each $.15**
**3-ply Sheet 10x30 inches** **Each .30**

**Postage: 4c extra**

## FIBRE BOARD

A very tough and durable material used successfully by thousands of builders for Wings, planes and tail assembly of light Racing Models, requiring no supporting frames. Also used for making easily formed, high-speed propellers and propeller blades. Can be cut to any shape with a razor blade or scissors. Red color.

**Sheet 3½x 8 inches** **Each $.04**
**Sheet 3½x22 inches** **Each .10**

**Postage: 4c extra up to 3 sheets**

## CELLOPHANE SHEETS

Genuine Dupont Cellophane suitable for windows; the most transparent material obtainable. Very thin, colorless and easily attached.

**Sheet 6x 6 inches** **Each $.05**
**Sheet 6x12 inches** **Each .10**

**Postage: 2c extra**

## AIRPLANE DOPE

Wing and fuselage surfaces covered with paper require "doping" to shrink the covering and make a smooth, tight surface and also to preserve, strengthen and protect the covering. We recommend IDEAL airplane dope as the best covering solution compound. It makes any type of covering; cloth or paper, absolutely water-and-air proof. Should be brushed lightly on the surface, using one or more coats as necessary. Can also be used as a quick drying glue to attach paper fabric to any wood surface. Dries colorless.

**1 oz.** **Each $.10**
**2 oz.** **Each .20**

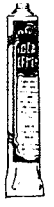
**Postage: 3c extra**

## COLORED DOPE

Equally efficient as our colorless dope, but specially prepared to give a beautiful, colored finish. It is a dope, glue and colored enamel all in one. Supplied in these colors: Red, Blue, Yellow, Green, Orange, Cream, Grey, Black, White, Khaki, Silver and Gold.

**Giant Size Vial: enough for a large Model** **Each $.10**
**2 oz. Can** **Each .20**

**Postage: 3c extra**



## COLORLESS CEMENT

Specially prepared for us, and exactly the cement used in our shops continually. Dries quickly, is waterproof and adds no weight to your Model. Sticks like nothing else can!

**6 dram Tube** **Each $.10**
**2 oz. Tube** **Each .20**
**Ambroid Cement, 6 dram vial, Each $.10**

**Postage: 3c each**

## COVERING MATERIALS FOR WINGS, FUSELAGE, TAIL ASSEMBLY

We have watched the development of covering materials for Models for more than twenty years, and the materials listed below are selected for their all around efficiency and recommended as the best obtainable.

## SILK CLOTH

The finest grade of Japan Silk, especially imported for this purpose. Used for covering wings, tail parts and fuselage of de luxe Models. Very light, yet the strongest made. When covered with our airplane dope, it will provide a perfect lifting surface to flying Models. Comes 36 inches wide; in white only.

**½ yard (18x36 inches)** **per piece $ .40**
**1 yard (36x36 inches)** **per piece .60**

**Postage: 2c extra**

## SILK PAPER

A Zephyr Skin paper that makes a semi transparent covering and is specially suitable for smaller and lighter Models. Just the thing for balloon covering. Takes any of the IDEAL dopes and forms a tough, tight covering. White only.

**Sheet 18x24 inches** **Each $.03**

**Postage: 1c extra**

## COLORED SILK TISSUE

The strongest and lightest paper for covering feather-weight Contest Models. Comes in Red, Brown, Blue, Orange, and Black, and enables you to dress your Models in classy style.

**Sheet 20x24 inches** **Each $.05**

**Postage: 2c extra**

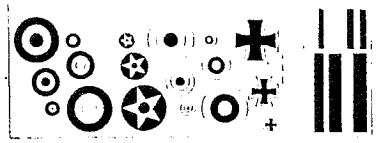
## BAMBOO PAPER

The most popular of all Model airplane coverings; the standard IDEAL material used for years on all professional jobs. Fits as tight as a drum when coated with either clear or colored IDEAL dope. The strength of this paper is greater than any other on the market, and it will make the Model tight, rigid and shock-proof. Comes in Natural Bamboo Color.

**Sheet 13 x36 inches** **Each $.13**
**Sheet 24¾x33½ inches** **Each .15**
**Extra Quality Vellum**
**Sheet 17 x22 inches** **Each .22**

**Postage: 2c extra per Sheet**

## INSIGNIA MARKINGS TO DRESS YOUR MODELS



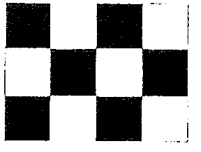
Identify your Models with their official markings; they put the finishing touch that distinguishes careful workmanship. The Insignia Sheet shown above is 7x10 inches and contains the following, each in three different sizes (⅜, ¾ and 1 3/16 inch). American, French, English and German war-time designations; the latest American and English markings; also the U. S. Army and Navy Rudder markings in two sizes. (Twenty-two pairs of Insignia in all.) These markings are suitable for use on Models with 6 inch to 24 inch wingspan. Printed in official colors on heavy gummed paper; just cut them out and glue them in place on your Models.

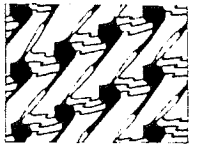
**Sheet complete** **Each $.10**

**Postage: 2c extra**

**American Star Insignia—1⅞ inch size** **Pair $ .03**
**American Star Insignia—4 inch size** **Pair .05**

**Postage: 1c extra**





## CHECKERED AND CAMOUFLAGE COVERING TISSUE

Add realism to your Models by applying this decorated paper to fuselage, tails, etc., of your war-time ships. Camouflage paper furnished in war-time colors. Checkered paper furnished in Yellow, Orange, Red, Green, Blue and Black on White background; also Black and Orange and Black and Red. Silk tissue paper to be used as covering, or can be applied as desired over the regular covering.

**Sheet 7x10 inches** **Per sheet $.10**

**Postage: 4c extra**

## BRONZE POWDER FOR DECORATING MODELS

A new metallic powder to be mixed with shellac, varnish or IDEAL airplane dope and applied to the covering. Produces the beautiful lustrous finish seen on so many transport and other ships. Adds little weight. Supplied in four colors: Silver, Gold, Blue and Green. A package contains sufficient for a medium size Model.

**Per Package** **Each $.15**

**Postage: 2c extra**

## RICE PAPER

An imported Japanese Rice Fibre paper extra light and strong and specially suitable for the latest Racing Models. Becomes air and water-tight when treated with dope. Comes in white only.

**Sheet 12x18 inches Each $.05 Per doz. $.50**
**Sheet 18x24 inches Each .10 Per doz. 1.00**

**Postage: 1c for 3 Sheets**

Ideal

# RUBBER

## IDEAL NEW PROCESS RUBBER

The advice of all experienced Model builders is this: "Rubber makes your Model go; use only the best you can get!" In fact, no flying Model, Racing, Duration or any other kind, is the least value unless the motive power gets it into the air and keeps it there; all your careful workmanship is wasted if your rubber fails.

IDEAL New Process **Rubber is unquestionably** the livest, strongest, freshest and most elastic you can use for any type of Model. It will stand 25 per cent more winding; its tensile strength is greater and it will stretch further before breaking than any other rubber on the market. All these advantages make it possible for this rubber to deliver the fullest possible power to your propeller.

**1/32 inch Square** **2 feet $.01**
**1/16 inch Square** **2 feet .01**
**1/8 inch Flat** **2 feet .01**
**3/16 inch Flat** **per foot .01**

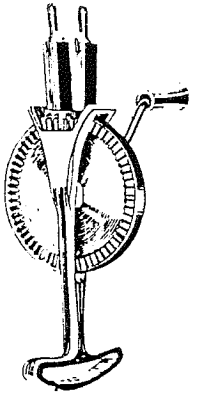
**Postage: 2c extra**

Rubber Tubing: For covering the ends of rubber hooks to prevent cutting of tightly wound strands.

**6 inch** **Per piece $.06**
**12 inch or more** **Per foot .10**

**Postage: 2c extra**

## THE MOST EFFICIENT WINDER OBTAINABLE



A light, smooth running winder that can be used for any single motor Model, and that will put more turns into a twin-motor ship in less time than any winder you ever saw. It's foolproof, too, and won't get stuck and refuse to work just when you need it most. Mechanically perfect in every respect; one turn of the handle gives 4 turns on the rubber. Assures equal turns on both sides, it cannot slip. Cast from aluminum, nicely finished and convenient size.

**Each** $.60

**Postage: 6c extra**

## LIQUID CELLULOID

A marvelous, new finish that gives Model a beautiful, glossy appearance. Applied with brush right over the finished parts, dries hard quickly, like a sheet of transparent celluloid. Intensifies the colors on your Model.

**Vial sufficient for Medium size Models** **Each $.10**

**Postage: 2c extra**

85% CRASH-PROOF 3½ ft. FLYING-BEN

FLIES 200 TO 700 FT. ON 1 WINDING

Here's a real flying model, designed by aircraft engineers, made of new CRASH-PROOF material. No balsa or flimsy sticks. Crashes buildings, fences, trees, etc., without breaking. Newpatented oiled rubber motor. Comes complete, ready to fly or in kits. Low prices. Send for FREE colored folder, shows plane in flight and crashes.

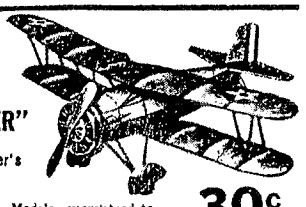
FLYING BEN MODEL AIRCRAFT CO.
2659 N. Parkside Ave., Dept. 20, CHICAGO, ILLINOIS

---

**Flying Model CURTISS "HELL DIVER"**

. . . also

Capt. Rickenbacker's **SPAD**



Both beautiful 12 in. Models, guaranteed to fly. Complete in Kits containing all Parts, Fittings, Materials, Plans and Instructions. Easy to build. Also 10 other fine Models at same price. Send 5c for Catalogue of them all, with information telling how you can join the IMPS!

