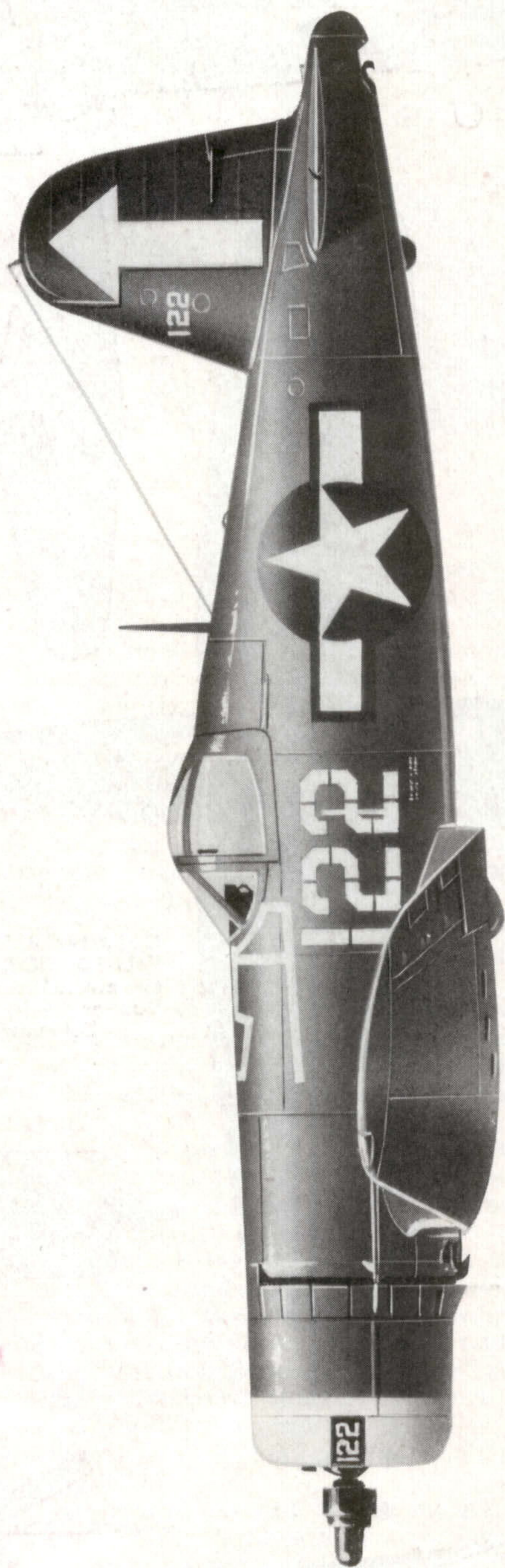


**PROFILE  
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Chance  
Vought  
F4U-I  
Corsair



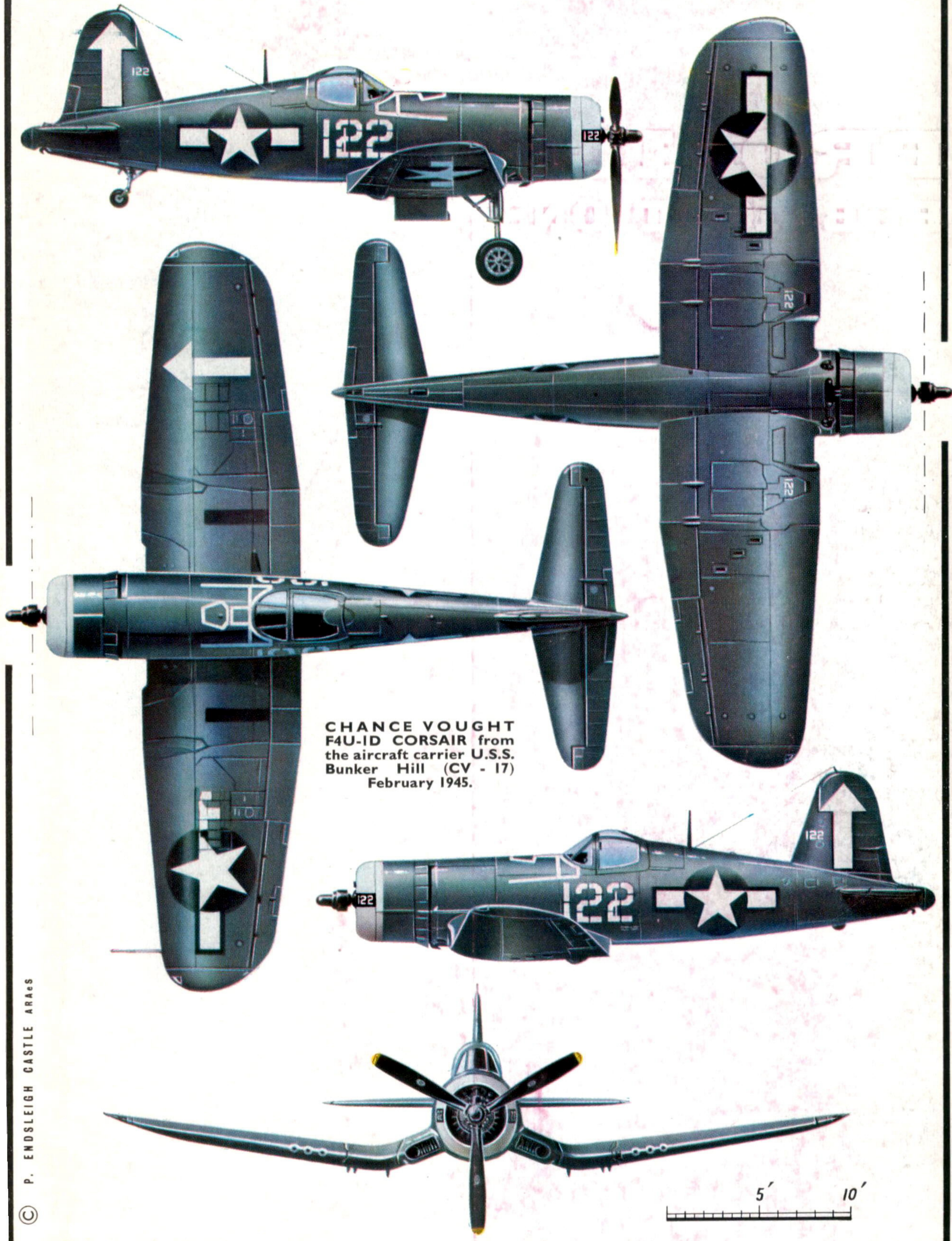
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**CHANCE VOUGHT  
F4U-1D CORSAIR** from  
the aircraft carrier U.S.S.  
Bunker Hill (CV - 17)  
February 1945.

# The Chance Vought F4U-I Corsair



by J. F. Dial

*A fine study of a U.S. Navy F4U-1 showing to advantage the three-shade camouflage scheme.*

(Photo: Vought)

To the ears of American G.I.s clawing their painful way off the bloody beaches of Okinawa in April 1945, the sweetest sound in the world was the whistling war-cry of a strangely-proportioned aircraft called the Corsair. In the shadow of their "Sweetheart's" cranked wings they found a brief respite from the danger that threatened them from every palm-grove and every scrub-covered ridge; but it is doubtful if any of them realised that the aeroplane which protected them had at one time been officially a "failure". The most important naval attack fighter of W.W.II, the Chance Vought Corsair remained in production for thirteen years, yet its first service trials had ended in failure in its chosen rôle.

The Corsair's most unique feature was the "bent" wing, the result of a marriage between the most powerful engine ever installed in a piston-engined fighter and one of the biggest propellers in the world. The inverted gull wing permitted the short, sturdy undercarriage required for carrier operations, allowed a low-drag, 90° wing-fuselage junction, gave the pilot better visibility over the wing and lowered the overall height of the folded wing. An added asset of the gull wing was a planing action during emergency water landings.

## THE CORSAIR DESCRIBED

The fuselage structure was an all-aluminium monocoque of four main assemblies: engine section and forward, mid and aft fuselage sections. The engine section, ahead of Station 91 $\frac{3}{4}$ , contained engine accessories, mounting and a Pratt and Whitney 18-cylinder twin-row R-2800-8 (-8W with water injection) Twin Wasp powerplant with two-stage supercharger and two-speed auxiliary geared 2/1. This latter operated only at High or Low blower settings. The Eclipse cartridge starter of early models was replaced by electric starters in the F4U-1D and fourth FG-1D. Hydraulically-operated cowl flaps opened to 35° for engine cooling; set full open they would remain at 35° until 105 knots I.A.S., when air pressure closed them until balanced by internal pressure. If blown closed they would re-open at lower airspeeds but if blown open, would remain open. Opening would

occur at approximately 350 knots when internal pressure over-rode the 750 lb./sq. in. actuator.

The Corsair's distinctive sound, which earned it among the Japanese the nick-name of "Whistling Death", was caused by the wing-root inlets for engine air. Placed in these inlets were the oil coolers which ejected hot air through adjustable doors under the wings just ahead of the spar.

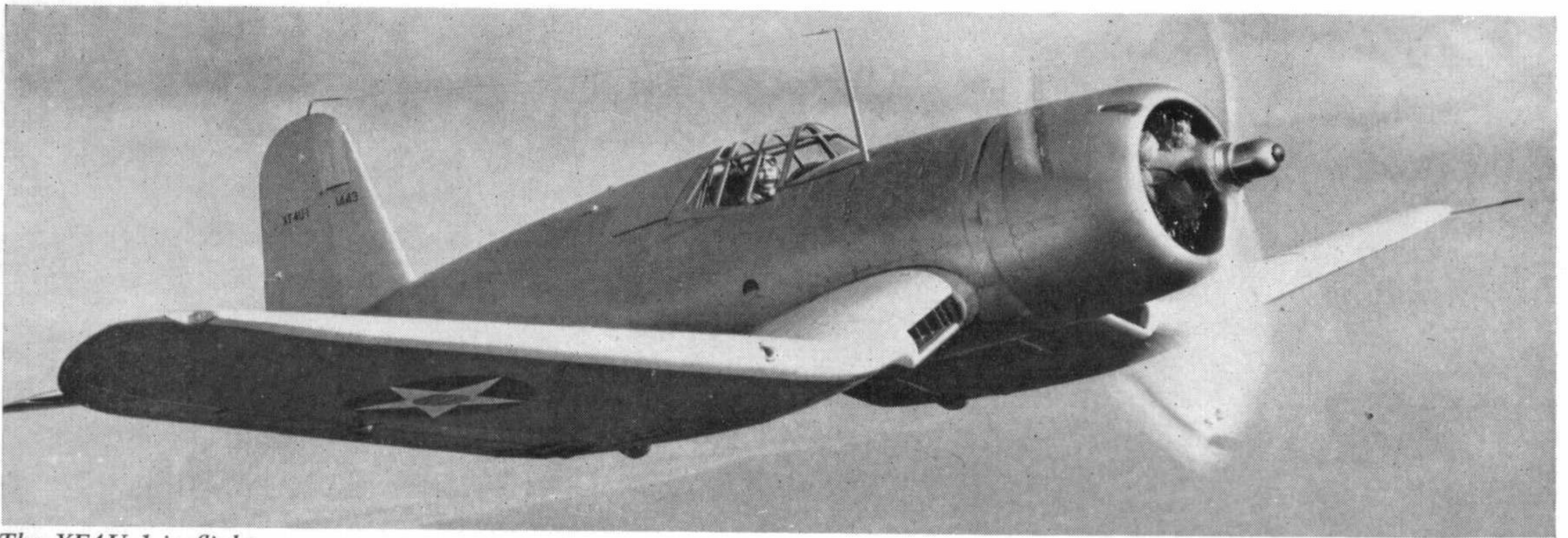
For take-off and at low altitude air was fed directly into the carburettor and main stage blower via bypass doors on the intercoolers. With the auxiliary operating at high altitudes the air passed through the intercoolers; coolant air was ejected through a flap under the fuselage ahead of the centre-section spar.

The forward fuselage section, between Stations 91 $\frac{3}{4}$  and 186, contained the main fuel cell of self-sealing multi-ply rubber in a lined compartment free of dangerous projections. This compartment was ventilated and slightly pressurised by ram-air from a cut-out in the cockpit air duct. The tank was protected by an upper fuselage deck section of one-tenth inch aluminium.

The wing centre-section was an all-aluminium box-spar structure composed of main spar, inter-spar and leading and trailing edges; this was an integral part of the forward section.

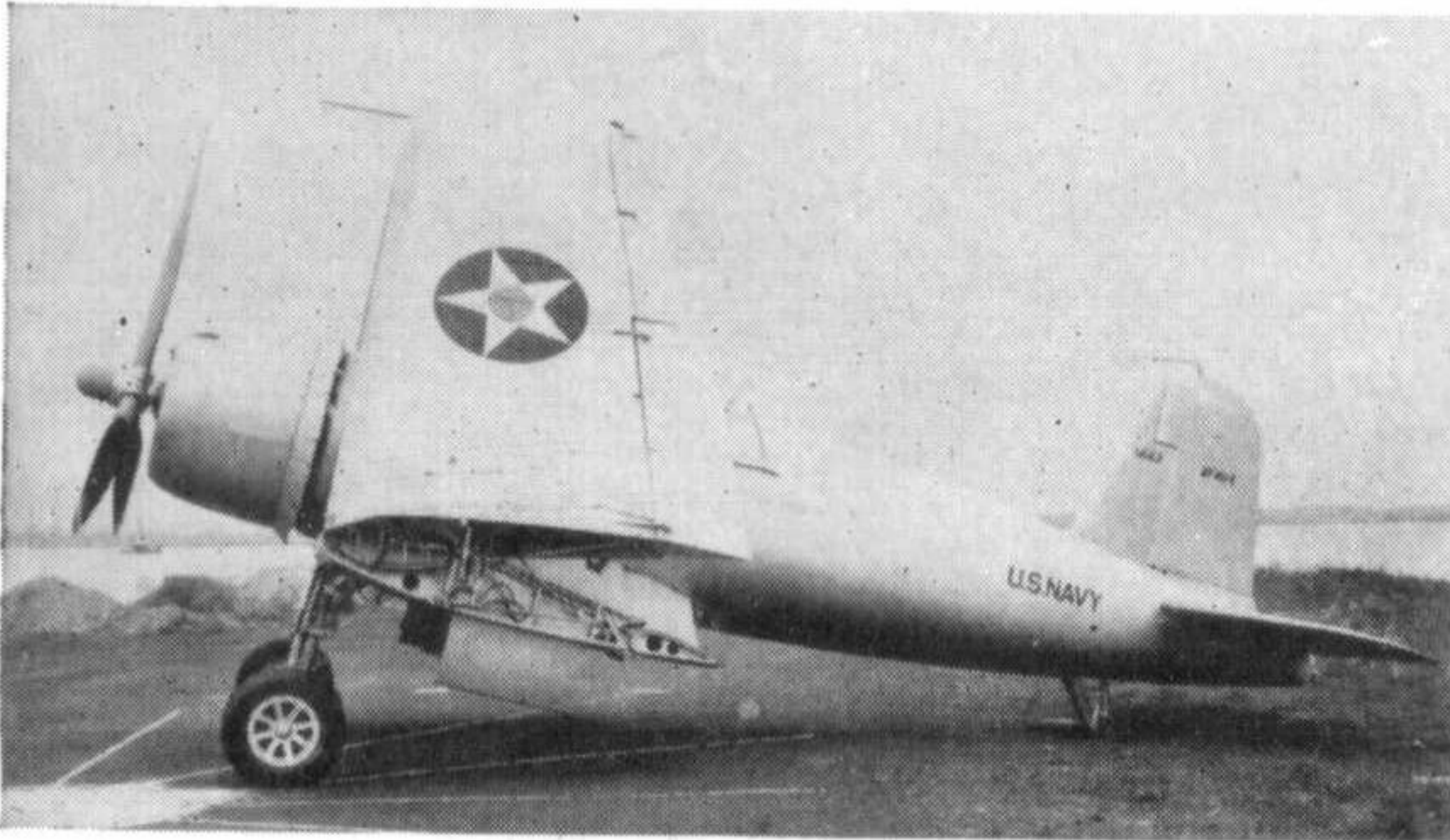
The mid-section, between Stations 186 and 288, contained all radio and navigation equipment; fittings were included for the arrester gear dashpot and elevator controls as well as headrest and seat attachments. The aft section, between Stations 288 and 371 $\frac{1}{2}$ , carried fin and stabiliser attachment points and cut-outs and fittings for tail-wheel and fairing doors. The fuselage ended in a small tail cone containing the tail running light.

