

THE TRAVEL AIR "MYSTERY SHIP"

By DALE SEBRING . . . A combination of nostalgic scale and an interesting fuselage construction technique makes this a fascinating project. Radial engined Thompson Trophy racers would look great around the pylons.

• Race planes in general, and the Travel Air Mystery Ship in particular, have always appealed to me. It seems to embody all those brutish yet beautiful qualities that an airplane must have to be appealing and functional. This particular Travel Air represents the plane with which Doug Davis won the 1929 Thompson Trophy Race. The colors of bright red and black trim with white numbers are very attractive. There are several other color schemes that could be substituted, however, such as Frank Hawks' Model-R of 1931, the Texaco Number 13, which was finished in red and white, or the Shell Oil Model R which Jimmy Doolittle flew, finished

in red and yellow.

I won't get into much on construction details, as this is a relatively simple aircraft to build. However I would not attempt it as a first, scratch-built project.

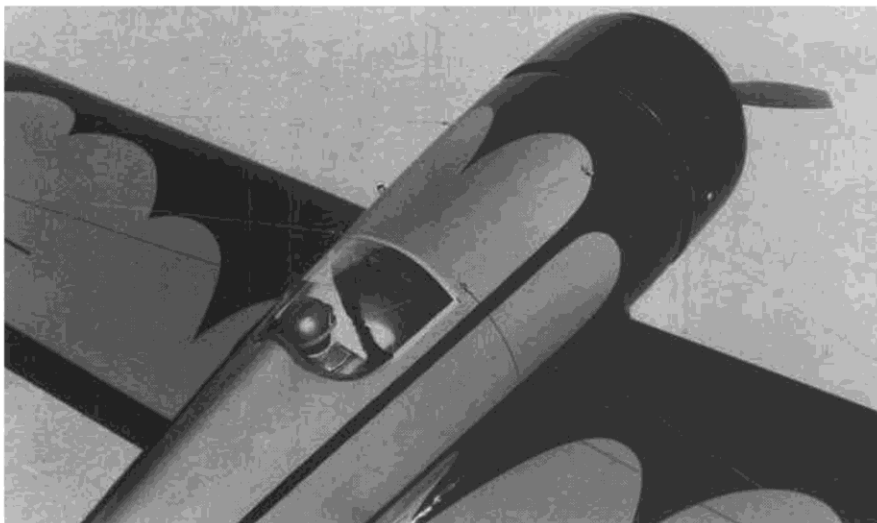
I think a close examination of the plans will give you a pretty good outline of the construction and the details involved.

The wing is quite simple . . . 1/16 skin and ribs, and single top and bottom spars with webbing. Secure the landing gear blocks well. A little extra epoxy here won't hurt. They may take some added shocks later on. Hollow the wing tips, if you wish, to save a little extra

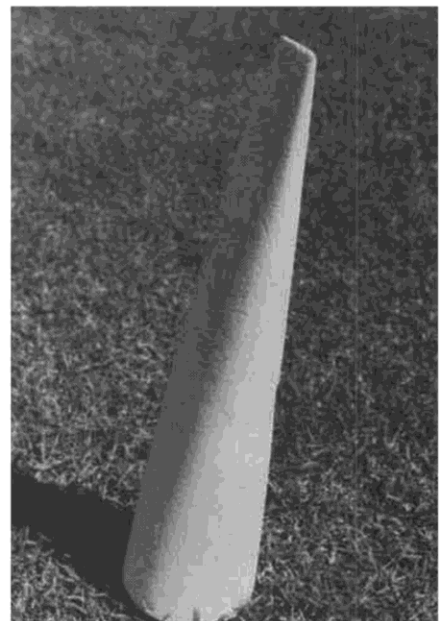
weight.

The ailerons are torque tube actuated, which I feel are more positive and perhaps a little bit lighter than the standard push-rod and bellcrank system. They are also more attractive with no horns showing, and they are not that difficult to fabricate. Be sure to glass the center section of the wing with some glass tape and resin.