**30c** EACH 2 for 50c POSTPAID

INTERNATIONAL MODELS CO., 1779 Broadway, New York.

---

**AMERICAN JUNIOR**

**READY-TO-FLY PLANES & ASSEMBLY SETS**

R.O.G. Climbs speedily under its own power to over 100 ft. cruises beautifully, then glides to a graceful landing.

**NEW IDEA!** *Parts in our sets completely formed & shaped —requiring only assembling and gluing*

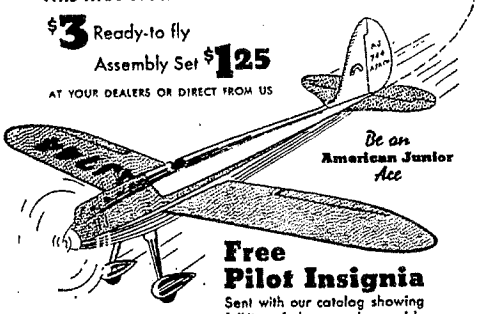
Classiest and most successful plane we've built in all our years of experience. Beautifully finished in three colors. Super stream-lined as shown. Wing span almost 2 ft. Sturdy and durable A real thrill ship! *Get one!*

**This model AJ744 Racer:**

$3 Ready-to fly

Assembly Set $1.25

AT YOUR DEALERS OR DIRECT FROM US



*Be an* **American Junior** *Ace*

**Free Pilot Insignia**

Sent with our catalog showing full line of planes and assembly sets from 25c to $3. Enclose 3c stamp for cost of mailing

**American Junior Aircraft Co.** 733 N. W. Everett St., Portland, Oregon

---

**MEGOW MODEL KITS**

Miss Stratosphere

Sponsored by **FAMOUS AVIATORS**

Al Williams' GULFHAWK... duplicate of latest navy fighting plane with new features by Maj. Williams . . . Clarence Chamberlain's MISS STRATOSPHERE . . . MONOCOUPE . . . TAYLOR CUB. Also gas-powered models, motors, etc.

Half-inch scale detail and flying models.

**50c** Postage 10c ex.

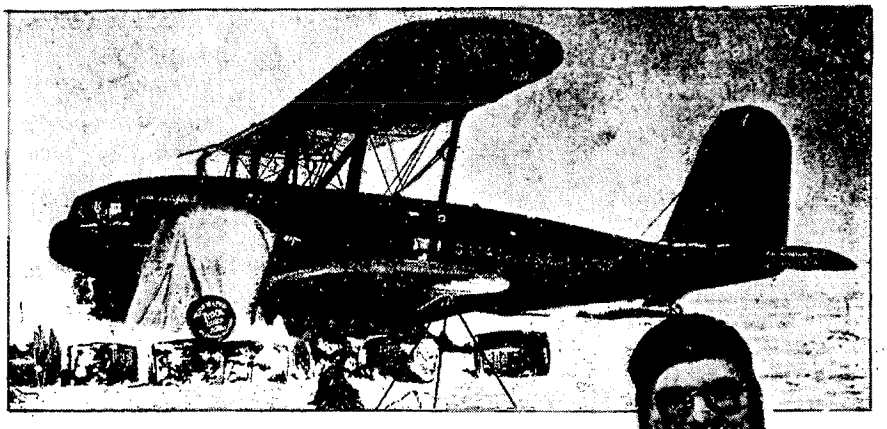
Send 5c for illus. catalog of airplane and ship models.

Gulfhawk

**MEGOW'S**

Dept. AB.
Howard & Oxford Streets
PHILADELPHIA, PA.
Also: 217 N. Desplaines St. CHICAGO

---



*Fly Plane Resurrected from*

# POLAR GRAVE

*after five years burial*

*told by*

## LT. COMMANDER GEO. O. NOVILLE

LT. COMMANDER NOVILLE

LIFE in Little America vividly described by Admiral Byrd's second in command . . . 142 flights over polar ice . . . Life in snow tunnels 30 feet below the surface . . . Exclusive story with graphic photos.

*ALSO:*

CLYDE PANGBORN
MODEL CONSTRUCTION
TECHNICAL INFORMATION
AVIATION FICTION.

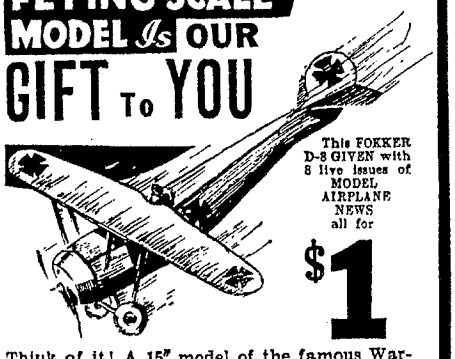
**BILL BARNES AIR TRAILS** 10¢

ON SALE ALL NEWS STANDS—OCT. 9

---

*This* **LIFELIKE FLYING SCALE MODEL *Is* OUR GIFT TO YOU**

*Canadians send 25c extra.*



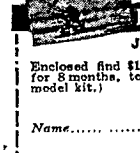
This FOKKER D-8 GIVEN with 8 live issues of MODEL AIRPLANE NEWS all for

**$1**

Think of it! A 15" model of the famous War-time fighting plane that actually flies. Complete kit containing all necessary materials for constructing it given with this special 8 months trial offer to

**MODEL AIRPLANE NEWS**—the only magazine devoted exclusively to model airplane building. Each month it brings you all the news of interest in the model airplane field, plans and instructions for building modern and war-time planes, photos and other interesting data that you won't want to miss. Subscribe today! The June issue contains a wow of a cash contest that you'll want to enter.

*Single copies sold at all news stands for 20c*



**MAIL COUPON NOW!**

JAY PUBL. CO., 1 East 45th St., New York

Enclosed find $1.00. Please send MODEL AIRPLANE NEWS for 8 months, together with the FOKKER D-8 (flying scale model kit.)

*Name*.....

*Street*.....

*City*.....*State*.....

---

**1933 - 1935**

Ads more familiar to the grandfather generation started to appear in the American Boy Magazine.

THE

CATALOG

OF

# SCIENTIFIC

## MODEL AIRPLANE KITS AND SUPPLIES

SCIENTIFIC MODEL AIRPLANE CO.
218-220 MARKET ST.
NEWARK N. J., U. S. A.

# SCIENTIFIC
## MODEL AIRPLANE KITS AND SUPPLIES

## FOREWORD

There is a wonderful opportunity to learn about aeronautics through experimenting with miniature airplanes. Time devoted to model building is not only enjoyably spent, but time that pays large dividends in knowledge and advancement. After the attainment of sufficient mastery of standard models, the earnest student seeks to crystalize his own ideas by designing and building models embodying these original ideas.

You, yourself, can undoubtedly think of any number of noted designers and aviators whose first knoweldge of aeronautics was gained through models. Perhaps **you** will be the one to design a plane that will revolutionize aviation.

"Anything worth doing is worth doing well." A model worth building is worthy of the highest quality material.

Whether you purchase a strip of balsa or a complete kit, SCIENTIFIC quality assures complete satisfaction. Every item is fully guaranteed.

We have served thousands of customers and, from our experience with them, and their enthusiastic letters of praise to us, we are confident SCIENTIFIC can serve **you** to your utmost satisfaction. Let us prove it to you.

**SCIENTIFIC MODEL AIRPLANE CO.**
**218-220 Market Street** **Newark, N. J., U. S. A.**

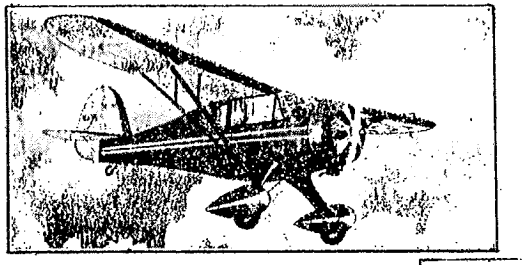


# De Luxe "HI-FLYER"
## MODEL AIRPLANES
## 25" WINGSPAN

THE BIGGEST DOLLAR FOR DOLLAR VALUE EVER OFFERED IN MODEL AIRPLANES

IF you want beautiful, accurate, easily-constructed and perfect flying models of the popular planes of the day, here they are! Every essential detail of these present day planes is copied in these De Luxe Models, and material furnished in the kits so you can reproduce them perfectly. As usual, Scientific-designed kits make building easier because more of the time-taking work is done for you. All ribs, bulkheads, outlines, etc., are printed on balsa, ready to be cut out; formed wire parts; new machine-cut balsa props are furnished in all kits; all strip balsa cut to size; liberal quantities of banana oil, cement, rubber, colored tissue, and other supplies come in each kit. Full sized plans and detailed instructions are simple to follow. You can build easier with Scientific De Luxe Hi-Flyer kits. Select yours now and order today for immediate delivery. (Remember to see your dealer first for Scientific kits, if he has not as yet received his supply, order direct from us.)

COMPLETE KIT **$1.00** POSTPAID OR AT YOUR DEALER



### MONOCOUPE MODEL 145

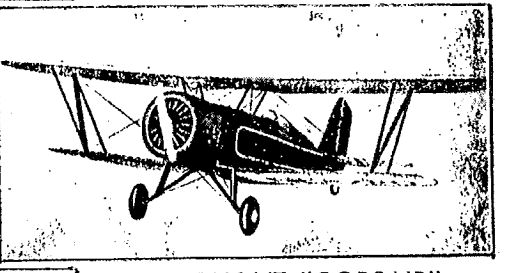
The Monocoupe is well known as the most beautiful small cabin job in existence. It might be said that light planes in the cabin class the world over are patterned very closely after this design. Col. Charles A. Lindbergh has recently secured one for his own private use. The model is a steady and beautiful flyer. Colors are blue and white with black details.

