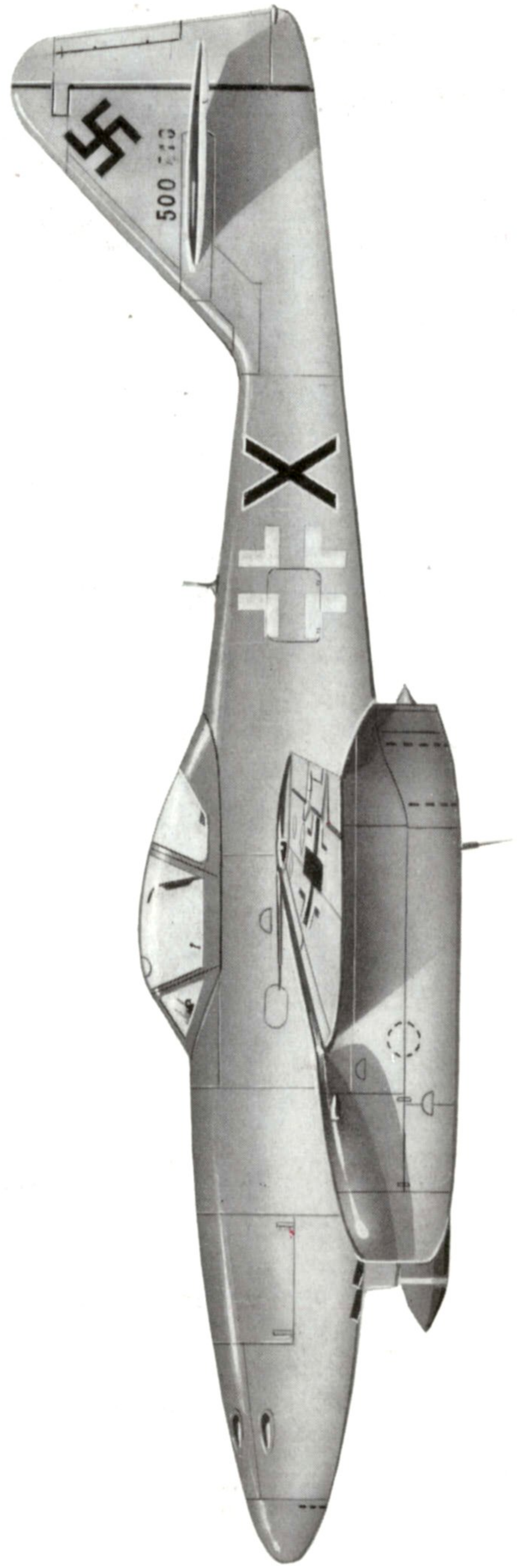
# PROFILE PUBLICATIONS

# The Messerschmitt Me 262



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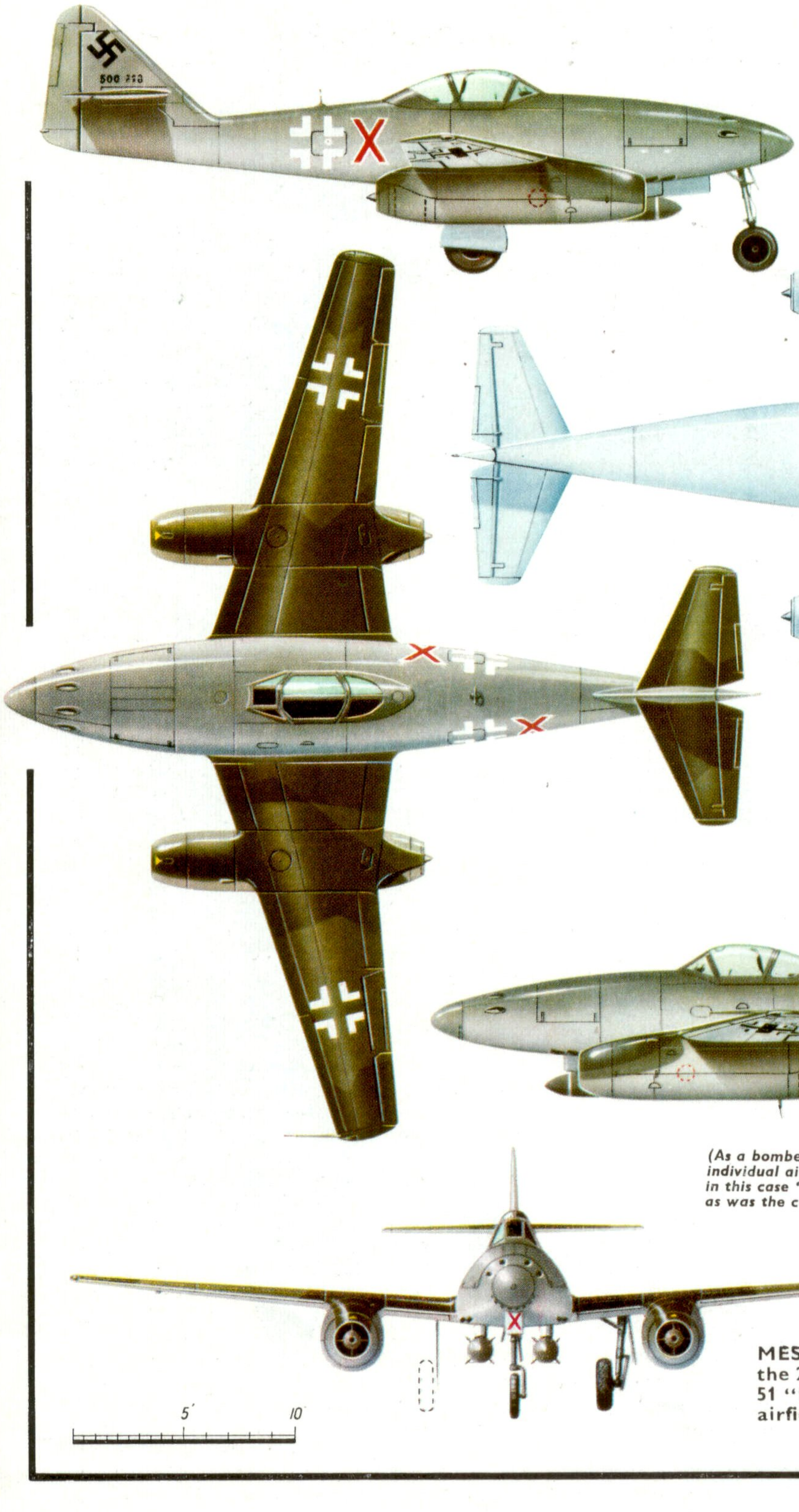
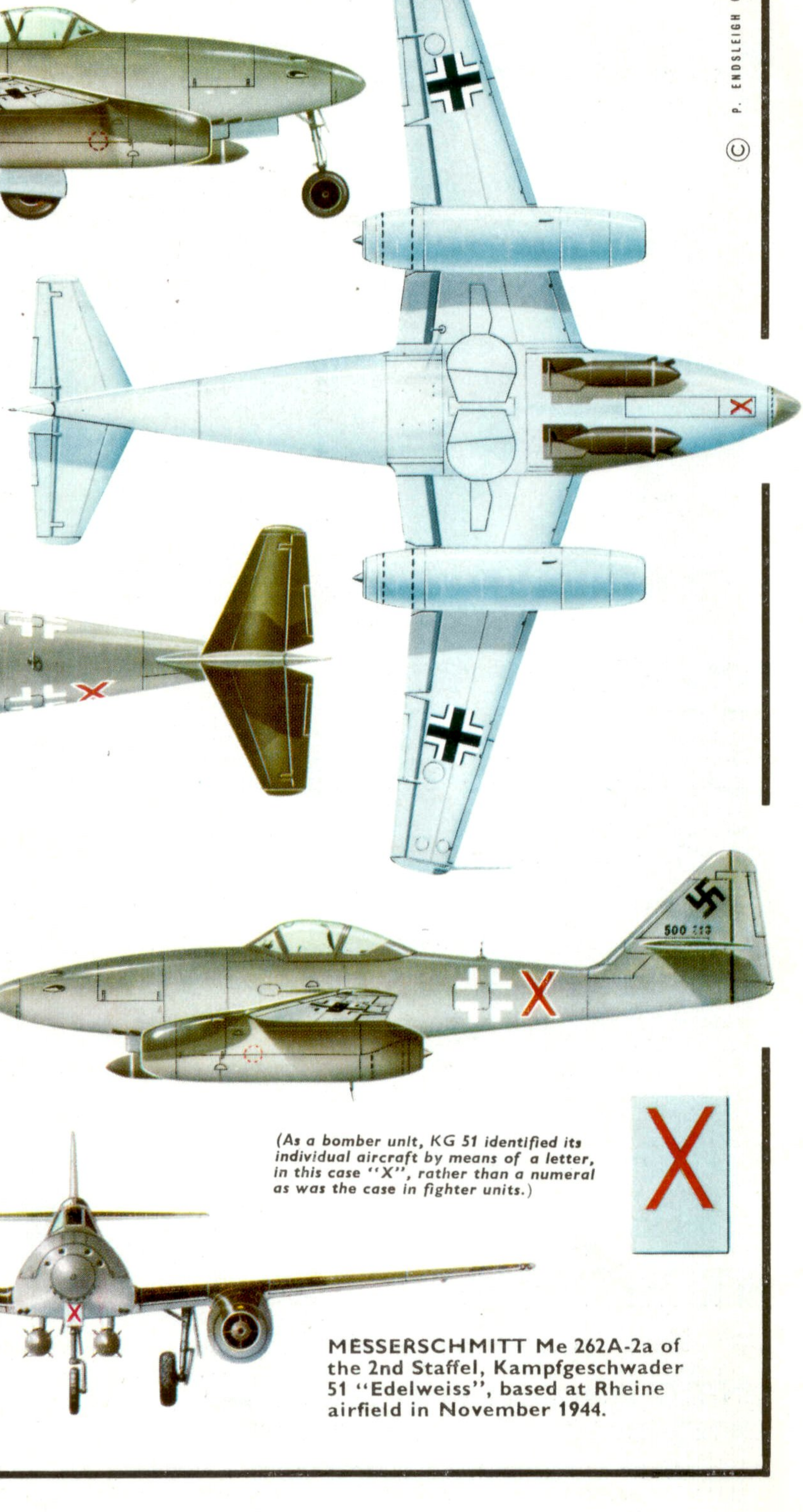








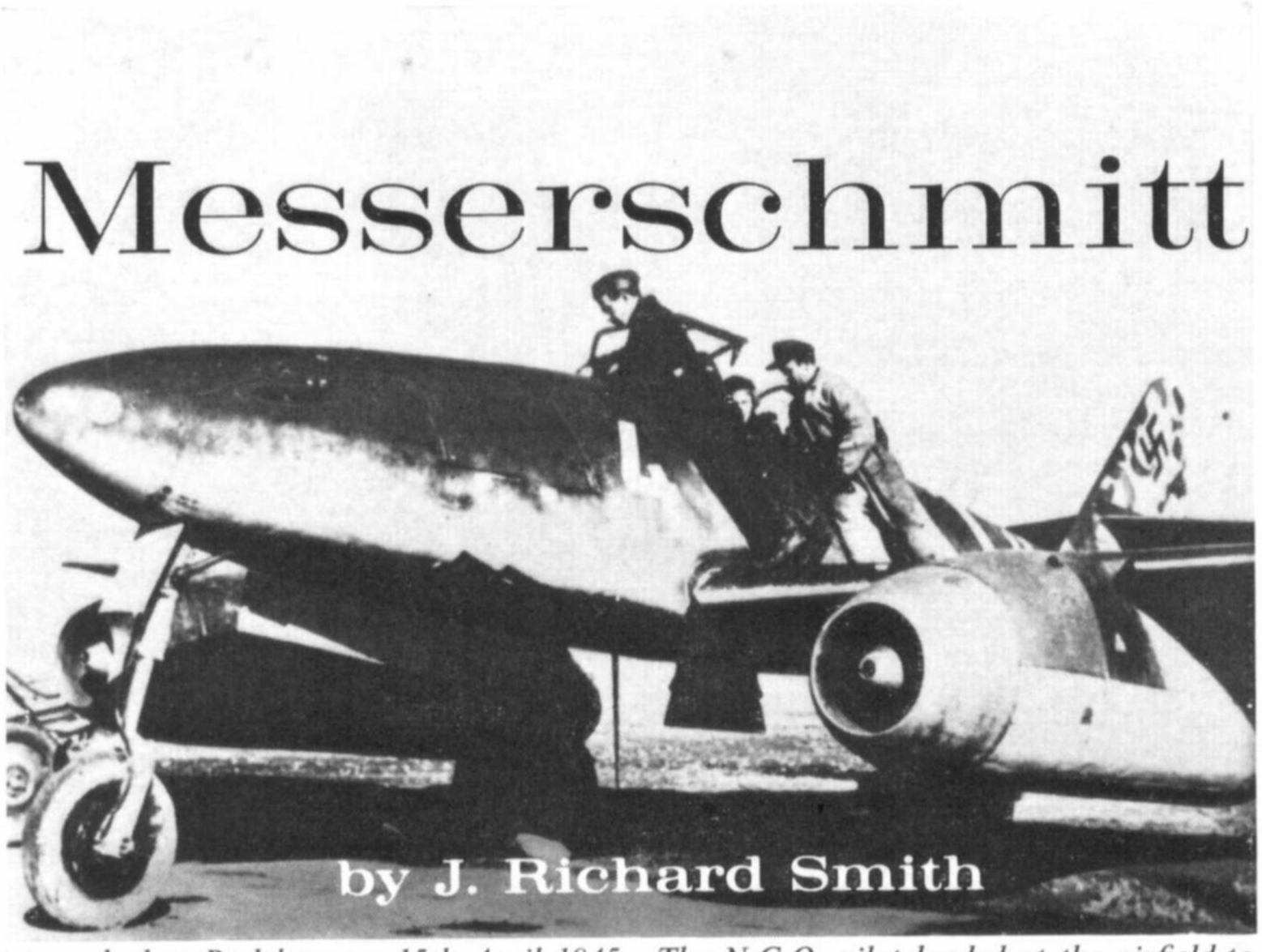




*(As a bomber unit, KG 51 identified its individual aircraft by means of a letter, in this case "X", rather than a numeral as was the case in fighter units.)*

**MESSERSCHMITT Me 262A-2a of the 2nd Staffel, Kampfgeschwader 51 "Edelweiss", based at Rheine airfield in November 1944.**

# The Messerschmitt Me 262



by J. Richard Smith

*An Me 262A-1a of* Jagdgeschwader 7, *photographed at Perleberg on 15th April 1945. The N.C.O. pilot landed at the airfield to refuel after an interception sortie, not having enough left in his tanks to take him back to his home base at Parchim. One of his engines failed on take-off from Perleberg; icy slush had collected in the nacelle during his stopover. Both pilot and aircraft survived this mishap, and an engine change was carried out in about three hours. The mechanic on the right wearing a peaked field-cap is Herr Rumler, to whom we are grateful for making this photograph available.* (Photo: Rumler via Hans Obert.)

