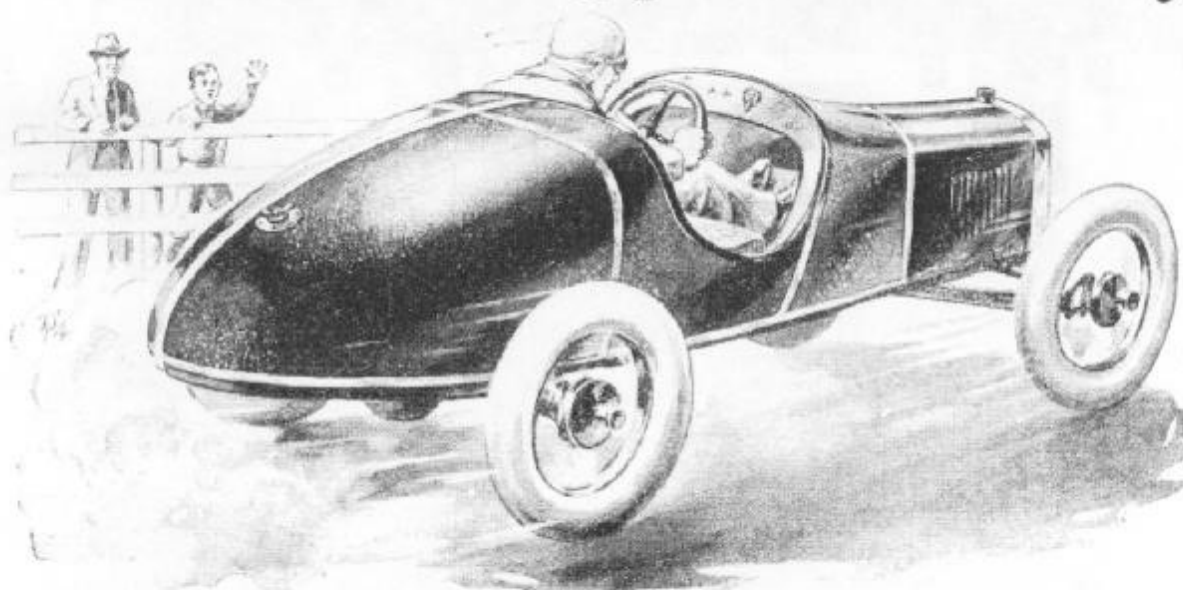


The M. M. Speedster Body



This type of construction, if followed through carefully, will give a beautiful speedster body requiring no paint work.

by ART KLUST and RAY F. KUNS

Here is a strong yet easy to build racing body that will make that old Model T Ford into a fast road bug or dirt track speedster. Although designed especially for the Model T Ford frame, this design is flexible enough to be readily adapted to any make of car.

ALMOST every day letters come to us asking how to build speedster bodies. In the main these are letters from owners of limited equipment. The M. M. Speedster body has been designed with this fact in mind.

Although these plans were dimensioned to fit a Model T Ford chassis, many of the measurements given are approximate and are trued up in the fitting. This plan of construction will work for any chassis and no particular difficulty should be encountered in adapting the body to varying specifications.

After making a careful study of the article, decide whether or not you wish to retain the splash aprons, running boards and fenders, as they will influence the body outline somewhat, then strip down the chassis ready for work.

First lay out the main sills on the chassis frame. The sills are all of 2" x 8" white oak. The main sills run from the

firewall to a point about 15" behind the rear end of the frame. Bolt them in place temporarily until the fitting is completed, then run in a sufficient number of bolts to satisfactorily keep them in place.

Now construct the seat back frame and the dash frame, assemble the seat and seat back as shown and by sliding this assembly along on the sills, determine its best driving position.

Fit in the cockpit frames and bolt the whole construction in place through the sills. Fit the upper and lower rear sills in place running back from the seat frame and the chassis to the tail.