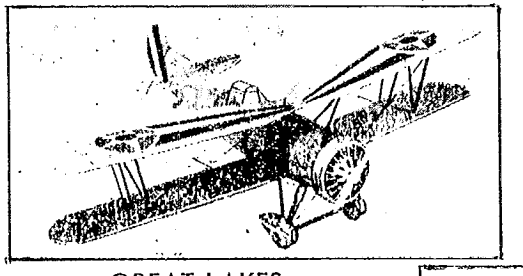
COMPLETE KIT **$1.00** POST PAID

### STEARMAN MODEL 81

Here's a model that is exclusive with Scientific. It has already established for itself an excellent reputation. We have adopted the most popular color combination, which is yellow wing and tail surfaces, body red with wide band of black outlined in white. The model is capable of beautiful flights, graceful and even. It makes a "hit" with everyone instantly.

COMPLETE KIT **$1.00** POST PAID





### VOUGHT "CORSAIR" MODEL V80

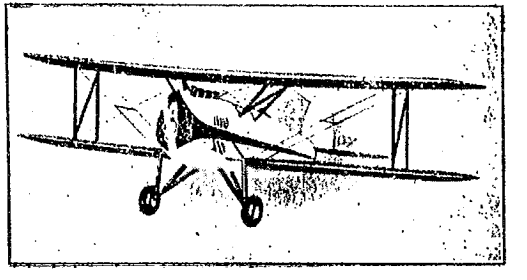
This Corsair V80 is a very fine addition to the famous line of Corsairs known the world over. It makes a beautiful, fast, and steady flying model. It is colored the usual blue wings and tail surfaces of the Navy, with the top of the upper wing yellow, balance of details black except for the special red markings on top of upper wing.

COMPLETE KIT **$1.00** POST PAID

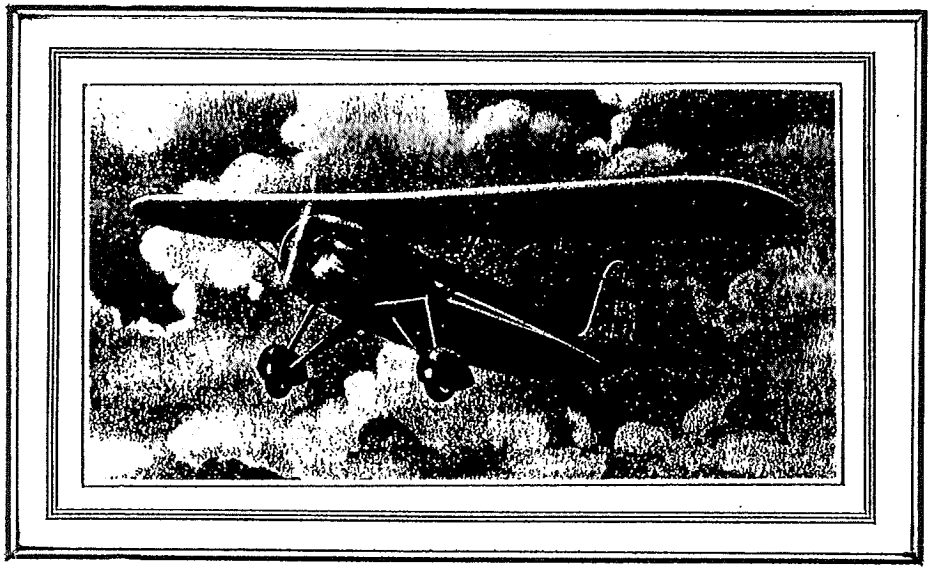
### GREAT LAKES SPORT TRAINER

kit to build this scale model airplane, the prototype of which is well known in the commercial world for its fine performance and exceptional beauty, contains a full sized completely detailed drawing with instructions for building. This new model will fly far better than the original design, which for a long time held an official world's record. Colors are red and white with black detail.

COMPLETE KIT **$1.00** POST PAID



# The Model Fit for a King



WARNER POWERED **FAIRCHILD** MODEL "22"

NEWLY DESIGNED LANDING GEAR IS BUILT INTO FUSELAGE WITH SPECIAL SHOCK ABSORBERS IN WHEEL HOUSINGS.

**50** INCH WING — LENGTH 35 INCHES — WEIGHT 8 OUNCES

Such an authentically detailed model was bound to create a sensation. What a peach to build! Yet its realism doesn't end with looks—no sir! She takes right off the ground within 12 feet and flies just like the "big plane." It is a steady, consistent flyer and will rise, in most cases, to about 75 feet altitude and fly from 500 to 750 feet on an average, although longer flights have been made:
This model, with a wingspan of 50", length of 35", a red and blue fuselage with yellow wing and rudder, makes an impressive sight to behold with its motor powerfully pulling it high in the air. The landing gear is especially well designed, being built right into the fuselage where both ends meet and are joined solidly. A speal shock absorber is employed in the pants which oliminates all shock to the model upon landing.

The construction kit to build this model contains giant full-size detailed drawing giving every bit of information needed for building and flying the plane, including five large clear photographs showing necessary views; all materials needed, including ready finished wheels; spun aluminum cowling ready to attach to model; large and small blocks for nose piece and cylinders; finished 13" balsa wood propeller; all wire fittings ready made; plenty of celluloid for windshields; all balsa strips cut to size; all ribs, bulkheads, curved tail and wing parts, sides and centers of pants, clearly printed on sheet balsa; 6 large sheets of extra fine tissue paper for covering model, black tissue for all lettering; 45 feet of rubber; large bottles of cement, banana oil, and black paint for details.

Send for one of these fine kits today. We'll see that you get it in a hurry. We're sure you'll be more than satisfied wth the kit, and with the finished model.

COMPLETE KIT

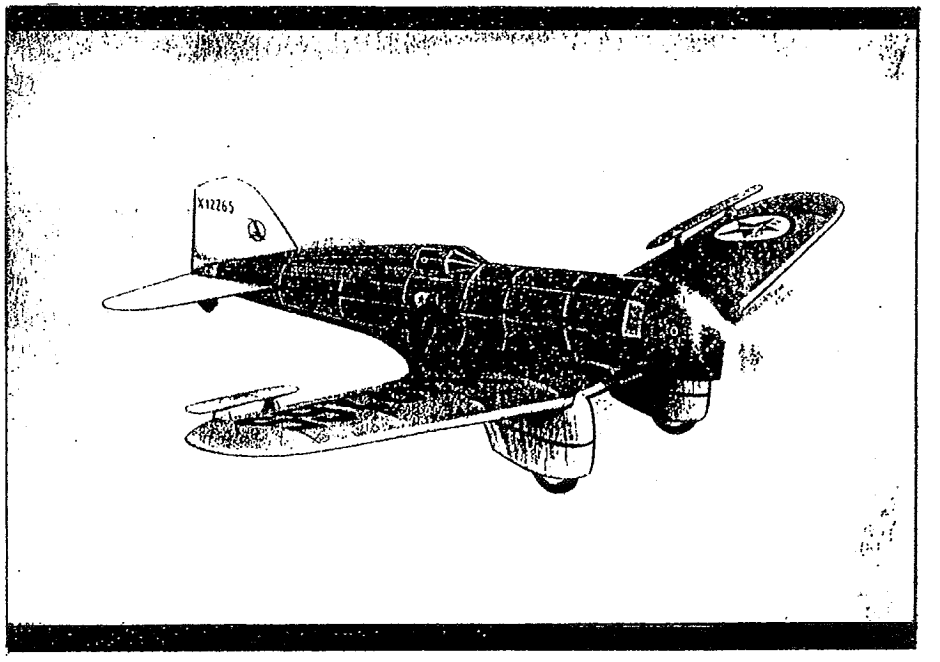
**$3.50**

POSTPAID
AT YOUR DEALER
OR ORDER DIRECT



## Here's Speed!—Thrills!—Flash!

FRANK HAWK'S **NORTHROP "GAMMA"**




22". WINGSPAN

Fellows, here's the biggest thrill of all. A model packed with thrills in building, and thrills in flying. Amazing in the details it embodies. Exceptional in flying, flash, and maneuverability. This model has been thoroughly tested by our factory experts, and found to be a "capable and consistent flyer, often flyng well over 600 feet—a romarkable performance."

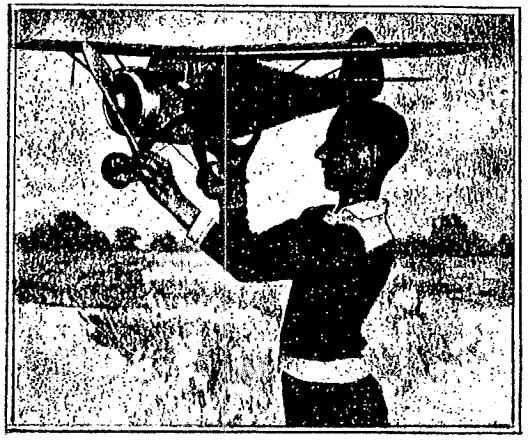
The kit is complete with large full-size drawings and explicit instructions; all ribs, bulkheads, fairings, etc. clearly printed on sheet balsa, ready-made balsa-cowling; ready-made balsa wheels; ready-made nose plug; ready-made wire fittings; semi-finished three-bladed propeller; fine tissue; rubber; Scientific cement; banana oil; all balsa strips cut to size, etc.

| | |
|---|---|
| Wingspan | 22" |
| Length | 13½" |
| Weight | 1 oz. |

COMPLETE KIT

only $1.00 Postpaid

AT YOUR DEALER — OR ORDER DIRECT



Look at these Specifications:

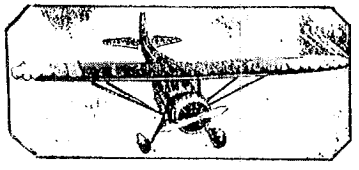
WINGSPAN: 72 inches
LENGTH: 43 inches
WEIGHT: 12 ounces
COLORS: Yellow and black

# 6 FOOT MONOCOUPE

## GUARANTEED TO FLY 500 FEET

Think of it! . . . 6 foot of model airplane all in the air at one time and giving a breath-taking performance. This is without doubt a marvelous value at such an exceptionally low price.