Wing structure consisted of the integral centre-section and hydraulically-folded outer panels of aluminium construction with fabric skin aft of the spar; jury struts locked the wings in the fully-folded position and could be unlocked and extended as the wings moved into the vertical position to permit refuelling and gun servicing. Wing airfoils were NACA 23000 section, 18% at root, 15% at fold and 9% at tip. Centre-section flaps were of aluminium structure



The XF4U-1 in flight.

(Photo: Vought)



Another view of the prototype XF4U-1, showing the small bomb doors in the wing underside; these are indicated by the joint lines running through the national insignia. (Photo: Vought)

and aluminium covered, with a "flap gap" closure plate hinged to the outer flap and sliding into the inner to fill the aperture caused by the inverted gull wing. Outer panel flaps were of fabric-covered aluminium structure, and the ailerons were of plywood-skinned all-wood structure.

The fin was aluminium, off-set 2° to the right to counteract torque, with a fabric-covered rudder; both all-aluminium stabilisers and fabric-skinned elevators were interchangeable. In addition to normal trim tabs, ailerons and elevators had balance tabs to lighten control forces.

Fuel tankage consisted of a self-sealing cell of 237 gallons capacity (including a standpipe reserve of 50 gallons) and outer panel leading edge tanks of 63 gallons; the latter were equipped with carbon-dioxide vapour dilution to prevent detonation resulting from combat damage. A Duramold centre-line drop tank of 178 gallons capacity could be carried. F4U-1D models had no wing tankage and could carry two pylon drop tanks; these were either 154-gallon Navy Standards or 174-gallon Lockheed tanks.

The main landing gear legs rotated through 90° as they folded rearward to permit the wheels to lie flat in the wings. The rearward-folding tail-wheel, with the arrester hook attached to the strut, was self-centring, lockable and 360° swivelling with a 12½ × 4½ in. pneumatic tyre; early models carried an 8½ × 4 in. solid tyre.

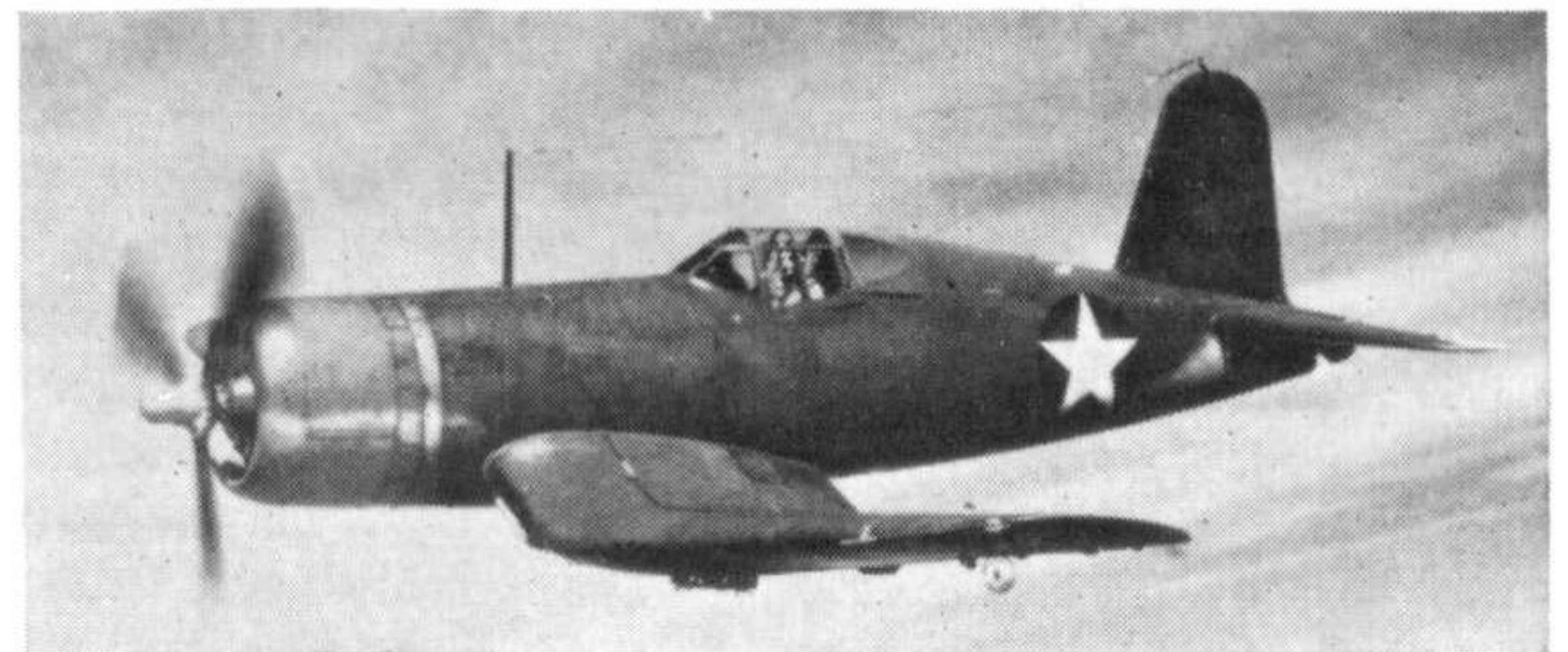
Armament consisted of six .5 in. Browning M2 machine guns, three in each outer wing panel, normally boresighted to converge at 300 yards. Inboard and intermediate guns carried 400 r.p.g. and outboard guns, limited by wing contours, carried 375 r.p.g. If desired the outboard guns, which most affected stability and flutter characteristics, could be removed.

## THE FIRST OF THE LINE

The prototype XF4U-1 first flew on 29th March 1940 with Lyman A. Bullard at the controls, and its impressive speed of 405 m.p.h. gave the lie to the prevalent theories among Army Air Corps authorities that the future of high-speed fighter design lay in liquid-cooled engine projects. Pratt and Whitney were consequently permitted to cancel these latter projects.

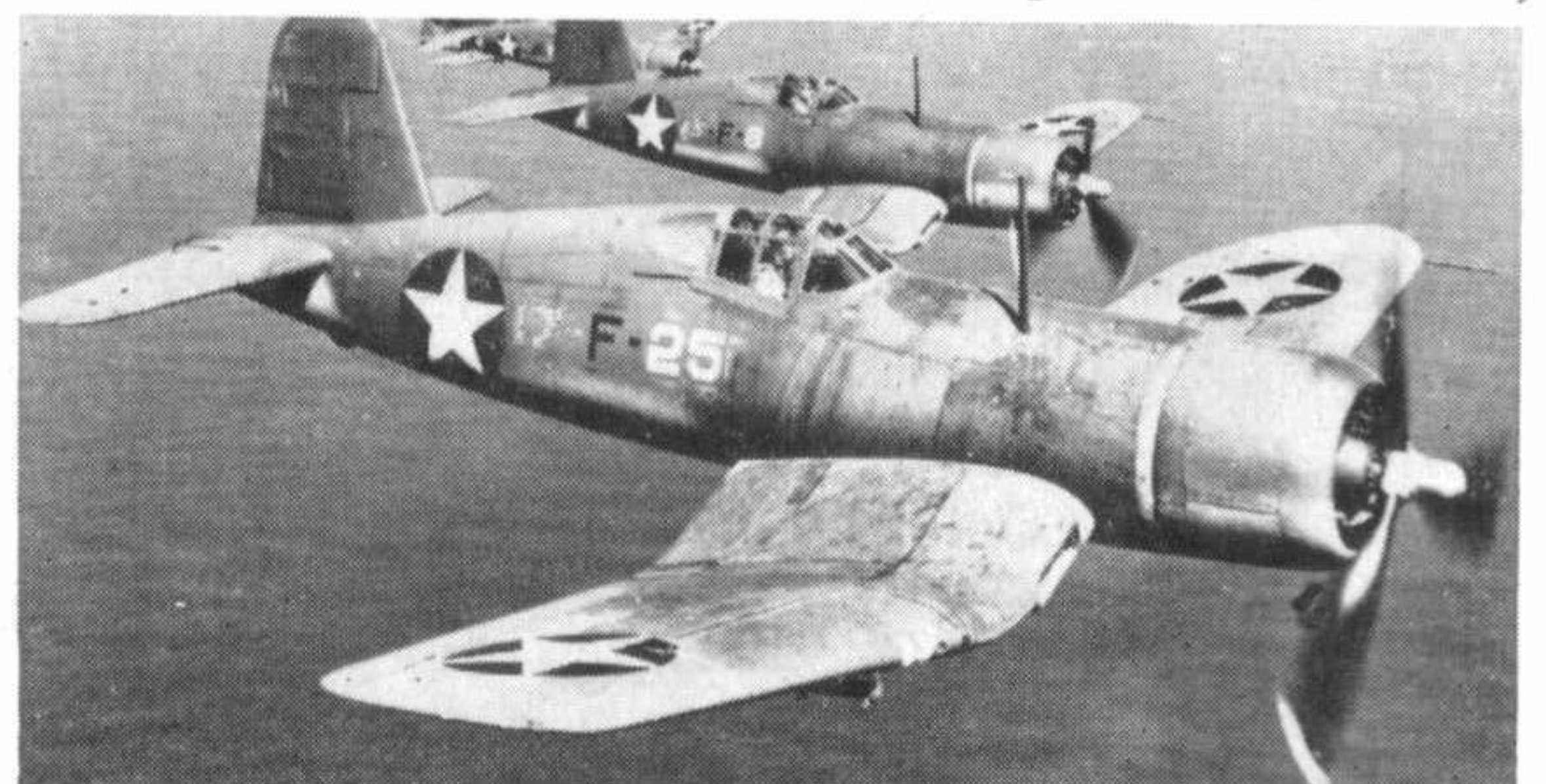
In the specification for the XF4U-1 of 10th May 1938 the armament was set at two .3 in. machine guns in the fuselage (500 r.p.g.), two .5 in. guns in the wings (200 r.p.g.) with provision for replacement by two 23 mm. Madsen cannon, and internal bomb cells in the wings with a total capacity of 176 lb. In the prototype a "teardrop" aiming window was fitted below the centre-section, and some production aircraft had a rectangular transparency.

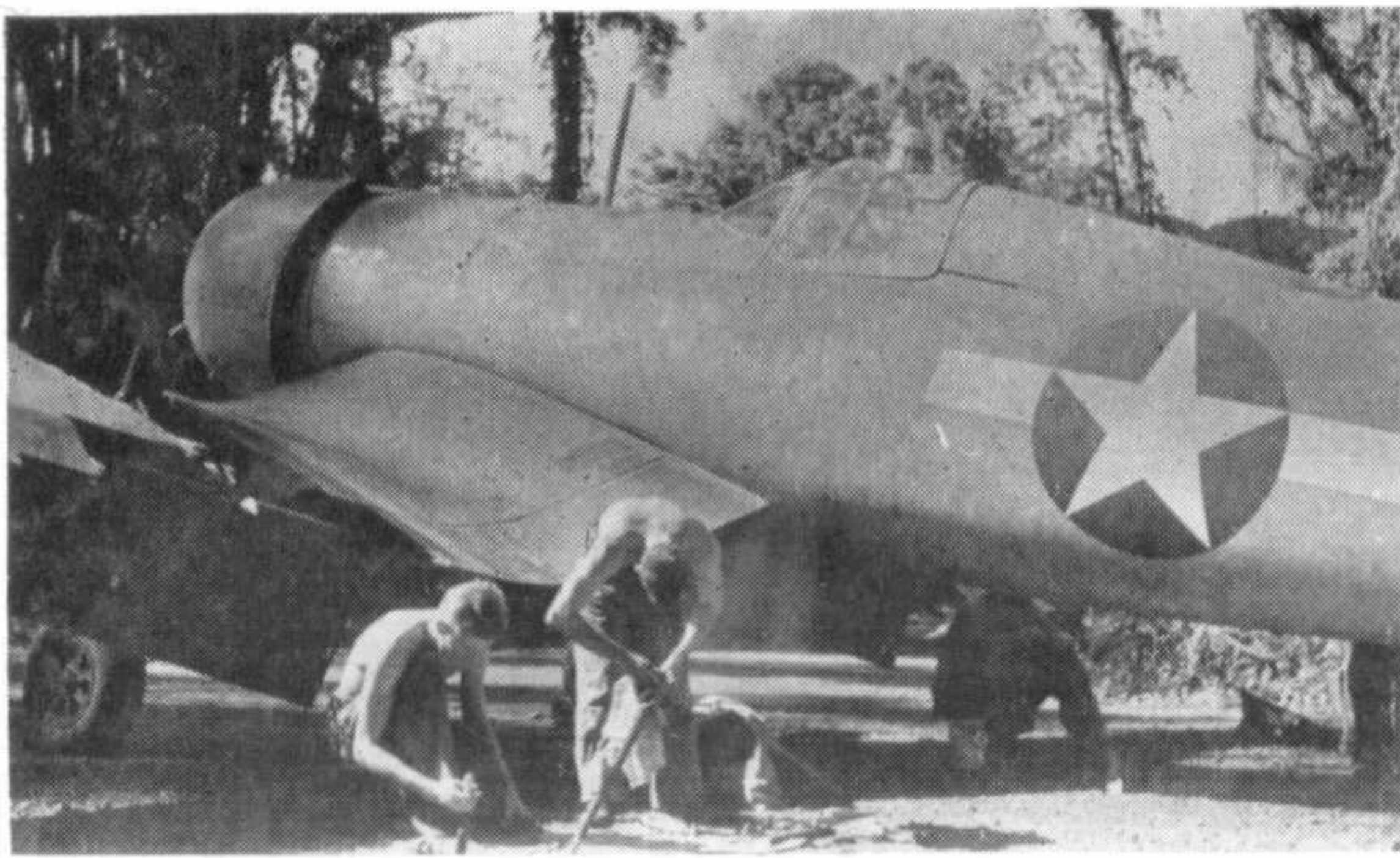
Ease and speed of mass production had not figured largely in the design as war was not considered imminent; thus a U.S. Navy request of 28th November



