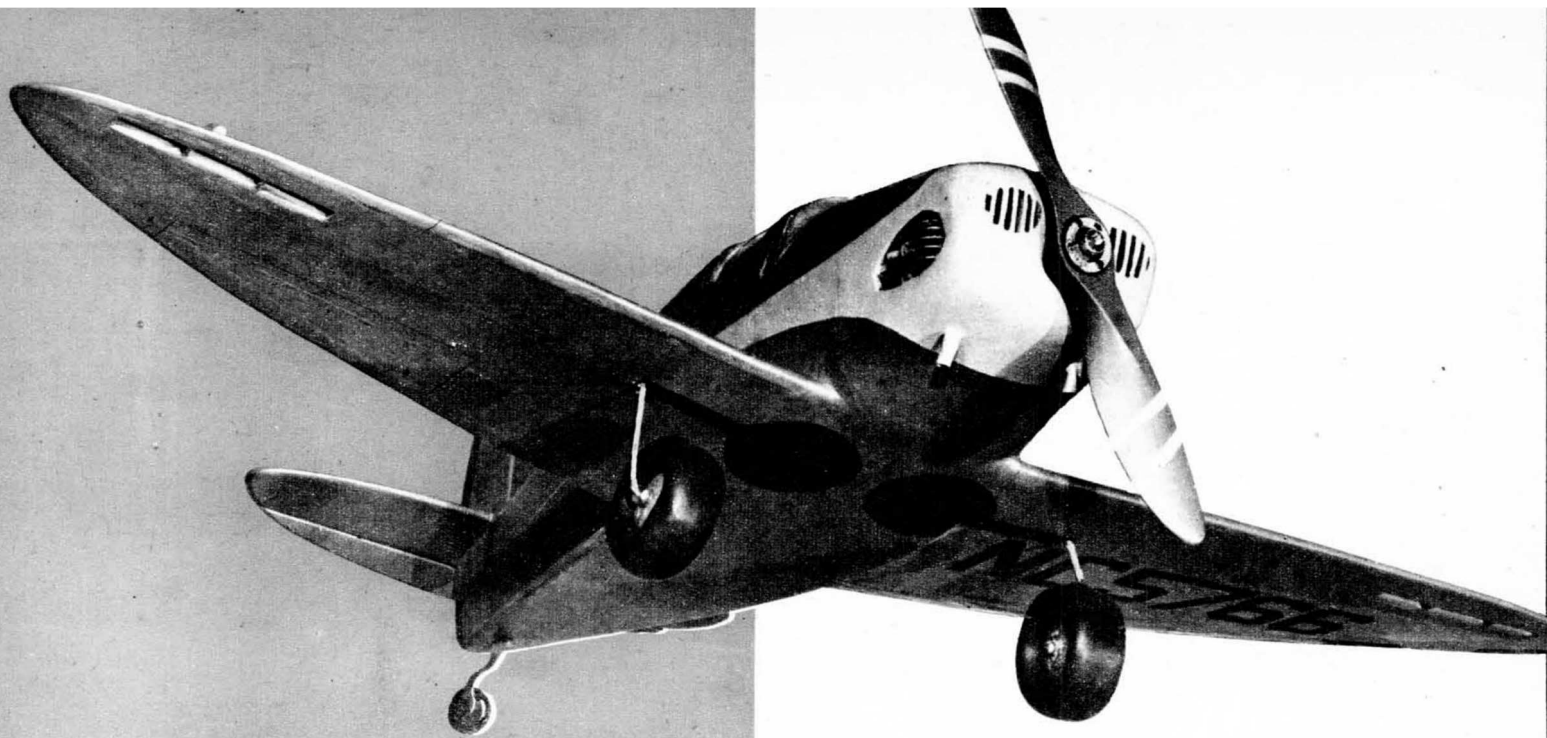


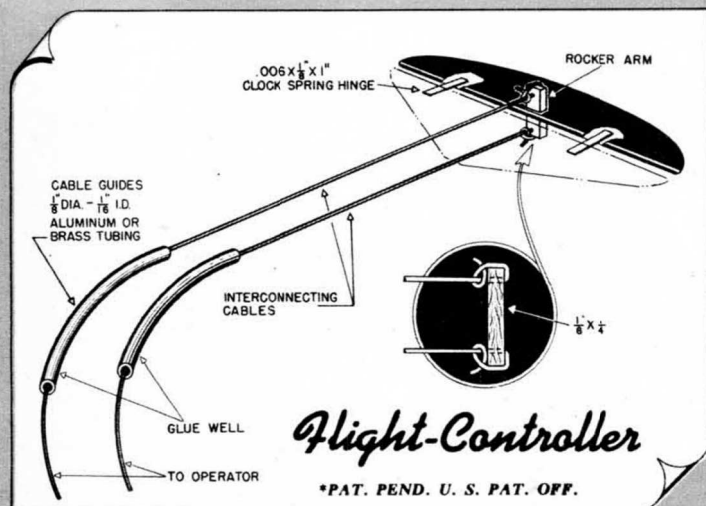


CULVER

CADET

By Walter Schroder

● This control system by the courtesy of Eagle Model Aircraft Co. and the mechanism shown on these plans is intended for the use of individual model builders and not intended for kit use without specific permission by the manufacturer.



THIS POPULAR PREWAR PRIVATE PLANE IS A SWELL ADDITION TO THE EVER GROWING FAMILY OF FINE SCALE CONTROL-LINE MODELS

THE trim, snappy lines of the Culver lend themselves to flying scale control-line with limitless possibilities for experimenting with various motors ranging from Class "A" to Class "C." The original model was designed for the Elf Twin, and I think this is the first time this motor has been effectively cowled in. The Elf twin has been considered one of the better motors in Class "A" but because of its greater width has never been utilized to any extent for flying scale.

Though the model is authentic in scale, its potential speed possibilities will allow the BZZZZ boys to compete with Class "B" and small "C" jobs. The elliptical wing planform with its small wing area is the "perfect" control-line machine from the standpoint of both speed and maneuverability; but effective motor control is a MUST, so a simple spark-control system has been incorporated. No gadgets, just a spark-control line directly to the operator.