...t sport is in store for you! Takes off the ground within 15 feet, zooms up high above the tops and after a beautiful flight, settles down to a perfect three-point landing. You'll get almost many thrills as if you, yourself, were in the plane at the controls. Build and fly this famous record-...ker for real flights. When you go outdoors to fly it you had better have your auto handy—you have to follow it all over the county.



COMPLETE KIT

**$5.00**

POSTPAID
OR AT YOUR DEALER

To build this wonderful model we have designed the most complete and perfect construction kit you will see in a long time. The plan is carefully reproduced from an accurate engineering blueprint. It shows every detail of construction and assembly, with every part indicated and explained fully. The materials and fittings are complete too. Nine large sheets of balsa; 35 balsa strips of various sizes; 7 large sheets of silk tissue; a generous quantity of banana oil, cement, and colored dope; propeller shafts; finished balsa wood propeller, rubber motor; finished balsa wood wheels; washers; sandpaper; celluloid; bamboo; wire; finished balsa wood cowling; finished balsa cowfront; nose plug; and other small but necessary things to make the complete model exactly in accordance with the plans and instructions.

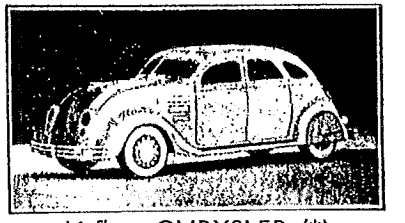
SEND FOR ONE OF THESE SIX FOOT MONOCOUPES TODAY ! !



## BUILD ONE - - and You'll Build All

We're so confident you'll be thrilled with this new model making sensation!

If you've ever wanted real enjoyment, . . something different for a change . . .

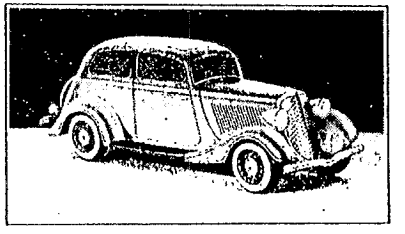


Airflow CHRYSLER (*)

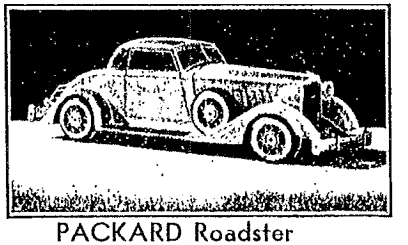
(*) Copyrighted name used with permission of Chrysler Corp.

## BUILD THESE

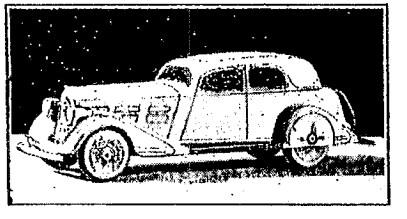
# STREAMLINE AUTOMOBILES



FORD V-8 Victoria



PACKARD Roadster



NASH Brougham

You'd be agreeably surprised if you could see the array of finished models at our showrooms. Our display resembles an automobile show in miniature. Every minute detail has been painstakingly copied from the original new cars.

No other kits ever offered by any firm are as complete as these Streamline Automobile Kits. Nothing has been overlooked. Even tools (full size coping saw and model knife) have been included. We've opened up a brand new field for Model Builders! If you have not as yet ordered one or more of these Streamline Automobiles, do so at once. The realism—completeness in every detail—will startle you.

Automobile dealers the country over are having these models built by boys, and displaying them in their showrooms. Think of the substantial profit you can make by reselling these miniature automobile models.

EACH KIT CONTAINS:

Finished wheels; finished headlights; finished tail lights; finished bumper ends (where needed); finished cowl lights (where needed); semi-finished balsa body; fenders printed on balsa; bumpers printed on balsa; body top printed on balsa; radiator ornaments printed on balsa; radiator printed on silver paper; license plates printed on silver paper; large tube cement; camel hair brush; full-size coping saw; model making knife; sandpaper; large bottle high-gloss lacquer; two bottles of high-gloss lacquer for trimming; full size plans with explicit instructions.

Buy these kits from your dealer or order direct.

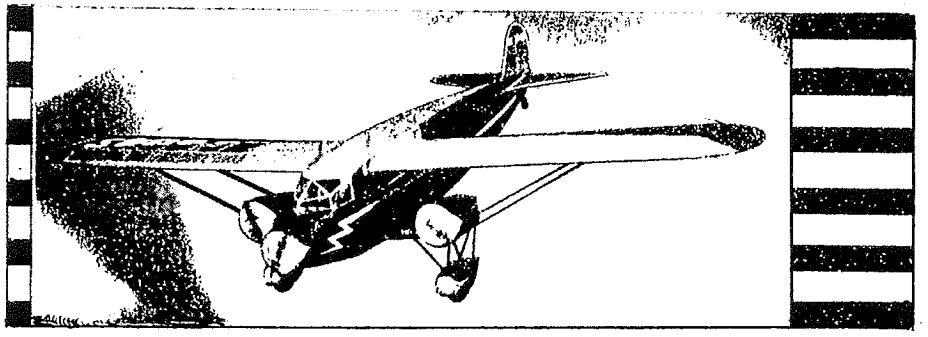
**$1.00 EACH POSTPAID**

COMPLETE WITH SAW AND MODEL KNIFE

# STINSON TRI-MOTOR

AMERICA'S MOST UNUSUAL SCALE FLYING MODEL AIRPLANE

High Value . . . Inexpensive



This giant airliner, the first of a series of transport designs which have followed it very closely, both America and abroad, represents one of the many now operating on the airways of the United States. The model, which weighs 1½ ozs., is a steady, consistent flyer, flying on an average of from 150 to 500 feet, although longer flights than this have been made.

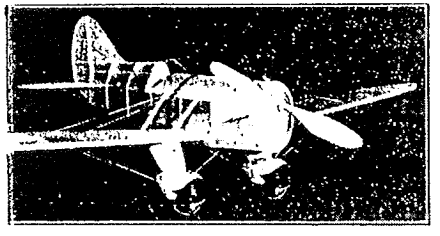
The finished model represents the real plane in every respect. The complete kit contains:

2 finished balsa cowlings; semi-finished balsa pants; finished wheels; finished propeller; finished wire parts; banana oil and Scientific ent; fine tissue; rubber motor; special colored dope; balsa strips cut e. All ribs and bulkheads, etc. clearly printed on balsa. Full size and explicit instructions.

**$2.00**

COMPLETE KIT POSTPAID
OR AT YOUR DEALER

Wingspan ..... 26¼" Length ..... 17½" Weight ..... 1½ oz.



## GEE BEE MODEL D

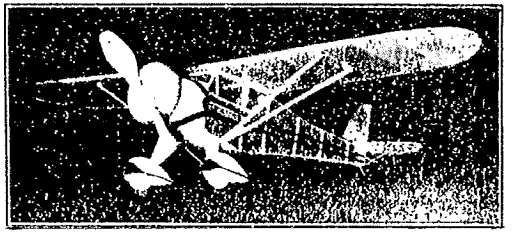
GUARANTEED TO FLY 600 FT.

Kit is complete in every detail, including ribs, bulkheads, pants and other parts clearly printed on balsa; banana oil; rubber motor; Scientific cement; finished wheels; semi-finished propeller; full size plans and explicit instructions, etc.
Colors Red and White.
Wingspan 22" Weight 1 oz.

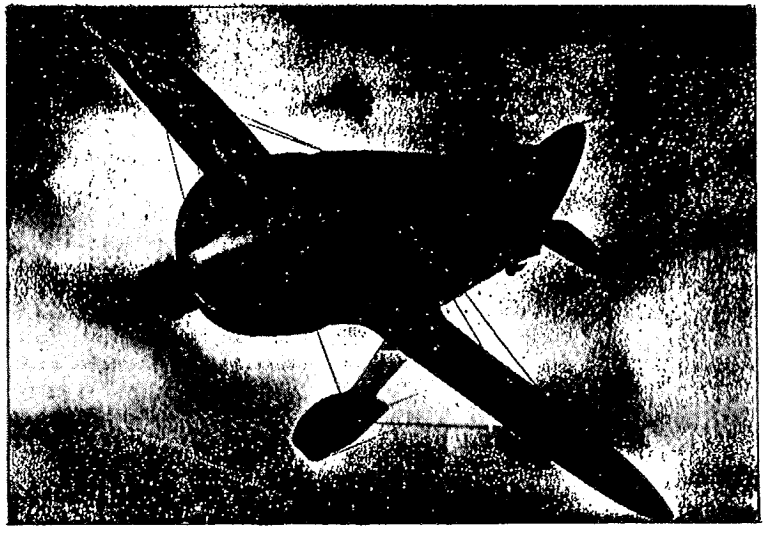
**75c** POSTPAID

re can hardly do justice to this beautiful model.
eal beauty and some flyer. Kit contains:
ulkheads, etc., clearly printed on balsa od.
l balsa wheels.
l balsa cowling.
l wire fittings, rubber motor, tissue.
oil, Scientific cement.
plans and explicit instructions, and ov- thing else needed to complete a real IENTIFIC Monocoupe flying model.

**75c** Wingspan ..... 22"
Weight ..... 1 oz.
Colors: Black and White.



GUARANTEED TO FLY 600 FT.



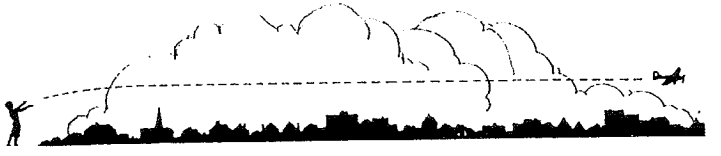
## DOOLITTLE'S GEE-BEE SUPERSPORTSTER

The "Flying Milk Bottle" as many appropriately term the Gee Bee racing model, was the most radical departure from conventional aircraft designs in racing airplanes as has ever been seen in recent years but it attained a speed of 309 M. P. H. in tests. Many model builders have reported excellent flights of several hundred feet with the model. It should be added to everyone's collection of fine models, because of its historic importance. Building and flying this Gee Bee will give you as great a thrill as though you were racing against Major James H. (Jimmy) Doolittle, himself. The model illustrated here is an exact copy of the "Big One" perfectly designed and balanced.

