



In direct contrast to last month's simpler sheet-built Ford Flivver, we try a built up Bucker biplane for a change of pace. A pretty airplane!

PEANUT BÜCKER JUNGSMANN

By Walt Mooney

What would you call a small model of a German biplane trainer? How about "A Peanut Bucker Sandwich?" If you can get past that without becoming ill, read on and find out how Walt built this little beauty.

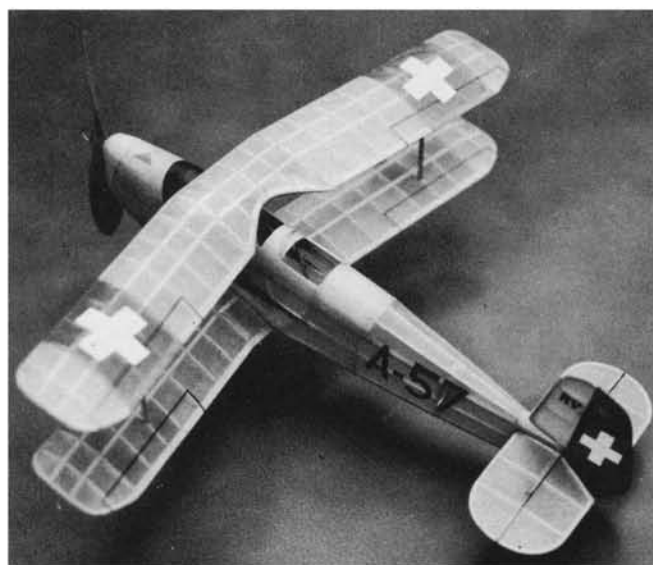
● This is a Peanut Scale model of the Bucker Bü 131 B Jungmann, the famous German primary trainer for most of the German pilots that later flew the fighters and bombers in the Second World War. Profile Publication Number 222 has provided the data and the three-views necessary to design this model which is a model of a Bucker Bü 131 B numbered A-57 which was license-built by Dornier-Werke A.G. in Switzerland. It has the standard color scheme applied to all Swiss military Bü 131's after WW II. In fact, this color scheme was the single

item that inspired the model. The base color is yellow, with white crosses on red bands on the top and bottom of the wings and on either side of the red rudder. It has a black fuselage stripe and black numbers on the fuselage.

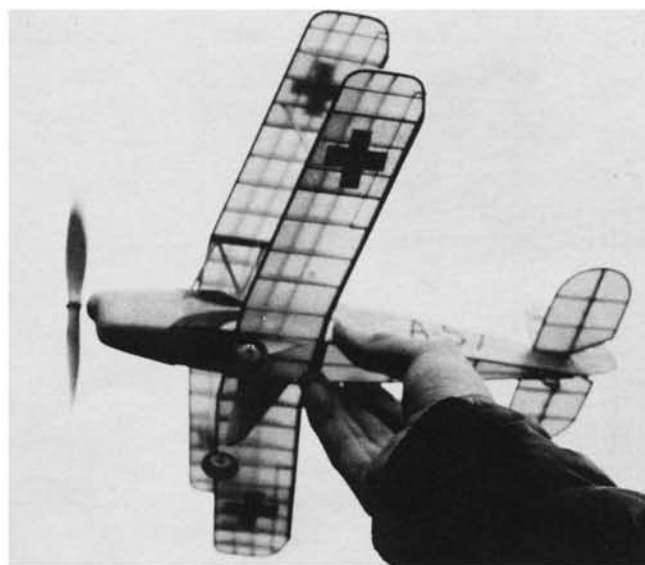
The aerodynamic setup of the Jungmann is very good for a rubber powered model with its long nose and ample tail length. In addition, the two wings result in quite a bit of wing area within the 13 inch span limits of the Peanut rules. The prototype model uses a Williams Brothers propeller and small nose plug.

It uses hardwood wheels manufactured by Marlowe engineering, and a simple straight pin for the rear motor peg. It uses one thirty-second diameter piano wire for the landing gear, the propeller hook and the fore and aft cabane struts. The strut fairings, and the interplane struts are made of one sixty-fourth plywood (doubled for one thirty-second thickness in the case of the interplane struts). All the rest of the structure is balsa wood.