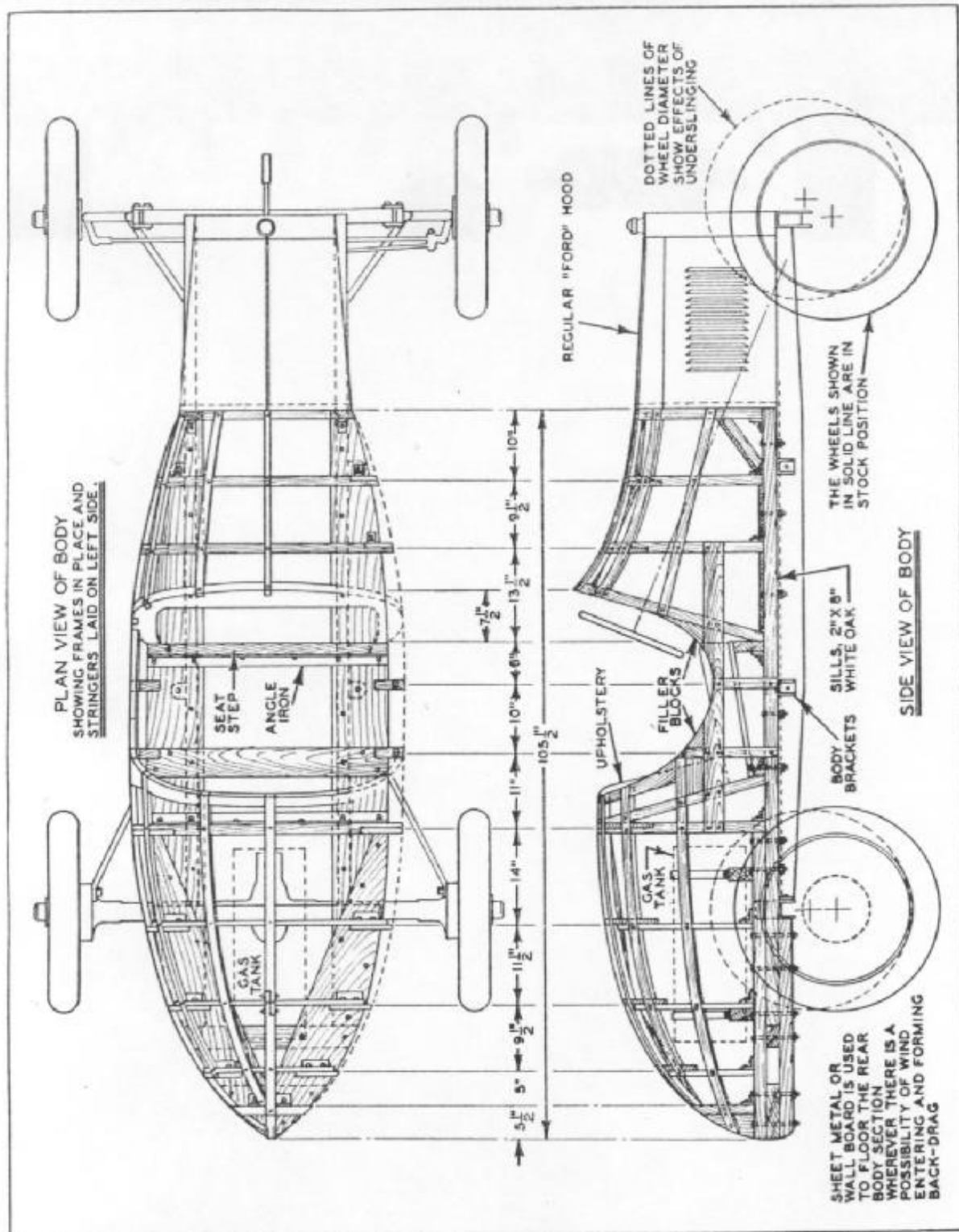
Complete the tail as indicated, and fit in the 2" x 4" cross piece at the ends of the main sills. The cross grain brace at the tail is 2" x 12".