The complete kit contains: Finished balsa wood cowling front; all ribs; bulkheads, pants, etc., printed on balsa; finished balsa wood wheels; rubber; colored dope; banana oil; cement; all strip balsa cut to size and length; finished wire parts; and most important of all, the very fine, thoroughly engineered, drawing with all parts drawn full size and illustrated with large size photographs—all that goes into a beautiful scale flying model as many say "fit for a king"—and a bargain at twice the price.

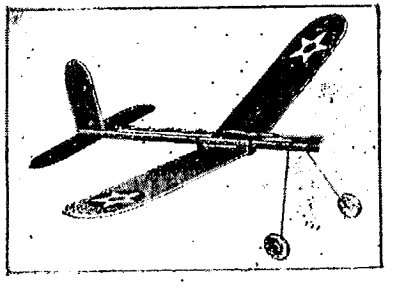
Send your order today for this model—we'll see that it reaches you promptly.

Wingspan ..... 20" Weight ..... 1¼ oz. Colors Red & White



**$1.50** POST PAID

OR AT YOUR DEALER



## READY-TO-FLY

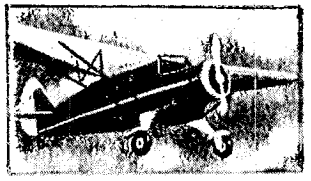
STICK MODEL

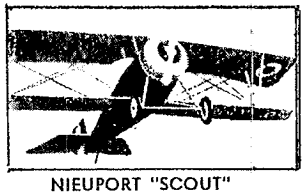
Will fly 400 to 600 feet, 2 to 3 minutes. Assembled in 3 minutes. Weighs only one-quarter ounce. Will stand nearly any collision without damage. The kit contains all finished parts including:

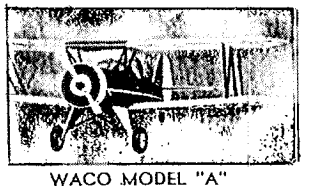
| | |
|---|---|
| Wings | Wheels |
| Tail surfaces | Landing Gear |
| Rudder | Propeller |
| Motor Stick | Rubber |
| All wire parts | Insignia |
| Wing Mount | |

EACH POSTPAID **25c** OR AT YOUR DEALER

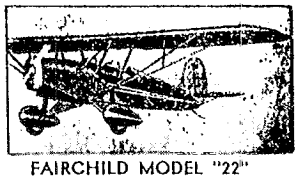
# THE FAMOUS LINE OF SCIENTIFIC HI-FLYERS


STINSON "RELIANT"


NIEUPORT "SCOUT"


WACO MODEL "A"

VANCE "FLYING WING"


FAIRCHILD MODEL "22"

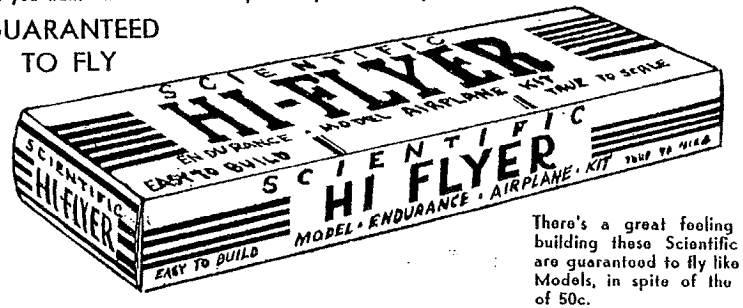
BELLANCA "PACEMAKER"

20" WINGSPAN! GUARANTEED TO FLY!

THESE are the popular "Hi-Flyers" that have been built by thousands of enthusiastic model fans. Every design has been tested, corrected, and perfected, before it was put out—the result is the most perfect models that can be made in this type of construction. Each kit contains everything needed to build the realistic model.

If you've never built a Hi-Flyer model, don't postpone the thrill another day. It's model airplane building of the highest type, yet planned and simplified to an amazing degree. Any model listed here is an exceptional value—send your order today for the ones you want—we'll see that they reach you in a hurry.

GUARANTEED TO FLY

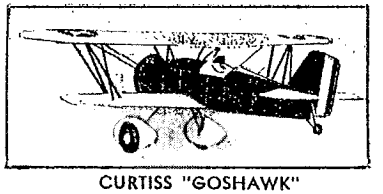


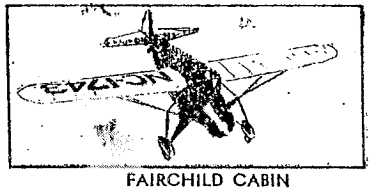

50¢ EACH POSTPAID
AT YOUR DEALER
OR ORDER DIRECT

There's a great feeling of satisfaction in building these Scientific HI-FLYERS. They are guaranteed to fly like all other Scientific Models, in spite of the extreme low price of 50c.

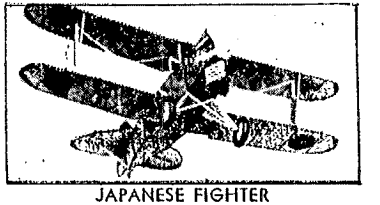
## EACH HI-FLYER KIT CONTAINS:

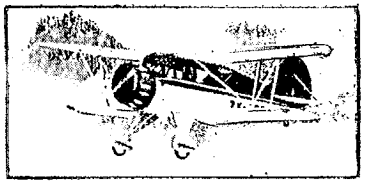
Finished drilled propellor.
2 sheets colored tissue.
Washers
Finished wire fittings.
Rubber motor.
All balsa strips cut to size.
Full size plans and explicit instructions.
Finished drilled wheels.
Bottle banana oil.
Bottle cement.
Finished drilled nose plug.
All ribs, bulkheads, fairings, printed on balsa.

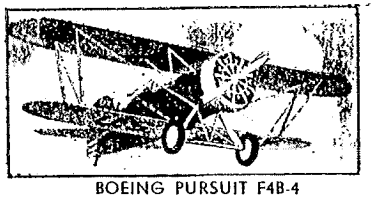

CURTISS "GOSHAWK"


FAIRCHILD CABIN

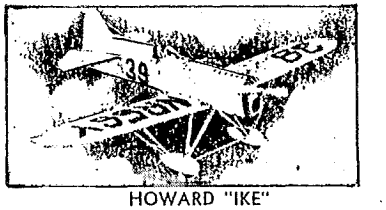
VICKERS "JOCKEY"

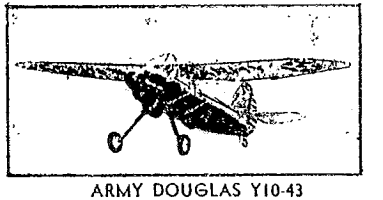

JAPANESE FIGHTER

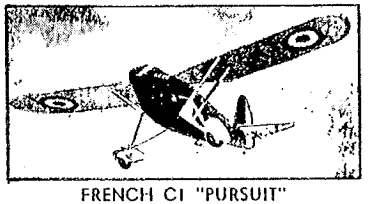

WACO CABIN Y.K.C.


BOEING PURSUIT F4B-4

CURTISS "CYCLONE" HAWK


HOWARD "IKE"


ARMY DOUGLAS Y10-43


FRENCH CI "PURSUIT"

## SCIENTIFIC KITS Make Model Building Worth While!

YES SIR! I'M SCOTCH. BUT I'M ALWAYS WILLING TO PAY A LITTLE MORE FOR THOSE "HIGH-GRADE" SCIENTIFIC SUPPLIES.

THE PARTS LISTED HERE ARE OF THE HIGHEST QUALITY OBTAINABLE AND REASONABLY PRICED . . . .

## SCIENTIFIC SELECTED BALSA WOOD

SBW — SCIENTIFIC BALSA WOOD

Finest grade South American Balsa wood, especially cut, dressed, and prepared for model airplane builders. Scientific Balsa is our trademark and is the customer's guarantee of protection against inferior and poorly dried Balsa. All our Balsa is imported directly from Ecuador, South America, and is cultivated, selected, and kiln-dried by experts. Weight: 7 to 11 lbs. per cubic foot.

When ordering balsa wood, if you will specify medium, light, or ultra-light weight, we will select it as nearly as possible.

Add 10c to your order for any quantity of balsa listed to cover special handling.

### 36" LENGTHS

| | | | |
|---|---|---|---|
| 1/16x1/16 | 10 for .05 | 3/16x1/2 | .05 |
| 1/32x3/32 | 7 for .05 | 3/16x1 | .05 |
| 1/8x1/8 | 7 for .05 | 1/4x1/4 | .03 |
| 3/32x3/16 | 5 for .05 | 1/4x3/8 | .04 |
| 1/8x1/4 | 5 for .05 | 1/4x1/2 | .04 |
| 1/8x1 | .04 | 1/4x1 | .06 |
| 1/32x3/32 | 5 for 05 | 5/16x5/16 | .05 |
| 1/16x1/8 | 5 for .05 | 3/8x3/8 | .05 |
| 1/16x3/16 | 3 for .05 | 3/8x1/2 | .07 |
| 1/16x1/4 | 3 for .05 | 3/8x3/4 | .08 |
| 1/16x3/8 | .03 | 3/8x1 | .09 |
| 1/16x1/2 | .04 | 1/2x1/2 | .08 |
| 1/16x1 | .05 | 1/2x3/4 | .08 |
| 1/32x3/16 | 2 for .05 | 1/2x1 | .12 |
| 1/32x1/4 | 2 for .05 | 1x1 | .17 |
| 1/32x3/8 | .04 | | |

### SHEET BALSA

### 36" LENGTHS

| | | | |
|---|---|---|---|
| 1/32x2 | .05 | 3/16x2 | .09 |
| 1/32x3 | .08 | 3/16x3 | .15 |
| 1/16x2 | .06 | 1/4x2 | .11 |
| 1/16x3 | .09 | 1/4x3 | .18 |
| 1/8x2 | .07 | 3/8x2 | .15 |
| 1/8x3 | .11 | 3/8x3 | .22 |
| 3/16x2 | .07 | 1/2x2 | .17 |
| 3/16x3 | .10 | 1/2x3 | .22 |

### 1/64" BALSA SHEETS

This 1/64" balsa is scarce. It is excellent for hollow leading edges, for built-up fuselages, hollow wheels, cowlings, coverings, wings, and any place where Balsa must be curved to extremes. This balsa is cut on high-speed, accurate, circular saws.

