



One of 1953's outstanding fliers of, and enthusiastic missionary for, the speed event, Leo shows off the airplane and some of the trophies won.

# QUICK SIXTY

by LEO HOLLIDAY

For the new McCoy .60, this job is from a family of winners. The .29 version took the last Nationals. Easy, fast to build, very sturdy, steady.



The "60." In all classes, including Half-A, the Quick Sixty has top notch performance. Various fliers declare it a dream to fly. Ink sac tank.

▶ The Quick Sixty is a slick speed ship that lives up to the name. It is quick to build and fast to fly. The original airplane of this current design was built in three nights. This includes mounting the engine in the metal pan and cutting the spinner down to the correct size.

The quicky design is the product of a process of elimination of time consuming construction and the incorporation of new quick construction ideas, the result being that even the slowest builder is able to have all classes of speed ships, from the small Half-A to the large C ships. This design is named for the type of construction and not the finished profile, as in almost all cases up to now, the finished ships, built by different people, have had their own individual characteristics. Usually, the cowl shape and rudder outlines have been changed; in some cases, the wing span and area have also been altered to fit the individual's own aeronautical design or fancy.

The Class B that I won the Nationals with was the first in this line. It has been a very consistent and rugged performer. The only structural failure in two years of contest flying has been a broken elevator. On one occasion a tie-down came loose on the Quicky '29, and the ship went into the ground doing over 125 mph. The result of the mishap was a broken spinner (B & D) and the elevator hinges pulled loose.

The speed on the Quicky '29 has never dropped below 124 mph on any flight: top speed to date is 130.5 mph and the winning flight at the '53 Nationals was 129.44 mph.

In exactly one year's time, the two .60 ships won eight first places, one tie for first (with current open record holder, Frank Stone) two seconds and one fifth. The fifth place was won at the 1953 Nationals. Consistency is the keynote to speed and this design has it as the ship has never been flown at a speed of less than 140 mph with greatest

speed of 151.20 mph obtained in October, 1953. A brand new McCoy .60 was used. This McCoy .60 was stock with the exception that the bypass port on the case was opened up and a Dooling needle valve was used rather than the standard McCoy needle. An ink sack (or pen bladder) tank, Fairabend's Stardust "H" fuel, 9X11 Tornado prop and a Champion VG-2 plug were used. The ship did 140.5 mph on the first flight, 145 mph on the next, and 151.20 mph on the third one.

My winning Class B ship at the Nationals featured the same design and construction with only the shape of the cowling and rudder changed. Incidentally, I used a stock Dooling .29, stock 7X9 Plasticoat prop, Ohlsson racing glow plug, stock Fairabend's This-Is-It fuel, and a pen bladder tank. Winning speed was 129.44 mph. This design is adaptable to all classes in speed by reducing all surfaces proportionately. The design has been built for a Monoline A ship with very good results.

The Quick Sixty has been illustrated in this article for two reasons: one is that many fellows are eager to try the new McCoy .60 that is now available; the other reason is that a great amount of success has been achieved locally in this class by this author. The Quick Half-A (Monoline) has a Thermal Hopper for power. Two Quick .19's have been built, one with a Torp .19 (Monoline) and the other, the new Fox .19, and both have been very successful. A Dooling .29 was used in the Nats winning Quicky '29 and, of course, the Quick Sixty is powered with a McCoy.

Quick Sixty's flight is very stable and is ideal for both the beginner and the expert. The ship was designed for the easiest and fastest construction possible, yet it gives a clean, consistent, and very strong airplane. This is a great factor