The fixed-wing slots on the full craft are placed near the wing tips and relieve the low pressure above the wing in a steep climb, improving and allowing easier movement of the control surfaces and thus permitting rapid recovery from any unusual attitudes while in flight. An alternative motor mounting method is shown, using an Ohlson "23" mounted on its side. The "23" can be used in an inverted position but will project from the bottom of the motor cowling.

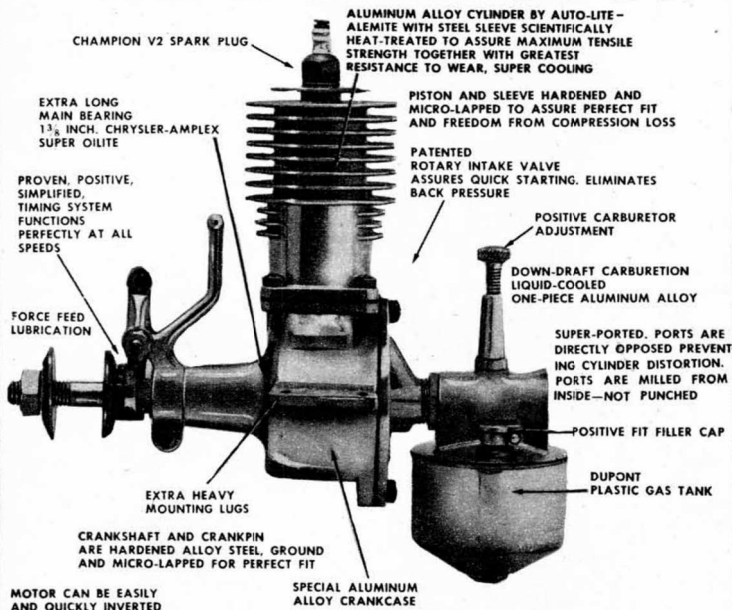
Fuselage: The conventional crutch of 3/16" sq. is used. While the crutch is drying glue all the upper formers in place. The side stringers of 3/32" sq. are inserted. When the upper half is dried, remove from workbench and install all the lower formers.

The elevator control system is installed next. Make the platform base of 1/8" hard sheet; have grain running lengthwise to the fuselage. Cut out formers F-3 and F-4 to receive the platform, and glue in place. The control fulcrum is made of 1/8" plywood formed to shape, shown in top view of fuselage. Use a 6-32 R.H. brass machine screw to hold the fulcrum to the control plate base. Be sure to insert two copper burrs or washers between the base and control plate. Solder the nut and screw so that vibration will not cause the nut to work loose.

