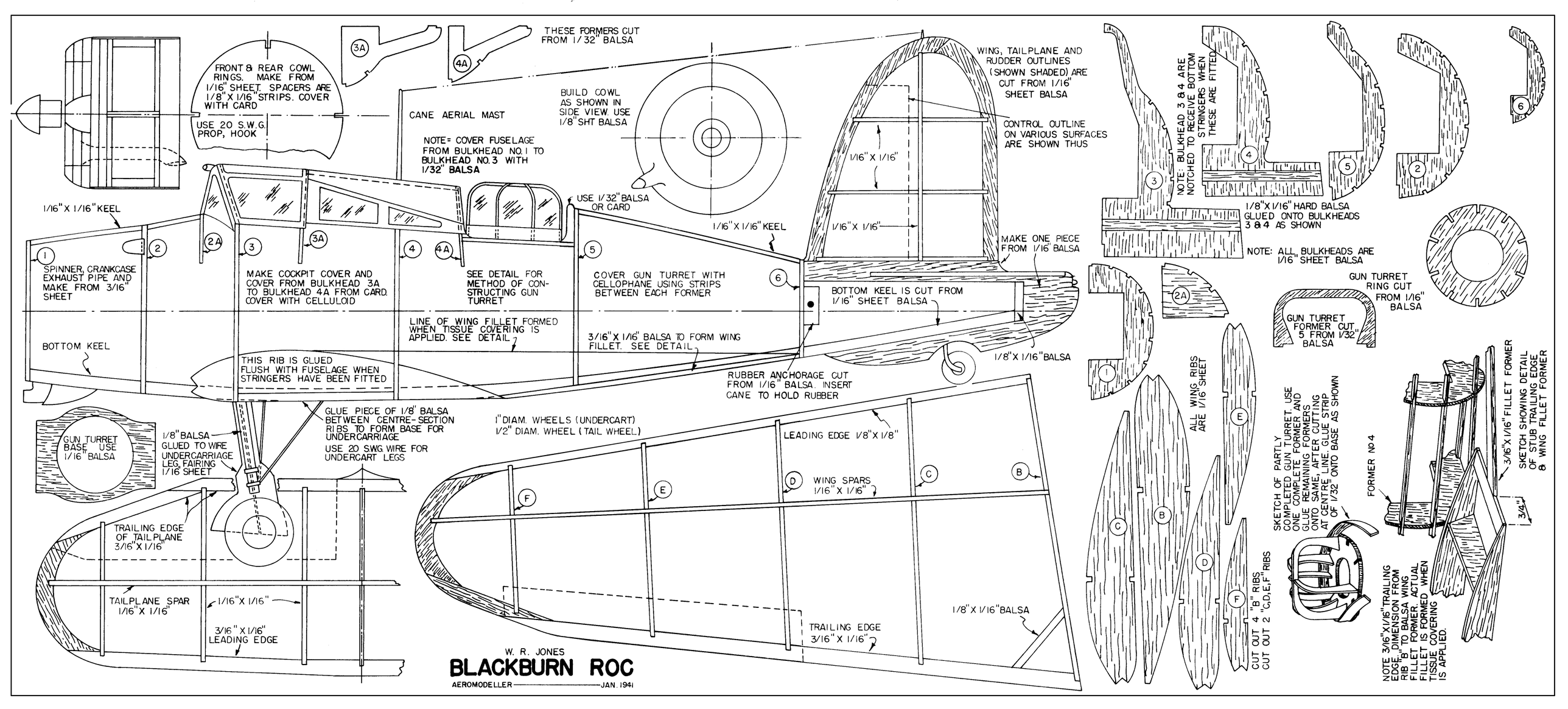


W. R. JONES

BLACKBURN ROC

AEROMODELLER — JAN. 1941

mounted well forward and with a wide track. Each unit retracts backward into the wing, where the wells are completely closed by the leg-fairing and by flush-fitting hinged panels after retraction. The struts apparently swivel to permit the wheels to lie flush in the wing-panels.

The Vought-Sikorsky XF4U-1 is about the size of the "Hurricane," having a span of about 40 feet, and a length of approximately 30 feet. Wing-area may be larger, however, since the machine is said to have a gross weight of nearly 9,000 lb. No performance figures have been released, but it is undoubtedly very fast, and probably does well above the 400 m.p.h. mark. The maximum speed is probably attained at a high altitude, since the R.2800 motor develops 1,600 h.p. at above 20,000 feet. Take-off rating is 1,850 h.p., so it may be assumed that the XF4U-1 has a rapid climb and a short take-off.

