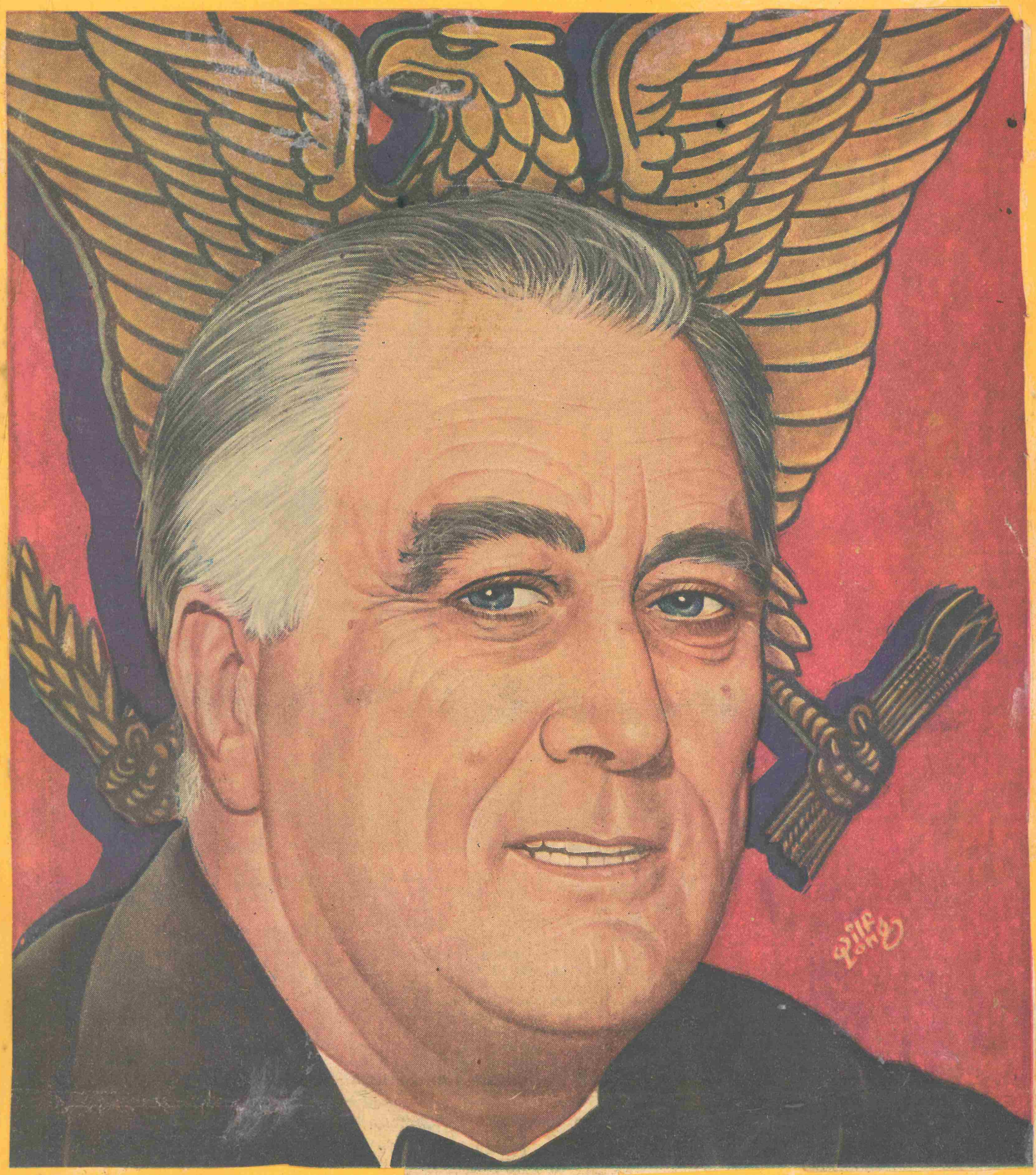
SOVEREIGN

Scrap Book



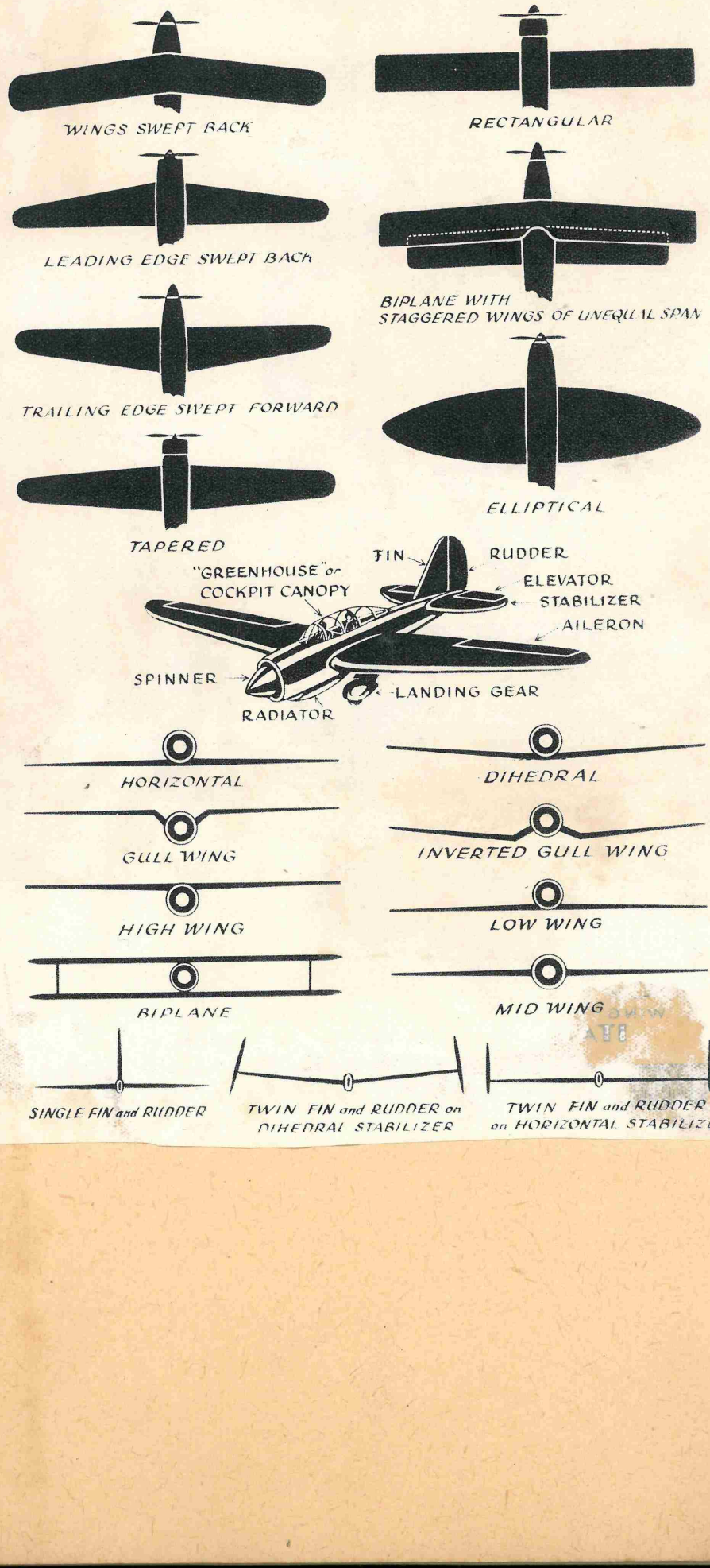
Franklin Delano Roosevelt

George
HANSEN
103

Plane Groups

1. Single engine single fin inline monoplane
2. " " " " radial "
3. Twin " " " " inline "
4 " " twin " " " "
5 Four " single " " "
6 " " " " "
7. " " twin " "
8 " " " radial "

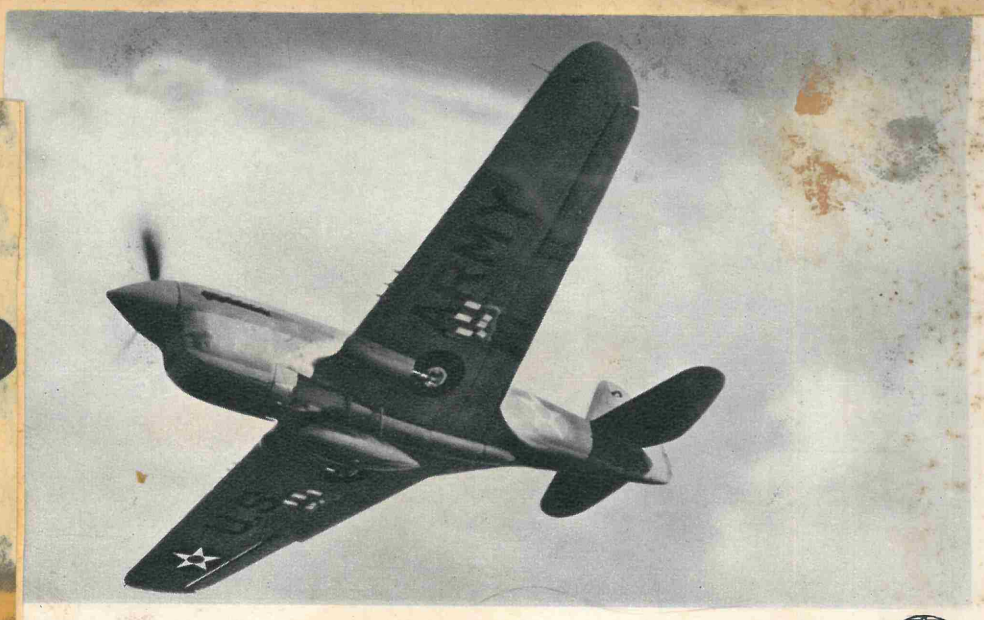
RECOGNITION POINTS



A 300 MILES per hour fighter monoplane used in co-operation with aircraft carriers of the Royal Navy, it is the fastest and newest fighter to be acquired by the Royal Navy. It was Fulmar machines taking off from the aircraft carrier Illustrious which escorted the torpedo-dropping Swordfish biplanes on the famous Taranto expedition on the night of November 11, 1940. They have taken drastic toll of both German and Italian airplanes, taking on all comers.

The Fulmar is heavily armed with a total of eight machine-guns distributed in the wings. The crew is normally two. Engine is the Rolls-Royce of 1,145-h.p., and, while no performance figures are available, it is thought that top speed of the Fulmar is in the neighborhood of 300 miles per hour.

1.



Official Photo, U. S. Army Air Forces

CURTISS P-40F "WARHAWK" (UNITED STATES)

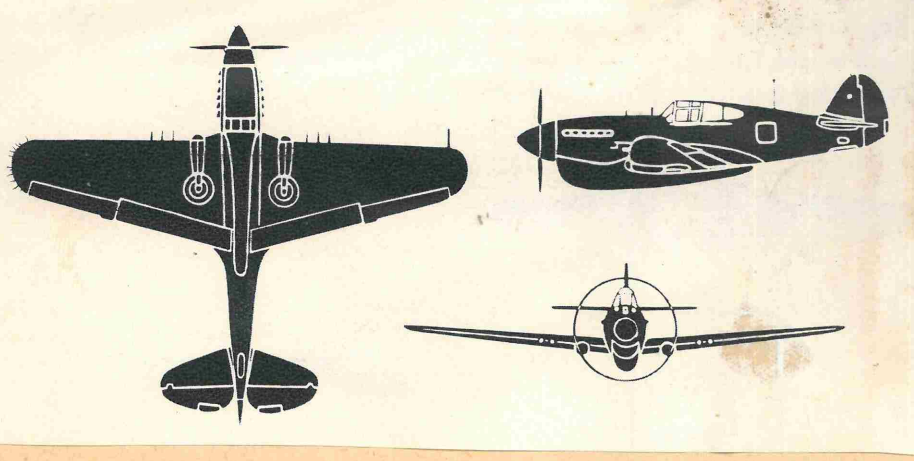
Markings

Description

Latest in the famous line of Curtiss P-40 series is the "Warhawk." It is very similar to the others in the series, but is the first to be powered by an American-built Rolls-Royce Merlin engine, which is a 12-cylinder V-type liquid-cooled engine developing 1,175 h.p. This ship is heavily armed and armored and is equipped with leak-proof tanks. All other data are restricted.

Recognition Characteristics

Almost identical with "Tomahawk" and "Kittyhawk" except for slightly different radiator shape. Plane pictured carries belly fuel tank for increased range. Can be jettisoned in flight.



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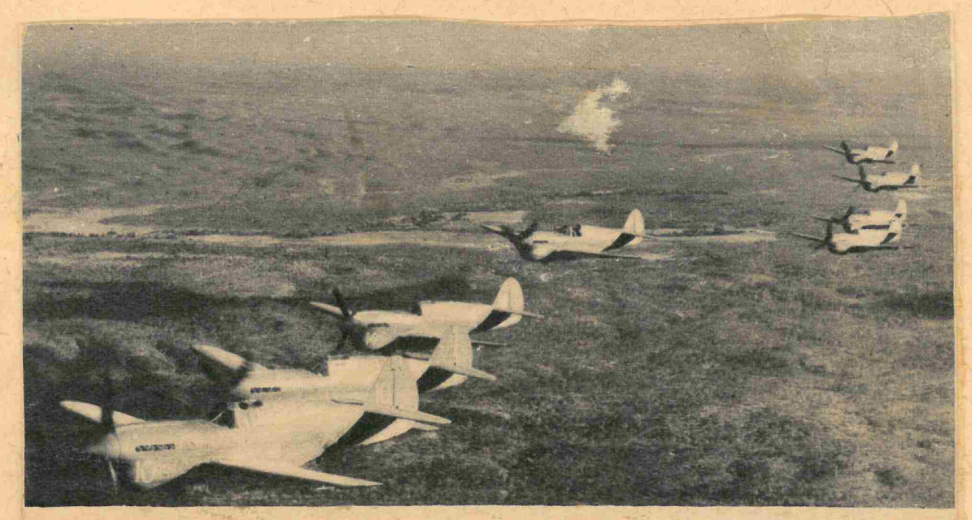
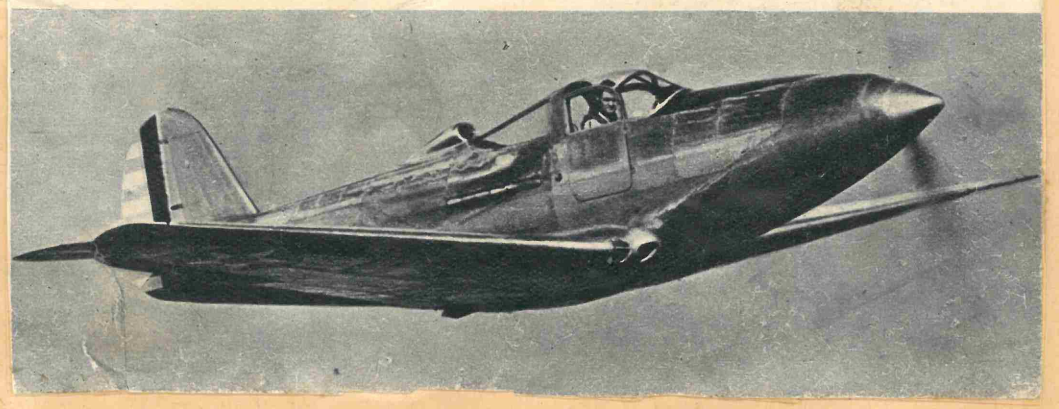


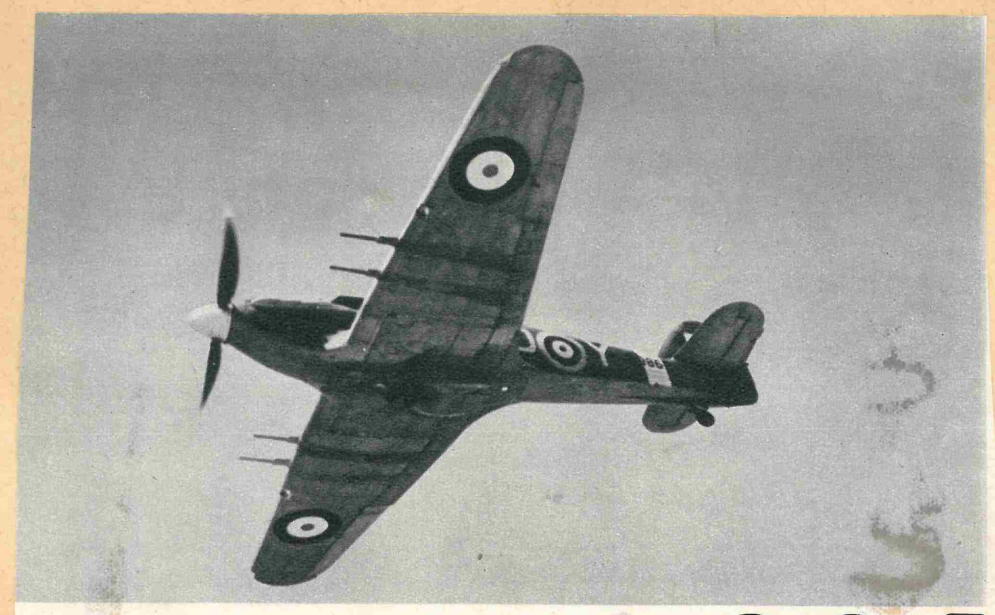
IN TIGHT FORMATION, "somewhere over Australia," these American P-40's and their American pilots are patrolling the airways. Their intention, as one observer puts it, is "to nip the Japs' Australian crawl."

1.

The new " Spitfires " have cannon guns mounted in the wings.

the Bell " Airacobra " (below) is the fastest single-engine machine in America.





British Press Service

HAWKER "HURRICANE IIc" (GREAT BRITAIN)

001

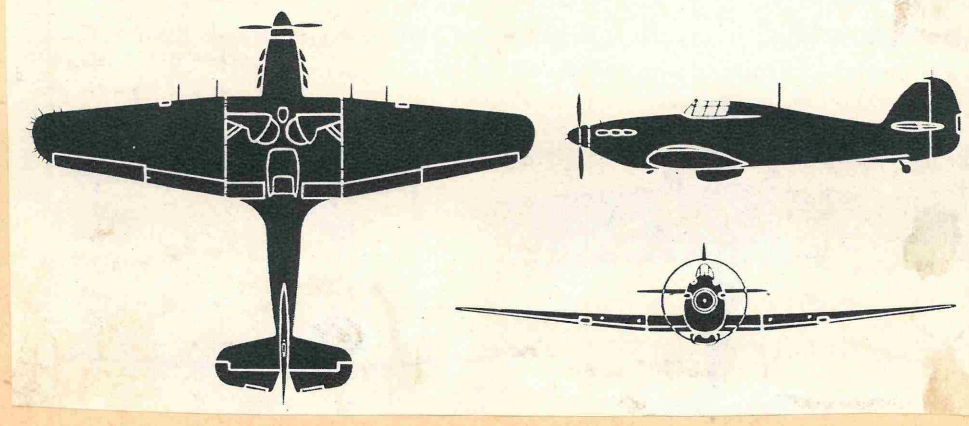
Markings

Description

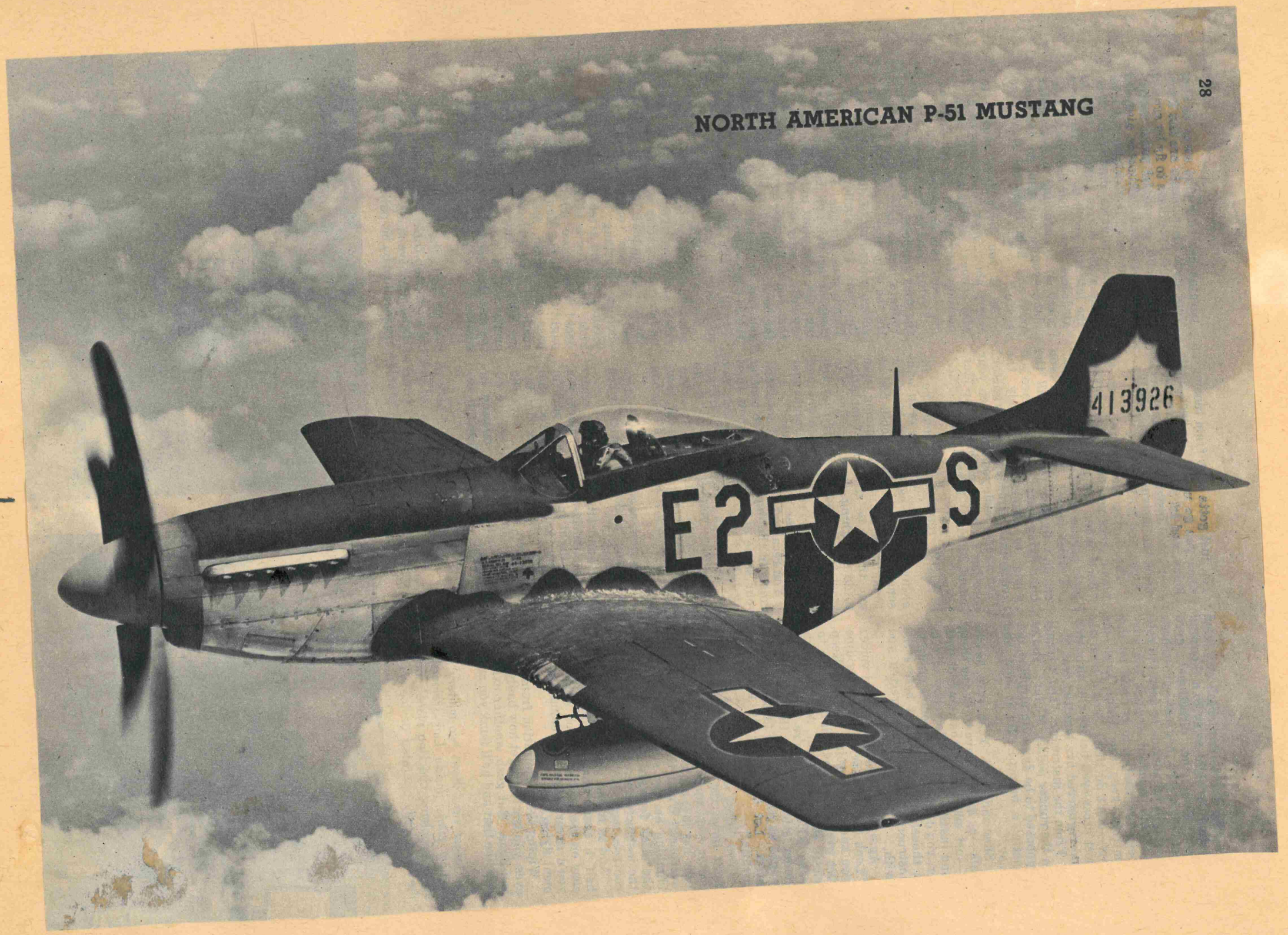
This is the latest version of the famed "Hurricane" single-engined, low-wing fighter of the RAF. It has been fitted with a new Rolls-Royce Merlin liquid-cooled engine and two models carry either cannon or machine guns. One model mounts 12 machine guns and the other four 20 mm. cannon. The plane pictured above is the cannon-armed type. Performance has been improved and the "Hurricane" has been called the "Hurry-bomber" since it and the American "Kitty-bomber" ("Kittyhawk") were used to carry bombs slung under their wings in addition to normal armament.

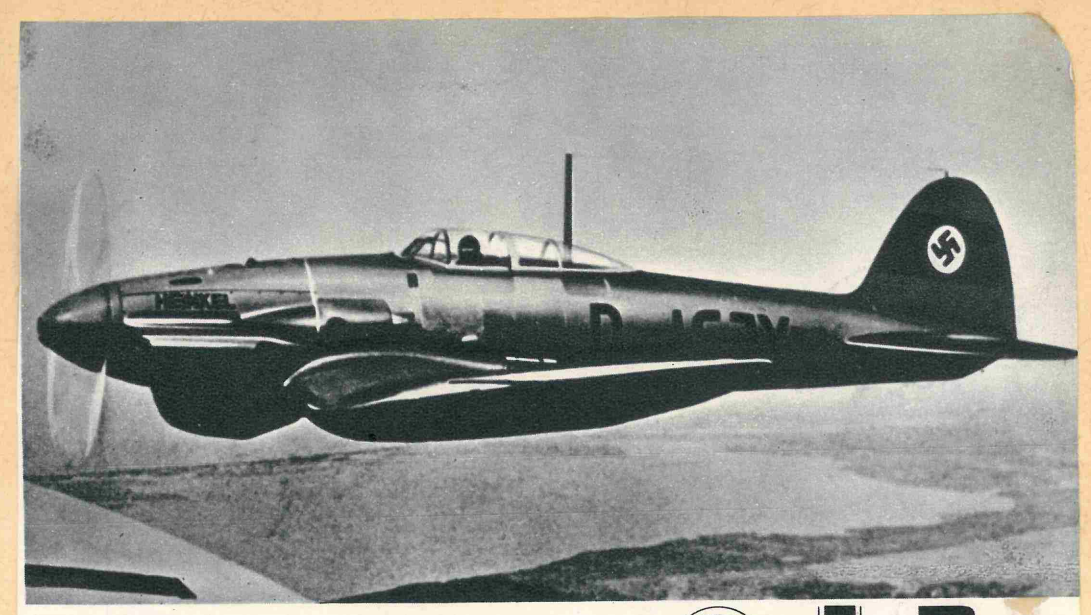
Recognition Characteristics

Low-wing, single-seat fighter with sharply tapered wing. Cannon version easily spotted. High-mounted stabilizer. Stern post appears to be sharper. Large radiator under center of fuselage.