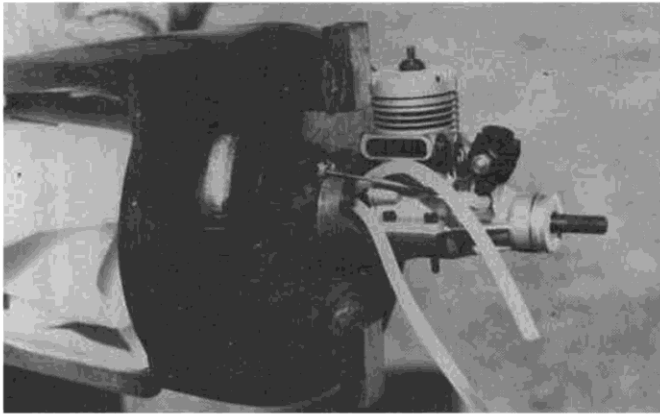
The fuselage is a little different from the usual. A simple plug is carved from styrofoam, over which you shape the



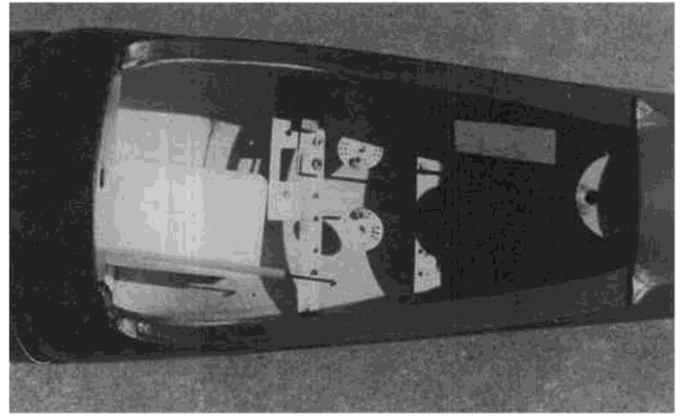
Smooth, neat workmanship enhances any model and is worth points in Sport Scale. It's quite apparent in this photo of the Travel Air. All-up weight without radio is just under 2-1/2 lbs.



Styrofoam plug for molding balsa fuselage skins. Finish needn't be super-smooth.



K & B .19 is radial mounted to firewall with Kraft-Hayes mount. Hardwood blocks take cowl mounting screws.



Monocoque fuselage shell provides unobstructed interior, is quite strong, yet extremely light. Tank is packed in foam.

fuselage sides in half shells, and later join them on their center lines. This plug need not be real smooth or neat, just a rough approximation as shown on the plans, will be quite adequate. When the desired shape is achieved, two sheets of 1/16 balsa fuselage skin are soaked in a water and ammonia solution so they will become very flexible, then wrapped around one side of the plug and secured with an ace bandage or something similar. Use large enough sheets to permit trimming to the centerline later. Allow to dry until completely cured (overnight), then the other fuselage side can be formed in like manner. At this time you can also fit the bulkheads to see if they are lined up properly. When satisfied, disassemble

the fuselage shells and then separate the two 1/16 balsa skins. Doing one shell side at a time, the two 1/16 skins are laminated with contact cement.

Spray both facing areas with a cement, such as 3M 77. With two extra hands to help, spread the outer skin, roll the inner skin a little tighter, and set it inside the outer shell. Spread carefully, then place back on foam plug and press skins together. Trim the two halves for a neat glue joint along the center line.

Fuselage construction can then go ahead by joining the two shells and installing the bulkheads at the same time. The front bulkhead laminations are 1/4 inch balsa, which is sanded to

conform to a semi-radius cross-section. This shape will lead to the firewall which is 1/8 plywood, to which your motor mount is secured.

I used a Kraft-Hayes 19 size motor mount to fit the Veco 19 which I used in the aircraft.

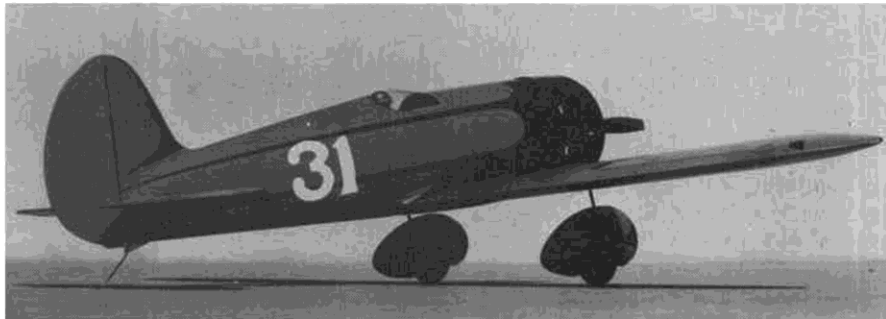
The tail surfaces are a simple procedure. Balsa cores of 1/16 sheet are cut to the correct outline and then stringers and caps are glued to these cores, top and bottom. They are then sanded to the correct cross-section. This makes for a simple yet strong and light-weight structure.