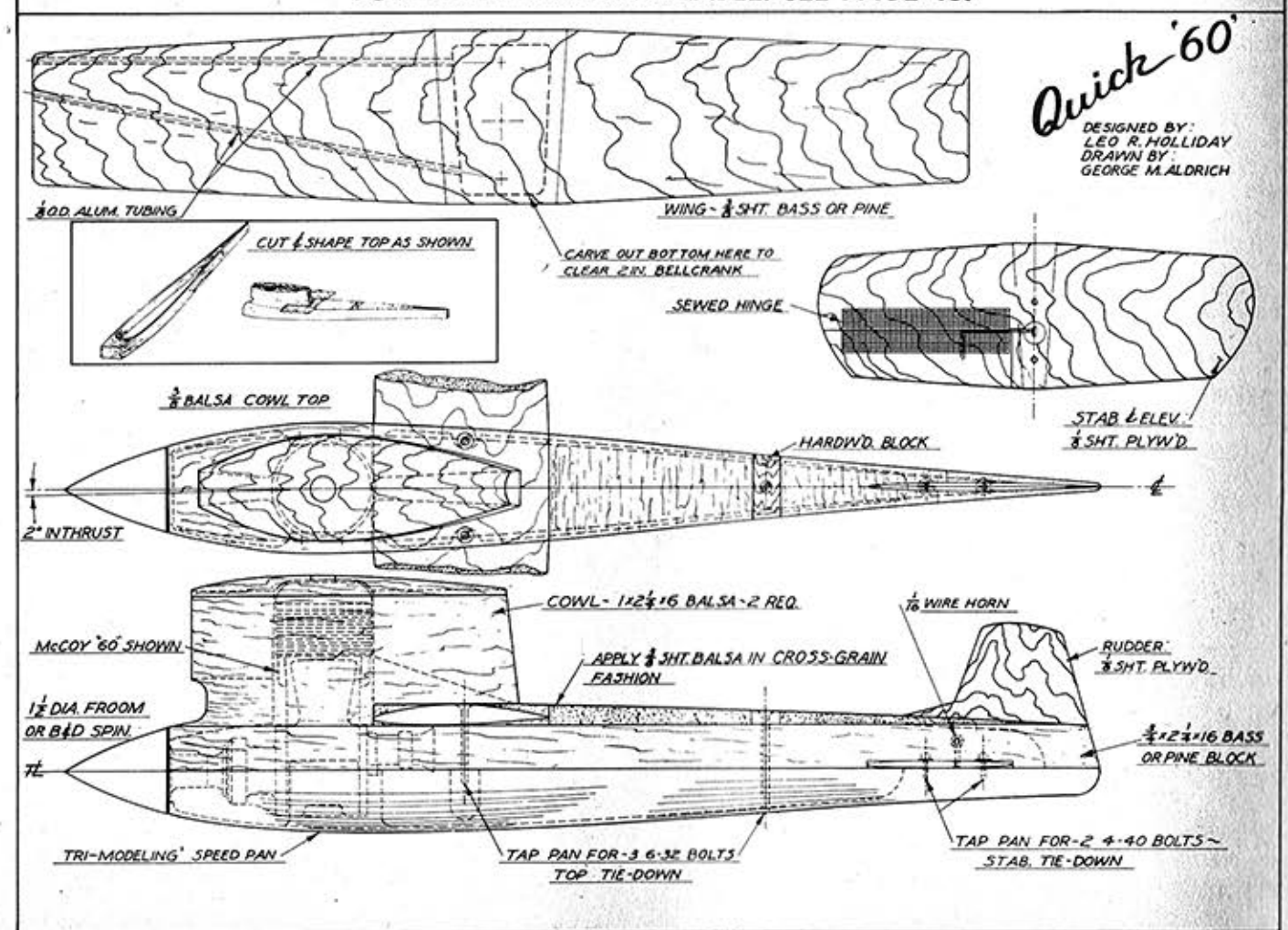
down here in Texas where good flying fields are few and far between (in fact, pardner, even bad fields are mighty far between) and a rugged ship is a downright necessity. The competition is getting downright out of this world in all classes and Class C is no exception. There are nine or ten fellows who frequent the monthly contests in Fort Worth, Tex., who can consistently break 140 mph; four of these have turned 150 mph or better this year. I am proud to say that Quick Sixty has held its own all of the way and has finished second only twice.