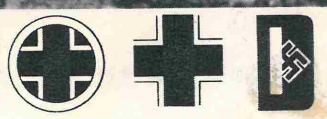
NORTH AMERICAN P-51 MUSTANG





Aeronautics Photo

HEINKEL He 112 (GERMANY)



Markings

Description

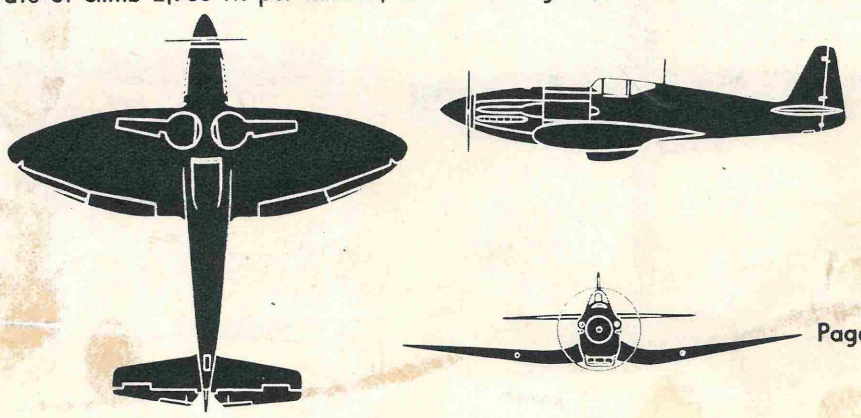
Low-wing, single-seat, fighter monoplane powered by one 660 h.p. Junkers Jumo 210 liquid-cooled engine, or one 1,070 h.p. Daimler-Benz DB 601A engine. Fuselage of light metal monocoque construction. Armed with 2 fixed machine guns which fire through propeller disc and 2 guns mounted in wings. Also has wing racks for six 22-lb. bombs. Cantilever inverted gull wings of elliptical shape. Two- or 3-blade propeller. Retractable landing gear. Some models carry wing cannon instead of machine guns.

Recognition Characteristics

Elliptically shaped inverted gull wing. Square-cut stabilizer. Long pointed nose with beard radiator.

Specifications

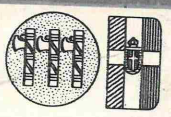
Span 29 ft. 10 in.; length 29 ft. 6 in.; height 12 ft. 1½ in.; wing area 183 sq. ft.; empty weight (with Jumo) 1,620 lbs.; (with Daimler-Benz) 3,571 lbs.; loaded weight (with Jumo) 4,960 lbs., (with Daimler-Benz) 5,740 lbs.; max. speed 317 m.p.h. at 15,240 ft.; rate of climb 2,760 ft. per minute; service ceiling 31,000 ft.



CONSOLIDATED VULTEE VENGEANCE A-35

Aeronautics Photo

MACCHI C. 202 (ITALY)



Markings

Description

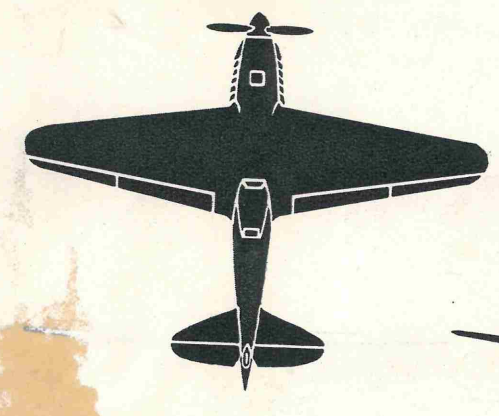
Low-wing, single-seat fighter powered by one Mercedes-Benz DB 601N 12-cyclinder inverted Vee liquid-cooled engine of 1,200 h.p. It is a development of the Macchi C 200 and carries 2 heavy machine guns which fire through the propeller disc. It is very similar in appearance to the American "Mustang" fighter except that its fuselage is rounded, originally having been designed for a radial engine.

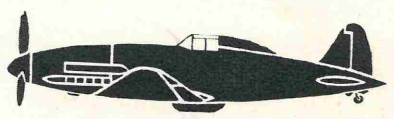
Recognition Characteristics

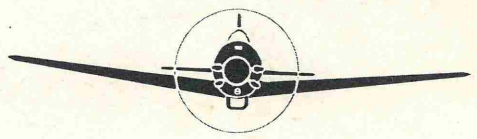
Low-wing, single-seat fighter similar to North American "Mustang" in general appearance. Rounded fuselage. Wing tapered. Low-mounted stabilizer.

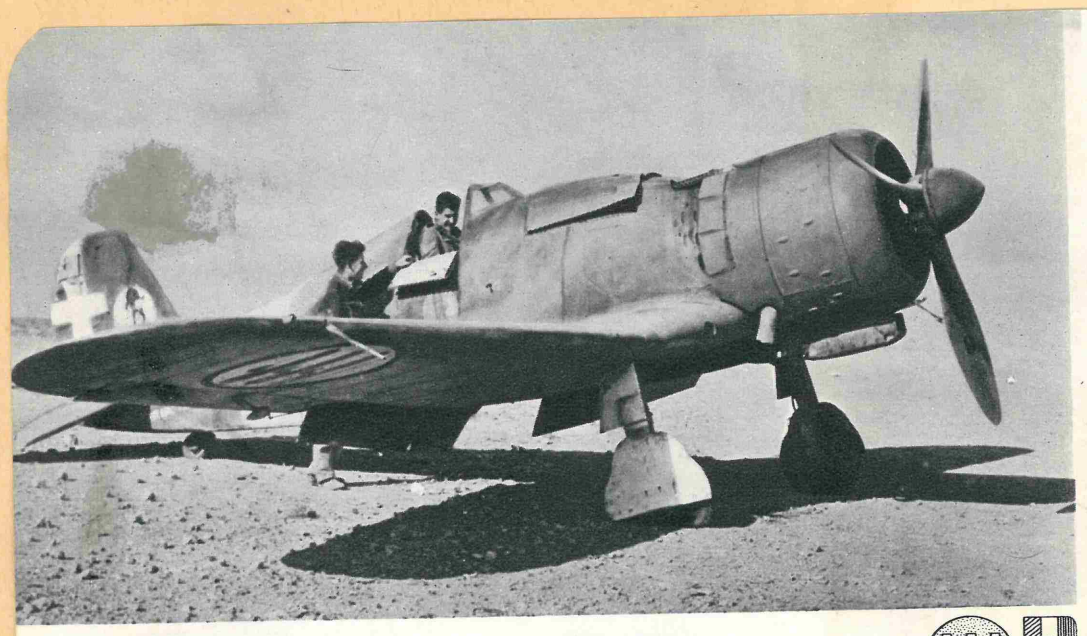
Specifications

Span 35 ft.; length 20 ft. 5 in.; loaded weight 6,300 lbs.; max. speed 330 m.p.h. at 18,000 ft.; service ceiling 34,500 ft.



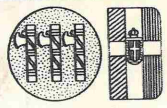






British Press Service

FIAT G-50 "FALCHO" (ITALY)



Markings

Description

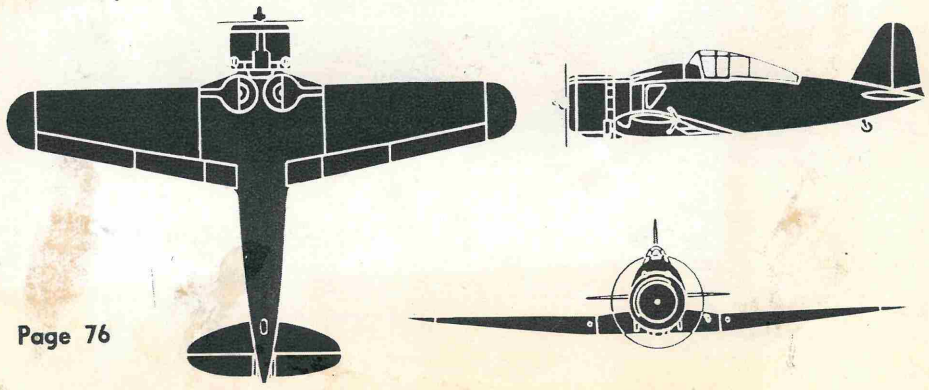
The Fiat G-50 pictured above was shot down and captured by RAF pilots. It is a low-wing, cantilever monoplane powered by one radial air-cooled Fiat A-74 RC 38 engine of 840 h.p. It is a single-seat fighter armed with 2 machine guns and 36 three-kg. bombs or 2 machine guns firing through the propeller and 2 wing guns. Alternate arrangements provide for carrying incendiary bombs. Landing gear is retractable. Equipped with NACA cowl and three-blade constant speed propeller. High aspect ratio fin. Marked dihedral on wing beginning at center.

Recognition Characteristics

Low-wing, single-engined fighter with blunt awkward-appearing cowl. Fuselage bulges behind engine to pilot's compartment.

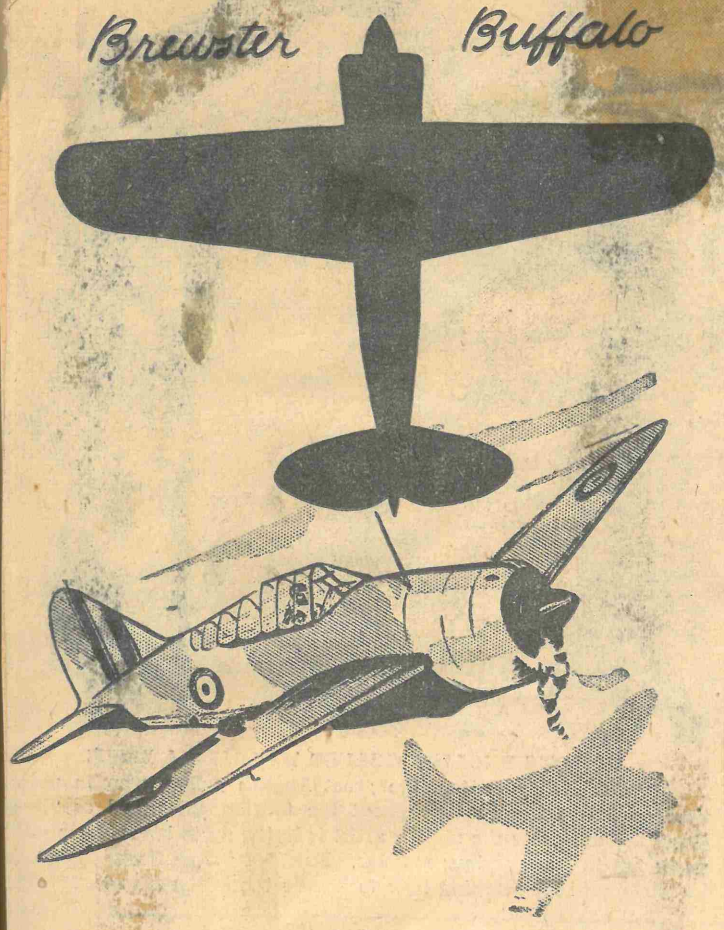
Specifications

Span 35 ft. 9 in.; length 25 ft. 7 in.; height 9 ft. 9 in.; wing area 196.2 sq. ft.; empty weight 4,180 lbs.; loaded weight 5,126 lbs.; max. speed 304 m.p.h.; rate of climb 4,920 ft. per minute; range 435 miles; ceiling 35,400 ft.



2

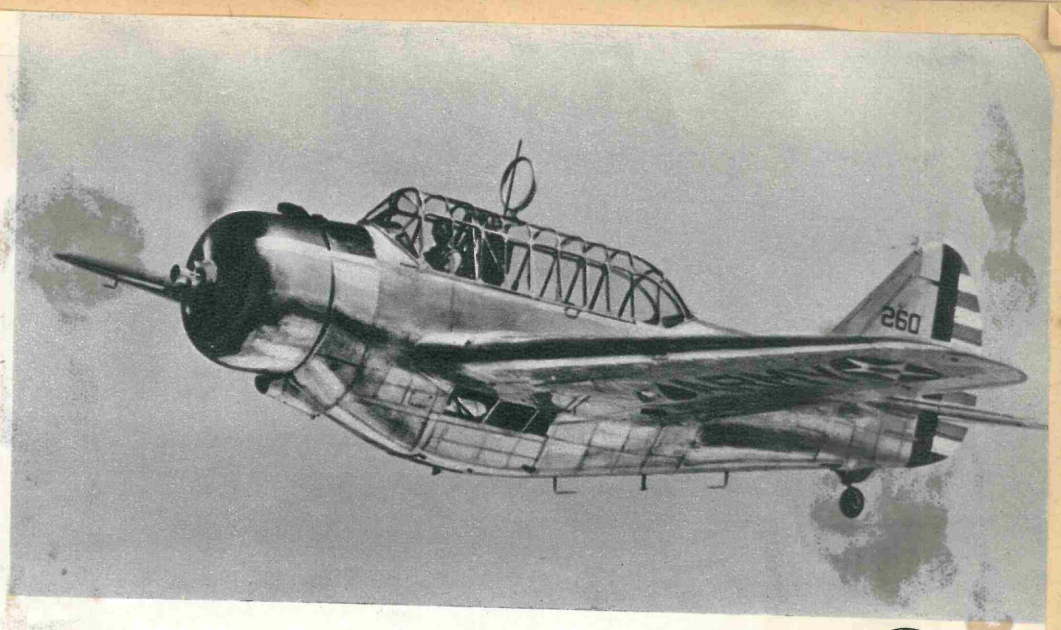
Brewster Buffalo



THIS sturdy-looking aircraft is well named, as the deep fuselage and short, powerful appearance are not at all unlike the buffalo—and this fact makes its recognition from other aircraft quite simple. And, like the buffalo, it is long-winded, for, when fitted with extra fuel tanks, for which provision is made, it is capable of 2,500 miles of continuous flying, and for a "fighter" aircraft this is a remarkable radius of action.

It is a powerful airplane with a 1,200-h.p. radial motor which drives it at a top speed of more than 330 m.p.h. Armament comprises six machine-guns, two mounted on top of engine cowling and two in each wing. As can be seen, it is a mid-wing type of monoplane, with a wing span of 35 feet and an overall length of 26 feet. Other details of performance have not been published.

2



Aeronautics Photo

NORTH AMERICAN 0-47 (UNITED STATES)

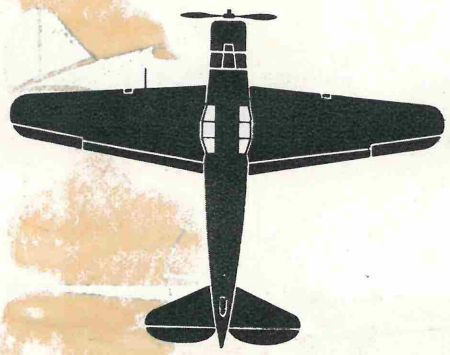
Markings

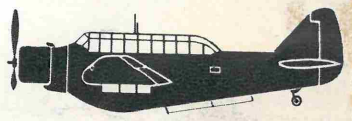
Description

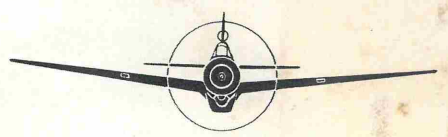
Mid-wing, 3-place, single-engine monoplane. Retractable landing gear and tail wheel. Equipped with a Wright Cyclone engine which develops 975 h.p. Also equipped with flaps. Designed to perform detailed reconnaissance of area immediately behind enemy's front lines, and for liaison purposes.

Recognition Characteristics

Easily recognized because of long, deep, prone observer's position in belly of plane. Long greenhouse with loop aerial over center.







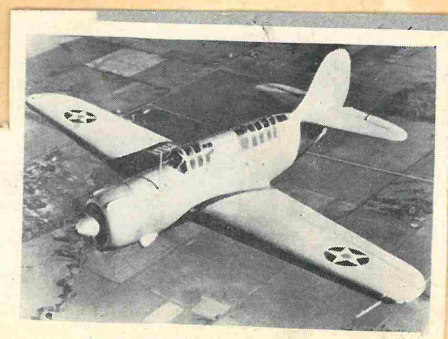
2

We build the—

HURRICANE — One of the two famous British fighters that have bested the enemy on all fronts.

1.

CURTISS DIVE-BOMBER—Made in Canada for the United States Government.



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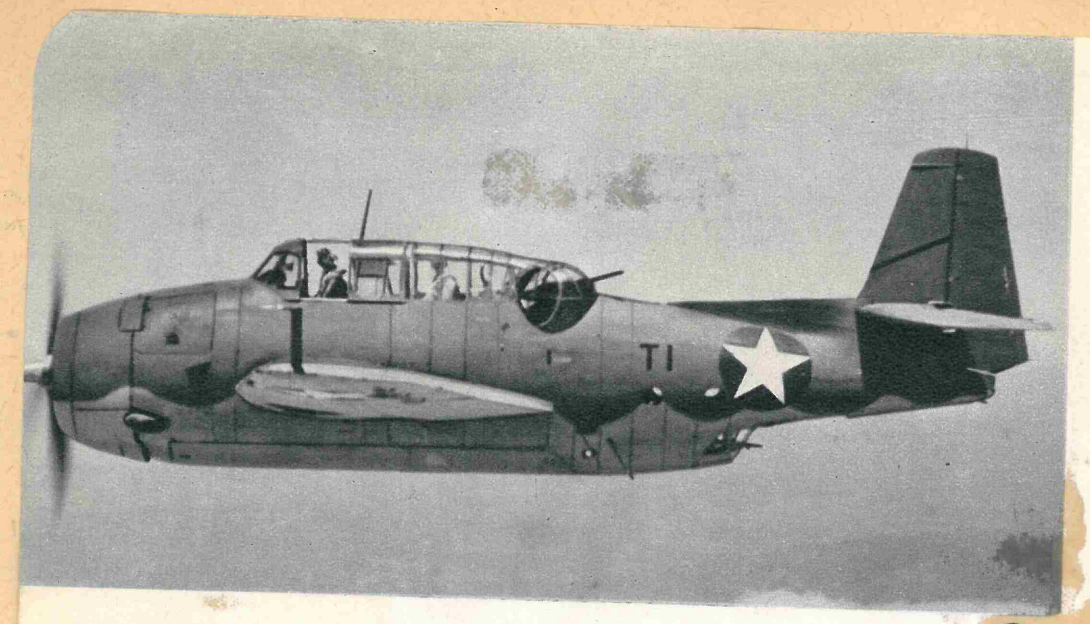


Official Photo, U. S. Navy

GRUMMAN TBF-1 (UNITED STATES)

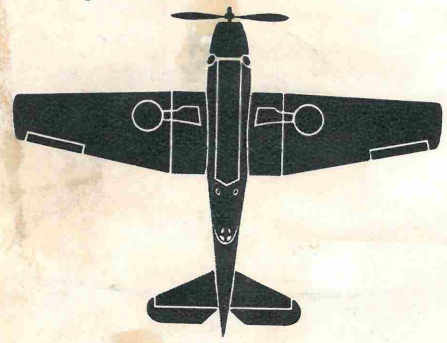
Markings

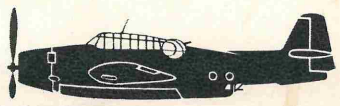
Description

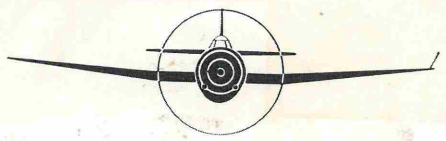
One of the latest planes accepted by the Navy as a torpedo-bomber is the "Avenger." This deadly plane made its debut under fire in the Midway Island battle and accounted for much of the damage inflicted on the Japanese fleet. It carries either a 21-inch torpedo or a ton of bombs. Unlike older torpedo planes, the "Avenger" carries its torpedo internally, adding to its maneuverability. Although it is a 3-place ship, its performance rivals that of single-seat fighters. Details are military secrets but it has been officially reported that this plane is capable of speeds in excess of 270 m.p.h., has a range of 1,400 miles and a ceiling of 20,000 ft. It is powered by a Pratt and Whitney engine in the 2,000 h.p. class. Has gun turret aft of cockpit and gun position aft of bomb bay for bottom and rear protection.

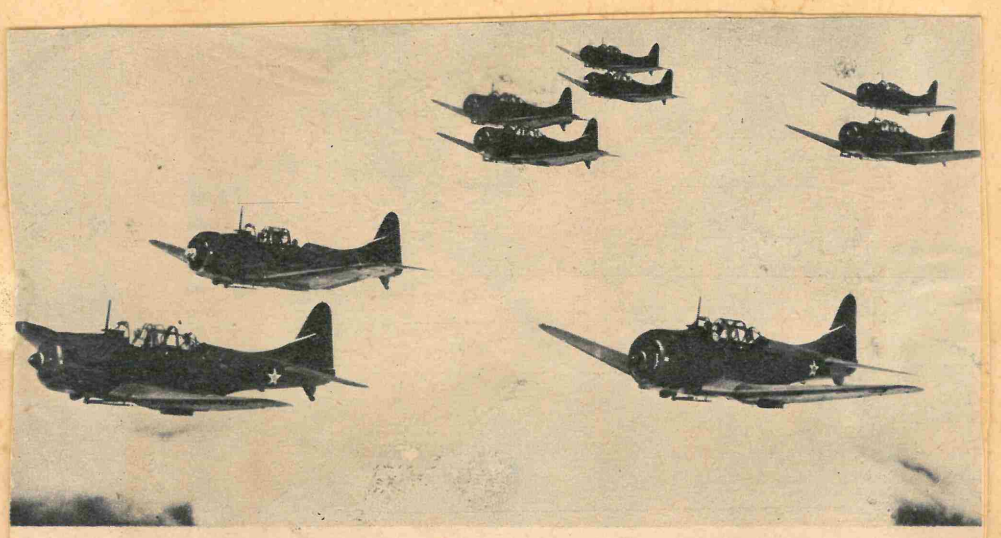
Recognition Characteristics

Large mid-wing airplane with square-tipped wing and tail surfaces. Bomb bay under fuselage terminating abruptly to provide gunner's station under tail. Turret aft of greenhouse.









PERFECT FORMATION is maintained by this flight of dive bombers on a practice patrol mission. Production will start in Canada on the Curtiss dive-bomber, which is expected to fly rings around the Stuka.

Aeroplane Photo Supply

MILES "MASTER II" (GREAT BRITAIN)

001

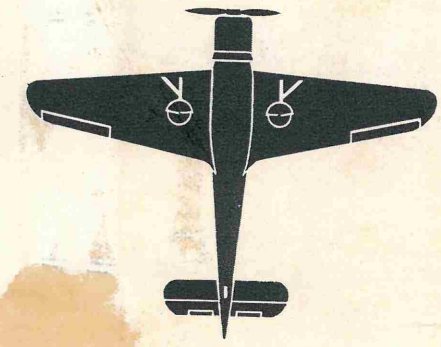
Markings

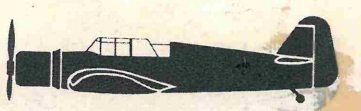
Description

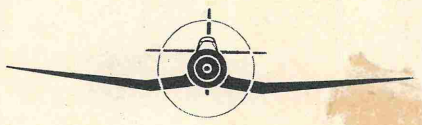
Same as "Master I" except that a Bristol Mercury engine is fitted. This model was adapted from the "Master I" and was the basis of the later "Master III." Performance substantially the same.

Recognition Characteristics

Similar to "Master I" except that radial engine makes front appearance quite different. Angular cockpit enclosure, inverted gull wing and tail surfaces identical with predecessor.







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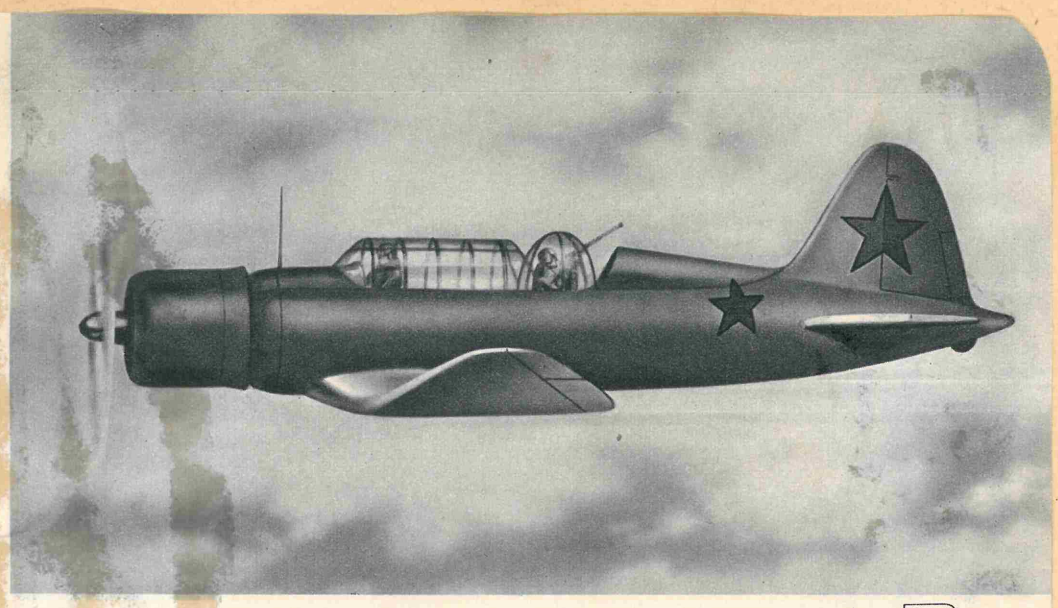
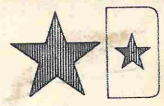


Aeronautics Photo

SU-2 (BB-1) (RUSSIA)



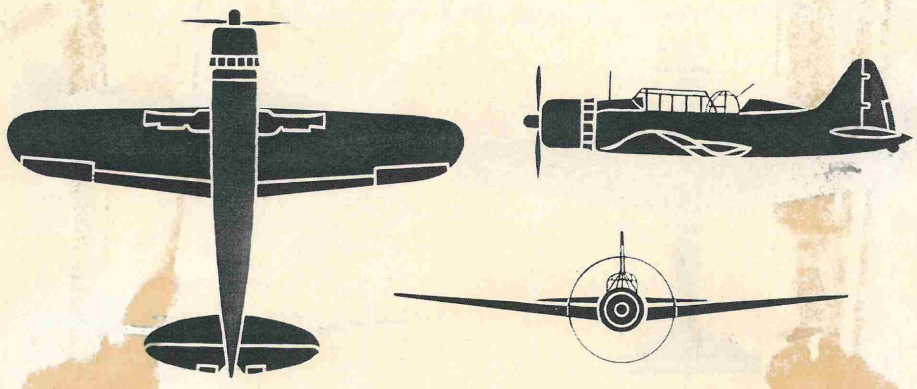
Markings

Description

Low-wing, two-seat fighter-bomber powered by one M.88 radial air-cooled engine of 1,000 h.p. It is similar in general design to the American Brewster "Bermuda." Bomber version has 2 forward wing-mounted machine guns and one free turret gun. Single-seat fighter version mounts 4 forward-firing guns in wings, and has no turret. Although no specifications have been released, it is believed to be a highly maneuverable, speedy plane used effectively in recent combat.