The battery box of 3/32" hard sheet is now built between formers F-10 and F-4; these formers are the battery box ends. The bottom of the box is formed by filling in the crutch between the cross pieces. Keep the 3/32" fill-in sheet flush with the top of the crutch. The electrical system is now installed with the coil mounted in the position shown on the plans to maintain the proper balance of the model. The condenser can be



NOW AVAILABLE! the ROCKET MOTOR



AMAZING STARTING ABILITY SUPERIOR PERFORMANCE

The quick starting and thrilling performance of the new, improved Rocket Victor Motor are due to the patented Rotor Intake Valve in connection with special tested parts. Every Rocket Motor is bench tested at the factory, and the most exacting care is taken in the manufacturing operations.

SPECIFICATIONS

Bore: 13/16 in. Stroke: 7/8 in. Displacement: .460 cu. in.
Fuel—Regular: 3 parts white gasoline to 1 part SAE 70 Oil
Fuel—Contest: Carmier's Miniature Engine Fuel
Weight: 8 oz. Spark Plug: Champion V2

LIST \$22.50, F.O.B. Detroit, Less Coil Condenser

DEALERS

Orders filled promptly, in order of their receipt. Wholesale only.

CLASS D RACING MODEL BOAT KIT

Kit for hull 28" long, designed for outstanding performance using any Class C Motor. Complete with hardware, plan and instructions. Rough propellers, 2 1/2" diam., holes drilled, 75c extra in 5, 6 and 7 pitch.



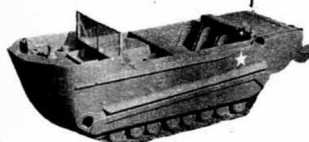
Kit, Less Motor

\$10.00

The Famous WEASEL

The Army's personnel and cargo carrier, M-29C. Complete scale model kit, 3/4" to 1" scale. Machined parts. 100 molded track shoes. 40 plastic wheels. Die-cut fibre axle supports. Die-cut fibre board trim parts. Accurate, full scale, 4-view drawings. Complete instructions with new photographic illustrations for easy step-by-step assembly.

Complete Kit, \$2.95 List



The DUCK

Complete construction kit for building an attractive scale model of this 2 1/2 ton amphibious truck used in all major landings. Attractive box. Beautifully detailed parts cut for assembly. Full size plan. Doughnut wheels. Decals. 15 1/4" long—4" wide—4 1/2" high.



List \$1.95

Ask your dealer. We sell wholesale only.

AIRCO MODEL SUPPLY

Model Kits and Hobby Supplies

1474 Gratiot Avenue DETROIT 7, MICHIGAN

Culver Cadet

mounted on the motor or the motor mounts. The snap switch is mounted on the front of the former F-4 as are the booster connections; make these connections of .040 piano wire. The nose cowl is formed of 1" soft balsa blocks cemented to the firewall. Form the blocks roughly to shape before gluing. The nose block of 5/8" soft balsa is glued against the blocks fastened to the firewall. The 1/16" soft sheet planking is now fastened to the fuselage. The sides and top of the fuselage are planked first. The sheet on the bottom is not put in place until the wings have been mounted. Slot the sheet planking on the top of the fuselage between F-7 and F-8 to receive the rudder which is inserted through this slot and butt-jointed against the back of F-7 and slipped over F-8.

Stabilizer and rudder: The stab and rudder are constructed of sheet and do not require any special directions.

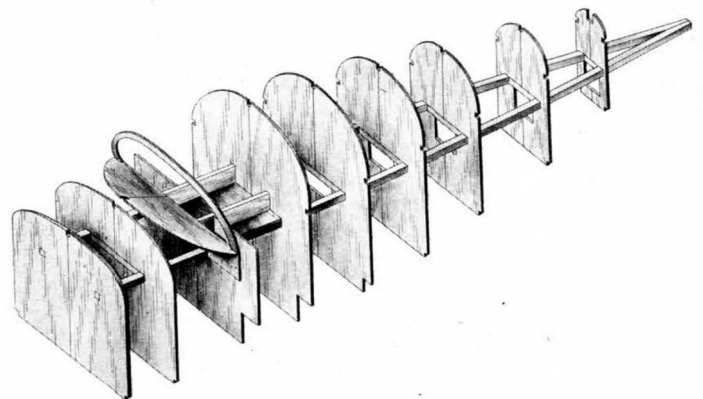
Wing: The wing, with the exception of the fixed slots, is the conventional design. The slots are formed by using 1/4" soft sheet shaped to the planform shown on the plans and inserted between the ribs in the respective places designated for each piece. The landing gear is mounted on the wing and is bent to the form shown; be sure to insert the plywood wing reinforcer before attaching the landing gear. Wrap the landing gear wire well with thread and give it a good coating of glue.