1/64x2x18" Each .03

### PLANK BALSA

### 36" LENGTHS

| | | | |
|---|---|---|---|
| 3/4x2 | .25 | 1x6 | .60 |
| 3/4x3 | .28 | 2x2 | .40 |
| 1x1 1/2 | .22 | 2x3 | .60 |
| 1x2 | .25 | 2x6 | 1.00 |
| 1x3 | .30 | 3x3 | .90 |
| 3x6 | 1.50 | | |

ALL PLANK PRICES F.O.B. NEWARK, N. J.

### PROPELLER BLOCKS

| | | | |
|---|---|---|---|
| 3/8x1/2x5 | .01 | 5/8x1x9 | .04 |
| 1/2x3/4x5 | .02 | 3/4x1 1/8x10 | .05 |
| 3/8x3/4x6 | .02 | 7/8x1 1/8x10 | .06 |
| 1/2x3/4x6 | .02 | 3/4x1 1/8x11 | .07 |
| 3/4x3/4x6 | .03 | 7/8x1 1/2x11 | .08 |
| 1/2x7/8x7 | .03 | 1x1 3/8x12 | .08 |
| 5/8x1x7 | .03 | 7/8x1 1/2x12 | .09 |
| 3/4x3/4x7 | .03 | 1x1 3/8x13 | .10 |
| 3/4x3/4x7 1/2 | .03 | 7/8x1 1/2x14 | .10 |
| 5/8x7/8x7 1/2 | .03 | 7/8x1 1/2x15 | .11 |
| 3/4x7/8x7 1/2 | .03 | 1x2x15 | .15 |
| 5/8x1x8 | .03 | 3/4x1 3/8x16 | .13 |
| 3/4x1 1/8x8 | .04 | 1x1 1/2x16 | .14 |
| 3/4x1 1/8x9 | .05 | | |

### SPECIAL BLOCKS

For Cowlings, Nose Pieces, Wheels, etc.

| | | | |
|---|---|---|---|
| 2x2x2 | .06 | 2x3x3 | .[illegible]5 |
| 3x3x3 | .18 | 2x3x6 | .[illegible] |
| 1x3x3 | .10 | 1x2x3 | .05 |
| 1x3x6 | .13 | 1x2x6 | .10 |

MODEL BUILDERS KNIFE EACH .10

# Scientific "HI-GRADE" Supplies

## COVERING MATERIALS

### Japanese EXTRA SUPER FINE SILK TISSUE

extra light and strong covering used on the latest endurance models. When treated with banana oil or dope it becomes impervious to air or water and dries as tight as a drum. This is the lightest tissue that it is possible to manufacture. Sheet 18"x24" .10

### SUPER FINE COLORED TISSUE

This is the regular tissue dyed by a special process which adds no weight to your model. Colors: Red, green, orange, blue, brown, black, yellow.
Sheet 20" x 24" .05

### SUPER FINE WHITE TISSUE

Sheet 20" x 24" .05

### SCALE MODEL TISSUE

For models that are to be covered with colored dope.
Sheet 29" x 25", 2 for .05
WRINKLES caused by folding tissue for shipment may be ironed out by using a hot iron and ironing between two layers of smooth paper on a hard surface. Before using, expose to the air until it resumes its normal size by absorbing moisture.

### WOOD VENEER PAPER

This is an excellent covering for fuselages on scale and flying models. It resembles wood in appearance but has the weight of paper. 15" x 20" sheet .10
20" x 30" sheet, each .15

### REED

Reed can be used to make various parts of light models, such as tail skids, wing tips, etc.
1/32" diam., 1/16" diam., 3/32" diam., 3 ft. for .03
1/8" diam., 3 ft. for .04

### DOWELS

Small birch dowels can be used for entering edges and wing spars for small scale models. Larger dowels can be used to form the cylinders of miniature motors. 36" lengths.

| | |
|---|---|
| 1/8" diam., each | .03 |
| 3/16" diam., each | .03 |
| 1/4" diam., each | .04 |

### BAMBOO

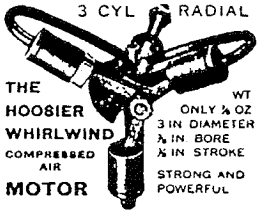
This is one of the important woods that go into the making of a model airplane. This bamboo will split straight to any size and is easily bent or formed over a candle flame or electric iron.

| | | | |
|---|---|---|---|
| 1/32x1/4x8" | doz. .07 | 1/16x1/4x15" | doz. .12 |
| 1/16x1/4x10" | doz. .08 | 1/16x1/4x18" | doz. .15 |
| 1/16x1/4x12" | doz. .09 | | |

### SHREDDED BAMBOO

| | | | |
|---|---|---|---|
| 1/64x1/64x12" | doz. .04 | 1/16x1/16x10" | doz. .05 |
| 1/16x1/16x8" | doz. .04 | 1/16x1/16x12" | doz. .06 |

## SCIENTIFIC FEATHERWEIGHT COMPRESSED AIR MOTORS AND TANKS




The size of model airplanes that can be flown with Scientific Featherweight Motors and Air Containers are as follows: The smallest size should not have a wing span of less than 4 ft. A wing span of about 7 to 7½ ft. with a chord of 17 to 15 in. is best. Maintain an aspect ratio of 6 to 1. The wing loading should not exceed 4 oz. per sq. ft. A loading of 1½ oz. per sq. ft. is ideal. A loading as low as this will give the model a very good gliding angle and it approaches the soarer type of plane. The 3-cylinder motor will carry a weight of plane motor, etc., up to 3 lbs. Steam makes a good driving force. Motor boats can be driven very successfully with these motors and steam boilers can be used. The running time from small steam boilers is 3 to 10 minutes. All parts of these motors are ready to be assembled; they are drilled, formed and shaped to correct size.
Set complete with plan and instructions $1.25

### FINISHED MOTOR

Three-cylinder finished motor, ready to use and run.
The completed motor, tested, each $3.50

### SCIENTIFIC TANKS

The Scientific Featherweight Air Tank weighs only 7 ozs. and has normal air pressure capacity. Ample safety insured by steel wire spaced 1/8" and winding over entire tank. Air pressure supplied by tire pump, or other convenient sources. Only tank of its kind on the market at a price every model builder can afford.

| | |
|---|---|
| 3x3x24" | $4.50 |
| 3x3x30" | 5.00 |

### KNOCKDOWN TANK KIT

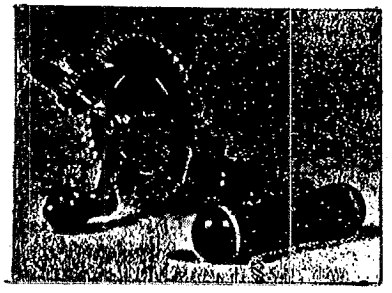
Enough material for a 24" or 30" tank, including cylinder wrapped with wire, main feeder pipes to motor, mounting brackets, etc. Each $3.95

### FEATHERWEIGHT TANKS AND MOTORS COMPLETE

Finished tank 3x3x24" or 3x3x30", with motor, complete. Mounted, tested, ready for use. Each $8.00

ASK YOUR DEALER FOR SCIENTIFIC SUPPLIES

NEW WINDER

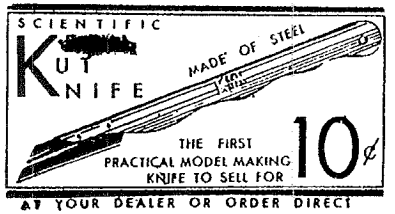


efficient. Each ..... $1.00, postpaid

BALSA WOOD COWLINGS

Smoothly finished, no sanding needed.

| | |
|---|---|
| 2" face, 5-8" wide | .10 |
| 3" face, 1 3-8" wide (hollowed) | .20 |
| 1" face, 1-2" wide | .10 |
| 1" face, 7-8" wide | .20 |






## ALUMINUM COWLINGS

Very authentic and realistic. This snappy accessory is spun from light aluminum. It fits directly over the nose of the model.