It has not been stated whether orders for either of these two aircraft the Grumman "Skyrocket," or the Vought-Sikorsky XF4U-1 have been placed, but both are obviously first-class fighters, and would be useful in this country.

Latest American Navy aircraft is the Curtiss XSB2C-1 dive-bomber. Very little information is available about the machine at the moment, but it is powered with a Wright double-row "Cyclone" 14-cylinder radial developing a maximum output of 1,700 h.p., and thus should be much faster than any other dive-bomber.

In general, the aircraft is a cantilever low-wing monoplane (apparently a two-seater), and of all-metal construction. The "Cyclone" is neatly cowled, and the propeller hub is enclosed in a large spinner, which enhances the appearance of the machine. The wide-track undercart retracts inward, and trailing-edge flaps, which can apparently be used as dive-brakes, are fitted.

Developed by the Curtiss Aeroplane Division, Curtiss-Wright Corporation, in co-operation with the U.S. Navy, the manufacturers state that the XSB2C-1 offers performance and versatility never before achieved in aircraft of its type. It is further stated to have a heavy armament, and to be capable of carrying a large bomb-load at a high speed over a long distance.

For this month's model drawing, the Henschel Hs.126 Observation Monoplane has been chosen. This machine is in the same class as our Westland "Lysander," and was described in the June, 1940, article. The full-size aircraft has a span of 47 ft. 7 in., so a ½ in. to the foot scale will give us a conveniently sized model of roughly 2 ft. span.

Since fixed strut-braced parasol-wings are never very durable, a suggested method of making a flexible mounting is shown in the sketch. The cabane struts are rigidly fixed to the fuselage, and a balsa platform mounted on top. The wing is then attached with rubber to this platform.

Wing struts and bracing wires always cause a lot of trouble, so these are also made to snap off in emergency. Simple plug fastenings are used to attach the spars to the undersurface of the wing. A rubber-band passing through the fuselage connects hooks on the bottom ends of the struts.

The usual "extras" for ultra-detailed models are noted with an asterisk in the drawing key.

COMMENCING NEXT MONTH:

A new series of articles, by H. J. Cooper, entitled :—

"FIGHTING AIRCRAFT OF THE PRESENT WAR"

BUILD A ½" Scale FLYING MODEL OF THE BLACKBURN 'ROC'

from the full size plans printed on pages 806, 807, 816, 817 ***Designed by W. R. Jones***

THIS model is true to scale, except for a slight increase of the tail and rudder area. It was designed over twelve months ago and can be relied upon to turn in very good flights around the 35 sec. mark.

Fuselage Construction.

The bottom keel member is pinned down on to the plan and the bulkheads (that is, one half of each) are glued on to this and the ⅛ in. by ⅛ in. top keels. When dry, remove from plan and glue the remaining half of each bulkhead on to keels. Add the stringers, keeping an equal number on either side. The 1/16 in. sheet tail and rudder support is fitted when keel members are being pinned down. The rubber anchorage pieces are glued inside stringers when fuselage is completed. Refer to detail drawings for assembly of centre section and wing fillets.

Wing Construction.

These are built on the plan, using the wool stated. Note: Top and bottom spars. Leading edge may be covered with 1/32 in. wood if desired.

Rudder and Tail-plane Construction.

These are built on plan when outlines, etc., have been cut out.

Undercarriage.

Build up as shown on the drawings and plug into ½ in. sheet inserts in the centre section.

Engine Cowl.

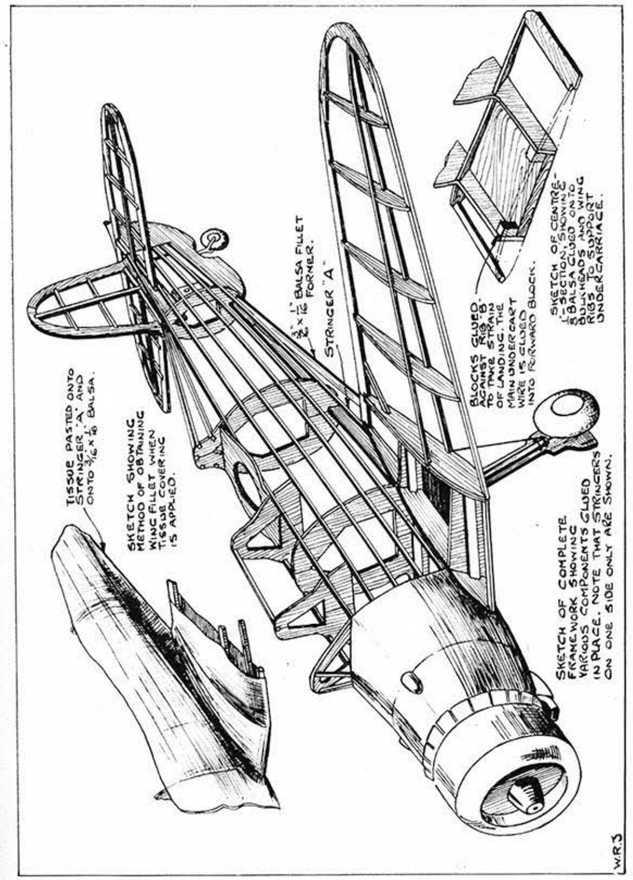
Build this as shown and cover with card or 1/16 in. balsa. Card is preferable owing to the fact that it adds weight to the nose.