The leading edge of the wing is covered with 1/16" soft sheet balsa ex-

formed of .035 piano wire. The axle is bent at right angles at each end. The pivot bearing is the same size wire as the axle, and is formed by looping the wire around the axle. The whole unit is then inserted into the stab. Note the axle is inserted into the stab and the bearing into the elevator.

Cowlings: The engine cowl is cut after the entire model has been finished. The hatch is wormed by cutting the upper balsa block parallel to the sides of the fuselage, the nose block, and the firewall. After the hatch is cut, remove it from the fuselage and carve the inside cowl and the hatch to suit the motor being used. After the inside of the cowl has been sanded and well doped (at least 8 coats) to prevent oil and residue from the motor's impregnating the wood, fasten the hatch to the cowl with a small butt hinge. A small door pull is formed of .035 piano wire and fastened to the hatch.

The cockpit canopy is formed by cutting the sheet planking covering the cockpit to the outline shown on the plans. Stiffeners of .040 wire are glued to the inside of the canopy, one on each side of the canopy door. The windows are cut out to the shape shown and celluloid windows are glued to the inside of the canopy. A brace of 1/8" x 1/2" hard balsa is inserted between F-10 and F-4 underneath the planking overhang on these formers. Small butt hinges for each canopy door are fastened to the inner brace and then to the canopy. This canopy permits access to the batteries,



● Fuselage Construction

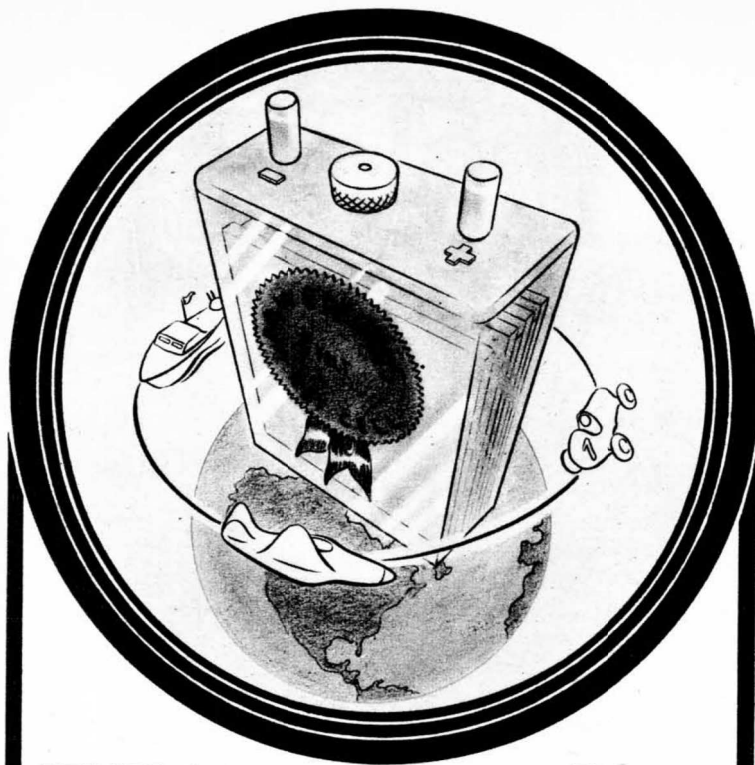
tending from the front of the wing spar down to and on top of the leading edge. The leading edge should be beveled to match the upper camber of the wing rib before the planking is attached to the leading edge. The control-line spreader bar is glued against the side of rib #7. A false rib to match rib #7 between the back of the wing spar and the inside of the trailing edge is glued against the side of the spreader bar. This rib not only strengthens the spreader bar but gives a surface to which can be attached the wing covering.

