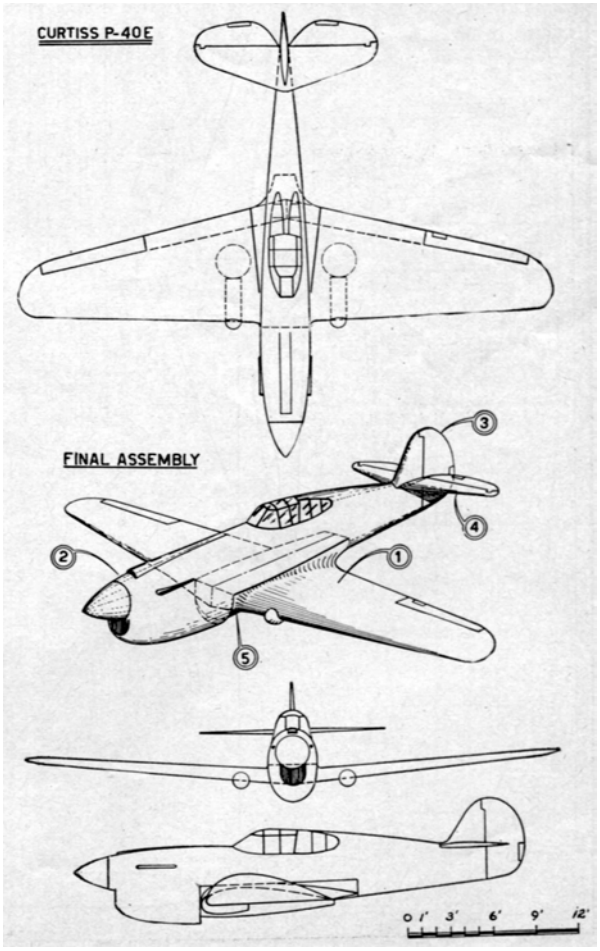
MODELING PLANES FOR UNCLE SAM

Build this solid scale model of the Curtiss P-4OE pursuit and help win the war

by NICK LIMBER



THE nation's model builders have for the first time been given the opportunity to participate in our war efforts, and in a manner which will be of direct benefit to the country's fighting forces. In order to train the thousands of airmen, gunners, spotters and other technicians of the Air Force and the various defense agency branches in the art of identification, range finding and other tactical problems associated with aerial warfare, a call has been issued for 500,000 scale models of present-day combat aircraft of all warring nations.

Model builders, through the nation's public school system, have been asked to cooperate with the Government by constructing miniature models of the airplanes requested by the authorities.