Assembly and Covering.

When each component has been completed, assemble as shown on the drawings, taking care to get everything true. Cover with tissue, and after shrinking with water add one coat of dope and one of banana oil. It is not advisable to use coloured dope if good flying is required.

Flying.

Use three-blade Paulowina 7 in. dia. propeller and three loops of ⅛ in. rubber, well lubricated. Put on 500 turns for maximum flight after the usual test glides, etc., have been made. Note: If obtainable, use 1/16 in. plywood for front and rear cowling rings and the model will balance perfectly. *Go to it!*



THE BLACKBURN "ROC" (British).

Manufacturers: Boulton Paul Aircraft Ltd., Wolverhampton.

Purpose: Two-seater Fleet fighter. A replacement type for the Hawker "Osprey."

Origin and Development: First appeared in 1939 as a development of the Skua for fighter duties only. Most important modification was the power-driven turret for the rear gunner in place of manually operated installation.

Power Plant: One Bristol Perseus XII motor. Maximum power, 905 h.p. at 2,750 r.p.m. at 6,500 ft. Cruising, 718-745 h.p. at 2,400 r.p.m. at 6,500 ft. Take-off, 815 h.p.

Construction: Wings—Two Alclad box-spars with Z-section stringers and stressed-skin covering. Water-tight compartments and Zapp flaps. Folding type. Fuselage—Metal monocoque structure in two sections, joined just forward of fin. Alclad frames and stringers carrying flush-riveted plating. Two water-tight compartments. Tail unit—Metal framework, metal covering but fabric-covered control surfaces.

Dimensions: Span, 46 ft. Length, 35 ft. 7 in. Height, 12 ft. 1 in.

Weights and performance: Not released.

Armament: Four machine-guns concentrated in rear turret.

Equipment: Deck landing arrester hook. Catapult launching gear attachment points.

Remarks: May also be used as a floatplane for use with cruisers, etc. It will be noticed that the wing-tips of the Roc are not swept upwards like those of the Skua.

Photo by courtesy of "Flight."

First production Rocs were left the silver finish of the Alclad covering, and red, white and blue cockades were painted on fuselage sides and above and below wings. Recently, however, these machines have been shadow-shaded on the upper surfaces and painted "duck-egg" blue on the undersides. On the fuselage the camouflage extends nearly to the wing fillet, the rest being pale blue finish. Some machines have all the fuselage camouflaged. The red and blue cockades are carried above the wings, some distance from the tips, while red, white and blue rings are painted beneath each tip. As is the case with the Skua, the system of cockades on the fuselage varied considerably on the early machines. Sometimes red and blue cockades were outlined with a wide yellow ring, or red, white and blue rings were surrounded with a yellow ring. The latter system is now standard.

Before the light blue undersides became standard for Fleet fighters, certain Rocs were painted light grey under the starboard wing and black under the port. No cockades appeared beneath the wings. This system has now been abandoned completely.

Recent production Rocs have only the decking of the fuselage shadow-shaded, the rest being "duck-egg" blue. The light section meets the camouflage section near the top of the cockade on the side of the fuselage. The yellow ring is carried right round the cockade, even on the light section.

The vertical red, white and blue stripes are painted on the fin of all machines. The rudder is sometimes camouflaged, but on most recent machines it is light blue like the undersides.

Certain unit markings were often painted on the fin before the stripes became standard. One machine had the markings "L6R" in black on the fin, with the "L" above the number and the "R" at the bottom.

The serial number, in black, is painted on the sides of the fuselage only. It is generally very small. The spinner and airscrew are all-silver finish. When floats are fitted they are painted the same shade as the undersides of the machine.