There are several notes I need to provide to aid you with the enclosed package. The original kits used 1/16" balsa. Since I wanted to print these directly on balsa sheet I developed the parts for 1/32" balsa sheet. My printer will handle up to 1/20" sheet, but I find 1/32" is a little easier to handle in the printer. As a result, some of the parts have been drawn to allow for cross grain laminations. The fuselage formers are a good example. The fin as also been drawn with a mirror image to allow for markings on both sides. This works fine as long as you are using 1/32" sheet stock.
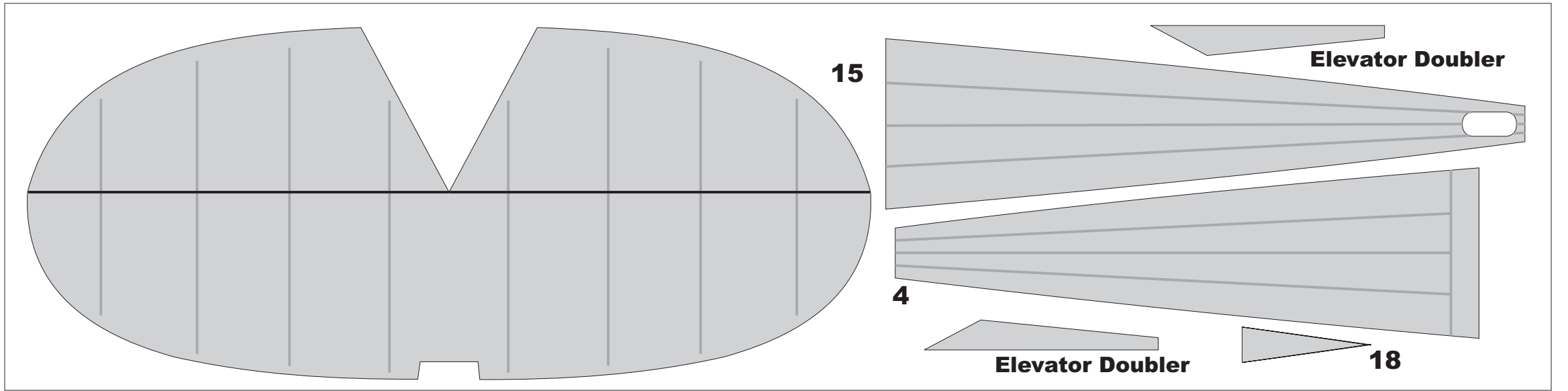
I like to use a removable nose for winding. The parts have been drawn with this in mind. An un-colored nose former has been drawn that is to be part of the fuselage structure. A colored nose piece has also been drawn. The piece when backed with a piece of 1/64" plywood becomes the removable part. The nose former is located to allow the removable piece to nestle inside the fuselage sheeting. I like to use a Peck thrust bearing for 1/32" prop shafts in the removable nose piece. Please see the diagram that comes just before the scanned kit plan in this package.
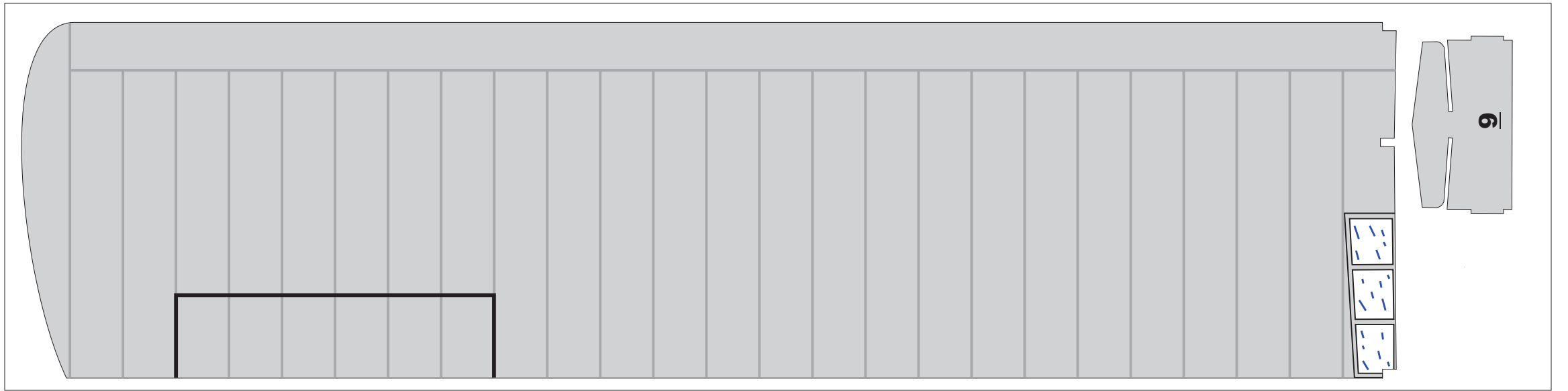
When using 1/32" sheet for the fuselage sides, I was concerned about the load of a fully wound motor on the rear motor peg. I like to use a piece of 3/32" aluminum tubing for the rear peg. Makes holding the model in a winding stooge very easy. To create a bit more strength at the rear peg, I apply a 3/8" diameter disk of plywood to the inside of each fuselage side at the peg location. This has proven to be more than adequate for a fully wound motor of 1/8" Tan II rubber. A piece of 3/32" OD aluminum tubing is used for the rear motor peg.