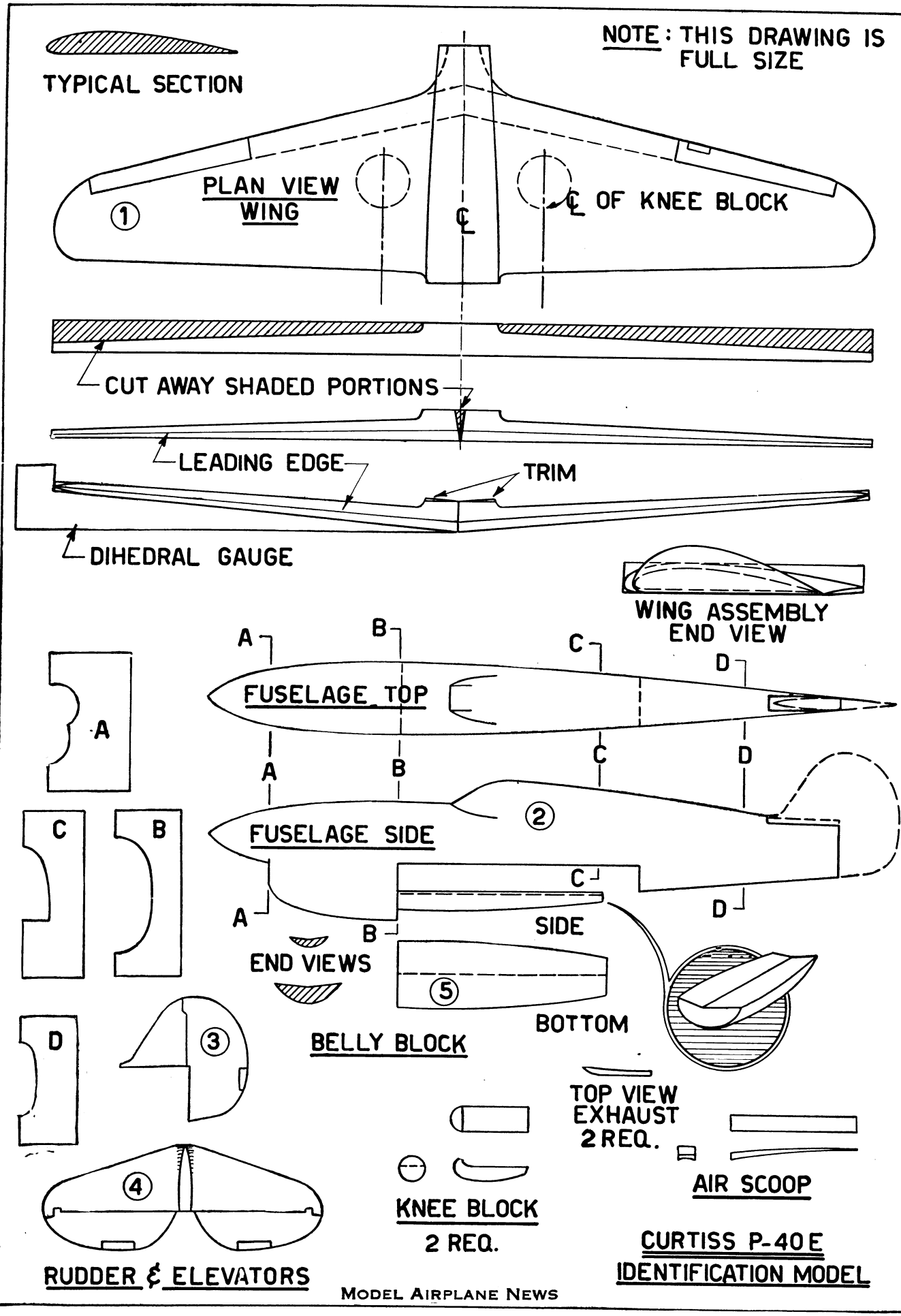
Construction of these models will not differ in any way from methods practiced by all builders for many years, excepting in the material used and perhaps the method of finishing.

Supplementing the official drawings and data issued by the Bureau of Aeronautics of the Navy Department, MODEL AIRPLANE NEWS is publishing drawings and instructions of these models for the benefit of those wishing to cooperate in this work but who have not been able to obtain official plans and data.

Prime requisite in the construction of these models is true scale accuracy and the ability of the model to take "abuse." For this reason, the models must not be constructed of balsa wood. White pine, ash, gum, poplar or similar wood has been officially specified by the Government. The first modeling project is the famous Curtiss P-40E pursuit plane that already has shown its mettle.

Start by carving the fuselage from a block measuring 3/4" x 1-1/4" x 5-1/4". First trace or scribe the top and side views of the fuselage on the block of wood.

Care should be taken in trimming the block to the scribed fuselage lines in order that the finished product is exact in both size and shape. Shaping the fuselage in accordance with templates "A," "B," "C," and "D" may be accomplished by the use of a fixed blade knife, spokeshave, plane or wood rasps. Frequent use of the templates during this operation is essential. Sandpaper is used in the final shaping operation. When completed the fuselage should conform to plans in outline and in cross section. The wing is made from a block measuring 1/4" x 1-7/8" x 6-3/8". Using a small jigsaw or similar tool, shape the outline of the wing in plan form.


NOTE: THIS DRAWING IS FULL SIZE
TYPICAL SECTION
PLAN VIEW WING
1
℄
℄ OF KNEE BLOCK
CUT AWAY SHADED PORTIONS
LEADING EDGE
TRIM
DIHEDRAL GAUGE
WING ASSEMBLY END VIEW
A
B
C
D
FUSELAGE TOP
FUSELAGE SIDE
2
SIDE
END VIEWS
BELLY BLOCK
5
BOTTOM
3
4
TOP VIEW EXHAUST 2 REQ.
AIR SCOOP
KNEE BLOCK 2 REQ.
RUDDER & ELEVATORS
CURTISS P-40E IDENTIFICATION MODEL
MODEL AIRPLANE NEWS

Tapering the wing and setting the proper dihedral angle is clearly illustrated in the drawings. First outline the front view of the wing as indicated in the plans.