CLOSED FACE

| | | | |
|---|---|---|---|
| 1" diam. | .15 | 3" diam. | .30 |
| 1 1-2" diam. | .15 | 3 1-2" diam. | .40 |
| 2" diam. | .20 | 4" diam. | .40 |
| 2 1-2" diam. | .25 | 5" diam. | .70 |

OPEN FACE

| | | | |
|---|---|---|---|
| 1" diam. | .15 | 3 1-2" diam. | .40 |
| 1 1-2" diam. | .15 | 4" diam. | .40 |
| 2" diam. | .20 | 5" diam. | .70 |
| 2 1-2" diam. | .20 | 6 3-4" diam. | 1.50 |
| 3" diam. | .30 | | |

ANTI-DRAG RINGS

| | | | |
|---|---|---|---|
| 1" diam. | .13 | 3" diam. | .25 |
| 1 1-2" diam. | .15 | 3 1-2" diam. | .35 |
| 2" diam. | .20 | 4" diam. | .40 |
| 2 1-2" diam. | .25 | 5" diam. | .60 |

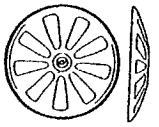
## BRASS WASHERS

Brand New! These are not like the washers you have been buying. They are light in weight with the right size pin hole. 1-8" or 1-4" outside diameter.

| | |
|---|---|
| Per doz. | .02 |
| Per gross | .20 |
| Per thousand | 1.25 |

## ALUMINUM MOTOR PLATES

7-8" diam. for 1 1-2" celluloid motor, each ..... .08



| | |
|---|---|
| 1 1-4" diam, for 2" celluloid motor, each | .10 |
| 1 3-4" diam. for 3" celluloid motor, each | .12 |

## ALUMINUM TUBING

| | | | |
|---|---|---|---|
| 1-16" O. D., per ft. | .10 | 3-16" O. D., per ft. | .15 |
| 3-32" O. D., per ft. | .10 | 1-4" O. D., per ft. | .15 |
| 1-8" O. D., per ft. | .10 | | |

## SHEET ALUMINUM

Furnished 12" wide and any length up to 6 feet.

| | | | |
|---|---|---|---|
| .001", per sq. ft. | .15 | .005", per sq. ft. | .20 |
| .002", per sq. ft. | .15 | .010", per sq. ft. | .20 |
| .003", per sq. ft. | .15 | | |

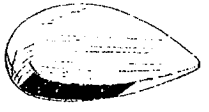
## BOMBS AND TORPEDOES

"VERY REALISTIC"

Can be attached to plane in such a way that it will drop off when sufficient height has been attained. Used mostly on solid scale models.

| | |
|---|---|
| 3-4" long, each | 2 for .05 |
| 1 1-4" long, each | .05 |
| 3" long, each | .10 |

BALSA WOOD PANTS

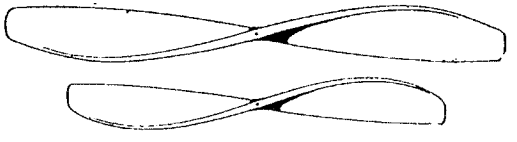


Shaped and polished. Realistic, streamlined, and economical. Made of the best grade of balsa wood, shaped exactly to size, and counterbored for wheel.

| | | | |
|---|---|---|---|
| 2" | for 3-4" wheels, pair | | .15 |
| 2 1-2" | for 1" wheels, pair | | .15 |
| 3" | for 1 3-8" wheels, pair | | .20 |
| 4" | for 1 7-8" wheels, pair | | .20 |

## READY-MADE BALSA PROPELLERS

True-pitch, with drilled center for shaft.



| | | | |
|---|---|---|---|
| 5" | .05 | 10" | .12 |
| 6" | .06 | 11" | .15 |
| 7" | 07 | 12" | .20 |
| 8" | .09 | 15" | .40 |
| 9" | .10 | | |

## SCIENTIFIC FLYING SCALE MODEL PLANS

This series will appeal to the beginner as well as the more advanced model builder. The clearness of the plans, and the simple construction, and the excellent flying performance of the completed model will give the budding model builder ample encouragement. Plans from kits illustrated in this folder.

20" WINGSPAN

| | |
|---|---|
| Curtiss Goshawk | Fairchild "22" |
| Vickers Jockey | Stinson Reliant |
| Navy Scout | Bellanca Pacemaker |
| Waco Model "A" | Vance Flying Wing |
| Japanese Fighter | Fairchild Cabin |
| Boeing Pursuit F4B-4 | Howard "Ike" |
| Curtiss Cyclone Hawk | Waco Cabin Y.K.C. |
| Army Douglas Y10-43 | French C1 Pursuit |

EACH ..... .15

| | |
|---|---|
| Six-foot Monocoupe, each | 1.00 |
| Stinson Trimotor, 26 1-4" wingspan | .30 |
| Monocoupe—110, 24" wingspan | .25 |
| Gee Bee Sportster D, 24" wingspan | .25 |
| Kellett Flying Autogiro, 24" rotor-span, each | .30 |
| Gee Bee Super Sportster, 20" wingspan, each | .30 |
| Northrop Gamma, 22" wingspan, each | .30 |

DE LUXE HI-FLYER PLANS

| | |
|---|---|
| Vought "Corsair" Model V80 | .25 |
| Great Lakes Sport Trainer | .25 |
| Monocoupe Model 145 | .25 |
| Stearman Model 81 | .25 |

SOLID SCALE MODEL PLANS—10" WINGSPAN

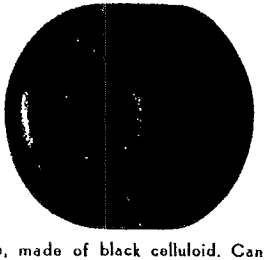
Boeing Pursuit X936
Pitcairn Sport Autogiro
Berliner-Joyce Fighter XFJ2
Curtiss Akron Fighter
Wedell-Williams Racer No. 92
Monocoupe Model 110
EACH ..... .05

## CELLULOID WHEELS

We have in stock the lightest wheels available. Weight from 1 gram to 3 grams. Colors: Red, yellow, green, blue, white and black.

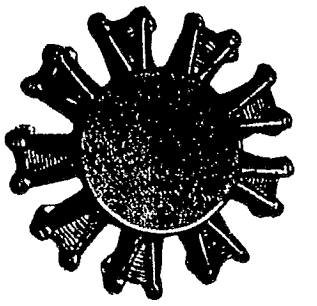
| | | | |
|---|---|---|---|
| 3/4" diam., pr. | .06 | 1 3/8" diam., pr. | .09 |
| 1" diam., pr. | .07 | 1 7/8" diam., pr. | .15 |
| 3" diam., pr. (black only) | | | .30 |

## CELLULOID COWLINGS



Closed face, made of black celluloid. Can be made into open face type or anti-drag ring by simply cutting.

2 1-4" diam, each .15 2 3-4" diam. each .20



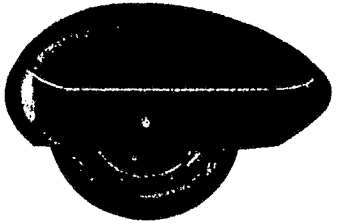
## CELLULOID DUMMY RADIAL ENGINE

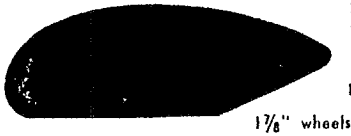
Black celluloid. Wasp or Wright. Weight 2 grams to 3 1-2 grams, very realistic. Complete with rocket arm cases, flanges, etc.

| | |
|---|---|
| 1 1-2" diam. motor, each | .20 |
| 2" diam. motor, each | .30 |
| 3" diam. motor, each | .35 |

## STREAMLINE CELLULOID PANTS

Latest Design. In perfect proportion with our celluloid motors and cowlings. In black only.





Small pants for for 1 3-8" and 3-4" and 1" wheels. Per pair ..... .20

Large pants 1 7/8" wheels, per pair..... .30

## SHEET CELLULOID

This is the thinnest celluloid made. Only .005" thick. Do not confuse it with impractical cellophane for wind-shields on models.

7"x12" sheet, each .05

## Black Celluloid Cylinder Heads

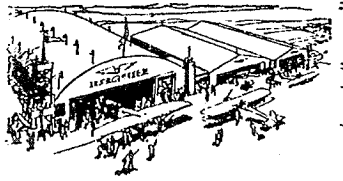
Some boys find it necessary to have individual cylinders for different types of fuselage noses, or a motor that requires only 3, or 6 cylinders

Large 5-8" cylinder, ea. .04
Medium 3-8" cylinders, ea. .03
Small 1-4" cylinders, ea. .02

## Three-Bladed Propeller Carving Knife

Especially adapted for whittling propeller blanks, etc. Made of the finest grade steel and retain their keen edge.

Price.....75



# EVER - SO - EASY

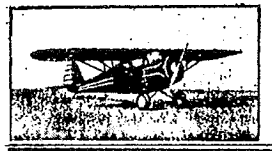
## TRUE-TO-SCALE SOLID BALSA MODELS

### NON-FLYING
### 10" Wingspan

·re are six solid scale models that can't be beat ‹ appearance. Every model builder likes to have ›mples of his handicraft for display in his room, › den, his workshop, to put on his bookcase, radio, ‹. You can make them in little time and decorate ‹m to suit your fancy. Their striking appearance ›on finished puts them in a class by themselves.

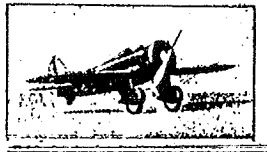
Each one comes complete in a construction kit everything needed furnished. The wings, tails, struts, landing gear, etc., are printed on balsa wood. You must cut them out to shape. Coloring and decorating materials are included, also cement, sandpaper, bamboo, full-size drawing with explicit instructions. Look over these dandy models and pick yours now.

**50c**
EACH
POSTPAID



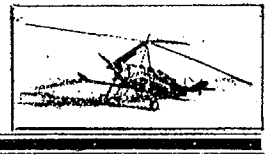
MONOCOUPE MODEL 110
One of the most striking models you have ever seen.

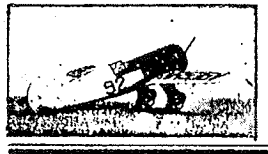
BERLINER JOYCE FIGHTER
A lifelike model and a beauty, too.



BOEING PURSUIT
A beautiful replica of this famous plane.

PITCAIRN SPORT AUTOGIRO
Complete to the last detail with vanes and everything.





WEDELL-WILLIAMS RACER
A replica of that record-breaking plane.

CURTIS AKRON FIGHTER
The famous navy ship, complete in every detail.

**Every Kit Guaranteed to Give Complete Satisfaction**



## DIE-CAST METAL PROPELLERS

These are exact duplicates of propellers used on the real airplanes of today such as Boeing and Curtiss Condor Transports. Ready to attach to your model. Standard Steel type.

**3-BLADED**

| | |
|---|---|
| 1 1-2" | .10 |
| 2 1-2" | .15 |
| 3 1-2" | .20 |
| 4 1-2" | .25 |

Other sizes and prices on request.