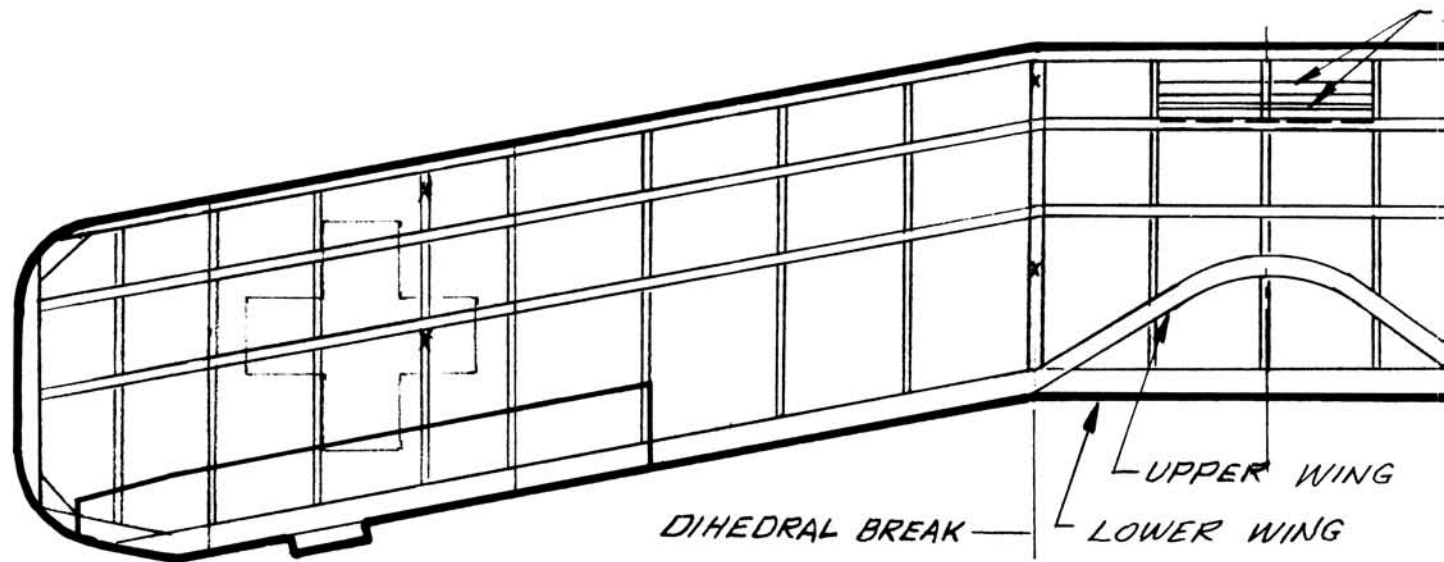
The fuselage is constructed in the
Continued on page 43



Beautiful proportions for a scale model that's expected to fly rather than sit! Walt really went ape with the rib template on this one.



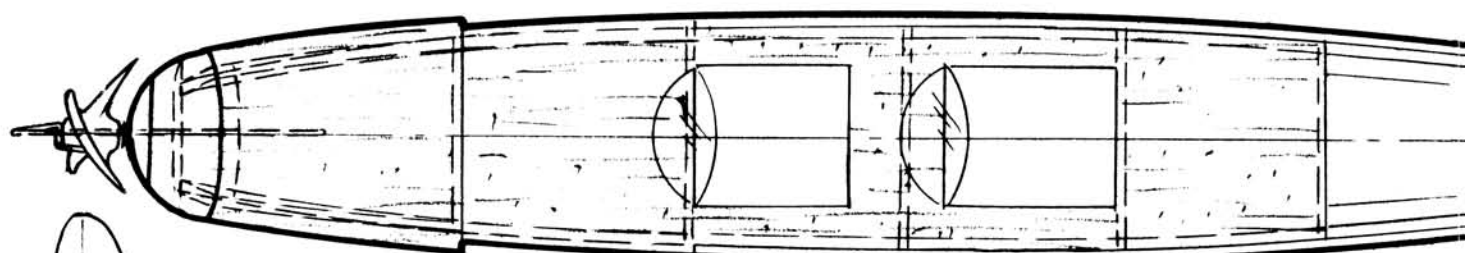
Are you R/Cers thinking what we're thinking? No, not THAT size, but about four times ought to do it....or double for pulse rudder.



DIHEDRAL BREAK

UPPER WING
LOWER WING

TOP VIEW



FORWARD CABANE STRUT
WIRE GOES TO COWL BOTTOM

← PLASTIC PROP.