During the Second World War there was an attitude prevalent amongst the Nazi hierachy that it would not be worth developing anything new as the war would be over within a year. This attitude persisted, and was to delay the introduction of some of the most advanced projects in the world—not least of which was the world's first operational jet fighter, the Messerschmitt 262.

The Me 262 was the one aircraft, that if developed with the correct priorities and put into service in its proper rôle as a high speed fighter, could perhaps have changed the course of the war in favour of Nazi Germany. There is little doubt that the machine could have prolonged the conflict by at least six months, and perhaps forced the Allies to cease, albeit temporarily, their strategic bombing offensives.

## DESIGN AND DEVELOPMENT

The aircraft was first projected during the autumn of 1938 as the Messerschmitt Projekt 1065 to be powered by two of the new turbojets then under development at B.M.W. and Junkers. The B.M.W. P.3302 (later designated 109-003) was first run in 1940 but only provided 570 lbs. thrust. The Junkers counterpart, the Jumo 004, was first tested on 11th October 1940, but serious snags were encountered, and it was not until January 1941 that it delivered a useful thrust.

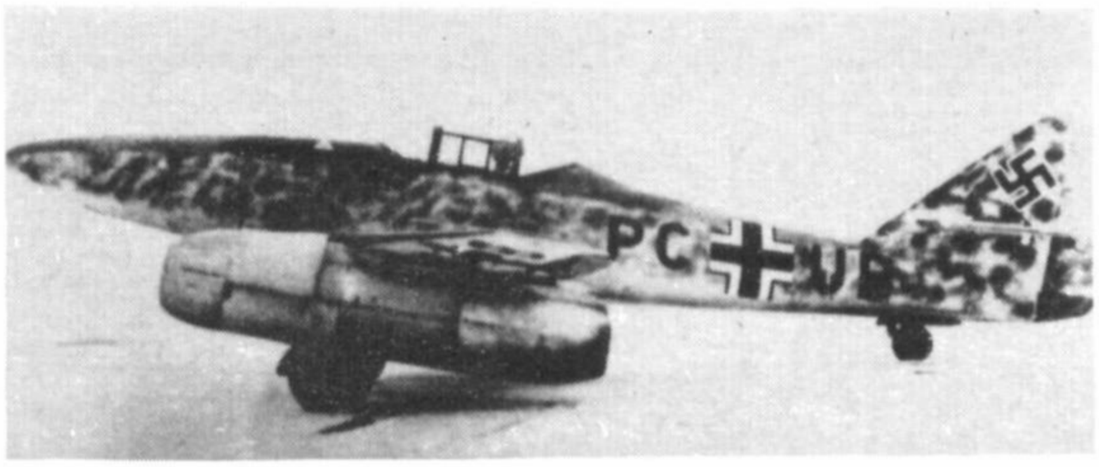
Design work on the P.1065 was completed in June 1939, and Messerschmitts' ordered the construction of a mock-up. This was inspected by R.L.M. officials on 1st March 1940 and an order was placed for three prototypes. These were completed early in 1941, but because of the delays with the turbojets, the first prototype, the Me 262 VI (PC+UA) was fitted with a single 700 h.p. Jumo 210 G piston engine. This was mounted in the nose of the aircraft which, although seriously underpowered, made its initial flight on 4th April 1941, piloted by *Flugkapitän* Fritz Wendel.

On 25th November 1941, an attempt was made to fly the VI with two prototype B.M.W. 003 V turbojets of 1,000 lbs. thrust. The Jumo 210 engine was retained, but the turbine blades of both turbojets failed at take-off revolutions and further trials were temporarily abandoned. Previously, on 2nd April 1941, the Heinkel 280 twin jet fighter had made its first flight. This machine, besides being earlier, proved to have a superior performance to the Messerschmitt design, and it is difficult to understand why the machine was not chosen in favour of the 262. It was not until 18th July 1942 that the Me 262 V3 (PC+UC) flew with two 1,850 lbs. thrust Jumo 004 A-O engines. This machine was destroyed during its second test flight on 11th August at Rechlin.

The Me 262 V2 (PC+UB) joined the test programme on 2nd October 1942, and the rebuilt V1, which had been damaged during the trials with the B.M.W. 003 engines, flew on 2nd March 1943 with two Jumo 004 units. In April 1943 the Me 262 V4 (PC+UD) was delivered to Lechfeld, being test flown by Gen. Lt. Adolf Galland on the 22nd. On 23rd July the first prototype was demonstrated before Göring who enthusiastically received the fighter, but plans for mass production were forbidden.

The first four prototypes employed tailwheel undercarriages but all encountered trouble with restricted forward view for take-off and the downward thrust of turbojets flung up large pieces of tarmac. Therefore, the Me 262 V5 (PC+UE) was fitted with a fixed nosewheel undercarriage and successfully flown on the 26th June 1943. The Me 262 V6 (VI+AA, W.Nr.130 001) was fitted with a fully retractable nosewheel undercarriage and was powered by the improved 1,980 lbs. thrust Jumo 004 B engines.

On 26th November 1943, Gerd Lintner demonstrated the Me 262 V6 before Hitler at Insterburg. Much to the surprise of everyone present, Hitler immediately acclaimed the aircraft as a high speed *bomber*. The Führer thought only in terms of offense and saw in the Me 262 a method of revenging Germany for the Allied bombing offensive. Nevertheless existing plans for the Me 262 fighter were continued

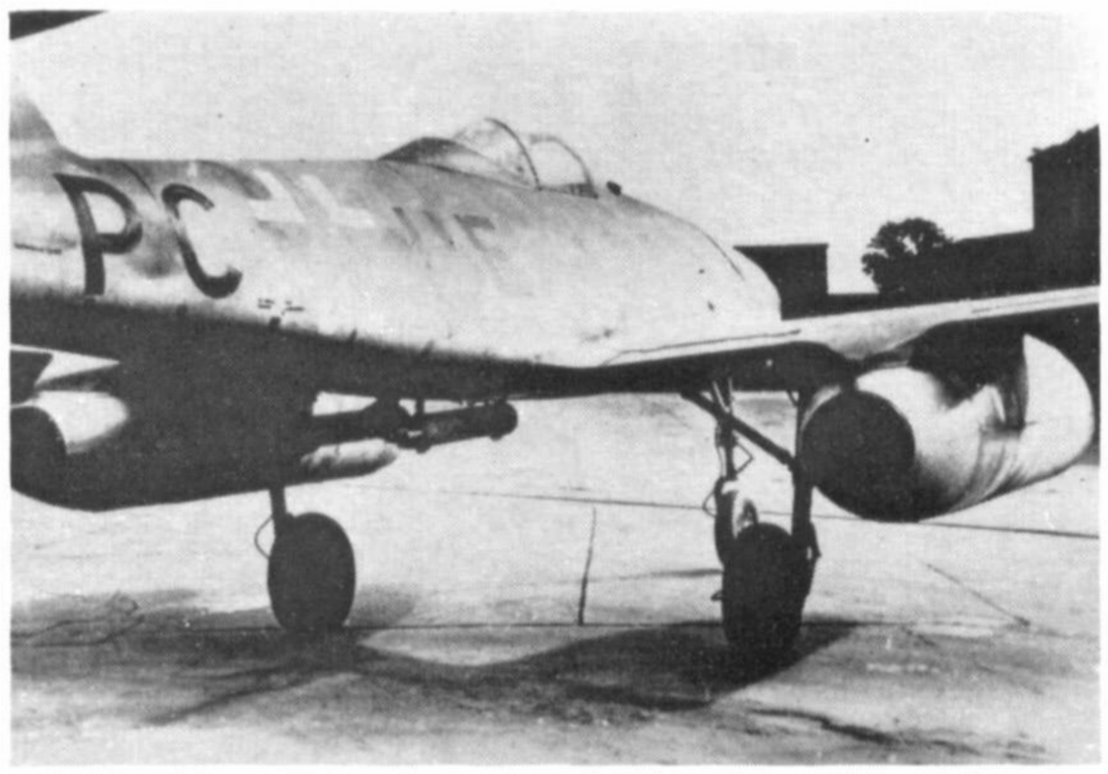


*The second prototype, PC+UB; note the conventional tail-wheel undercarriage. This machine joined the test programme on 2nd October, 1942.*

*The V3, PC+UC, was the first machine of the series to fly on pure turbo-jet power, provided by two 1,850 lb. thrust Jumo 004 A-O engines. It was destroyed during the second test flight at Rechlin on 11th August, 1942.*

and demands were made by Milch and Sauer for large scale production. However, at a production conference held in late April 1944 at Obersalzburg, Hitler asked how many Me 262 bombers had been built. When told by Milch that the aircraft was being produced exclusively as a fighter, Hitler flew into a rage and forbade any further *mention* of the aircraft as a fighter !

Meanwhile several other prototypes were completed, the first of which, the Me 262 V7 (VI+AB, W.Nr.130 002) flew in November 1943 with a rubber sealed pressurized cockpit. The V8 (VI+AC, W.Nr.130 003) was the first aircraft with armament, four 30 mm. Mk. 108 cannon being concentrated in the nose. The V9 (VI+AD, W.Nr.130 004), which flew in January 1944, tested FuG 24 R/T (eventually to replace the standard FuG 16) and FuG 25 I.F.F. radio equipment. The tenth prototype (VI+AE, W.Nr.130 005) which took to the air on 1st May 1944, was fitted with bomb pylons, two ETC 504 racks



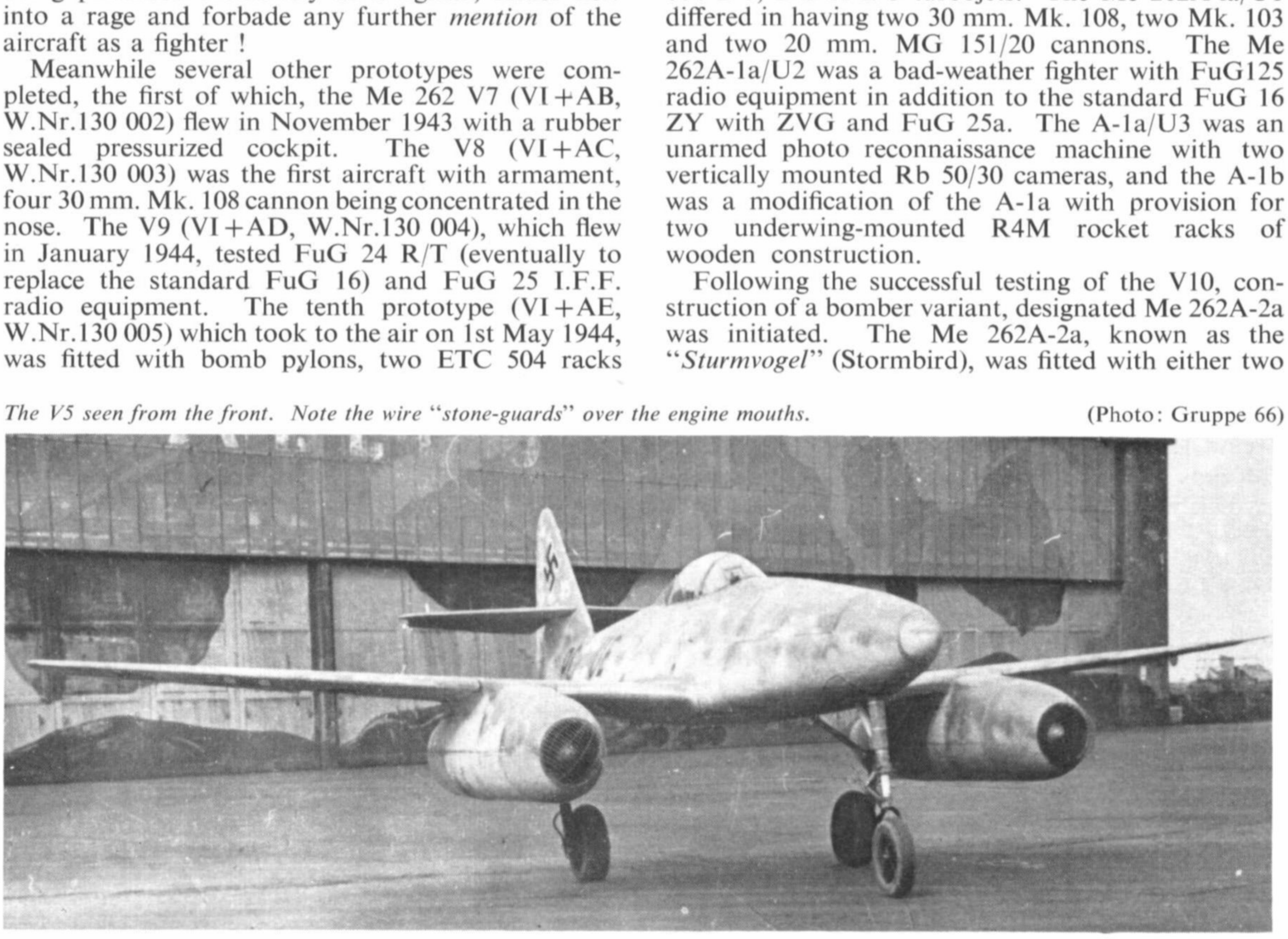
*The Me 262 V5, PC+UE, was fitted with a fixed nosewheel undercarriage. Note the rocket-assisted take-off units mounted below the fuselage.* (Photo: Imp. War Mus. HU2967)

being installed under the forward fuselage. The Me 262 V12 (VI+AG, W.Nr.130 007) was a special high speed test aircraft which first flew on 6th July 1944. Fastest of all variants, the V12 was specially streamlined and achieved a speed of 624 m.p.h.

Thirteen Me 262A-O pre-production aircraft were completed in March and April 1944 and plans were made for mass production. The R.L.M. at last recognised the potential of the fighter in its Programme No. 223 which called for the production of 60 aircraft per month by May 1944. The initial production model was the Me 262A-1a "*Schwalbe*" (Swallow) which carried an armament of four nose-mounted 30 mm. Mk. 108 cannon and was powered by Jumo 004 B-1, B-2 or B-3 turbojets. The Me 262A-la/U1 differed in having two 30 mm. Mk. 108, two Mk. 103 and two 20 mm. MG 151/20 cannons. The Me 262A-1a/U2 was a bad-weather fighter with FuG125 radio equipment in addition to the standard FuG 16 ZY with ZVG and FuG 25a. The A-1a/U3 was an unarmed photo reconnaissance machine with two vertically mounted Rb 50/30 cameras, and the A-1b was a modification of the A-1a with provision for two underwing-mounted R4M rocket racks of wooden construction.