Recognition Characteristics

Very similar to Brewster "Bermuda." Fully-cowled radial engine. Turret aft of cockpit. Broad sweep to fin and rudder. Wing is tapered.



2.

Official Photo, U. S. Army Air Forces

NORTH AMERICAN P-64 (UNITED STATES)

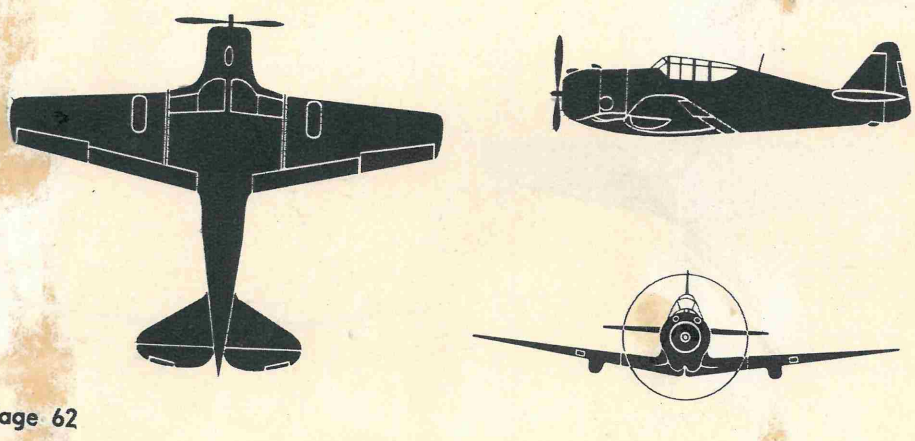
Markings

Description

This low-wing, radial-engined fighter was originally produced for Siam but was later taken over by the U. S. Army. It is used as a special advanced trainer for Air Forces personnel. It is equipped with a Wright radial air-cooled engine, but it has not been modernized and the plane is not being produced in quantity.

Recognition Characteristics

Low-wing fighter. Radial engine. General appearance similar to P-43. Bulges on under surface of each wing.



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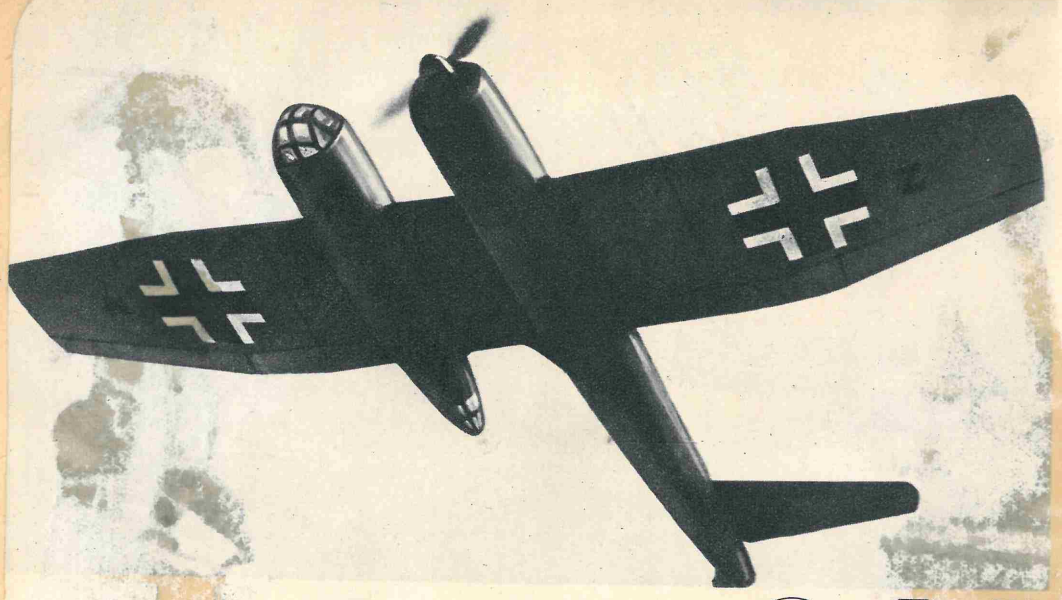


International Photo

BLOHM AND VOSS Bv 141 (GERMANY)

Markings

Description

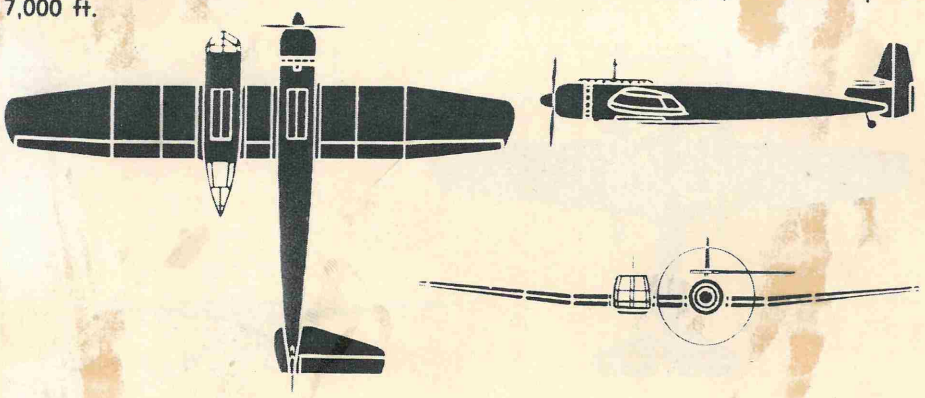
Two-seat, low-wing, single-engine reconnaissance monoplane of asymmetrical design. It is powered by one Bramo Fafnir radial air-cooled engine of 1,000 h.p., which is placed in its usual position at the front end of the fuselage. That, however, is the only conventional thing about the entire ship. A nacelle, placed on the starboard wing, houses the personnel. The left wing is shorter than the right. The offset nacelle was intended to provide better visibility and is balanced by the half stabilizer and offset engine. It was reported to have been used in Russia.

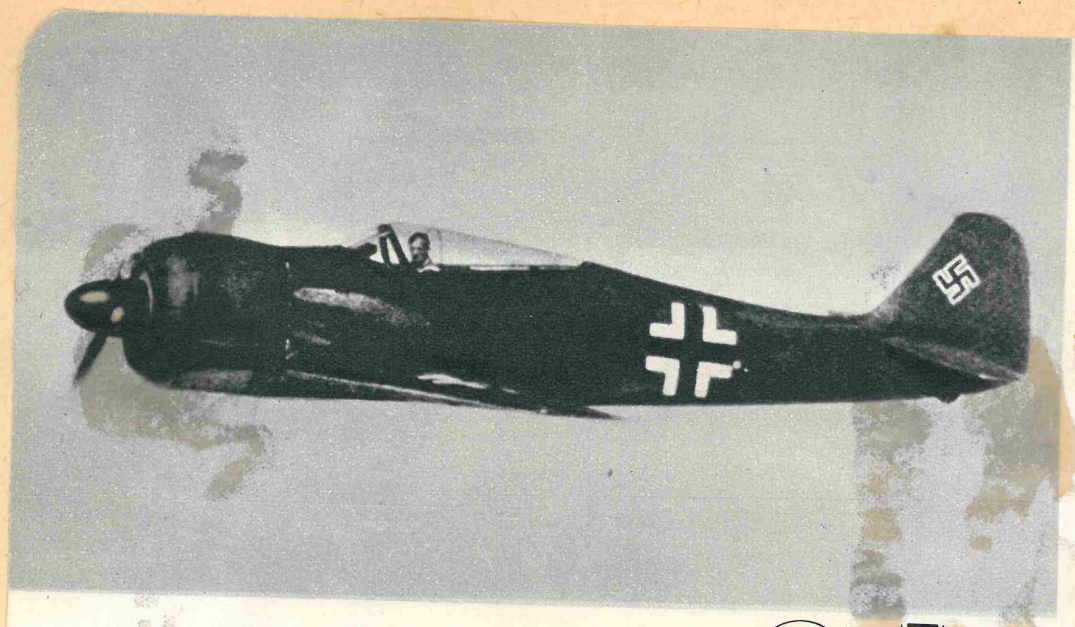
Recognition Characteristics

Immediately recognized since there is nothing else remotely similar.

Specifications

Span 66 ft.; length 49 ft.; loaded weight 9,700 lbs.; cruising speed 220 m.p.h. at 17,000 ft.





Official Photo, U. S. Army Air Forces

FOCKE-WULF Fw 190 (GERMANY)

Markings

Description

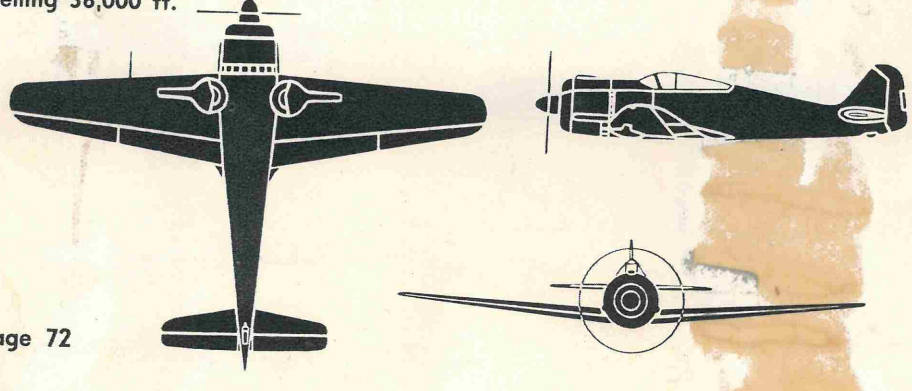
A complete departure from the usual Nazi practice is evident in the Fw 190. Here they have designed a radial air-cooled engined plane for greater maneuverability. Similar in appearance to the Curtiss "Mohawk," this new fighter is equipped with a 1,600 h.p. BMW 801 14-cylinder, twin-row, radial, fan-assisted air-cooled engine. The wing span is very small. Landing gear, including tail wheel, retractable. The exact armament is not known, but it is reported to be 6 wing-mounted machine guns. RAF pilots have already reported large numbers of Fw 190's shot down.

Recognition Characteristics

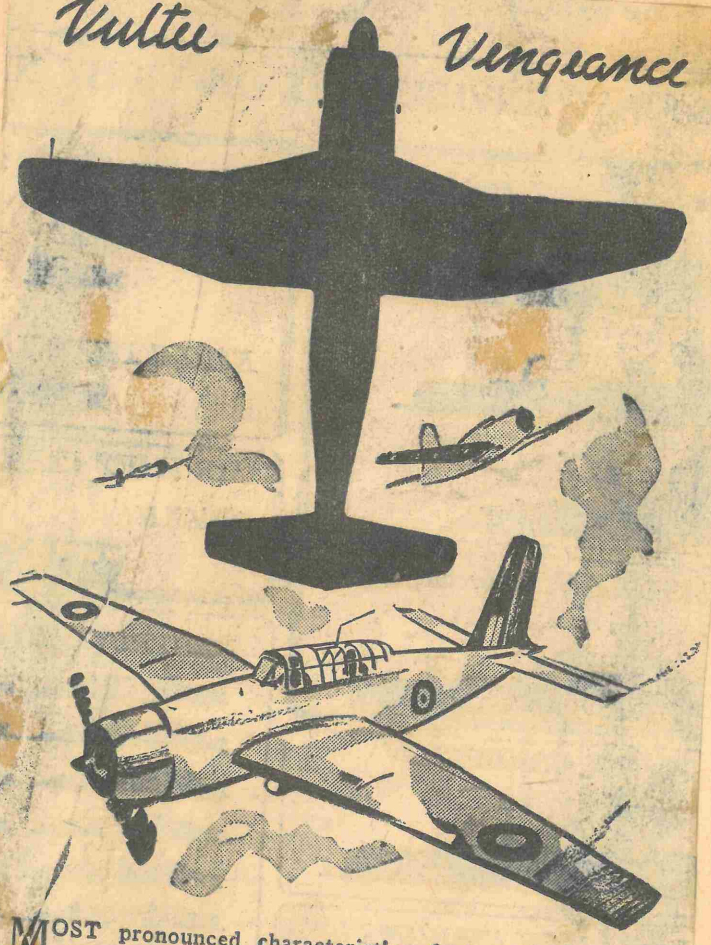
Radial engine, low-wing monoplane. Wing tapers from roots where there are small fillets. Short wing span. Rather long spinner.

Specifications

Span 37 ft.; length 28 ft. 11 in.; wing area 194 sq. ft.; loaded weight about 7,000 lbs.; max. speed 370 m.p.h. at 18,000 ft.; range 525 miles at 300 m.p.h.; service ceiling 38,000 ft.



Vultee Vengeance



MOST pronounced characteristic of the Vengeance, as seen from above or below, is the wing shape. Note how the leading edge of the wing sweeps forward as it nears the fuselage, this design is unique with the Vengeance.

This aircraft is designed as a dive-bomber, and while it is well equipped with several fixed machine-guns forward and also in the rear turret for both offensive and defensive tactics—its main mission is bombing.

The Vulter Vengeance is a low-wing, all metal monoplane of the single engine class, with retractable landing gear and tail wheel, and carries a crew of two—pilot and rear gunner. It is equipped with diving brakes, as well as wing slots. The engine is a 1,500 h.p. air-cooled radial type giving the aircraft a top speed in the neighborhood of 300 m.p.h. In addition to the guns it is also equipped, of course, to carry a sizeable load of bombs for dive bombing operations.

FLYING INTO FOCUS

Now in its eighteenth modification, the DeHavilland Mosquito carries four .303 machine guns and a cannon. It may have a pressurized cabin like the XVI.

3

Saro Lerwick

THE Lerwick is a popular aircraft with Canadians and other pilots of the coastal command of the Royal Air Force. It is a cantilever high-wing monoplane with sharply tapered wings and a deep hull.

The Lerwick carries a heavy load of bombs and formidable armament in three power-operated gun turrets, one in the nose, one in the tail and the other amidships.

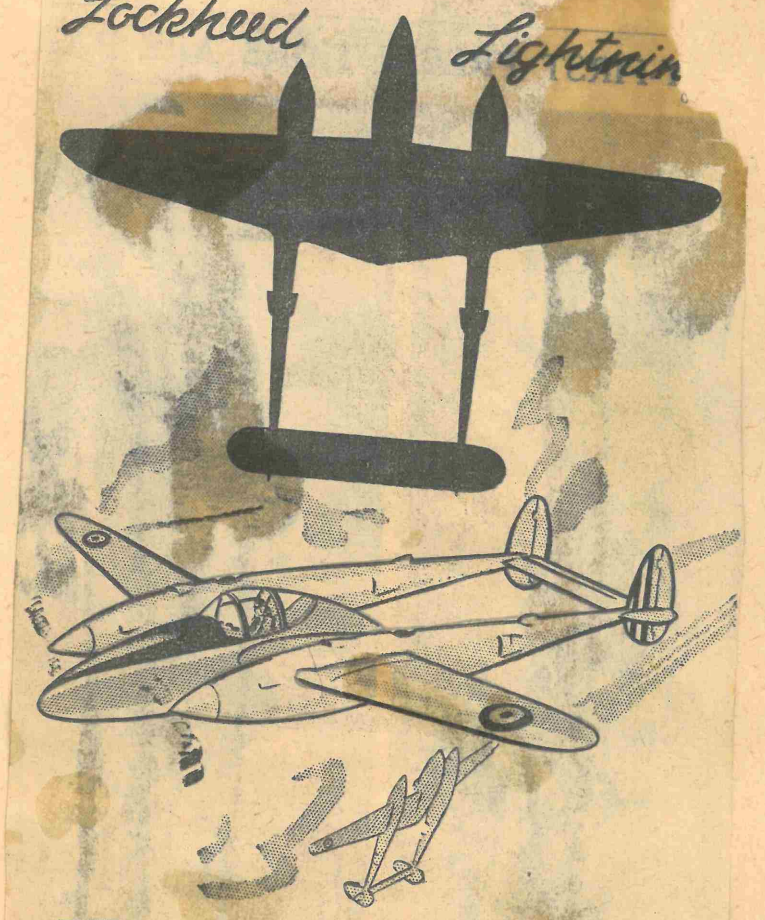
Speeds and range remain secret together with the weight, but the Lerwick has a wing spread of 81 feet and is 65 feet long. The Lerwick carries a crew of six and is fitted with a galley and living accommodations for all.

Two Bristol Hercules radial engines of 1,375-horse-power each provide power for the two three-bladed constant speed metal airscrews.

3

3

Lockheed Lightnin

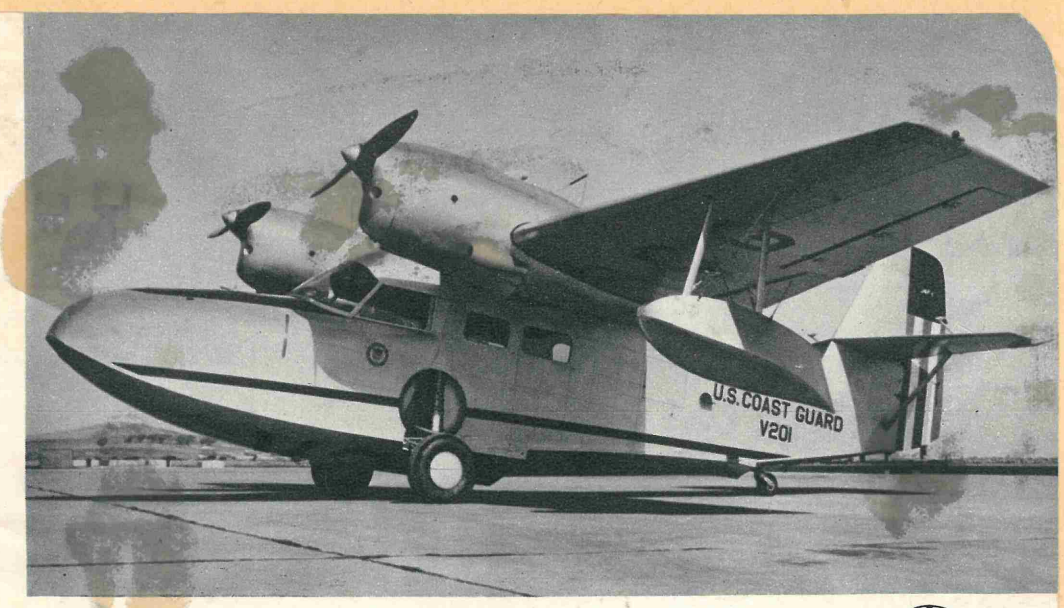


THE Lightning is most appropriately named. Hurtling through the air at a top speed of better than 400 m.p.h., it is about as close to human lightning as anything yet seen. This startling product of the Lockheed Co. of California is a twin-engined, single-seater fighter in which the pilot sits in a streamlined nacelle, between the two engines.

The engine nacelles are continued to the rear in the form of twin tail booms which carry and support the tail surfaces.

Power is supplied by two 1,090-h.p. liquid-cooled Allison engines. Wing span is 52 feet with an overall length of 37 feet 10 inches. The initial climb is almost 3,000 feet per minute with a service ceiling of 30,000 feet.

Armament consists of four machine-guns and one cannon in the nose. The range of the Lightning is almost 600 miles.



Peter M. Bowers Photo

GRUMMAN G-44 (UNITED STATES)

Markings

Description

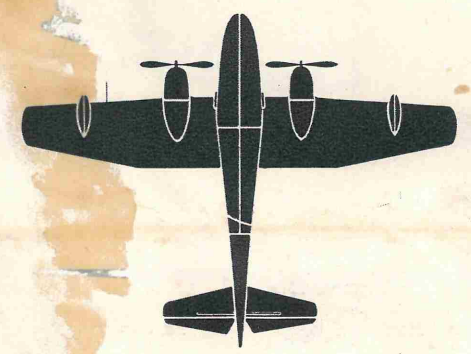
A 4- or 5-place twin-engined amphibian developed from its predecessor the G-21A. It is very similar in appearance to the larger model but is powered by two Ranger in-line air-cooled engines of 200 h.p. each. All-metal stationary wing floats. Two-step hull with chines back to tail post. Wheels retract almost flush into side of hull. Tail wheel retracts into pocket. It is used by the Coast Guard where it is designated J4F-1. Known commercially as "Widgeon."

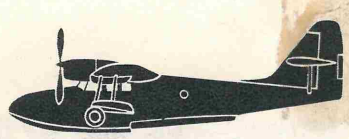
Recognition Characteristics

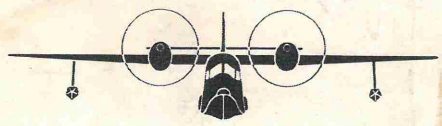
Two-step amphibian. Wheels retract into hull. In-line engines with pointed nacelles and spinners.

Specifications

Span 39 ft.; length 34 ft.; height 12 ft. 4 in.; loaded weight 6,170 lbs.; max. speed 180 m.p.h.