The original Goldberg kits did not have any color applied to the balsa. I have added color and markings in a manner similar to the old Top Flite Jigtime models. Carl Goldberg was responsible for the Jigtime series when he was with Top Flite. The colors chose are based on colors used on the full scale aircraft.

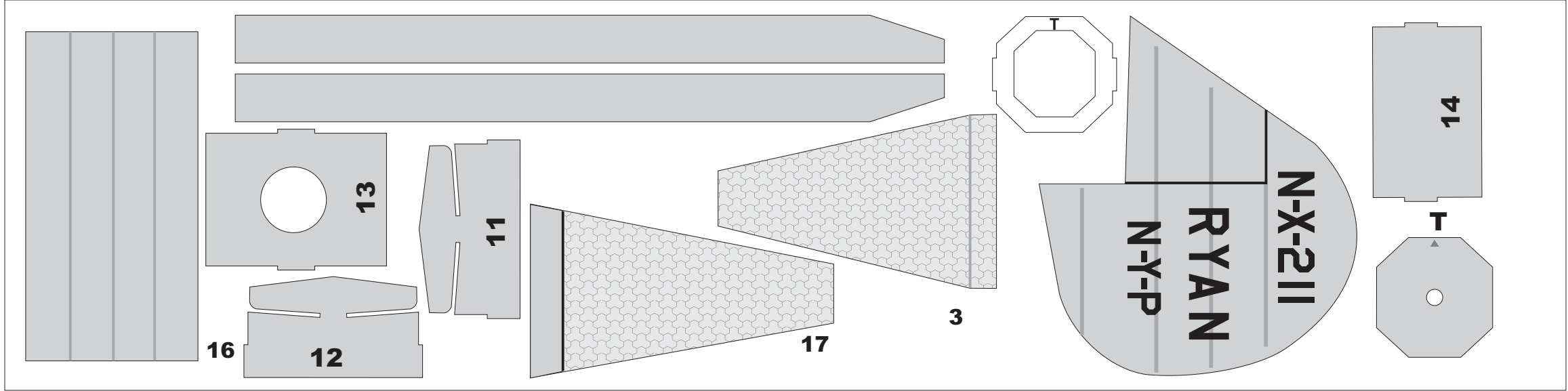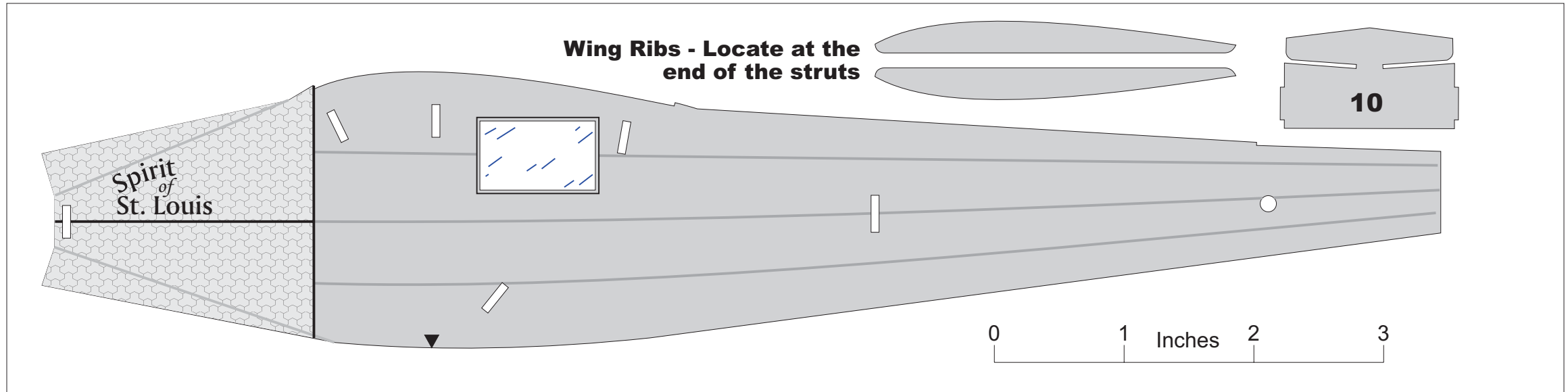I do hope you build and enjoy a model from this plan package.