Following the successful testing of the V10, construction of a bomber variant, designated Me 262A-2a was initiated. The Me 262A-2a, known as the "*Sturmvogel*" (Stormbird), was fitted with either two

*The V5 seen from the front. Note the wire "stone-guards" over the engine mouths.* (Photo: Gruppe 66)




*The V6, VI+AA, W.Nr.130 001, the first aircraft to be fitted with a retractable nose-wheel undercarriage. Gerd Lintner flew the aircraft on display before Hitler on 26th November 1944.* (Photo: via Messerschmitt AG.)

ETC 504 or two *Wikingschiff* bomb racks which enabled a 2,200 lbs. bomb or two 1,100 or 550 lb. weapons to be carried. The Me 262A-2a/U1 had two 30 mm. Mk. 108 cannon removed to make way for a TSA bombsight, and the A-2a/U2 was fitted with a bulged wooden nose, the forward part of which was glazed, allowing a bomb aimer equipped with a standard Lotfe 7D bomb sight to be carried.

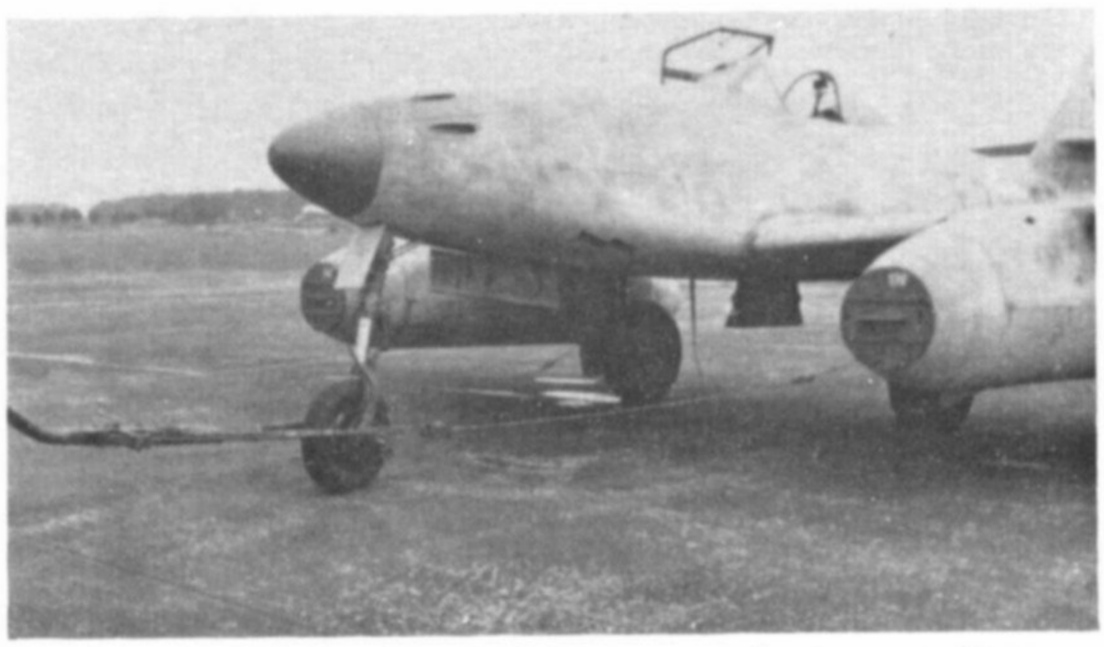
The Me 262A-3a was a ground attack aircraft with additional armour protection for the pilot and fuel tanks. The Me 262A-4a was a project for an unarmed photo-reconnaisance aircraft with two Rb 50/30 cameras which was cancelled in favour of the more easily converted Me 262A-1a/U3. The Me 262A-5a was an armed photo-reconnaissance aircraft with Rb 50/30 cameras, two 30 mm. Mk. 108 cannon and provision for two 66 Imp. gallon drop tanks.

## NOWOTNY'S SWALLOWS

The first Me 262A-0's were delivered to the E-2 department of *E-Stelle Rechlin* during the summer of 1944. *E-Stelle Rechlin* was a purely experimental test formation which possessed a maximum of fifteen Me 262's. The first semi-operational jet unit was *Erprobungskommando 262* which also possessed about fifteen aircraft. It was commanded by the veteran Austrian pilot, Maj. Walter Nowotny, holder of the Knight's Cross with Oak Leaves, Swords and Diamonds and *ex-Gruppe-Kommandeur* of I./JG 54.

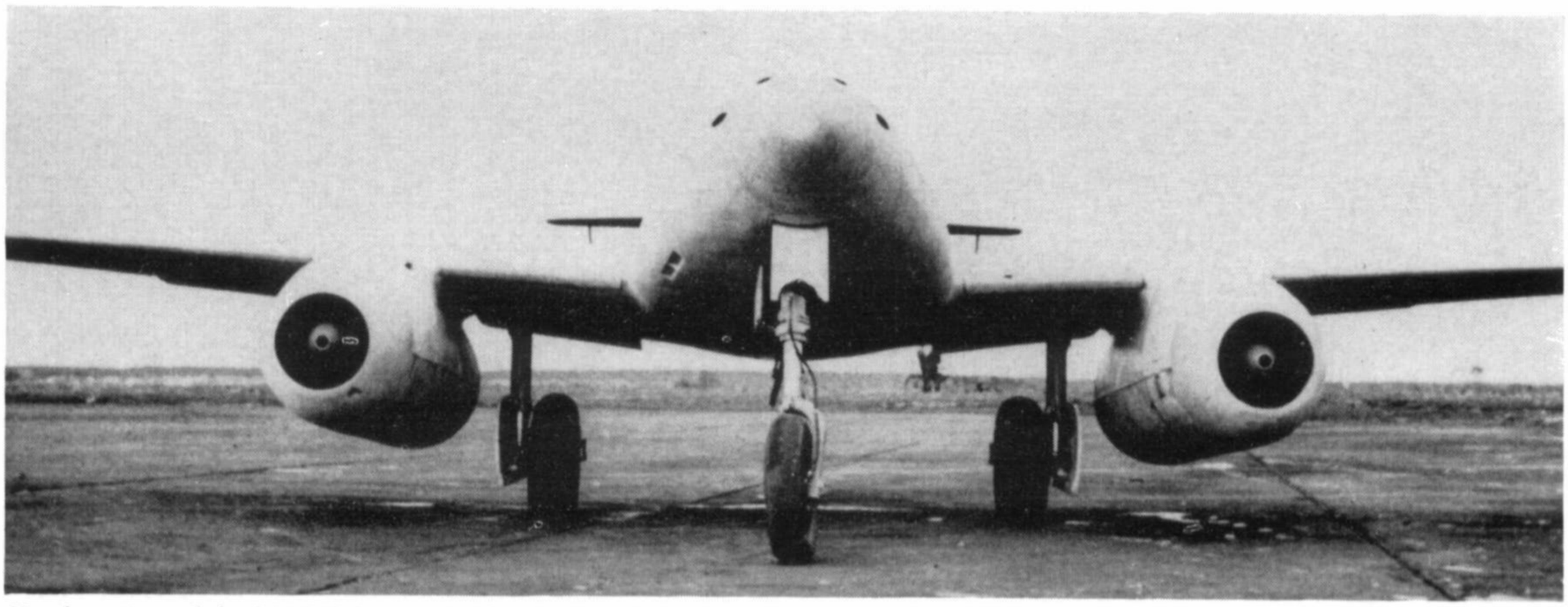
*Erprobungskommando 262* was disbanded in September 1944, its aircraft being transferred to a new fighter unit designated *Kommando Nowotny* after its leader. The unit had a nominal strength of forty

*An Me 262A, probably one of the thirteen pre-production batch machines, starts its port engine.* (Photo: PK)

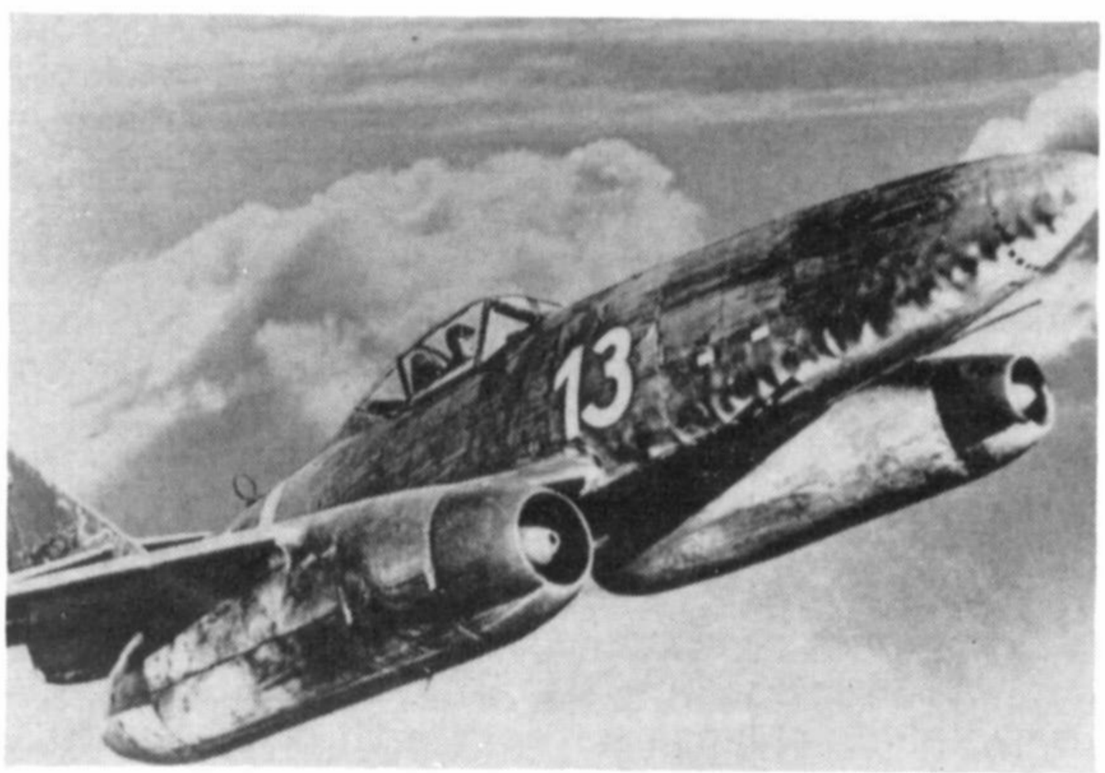


*E2+00, one of the Me 262A-0 pre-production machines at* Erprobungstelle Rechlin, *where it was used to test various bomb-sights.*

*Werke Nr. 130 167, an Me 262A-1a used by the Rechlin experimental establishment for various test programmes.*



*Head-on view of the Me 262A-1a; note the ejection shutes in the lower nose for the 30 mm. MK 108 cannon shell cases.*
(Photo: via Messerschmitt AG.)



Left: *The Me 262A, W.Nr.130 056, experimentally fitted with Lichtenstein SN-2 radar.* Right: *Air-to-air study of an Me 262-1a of* Kommando Nowotny. *The swastika on the fin has been obscured by retouching at some stage.*
(Photos: via Messerschmitt AG.)

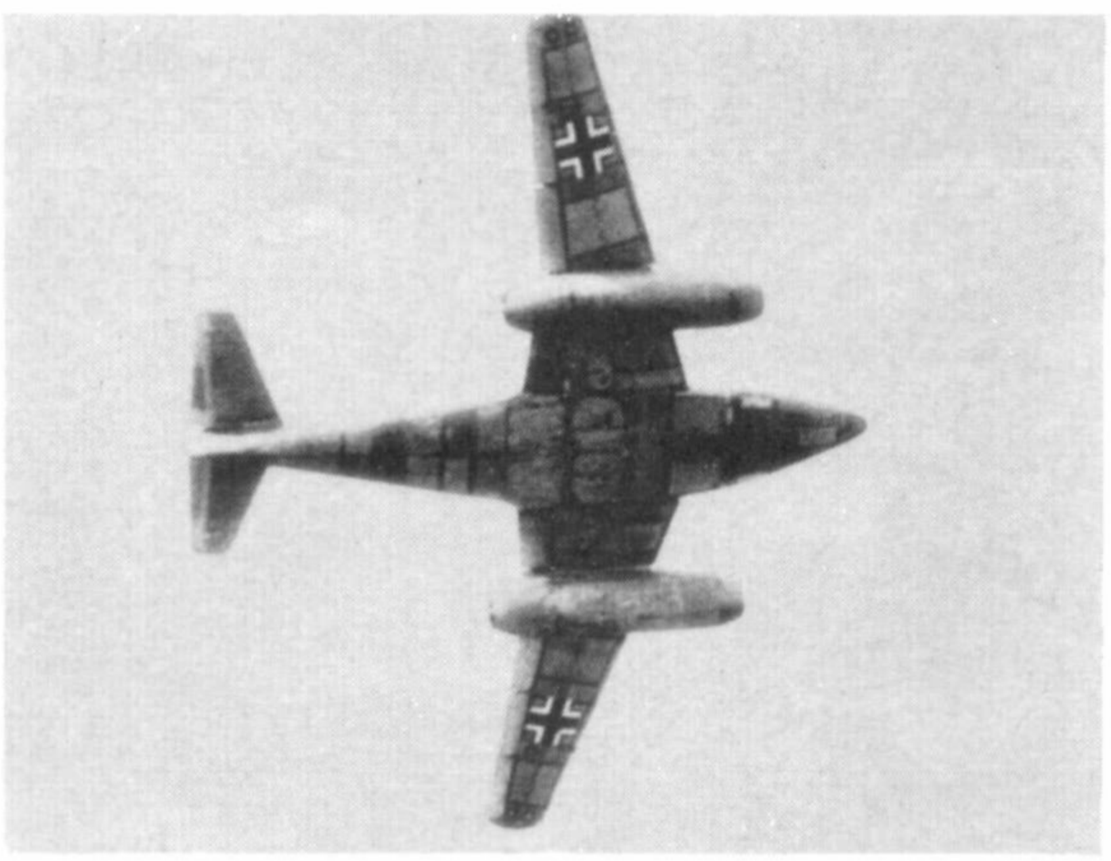
aircraft divided into two *Staffeln* based respectively at Achmer and Hesepe near Osnabruck. It became operational on 3rd October 1944, first casualties occuring a week later when two Me 262's were lost to Mustangs of the 361st Fighter Group, U.S. 8th Air Force.

*Kommando Nowotny's* operations were directed against U.S.A.A.F. bomber formations, a tactic which was considered by many leading *Luftwaffe* tacticians to be incorrect. They considered that the Me 262 should be used against the bomber's fighter escort, to force them to drop their long range tanks prematurely, and leave their charges undefended. However the Me 262 was used directly as an anti-bomber weapon and several aircraft were lost to U.S.A.A.F. fighters whilst slowing down in order to attack the bomber formation.