The seat back frame is built to dimensions given as is the dash frame. The tail dimensions are also accurate enough to accept. With the exception of the firewall

BLUEPRINTS FOR THE M. M. SPEEDSTER BODY

If you are contemplating building the M. M. Speedster Body and would like a set of blueprints from the designer's original drawings (similar to those reproduced here, but done up larger for shop use) you can obtain them for \$1.00 from Modern Mechanics and Inventions, 529 South Seventh Street, Minneapolis, Minn.

Seat and Wheel Should Be Placed to Conform to Driver's Build



This body is designed for a driver about 5 feet, 10 inches in height. If much taller or shorter the cockpit can be moved.

outline frame, however, the frame dimensions are flexible, subject to fitting and are merely roughed in at first.

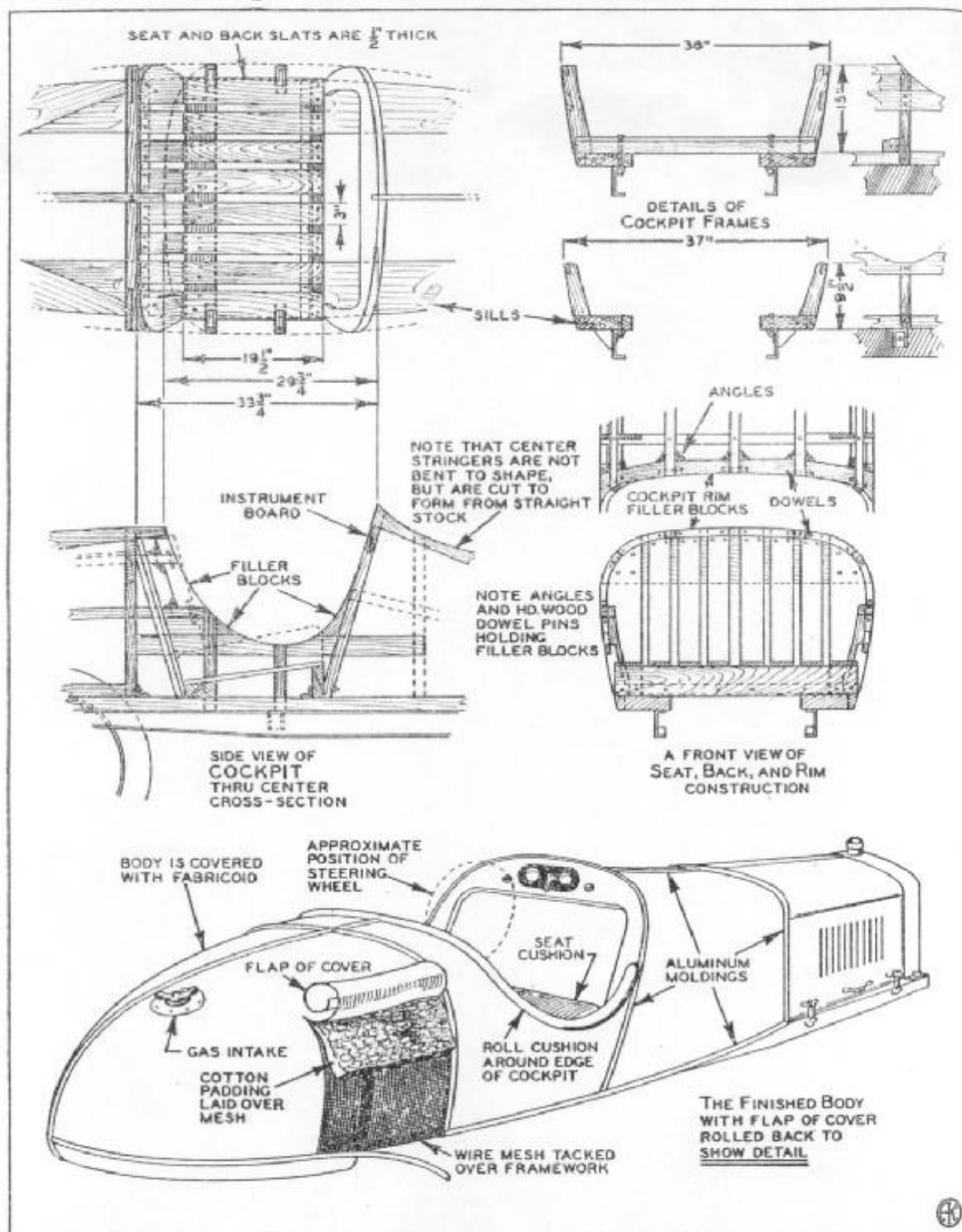
Cut all curves on a square with the plane surface until fitting demands a bevel. Note the angle irons at seat slip and seat back frame. Notch in the 3/4" x 3"