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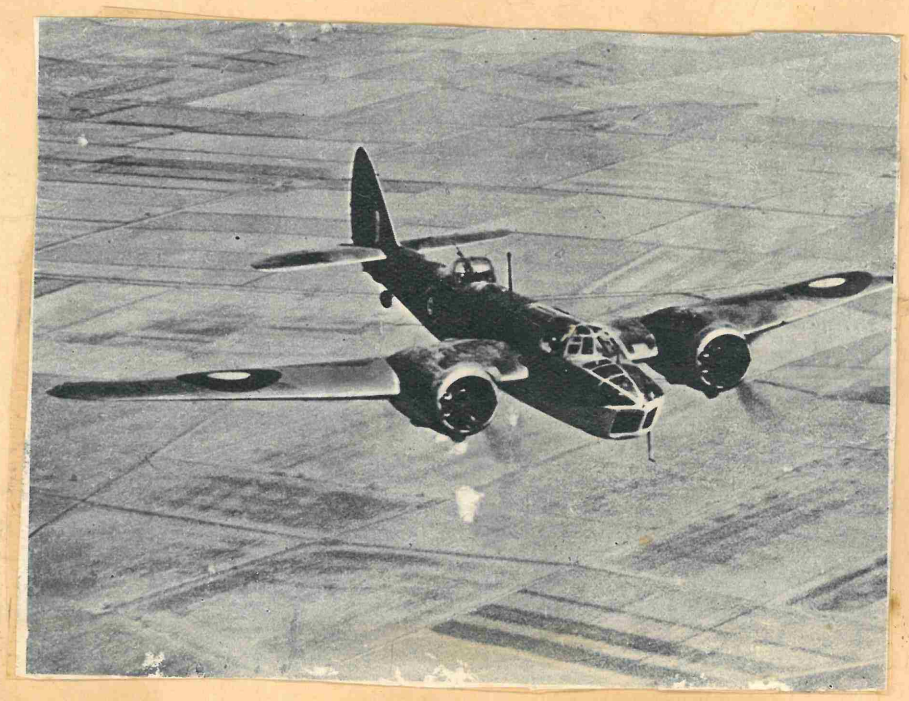

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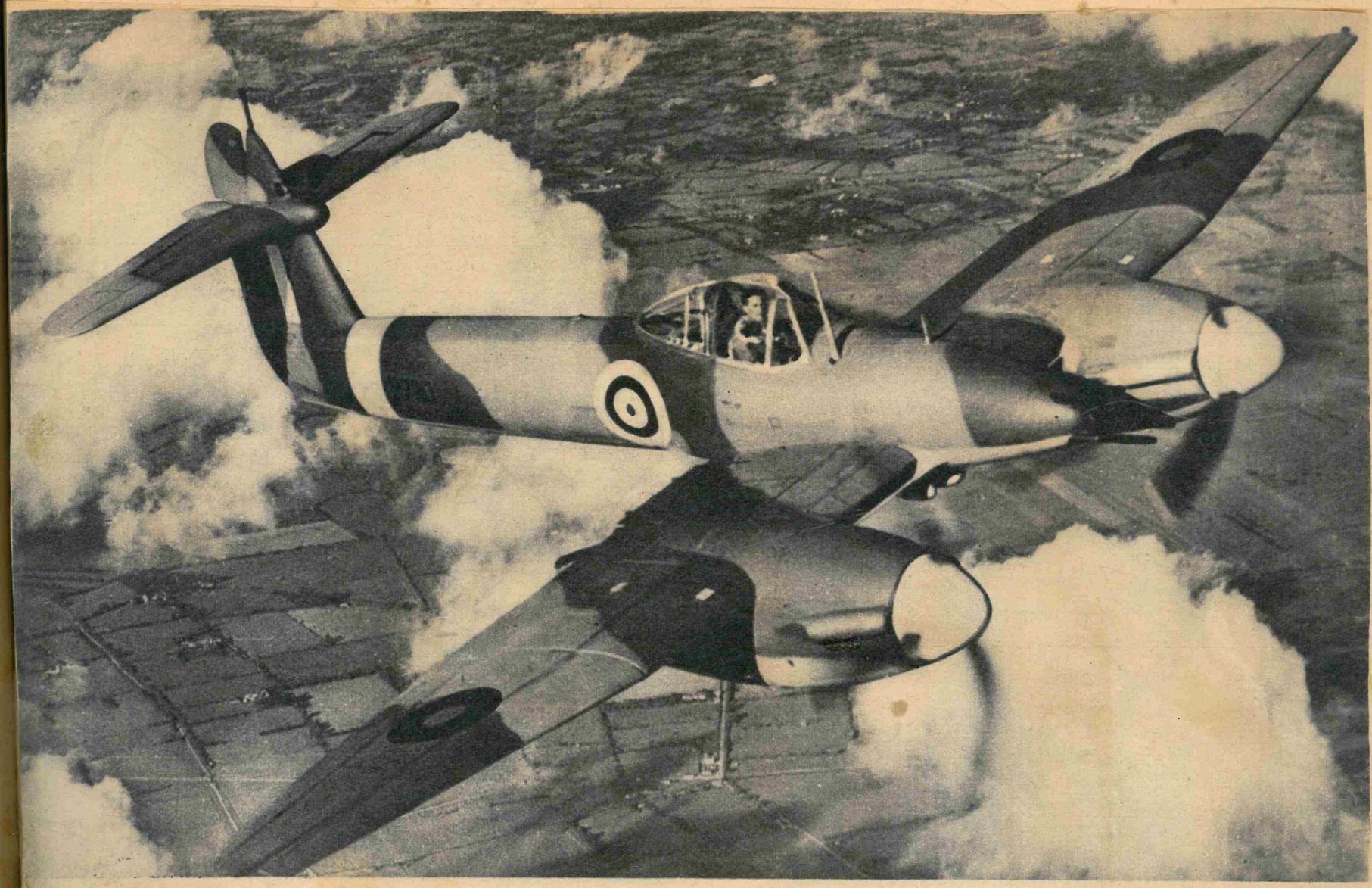
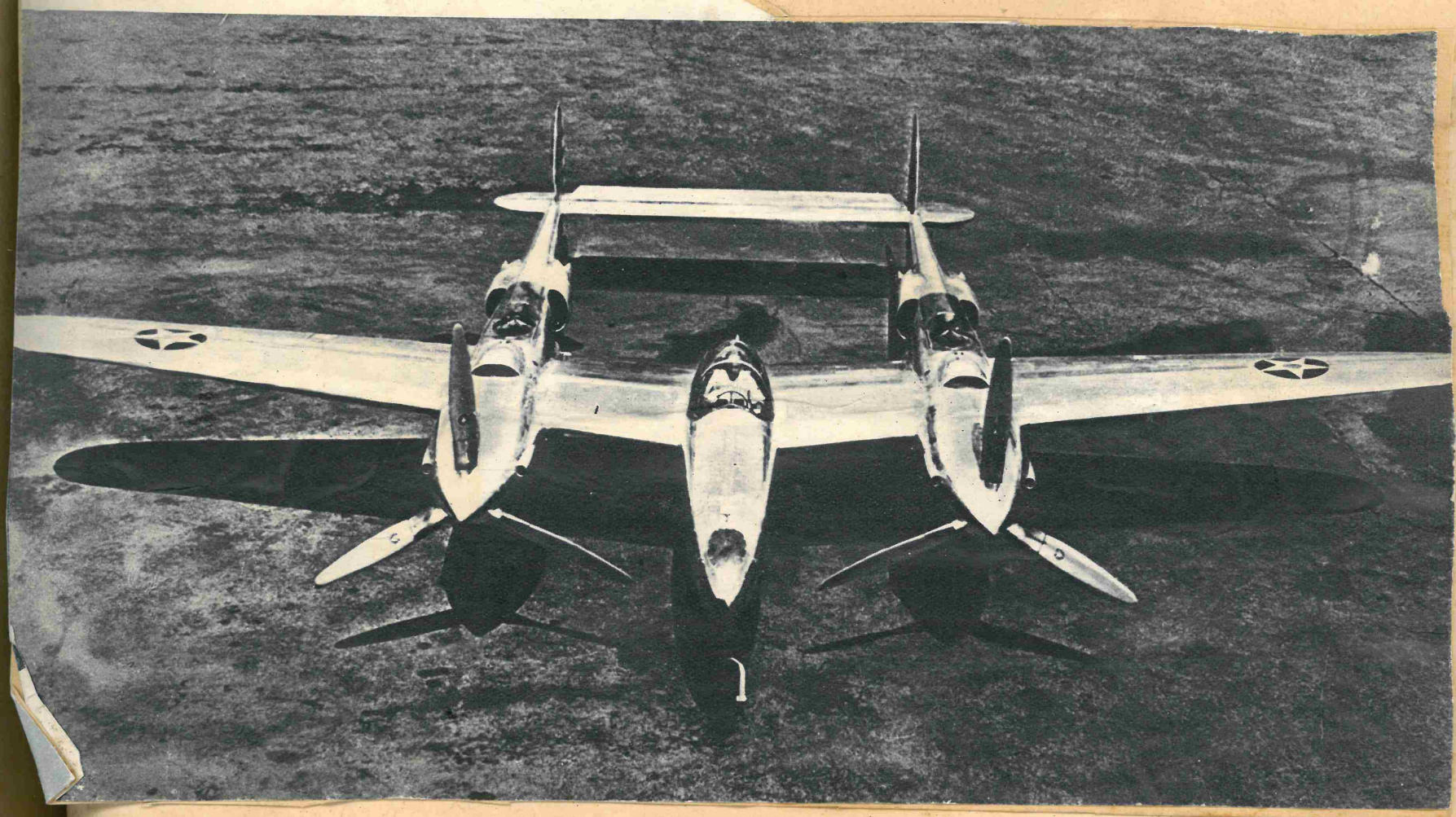


ANOTHER STRIKING view of the Westland "Whirlwind" in the air. Long on the "secret" list, it is said to be faster than the famous Spitfire. In its fighter plane sweeps across the French coast, in which these dangerous wasps of the air play an important part, the R.A.F. has been making every effort to draw German planes into the air so that the Luftwaffe in western Europe can be reduced as rapidly as possible. The R.A.F. is losing fewer planes than did the Nazis in their mass air attacks on Britain in 1940 and 1941.

3

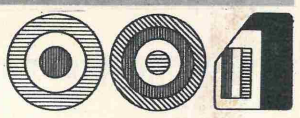
The new Lockheed P-38 is capable of over 400 miles per hour.



4

British Combine

DOUGLAS "BOSTON III" (GREAT BRITAIN)



Markings

Description

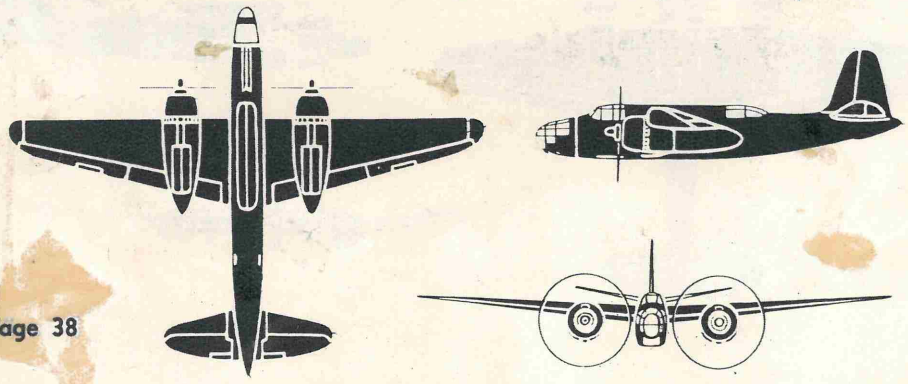
Twin-engined, mid-wing monoplane of stressed-skin construction powered by 2 Wright Cyclone radial air-cooled engines of 1,600 h.p. each. Previous models, known as the DB-7, A-20A in the United States and "Havoc" (as a night fighter) by the RAF have become favorites in action. The "Boston III" is the first tricycle landing gear bomber to be accepted and used by the RAF. It carries 4 forward-firing machine guns and 2 free guns firing aft and proudly stands on the fact that up to the present writing, no fighter has ever brought one of them down. In fact, one RAF gunner reports having shot down two Fw 190's with his rear guns. Its speed approaches that of fighters and has been found very useful in avoiding enemy flak.

Recognition Characteristics

High-wing monoplane with underslung radial air-cooled engines. Nacelles terminate in points well aft of trailing edge. Highly tapered wing.

Specifications

Span 61 ft. 4 in.; length 47 ft. 7 in.; height 15 ft. 10 in.; speed 300 m.p.h.



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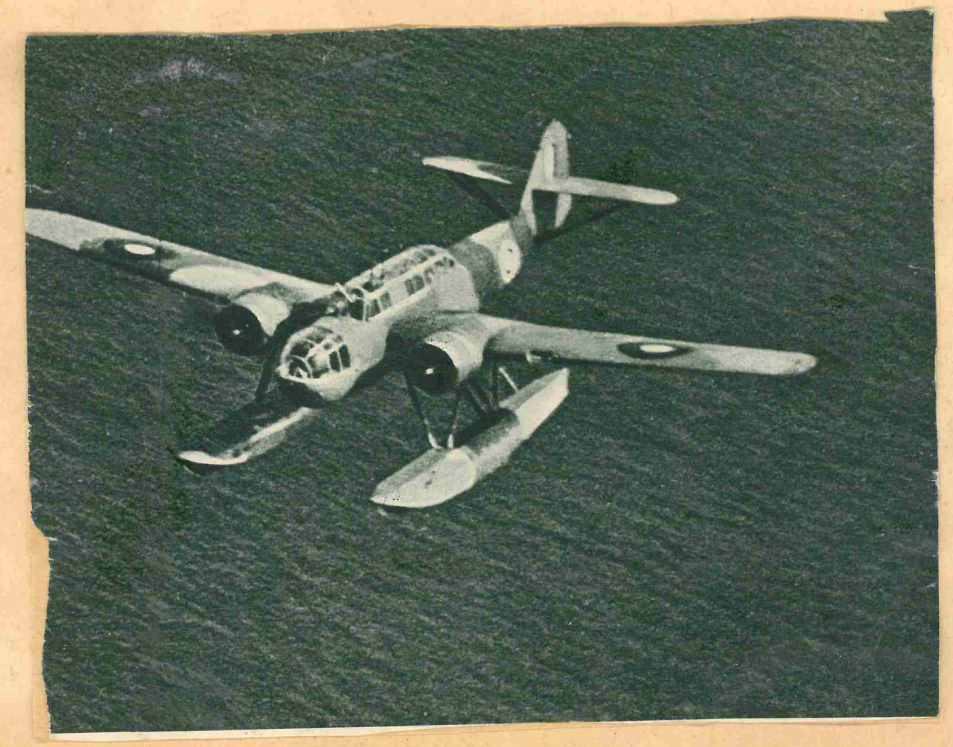

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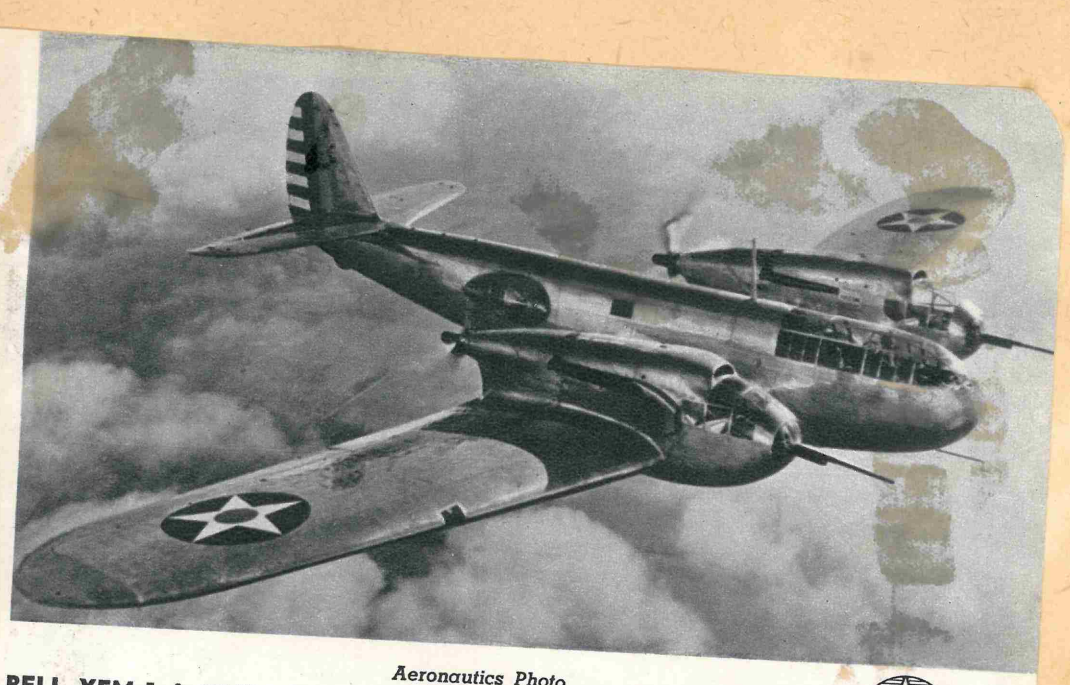


Aeronautics Photo

BELL YFM-1-A "AIRACUDA" (UNITED STATES)

Markings

Description

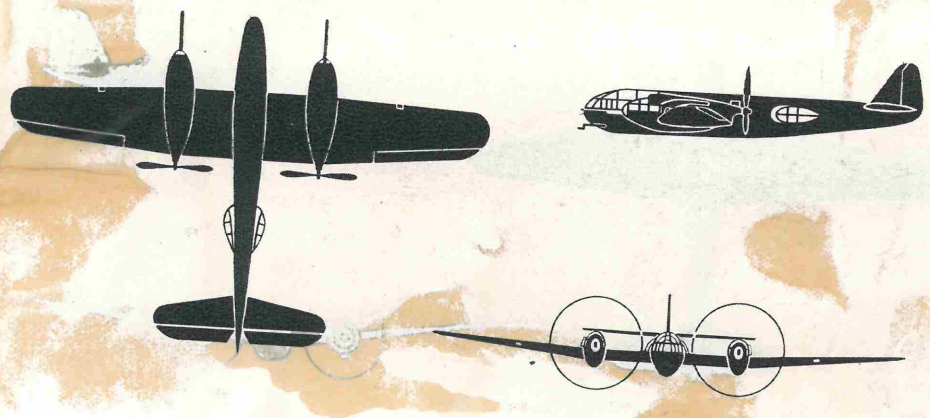
Twin-engined, mid-wing, 5-place fighter powered by two 1,050 h.p. Allison liquid-cooled engines driving pusher propellers. Fuselage is all-metal construction. Cantilever mid-wing supports two engine nacelles driving propellers through extension shafts. All wheels retract inboard. Armament consists of two forward .37 mm. cannons in engine nacelles plus an undisclosed number of machine guns.

Recognition Characteristics

Mid-wing, twin-engined monoplane. Single fin and rudder. Twin pusher engines.

Specifications

Span 70 ft.; length 47 ft. 2 in.; height 12 ft. 11 in.; max. speed around 300 m.p.h.



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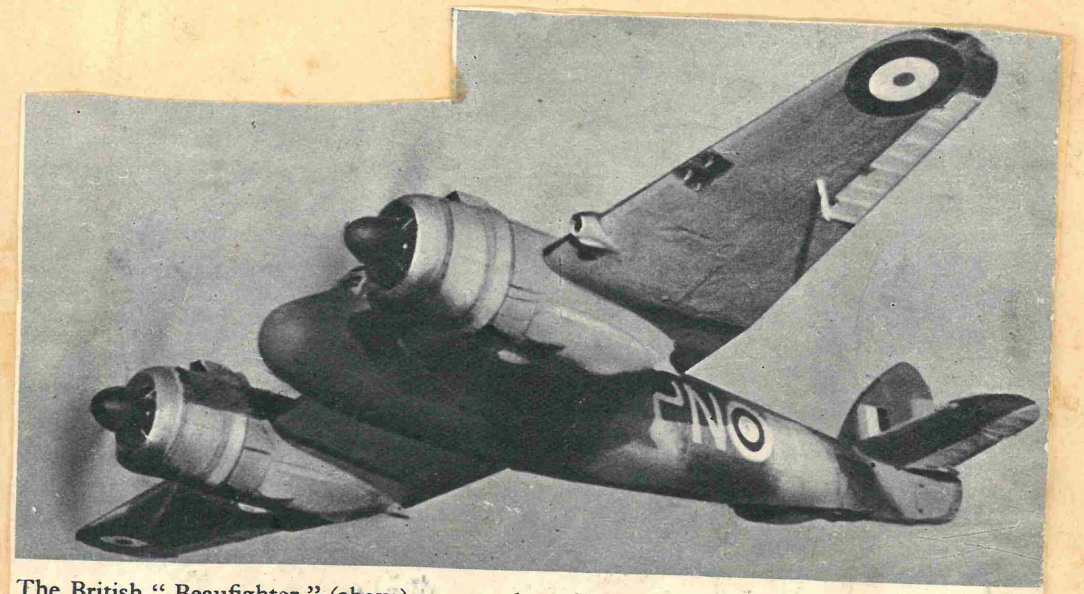
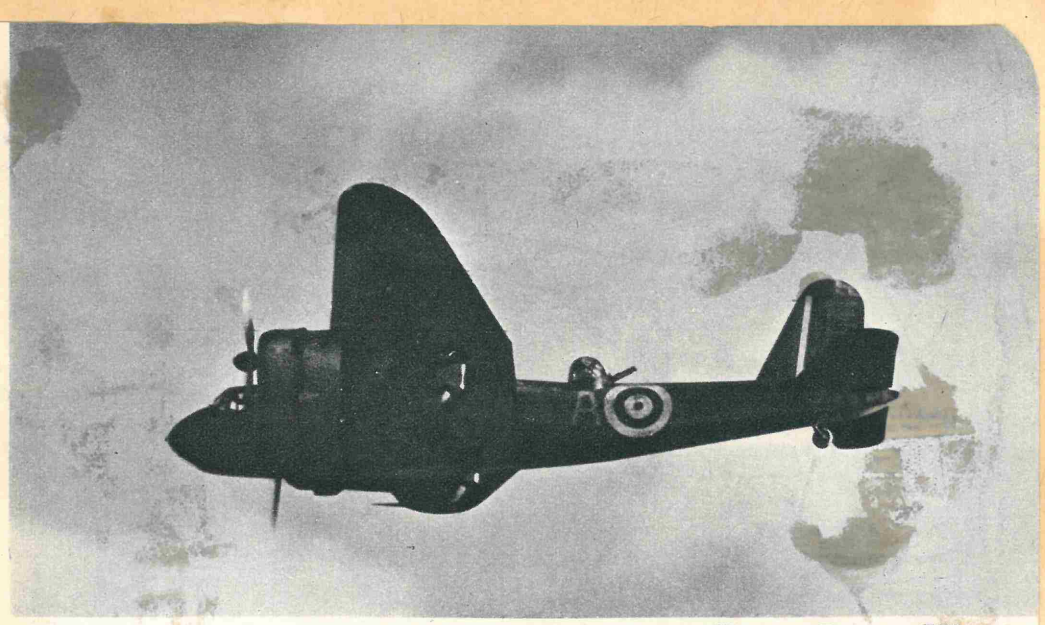


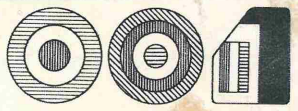
The British " Beaufighter " (above) mounts 6 machine guns and 4 cannon, and

3



British Press Service

BLACKBURN "BOTHA" (GREAT BRITAIN)



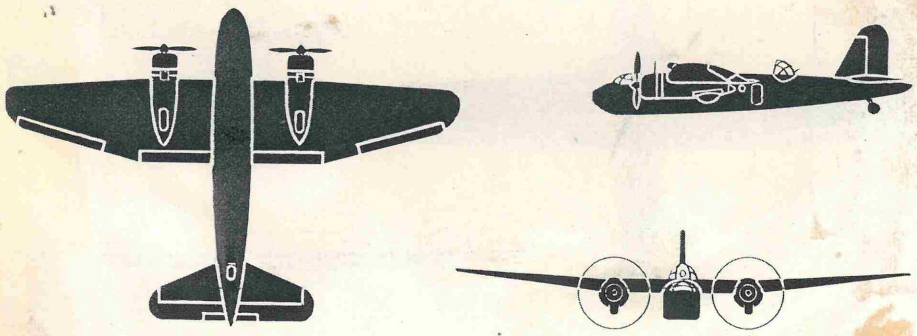
Markings

Description

A new plane to make its presence known is the "Botha"; a twin-engined, high-wing, reconnaissance-bomber powered by 2 Perseus radial air-cooled engines of 890 h.p. each. The sharp forward sweep of the trailing edge of the wing and the high single fin and rudder placed well forward of the stabilizer characterize this ship. It carries 2 torpedoes which are stowed internally, and mounts an oddly-shaped dorsal turret. No performance data are available.

Recognition Characteristics

Odd-shaped dorsal gun turret. High-wing, twin-engined monoplane. Sharp forward sweep to trailing edge.