Paul Bradley

15

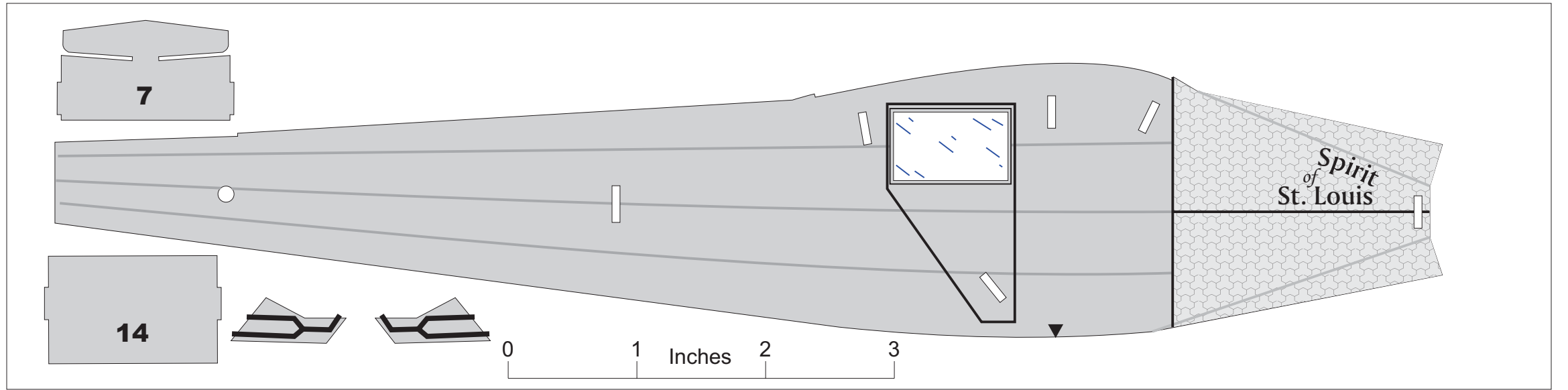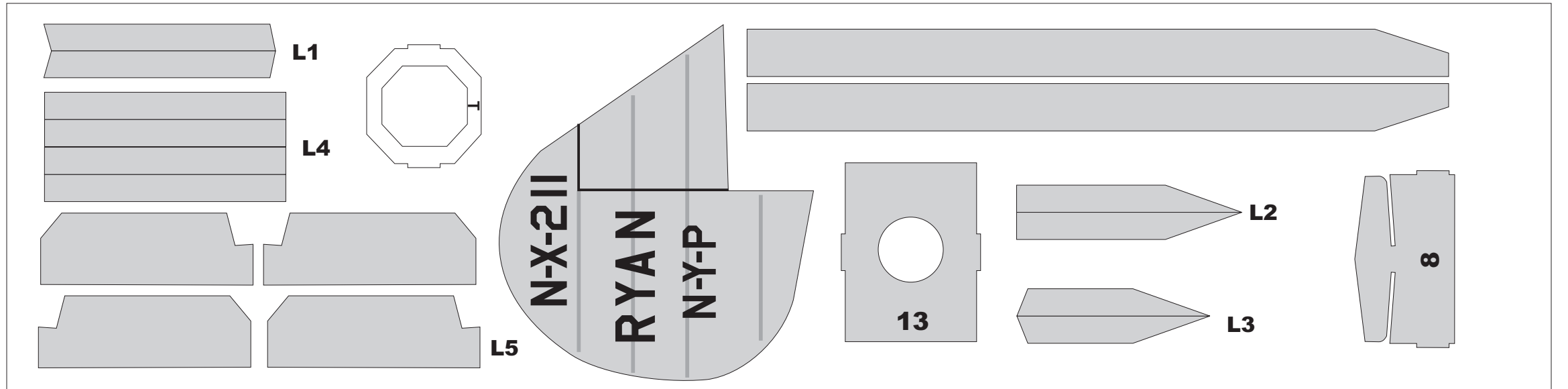**Elevator Doubler**

4

Elevator Doubler

18

0　　　1　　Inches　2　　　3

0   1   Inches   2   3

N-X-2II

0 1 Inches 2 3

14

13

11

16 12

17

3

RYAN
N-X-211
N-Y-P

14

0   1   Inches   2   3

**Wing Ribs - Locate at the
end of the struts**

Spirit
of
St. Louis

10

0   1   Inches   2   3

7

14

Spirit
of
St. Louis

0   1   Inches   2   3

L1

L4

L5

8

N-X-211 RYAN N-Y-P

13

L2

L3

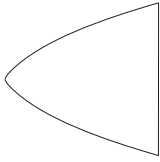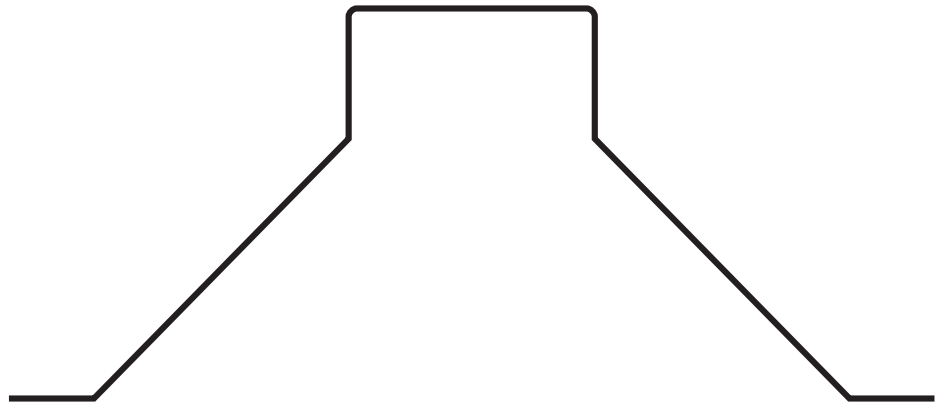8