oak strip at bottom of cockpit cutaway after fitting the cockpit frames into the sills.

The outline frame at firewall is the only frame that is notched for stringers before assembling.

Complete the remaining frames ap-

Fabricoid Covering Will Stand Up Under Any Weather Conditions



Details of the seat and cockpit are given here, while below is shown how wire and cotton form a base for the fabricoid.

proximately to the measurements given, and after flooring the cockpit with $\frac{1}{2}$ " material, leaving a removable section, set the forward frames in place and fit the center stringers in their places. Fasten the frames to sills with angles as shown.

To fit the rest of the stringers in the forward section, spot them at the dash

and firewall, determine the positions of the frame notches by bending the stringers into place, and fasten with screws.

Set the gas tank and line at the rear, and complete this framing in the same manner. Run a filler spout to the outside of body through a block fitted between the frames.

Frames Are Made of White Oak

The cockpit rim is completed by gluing and doweling filler blocks where they are needed, fastening them to the protruding stringers by means of small angles bolted to stringers and screwed to the blocks.

Smooth off the framework, preserving the outlines by beveling the sills, etc., and the frame is ready for covering. If it is found necessary, run in a few small stringers of spruce $1" \times \frac{1}{2}"$ to preserve the curves of the body.

The upholstering is taken care of by cutting down the cushions of the regular car.

The emergency brake handle is placed on the outside of the body in regular racer style.

The next important thing is to determine on the position of the steering gear. Ordinarily the steering gear may be raised or lowered to suit the builder.

Most speedsters and racing cars have the steering wheel dropped down so as to have the top of the wheel slightly below the cowl line. Block or brace the steering wheel into position temporarily. Later, when the frame is completed, it will be bolted to it.

Since this body is to be covered with Fabricoid, it is necessary to determine the point at which the seams or overlapping joints of the material will come. The best place for this is where the notches for the rails are shown. Of course there will be other notches for other rails since these rails must be run in about 6 or 8 inches apart. The important rails are those indicated at the points notched.