DIHEDRAL

FUSELAGE SIDE
SHOWN HATCHED

SIDE VIEW

Walt Mooney
2-7-72

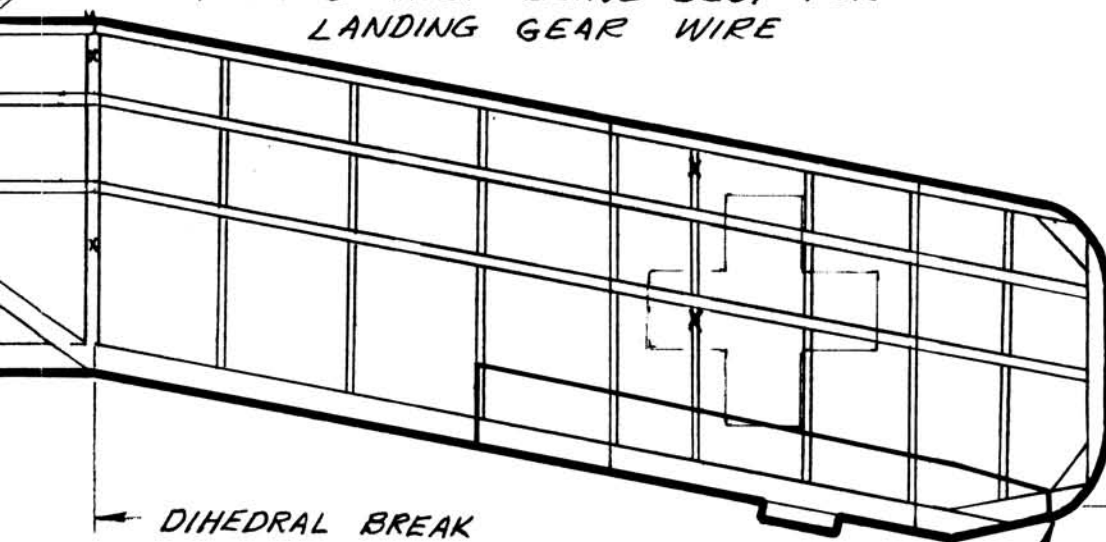


FENDERS
NOT ON ALL A/C.