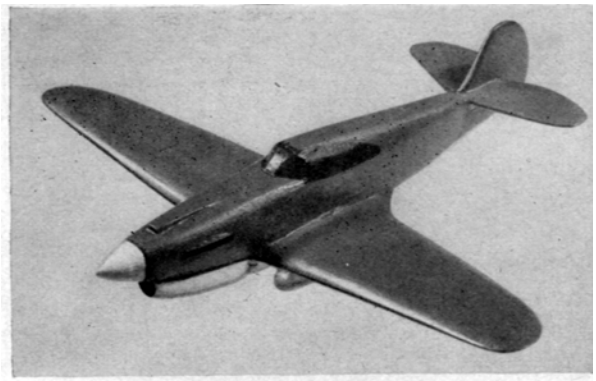
Cut away excess wood shown as shaded areas. A plane, drawknife or spoke-shave may be used.

In most cases, the builder will find the drawknife best suited to this operation.

After the block has been cut to form the plan and front view outlines of the wing, with a hard pencil scribe a line indicating the leading edge. Shape the wing as indicated by the drawing of the "Typical Section" on the plans. The same tools as used in shaping the fuselage are used in this operation on the wing. Extreme care must be used when shaping the section towards the center or root of the wing. As indicated, the center portion of the wing block is in effect used as wing fillet and lower fuselage central portion. The abrupt change in shape at this section of the block may be accomplished with various size rat-tail files. When completed and set into place, the lines of the fuselage and central portion of the wing block must be such as to flow together without breaks or low spots.

Prior to assembling the wing and fuselage, however, the proper dihedral angle must be set. The manner in which this is accomplished is quite obvious. First cut the wing along the centerline. The root end of each panel is then beveled and the ends placed together. A quick drying cement is used to glue the wing together. The dihedral gauge should be used in checking the angle. Trim the upper surface of the center section to get a flat surface prior to cementing it to the fuselage. The movable surfaces such as ailerons, tab and flaps should be indicated by a slight groove in the surface of the finished wing. Referring to the final assembly diagram, cement the wing to the fuselage as indicated.

Next construct the belly block. This is formed from a block 3/16" x 1/2" x 1-3/4", designated as number 5 on the plans. Formed in a manner similar to that used for fuselage and wing, with the exception of the Vee surface on the top, the belly block is simple to construct. Care is required in cutting the Vee surface so that it forms a Rush fit with the lower surface of the wing. When this has been done, cement the belly block in place.



Finished model in regulation Army colors. Models for the Navy program should be painted dull black all over

The tail surfaces are made from 1/16" stock 1-1/8" wide and 3-1/2" 1ong. Note that the upper portion of the stabilizer center section is left flat so that a flush fit with the bottom of the rudder is achieved. When the tail surfaces have been formed, indicate movable sections prior to assembly.

Except for landing gear knee blocks, exhaust and air scoop or intake, all other details are omitted from the model on Government order. The knee blocks are carved from 3/16" stock while the exhaust and air intake may be made from the scrap left over from the tail surface stock. The essential details, having been formed, must be glued to the airplane model as shown in the drawing of the final assembly. You will note that these parts have not been numbered, as have been the five main sub-assemblies. After the model has been assembled plastic wood may be used to fill in any recesses due to improper joints. In few cases, however, should this be necessary.

The model is now ready for finishing. Apply several coats of clear lacquer, allowing each coat to dry thoroughly, however, before applying the next coat. Sandpaper the surface after each coat has dried.

A final coating of dull black is applied to the model. Note that on Government specifications dull black is required, there-by reducing reflection which may tend to distort the true outlines of the model. For descriptive booklet showing the technique used in carving a model, "Scale Model Aircraft Construction Procedure", write the Federal Security Agency, U.S. Office of Education, Washington, D.C. When your model is completed take it to the manual training teacher of a junior or senior high school. He will see that it is packed properly or show you the correct procedure. The model then will be sent through the proper channels to the U.S. Navy, Bureau of Aeronautics, Washington, D.C.

Now get to work and help beat the Japs! In next month's issue, complete plans and data for the construction of another model will be published.

VICTORY