0   1   Inches   2   3

Spinner

**Landing Gear - .032 music wire.
Use 1" wheels.**

Dummy cylinders - The original Goldberg kit used a vacuum formed part for the engine cylinders. This was a two piece part that represented the front and back of the engine cylinders. After assembly the part was painted and then slipped over the nose.

For the reproduction nine cylinders are made up from foam. Prepare a strip of foam 1/4" thick by 3/8" wide about 4" long. Cut "wedges" per the template from the foam. Either cut or sand the notch at the top of each wedge. This simulates the rocker arms at the top of each cylinder. Use a black marker or paint to make the cylinders black.

Next cut out the cylinder placement template. Leave material around the outside and do not cut the inside area just yet. Glue this to a piece of light card stock. Now cut to the outside circle and inside opening lines. Cut the template in half using the reference line. Once cut in half, on the back side tape the two halves together. This will make it easy to remove the template after the cylinders are in place. Slide the placement template over the nose of the model.

Fit each and glue each cylinder to the nose of the model using the placement template as your guide. The cylinders will be in front of the placement guide. You will need to cut or sand the bottom of each cylinder to fit. Be careful not to get glue on the template. After the glue has dried, remove the tape from the back of the template and remove each half.

Top | Top
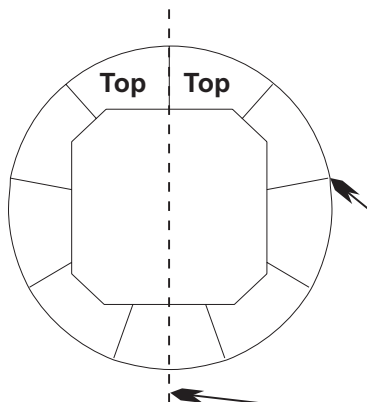
Cylinder placement template. Glue the template to a piece of light card stock before cutting out.

Place cylinders in front of these lines

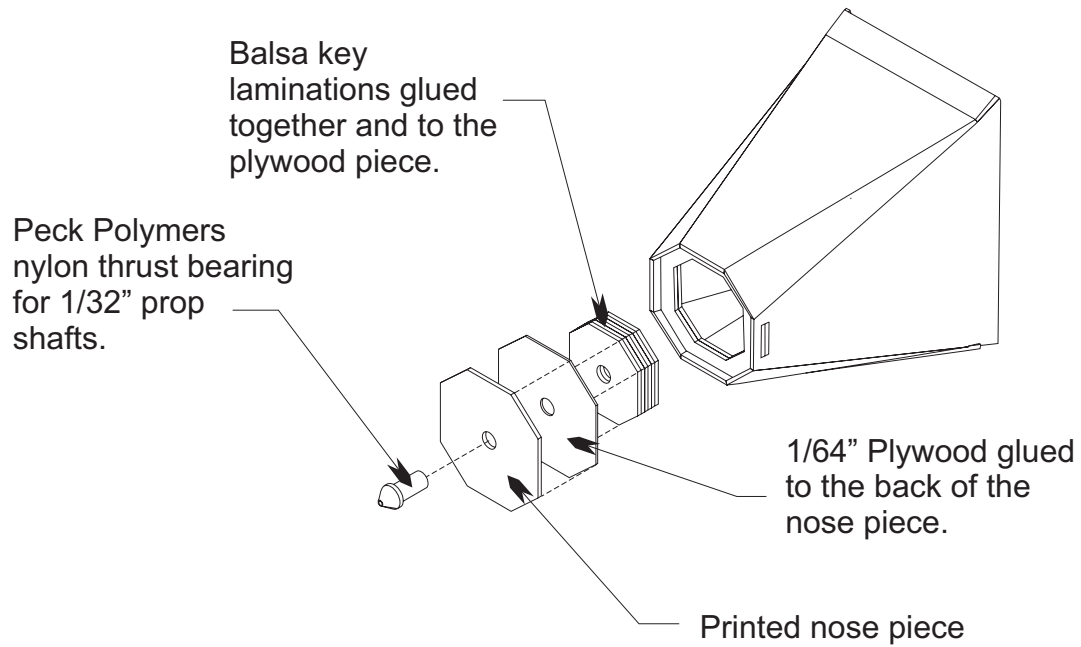Cut template in half along this line. Tape back together on back side.