The landing gear is bent up from 1/8 music wire. One end is fitted to the hardwood blocks in the wings. The other end fits into the wheel pants, which are carved from balsa and ply laminations.

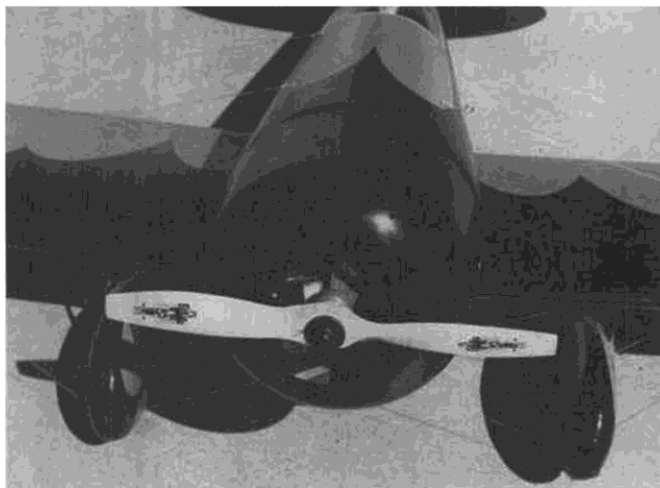
The cowl is constructed from fiberglass. I happened to find a metal bowl which was the correct shape and diameter. This was used as a mold to which three layers of 6 oz. fiberglass cloth was layed up with polyester resin. This made for a very strong, yet light weight cowl.

This model was covered with red Permagloss Coverite. It seemed to work out quite well because it was only

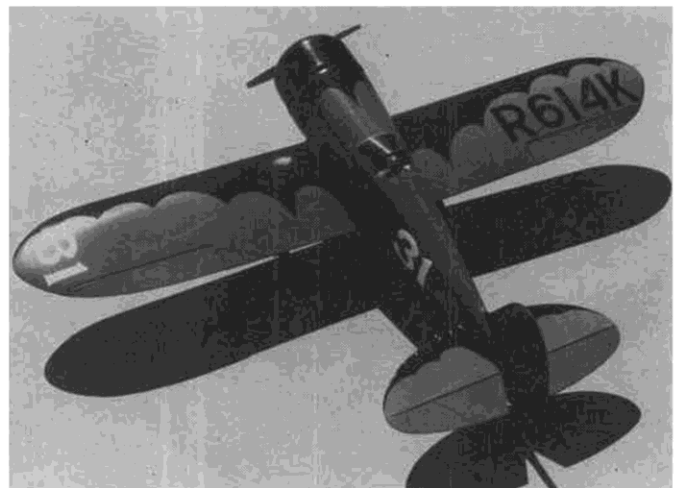
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This angle gives away the simplified, single strut landing gear. Others may be faked, as long as there is flexibility in the set-up. Tailskid is steerable, which greatly improves ground handling.



Cowl molded over 6 inch stainless steel bowl. Balanced, ready-to-use Zinger props are gaining popularity with top west coast fliers.



Model is covered in red Permagloss Coverite, needed only the black trim paint to finish. Ship is stable and easy to handle in the air.

T-Air. *Continued from page 12*

necessary to mask off the appropriate areas and spray the Aero gloss black dope for the trim. The numbers were also masked off and sprayed.

Radio installation should present no problems. Just keep all components as far forward as possible to maintain a good C.G. without adding ballast.

I used a Veco 19 engine and a Kraft 4 oz. tank. I see no reason why larger engines, up to a 25, could not be used, but I wouldn't go much larger than that.

This aircraft is *very* responsive in flight . . . especially to elevator, and will perform snap rolls, faster than you can blink. It presents no problem on landing and takeoff. It is quite easy to fly. I hope you enjoy building and flying your Travel Air as much as I have. ●