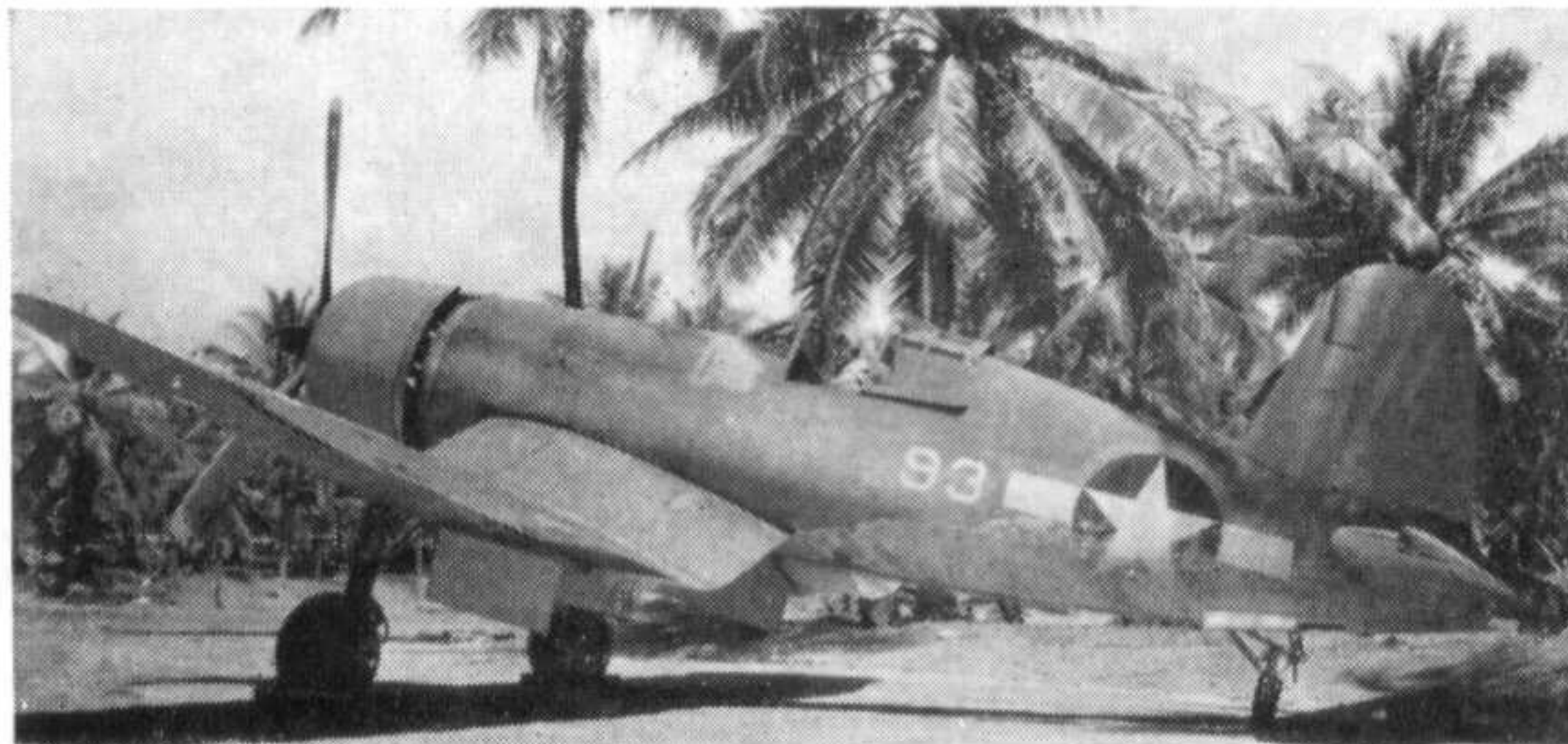
An early F4U-1 with "flat-top" canopy; points of interest are the rear-vision periscope just visible as a small protrusion on top of the windshield, the landing light, and the removable bomb rack under the outer wing panel. (Photo: A. G. Simmons)

"Flat-tops" of VF-17 in flight; the war-time censor has obscured the code "17" immediately forward of the fuselage star. (Photo: Imperial War Museum)





Armourers working on wing guns of an F4U-1 Corsair at Tutuila, Samoa. (Photo: A. G. Simmons)

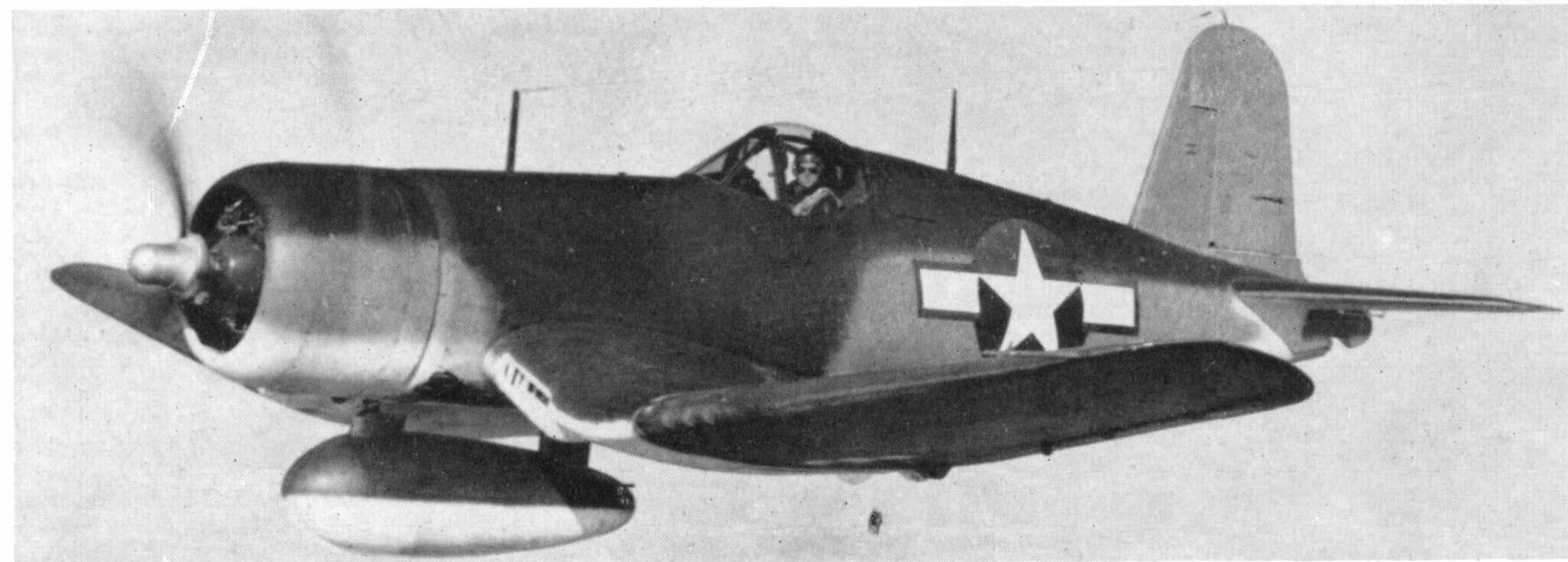


An F4U-1 of VMF-214 "Blacksheep" on Turtle Bay airstrip, Espiritu Santo. Photographed in September 1943, this machine has had the arrester hook removed; many land-based Corsairs had hooks removed and wings locked down as an easily reversible "field mod". (Photo: A. G. Simmons)

1940 for production proposals led to a major programme of redesign to ease "producibility" and to bring the infant Corsair into line with changing military requirements. All armament was moved into the wings, and the main fuel cell was moved from the centre-section into the forward fuselage, thus necessitating the moving of the cockpit aft to the line of the trailing edge and opening a Pandora's box of visibility problems that were never satisfactorily solved during W.W.II. Armour totalling 170 lb. was added behind the seat, as side splash panels, and in the form of 1½-in. laminated glass behind the windscreen; as previously stated, the fuel tankage was protected by a heavy aluminium plate.

A production contract was awarded to Chance Vought on 30th June 1941 and the first production

The basic non-specular Pacific colour scheme is displayed by this F4U-1A with a Duramold centre-line tank of 178 galls. capacity. (Photo: Vought)



machine, Bureau of Aeronautics Number (BUNO) 02153 flew on 25th June 1942 with a top speed of 415 m.p.h., a sea-level climb rate of 3,120 ft./min. and a service ceiling of 37,000 ft. The first carrier trials were carried out on 25th September 1942 aboard the U.S.S. *Sangamon* (CVE-26) by Lt. Sam Porter in BUNO 02159, the seventh production machine. These trials drew attention to a number of problems which prevented the Corsair from going into carrier service with the U.S.N. for some years. The landing gear shock struts were too stiff; and there was a landing "kick" caused by local stall in the crank of the gull wing in the high three-point attitude. Experienced pilots learned to master this but accidents were numerous during training.\* The individual actuators of each cowl flap leaked oil badly, as did the rocker-box, and this cut the already poor high-angle visibility. The early magnesium rockerbox covers of the R-2800 tended to warp; and when it was discovered that the R-1830s aluminium covers were interchangeable many Corsairs were modified with "borrowed" covers from Wildcats and Liberators. The cowl flap problem was finally solved by a modification in December 1942, using one actuator and a cable-and-roller mechanism.

The first Corsair squadron was formed at Camp Kearny, California, on 7th September 1942; this was Marine Fighting Squadron 124 (VMF-124) commanded by Maj. William Gise. October of that year saw the formation of the first Navy squadron, Fighting Squadron 12 (VF-12), at North Island under the command of Lt.-Cdr. Joe Clifton.

In order to avoid delaying aircraft on the production line a separate unit was set up to install combat

\*Field units devised an extended tail-wheel strut, but CV frowned on the shifting of so much weight aft. Satisfactory results gained by a Goodyear "kit" for training units later led to production by CV; the addition of a spoiler to the starboard wing leading edge aided further and also helped counteract torque at take-off.



Pilots "scrambling" from a Pacific combat base; the aircraft are F4U-1 "bubble-tops". (Photo: Vought)



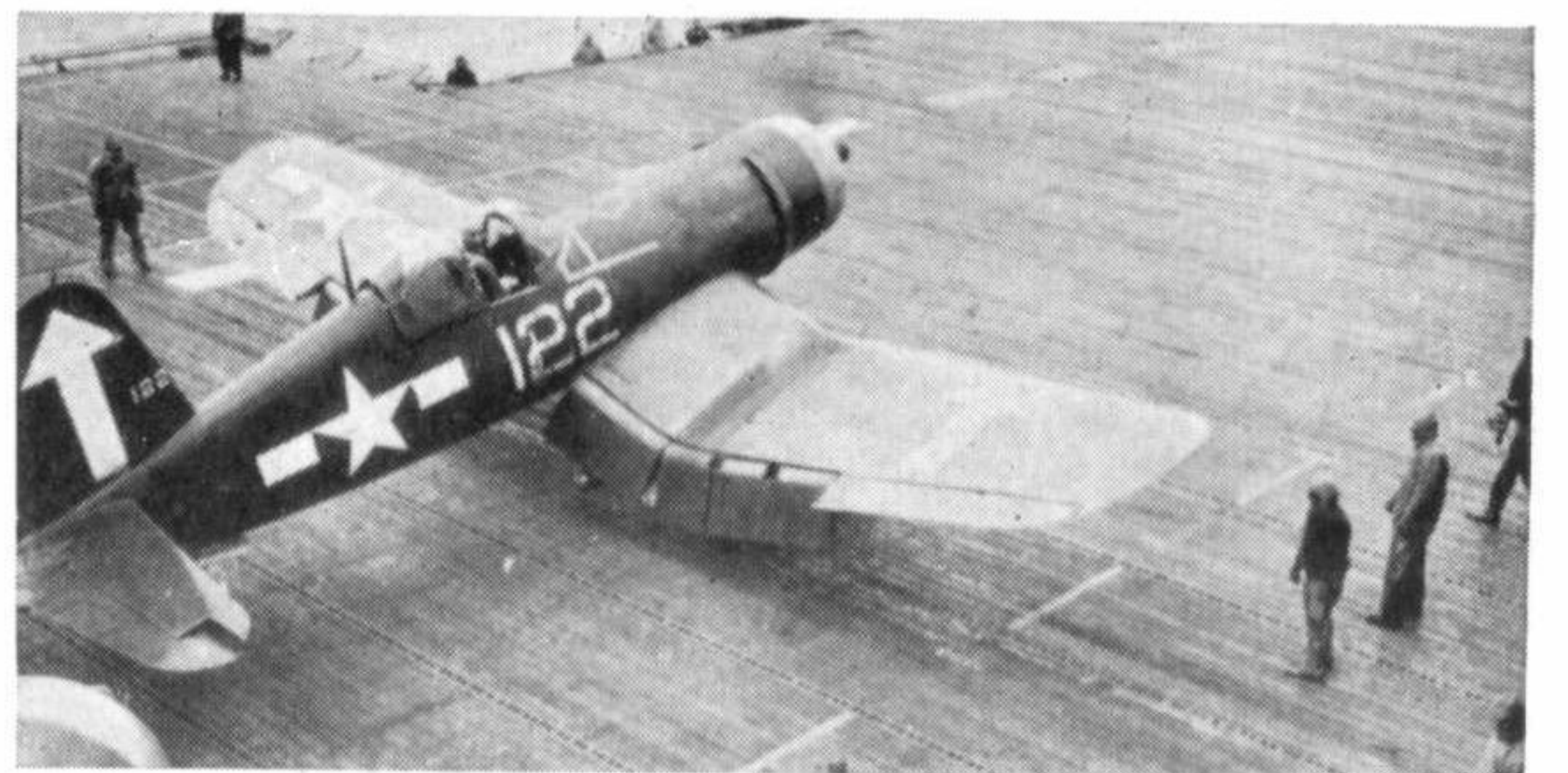
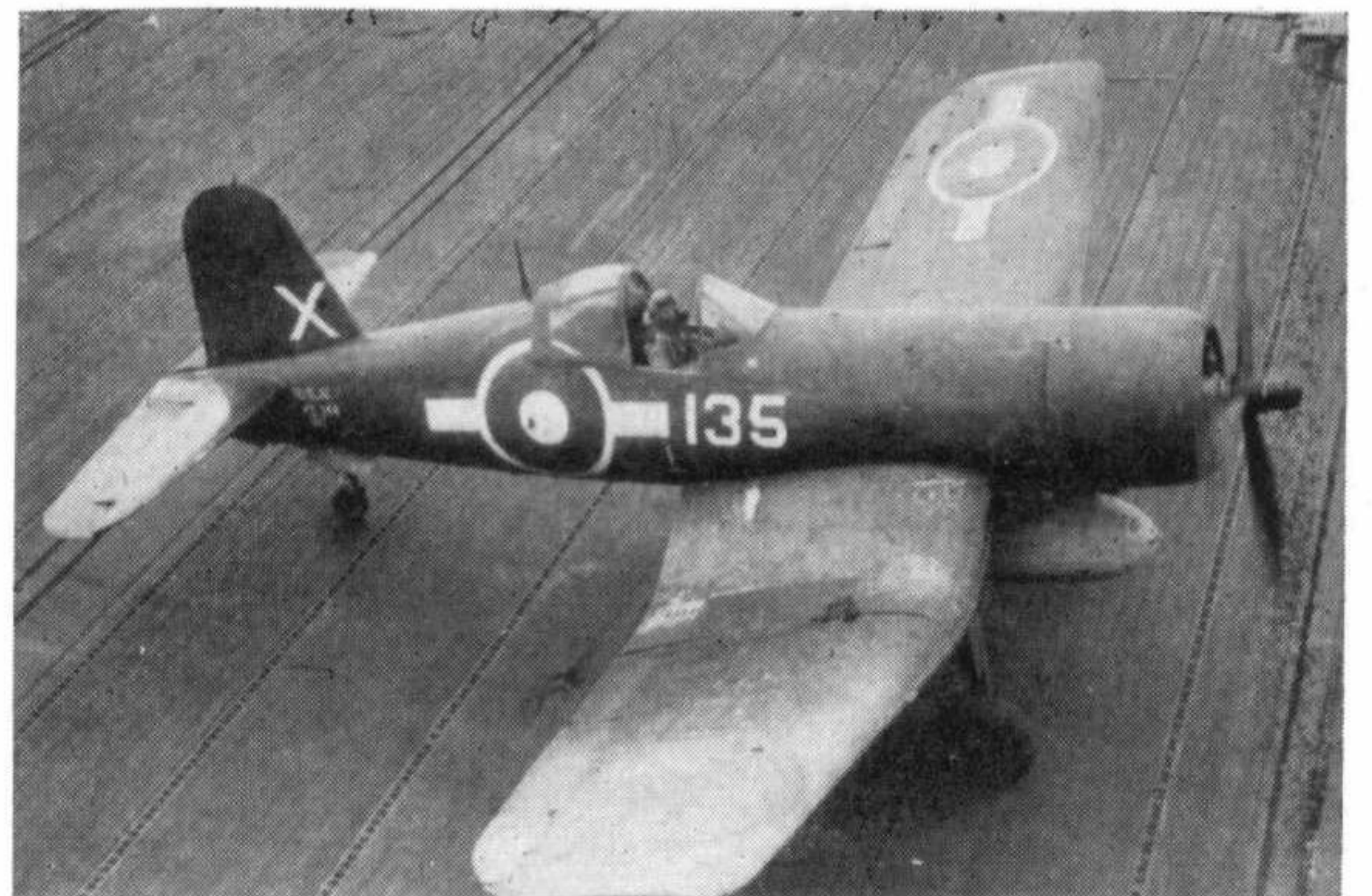
An F4U-1A with blown hood and centre-line bomb.