Front | Side

Simulated cylinder shape. Make 9 from foam.
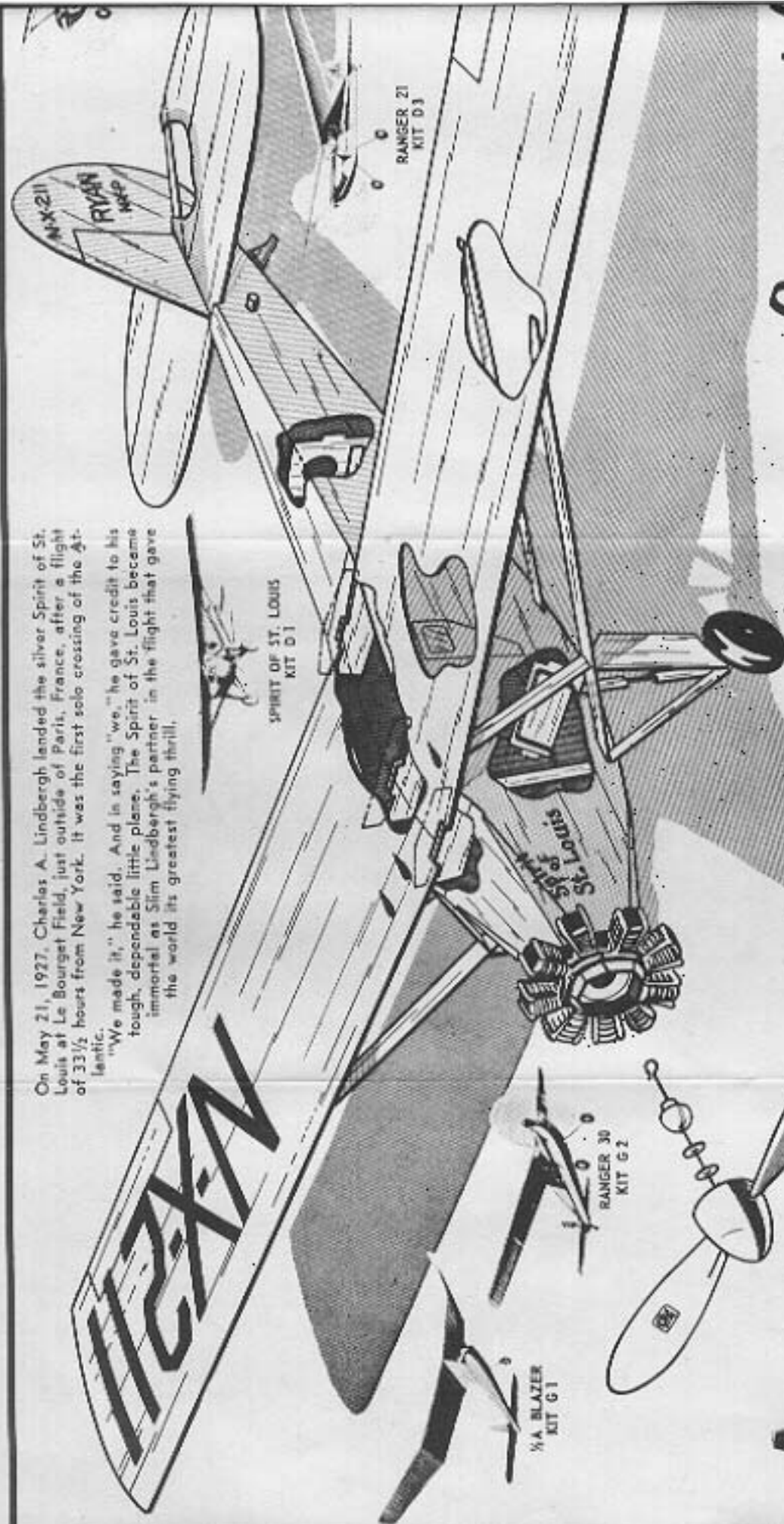
Spirit of St. Louis

Removable Nose Assembly

Balsa key
laminations glued
together and to the
plywood piece.

Peck Polymers
nylon thrust bearing
for 1/32" prop
shafts.

1/64" Plywood glued
to the back of the
nose piece.

Printed nose piece

Spirit of St. Louis

Spirit of St. Louis

FLYING MODEL,

FLIES 15-30 SEC

Wingspan	21"
Length	13½"
Weight	1¾ oz.

On May 21, 1927, Charles A. Lindbergh landed the silver Spirit of St. Louis at Le Bourget Field, just outside of Paris, France, after a flight of 33½ hours from New York. It was the first solo crossing of the Atlantic.

"We made it," he said. And in saying "we," he gave credit to his tough, dependable little plane. The Spirit of St. Louis became immortal as Slim Lindbergh's partner in the flight that gave the world its greatest flying thrill.