Losses were also experienced because of mechanical failures. 34% of these were due to undercarriage malfunctions, 33% to turbojet failures and 10% to the turbojets setting up oscillations in the tailplane and causing failures in the structure. The main failures in the undercarriage were due to the nose wheel collapsing and tyres bursting at the high landing speeds that were being experienced with the aircraft. A Siebel 204 had pre-spinning discs experimentally fitted to the wheels in an attempt to cure the trouble, but had little success. A Messerschmitt 262 (W.Nr.130 168) was also tested with two additional wheels in October 1944.

Because of these various troubles, *Kommando Nowotny* did not enjoy the success that had been anticipated. Finally, on 8th November 1944, Nowotny himself was killed after claiming the destruction of a third Allied aircraft. He was flying an Me 262A-1a (W.Nr.110 400), the third jet to be lost on that day. With the death of their leader, the *Kommando* was withdrawn from operations to form the basis of a

*Fine in-flight study of an Me 262A-1a.* (Photo: U.S.A.F.)

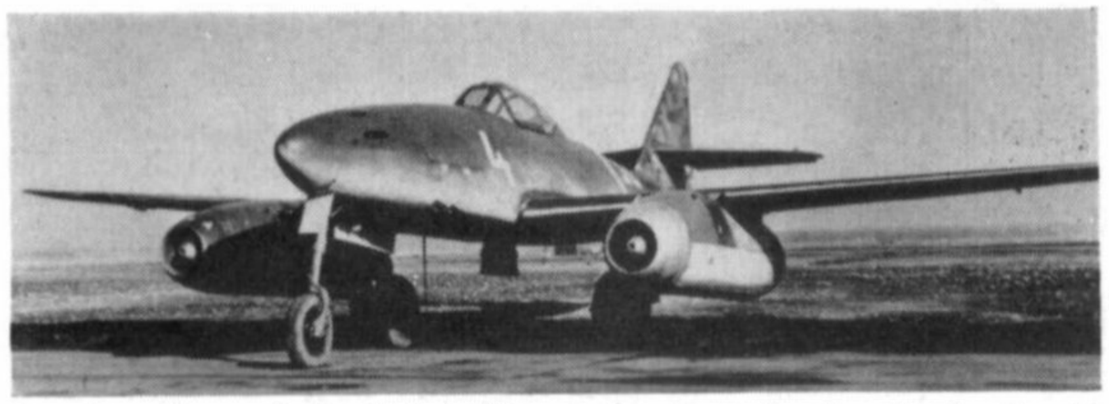


*W.Nr.112 385, an operational Me 262A-1a which served with the third* Staffel *of* Jagdgeschwader 7 "Nowotny". *Note the "running fox" insignia of the* Geschwader *on the nose of the aircraft. The numeral 8 and the single belly-band were in yellow.*
(Photo: U.S.A.F. official)

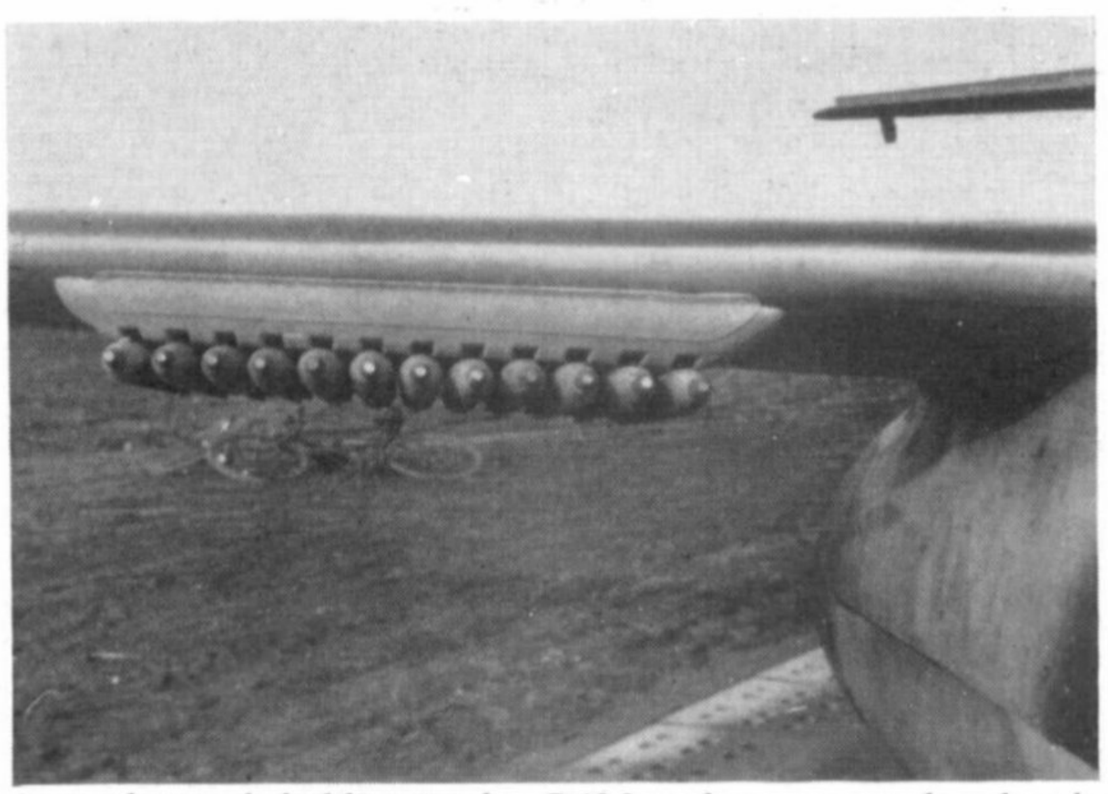
new fighter wing, to be designated *Jagdgeschwader 7* and named after Nowotny.

The first Me 262 bomber unit was formed from a detachment of KG 51 "*Edelweis*" and named after its commander, Maj. Wolfgang Schenk. *Kommando Schenk* became operational about the same time as *Kommando Nowotny* and gradually the remainder of KG 51 was re-trained on the Me 262. I./KG 51 under Maj. Kurt Unrau exchanged its Me 410's for Me 262A-2a's, its 3rd *Staffel* becoming operational with *Luftflotte 3* at Rheine in October 1944. The *Geschwader Stab* and II./KG 51 were also equipped with the Me 262A-2a and placed under *Luftflotte 3* control. An additional experimental Me 262 bomber unit, designated *Kommando Edelweis* was also established in late 1944.

The Me 262A-2a's of *Kampfgeschwader 51* often operated in conjunction with the less numerous Ar 234 B-2's of the *Geschwader Stab, 6 Staffel* and *III Gruppe* of KG 76. These bombing raids were of little more than nuisance value, but their high speeds demonstrated to the Allies the damage that could have been inflicted had the machines been developed with the full priorities.



*Another view of the* Schwalbe *pictured at the head of p.3; the numeral 4 and the single belly-band were in white.*

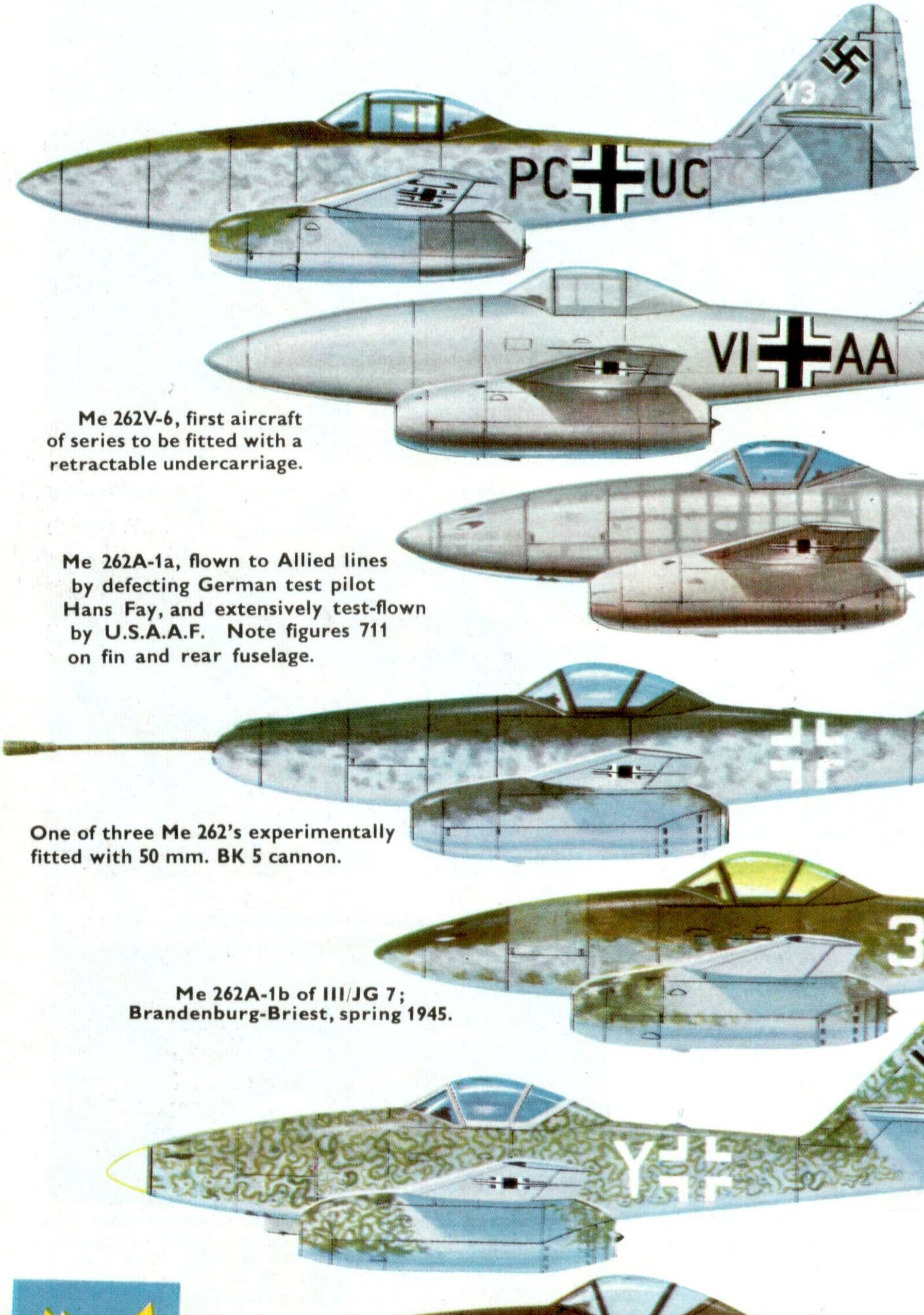


*A wooden rack holding twelve R4M rockets mounted under the wing of an Me 262A-1. Aimed with the standard Revi gunsight, these folding-fin projectiles were used against Allied bomber formations with devastating effect by the pilots of* Jagdgeschwader 7 *and the elite* Jagdverbande 44. (Photo: Gruppe 66)

## JAGDGESCHWADER 7

*Jagdgeschwader 7 "Nowotny"* was set up under the guidance of the veteran *Luftwaffe* fighter pilot, Obst. Johannes Steinhoff, ex-*Geschwader Kommodore* of JG 77 "*Herzas*". The unit was established with


*Line-up of Me 262A-1a's on a* Luftwaffe *airfield in the late spring of 1945. The nearest aircraft is W.Nr. 170 059.*




Me 262V-3, third prototype, and first aircraft of series to fly on pure jet power, 18th July 1942.

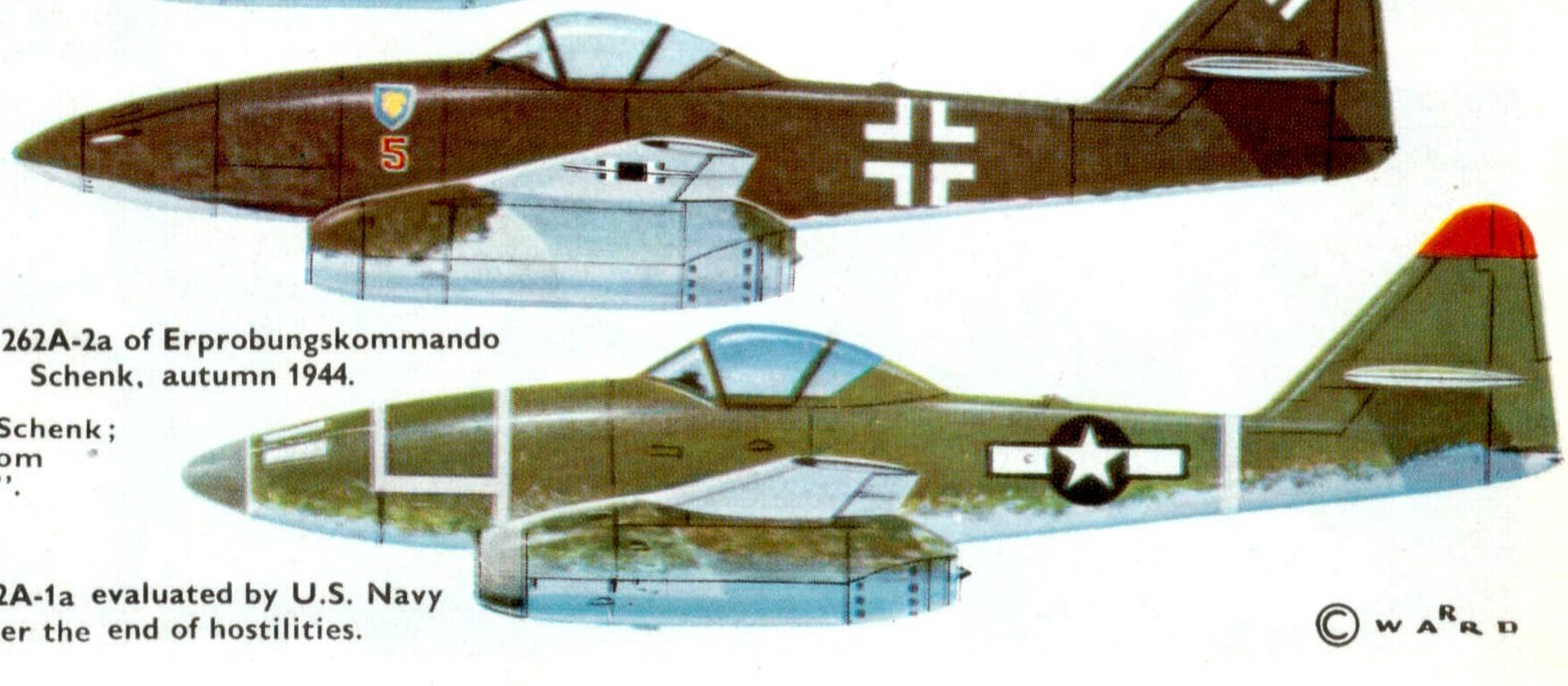
Me 262V-6, first aircraft of series to be fitted with a retractable undercarriage.

Me 262A-1a, flown to Allied lines by defecting German test pilot Hans Fay, and extensively test-flown by U.S.A.A.F. Note figures 711 on fin and rear fuselage.