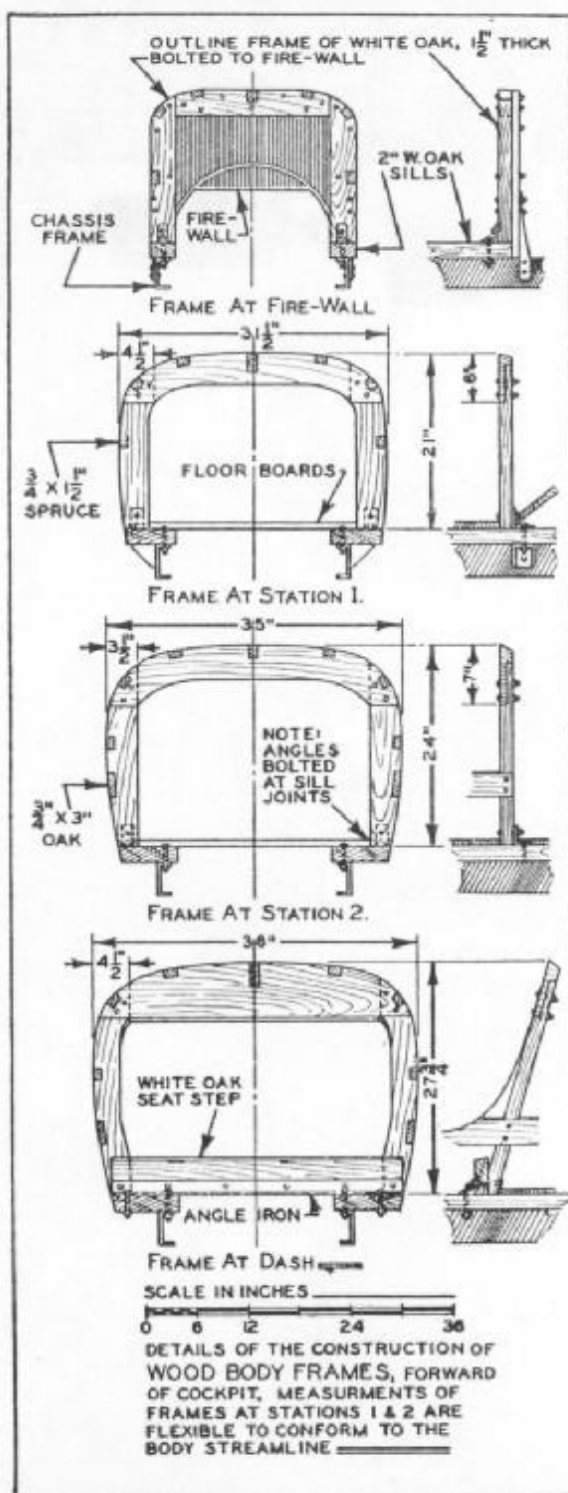
Fabricoid Material Stretched on Rails

When the Fabricoid material is stretched on it will be tacked on these rails and the job finished off by means of an aluminum mould. Much of the work may be quite rough but the two rails on either corner must be laid in absolutely true and symmetrical so the mould will have a proper appearance.

The best plan is to nail up the frames and then use a lath to lay out the position of these corner rails, which must run all the way from the seat position to the tail end of the body.

The type of construction used is such that as long as surfaces are approximately even that is all that is necessary. After the frame has been roughed in and fastened together rigidly, this being very important, the next step is to proceed to cover the frame with some form of woven wire.

One type which is generally available is the so-called square mesh wire. This should be about a No. 18 wire with a $\frac{1}{4}"$ mesh. Cover the frame with this. You are going to have some difficulty in getting this to lay to shape in every instance but you will just have to be patient and continue the work until the wire does conform to the shape of the body. It is