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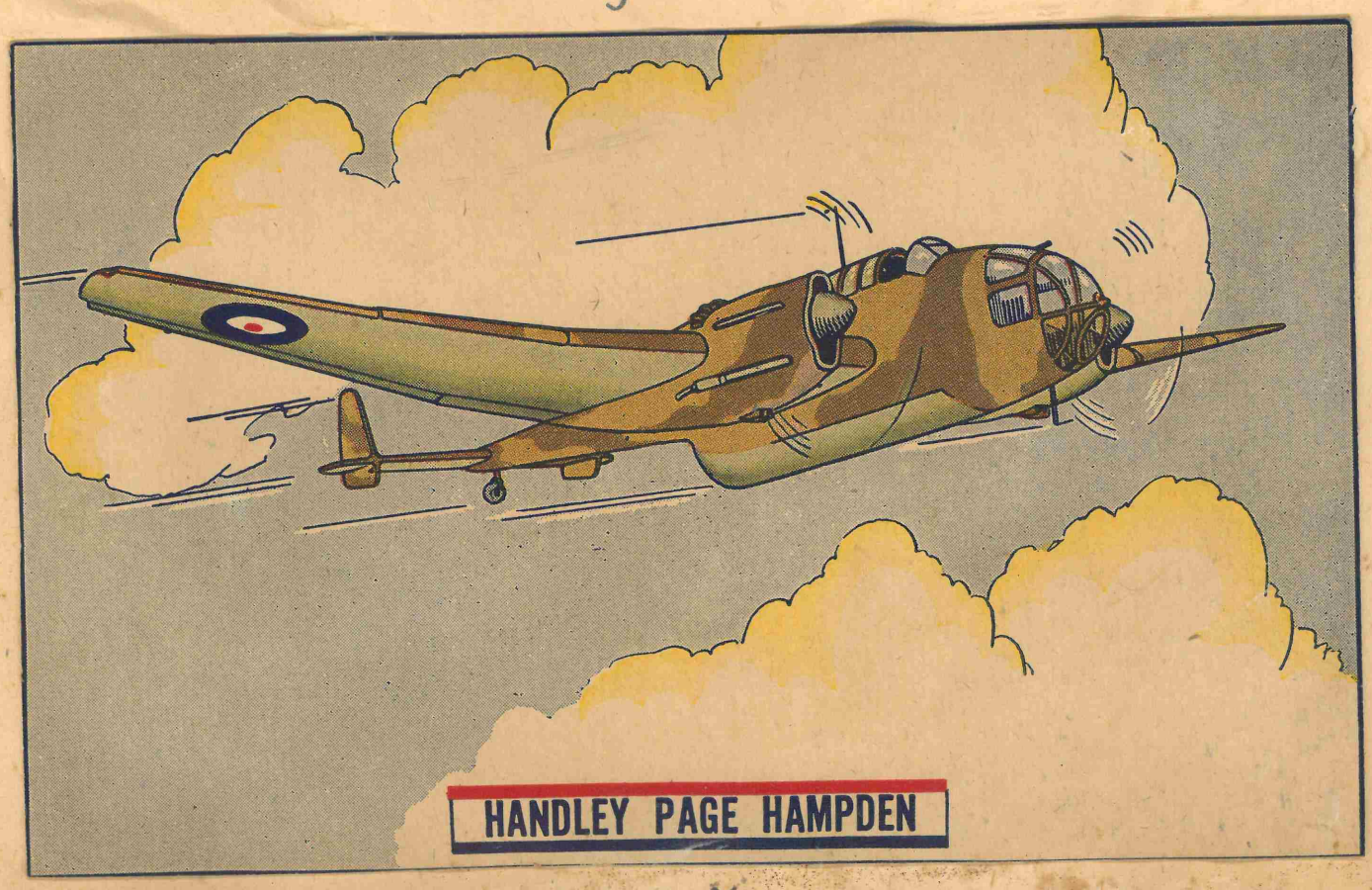

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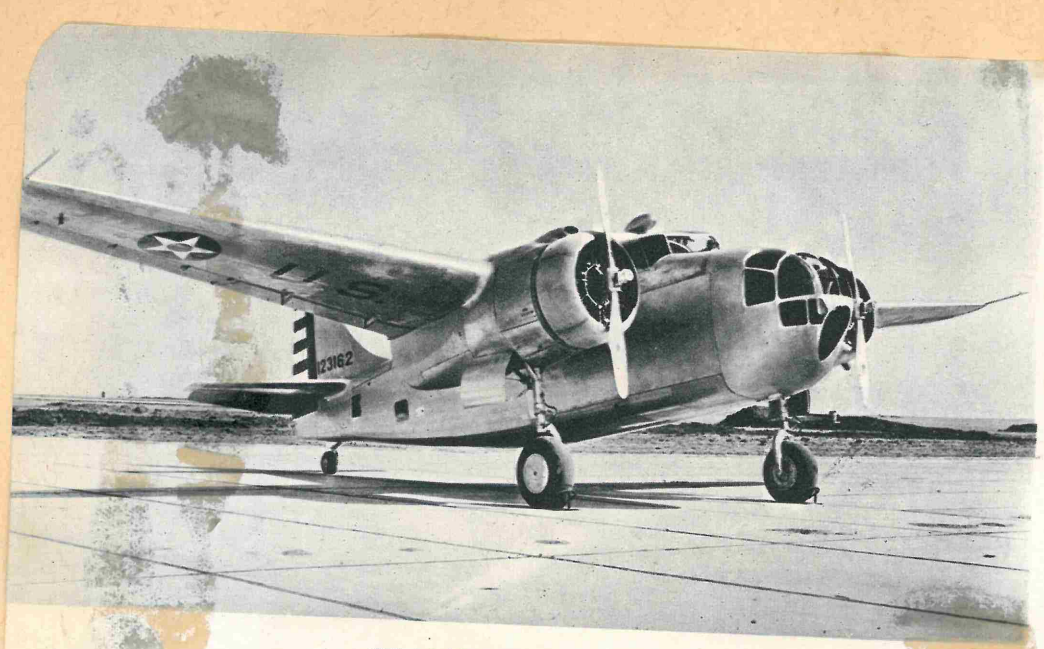


Official Photo, U. S. Army Air Forces

BOEING AT-15 (UNITED STATES)

Markings

Description

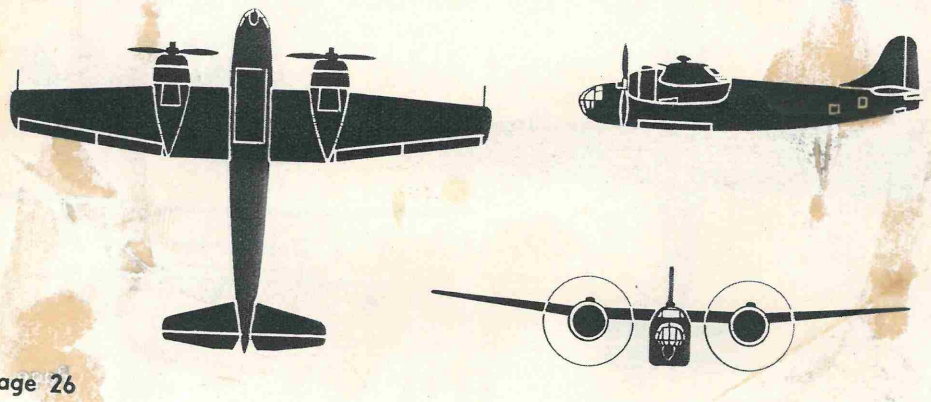
The U. S. Army's newest multi-engined trainer resembles a small version of a twin-engined bomber. It is the first advanced trainer to be designed and equipped for training a full crew of bombardment personnel, including pilots, navigators, gun crews, and bombardiers. Basically of steel tube construction, it uses comparatively little strategic materials, plywood and fabric being used wherever possible.

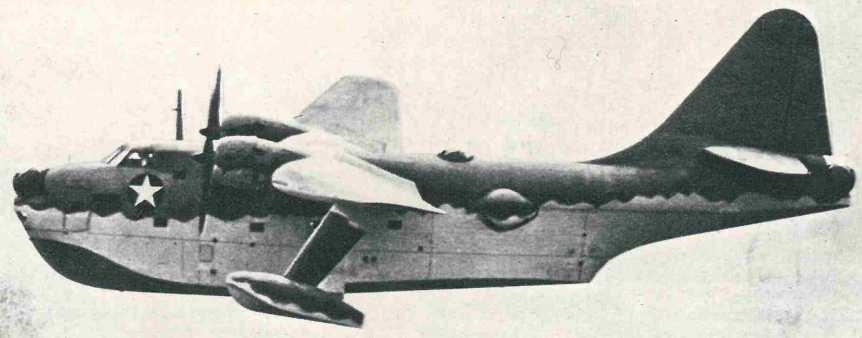
Recognition Characteristics

High-wing twin-engined plane resembling full sized bomber. Very sturdily built. Flat sides and bottom. Rather blunt transparent nose. Engines are underslung on wing.

Specifications

Span 59 ft.; length 42 ft.; max. speed in excess of 200 m.p.h.





Official Photo, U. S. Navy

BOEING XPBB-1 (UNITED STATES)

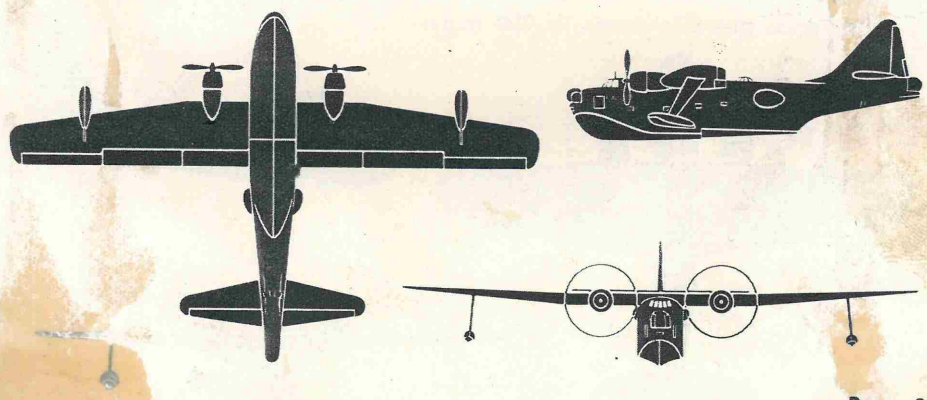
Markings

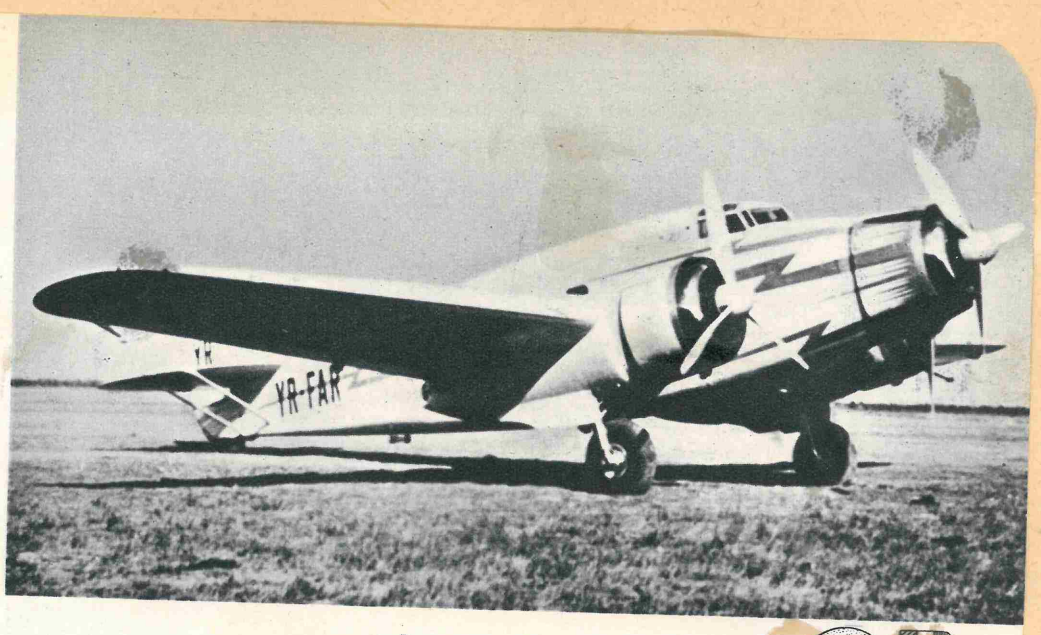
Description

Latest long-range patrol-bomber flying boat to be added to the Navy's brood is the new "Sea Ranger." It is a twin-engined boat which is heavily armed and capable of carrying enormous bomb loads for extreme ranges. Wing floats are stationary and characterized by sharp angle of float strut. Gun positions in top, nose, tail, and sides. All armament and performance details are restricted.

Recognition Characteristics

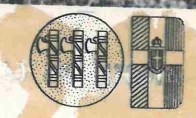
Easily spotted by shape of wing float strut and large surfaced fin and rudder. Leading edge of wing swept back from engines. Gun positions on side surfaces, and at nose and tail.





Aeronautics Photo

SAVOIA MARCHETTI SM 83 (ITALY)



Markings

Description

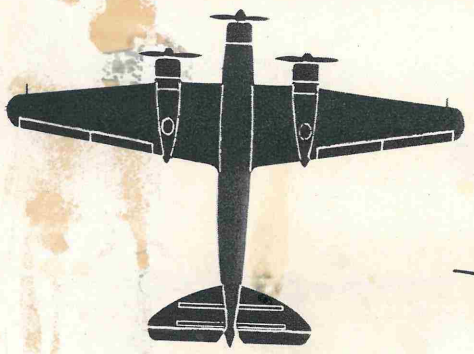
Three-engined, mid-wing bomber powered by 3 Alfa-Romeo 126 RC 34 radial air-cooled engines of 750 h.p. each. Carries crew of 3 plus 10 passengers. During peacetime used for commercial transport. No data available as to armament on military models. Retractable landing gear. Single fin and rudder with strut-braced stabilizer.

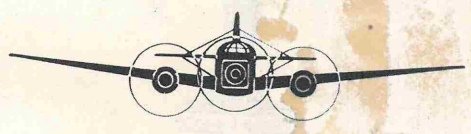
Recognition Characteristics

Three-engined, mid-wing bomber. Engines covered with NACA cowl. Outboard engines protrude beyond trailing edge of wing.

Specifications

Span 66 ft. 3 in.; length 53 ft. 2 in.; height 13 ft. 6 in.; wing area 646 sq. ft.; empty weight 14,960 lbs.; loaded weight 22,660 lbs.; max. speed 276 m.p.h. at 13,120 ft.; rate of climb 1,093 ft. per minute; range 930 miles; service ceiling 18,100 ft.





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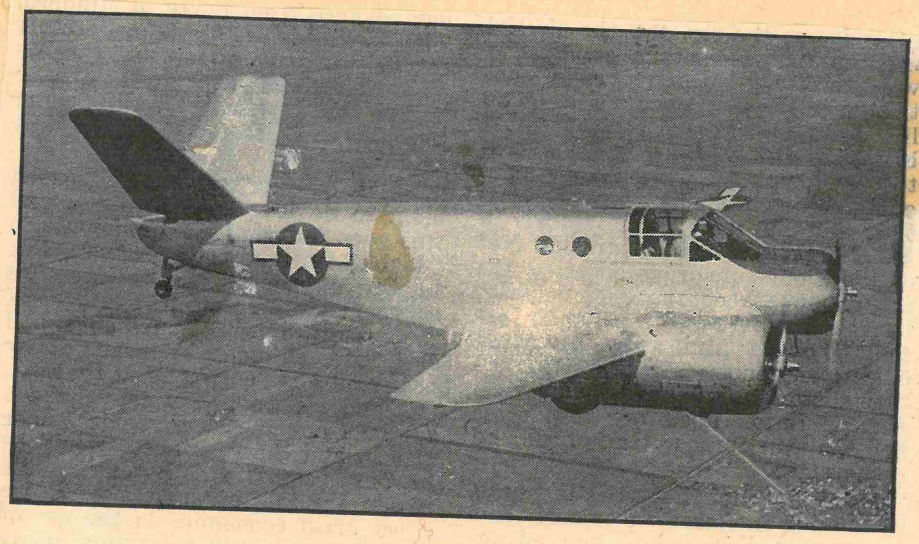
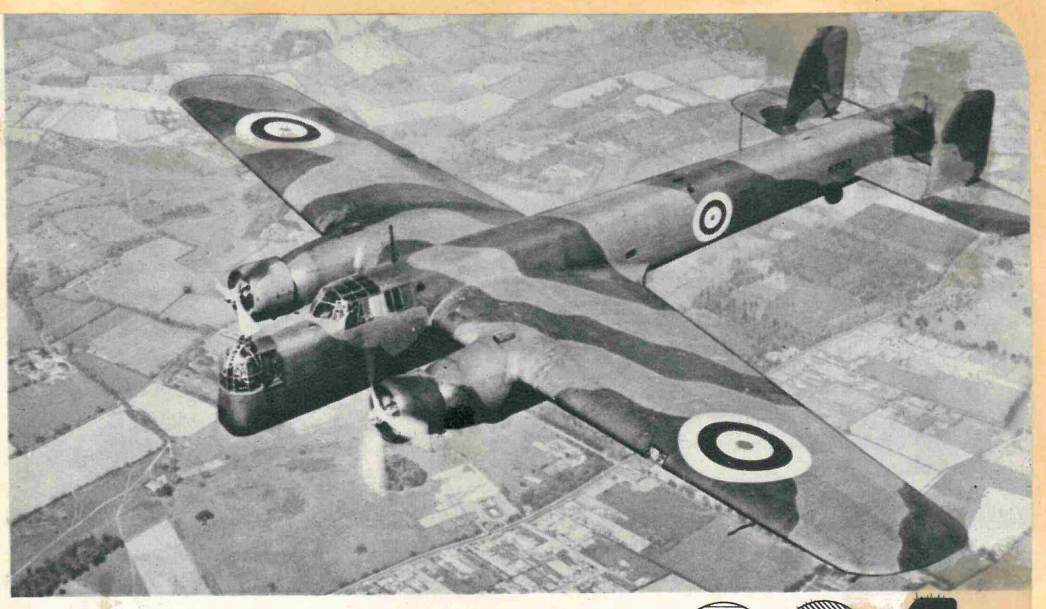


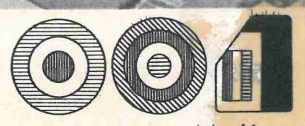
Beech Aircraft

During the past few months residents around Wichita, Kas., have been startled by seeing this queer looking plane without either horizontal or vertical tail surfaces (being equipped with a tail with only two elements). It may now be revealed that it is a Beech experimental job built to study possibilities of such a simplified structure with respect to control, stability and handling ease. A Beech workman called it the "Butterfly" tail, due to its resemblance to the half opened wings of a butterfly and the name appears likely to become official.



Aeroplane Photo Supply

ARMSTRONG-WHITWORTH "WHITLEY III" (GREAT BRITAIN)



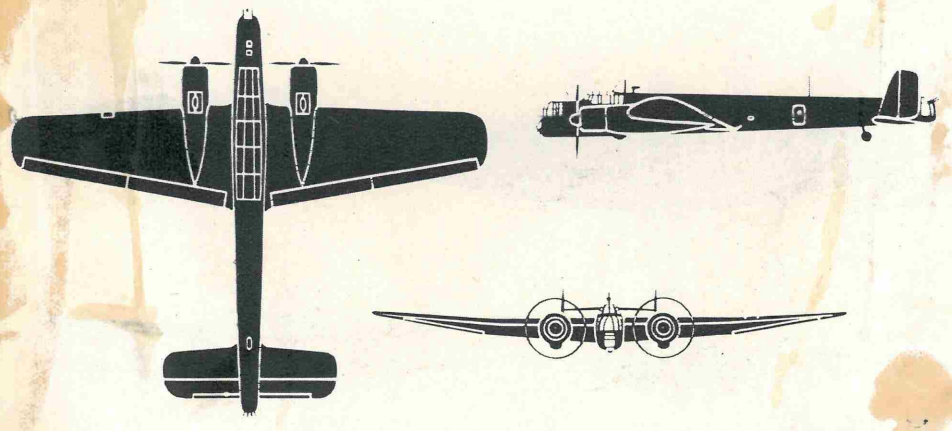
Markings

Description

Newest version of the "Whitley" bombers is this radial-engined model. It is a twin-engined, mid-wing, long-range, heavy bomber powered by two radial air-cooled engines instead of the Merlins used by its predecessor. The new power installation is reported to have increased its range and load capacity. Has gun positions in nose and tail and presents same angular appearance.

Recognition Characteristics

Square-shaped, mid-wing, twin radial-engined bomber. Twin fins and rudders mounted atop low positioned stabilizer and are strut-braced through fuselage. Wing is placed higher in this version.



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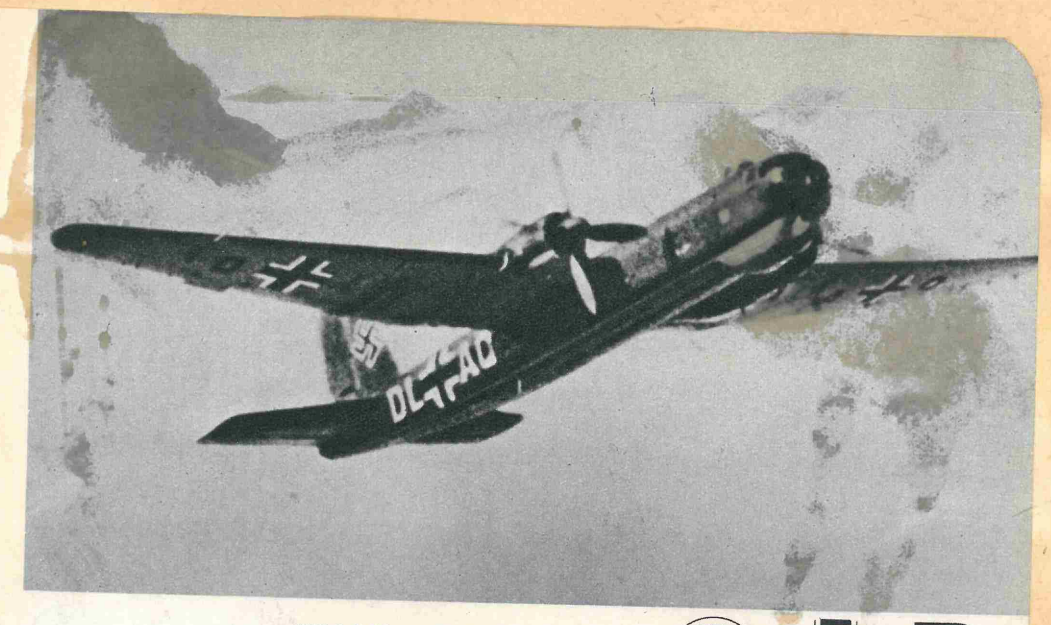


Official Photo, U. S. Army Air Forces

HEINKEL He 177 (GERMANY)

Markings

Description

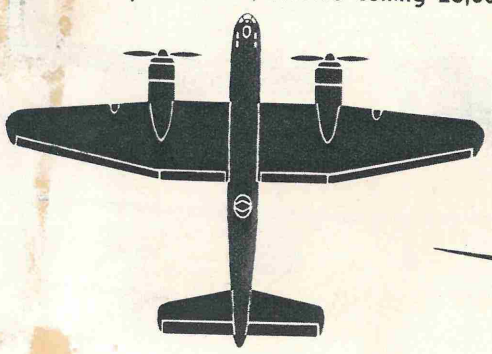
One of the newest Nazi long-range bombers to make its appearance is the 4-engined He 177. Although it appears to have 2 radial engines, there are actually 4 liquid-cooled engines, two placed side-by-side in each nacelle with a circular nose radiator. It is equipped with dive brakes under the wings and has turrets on top of the fuselage, behind the tail, and under the nose.

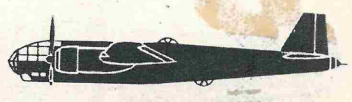
Recognition Characteristics

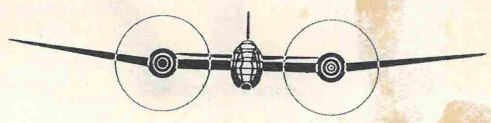
Very long nose. High aspect ratio, tapered mid-wing monoplane. Square-cut tail surfaces. Marked back sweep to stabilizer. Wing seems to be half way back along fuselage. Twin engine nacelles covering 4 engines.

Specifications

These details are approximate. Span 103 ft. 4 in.; length 67 ft. 3 in.; height 18 ft. 2 in.; wing area 1,660 sq. ft.; empty weight 35,000 lbs.; loaded weight 71,600 lbs.; max. speed 280 m.p.h. at 19,000 ft.; range 7,040 miles at 180 m.p.h.; rate of climb 840 ft. per minute; service ceiling 25,000 ft.







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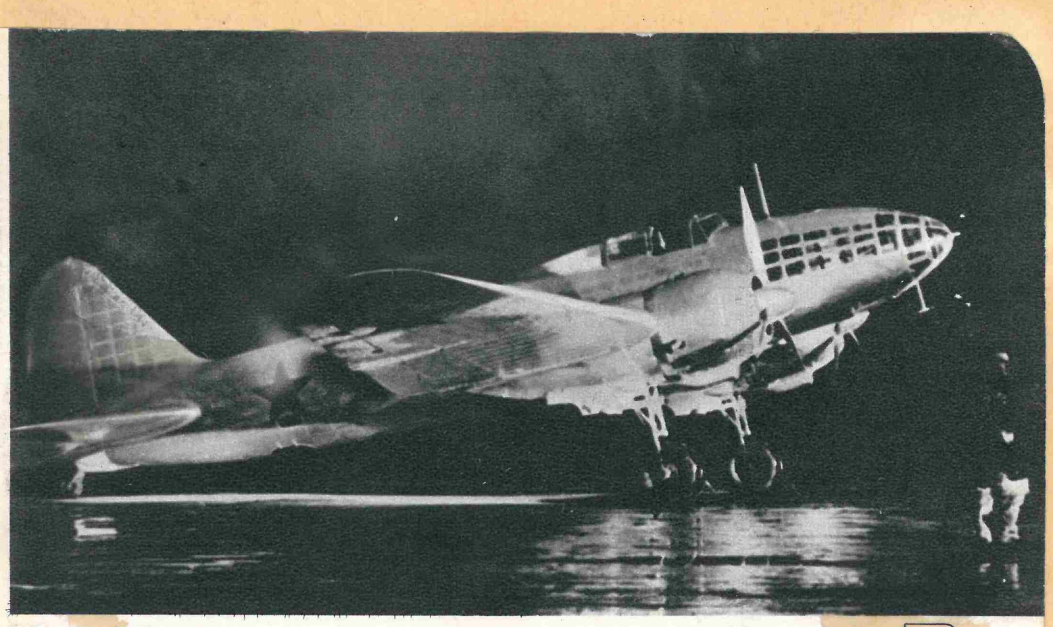
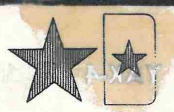


Sovfoto

DB-3F (RUSSIA)



Markings

Description

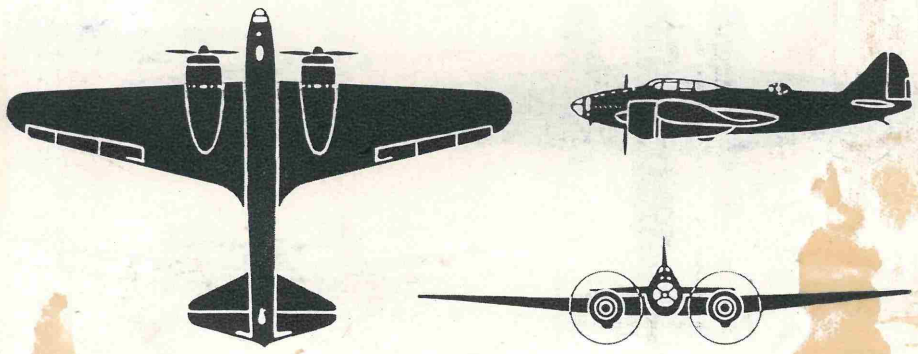
Twin-engined, low-wing, medium bomber powered by two twin-row M.87N radia air-cooled engines which were based on the French Gnome-Rhone models. They are of 950 h.p. each. This plane, a later version of the DB-3A which made a non-stop U. S. S. R. to United States flight, is capable of carrying more than 2 tons of bombs for long distances. It has nose, belly, and top gun positions. In accordance with Russian practice, no armament details have been released.

Recognition Characteristics

Low-wing, twin-engined bomber. Long pointed, transparent nose. Pilot's cockpit over leading edge of wing. Prone gunner's position on bottom of ship just forward of stabilizer.