RYAN NHP

M-X-211

NX-211

St. of St. Louis

RANGER 21 KIT D 3

SPIRIT OF ST. LOUIS KIT D 1

RANGER 28 KIT D 5

SPACE JET 21 KIT G 5

RANGER 30 KIT G 2

SPACEMAN 30 KIT G 7

½A BLAZER KIT G 1

HOW TO WIN YOUR PILOT'S LICENSE!

A pilot must of course study, practice and finally pass certain tests before he can win the coveted certificate. The performance standard set for your model is not difficult, but it will take some effort. So read the following carefully.

First, build your model carefully and accurately, following instructions. Cement all the joints firmly. Sand the entire model neat and smooth, with rounded edges especially on the wing and tail. Keep it flight.

Second, follow the Flying Instructions to get your model in perfect "flying trim." Get lots of practice in flying it, and learn to make small adjustments to help it fly more smoothly. Study and follow the section on How to Make Extra Long Flights. Keep practicing.

Third, have your model timed to see how long it can stay up. The timer can be your teacher, scoutmaster, parent or a friend, and should use a stopwatch or a sweep-second watch. When you have successfully achieved the necessary time as shown in the application, fill it out and send it in with 50c to cover the handling and mailing costs. Within a short time (allow three weeks), you will receive a handsome certificate inscribed in your name, giving real recognition to your building and flying achievement!

YOUR SUGGESTIONS WANTED!

Modelers often have ideas for improvements. We will be happy to hear from you by post card or letter on:

1. Your suggestions.
2. What you like best about our models.
3. What three new models you'd like to see us bring out.

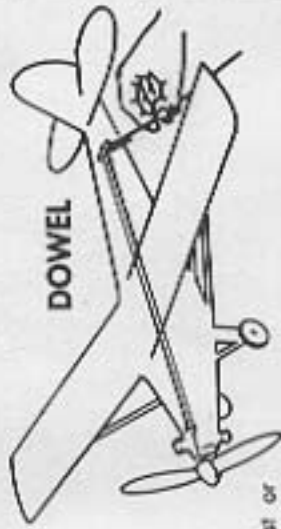Be sure to include your name, age, and address so we can reply and thank you.

FLYING INSTRUCTIONS

RUBBER BAND

WIRE

DOWEL

1 Use long wire (from hobby shop, florist or hardware) to help install rubber motor. Insert dowel at rear.
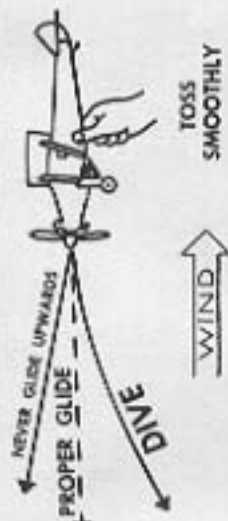
2 Balance model as shown. Add modeling clay to front or rear to make model balance at arrow.

3 Make test glides over tall grass. Should model dive, bend tail up a little at a time until the glide is smooth.

NEVER GLIDE UPWARDS

PROPER GLIDE

DIVE

BEND UP

TOSS SMOOTHLY

WIND

STALL

PROPER GLIDE

BEND DOWN

WIND

A ← IF MODEL TURNS "A"

BEND RUDDER TO "B"

CESSNA 180 KIT D 4
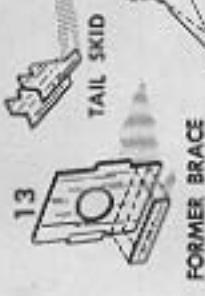
SHOESTRING KIT D 2

St Louis KIT D1

150-300 FT.

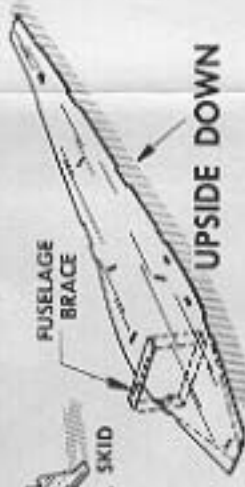Designed and drawn by:

MODELS INC.

Here's HOW TO BUILD YOUR MODEL RIGHT!
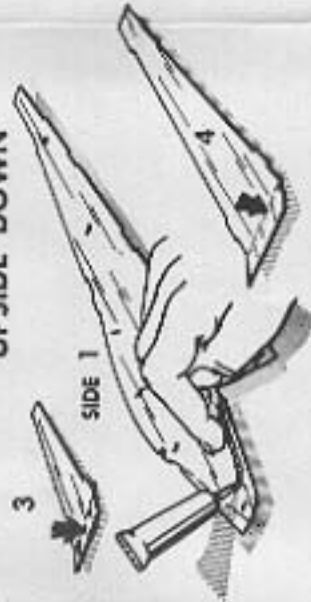
1 Turn fuselage sides 1 and 2 upside down, and rub regular model airplane cement into underside of creases. Do same with 3 and 4.