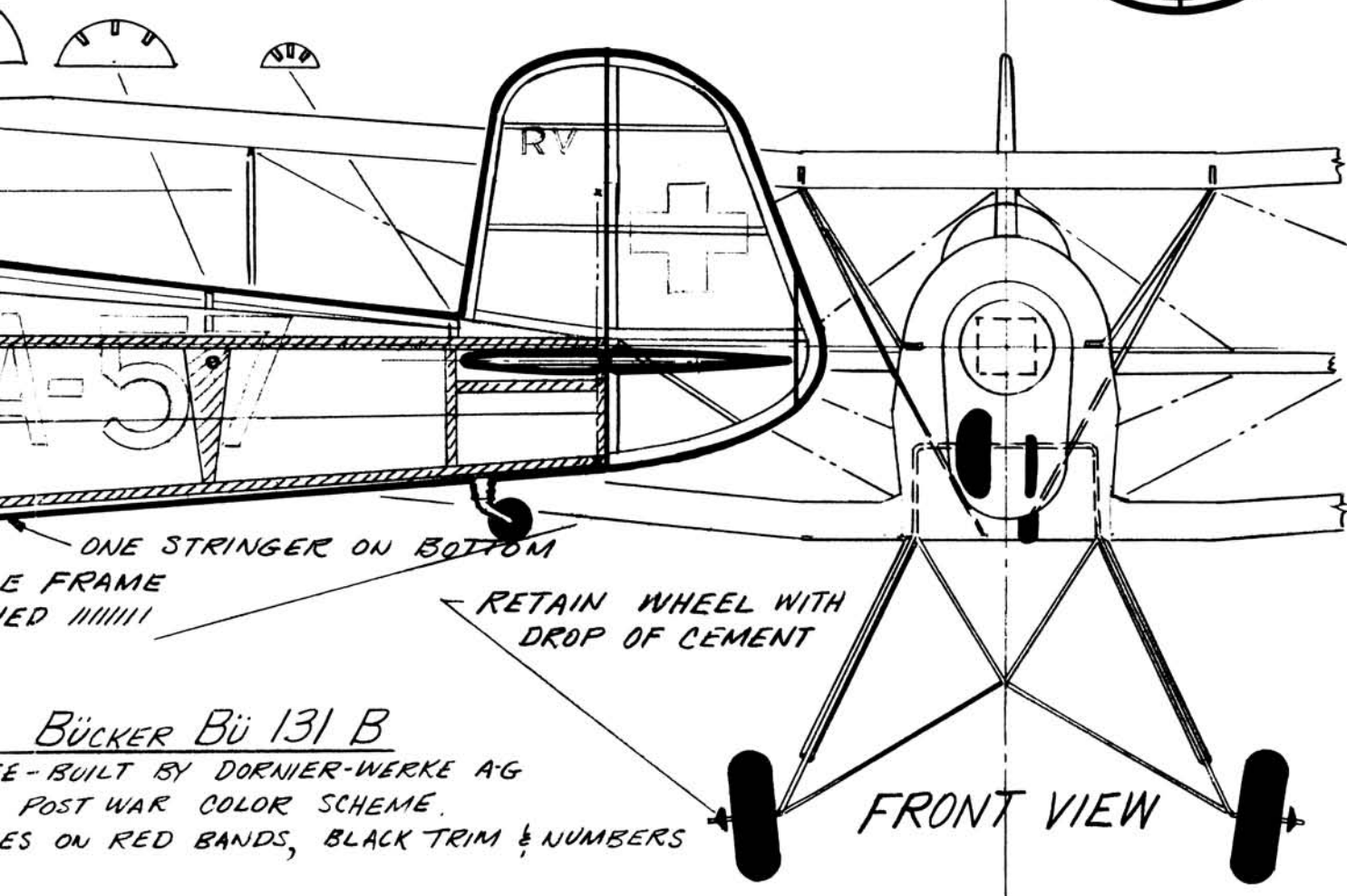
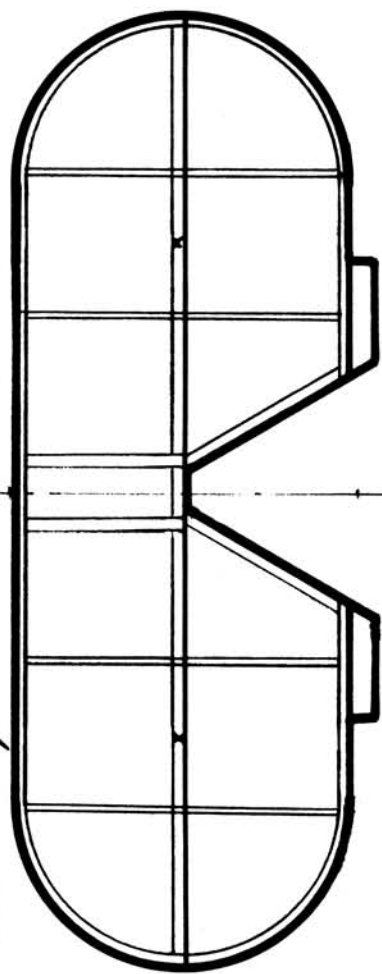
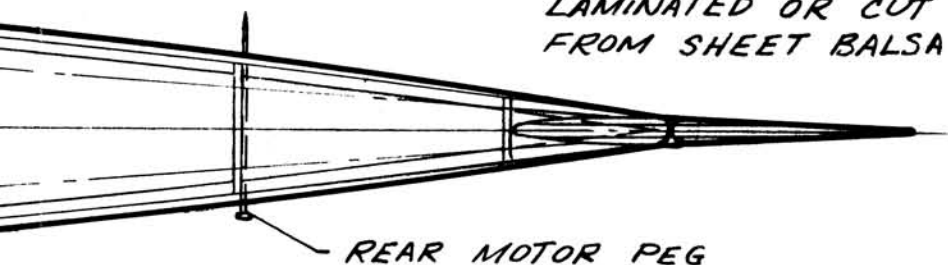
ALL YELLOW, EXCEPT WHITE CROSSES

PEANUT SCALE
MODEL OF LICENSE-
A-57 IN SWISS F

BOTTOM WING ONLY - LEAVE SLOT FOR
LANDING GEAR WIRE



OUTLINES MAY BE
LAMINATED OR CUT
FROM SHEET BALSA



BÜCKER Bü 131 B
E-BUILT BY DORNIER-WERKE A-G
POST WAR COLOR SCHEME.
ES ON RED BANDS, BLACK TRIM & NUMBERS

Peanut..... Continued from page 27

traditional fashion, with two sides built over the plan, assembled into a box with cross braces and formers, and then one thirty-second sheet balsa cockpit combing, stringers, and cowl panels of thicker sheet with a block balsa nose. The bottom of the engine cowl is made of three-sixteenth thick balsa, the sides of one eighth, and the top of one thirty-second. Note the curious angular shape of the nose block and use a block with the grain parallel to the thrust line. This simplifies making the square hole in the nose block for the nose plug. Carve and sand the engine cowl and nose plug to the correct contour. For lightness, the stringers are cut from one thirty-second sheet by one sixteenth wide and these are installed on edge. Sand the entire fuselage structure for lightness and to remove any rough edges prior to covering.