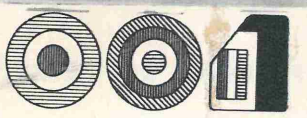
Specifications

Max. speed around 280-300 m.p.h.; loaded weight 33,000 lbs.



RCAF Photo

CESSNA "CRANE" (GREAT BRITAIN)



Markings

Description

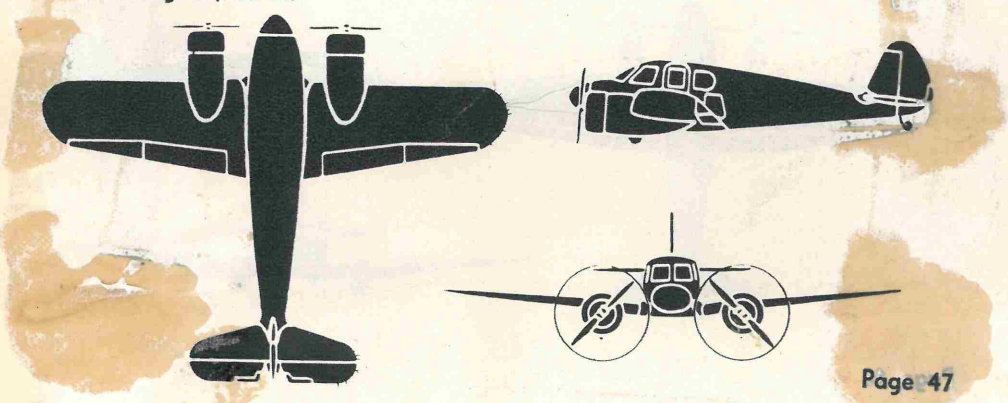
Popularly used in the United States, Canada and Great Britain is the "Crane" (Cessna T-50, Army AT-8). It is a low-wing, twin-engined monoplane especially adaptable as a transitional trainer and peacetime personal transport. Landing gear is retractable. Powered by two Jacobs radial air-cooled engines of 500 h.p. each. Seats five.

Recognition Characteristics

Low-wing, twin-engined trainer with rather long, pointed nose. Underslung engines. Straight leading edge, tapered trailing edge. Flat sides, top, and bottom. Engines extend about same distance forward of leading edge as nose.

Specifications

Span 41 ft. 11 in.; length 32 ft. 9 in.; height 9 ft. 11 in.; empty weight 3,600 lbs.; loaded weight 5,100 lbs.; range 750 miles; max. speed 195 m.p.h. at sea level; service ceiling 22,000 ft.



Official Photo, U. S. Army Air Forces

AMIOT 370 (FRANCE)

Markings

Description

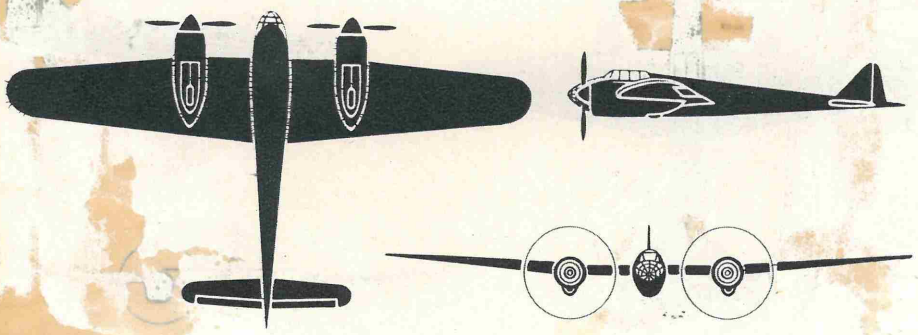
Twin-engined, mid-wing monoplane, long-range bomber powered by two Hispano-Suiza 12Y-drs liquid-cooled engines of 860 h.p. each. Fuselage of stressed skin covering. Mid-wing cantilever construction. Carries crew of two or four. Pilot sits in nose with navigator-radio operator behind. Transparent covered nose.

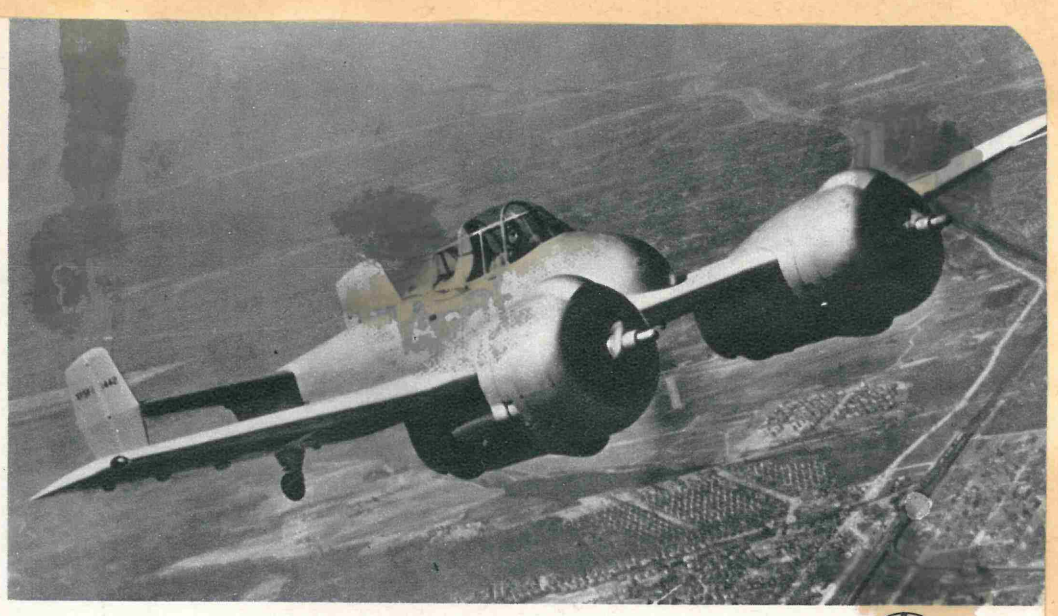
Recognition Characteristics

Twin-engined, mid-wing monoplane with transparent nose and cockpit enclosure. Oval shaped fuselage. Single fin and rudder. Pointed spinners on engines under which are beard radiators.

Specifications

Span 75 ft. 6 in.; length 46 ft.; height 13 ft. 1 in.; wing area 726 sq. ft.; empty weight 9,479 lbs.; loaded weight 17,637 lbs.; max. speed 310.5 m.p.h. at 13,120 ft.; range 4,350 miles; ceiling 32,800 ft.





Official Photo, U. S. Navy

GRUMMAN XF5F-1 (UNITED STATES)

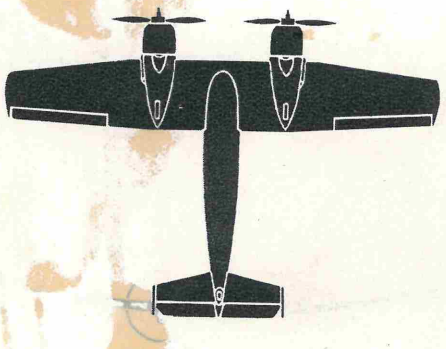
Markings

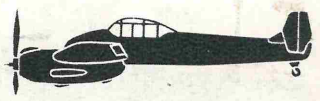
Description

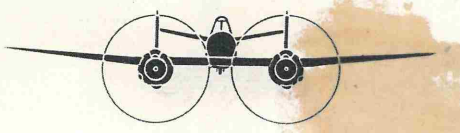
Low-wing, all-metal, twin-engined experimental fighter monoplane. Fuselage is of monocoque construction. Tail group consists of twin fins and rudders attached to tip of stabilizer. Unorthodox design places nose of fuselage behind leading edge of wing. Powered by two Wright or Pratt and Whitney double-row air-cooled engines of undisclosed model. Performance data and armament information restricted. It is known as the "Skyrocket."

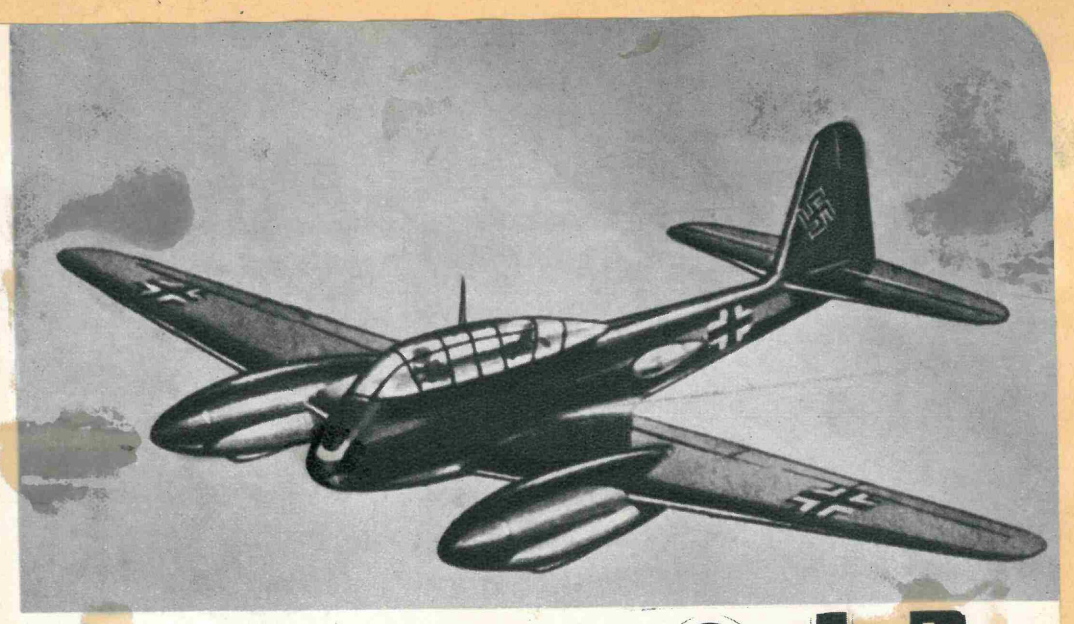
Recognition Characteristics

Easily recognizable because of protruding, underslung radial engines and by placement of fuselage behind wing. Angular twin fins and rudders.



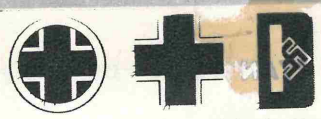






Official Photo, U. S. Army Air Forces

MESSERSCHMITT Me 210 (GERMANY)



Markings

Description

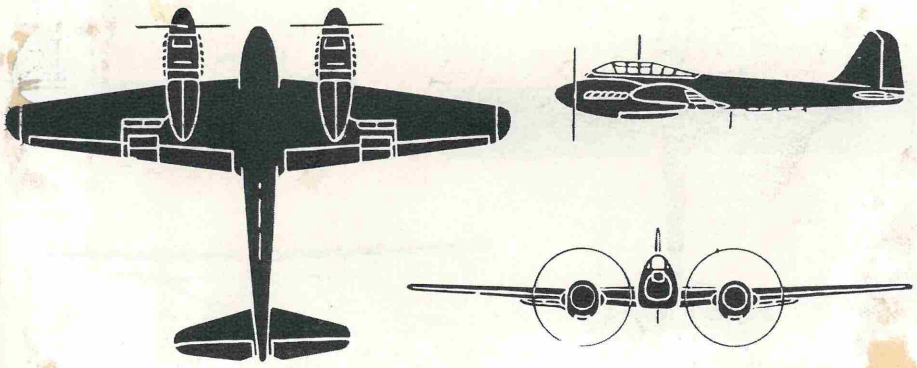
Twin-engined, low-wing, fighter-bomber, powered by two 1,450 h.p. liquid-cooled Mercedes-Benz DB 603 engines. A long-range plane developed from the Me 110 but having a much greater load capacity. Reported to carry about 4,000 lbs. of bombs. Its armament is reported to be 2 cannon and 4 machine guns in nose. Carries a crew of 2 or 4.

Recognition Characteristics

Similar in design to Me 110 except that engines protrude beyond nose, and single fin and rudder is fitted. Shorter nose gives greater visibility. Blisters on sides probably for rear protection.

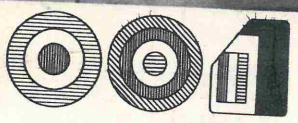
Specifications

Span 55 ft.; max. speed 285 m.p.h. at 18,500 ft.; weight loaded about 18,000 lbs.



British Press Service

VICKERS-ARMSTRONG "WELLINGTON III" (GREAT BRITAIN)



Markings

Description

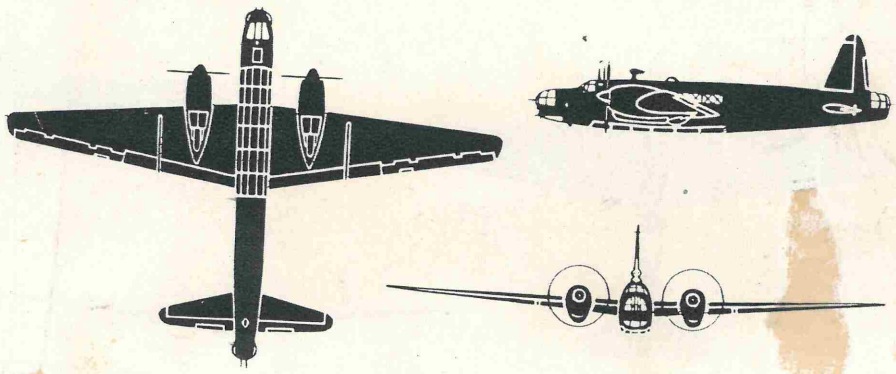
Twin-engined, mid-wing, cantilever, long-range bomber. Same in all details as predecessor with the exception that the "Wellington III" is powered by two Rolls-Royce Merlin X liquid-cooled engines of 1,040 h.p. each. The new engines increase the plane's cruising speed to 255 m.p.h., which is only 10 miles per hour slower than its top speed with the Bristol Pegasus air-cooled engines. Construction and armament details are unchanged.

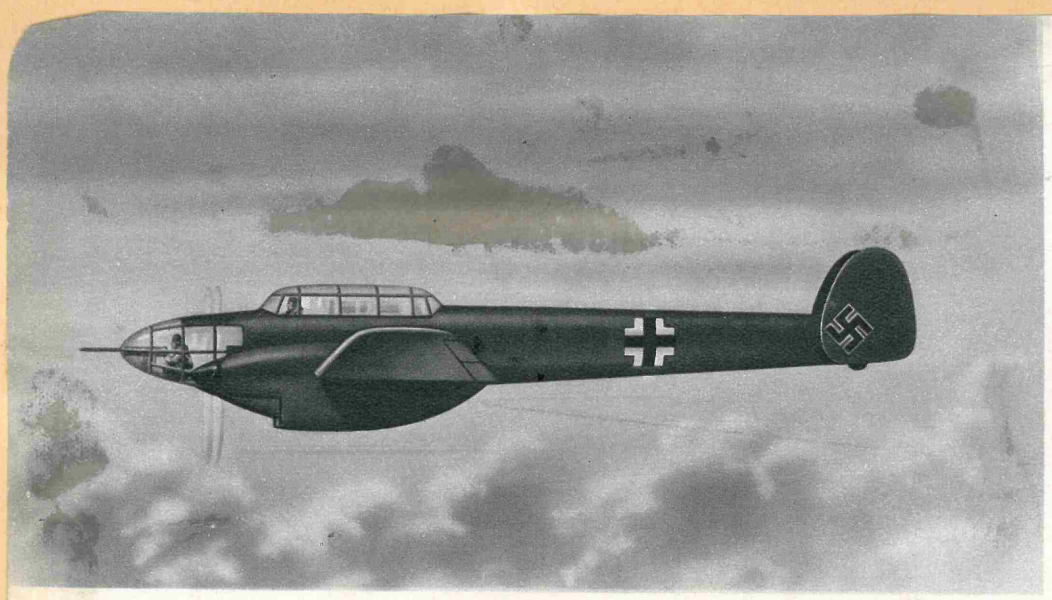
Recognition Characteristics

Long, flat-sided fuselage. Streamlined, pointed nacelles on tapered mid-wing. Gun positions in nose, tail, and on each side.

Specifications

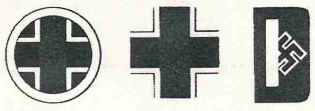
Span 86 ft. 1 in.; length 61 ft. 3 in.; height 17 ft. 5 in.; wing area 750 sq. ft.; cruising speed 255 m.p.h.





Aeronautics Photo

MESSERSCHMITT "JAGUAR" (GERMANY)



Markings

Description

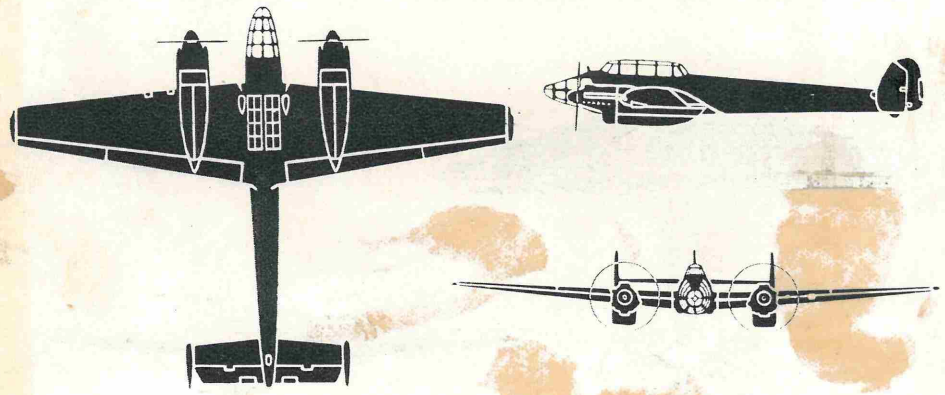
The "Jaguar" is the Me 110 converted for use as a light bomber. The entire nose section has been panelled for the bombardier and the cockpit is resultantly shorter, having only to house the pilot. Fuselage is slightly wider than Me 110 to accommodate an internal bomb load. Engines are 1,150 h.p. Daimler-Benz DB 601A liquid-cooled.

Recognition Characteristics

Twin-engined, long, slim, low-wing monoplane with transparent nose section. Twin fins and rudders. Beard radiators.

Specifications

Same as Me 110 except that maximum speed is reduced to 320 m.p.h.



Official Photo, U. S. Army Air Forces

DOUGLAS B-23 (UNITED STATES)

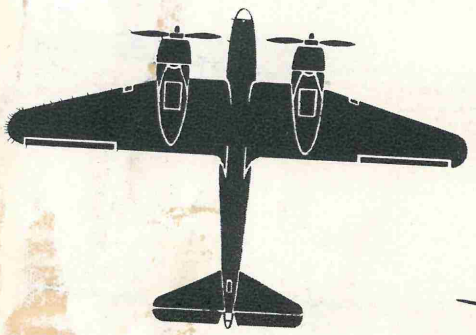
Markings

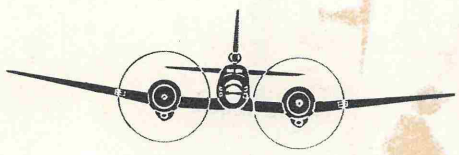
Description

Twin-engined, low-wing, all-metal reconnaissance bomber upon which all data are restricted. It is reportedly being used as an advanced trainer for gunners, bombardiers, and bomber pilots.

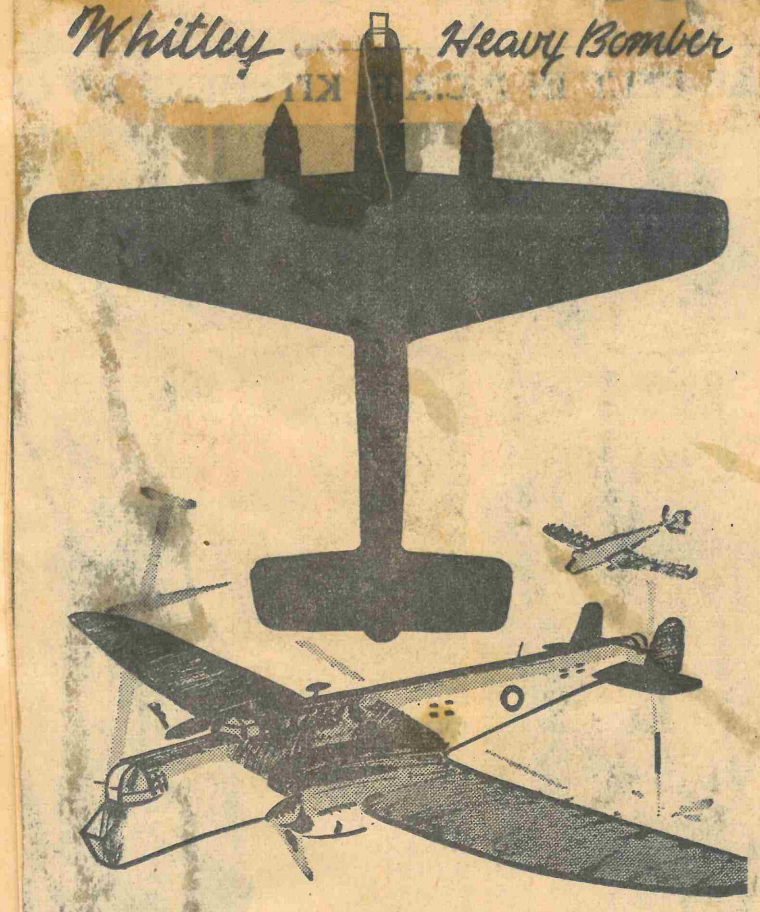
Recognition Characteristics

Leading edge of wings taper sharply to rounded tips. No taper between engines and fuselage. High single fin and rudder.





Whitley Heavy Bomber

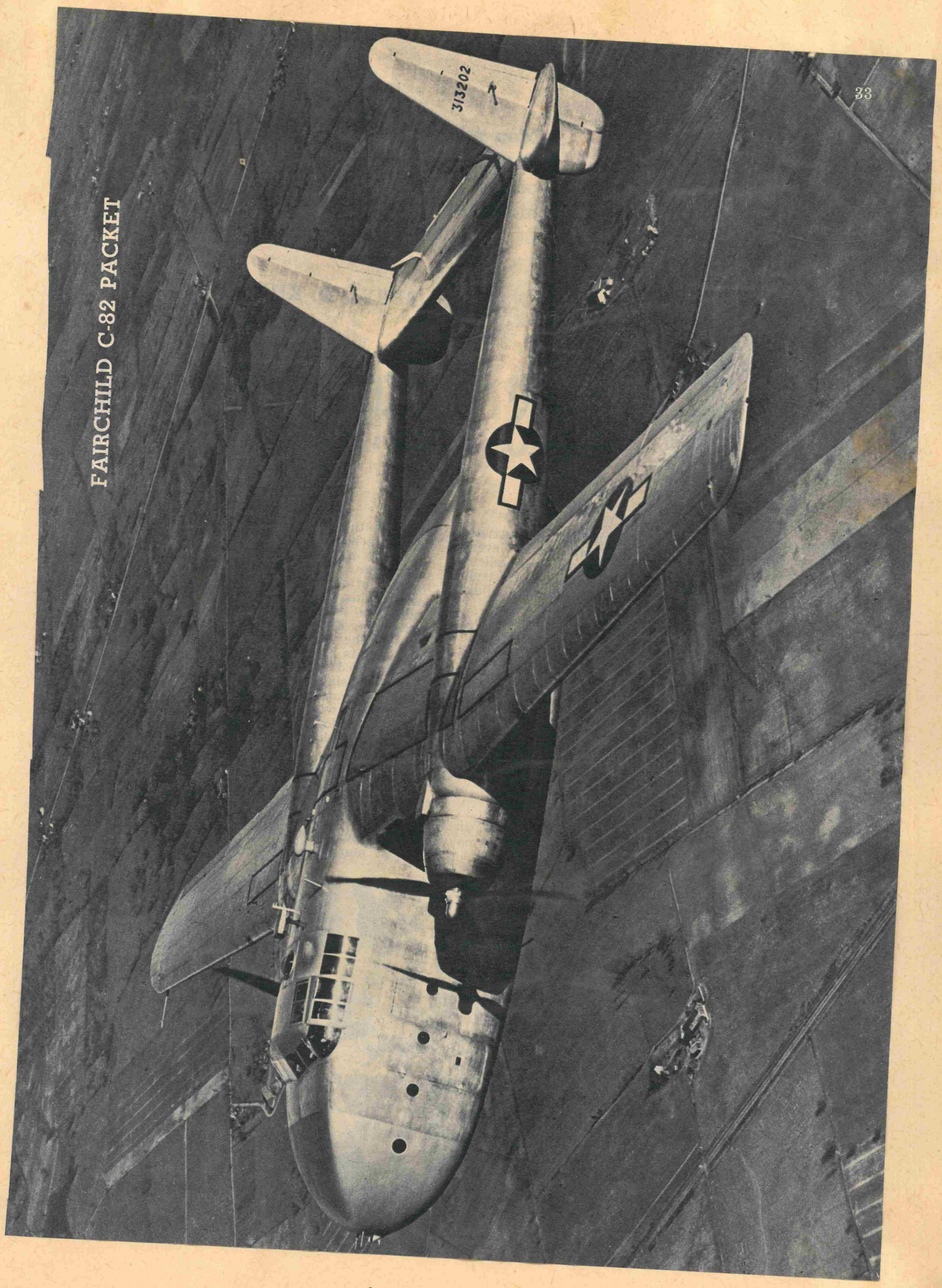


DEFINITELY in the class of the "heavies" is the Armstrong-Whitworth Whitley and despite its unorthodox appearance is for its purpose a most efficient and successful aircraft.

