



Don McGovern

# INFAMMABLE

**36" rubber powered sportster — hardwood, balsa or plastic prop. Modifications are shown for .020 — .024 mills. 1/3 scale.**

► As its name denotes, this one met an untimely end. It is hard to imagine how a rubber job could cremate itself, but a brush with a hot soldering iron, while converting it to floats, left us staring at a bubbling batch of rubber on the front patio.

Though it was destined never to go to sea, it did do very well as a sport flying landplane. The design is quite easy to build, and presents a pleasing appearance. It may be flown from relatively small fields, and is very consistent in its flight pattern. With low power and a controlled amount of turns, it takes off smoothly, circles about and lands in almost the same spot every time, given calm air conditions. With full power, it is capable of a very fast climb, and all the performance you can hope for in this type sport craft.

The original was flown extensively, using a 10" hardwood Paulowina prop, which can come close to simulating gas powered flight conditions, and makes an excellent training craft, when so equipped. A plastic or balsa prop will do very well, as long as it is well balanced. The addition of a free-wheeling device will improve performance in the glide, and requires only a few minutes to construct. For maximum endurance, a balsa folder is recommended, though if this is your prime consideration, a Wakefield design would be a better bet for you.

The plans are drawn 1/3 scale, and show conversion to .020 and .024 gas power. The design is the perfect size for these engines, and should turn in excellent performance with them.

The enlargement of the plan is actually quite easy. With a straight edge, draw a reference line on your paper, and erect key points, pacing off dimensions three times, using an inexpensive pair of dividers.

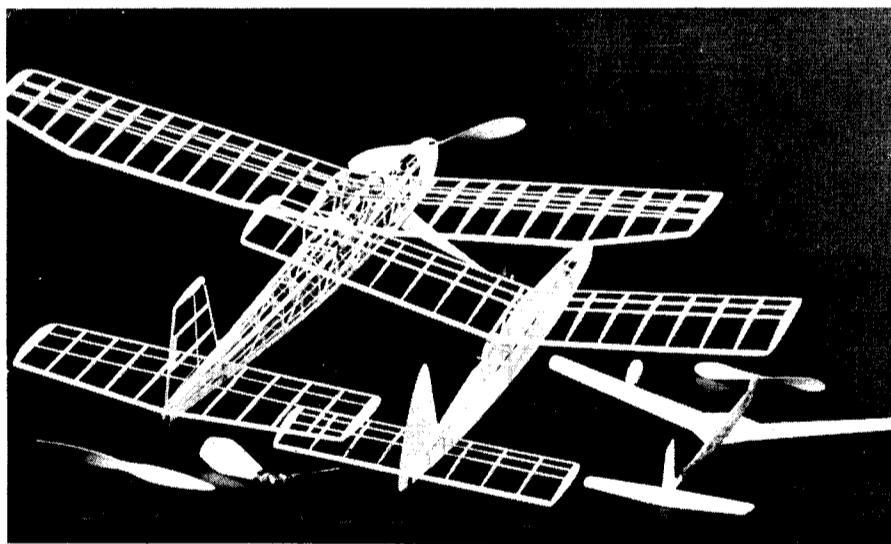
**Wing Construction:** Position the 1/8" x 1/2" tapered trailing edge stock over the plan, with pins along the edges, rather than piercing the wood. The bottom spars, and ribs are now installed. Follow with the leading edge and upper wing spars. For gas power, we recommend 1/8" sq. bottom spars and 1/16" x 1/8" upper spars, laying flat. Center-section ribs should be added after the panels are joined at the proper dihedral angle and gusseted. Install the block wing tips, and trim and sand the structure, ready for covering.

**Stabilizer and Rudder:** These are assembled in the same basic manner as the wing, with care taken to use straight warp free balsa, to avoid trouble after covering.

**Fuselage:** The fuselage is constructed around two sides, with stringers and cabin structure added as it takes shape. The longerons are 3/16" sq., and are recommended for sport flying and gas power. 1/8" sq. longerons may be substituted if desired, to further increase performance, though it will make a more fragile fuselage. Uprights and cross-pieces are of 3/32" sq. stock, while the diagonals and stringers are 1/16" sq. In assembling the fuselage sides, position the first side uprights and diagonals flush with the plan, to form the exterior surface. Construct the second side above the first, with the uprights and diagonals flush with the exterior, to form the opposite side. Make one right side and one left. Allow to dry thoroughly, before removing from the plan.



Above: You get plenty of use from this type craft as it can be flown from any clearing. On hand winds or by using a winder, it'll turn in a creditable performance, with hardwood or plastic prop. Below: Bones show. Two others in photo, so what can we do? Right to left; a fly-about, intermediate type and "Inflammable." Structure is quite easy, ample, durable. Try with night lights.



Cut the fuselage cross-pieces two at a time for uniformity. Join the sides, and add the former units as shown. The cabin area is assembled as indicated on the plan. Cement all joints well, and scrape the celluloid to roughen for a better cement bond, where it contacts the cabin. Add the wing hold-down dowels, rubber post and other necessary nose detail. The landing gear may now be bound with thread, and cemented securely to the cross-pieces. Add the 1/16" sq. stringers, and remaining structure. Trim and sand, ready for covering.

On the gas power versions, the nose is shortened as indicated, and provision made for a timer if desired. The gear too, should be modified for the increased power, and the smaller prop clearance required.

**Covering:** There are no compound curvatures to deal with, and you will find it an easy model to cover. Use Silkspar, Jap Tissue or equivalent, clear doping to a glossy finish. On gas powered models, use fuel-proof dope. All dope used should contain a plasticizer, to minimize any warping tendency. If you feel your dope will be too constricting for the structure, add a drop or so of castor oil to it before applying. Should a warp appear after

the model is finished, it may be removed over a steaming kettle. Twist in the opposite direction, holding till the surface cools.

**Flying:** The original was flown with 8 to 12 strands of 3/16" flat rubber, well lubed, wound with a winder. The nose is of course made removable, for this purpose. 1 1/2" of slack was allowed in the rubber motor, and the forward end was secured to a bobbin, to prevent the wire shaft from cutting the rubber.

After hand gliding to check the trim, try a few low power flights, hand wound. The original climbed steeply in a right spiral, and glided in a left circle. When satisfied with the trim and thrust settings, add more winds with a winder. Stretch the rubber to approximately triple its original length, and start winding. Gradually move in, as your helper holds, winding until a double row of knots appear, and so timed that you arrive at the nose at this moment. Lash the nose block in place, and launch as quickly as possible, to avoid excess rubber fatigue.

Flight trim on gas powered versions is pretty much the same, though use caution, as the greater power available will mean more damage if you wind it in. Good luck with it, and we hope it survives to a riper age than ours. ●