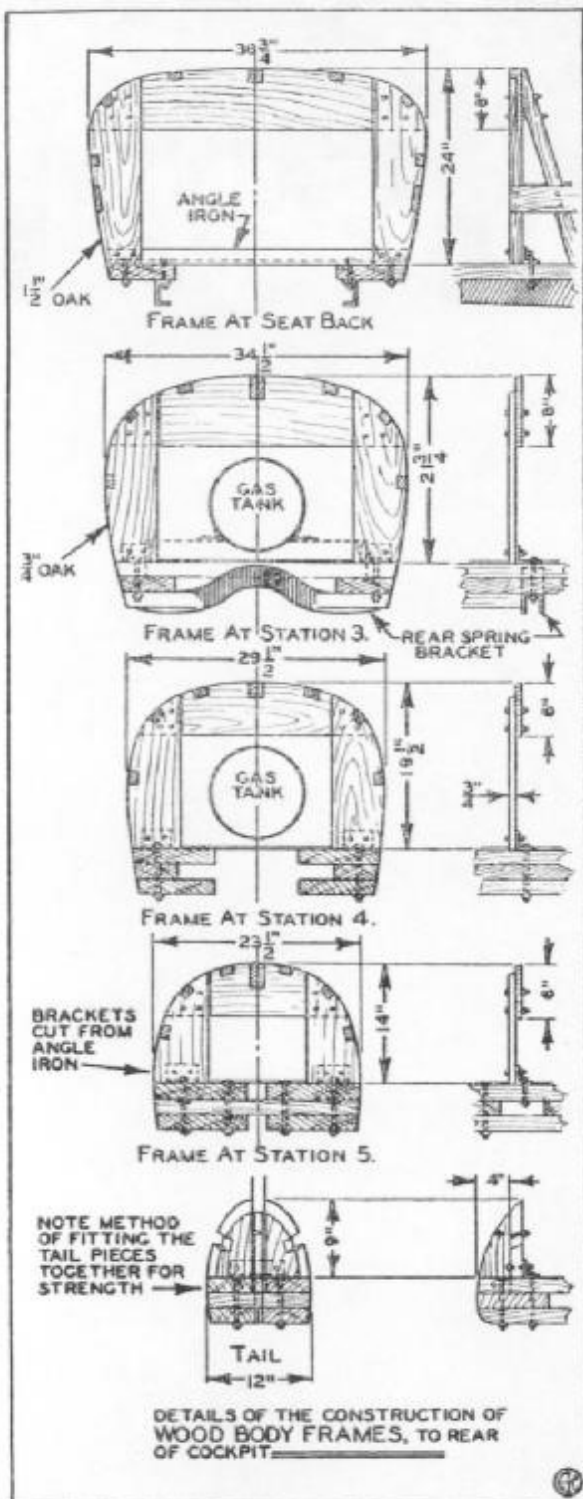


Detail drawings of the frames forward of the cockpit.

very much easier than covering a body with metal.

At times you will need to use a wood mallet or block from the inside to remove flat places in the wire. It may be that you will need to cut the wire at the rail and post lines, putting it on in sections.

Do not worry about the roughness of the job in minor details but be very sure



Working drawings of the frames in rear of the cockpit. Dimensions are easily changed for other make of car.

that the general curvature of the wire, when finished, conforms to a smooth line. You can test this by means of a light strip of wood laid over the wire and brought down to the posts and rails. If flat places show under it, hammer them out.

Wire ends and slight irregularities, due to roughness of work, will be all ironed

Care Is Needed in Streamlining

out when the cotton batting is applied. This will lay over the wire frame very nicely and should be tacked on the rails and posts where the aluminum moulding is to be placed, covering the Fabricoid joints. In other words do not tack the cotton batting, except at those points at which you expect to tack the final covering which is DuPont Fabricoid.

Having the cotton batting in position the next step is to lay out and apply the Fabricoid. DuPont Fabricoid is a product made in a variety of colors and available through upholsterers and jobbing houses, carrying materials for top and body repair men. Determine on the color you want your finished speedster. When you have applied the Fabricoid no paint is necessary.

The finished appearance of the car will be determined entirely by the care you use in laying out the joints of the Fabricoid, which are to be covered by aluminum moulding.

Appearance Determined by Covering

If you give no thought to streamlining or finished appearance, you may violate some of the most commonly understood rules of streamlining. Observe the effect of moulding lines on any automobile, especially the later type speedsters and roadsters.

When stretching on the Fabricoid, it is likely you will be able to use one piece over the cowl and bring it down pretty well, even to the sill lines. Of course there will be some waste. Unless you have too much scoop on the cowl you should be able to cover it with one piece, making a joint line just below or near the bottom of the curve on each side.

If you will be patient you will find that it is possible to stretch this Fabricoid in a very snug manner. You will also find that when stretched over the cotton batting it is soft to the touch and has a neat, very smooth and finished appearance.

The sides of the rear portion of the body should be applied after the cowl is covered. Pull and stretch this snug, without wrinkles. Finally cover the deck of the body or the top of the rear body portion, pulling and stretching it into form. You will now understand the value of having two good rails at these points.

With the body fully covered, apply the aluminum moulding on those lines indicated by the tacked joints of the Fabricoid. You may be able to secure a piece of aluminum to run around the cowl frame at the firewall to protect the Fabricoid from wear induced by the hood end.

In conclusion let us say that this type of construction, if followed through carefully, will give a beautiful body. One entirely different from the usual type of sheet metal construction cobbled up by back yard mechanics.