**2-BLADED**

| | |
|---|---|
| 1 1-2" | .10 |
| 2 1-2" | .15 |
| 3 1-2" | .20 |
| 4 1-2" | .20 |

**REAR HOOKS**
3 for .05

## PROPELLER SHAFTS

| | |
|---|---|
| 1 1-4" long | 4 for .05 |
| 2 1-2" long | 3 for .05 |
| 6" long | 2 for .05 |

## WOOD NOSE PLUGS

No more tedious work on the nose of your model. Just apply a finished nose plug, drilled for shaft.
Nose plug for models with 15" to 36" wingspan. Special low price, each.....01
Nose plug for models with 36" to 72" wingspan. Each.....05

## SCIENTIFIC
## CUT-OUT LETTERS AND NUMERALS

These letters and numerals will improve the looks of your models 100%. When applied to wings and fuselage, etc., they look like a hand-painted job. Made of extra-fine, very thin, black tissue.

| ASSORTED NUMERALS 1, 2, 3, 4, 5, 6, 7, 8, 9, & 0 Packages of 50 | | ASSORTED LETTERS U, S, A, R, M, Y, N, C, V, X. Packages of 50 | |
|---|---|---|---|
| 1" per package | .20 | 1" per package | .20 |
| 1 1-2" per package | .25 | 1 1-2" per package | .25 |
| 2" per package | .30 | 2" per package | .30 |

## DIE-CUT AIRPLANE INSIGNIAS

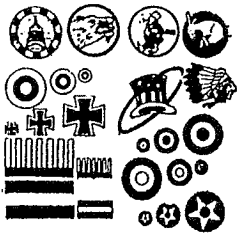
**STARS OR CIRCLES**

| | |
|---|---|
| 1" diam. | 5 for .05 |
| 1 1-2" diam. | 4 for .05 |
| 2 1-8" diam. | 4 for .05 |

**CROSSES, GERMAN WAR EMBLEMS**

| | |
|---|---|
| 1 3-8" sq. | 4 for .05 |

## INSIGNIA SHEET



48 items in all printed in colors on gummed paper. American, English, and French insignia in all sizes, German crosses, tail stripes, instrument board, hat in ring, Indian, red devil, etc., squadron insignia.

Each sheet .....10

## Ordering Instructions

1. We do not accept any order amounting to less than $.25.
2. Cash with order. We do not make C.O.D. shipments. Send the full amount required to cover your order plus any postage or other charges as listed below. Remit by check, postal, or express money order. Make payment to Scientific Model Airplane Co., 218-220 Market St., Newark, N. J.
3. United States stamps (unused and in good condition only) will be accepted as payment in amounts not exceeding $1.00. Canadian or foreign stamps or coin not accepted.
4. To insure quick delivery, PRINT your name and address clearly. All orders will be shipped 3 hours after receiving them.
5. Where insufficient remittance is made order will be short-shipped for the amount short.
6. Add 15c for packing and postage on all orders up to $1.50. On orders of $1.51 and over, add 10 per cent.
7. Add 10c more to orders West of Mississippi River.
8. Orders of $4.00 or over sent postpaid and insured in U. S. A.
9. Add 10c to your order for any quantity of balsa wood to cover special handling.
10. Prices are subject to change without notice.
11. Our Guarantee: Your money back if the kits and supplies listed are not as represented.
12. Any goods returned to us must be in original container and condition, shipping charges prepaid, after obtaining our permission for return.

CANADIAN ORDERS: Remit by postal or express money order. Since duty is paid on the Canadian side of the border nothing need be sent us for this purpose. Add $.30 for postage on orders up to $2.00. On orders of $2.01 or more, add 20 per cent for postage and special handling.

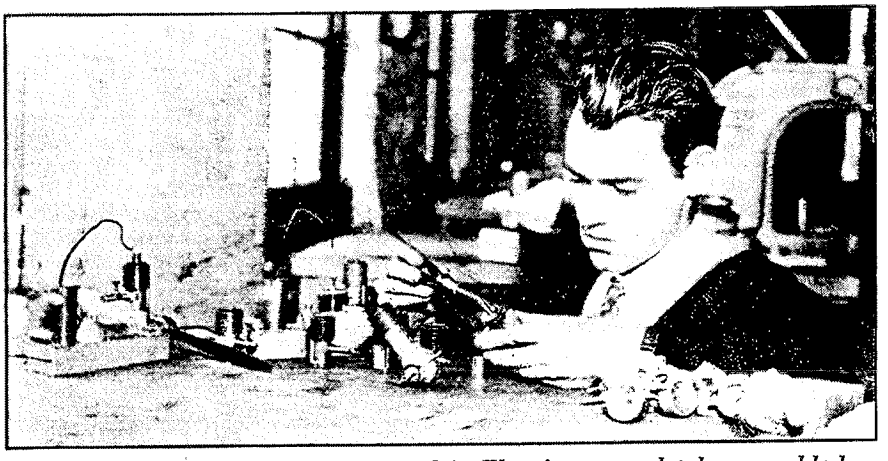
FOREIGN ORDERS: Remit by postal money order only. Include 25 per cent for postage and special handling.

SCIENTIFIC MODEL AIRPLANE CO.
218-220 Market Street
Newark, N. J., U. S. A.

## MAIL YOUR ORDER TODAY!!!!

It will receive our usual three-hour service —the prompt delivery and high quality of our kits and supplies will make you another of the thousands of Scientific boosters. (All photographs are of the actual models built from our kits.) Every Scientific flying model is guaranteed to fly.

# BILL BROWN STARTED SOMETHING!



*Those are cylinders on Bill's bench! There's a completely assembled motor at the left.*

*by* WILLIAM WOLF

WILLIAM BROWN, Philadelphia high school student, decided that it was time for model airplanes to graduate from rubber-band motors to gasoline engines.

Wiser heads said it couldn't be done, but Bill went ahead. He constructed a two-cycle, one-cylinder motor weighing 6½ ounces. The bore is ⅞ inch, the stroke one inch, the horsepower 1/5! Then he proceeded to put the world's smallest gasoline motor in a model plane and fly it for 2 hours, 35 minutes, 39 seconds—a world's endurance record!

The motor will run for 15 minutes on two ounces of fuel. It will turn up 5,000 revolutions. In tests it has worked best in planes with wing spans over four feet.

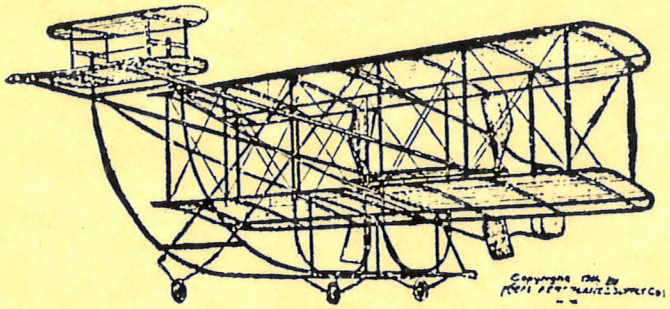
Bill's father has organized a company to produce the motors for model plane enthusiasts, but Bill—now an engineering student at Penn State—is working on a 3-ounce motor that will develop only 1/80th horsepower. His professors are shaking their heads, but Bill thinks he can do it!

Mention THE AMERICAN BOY

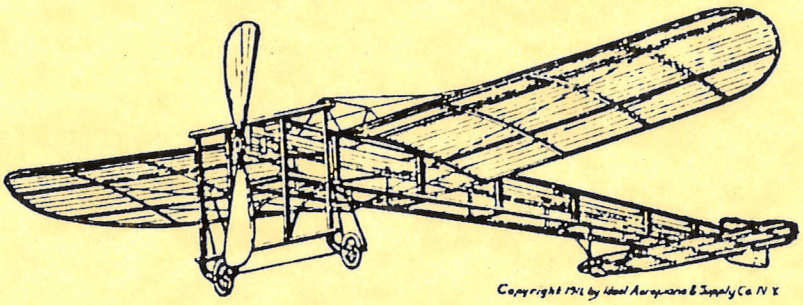
---

In March 1935 the above picture and information was printed. The text was incorrect since it was Maxwell Bassett's airplanes setting the records. However, the world of model airplanes changed forever, ..... with the use of Bill's engines ! In 1997, Maxwell Bassett is retired in Florida and Bill Brown is still in Pennsylvania, building model airplane engines, single and twin ..... $CO_2$'s.

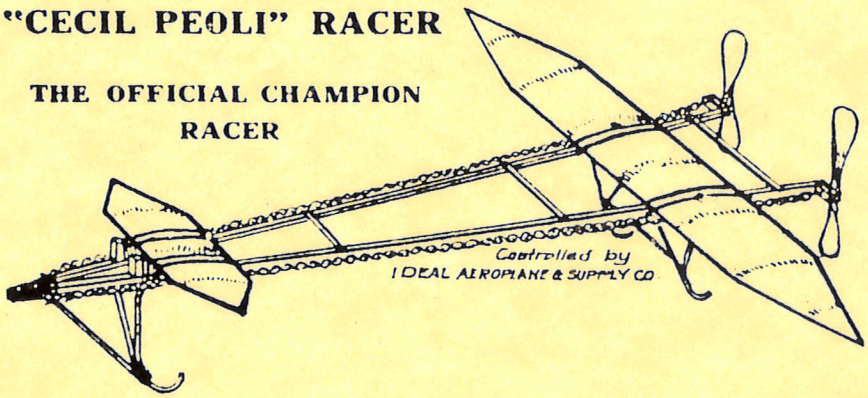
## "IDEAL" WRIGHT BIPLANE
### THREE FOOT FLYING MODEL



## "IDEAL" BLERIOT MONOPLANE
### THREE FOOT FLYING MODEL




## "CECIL PEOLI" RACER
### THE OFFICIAL CHAMPION RACER




A BEGINNING .....