(Photo: A. G. Simmons)

modifications under the leadership of Col. S. Ridderhoff, U.S.M.C., and Jack Hospers, Vought Field Service Manager throughout the entire Corsair programme. By the close of the year CV's Stratford, Connecticut plant had produced 178 F4U-1s and 66 had passed through the Hospers-Ridderhoff "commando" for 159 combat modifications. On 28th December, after three weeks of round-the-clock effort, 22 Corsairs were signed over to VMF-124 as "combat-ready"; and the first twelve machines arrived at Henderson Field on Guadalcanal on 12th February 1943.

### INTO ACTION

On 13th February VMF-124 demonstrated their superiority over the Wildcat by escorting PB4Y-1 Liberators all the way to Bougainville. The following day they saw combat for the first time, and the inexperienced Corsair pilots were badly mauled by some 50 Mitsubishi Zeros. Two Corsairs, two Liberators, two P-40s and four P-38s were lost in this "Saint Valentine's Day Massacre", but the Corsairs soon gained an ascendancy over the Japanese which they never lost, VMF-124 being subsequently credited with 68 kills against a loss of four aircraft and three pilots. Within six months all Pacific-based Marine fighter squadrons had been re-equipped with the Corsair.



Top right: The fume seal is clearly visible on this photograph of an F4U-1D taking off from the U.S.S. Bunker Hill for a raid on the Tokyo area early in 1945.

(Photo: A. G. Simmons)

Above: Corsair IV KD-244 (FG-1A Buno 14675) from 1842 Sqn., H.M.S. Formidable, on board U.S.S. Shangri-La (CV-38). The wing folding gap door is not closed, indicating that the wings are not yet locked down, or are about to be folded.

(Photo: A. G. Simmons)

An F4U-1D Corsair aboard the U.S.S. Franklin (CV-13).

(Photo: A. G. Simmons)



The famous "Ole 122", an F4U-1A of VMF-111 "Devil Dogs". This aircraft completed 100 dive-bombing missions against Japanese positions in the Marshall Islands, and had an official citation varnished into her cockpit. Note the 500-lb. bomb on a Brewster centre-line rack and the 100 mission markers under the cockpit. (Photo: Vought)

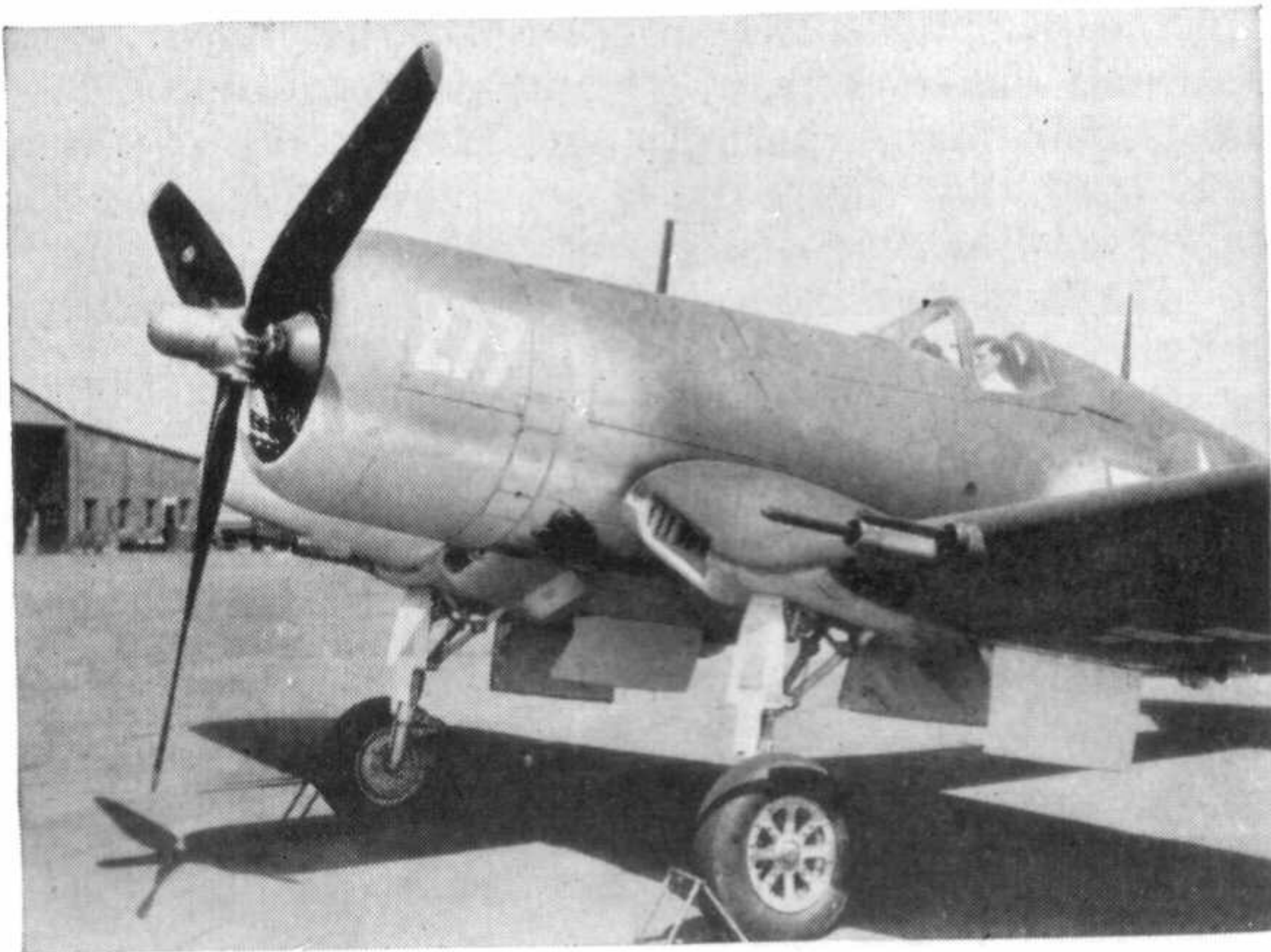
Since VF-12 had turned their machines over to Marines on Espirito Santo, VF-17 "Skull and Crossbones" was the first Navy Corsair squadron to see action. Commanded by Tommy Blackburn, VF-17 became the first land-based fighter unit in the New Georgia area, and within 79 days of combat was credited with the destruction of 154 Japanese aircraft. This squadron has been called "the greatest Navy fighter squadron in history": it contained twelve aces (i.e. pilots credited with five or more victories) and

destroyed no less than 18 torpedo bombers in two passes while providing top cover for the carriers *Essex* and *Bunker Hill* during the first strike on Rabaul. When they ran low on fuel VF-17 became the first squadron to "operate" from a ship in combat.

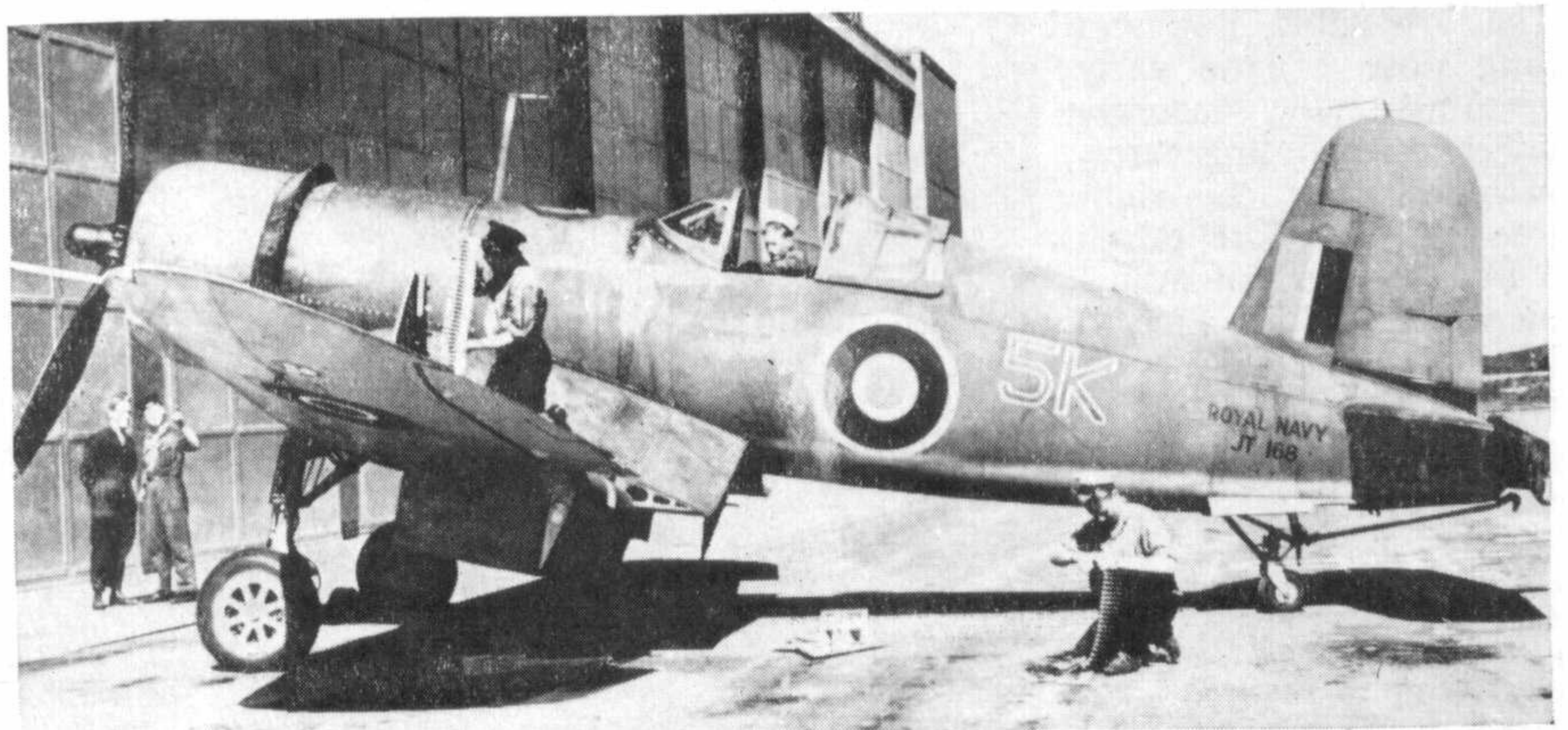
The Corsair achieved a victory/loss ratio of 11.3/1; it proved "definitely superior" in trials with a captured Zero and gave favourable results in competitive manoeuvres with a P-51, a P-47, a P-38 and a P-39. Above 12,000 ft. the Corsair outfought the Mustang and was considered evenly matched at lower altitudes. Against the F6F (even with Lt.-Cdr. "Butch" O'Hare at the controls of the Hellcat) the Corsair was more than a match for its opponent.

### THE CORSAIR NIGHT FIGHTER

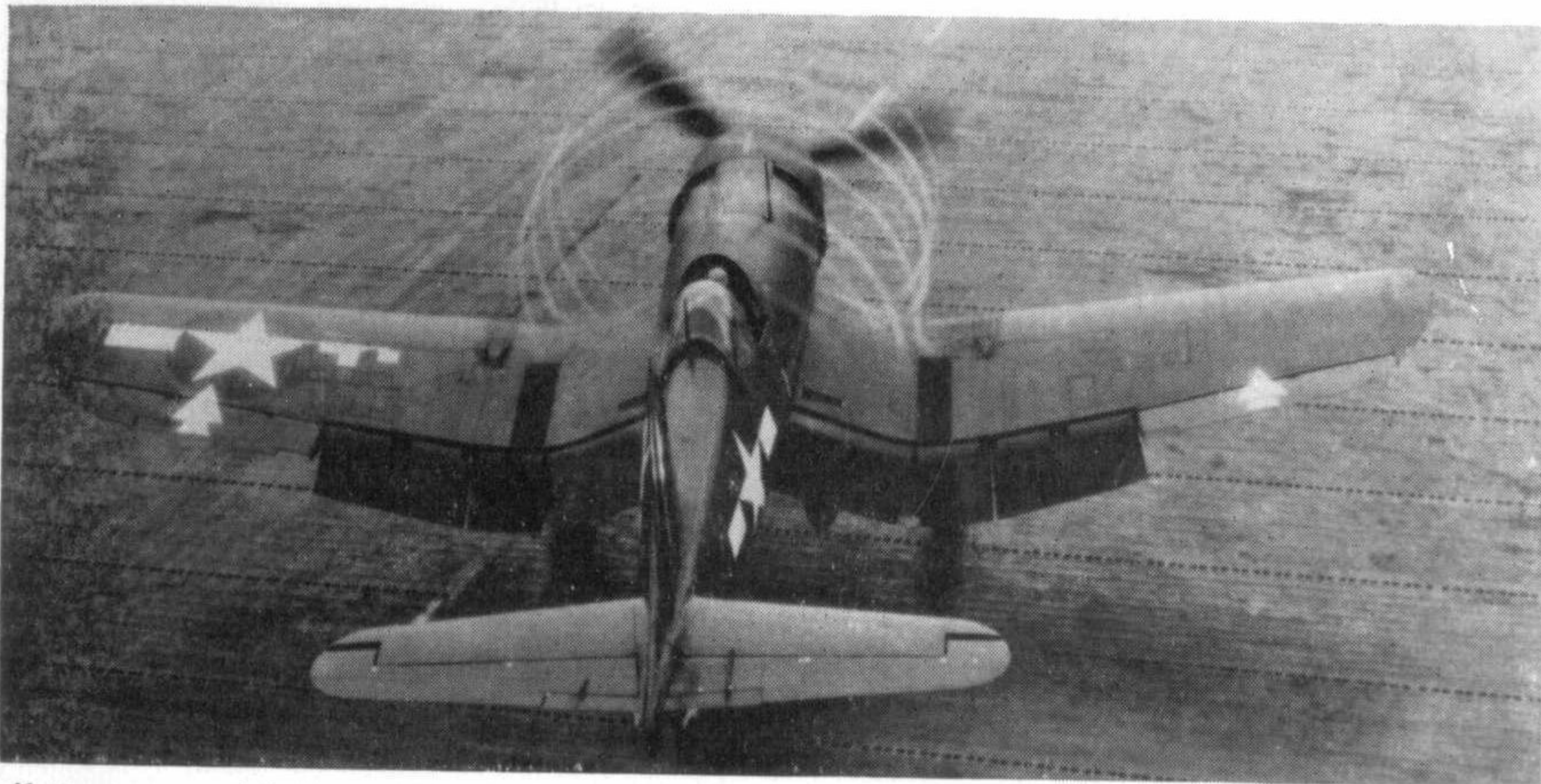
On 6th January 1942 CV submitted a proposal for the F4U-2 radar-equipped night fighter and the mock-up was ready for inspection by the Navy on 28th January. Pressure of normal production led to the cancellation of an initial order for 50; so "Project Affirm", the conversion of 12 standard F4U-1s, was initiated at Quonset Point, Rhode Island. Six machines were turned over to VF(N)-75 (Lt.-Cdr. G. Widhelm) and went into action from Munda Strip on New Georgia; Japanese night bombers had been carrying out nuisance raids in the area, but Widhelm's hand-picked