UPSIDE DOWN · SIDE 1 · 3

2 Carefully cement together the various parts pictured above.

UPSIDE DOWN · FUSELAGE BRACE · TAIL SKID · FORMER BRACE · 5 6 · 8 · 10 · 12 · 7 · 11 · 13

3 Join the fuselage sides with formers 7-8, 9-10, and 14.
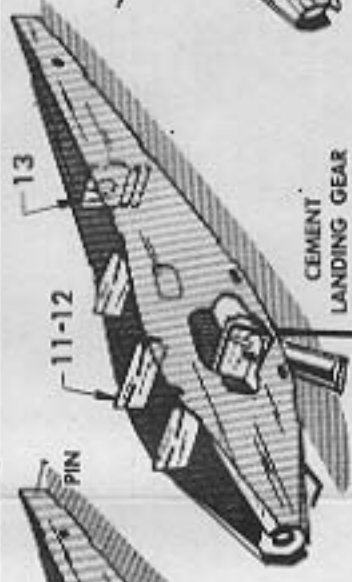
LANDING GEAR FORMER 14 · 7-8 · 9-10 · 1
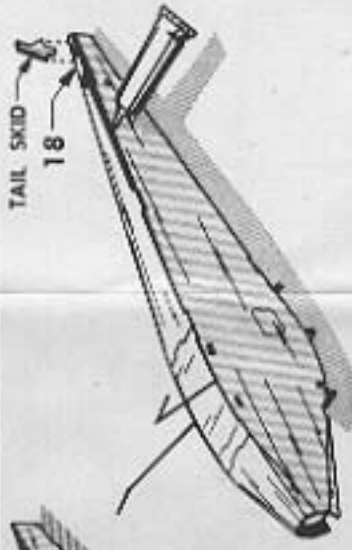
4 Join
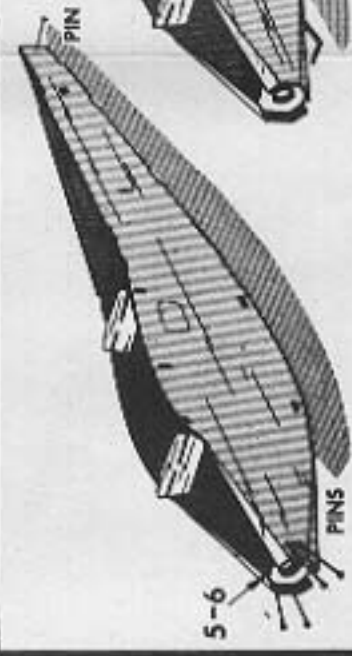
5 Cement formers 5-6 in place, using 4 pins. Very accurately cement rear of fuselage together, using a pin to help.

PINS · PIN · 5-6

6 Add formers 11-12 and 13. Cement landing gear firmly in place.
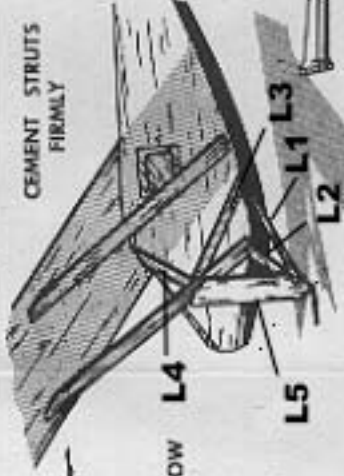
11-12 · 13 · CEMENT LANDING GEAR

7 Set entire bottom in place. Lift up part of one edge at a time, and cement. Add rear segment 18 and tail skid.

8 Cement washers to front and of nose formers.

TAIL SKID · 18 · 2 HEAVY WASHERS

12 Finish cutting out windows, and cover with celluloid.

WINDOW

13 Sand all struts smooth, and round off edges except where parts join. Mount struts firmly. Add wheels. Put drop of cement on ends of axles.

CEMENT STRUTS FIRMLY · L1 L2 L3 L4 L5

14 Cement tail carefully in place. Add stabilizer braces. Look at model from front and rear for correct line-up. Straighten before cement dries.

STRAIGHTEN TAIL

15 Cut off tops of the engine halves, c

4 Should model stall and dip (first climb, then dive), bend tail down a bit at a time until the glide is smooth and flat.

5 flights. Wind motor 100 turns, and make several test flights. Make corrections for better flights by bending tail as in steps 3 and 4.

HOW TO GET EXTRA LONG FLIGHTS!