One of three Me 262's experimentally fitted with 50 mm. BK 5 cannon.

Me 262A-1b of III/JG 7; Brandenburg-Briest, spring 1945.

Me 262A-2a of I/KG 51; Achmer, spring 1945.




Me 262A-2a of Erprobungskommando Schenk, autumn 1944.

Erprobungskommando Schenk; personnel drawn from KG 51 "Edelweiss".

Me 262A-1a evaluated by U.S. Navy after the end of hostilities.

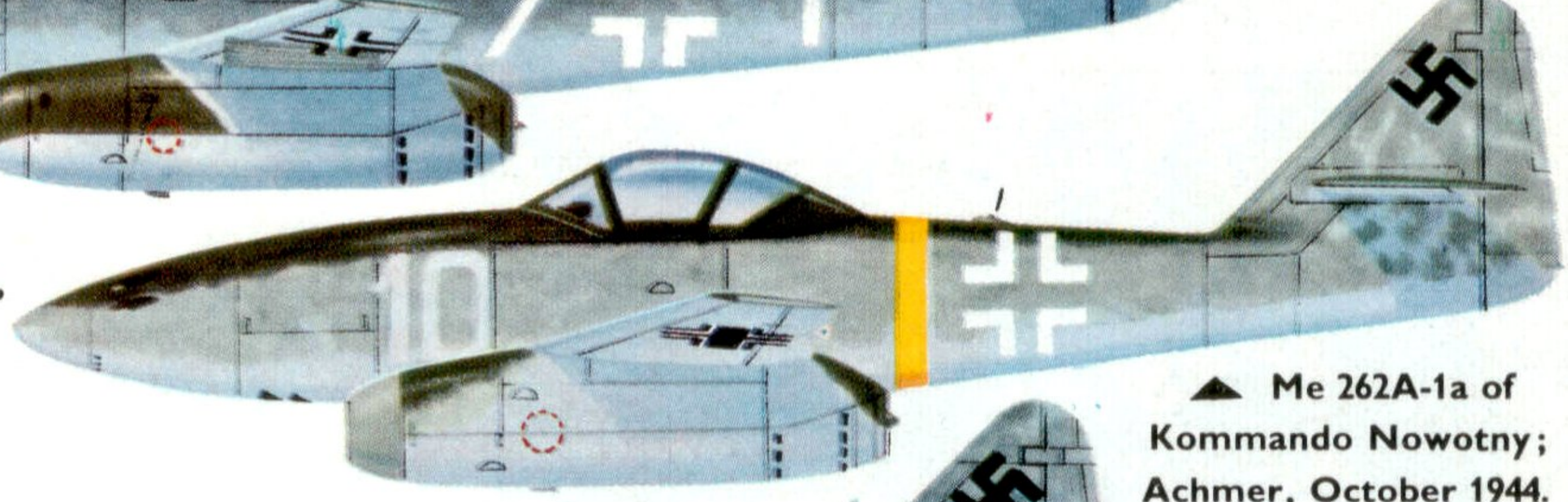
Me 262A-1a of 3/JG 7 "Nowotny"; Brandenburg, March 1945.



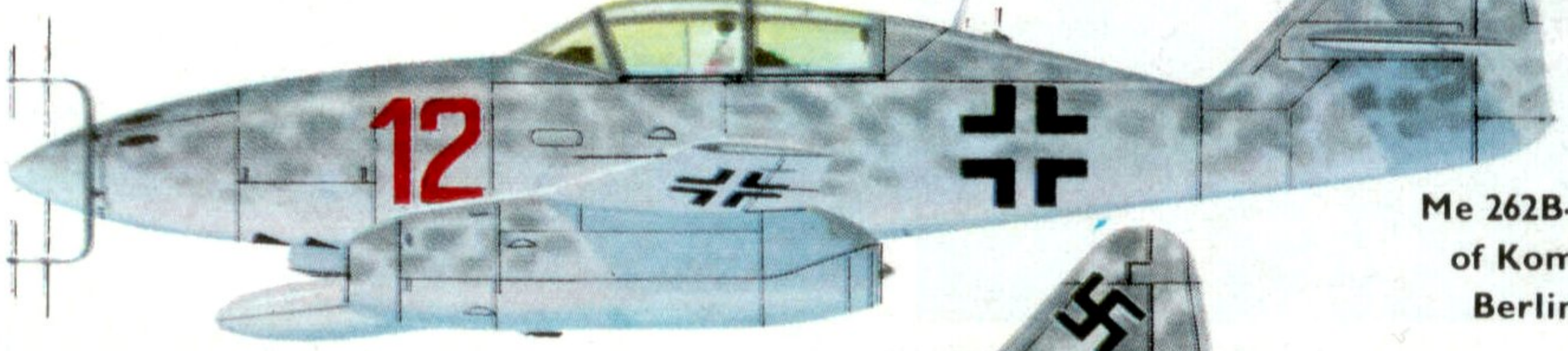
Jagdgeschwader 7.

Jagdgeschwader 7 variation: starboard side presentation.

Me 262A-1b of 7/JG 7 "Nowotny"; Parchim, early 1945.

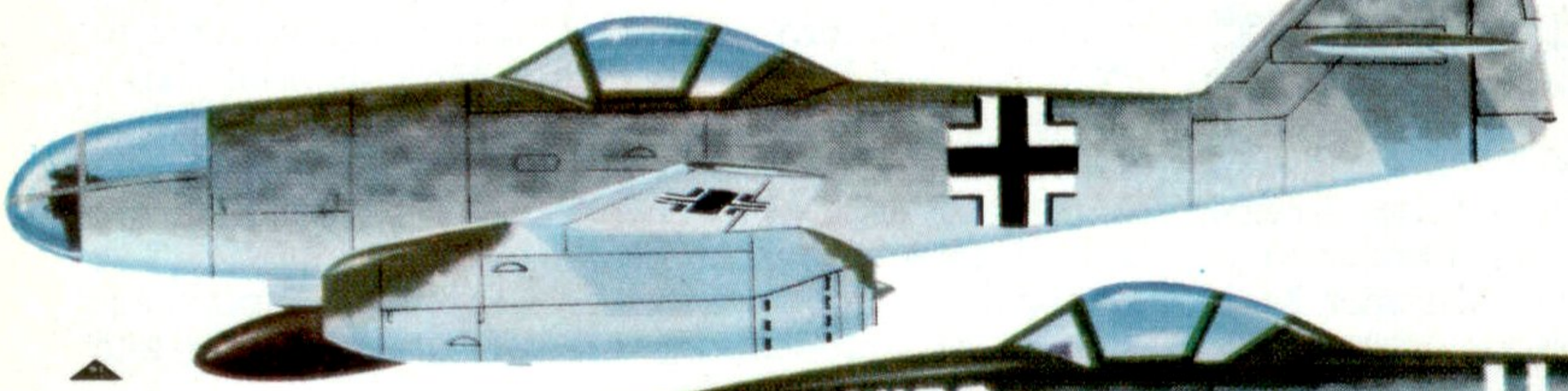


Me 262A-1a of Kommando Nowotny; Achmer, October 1944.

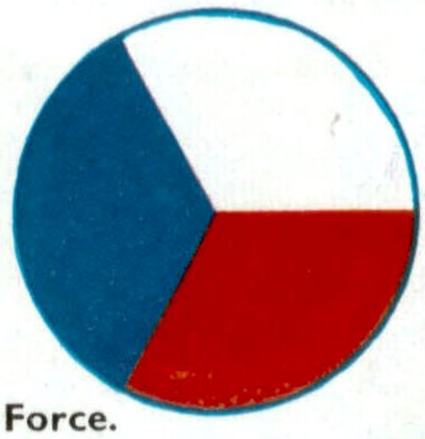


Me 262B-1a/U1 night fighter of Kommando Welter; Berlin, Spring 1945.

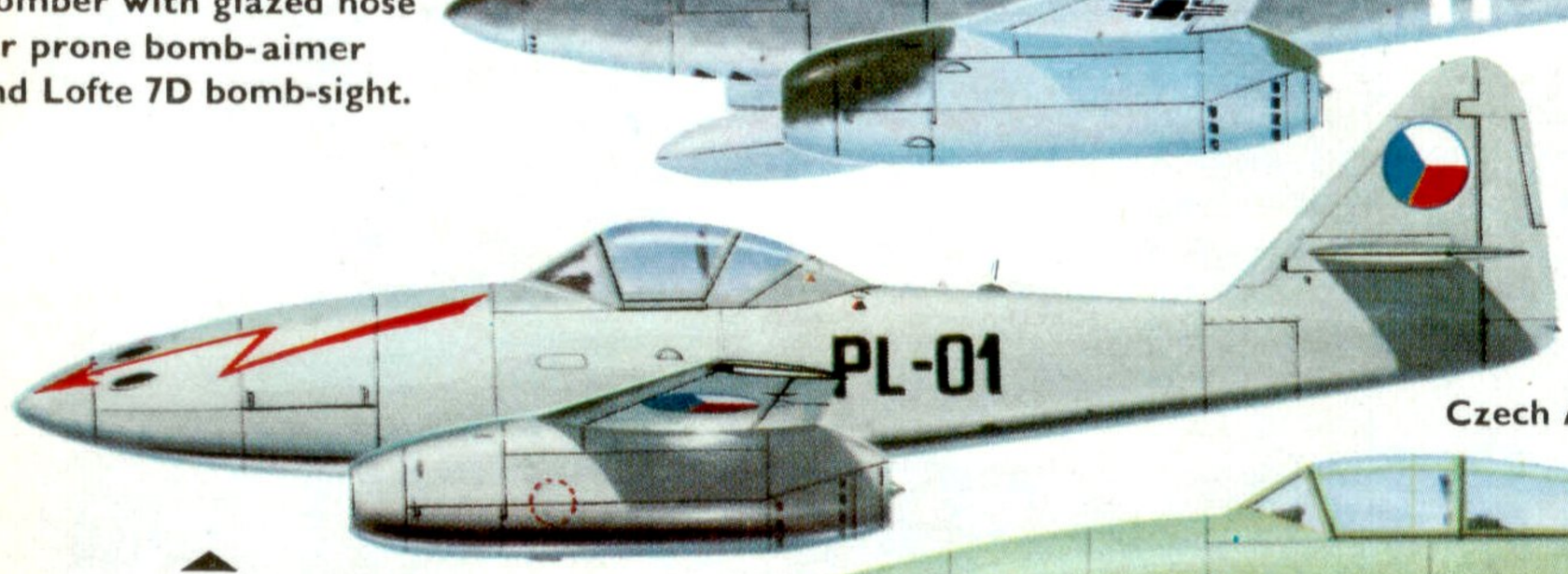
Me 262C-1a experimental rocket-propelled fighter. W.Nr.130 186.



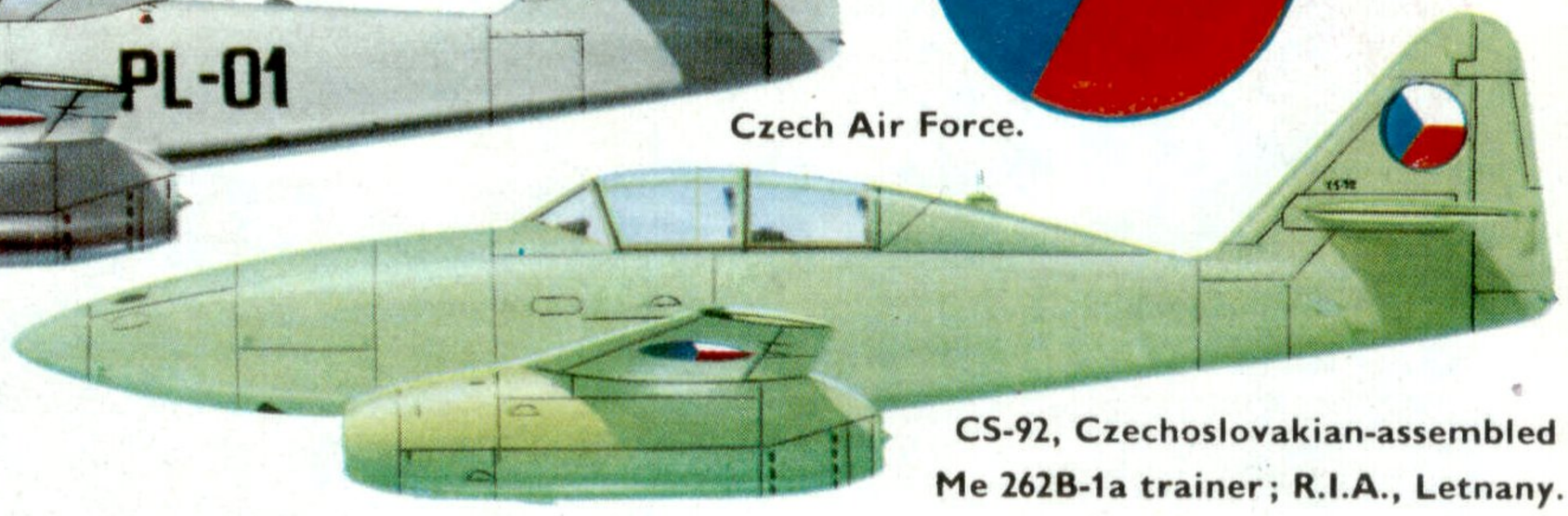
Me 262A-2a/U2 experimental bomber with glazed nose for prone bomb-aimer and Lofte 7D bomb-sight.



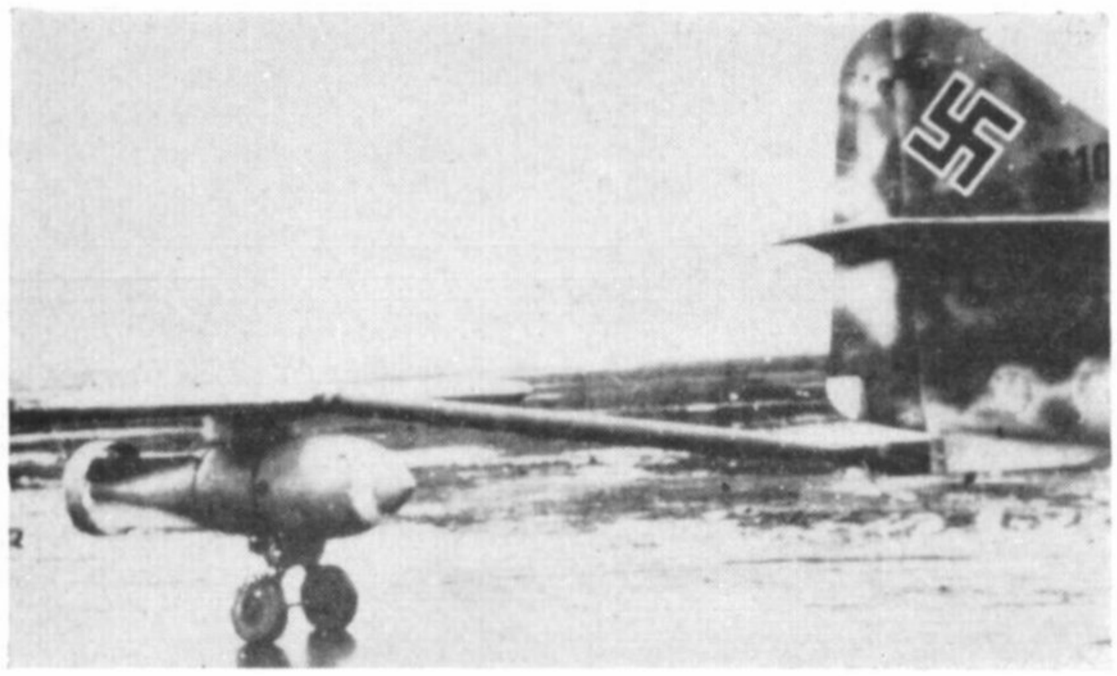
Czech Air Force.