The F4U-1C, with four 20 mm. M-2 cannons. (Photo: Vought)



The 69th<sup>th</sup> Corsair I, JT-168 (F4U-1 Buno 18190) at Brunswick, Maine. (Photo: A. G. Simmons)



*Glossy sea-blue F4U-1D makes vortices as she runs up on board the U.S.S. Bennington (CV-20). Note that the port wing insignia is distorted by new gun bay covers (c.f. painting on page 2 of this Profile). (Photo: Vought)*

pilots soon rid the sky of these "Washing-machine Charlies". They claimed they shot down every enemy aircraft they saw; and a certain Lt. O'Neill startled himself by shooting down one he *didn't* see, a bomber which was in the way when he "tested guns" one night over Bougainville! The other F4U-2s served with VF(N)-101 (Lt.-Cdr. R. E. Harmer) and went aboard the *Essex*. The night fighters were moved around considerably; at various times they flew from the *Hornet* and the *Intrepid* and served with VMF(N)-532.

### GOODYEAR STARTS PRODUCTION

In November and December 1941, Brewster and Goodyear respectively had been appointed sub-contractors; and the first flights of the Brewster F3A-1 and Goodyear FG-1 had followed on 26th April and 25th February 1943. Goodyear, with a score of 4,014 machines, built almost as many of the initial model as the parent company. The first Goodyear aircraft were early flat-canopy versions but the majority were blown-hood types duplicating the F4U-1A and -1D. Due to what has been termed "poor management" Brewster had only turned out 735 Corsairs when the contract was terminated on 1st July 1944.

Very early production Corsairs were equipped with the Brownscope wide-angle rear-view periscope system, which was shortly replaced by a mirror in a small "bubble" in the sliding canopy.\* The first aircraft to be fitted with the blown hood was BUNO 17456, and the first production aircraft was accepted on 9th August 1943. The low cabin line and long nose of the early versions made accurate deflection shooting extremely difficult; the sight line was therefore raised 5 in. and the seat adjust increased to 9 in. Due to the urgency of production requirements the rudder pedals were moved aft but



*Goodyear Aircraft flight-line at the company's Akron, Ohio, plant. Note folded wings of machines in background. (Photo: Goodyear)*

raised only  $\frac{1}{2}$  in.; pilots thus adopted an almost "standing" posture when the seat was at full height, and this, coupled with the fact that the Corsair had no cockpit floorboards, gave one the impression of sitting on the edge of a deep pit with a yawning black chasm below. The pilot's posture was satisfactory for long flights but the more nervous felt a constant nagging fear that if they slipped they might just wind up somewhere in the mysterious depths of the fuselage bottom!

### COMMONWEALTH CORSAIRS

The first Corsairs for the Fleet Air Arm started to arrive in England in November 1943; these were designated Corsair I (Vought-built F4U-1), Corsair II (Vought-built F4U-1A and -1D), Corsair III (Brewster-built F3A-1), and Corsair IV (Goodyear-built FG-1). From the Corsair II onward 8 in. were clipped off each wing tip to allow storage in the lower head-room of British hangar decks; this modification resulted in a slightly higher stalling speed, but the stall was cleaner and easier to control. (The Royal Navy operated Corsairs from "Jeep" carriers long before the United States, and in some U.S.N. circles it was held that this might be a useful modification for American-flown Corsairs, although the majority opinion was that the sacrifice of wing area would be unjustifiable.) The Corsair equipped 19 Fleet Air Arm

*\*There is no designation difference between these two versions. Indeed, there is no use of the designation "F4U-1A" for the blown-hood version in war-time CV documentation; this appears to be a post-war retroactive designation to bring terms into line with -1C and -1D designations.*





A R.N.Z.A.F. Corsair, serial NZ5218.

(Photo: U.S.M.C. via Vought)

squadrons and formed the backbone of that service's Pacific fighter force. A total of 425 Corsairs were also supplied to the Royal New Zealand Air Force, deliveries commencing early in 1943. All from U.S. Navy contracts, they were delivered entirely out of sequence and may have been just "passing through" when assigned.

It was not until April 1944 that VF-301 completed the trials that finally permitted fleet service for the Corsair, and if a derogatory letter drafted by the Chief of Naval Air Operational Training, Jacksonville, Florida, had been sent through channels, the "bent-wing bird" might have been rejected a second time. In the hands of inexperienced pilots the F4U tended to bounce on deck landings; so "Programme Dog", the fourth modification programme, was initiated and completed in just ten days under the leadership of Jack Hospers. Modified oleo struts were free of "built-in-bounce" and VF-301 completed 113 deck landings on the *U.S.S. Gambier Bay* (CVE-73). After a series of comprehensive comparisons with the F6F-3 Hellcat, a Navy evaluation board stated on 16th May 1944 that:

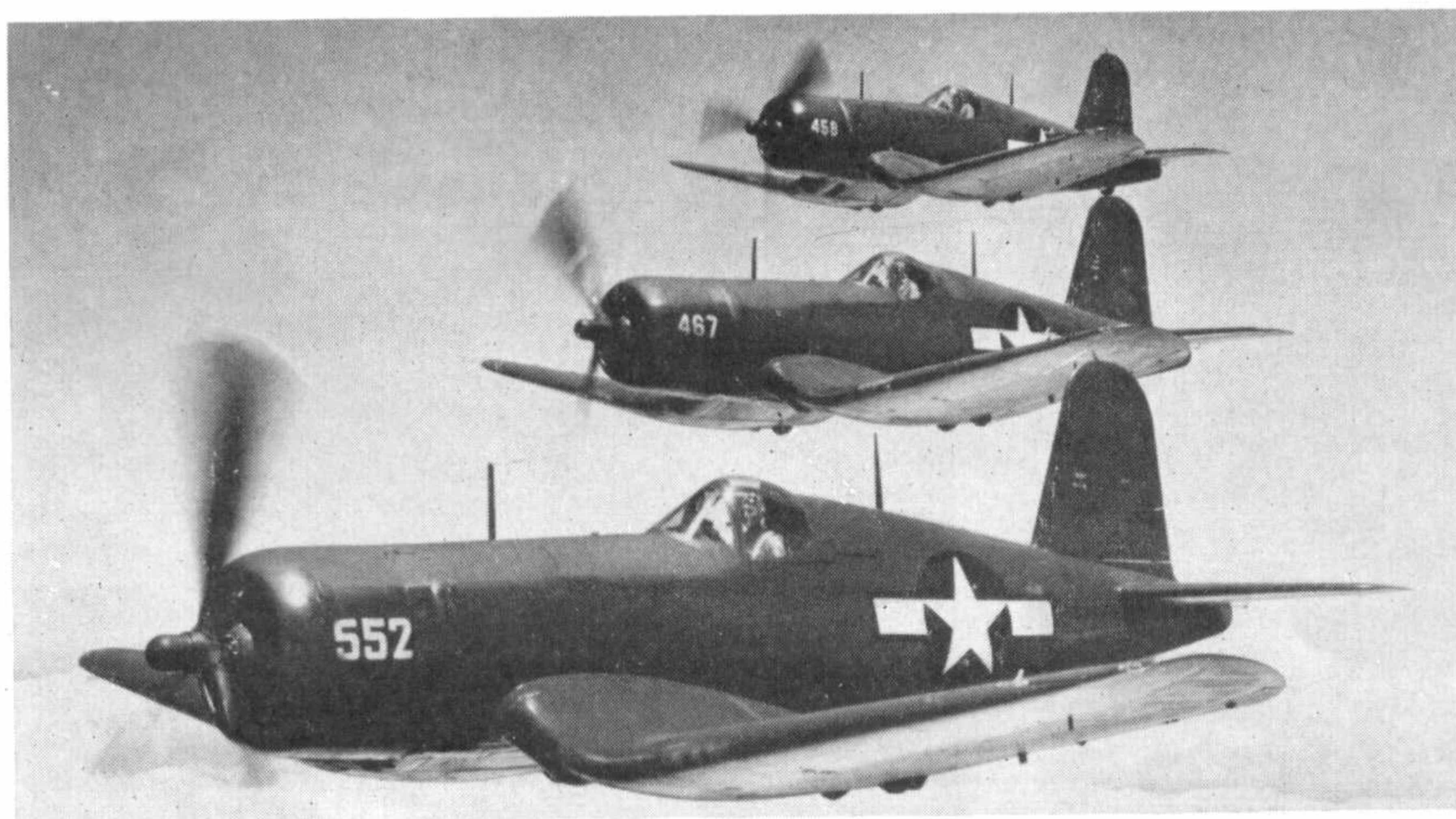
"... generally the F4U is a better fighter, a better bomber and equally suitable carrier airplane as compared with the F6F. . . . It is strongly recommended that the carrier fighter and/or bomber complements be shifted to the F4U type."

The threat of *Kamikaze* attacks necessitated a strengthening of carrier fighter units, and the Marines were called in to fill the gap. Thus, on 28th December

1944, VMF-123 (Maj. D. E. Marshall) and VMF-124 (Lt.-Col. Bill Millington) went aboard the Fast Carrier *Essex* in Ulithi Harbour. The first strike by U.S. carrier-based Corsairs was an attack on Okinawa on 3rd January 1945 by a formation of both squadrons under the command of Lt.-Col. Millington.

Cannon-armed Corsairs went into action for the first time on 7th April 1945, five pilots of VMF-311 blowing the wing off a Kawasaki *Lily*. The F4U-1C carried four 20 mm. M2 cannon with 120 r.p.g. and alternated on the production line with F4U-1Ds in batches varying from 3 to 43. (The F4U-1D carried normal six-gun armament and twin centre-section pylons for bombs or drop-tanks.) The last 266 Vought-built F4U-1Ds and FG-1Ds subsequent to the 295th machine were fitted with four fixed zero-length rocket-launching stubs under each wing. It was recommended that these were removed when not in use as they affected performance detrimentally.

Early production machines had attachment points for Mk. 41-2 bombracks under each outer wing panel, to carry a 100-lb. bomb; aircraft fitted with the centre-line drop tank installation could mount the Brewster bomb adaptor to carry either a 500 or a 1,000-lb. weapon. (There were instances of 2,000-lb. bombs being mounted. Charles A. Lindberg, a Technical Representative for United Aircraft, was pilot on the first occasion a 4,000-lb. load was carried, in an attack on Wotje Atoll.) March 1944 saw the first Corsair dive-bomber mission, an attack by VMF-111 ("The Devil Dogs") on Mille in the Marshalls group. In the



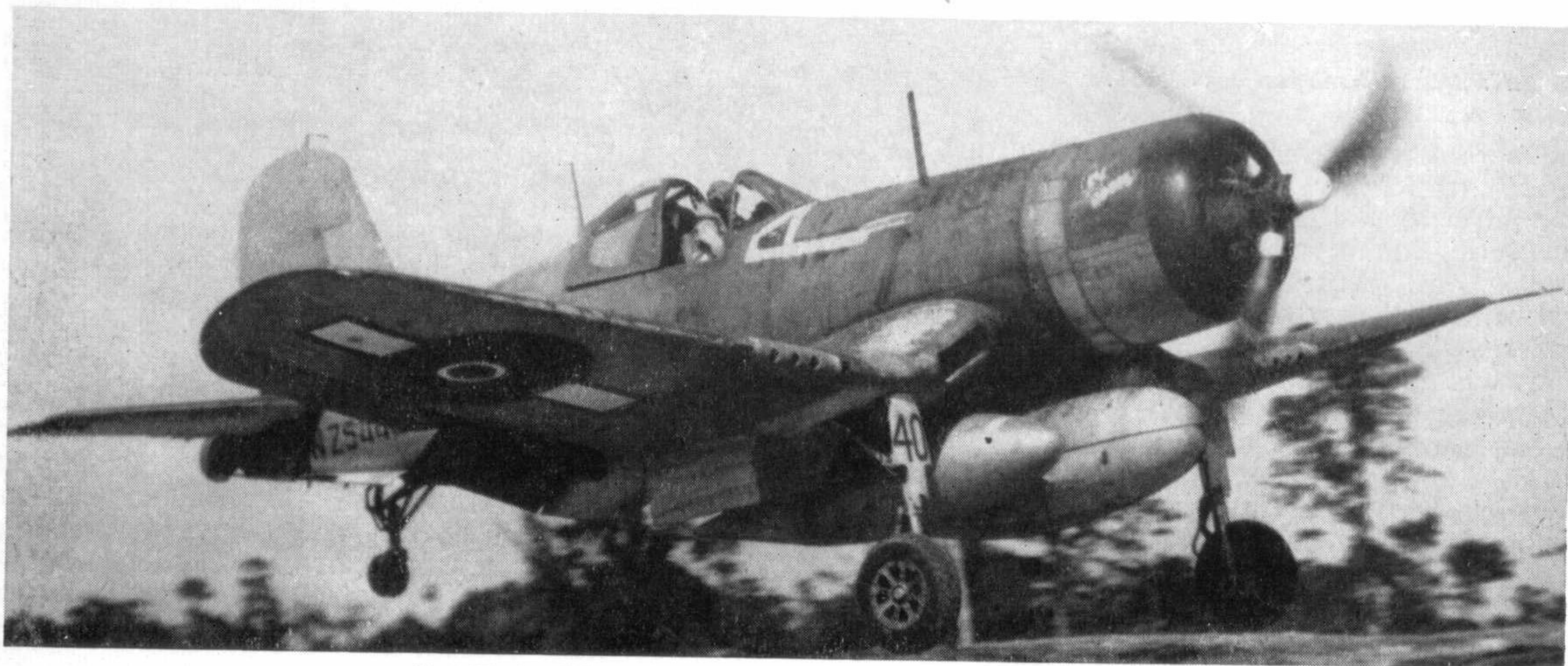
Goodyear FG-1s in flight.  
(Photo: George J. Letzter)

seven weeks that followed, the Corsairs proceeded to drop 200,000 lb. of bombs on the enemy.