It should be made clear at this point, however, that this design or any speed design is not what makes a speed ship fast. It helps, sure, but a good well-taken-care-of engine is the real difference. A design is only the airframe to house the power plant. The airframe should be as simple in operation, construction and maintenance as possible. Fancy gadgets will lose the contest for you and quite naturally Quick Sixty has none. Quicky does have a couple of weak points as will be pointed out in the construction notes, but the strong points are in the majority.

The best starting point for this design is the metal pan. A Champion Pan produced by Jim Clem and Sam Beasley was used in all classes of this design. The real advantage is that the wing tie downs are cast into the pan. However, any pan can be used by simply making brackets for tie downs in the usual manner. For you young pattern makers, you can carve your own patterns and reduce the cost of the pan more than half.

The engine should be mounted first. The McCoy .60 has to be shaved on the bottom of the case just a little to allow it to fit in the pan. Slot the holes in a little and drill and tap mounting holes for 6/32 (Continued on page 49)

FULL SIZE PLANS AVAILABLE. SEE PAGE 46.



## Quick Sixty

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metal screws.

The spinner was cut down on a drill press from a 1-3/4 in. Froom to a true 1-1/2 in. spinner. This situation can be eliminated, though, as the engine can be moved back 1/4 in. and a stock Froom 1-1/2 in. spinner will fit. This will not affect the balance point, as will be described later.

Next on the agenda is the elevator. It is made of 1/8 sheet plywood and the sewed cloth hinge is used. The flipper is on the inside of the circle. Reason: pilot can see the elevator at all times before take-off and is not likely to pick up the handle incorrectly. Simple? The elevator is bolted to the pan with two 4-40 bolts.

The top crutch is next. Basswood is recommended for this part as it does not split so easily; however, white sugar pine may be substituted. Outline the pan with about 1/16 in. to spare on the 3/4 x 2-1/4 x 16 in. block. Cut outline from the block. Draw center line and cut out inside of crutch with copen, jig or bandsaw. The slot where the saw enters is where the rudder will be cemented, so saw this line straight. Cut out inside allowing 3/8 in. around the crutch up to the front of the cylinder fins. This operation saves the time killing gouging out of the rear section of the top half. The rudder is cut to outline, shaped, and cemented into position. Let the rudder extend all the way through the 3/4 in. block. It goes without saying that all cement joints should be pre-cemented before the piece is cemented into position.

Fit the crutch down over the motor, taking out as small amounts of wood as possible for strength purposes. The tail section should be gouged out for the elevator horn and push rod clearance.

Now for the most important part of this model: the balancing. The center of gravity was not shown on the plans as no two models ever balance alike. Turn the model upside down and balance this portion of the model (with elevator mounted) on the sharp edge of a carving blade. Mark the exact point on each side of the crutch.

Place wing on pan in a position where the CG is between the center of the lead-outs. Mark the wing and begin to carve to shape. The standard airfoil is used on the Quick Sixty—high point back 40 per cent on top and 25 per cent on bottom with center line of airfoil at 33 per cent of the thickness of the section. Reference lines are drawn on 3/8 in. pine block—zero incidence. The pine block is left at the original thickness in the center section in order to give a flat surface to cement to, and to leave extra wood to use as a faring block for the top of the ship. Wing tie downs are lined up, marked, drilled, and tapped in the pan. The wing is cemented in place with the tie downs holding the wing in place. The rear tie down block is cemented in place and tie down is drilled and tapped. Sheet balsa blocks are cemented in place in cross grain fashion.

The cowl was made of balsa wood on the original job for speed of construction, but for a long life, it is advisable to use hardwood. Drill a hole in cowl block and work out to size of diameter of fins with two layers of masking tape around them. Cut block to fit on wing and crutch. Carve outside shape, then cut air ducts and cement on top of cowl.

Carve top of ship with rounded edges and fare in block on top of wing to rounded edges. Use plastic wood to fare in joints.

The original ship had a clear finish, but the later one had a sprayed white Dulux finish with two coats of sanding sealer and two sprayed coats of automobile primer under it. A lock-on-dolly, similar to Herbert L. Davis', was used with remarkable success on all types of flying fields. END