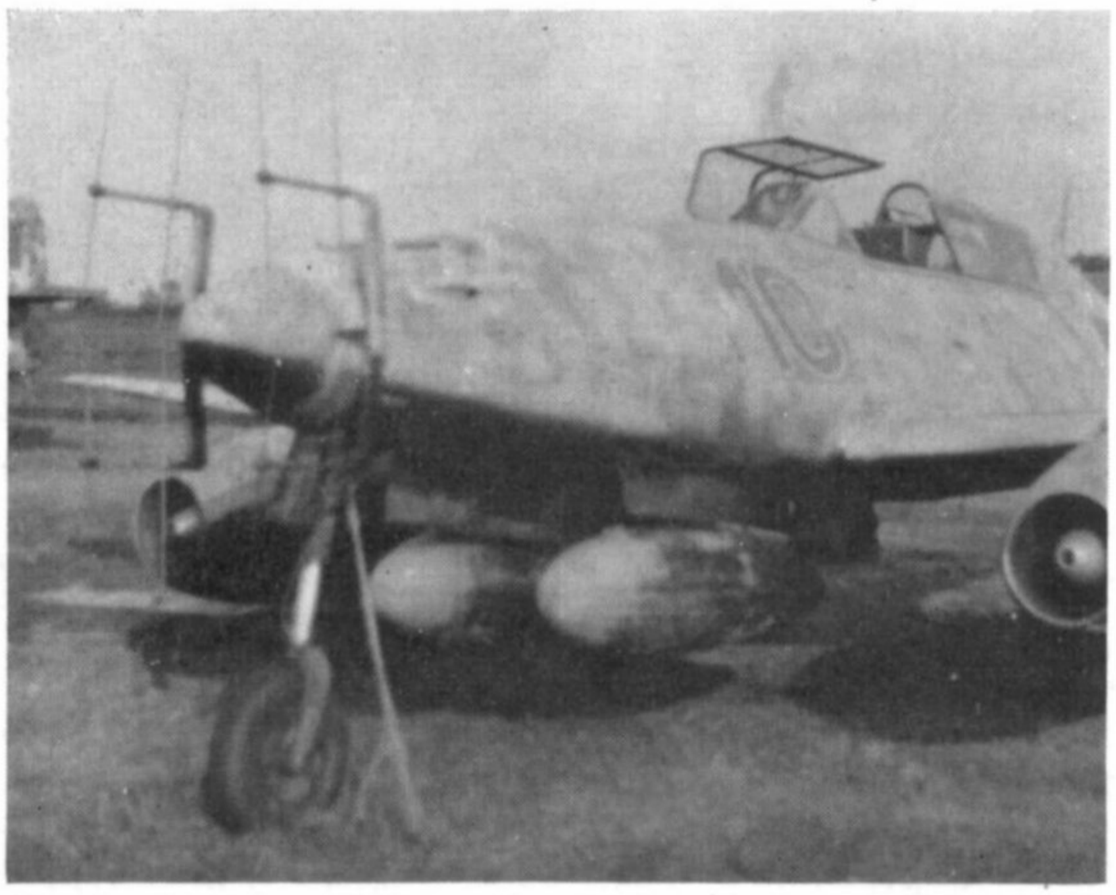
S-92, Czechoslovakian-assembled Me 262A-1 employed in high speed research by Research Institute for Aerodynamics at Letnany.



CS-92, Czechoslovakian-assembled Me 262B-1a trainer; R.I.A., Letnany.



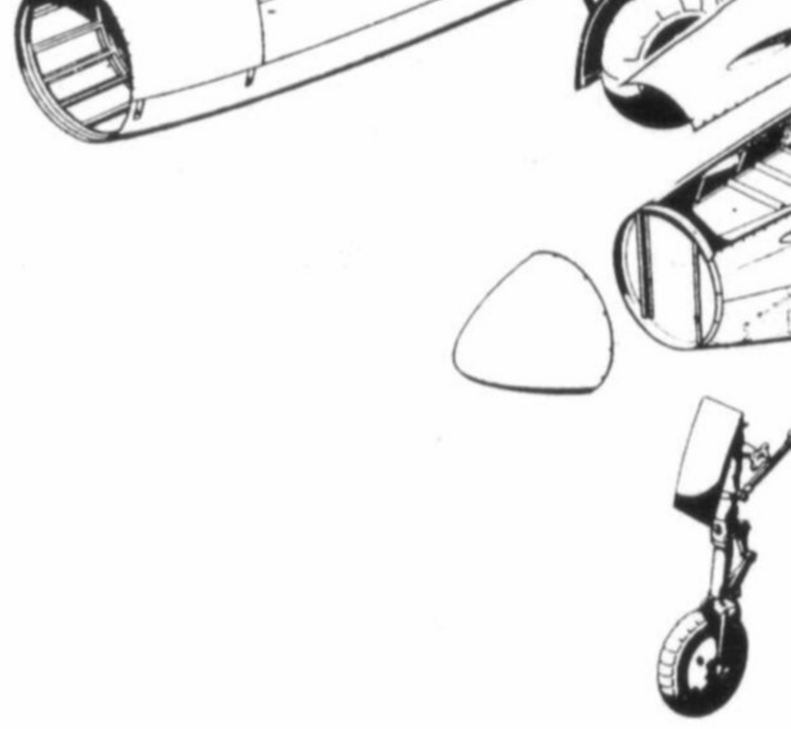
*"Trailer-bomb" test on the Me 262 V10, W.Nr.130 005. This machine, coded VI+AE, was used in several bomb-carrying tests, including this series in which a tow-bar led back to a small airfoil under which was mounted an SC 500 bomb.*
(Photo: Archiv Heumann via Gruppe 66)



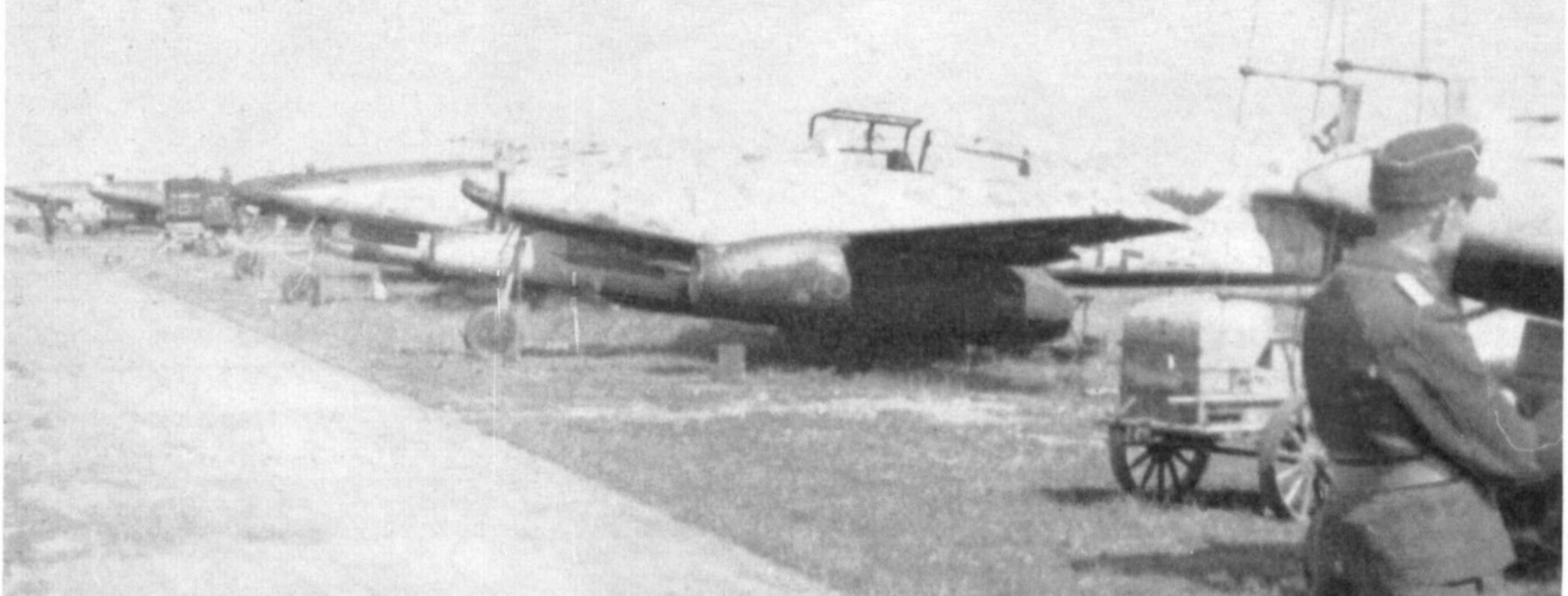
*Extremely rare photograph of the Me 262B-1a/U1 night fighter; this is red 10 of* Kommando Welter. *Note radar array and drop tanks carried on* Wikingschiff *racks beneath the nose.*
(Photo: via Alfred Price)

Me 262's plus a small number of Bf 109G's and was based at Brandenburg. The first *Gruppe* to see service was III./JG 7 which had been established under Maj. Erich Hohagen, but became operational under Maj. Rudi Sinner. Sinner scored his first victory on 26th December 1944 when he shot down a P-38 Lightning over Fullsteinhorn. III./JG 7 was then transferred to Parchim near Schwerin which became its home base.

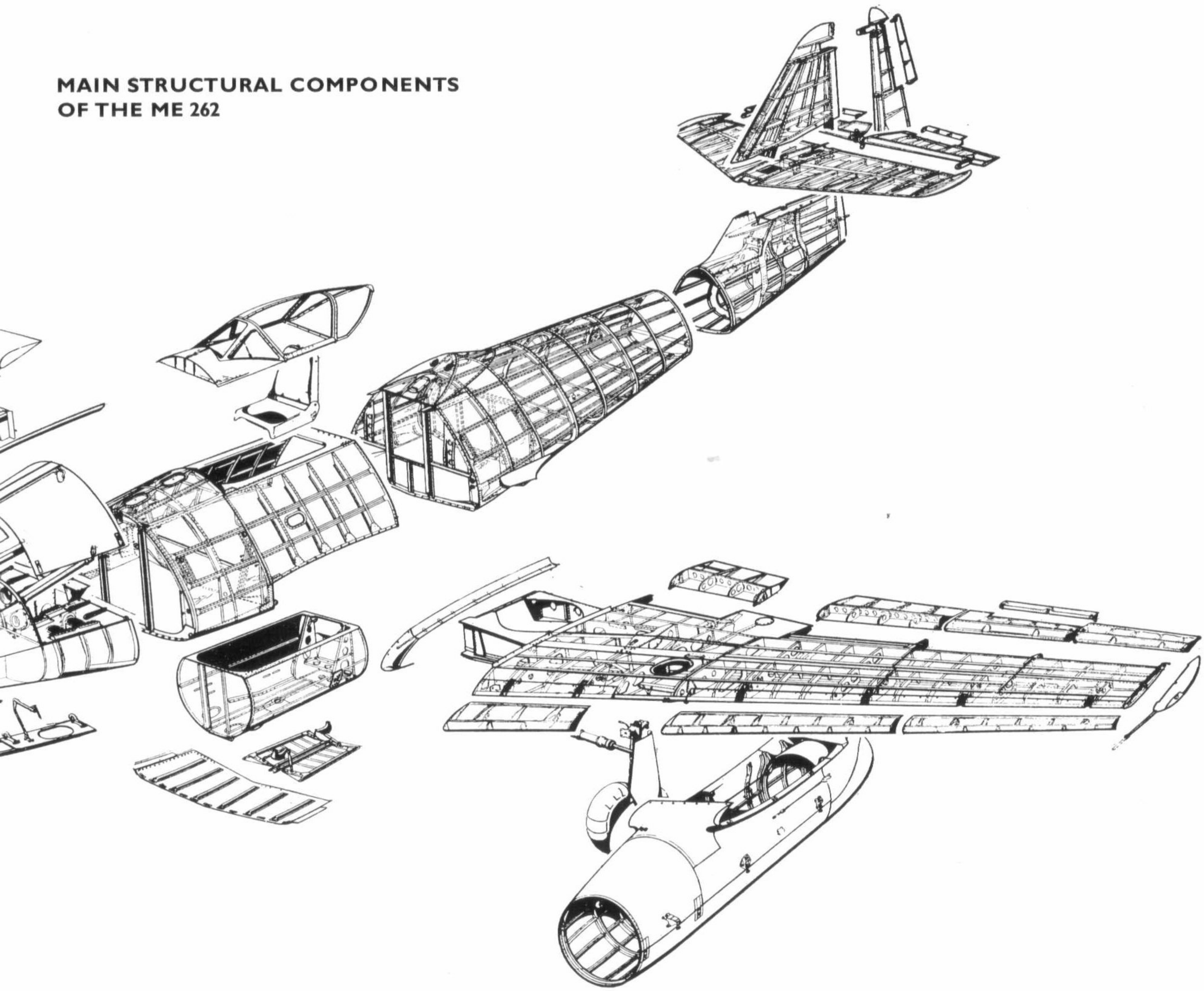
The *Geschwader Stab* of JG 7 was established shortly after *III Gruppe*, but did not become operational until after Maj. Theodore Weissenburger (from JG 5) took over command from Steinhoff. The establishment of two further *Gruppen* was planned; I./JG 7 at Brandenburg under Maj. Desdorffer and



*Line-up of Me 262B-1a/U1 night fighters, almost certainly serving with* Kommando Welter *in defence of Berlin in March 1945. The following month the unit, which had about ten machines on strength, was redesignated as the 10th* Staffel *of* Nachtjagdgeschwader 11.
(Photo: U.S.A.F.)



**MAIN STRUCTURAL COMPONENTS OF THE ME 262**



II./JG 7 at Neumünster under Maj. Erich Rudorffer, but only odd parts of these units were in fact formed. JG 7 always flew in elements of four (the *Schwarm*) two or three of these being assembled to bring the unit up to *Staffel* strength.