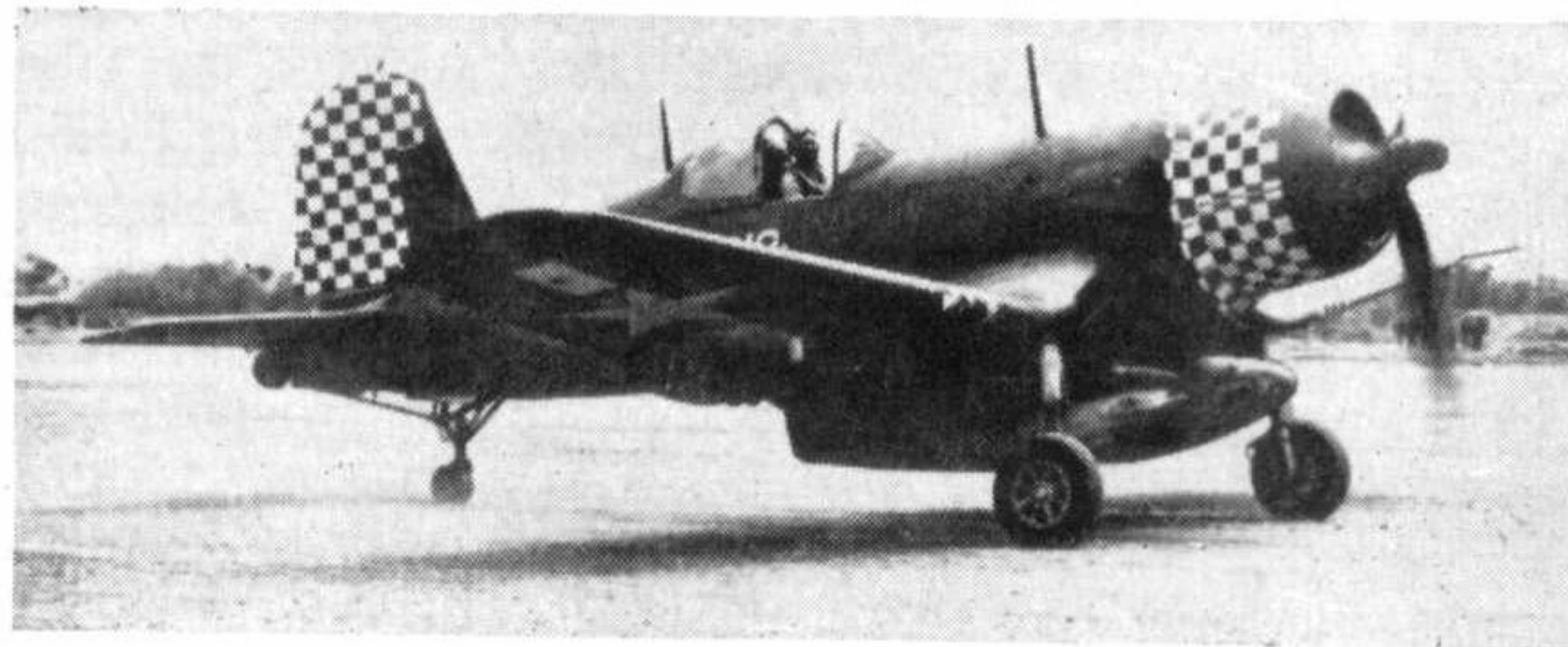
As the tempo of the war quickened, the Corsair played its part in bringing the wrath of the U.S. Navy to the Japanese Home Islands, and in support and cover missions during the invasions of Iwo Jima and Okinawa. Land-based Marine Corsairs flew 600 support missions on Okinawa from 7th to 30th April 1945. With the *Kamikazes* to contend with, VMF-411 shot down 17 enemy aircraft in one action, and the "Death Rattlers" destroyed 124 in a single Okinawa tour of duty. Major George Axtell, C.O. of the "Death Rattlers", said of the Corsair:

"It's the best fighter there is. It's rugged. It's a workhorse. You can use it for anything, including dive-bombing, and it's effective. You can shoot anything off or out of that plane and it still goes."

Vought terminated F4U-1 production on 2nd February 1945, with the delivery of the 4,996th machine. In air-to-air combat the Corsair had destroyed 2,140 aircraft for the loss of 189; in three years of battle she met the enemy wherever they appeared, and struck them down until there were no more. The first of a long line of fighting airplanes, the "Sweetheart of Okinawa" earned the affection of fighting men and earned it well.

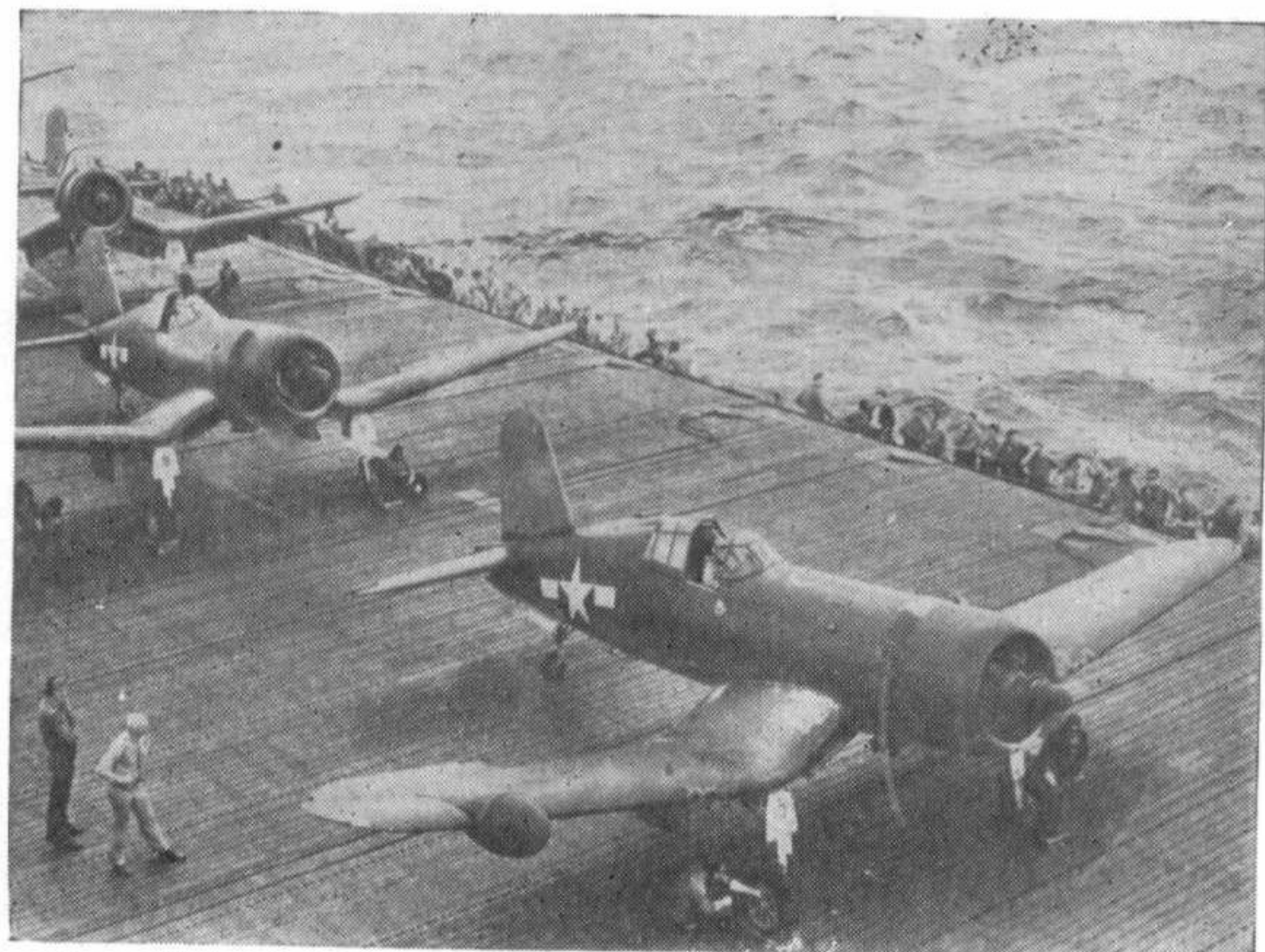
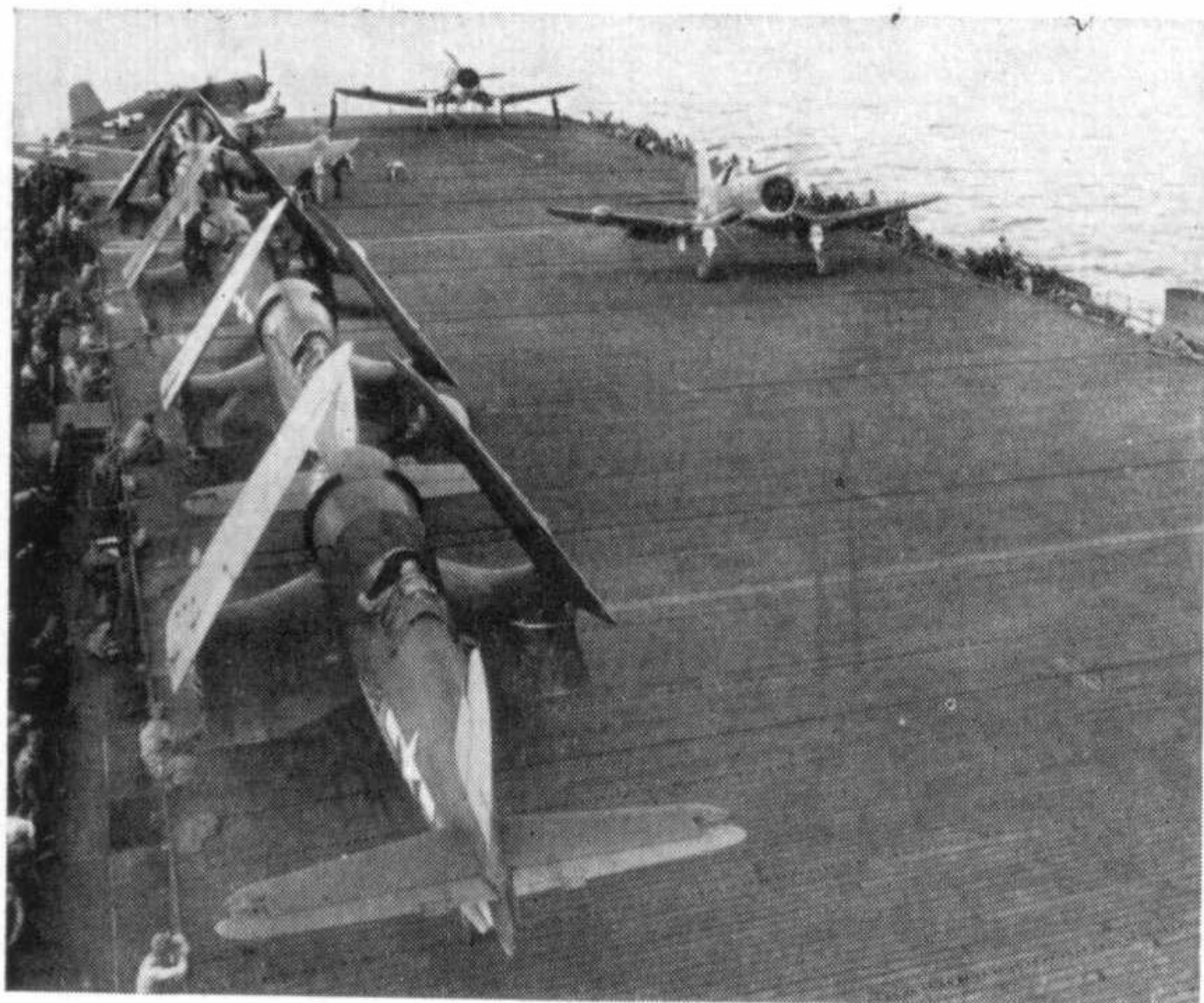


*New Zealand Corsair with centre-line and wing-root fuel tanks.*



Left: An F4U-1D of the U.S. Marine Corps on Okinawa. Right: FG-1D of the U.S. 2nd Marine Air Division. (Photos: U.S.M.C.)

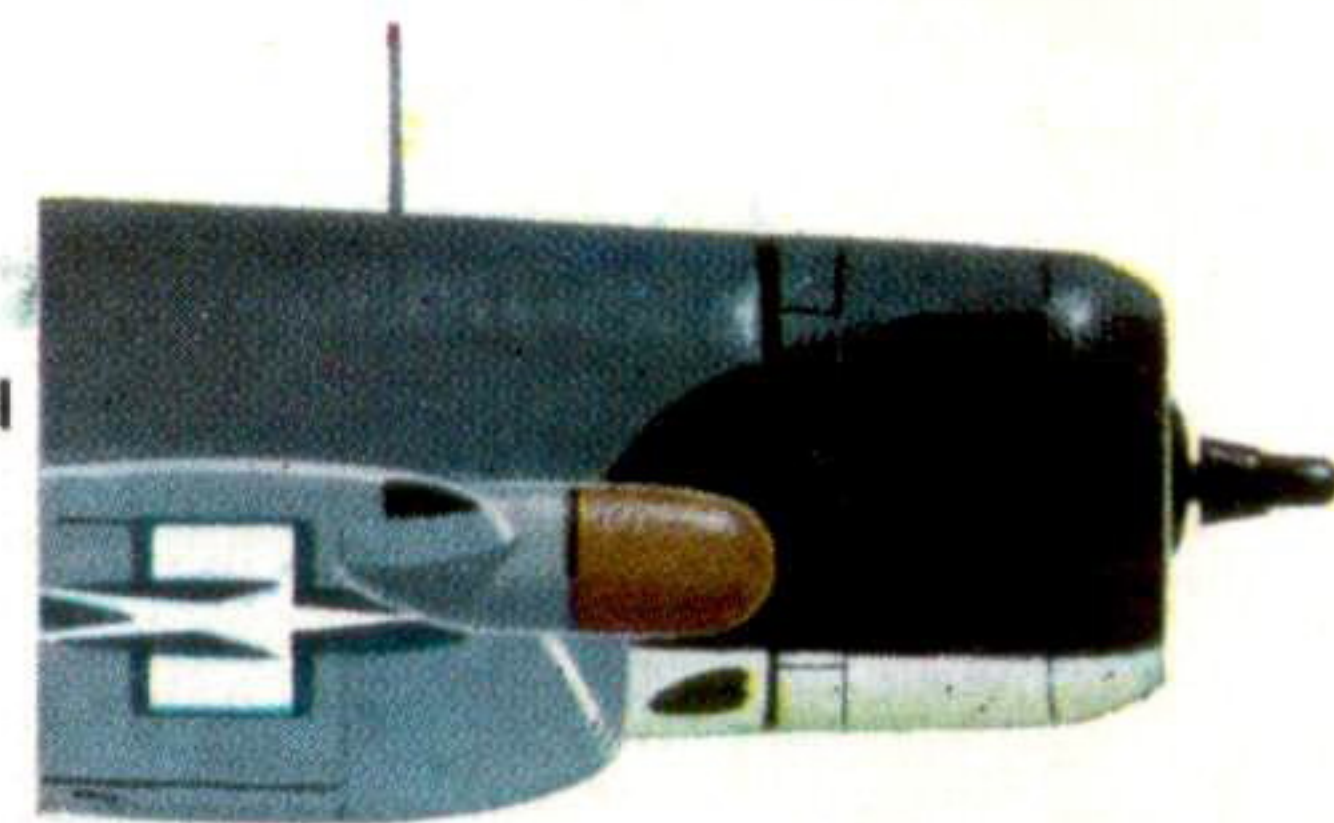
Left: F4U-2 radar-equipped night-fighters of VMF(N) 532 aboard the U.S.S. Windham Bay (CVE-92). Note that the aircraft facing the camera has only two guns in the starboard wing. Right: F4U-2s preparing to take off from the U.S.S. Enterprise for a mission over Truk. (Photos: A. G. Simmons)