It has taken a large and important part in the raiding into enemy territory ever since the war started. Primarily it is used for night operations owing to its relatively low speed, and its high load capacity of almost two tons.

Whitley's wing span is almost 85 feet, with an overall length of 70 feet. It is of all-metal construction, with retractable landing gear, and powered with two Rolls-Royce Merlin liquid-cooled engines of 1,030-h.p. each, giving a top speed of 245 m.p.h. with a range of 1,250 miles at cruising speed of 180 miles per hour. It is easily distinguished by the long box-like shape of the fuselage and the twin fins and rudders. Machine-guns are mounted in power-operated turrets in both the nose and tail. The normal crew consists of five—two pilots, navigator and bomb-aimer, a rear gunner and radio operator.

FAIRCHILD C-82 PACKET



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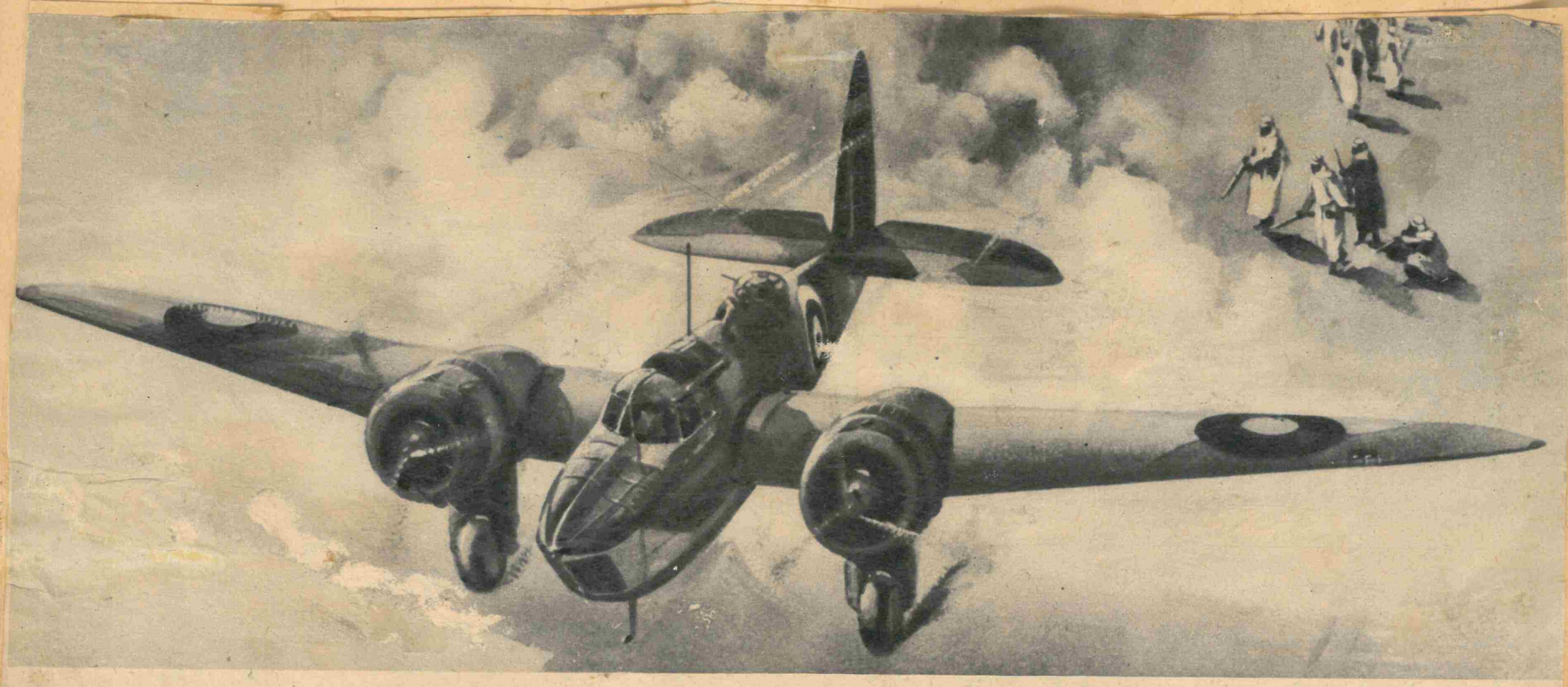
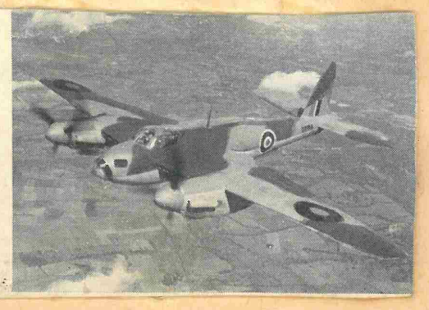


NUMEROUS INSTANCES of acts of daring and courage performed by the fighting personnel of the Allied forces have proven that man for man they are superior to the enemy. A flying officer in the R.A.F. was awarded the D.F.C. for his feat of rescuing the crew of a wrecked British plane on the French Moroccan coast. They escaped from the band of Arabs and when he landed his plane they quickly jumped aboard and he took off in the teeth of rifle fire, his throttle creating an effective dust screen.

3

We build the—

MOSQUITO — This is the new Canadian - built fighter - bomber, said to be the fastest and most effective aircraft in the world.



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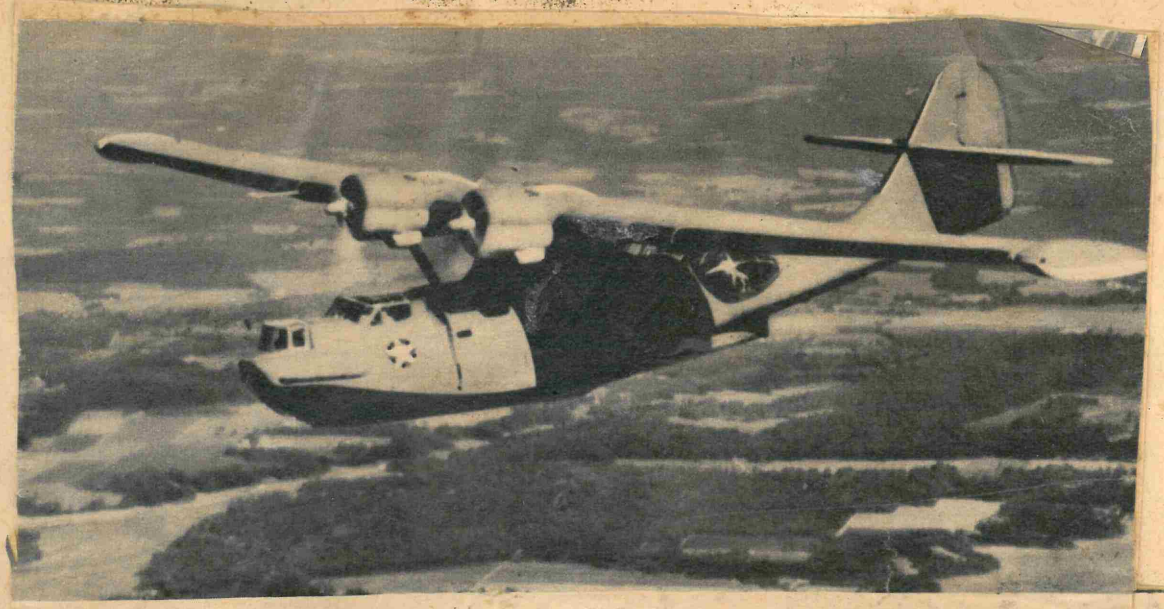
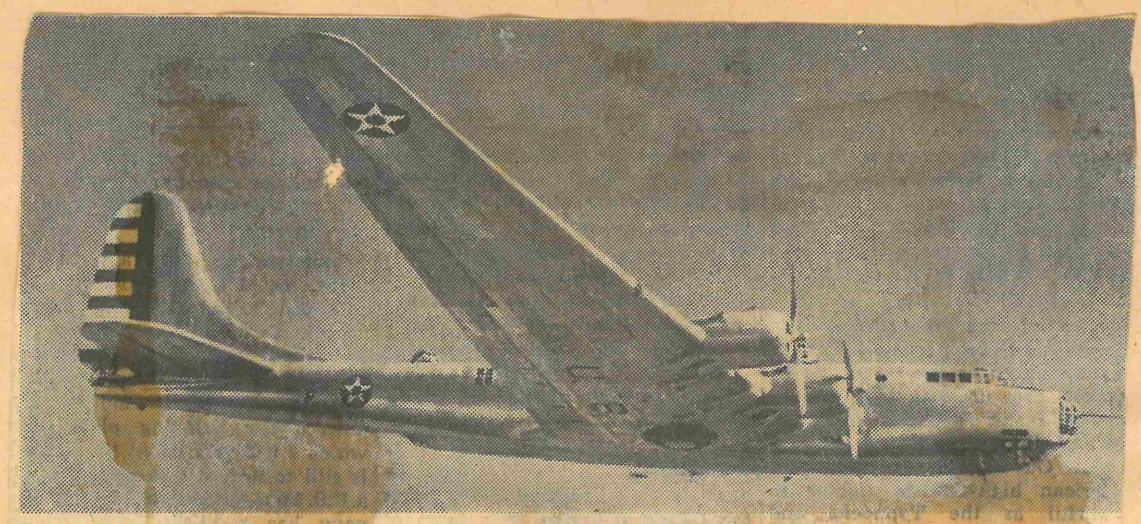


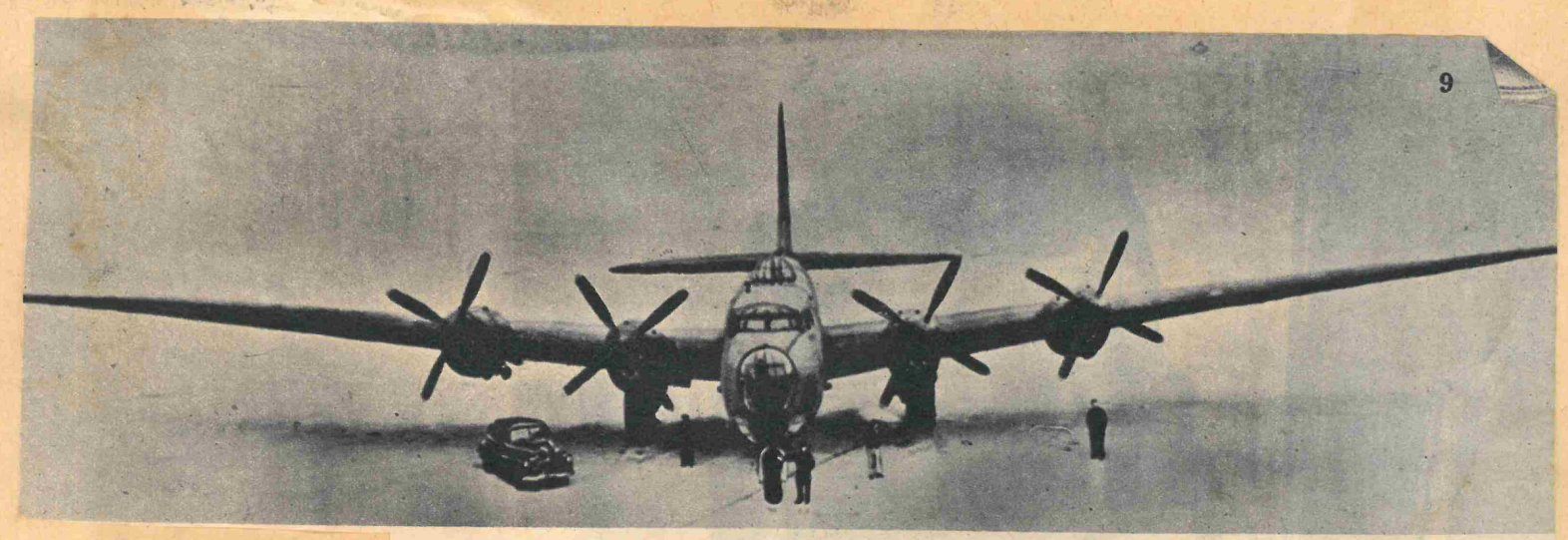
OVERSEAS PATROL is the task set these United States Navy Consolidated PBY-5 long-range patrol bombers. Many hundreds of planes such as these are in service with the U.S. Navy and with the British forces under the name "Catalina." It was a bomber of this type which located the huge German battleship Bismarck after the sinking of the Hood and led to sinking of the Nazi vessel by British naval forces. Known as the eyes of the fleet, these planes search from coastal or advanced bases or from aircraft tenders for enemy raiders and their main job currently is the protection of merchant shipping. The latest model is heavier than its predecessors and carries much more armament. It has a long-distance range of about 4,000 miles.

THE BOMBER POOL at the Lockheed Aircraft Corporation in Burbank, California, is crowded with bombers for England. Now that war flares around the world, some will go east to Britain, many others go west to the Orient. "Old Boomerang" is the loving name that R.A.F. men have given these Hudson bombers—"because Hudsons always get you home." Tomorrow these planes will be tested, then up and winging away for duty, and new bombers will be wheeled up to the line. More than 1,500 have left this field.



EVEN IN THE EXPANSE of the sky the B-19 looks tremendous. It has a wingspread of 212 feet, speed of 210 miles an hour, carries a crew of 10 and a bomb load of 18 tons. It's cost is $3,500,000. Canadians, buying war savings certificates, know their money will go for the purchase of other great bombers, for only with the most modern planes can Hitler be beaten. The B-19 was built in California and completed its army acceptance test last week.

5



9

The B-19 is in the news again. Now, with new power plants—2,600-hp. liquid-cooled Allison engines—the huge experimental bomber has 30 per cent more power. It carries 18 tons of bombs.

International News ph

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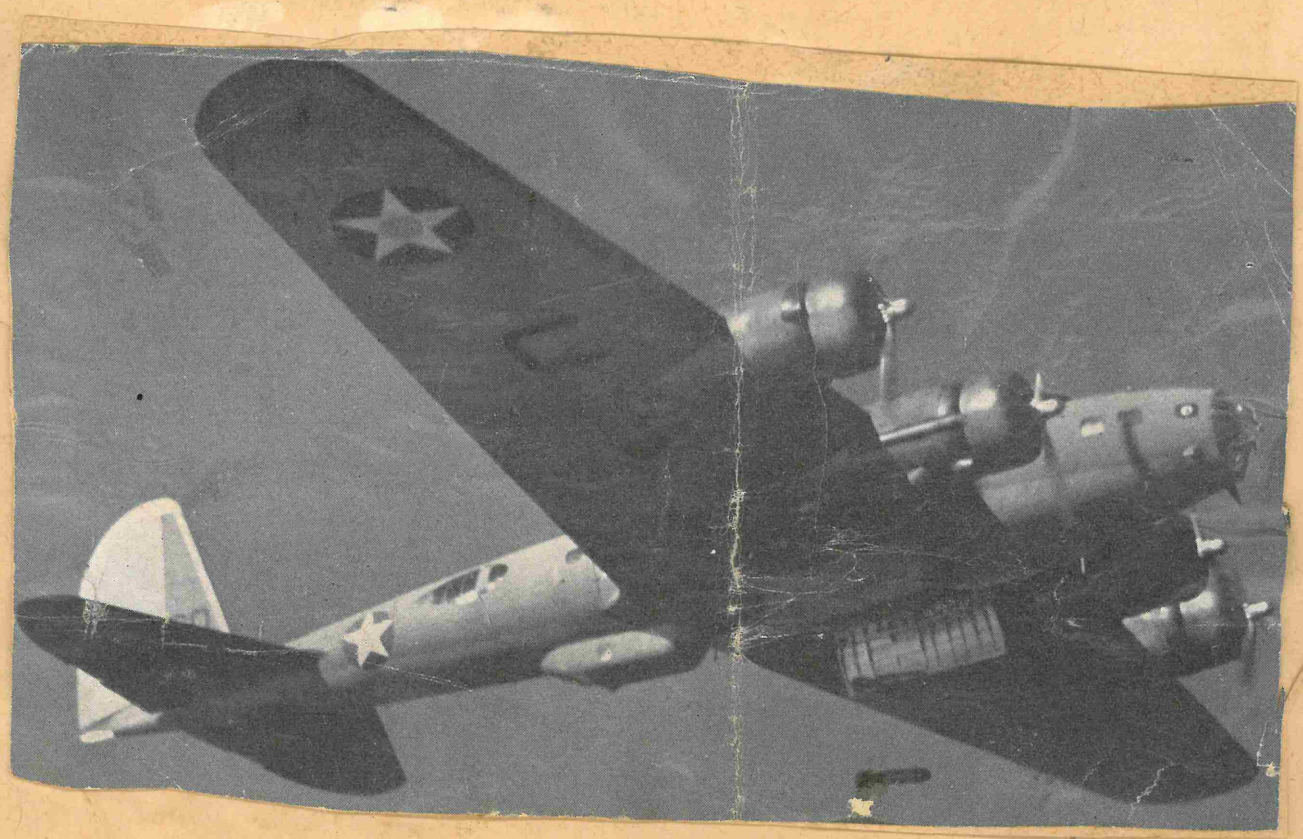

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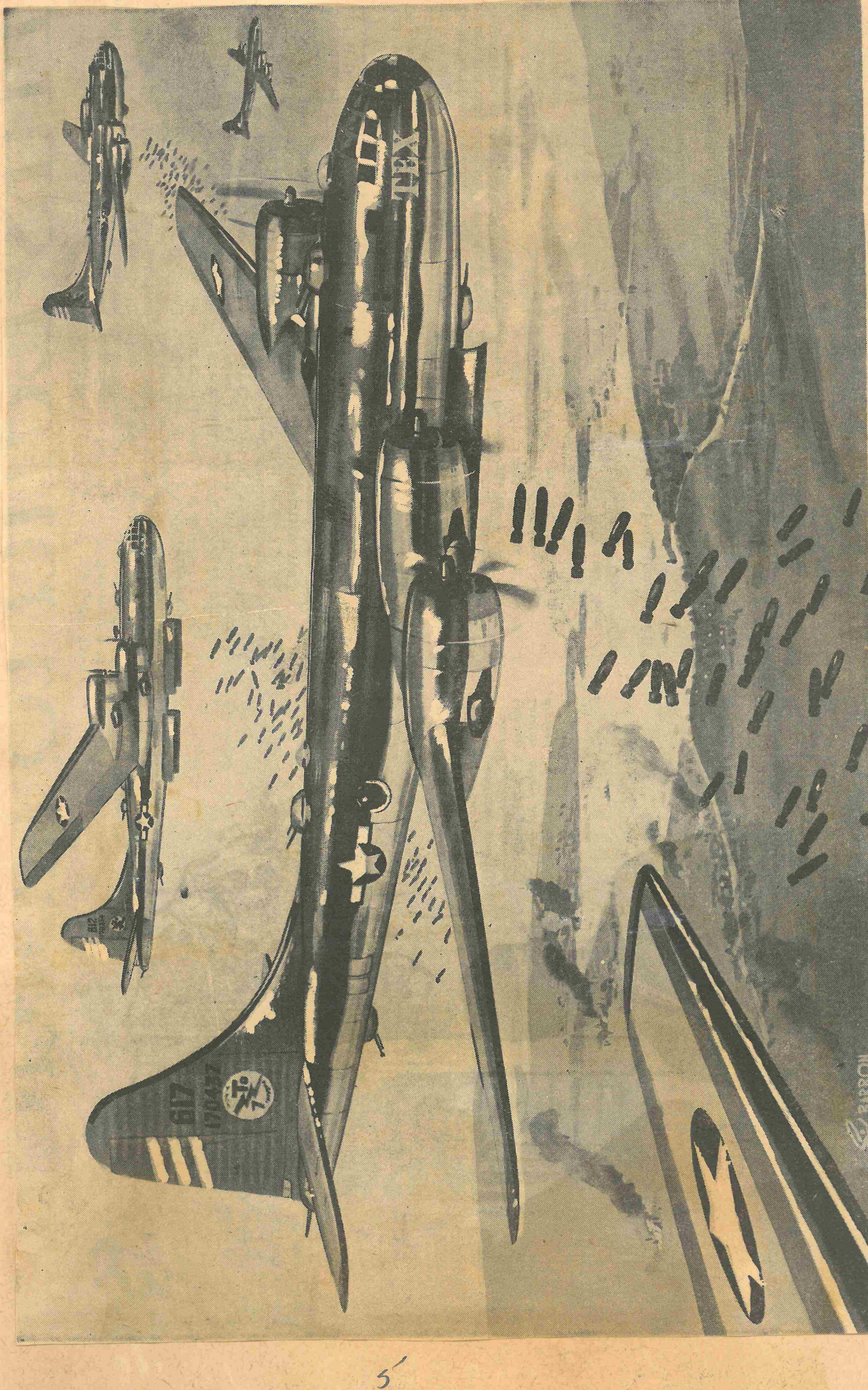
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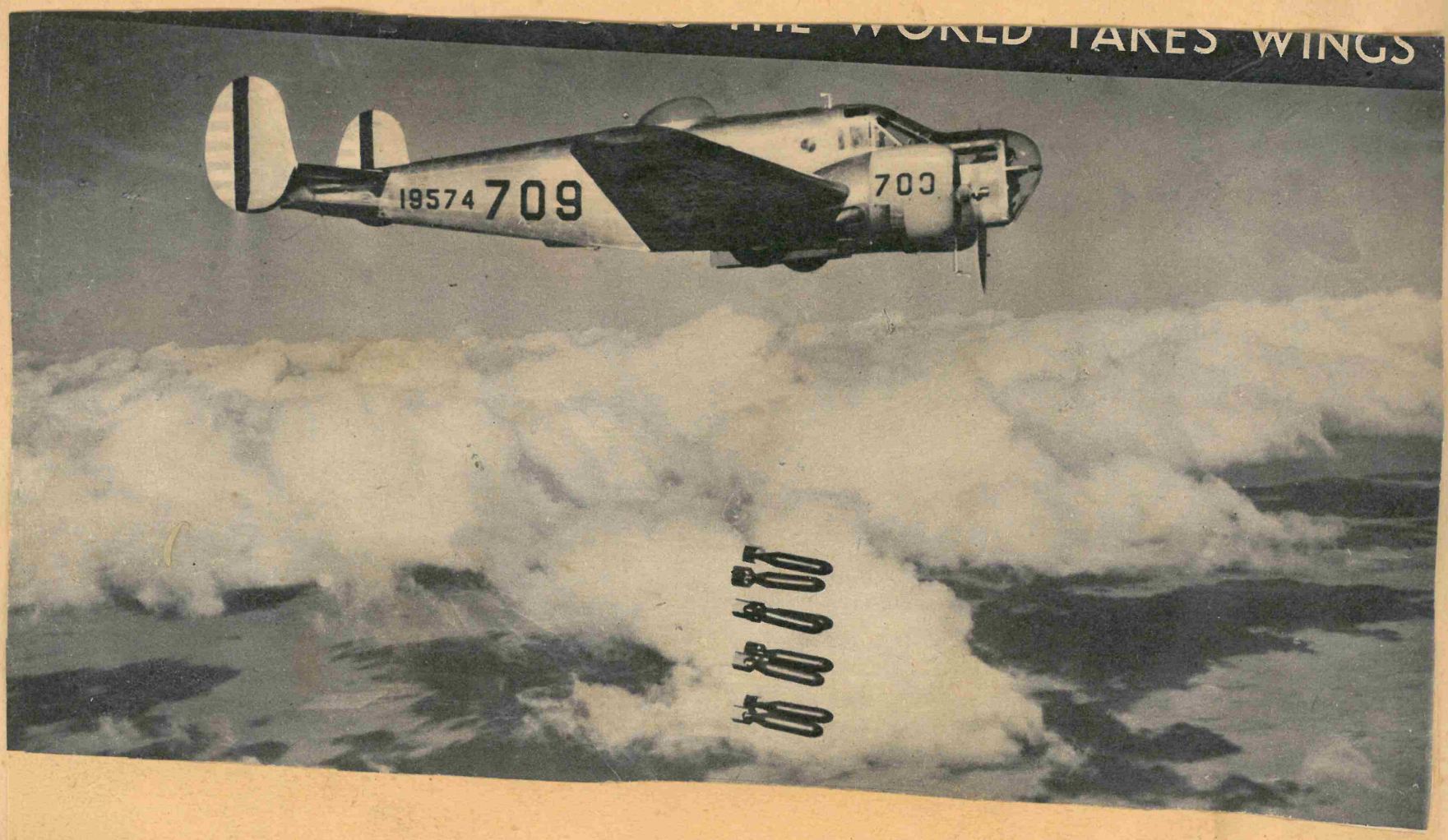
THE WORLD TAKES WINGS
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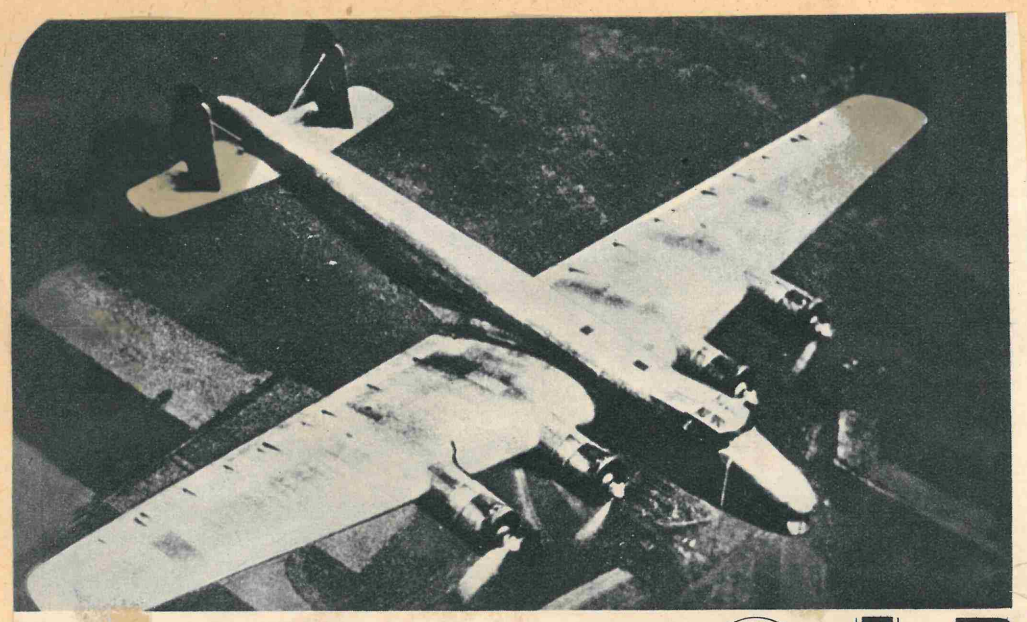


Aeronautics Photo

DORNIER Do 19 (GERMANY)

Markings

Description

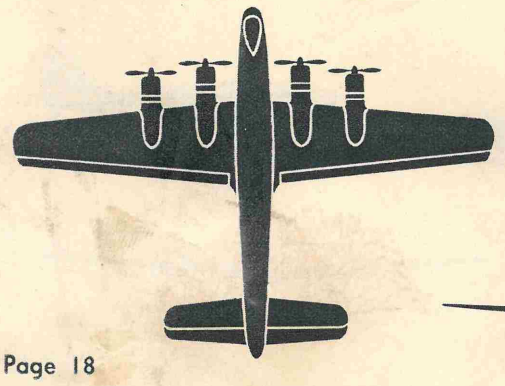
Long-range, mid-wing, 4-engined bombing monoplane powered by 4 Bramo radial engines of 650 h.p. each. Little information is available on this plane although it has been in service for some time. Reported load capacity is about 9 tons and it is capable of speeds in excess of 200 m.p.h. It is known to carry at least 4 machine guns in addition to its bomb load. Has gunner's position under nose and probably in the tail.