At Maj. Sinner's instigation, tests were carried out by *Erprobungstelle Rechlin*, *Jagdgruppe 10*, III./JG 7 and the Messerschmitt test pilot, *Flugkapitän* Fritz Wendel with the installation of R4M missiles. Twenty-four 55 mm. R4M unguided rockets were mounted beneath the wings of the Me 262 and fired from a distance of 650 yards, aiming being effected with the aid of a standard Revi gunsight. The R4M was an extremely effective weapon although aiming was to prove difficult with the high closing speeds of the Me 262. Several other advanced air to air missiles were developed for the "*Schwalbe*" including the R.100.BS unguided missile used in conjunction with "*Oberon*" radar and the Kramer X-4 guided weapon. Like the Me 262 itself, these weapons came too late.

As has previously been noted, inexperienced pilots suffered problems due to the radical nature of the Me 262. The aircraft itself possessed good handling characteristics, but had a different "feel" from that of a conventional piston engine machine. These problems obviously made the production of a two-seat trainer variant a priority consideration, and accordingly the Me 262B-1a was built. This was a tandem two-seat trainer, the rear seat of which displaced the other main fuel tank and necessitated the carrying of two 66 Imp.gal. drop tanks under the fuselage nose. The standard armament of four 30 mm. Mk. 108 cannon was retained, but only fifteen aircraft were completed before the end of the war.

Two training *Gruppen* were established during the late months of 1944, one for instructing bomber pilots, the other for fighter personnel. The latter unit was designated III./*Ergänzungsjagdgeschwader 2* and was equipped with the Me 262B-1a. It was based at Lechfeld, and formed in November 1944, pilots

*An Me 262A-2a bomber of the first* Staffel *of* Kampfgeschwader 51 "Edelweis", *based at Achmer during the spring of 1945. Note the so-called "wave-mirror" camouflage scheme, reminiscent of that applied to some* Luftwaffe *maritime aircraft. The machine was coded white Y, the character appearing in the same positions as the X on the aircraft shown in the five-aspect painting on p.2 of this* Profile.

being drawn from the then-defunct *Kommando Nowotny*. During the spring of 1945, both KG 6 and KG 27 were withdrawn from operations and slowly re-trained on the Me 262 in preparation for becoming fighter units under the new designation KG(J) 6 and KG(J) 27. The former unit had previously operated Bf 109's, I Gruppe having the K-4 variant, II Gruppe the G-6 and III Gruppe the G-10. Neither formation became operational before the end of the war. The other Me 262 training unit was IV.(Erg.) /KG 51 which supplied pilots for KG 51's bombing operations. The IVth *Gruppe* of a bomber *Geschwader* was always a training and replacement unit. 12./KG 51 had about ten pilots, several of whom were shot down whilst flying the Me 262.

## THE 262 NIGHT FIGHTER

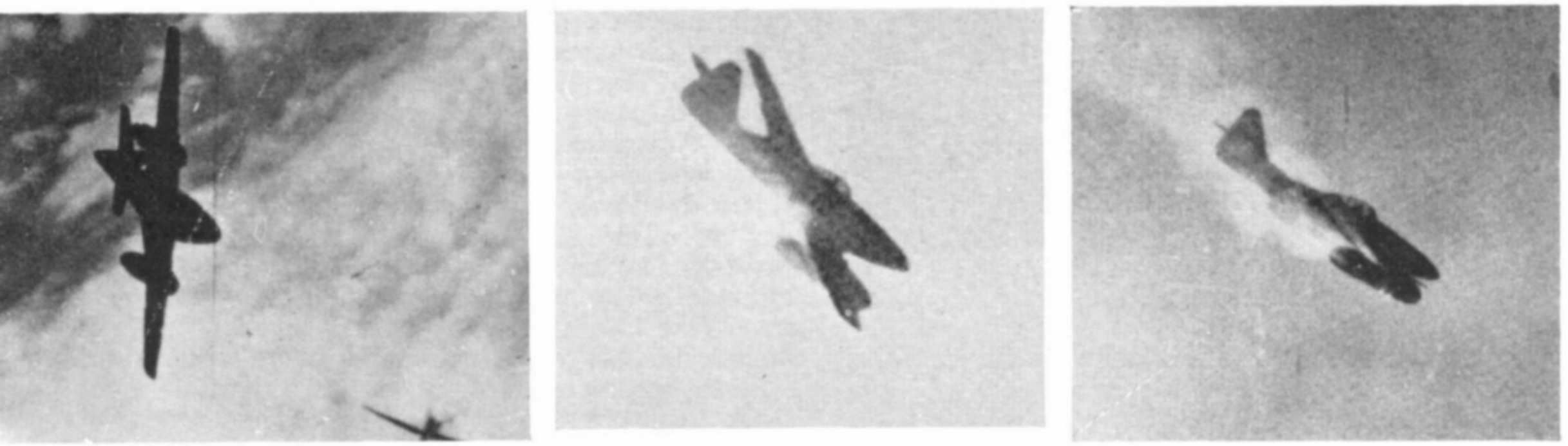
In October 1944, Oberst Hajo Herrmann of *Jagddivision 30* and Oblt. Behrens of *E-Stelle Rechlin* tested a Me 262A (W.Nr.130 056) fitted with SN-2 radar as a night fighter. They found that the machine was excellent for this purpose and consideration was given to the conversion of the Me 262B-1a for night-fighting. This variant, designated Me 262B-1a/U1 was fitted with FuG 218 "*Neptun V*" radar, FuG 35o ZC "*Naxos*" for homing on to the British H2S, FuG 16 ZY R/T, FuG 25a I.F.F., FuG 120a "*Bernadine*" and FuG 125 radio equipment. The "toasting fork" radar array reduced the maximum speed of the aircraft by some 37 m.p.h., which caused some concern.

*One of the three Me 262A's experimentally fitted with a 50 mm. cannon.* (Photo: via Messerschmitt AG.)

The main production night fighter variant was to have been the Me 262B-2a which employed an extra 3 ft. 11¼ in. section added to the rear fuselage. This enabled the machine to carry 638 Imp. gals. of fuel, almost double that of the previous variant. Two additional 30 mm. Mk. 108 cannon were mounted aft of the cockpit firing obliquely upwards in a "*Schräge Musik*" (Jazz Music) installation. Only one Me 262B-2a was built, although a second aircraft with centimetric radar in a blunt-tipped nose was ready for flight testing at the end of the war. It was anticipated that this feature would increase maximum speed by some 30 m.p.h.

The first experimental Me 262 night fighter unit was *Kommando Stamp* which was named after its leader, Maj. Gerhard Stamp, ex-*Gruppe Kommandeur* of I./JG 300. The unit was later re-designated *Kommando Welter* (after Maj. Kurt Welter) and equipped with approximately ten Me 262 night fighters. The unit was based near Berlin for the

*An Me 262A-2a of the test unit* Erprobungskommando Schenk, *formed to evaluate the operational capabilities of the bomber variants in the same way and at much the same time as* Kommando Nowotny *tested the aircraft's fighter potential. The unit was staffed by personnel of KG 51* "Edelweis" *and commanded by that* Geschwader's *C.O., Major Wolfgang Schenk.*



*Frames from combat film taken by two U.S. 8th Air Force P-51D pilots.* Left: *an Me 262 on the tail of another Mustang.* Centre and right: *surprised by the Mustang's attack, the* Luftwaffe *pilot dives away, his starboard engine smoking.* (Photos: U.S.A.F.)

defence of that city. During April 1945 the unit was re-designated into the special "*Wilde Sau*" night fighter unit, NJG 11, becoming its 10th *Staffel*, the other *Staffeln* operating the Bf 109G-14.

Towards the close of 1944, with the advance of Allied forces deep into German-held territory, it was decided to experiment with rocket-boosted variants of the Me 262 which could climb to interception heights quickly. The first of these was the Me 262C-1a which employed, in addition to the conventional Jumo 004 turbojets, a 3,750 lbs. thrust Walter HWK 109-509 A liquid fuel rocket engine mounted in the tail. The rocket exhausted beneath the modified rudder and was fed by a 198 Imp. gal. *C-Stoff* tank mounted forward of the cockpit and two 66 Imp. gal. drop tanks containing *T-Stoff*. The only Me 262C-1a to be built (W.Nr.130 186) made its initial flight on 27th February 1945 piloted by *Flugkapitän* Karl Baur. It attained an altitude of 38,400 ft. in no less than 4½ minutes; and this from a standing start !

A second rocket-boosted model was the Me 262C-2b. This was powered by two B.M.W. 003 R engines, each of which comprised a 1,760 lbs. thrust B.M.W. 003 A turbojet and a 2,700 lbs. thrust B.M.W. 109-718 rocket engine. The last named power plant proved difficult to control, and frequently blew up even on the test bench. Only one test flight was made with the Me 262C-2b (W.Nr.170 078) piloted by Karl Baur, but the power plants proved too complicated and the variant was abandoned in favour of the C-3a. The Me 262 C-3a had a jettisonable Walter 109-509 A-2 rocket mounted beneath the fuselage centre section, fed from a fuel tank positioned just forward of the rocket. No Me 262C-3a was completed before the capitulation.

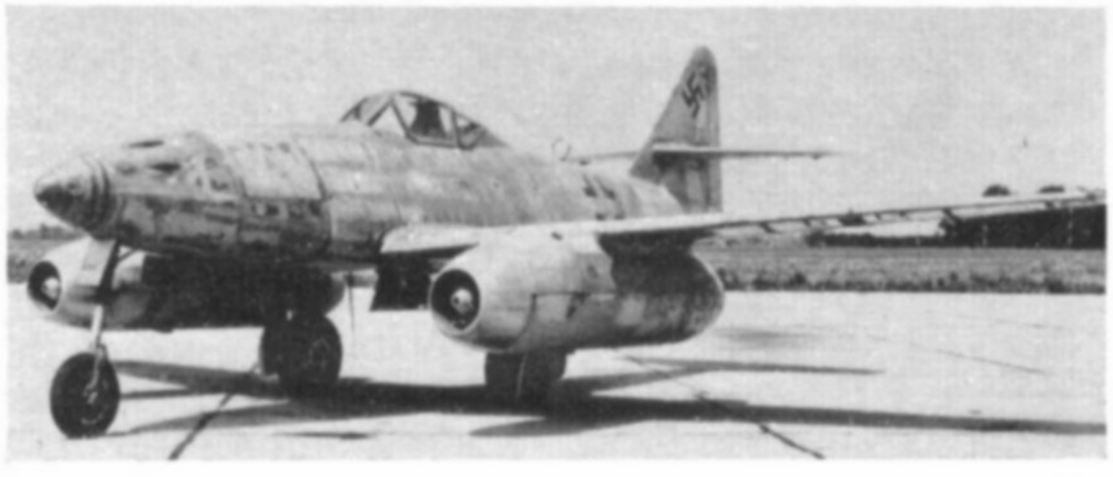
*An Me 262-2a, W.Nr.500 079, probably belonging to the* Geschwader Stab *of KG 51* "Edelweis"; *the aircraft was found at Giebelstadt by troops of the U.S. 12th Armoured Division in April 1945.* (Photo: U.S.A.F.)

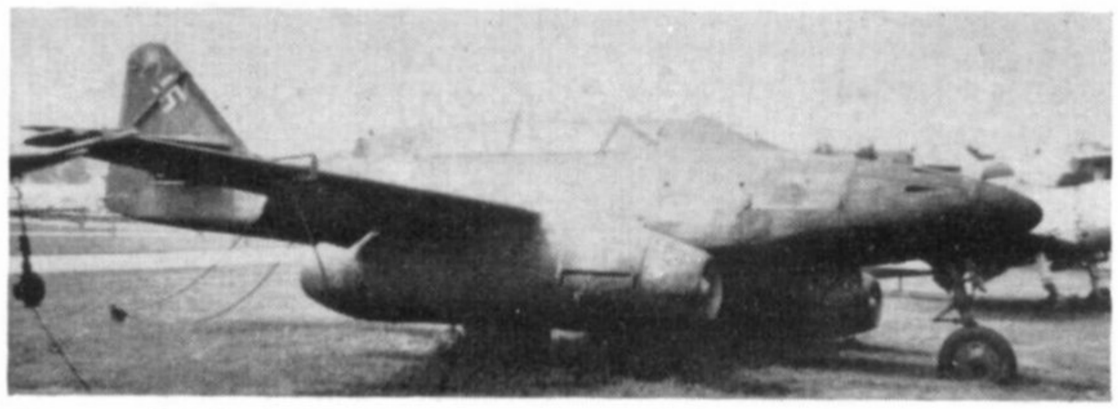
## ARMAGEDDON

During the winter of 1944/45 several new Me 262 units were established following the increase in production, which totalled 568 by 1st January 1945. *I Gruppe* of KG 54 "*Totenkopf*" under Maj. Hans Georg Bätcher, one-time *Geschwader Kommodore* of KG 100, exchanged its Ju 88A-4's for the Me 262 in January 1945. The Gruppe was re-designated as I./KG(J) 54 and operated as a conventional fighter unit from Giebelstadt near Würzberg. Earlier, in December 1944, a special Me 262 short-range observation unit had been formed under the command of Hptm. Brauegg, a famous reconnaisance pilot from the Eastern Front. Designated *Sonderkommando Brauegg*, the unit, which was equipped with the Me 262A-1a/U3, was re-designated into *Nahaufklärungsgruppe 6* as the *Gruppe Stab* and 2nd *Staffel* in the spring of 1945. NAGr 6, which also received a few Me 262A-5a's, was most successful in gathering information on Allied troop movements, being virtually immune to interception.

The *Versuchsverband Ob.d.L* (Experimental Unit of the High Command of the *Luftwaffe*) was a special experimental formation equipped with a combination of the most advanced German types and the latest *Allied* fighters. It was closely allied to the famous

*Two views of the Me 262A-1a, W.Nr.111 711, flown to Rhein-Main airfield at 13.45 hrs. on 30th March 1945 and surrendered by the defecting* Luftwaffe *test pilot Hans Fay. This was the first intact example of the German jet to fall into allied hands.* (Photo: U.S.A.F., Imp. War Mus. HU2744)





*Captured Me 262B-1a trainer, later flown by the U.S.A.F.*
(Photo: Imp. War Mus. HU2986)

*Kampfgeschwader 200*, forming with other units, *Fliegerführer 200*. 1./*Versuchsverband Ob.d.L.* was equipped with the Me 262 as early as July 1944, the 3rd Staffel also operating the machine a little later. There were also unconfirmed reports that the *Aufklärungsgruppe Ob.d.L.* operated the Me 262 for shadowing U.S.A.A.F. bomber streams, reporting their position to fighter control.