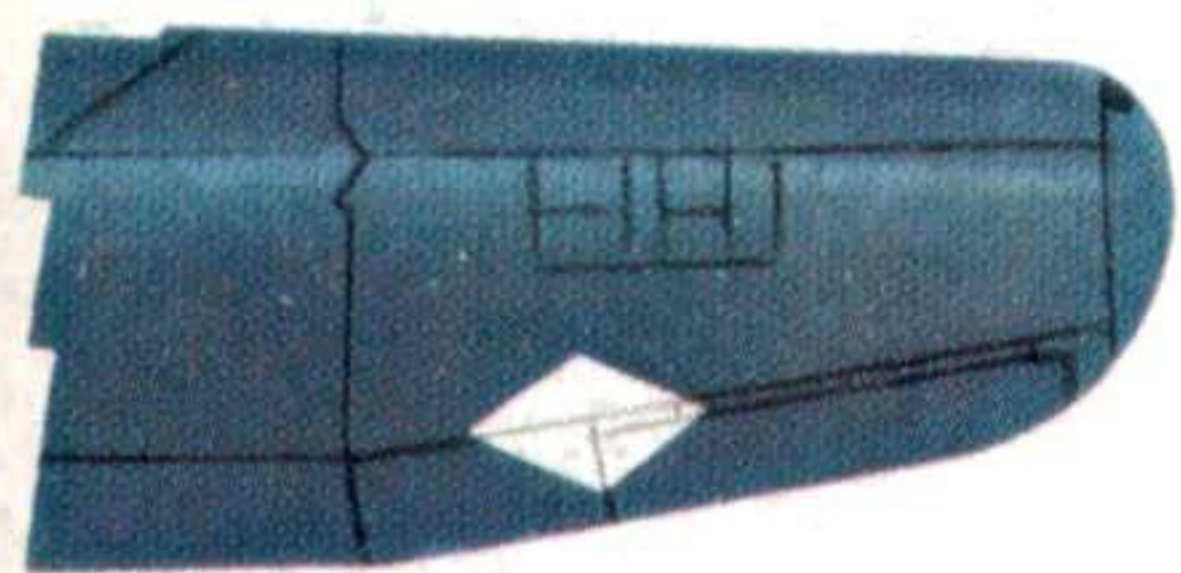
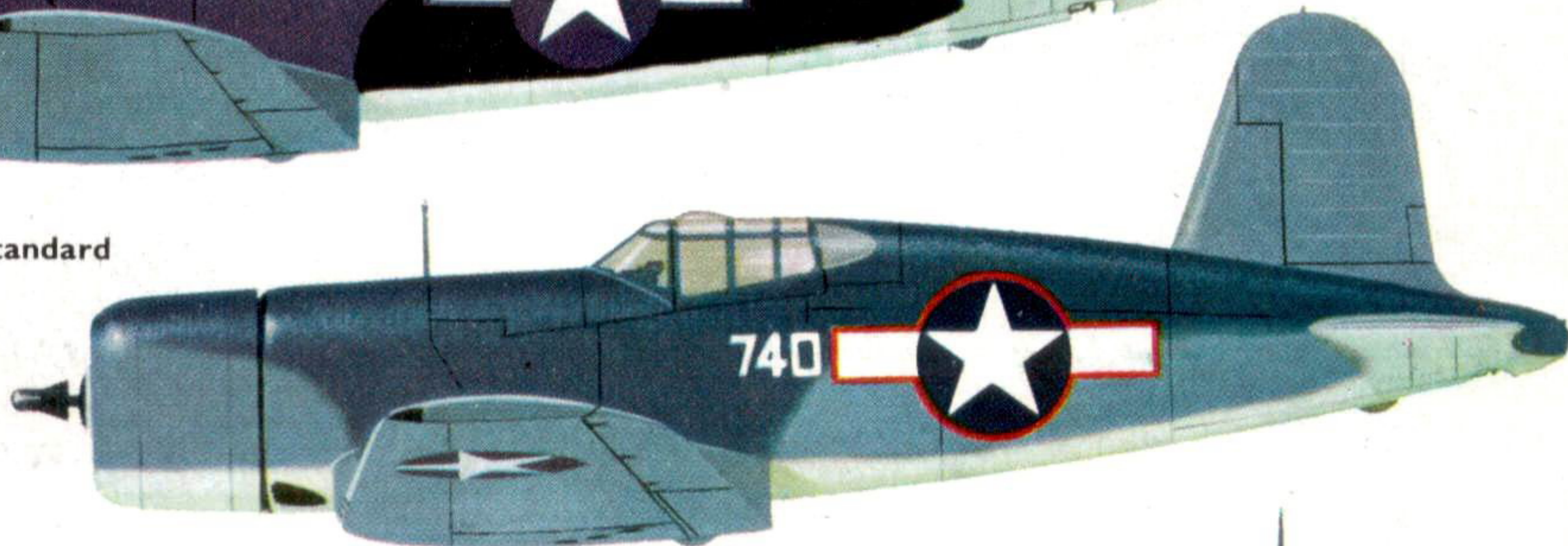
F4U-2 Corsair in non-standard night-fighter finish. U.S.N.



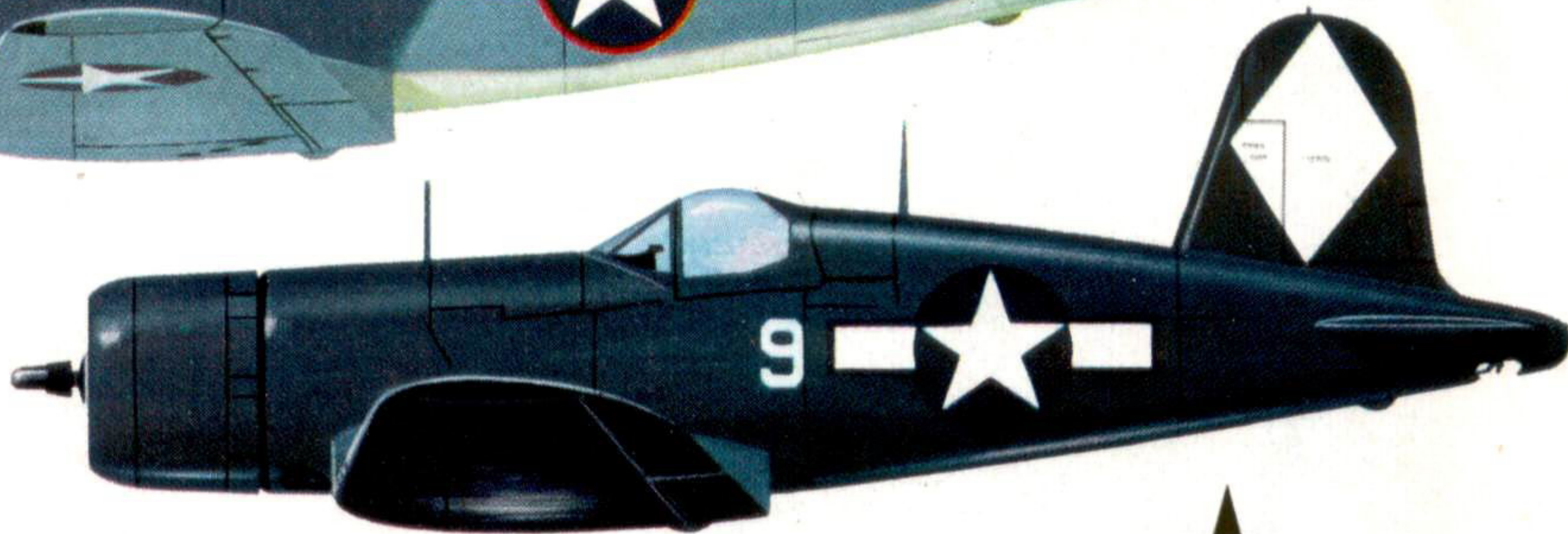
Radome detail



F4U-1 Corsair with non-standard barless national marking under port wing only. Red border to national marking was used from June to September 1943. U.S.N.

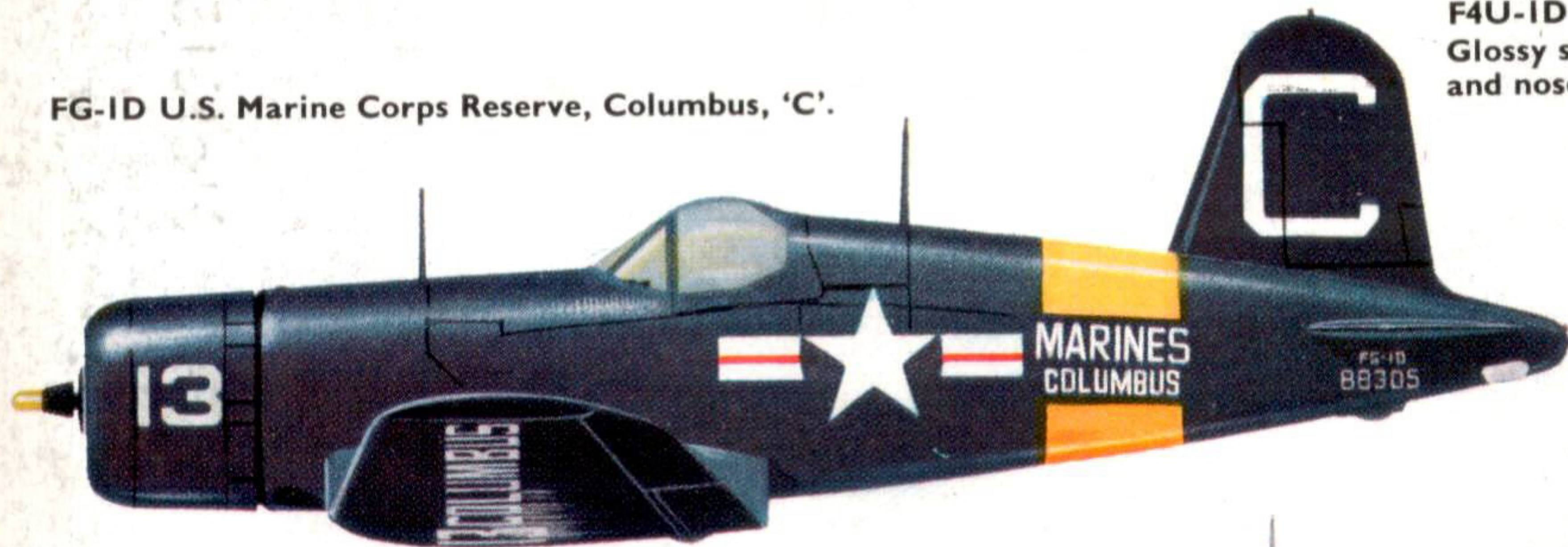


port and stbd wing marking of CV 13.

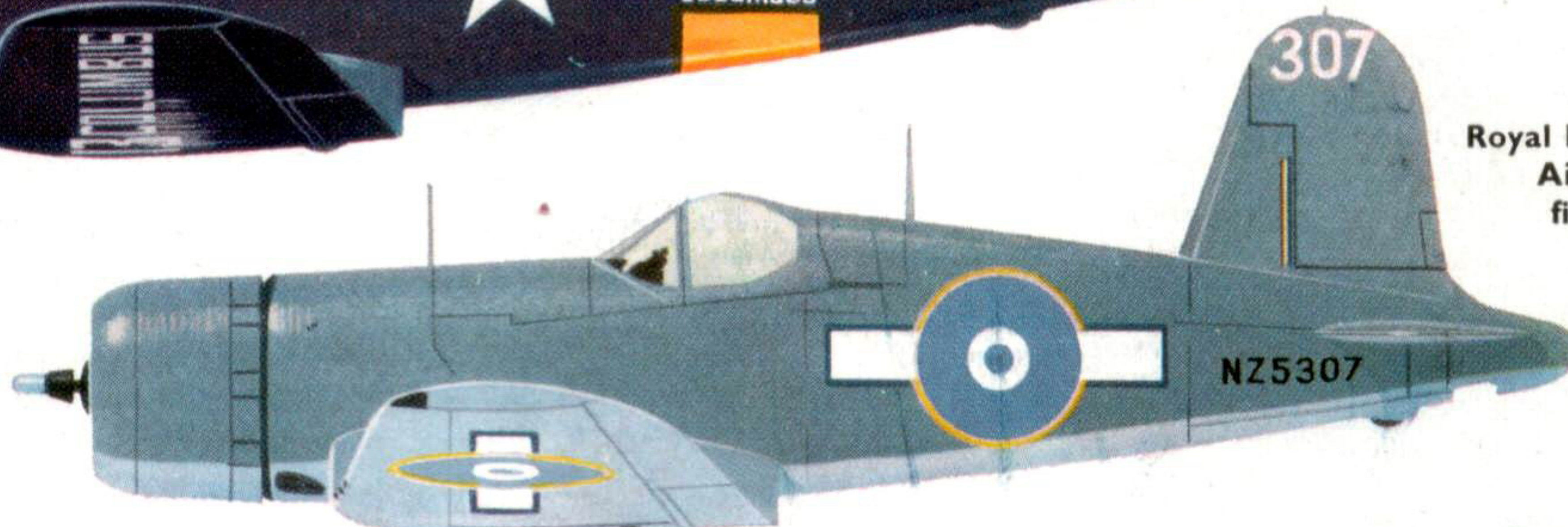


F4U-1D Corsair operating from U.S.S. Franklin, CV 13. Glossy sea-blue overall except for matt sea-blue cowl and nose forward of cockpit. U.S.N.

FG-1D U.S. Marine Corps Reserve, Columbus, 'C'.