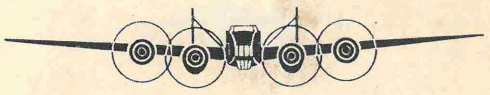
Recognition Characteristics

Large 4-engined bomber of generally angular appearance. Twin fins and rudders are mounted on upper surface of stabilizer half-way between tip of stabilizer and fuselage, and are strut-braced. Tapered wing of high aspect ratio.

Specifications

Span 106 ft.; length 78 ft.; height 19 ft.; empty weight 24,000 lbs.; loaded weight 40,700 lbs.; max. speed 235 m.p.h.





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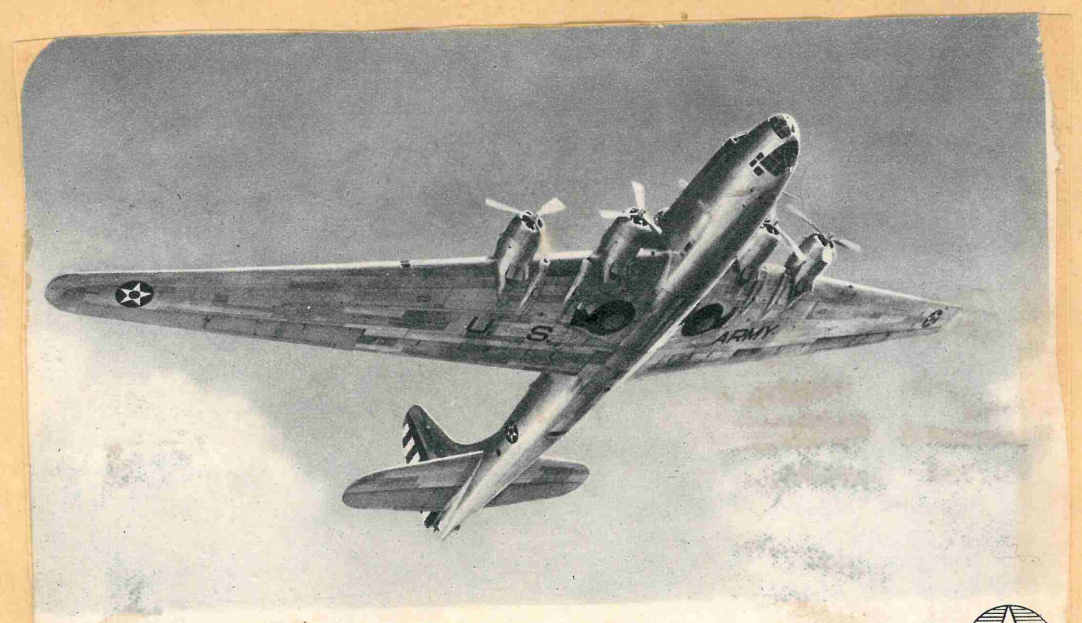


Aero Digest

DOUGLAS B-19 (UNITED STATES)

Markings

Description

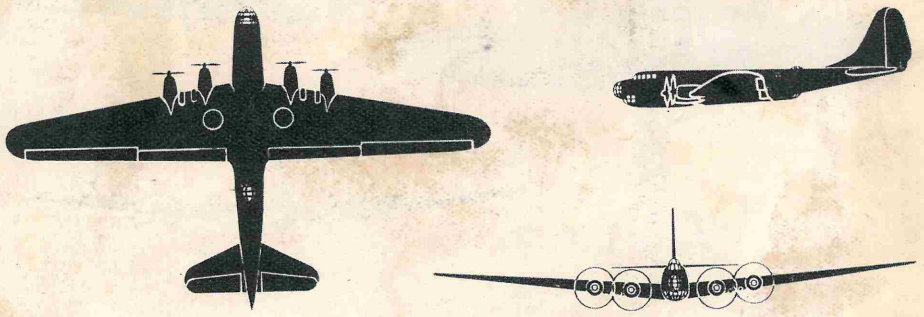
This is the world's largest land airplane. Carries flight crew of 10 men with sleeping accommodations for 8. Powered by 4 Wright Duplex-Cyclone radial air-cooled engines of 2,000 h.p. each. Propellers are 17 ft. in diameter. Plane can carry 18 tons of bombs. Contains 10 miles of electrical wiring, 2 miles of control cable, 3,000,000 rivets and required 42,500 hours research and testing time, four years from design to first flight, 700,000 hours engineering time. Its 9,000 drawings would cover 4 acres. 500 engineers, technicians and mechanics were employed in its manufacture. Vertical fin is almost 5 stories high.

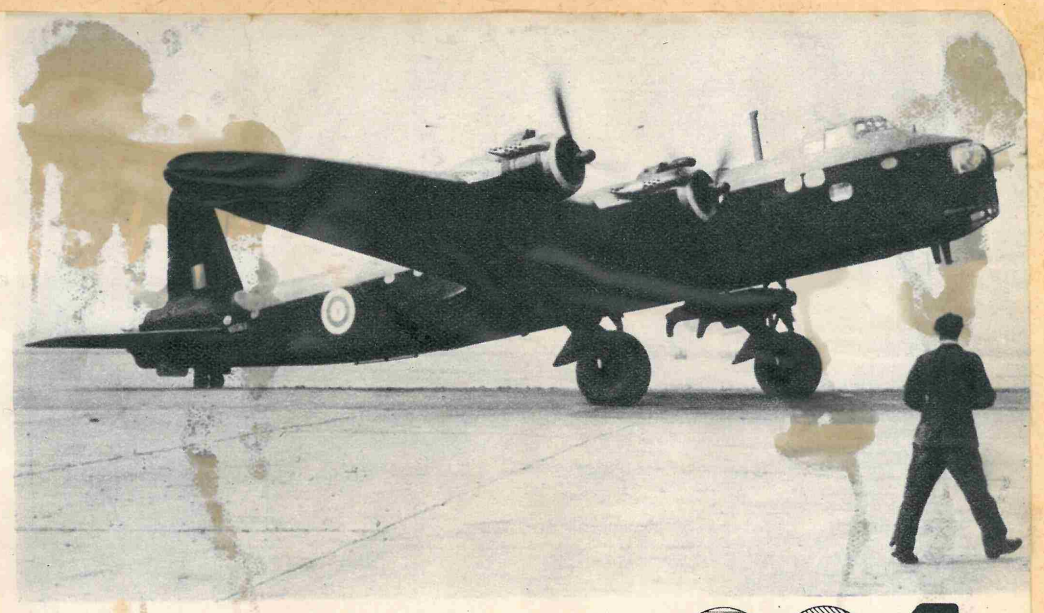
Recognition Characteristics

Largest landplane in existence. Four engines. Immense wing spread. Tricycle landing gear. Highly tapered leading edge. Straight trailing edge.

Specifications

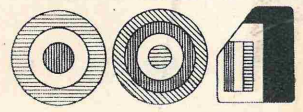
Span 212 ft.; length 132 ft. 4 in.; height 42 ft. 9 in.; empty weight 84,059 lbs; loaded weight 161,879 lbs.; max. speed in excess of 200 m.p.h.; range 7,750 miles.





British Combine

SHORT "STIRLING II" (GREAT BRITAIN)



Markings

Description

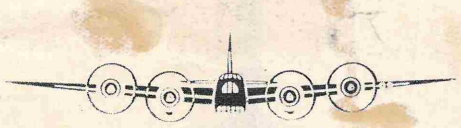
Four-engined, mid-wing, long-range, heavy bomber which is capable of carrying 8 tons of bombs. This is the latest version of the "Stirling" series. It has 3 gun turrets mounting a total of 8 Browning machine guns. It is equipped with self-sealing fuel tanks and is heavily armored for crew protection. Reported to be one of the largest and heaviest 4-engined bombers in present use. Other data restricted.

Recognition Characteristics

Four-engined, mid-wing bomber. Wing tapers and has dihedral. Single, high fin and rudder. Flat sides and bottom. Gun positions in nose, tail and on top.

Specifications

Length 87 ft. 3 in.; height 22 ft. 9 in.; speed about 300 m.p.h.; range 2,500 miles.



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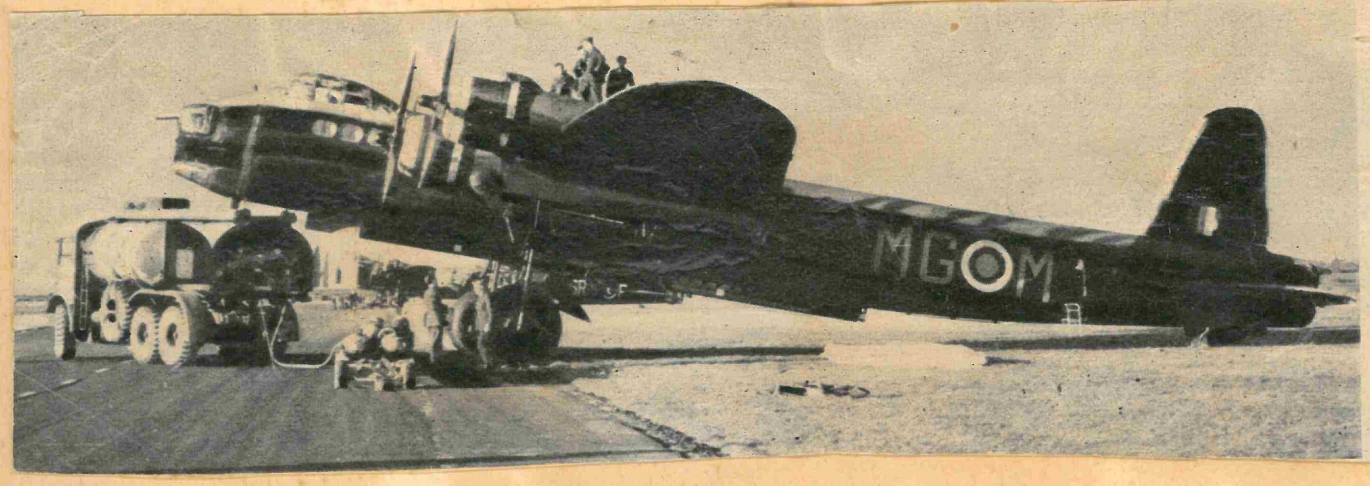
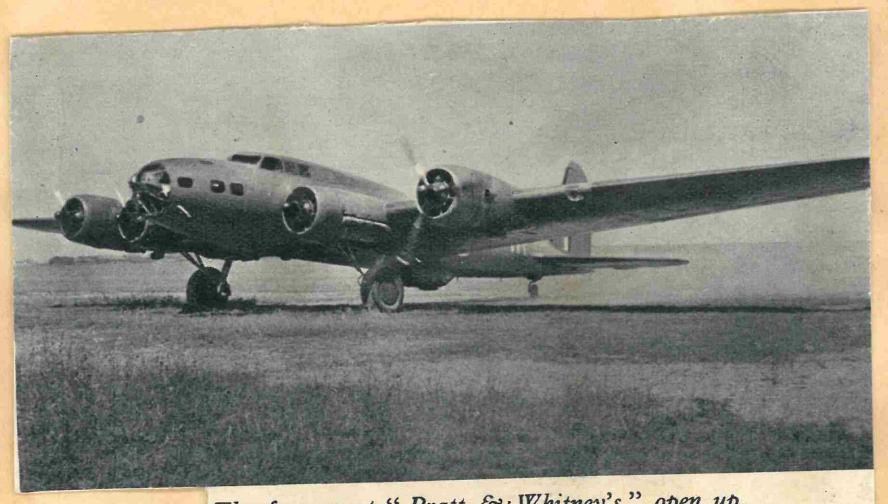


this Stirling bomber carries four tons of high explosives —the biggest load of any British plane. It is three times as much as a Wellington carries and nine times as much as a Blenheim. The bomb-compartment has a capacity similar to that of a two-car garage. It is powered with four big 1,400 horsepower motors and has a wing spread of 99 feet. Its huge dimensions include an over-all length of 90 feet.

5

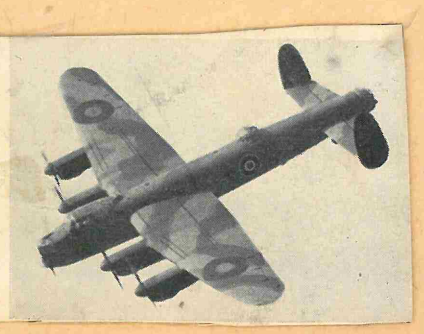


The four great " Pratt & Whitney's " open up.

5

We build the—

LANCASTER — Proved to be one of the most effective heavy bombers produced in this war.



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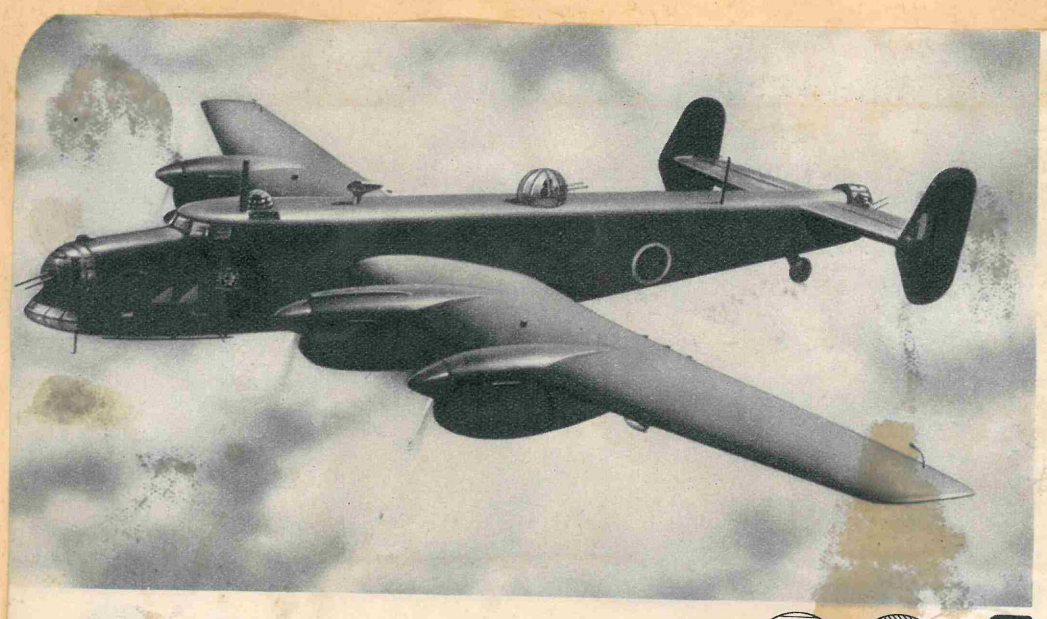


Aeronautics Photo

HANDLEY PAGE "HALIFAX II" (GREAT BRITAIN)

001

Markings

Description

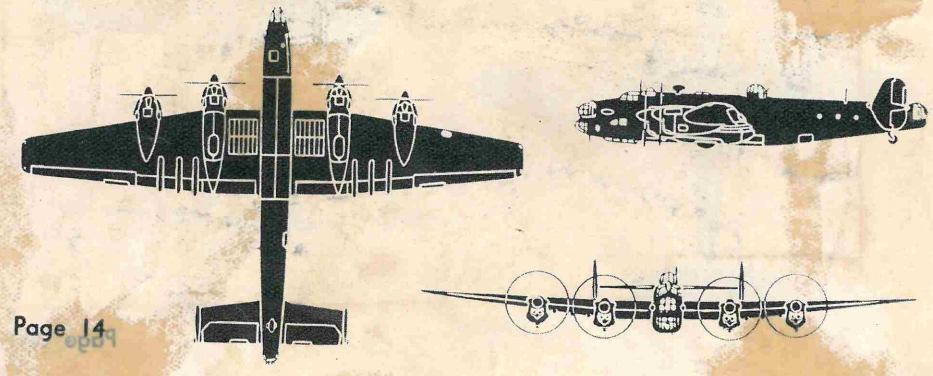
Four-engined, mid-wing, long-range, heavy bomber powered by 4 Rolls-Royce Merlin liquid-cooled engines of 1,175 h.p. each. The "Halifax II" differs from its predecessor in that it has a Boulton Paul center dorsal turret which mounts two machine guns. Armament consists of eight Browning .303 machine guns and a 5½ ton load of bombs is carried internally. Inboard engines are mounted slightly ahead of outboard. High-mounted stabilizer has triangular-shaped twin fins and rudders attached to its tips. Wing is tapered on leading and trailing edge and tips are square-cut.

Recognition Characteristics

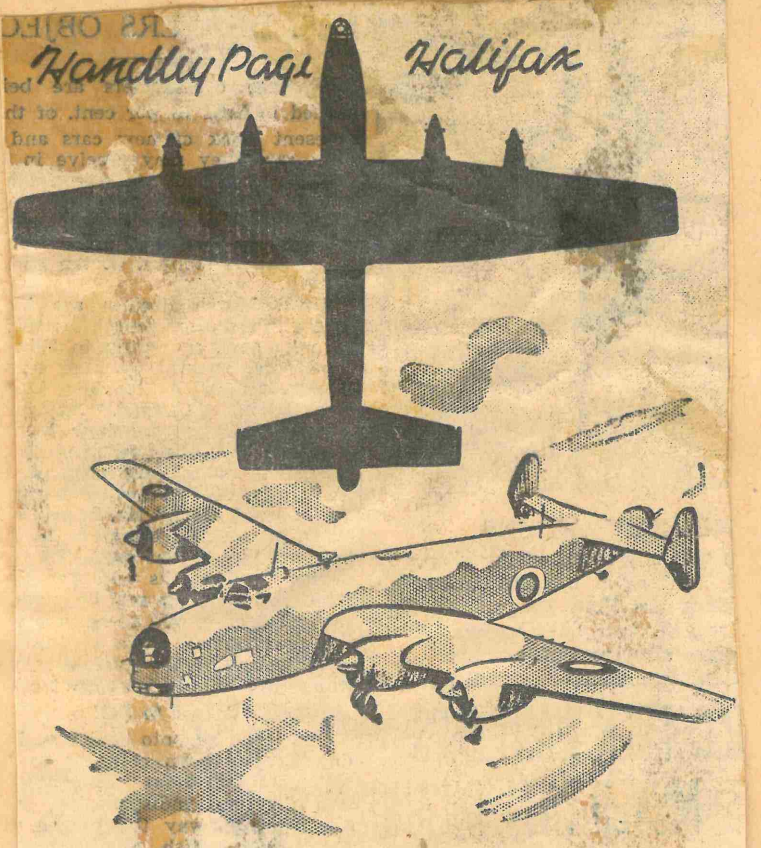
Four underslung liquid-cooled engines. Large mid-wing with square tips. Dorsal gun turret. Turrets in tail and nose. Flat-sided fuselage.

Specifications

Span 99 ft.; length 70 ft.; height 22 ft.; wing area 1,250 sq. ft.; loaded weight 60,000 lbs.; max. speed about 300 m.p.h.; range 3,000 miles.



Handley Page Halifax

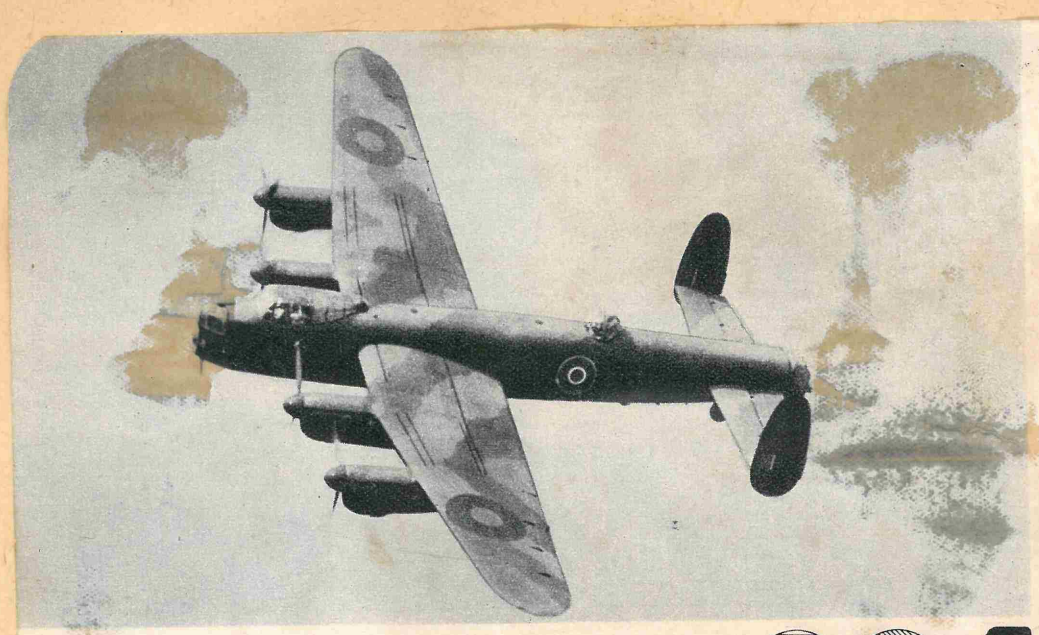


THE Halifax is the latest member of a long and distinguished line of heavy bombers. In 1917 the Handley-Page 0/400 did yeoman service with the independent air force of the R.A.F. and on the northern front in Europe. Its record as a night bomber will be long remembered. Then in 1918 Handley-Page produced the V/1500, a huge four-engined airplane with a wing spread of 126 feet, built especially to bomb Berlin but the Armistice terminated such plans before they could be brought to fruition.

Today, the promise of 1918 is being fulfilled by the Halifax. The Halifax is one of the newer four-motored bombers. It is an all-metal aircraft, and, while not unpleasant to the eye, it was undoubtedly designed with an eye to quick and easy production. Engines are four of the famous Rolls-Royce Merlins.

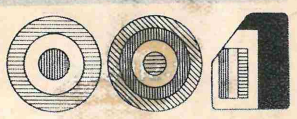
A crew of seven is usually carried, consisting of captain, second pilot, navigator, two wireless operators, engineer and tail gunner.

The armament is heavy and the aircraft is well protected at all points for defensive action.



Acme Newspictures

AVRO "LANCASTER" (GREAT BRITAIN)



Markings

Description

Four-engined, mid-wing, all-metal, long-range heavy bomber powered by 4 Rolls-Royce Vulture engines of 2,000 h.p. each. Carries crew of 7. Wing has pronounced dihedral and engines are all underslung, with beard radiators and rounded spinners. Fuselage is flat-sided. Gun positions in nose, tail, on top, and on bottom. It is armed with 10 .303 calibre machine guns mounted in 4 power turrets and carries 8 tons of bombs in its 33-foot bomb compartment. Has seen action in the famous raid on Cologne and in later large-scale bombing attacks.

Recognition Characteristics

Large mid-wing, 4-engined bomber. Engines underslung. Mid-positioned stabilizer with elliptically-shaped twin fins and rudders attached to its tips. Gun turrets in nose, on top of fuselage and in tail. Large fixed tail wheel.

Specifications

Span 102 ft.; length 69 ft.; height 20 ft.; loaded weight 60,000 lbs.; max. speed in excess of 300 m.p.h.; range 3,000 miles.