The tail outlines and the wing tips are laminated using one sixteenth by one thirty-second pieces. Make one eighth thick balsa forms to the shape of the inside of the surface outline. Wax the edges of these forms so glue won't stick to them. A common color crayon is satisfactory for this waxing and has the advantage that the color indicates complete waxing. Thin out some white glue with about two parts water to one part of glue. Use this to glue three laminations together and wet the layer that is to be outside. Then using masking tape to hold the laminations to the form, wrap laminations around the outline. The secret to avoiding kinks as the laminations are bent around the outlines is to maintain a slight amount of tension at all times during the wrapping operation. Let these dry, preferably over night.

If the laminating method looks like too much trouble, the outlines can be cut out of one sixteenth thick sheet balsa and they will be strong enough if they are kept about one eighth of an inch wide.

The tail structure is made over the plan using sticks one sixteenth thick by the width shown. When dry these are removed from the plan and one thirty second square pieces are added on the top and bottom of the ribs after which the tail structure is sanded to an airfoil section before covering.

The wings are conventional multi-spar structures with ribs cut from one thirty second sheet balsa. Leading and trailing edges are one sixteenth by one eighth and the spars are one sixteenth square. The ribs nearest the tips are thinned down a bit to match the thickness shown in the front view and the upper wing center section ribs are shortened and recontoured for the wing cut-out. This model is a little more complicated than the average Peanut and it has more ribs than necessary from a structural stand point. Every other rib can be omitted for simplification, if desired. On the other hand, it may be questioned as to why it doesn't have scale rib spacing. The reason for the specific spacing shown on the model is that the edges of the red wing panels are located on a rib which simplifies the covering and the wing struts are also lined up with a rib, as indicated by the small "x's", on the wing plan. The landing gear wire extends through the lower wing, so two pieces of balsa are placed between the next-to-center ribs after the center rib is slotted to accept them.

Cut the spars to allow the correct amount of dihedral to be blocked up under the wing tips and cement the dihedral joints. Then sand the wing to remove all rough spots and shape the leading edge to a half round section and the trailing edges to a triangular section.

Start the covering of the model using red tissue for the areas that are to be red and then going on to the yellow for the rest of the covering. Use Japanese tissue. After covering, water shrink the tissue using only a fogged on spray of water. When dry, give all the parts a single coat of thin dope. Then cut the trim from black tissue, and using thin dope, install the big numbers and the fuselage striping. The control outlines and the small lettering is done with a thin felt pen. The white crosses are made from white decal sheet, or in lieu of this, from thin bond paper.

Install the fore and aft wire cabane struts. This is a ticklish job and will take a little trial and error effort to make certain that the wing is aligned in the proper position. It should end up parallel to the bottom wing in the top, front, and side views. Cement the wings in place and then make the strut fairings so the cabane struts become an "N". Make and install the interplane struts

at the "x's" shown in the wing plan. Cut away the last upright of the fuselage to allow the installation of the horizontal tail and put it in place cementing only the very back part to the fuselage. This will allow tail incidence adjustments by shimming the leading edge of the tail if necessary. Cement the vertical tail in place making sure that it is straight. Check the surfaces for warps and remove them at this time, using heat if necessary.

Install the main landing gear wire by slitting the wing tissue and sliding the wire up in the slit between the balsa braces. Cut out the main landing gear fairings from three thirty-second sheet balsa and sand to a streamlined section. Cover with yellow tissue and cement in place. Make a tail wheel from hard balsa and cement it in place. Make windshields from thin plastic and cement them in place. At this point the fuselage can be given another coat of dope, but resist the temptation to dope the surfaces again unless you are sure they won't warp.

The model now is complete except for details. There are a large number of minor details that can be added and these can all be found in Profile 222. The model in the photos has the wing flying and landing wires and the tail brace wires made of 8 pound test monofilament fishing leader. This has the advantage that it can be installed with a little slack and the application of a little heat will shrink them enough to tighten them. Don't overdo the tightening and warp the model, however.

The model should balance level if supported at the tips of the upper wing at the leading edge. Ballast it if necessary. Test glides should be straight and without a tendency to stall. Shim the leading edge of the horizontal tail up or down to achieve this. With the drag of a biplane don't expect too flat a glide, so long as it's smooth and not too fast it will be OK. Adjustments for flight under power should be made by shimming the nose plug to point in the direction the model needs to go. ●