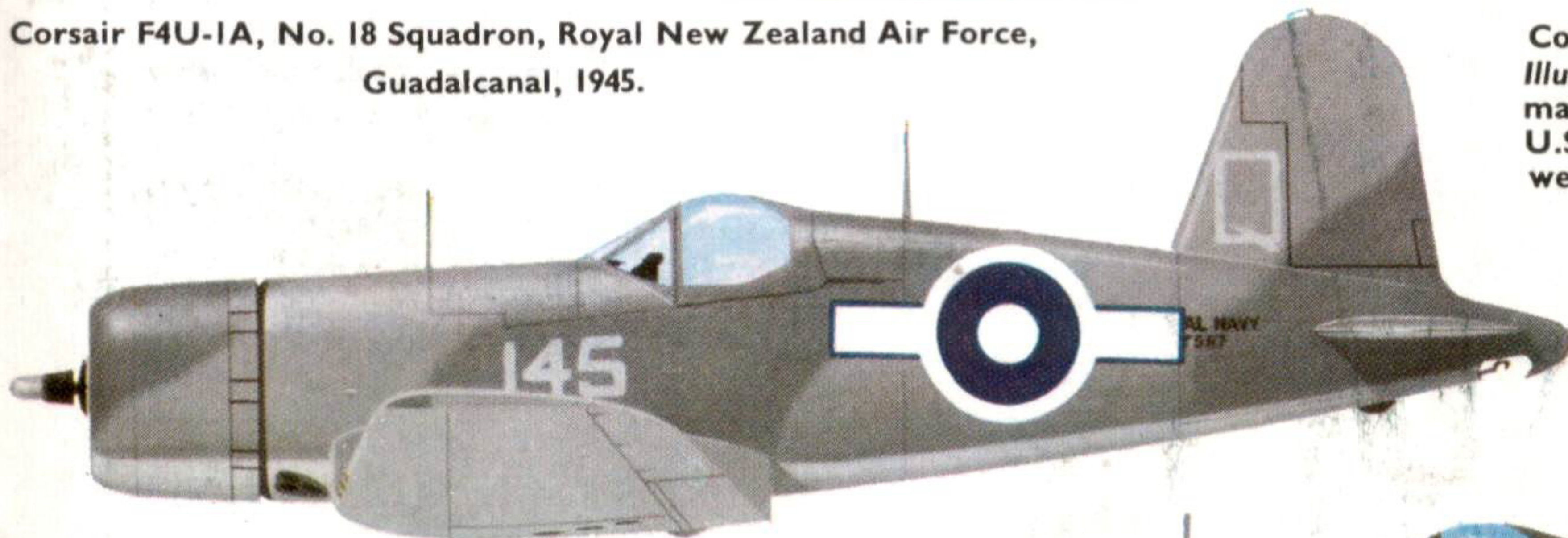


Royal New Zealand Air Force fin flash



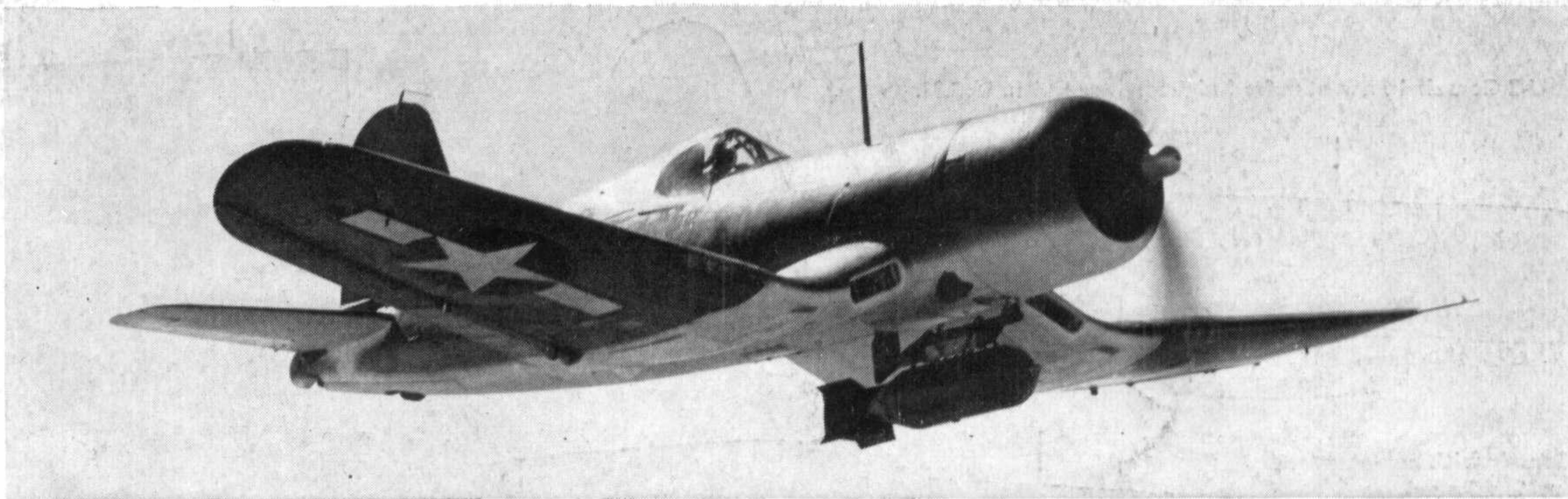
Corsair F4U-1A, No. 18 Squadron, Royal New Zealand Air Force, Guadalcanal, 1945.

Corsair II (F4U-1A) Fleet Air Arm, H.M.S. Illustrious SWPA markings. The national markings usually conformed to standard U.S.N. practice but sometimes six positions were used.

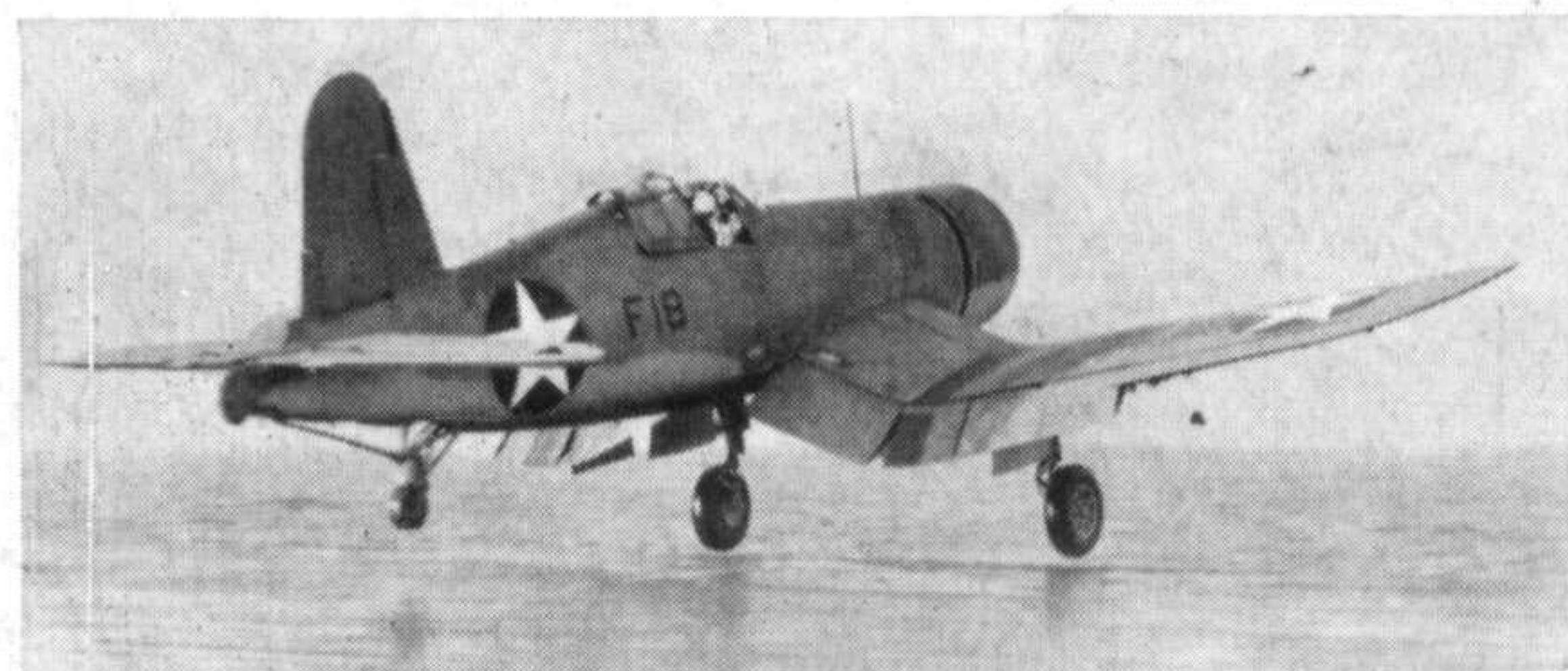
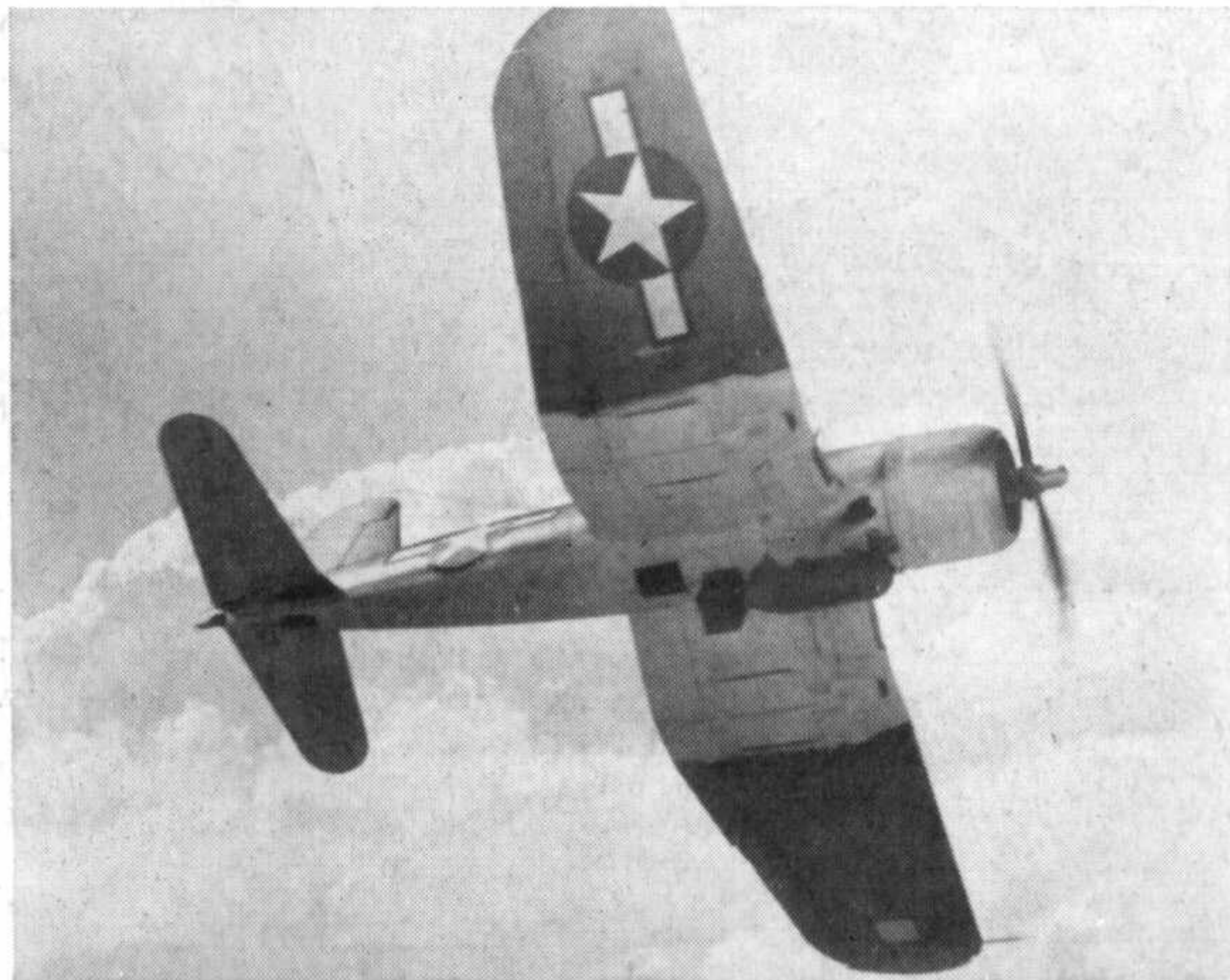


Corsair II (F4U-1A) Fleet Air Arm, Far East Fleet markings, six positions.





Two fine illustrations of an F4U-1A with a 1,000-lb. bomb on a Brewster centre-line rack. The undersurface view shows the belly bomb-aiming window below the centre-section, immediately behind the bomb. (Photos: Vought)



A blue-grey "bubble-top" Corsair taking off from the U.S.S. Core (CVE-13); probably an aircraft from the first Navy Corsair squadron, VF-12. (Photo: A. G. Simmons)

#### United States Corsair Units

U.S.M.C.: VMF-111 (Devil Dogs), VMF-112 (Wolf Pack), VMF-122, VMF-123, VMF-124, VMF-212, VMF-213, VMF-214 (Black-sheep), VMF-215 (Fighting Corsairs), VMF-216, VMF-221 (Flying Falcons), VMF-222 (Flying Duces), VMF-223, VMF-225, VMF-311, VMF-323 (Death Rattlers), VMF-411, VMF-422, VMF(N)-532.

U.S.N.: VF-12, VF-17 (Skull and Crossbones), VF(N)-75, VF-82, VF(N)-101, VF-301.

(The above list of units covers known Corsair squadrons, and is not necessarily complete.)

#### Corsair Aces:

Colonel Gregory M. "Pappy" Boyington, C.O. of VMF-124, 28 kills.

Major Joseph Foss, C.O. of VMF-422, 26 kills.

Lt. Robert M. Hanson, 25 kills, 20 of which were scored within 17 days.

Major Kenneth Walsh, 21 kills.

Major John L. Smith, 19 kills.

Lt. Ira Kepford of VF-17, 19 kills.

Major Marion Carl, 18½ kills.

#### PRODUCTION NOTES

Year	Chance Vought F4U-1, -1A, -1C and -1D	Goodyear FG-1A and -1D	Brewster F3A and -1A
1942	178	—	—
1943	1,780	377	136
1944	2,667	2,108	599
1945	74 (F4U-4 production commenced in 1944)	1,529	(Contract terminated July 1st 1944)
Total	4,669	4,014	735

Service Use	Type	U.S.N.	Royal Navy	R.N.Z.A.F.
	F4U-1	876*	95	—
	F4U-1A	1,232**	360	173
	F4U-1C	190	—	—
	F4U-1D	1,659***	150	192
	FG-1A	487†	99	—
	FG-1D	1,470****	843	60
	F3A-1A	305	430	—
	Totals	6,255*****	1,977	425

\*=Includes 12 converted to F4U-2 standard.

\*\*=Includes 173 to New Zealand.

\*\*\*=Includes 192 to New Zealand.

\*\*\*\*=Includes 60 to New Zealand.

\*\*\*\*\*=Includes 425 to New Zealand.

†Includes, reportedly, 2 "Flat-top" versions.

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#### SPECIFICATION

**Dimensions:** Wing span 40 ft. 11.7 in. Span (folded) 17 ft. 0.5 in. Length 33 ft. 4.6 in. Height (taxi position) 15 ft. 0.07 in. Height (wing folded) 16 ft. 6 in. Max. height (wing vertical) 18 ft. 3.2 in. Wing area 314 sq. ft.  
**Weights:** Empty 8,694.5 lb. Gross 11,092.8 lb. Useful load 2,398.2 lb. Wing loading 26.6 lb./sq. ft. Power loading 4.72 lb./h.p.

**Powerplant:** One Pratt and Whitney 18-cylinder twin-row R-2800-8(W) Twin Wasp B Series with two-speed supercharger.

**Powerplant Ratings:** Take-off 2,000 h.p. at 2,700 r.p.m. Military 2,000 h.p. at 2,700 r.p.m. \*War Emergency 2,250 h.p. at 2,700 r.p.m. Max. Cruise 1,070 h.p. at 2,150 r.p.m. Economy Cruise 570 h.p. at 1,300 r.p.m.

**Fuel Tankage:** Internal 237 gallons. Normal Fighter 178 gallons. Overload Fighter 535 gallons.

**Performance:** Max. speed 415 m.p.h. at 20,000 ft. Stalling speed 79 m.p.h. at sea level. Initial climb 3,120 ft./min. Service ceiling (normal load) 37,000 ft. Take-off over 50 ft. obstacle (no wind) 1,430 ft. Landing over 50 ft. obstacle (no wind) 2,500 ft.

\*This rating refers to the -8W powerplant with water-ethyl alcohol injection, fitted to F4U-1D and the fourth FG-1D. The injection of this mixture allowed the increase of power above Military rating by acting as an anti-detonant. 10.4 gallons were carried in three tanks with 40% alcohol used for anti-freeze protection. Initiated by the last ⅜ in. of throttle movement, the device gave an extra 250 h.p.