Hardware: The various control attachments are very simple to make and do not require any special skill. The hinges for the rudder are made of .012 sheet aluminum bent double and inserted into a slot cut in the vertical fin and the rudder. The elevator pivot is made of .045 sheet aluminum drilled for the control rod and then at the angles shown on the plans. The elevator hinges are

booster battery connections, and the ignition switch.

Spark control: This control uses a third line running between the elevator control lines. The simplest method of operating this line is to form a slip knot at the end of the line and slip over the index finger. By using a slip knot the line is easily removed and does not shorten the lines by continually making new knots when flying. The spark-control line is the usual fish line ordinarily used for regular control lines. Remove the spark control lever from your motor and drill two small holes in the end of the lever, one hole for coil spring, the other for the control line.

Be sure to loosen the tension screws on the spark lever so that there will not be any tension on the lever arm. The coil spring when attached must have sufficient tension to keep the spark lever arm in a fully retarded position. When starting the motor, the operator at the



POWER-Plus

wet cells

They're Engineered!

Examine a POWER-Plus wet cell, and you'll find the parts are engineered like full-size storage battery parts. That's because POWER-Plus was designed by leading storage battery engineers. This engineered construction means built-in efficiency, durability, and greater capacity, weight for weight, than is ordinarily found in miniature wet cells. One charging from a car battery is good for a whole day's flying, and you always have a hotter spark than the finest flashlight batteries can deliver. When you fly with a POWER-Plus, you're flying with the very best—so see your dealer and get one now.

**90% of Your Ignition Troubles
Will be Eliminated by These
POWER-Plus Features:**

- Transparent 100% Acid-Proof modern plastic case.
- Full 1/8 inch sediment space at the bottom.
- Genuine cedar plate separators for long life.
- Super-sealed for safety & durability.

FLIGHT BATTERY
Wet wt. 2 oz.—2 volts \$2.75

BOOSTER BATTERY
4 volts \$3.50

DEALERS: See Your Distributor or Write:

Austin Craft
431 S. Victory Blvd.
Barbank, Calif.

Ace Model Airplane Co.
3149 Shenandoah Ave.,
St. Louis 4, Missouri

Mogow
Howard & Oxford Sts.,
Philadelphia 22, Pa.

National Hobby Distributors
510-12 Paul St.
Baltimore 2, Maryland

C. J. Bubla
25-28 Thirtieth Ave.,
Long Island City 2, New York

Chicago Hobby Distributors
4609 Lincoln Ave.,
Chicago 25, Illinois

Dallaire Model Aircraft Co.
9830 Wyoming Ave.
Detroit, Michigan

Germantown Model Supplies
4523 N. Broad St.
Philadelphia, Pa.

Gold Seal Model & Supply Co.
3305 93rd St.
Cleveland 4, Ohio

Haines Hobby Shop
44 S. Sixth St.
Reading, Pa.

Howard E. Ruth
1466-68 Genesee St.
Buffalo, N. Y.

National Model Distributors
150-56 North Wacker Drive
Chicago 6, Illinois

Offenbach's
1425 Market Street
San Francisco, Calif.

Polk's Model Craft Hobbies
314 Fifth Ave.
New York 1, New York

B. Paul Model Distributor
525 Market Street
Philadelphia, Pa.

Universal Model Supplies, Inc.
21 West 45th St.
New York 19, New York

Western Model Distributors
4546 Hollywood Blvd.
Los Angeles 25, Calif.

Western Model Distributors
1060 E. 12th St.,
Oakland 6, Calif.

POWER-Plus
wet cell co.

1970 1/2 Brooklyn Ave.
Los Angeles 33
Calif.

New York Representative S. BENDER, 455 Schenectady Ave., Brooklyn 3, N. Y.

end of the line advances the spark and determines the amount of power he wants to use for each flight. If any trouble should occur while flying the model, the simple process of relieving the tension of your index finger automatically retards the spark permitting you to land your model at slow speeds.

When using the Elf twin, the tension spring is mounted on upper left motor bearer and the .035 wire control line guide is fastened to the lower right motor

bearer. Remove the spark control lever on the twin and insert the coil spring and the control line into the hole in which the lever had been screwed. When using the Ohlsson "23" the tension spring is attached to the lower left section of former F-1. The control-line guide (a small eyelet screw) is fastened to the upper right section of former F-1. To ease the strain and drag on the spark control line insert grommets in the fire-wall and other formers through which the spark control line passes.