16" LOOP 3/16 x 1/30 RUBBER
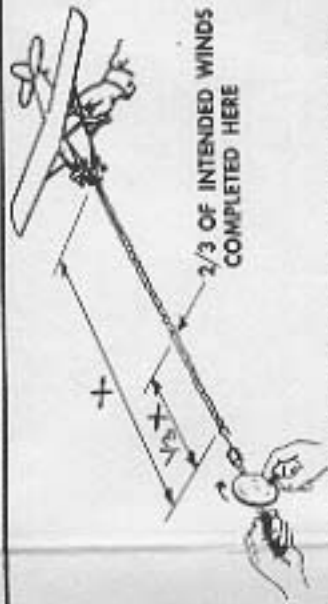
CASTOR OIL

6 For a longer, more powerful motor, see your dealer for rubber 3/16 x 1/30 x 32". Tie the ends with a square knot. Rub castor oil into the motor so it can take many more turns without breaking. Don't get castor oil on the knot or it will come undone, and you'll have to rub dust into it to get the knot to hold.
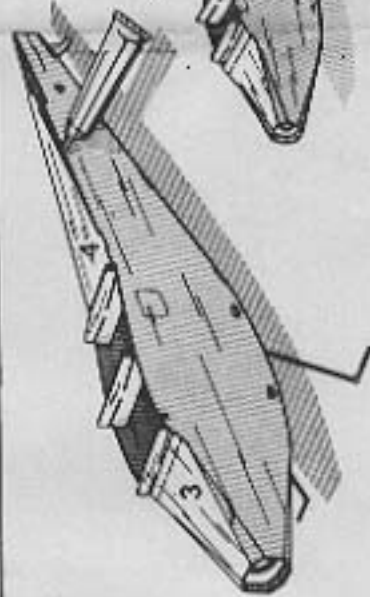
Learn to wind with a drill, with a hook firmly tightened in place for winding. Stretch the motor 3 to 5 times its length, and wind while coming back in gradually. You should have about 3/4 of your intended number of turns by the time you have come back in about 1/4 of the distance.

2/3 OF INTENDED WINDS COMPLETED HERE

Practice winding for maximum turns and power. It's best to practice with the motor outside the plane, hooked on a nail, in case it should break. You should be able to get from 750 to 1000 turns. In good, calm flying weather, and with your plane adjusted to fly smoothly, this amount of turns should enable you to get long flights of 20 to 30 seconds duration. Good luck!

9 Cement in place top panels 3 and 4.
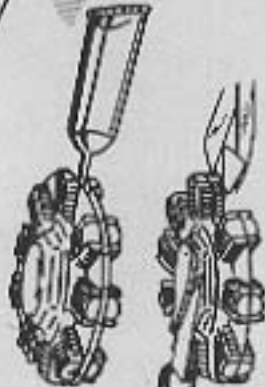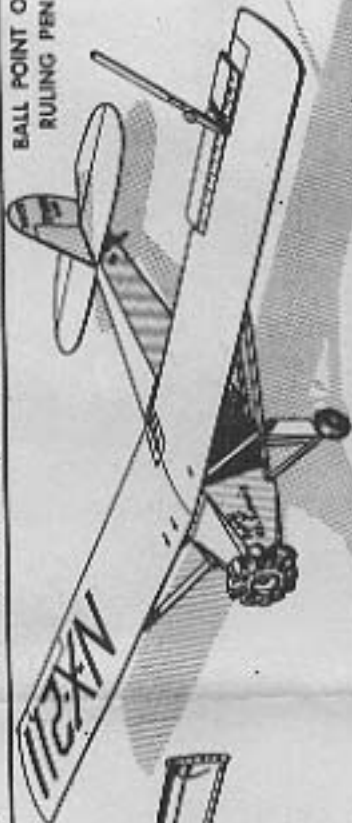
SANDPAPER BLOCK

STRUTS

SAND SMOOTH AND ROUND EXPOSED EDGES

10 Sand all parts smooth except formers, using 4/0 sandpaper. Round off square edges on wings and tail except where parts join.
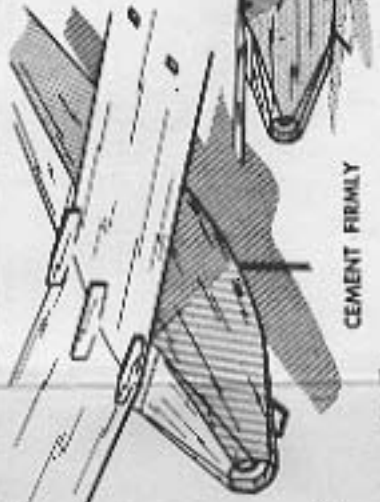
CEMENT FIRMLY

11 Cement wings carefully in place.

DON'T GET PROP BACKWARDS

WASHERS

COFFEE CAN KEY

17 Assemble propeller parts as shown. Bend and cement shaft to prop, then add spinner.

BALL POINT OR RULING PEN

NX211

CEMENT FIRMLY

ENGINE

16 Model may be clear doped one thin coat and sanded smooth. Add trim lines and decals. Keep model light for long flights. If beauty is more important, apply 2 thin coats color dope before lines and decals.
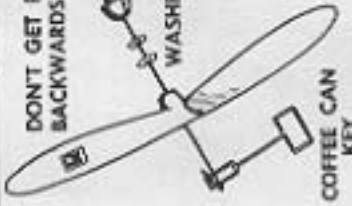
bottom panels 15, 16, and 17.

...rear

...ormers and sand smooth. Trim excess off ...ment together, and mount in place.