By the spring of 1945, *Luftwaffe* piston engined units had virtually disappeared from the skies. The jets however, which now had top priorities, were still very active. Operating from converted *autobahn* runways amidst the pine forests of Bavaria, the Me 262's of JG 7 and the newly formed JV 44 were active against the massive Allied bombing fleets which were ceaselessly pounding the heart out of Nazi Germany. *Jagdverband 44* was formed in January 1945 by Gen. Lt. Adolf Galland as an élite unit staffed by the most experienced pilots of the *Luftwaffe*. Ten were holders of the coveted *Ritterkreuz*:— Gen. Lt. Adolf Galland (RK-Br.); Obst. Gunther Lutzow (RK-S); Obstlt. Gerhard Barkhorn (RK-S); Obstlt. Wolfgang Späte (RK-EL); Maj. Erich Hohagen (RK); Maj. Walter Krupinski (RK-EL); Maj. Karl Heinz Schnell (RK); Oblt. Hans Gruenberg (RK); Oblt. Alfred Heckmann (RK) and Lt. Helmut Neumann (RK). After a period of working up with JG 7 at Brandenburg, the unit, which now comprised some fifty pilots, was transferred to München-Riem on 31st March 1945. JV 44 had a nominal strength of some 25 aircraft, but troubles with Jumo 004's and undercarriage failures meant that rarely more than 15 were operational at one time.

JV 44's aircraft, unlike those of JG 7, flew in elements of three (*Ketten*) and for bomber interception duties flew in groups of three *Ketten*. The aircraft were often equipped with R4M rockets and flew in either a Vee formation or in echelon, the rear elements at a higher altitude. After sighting with a standard Revi gunsight, the Me 262's would first fire their R4M's and then follow up with their 30 mm. cannon. Following the attack, which lasted little longer than six seconds, the aircraft would fly over the bombers, the fast-moving fighter presenting an impossible target to the bomber's gunners. In fact it was found that it was impossible to even track the Me 262 with the standard Bendix turret of the B-17G. After attacking, the aircraft would return to base singly or in pairs as lack of endurance prevented them from re-forming.

Despite their speed, several Me 262's were lost to Allied fighters. The inexperienced jet pilots would slow their aircraft down in order to gain manoeuvrability and allow sufficient time to aim, but this enabled the P-51 Mustangs and Hawker Tempests of the Allied Air Forces to bring their guns to bear. Over one hundred Me 262's fell to the guns of the P-47's and P-51's of the U.S. 8th and 9th Air Forces, twenty were destroyed by Tempests and several more by Spitfire IX's and XIV's of the R.A.F. During one notable action on 10th April 1945, no less than 20 Me 262's were shot down and a further 13 damaged by fighters of the U.S. 8th Air Force. The destruction of ten American "heavies" was little consolation for these losses.

One method of combating the fast-moving Me 262's was to place standing patrols of Allied fighters (usually Hawker Tempest V's) over the German airfields. The piston-engined fighters would then attack the Me 262's as they came in to land. These tactics, dubbed "Rat Catching", were quite successful until the introduction of heavier anti-aircraft defences made them impractical.

Maj. Sinner of III./JG 7 was shot down and injured on 4th April 1945 by Mustangs of the 355th Fighter Group, U.S.A.A.F. near Parchim. Obstlt. Wolfgang Späte (late of the famous Me 163 rocket-propelled unit, JG 400) took over command of the *Gruppe* which remained operational until the end of the war, although nominal strength was reduced to some twenty aircraft. Towards the end of April 1945, all surviving Me 262 units with the exception of III./JG 7 and JV 44 were disbanded and their aircraft flown to München-Riem for use by the last-named unit. By April 26th, no less than 95 Me 262's were at München, although most of JV 44's operations were being undertaken from the München/Augsburg autobahn, the centre reservation of which had been concreted over to provide an excellent emergency runway. Finally, JV 44 transferred to Salzburg-Maxglam where it surrendered to American armour on 3rd May 1945.

## EXTRACTS FROM ME 262A-1 AND A-2 OPERATING INSTRUCTIONS FOR PILOTS.

(From *Luftwaffe* Manual L.Dv.T.262A-1, A-2/F1 published January 1945).

**A. Preparation for take-off.**

*Airframe*. (1) Point the machine into the wind. (2) The pilot's seat is only adjustable on the ground, 3 positions. (3) The rudder pedals are adjustable for length, 3 positions. (4) When A.T.O. units are fitted only connect up the detachable plug immediately before take-off.

*Power unit*. (1) Fuel cocks to be closed . . . Throttle lever in the "Stop" position.

*Bombs*. (Me 262A-2 only) (1) Switch on fusing switch box. (2) The indicators of the loaded slips will respond. (3) Switch off fusing switch box.

*Safety Equipment*. Place parachute in position and test. (1) Put on the oxygen mask, check fitting.

*The Czechs also assembled at least one example of the Me 262B-1a trainer, designated CS-92; this photo was taken in 1963.*
(Photo: Zdenek Titz)

(2) See that the parachute oxygen bottle shows "Full". (3) Couple the short parachute oxygen tube to the aircraft supply. (4) Couple the tube from the oxygen mask to the long tube on the parachute. (5) Attach the snap hook of the emergency oxygen valve to the pilot's seat. (6) Open the remote control valve to the main oxygen supply . . . (7) Breathe. The oxygen indicator should blink. (8) Push the oxygen continuous flow button. The indicator should then operate. (9) Remove the oxygen mask. (10) Fill Verey cartridge containers.

**B. Starting.**

*Airframe.* (1) Place the chocks in front of main landing wheels but not . . . nose wheel. (2) Place protecting baskets in front of the air intakes of the engines.

*Powerplant.* (1) Push the red ringed automatic switch. The switch labelled "*Fernselbstschalter*" should be "Off" when an external source of current is connected. WARNING: Do not switch on the ignition button as otherwise there will be a danger of fire. (2) Press starting handle for 3 to 5 seconds. Starting fuel runs into the air intake of the Reidel starter. (3) Pull starting handle, this switches on ignition and starter of the Reidel. (4) The Reidel must start within 5 seconds, otherwise re-commence operations. (5) As soon as the Reidel is running, press the change-over switch which selects lower scale on the rev. counter. (6) Read revolutions on the inner scale of the rev. counter. (7) At approx. 800 r.p.m. press the button on the throttle lever. This causes starter fuel to be injected and ignited by means of sparking plugs. Engine revs. rise. (8) Watch the temperature. If there is too much flame or the temperature rises above the highest permissible point, release the button and allow the Reidel starter to continue running, i.e. go on pulling starter handle. (9) At about 2,000 r.p.m. release starter handle and rev. counter scale switch. Open fuel cock on port instrument bank. (10) Slowly move throttle from "Stop" position to "Idling" position. The ratchet lever clicks into the stop. Continue pressing the ignition button until 3,000 r.p.m. is reached. Do not move throttle past "Idling" position. (11) At 3,000 r.p.m. release the ignition button. The engine is now running on J-2 fuel. (12) Switch labelled "*Fernselbstschalter*" to "On". The engine is now idling.

**C. Running Up.**

(1) Gradually move throttle lever forward from 3,000 r.p.m. to 6,000 r.p.m. Temperature may not rise above highest permissable point. The control unit only operates above 6,000 r.p.m. Therefore if the throttle is moved forward too quickly there is a danger of considerable flame and thus of fire. (2) As from 6,000 r.p.m. gently move throttle lever to fully open. Watch temperature. Max. revs. 8,700+200. Gas temperature must remain constant after one minute. (3) Bring the throttle lever sharply back to the "Idling" position. This must not cause the engine to peter out. (4) With low oil temperatures the revs. may exceed the highest permissable by 250. On reaching operating temperature the revs. will drop again.

**D. Proceeding to Take-off.**

(1) The aircraft is towed to the take-off point. Use of towing gear essential. (2) The nose wheel prevents pivoting about a point and sharp turns. When towing or taxying remember that the mechanical stop limits the movement of the nose wheel to ± 50°. (3) According to ground conditions the aircraft begins to move at between 4,500 and 6,000 r.p.m. Keep engines running at equal speeds; in any event first allow the aircraft to get underway, then turn by applying the brakes to one wheel.

**E. Take-off.**

*Radio installation.*

(1) Switch on the FuG 16 ZY and FuG 25 A. After two minutes these units are ready for operation. (2) WARNING: When switching on the FuG 16 ZY set ensure that the selector switch on the junction box AD 18 Ys is at "FT". (3) Connect up helmet.

*Airframe.*

(1) Close the cockpit canopy. (2) Do not switch on pitot head heating on the ground. Do not switch on auxiliary tank pumps on the ground. (3) Rudder trimming should be neutral. (4) The tailplanes should be trimmed nose-heavy. 2-4 gradations according to tankage, which equals + 1°-2°. (5) Landing flaps in take-off position. The scale is on the outer port landing flap. (6) Head aircraft into take-off direction, keep brakes on until 7,000 r.p.m. has been reached. At commencement of take-off run select "Full load" position for throttle . . . (7) . . . (8) Retract undercarriage, apply brakes to wheels. The undercarriage button is on the port instrument bank. The safety shield must not be pushed to one side first of all. The switch automatically returns to the neutral position. If the indicator does not show "Up", press again. (9) Raise landing flaps. The switch is on the port instrument bank and the flaps will only move as long as the switch is held down.

**G. Cruising.**

*Power Unit.*

(1) Highest permissable revs., 8,700. Permissible for 15 minutes. This may only be exceeded in climb, combat and at great height . . . (2) . . . (3) *Fuel supply:* There is only a contents gauge for the main tanks. (a) Fuel should be taken from the two main tanks for the first five minutes after take-off. (b) Switch both power units to rear main tank until gauge shows 600 litres (*132 Imp. gal.*). (c) Switch on auxiliary tank pumps . . . (*Fuel was pumped from front auxiliary tank to rear auxiliary tank, to front and rear main tanks; the front receiving one fifth, the rear about four fifths of the supply*). (d) After 20 minutes switch over once again to front and rear main tanks. Thus by switching selectively from one to the other maintain an equal fuel level in both tanks.

**L. Landing.**

*Airframe.*

(1) Lower landing flaps to take-off positions at

*Originally used by the Research Institute at Letnany for high-speed studies, an S-92 is seen here at Olomouc-Holice airfield in 1957.* (Photo: Zdenek Titz)


*Rare photograph of one of the Me 262A-1a's assembled after the war in Czechoslovakia, under the designation S-92.* (Photo: Zdenek Titz)

500 km/h (311 m.p.h.). (2) Lower the undercarriage below 350 km/h (217 m.p.h.). (3) Flaps right down at 300 km/h (186 m.p.h.). The flaps can only be raised or lowered when the undercarriage switch is in the neutral position. The landing flaps stop moving as soon as the button is released. This may be anywhere between 0° and 55° and they are hydraulically locked. An overload safety valve is not fitted. (4) Touch down as though the aircraft had a tail wheel. With 2×200 ltr. (44 Imp. gal.) in the main tanks and all ammunition the speed at the airfield boundary is about 200 km/h (124 m.p.h.). (5) Do not apply brakes until the nose wheel has touched down. Use the nose wheel handbrake as well.

**N. Behaviour in Special Cases.**

*Going Round Again.*

(1) Slowly open throttle to 6,000 r.p.m., then gently to fully open position. Trim nose heavy. (2) At a safe height, raise flaps by stages. WARNING: The lowering of the undercarriage may not be interrupted. Only when both green indicators for the main undercarriage are visible may the undercarriage be raised again.

*Single-Engine Flight.*

(1) The throttle of the unserviceable engine must immediately be fully closed. Also close the fuel cock. (2) Trim the aircraft by means of trimming tabs on the rudder. A slight bank towards the running engine means less rudder and greater range.

*Single-Engine Landing.*

(1) Trimming tabs on rudder to be in the neutral position. (2) Maximum approach speed 260 km/h (162 m.p.h.). At this speed the aircraft drops between one and two metres per second at full throttle and with lowered undercarriage. (3) Only lower the undercarriage when the airfield can be reached without having to open the throttle again. Lower flaps.

*Re-Starting the Engine in Flight.*

Only possible under 4,000 m. (13,123 ft.). Do not use the Reidel starter as switched-off engine remains running.

(1) Reduce speed to between 300 and 350 km/h, about 3,000 r.p.m. on engine. (2) Open fuel cock. (3) Switch on ignition and when temperature has risen slowly move throttle lever to idling position.

## EXAMPLES OF Me 262's USED BY OPERATIONAL UNITS

*Kommando Nowotny:* 110 400 (Nowotny's aircraft, lost on 8/11/44), 110 522 (White "13"), 111 617 (White "9"), 170 049 (badly damaged 4/10/44), 170 310 (all but destroyed on 4/11/44, piloted by Ofw. Zander).

*I./JG 7:* 112 385 (Yellow "8").

*III./JG 7:* 110 407 (crashed on 1/1/45), 110 479 (Red "12"), 110 564 (White "8"), 110 775 (crashed on 19th.2.45), 111 008 (Green "2"—crashed on 17/2/45), 130 163 (E-Stelle Rechlin aircraft later transferred to JG 7), 130 178 (Red "1"), 130 180 (Red "13"), 500 039 (crashed on 1/1/45).

*KG 51:* 170 126 (shot down in December 1944 in Holland), 500 079.

*I./KG(J) 54:* 110 017, 110 467, 110 516, 110 532, 110 586, 110 653, 110 660, 110 718, 111 305, 111 362, 111 411, 111 511, 111 606, 111 613, 111 616, 111 620, 111 648, 111 662, 111 798, 130 183, 170 004, 170 015, 170 091, 170 301, 170 302, 170 361, 500 012, 500 024, 500 054, 500 069.



## SPECIFICATION

**Messerschmitt Me 262A-1a**

*Dimensions:* Span 40 ft. 11½ ins. Length 34 ft. 9½ ins. Height 12 ft. 7 ins. Wing area 234 sq. ft.

*Power plants:* Two 1,980 lbs.s.t. Junkers Jumo 109-004 B-1 turbojets with eight-stage axial flow compressor, six combustion chambers and single stage turbine. Two Walter 109-502 assisted take-off rockets could also be installed under the fuselage.

*Armament:* Four 30 mm. Rheinmetall-Borsig Mk. 108 automatic cannon with electro-pneumatic cocking and electrical firing, grouped together in the fuselage nose. The two upper cannon had 100 r.p.g., the two lower 80 r.p.g., the four being aimed to converge at about 500 yds.

*Weights:* Empty 9,741 lbs. Loaded 14,101 lbs.

*Performance:* Maximum speed 519 m.p.h. at sea level; 542 m.p.h. at 19,686 ft. and 478 m.p.h. at 39,372 ft. Landing speed 109 m.p.h. Climb rate: 6·8 minutes to 19,686 ft.; 13·2 minutes to 29,529 ft. and 26·0 minutes to 32,810 ft. Range: 298 miles at sea level; 526 miles at 19,686 ft. and 652 miles at 29,529 ft. Endurance: 50 to 90 minutes. Service ceiling: 36,091 ft. Take-off distances: 1,100 yds. (concrete) 1,400 yds. (grass). Landing distances: 1,100 yds. (concrete), 900 yds. (grass).

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