

Hellcat-Gentleman s Speedster And How To Build Her

By T. H. S.

This article is reprinted from the August 1920 issue of Ford Owner and Dealer. It is believed that T. H. S. was a pseudonym used by Murray Fahnestock, the editor of the magazine. Murray also used other names such as Ed. Technical to make it appear that the staff was much larger than it really was. It is purported that T. H. S. stood for The Head Swami. No matter who may have written this, I think you will find it enjoyable.

Sometime last fall there appeared in this magazine an article by the editors suggesting that the builders of Ford speedsters submit a description of their work, telling us just how they did it, so that it might be of help to the rest of us. I have looked eagerly for these stories ever since the above announcement was made, but, with the exception of a few small cuts of some extremely racy looking craft, there has been practically nothing along this line which would be of any assistance to the ordinary individual who does not go in for professional racing but who would, nevertheless, take a great deal of pride in owning a car that stood out and above the average run of Fords both in comfort, speed and appearance.

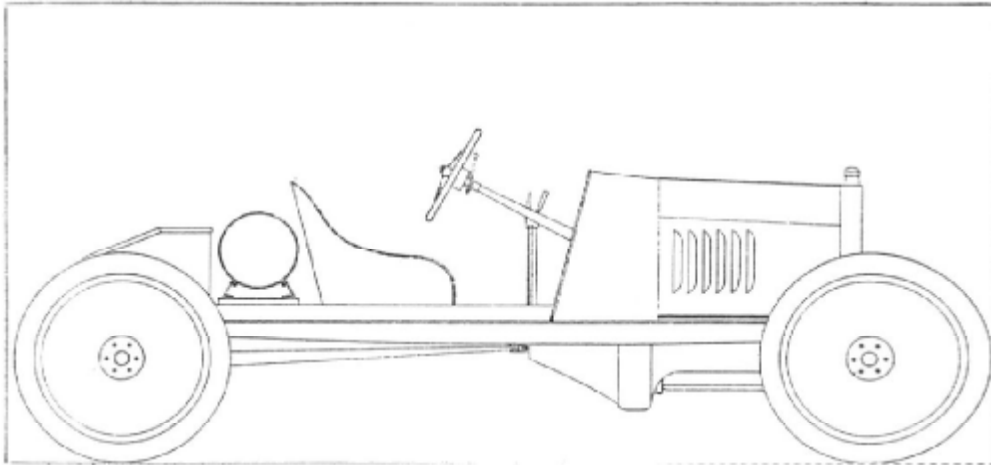
So, in designing Hellcat, as she has been called by the natives, no effort was made to produce a record-breaker, and, at the same time, no effort was spared for the sake of appearance, the one desire being to produce a sport model that could hold its own anywhere. The manufacturers of heavy, high priced cars classify this type as a "Gentleman s Speedster, through it may be questioned by some as to whether or not the so-called gentleman would ride in a Ford. Nevertheless, such is Hellcat, and I feel sure that the average

chap would much prefer to do his going and coming from the office in a speedster of this sort than suspended from a strap in the subway or surface cars, and it is to him-the average fellow who has to earn his living each day-that Hellcat is dedicated.

In developing this type of car there are simply three main features employed, namely, the disc wheels, the underslung chassis and the familiar bucket seat body design. The first, where economy is to be considered, may, for all purposes of appearance, just as well be the false disc wheels, which are comparatively simple to make. The second feature can be produced by any one of the number of good underslinging parts now on the market. While the third can be produced by a few dollars, a few tools and a little skill in their use.

First of all, obtain a Ford, either by ordering a new chassis or by purchasing a late model second hand car in good condition. Or perhaps you already own one. In any case, take the body off and sell it; you won t need it and, if it is in good shape, it will just about pay for all the material for your new speedster body. You must, however, retain the hood over the engine. When everything else has been removed clean the chassis thoroughly and give it a coat of quick drying black enamel.

The next problem is that of lowering the chassis. To do this you may select any of the underslinging parts now on the market, though the writer has used the new type of brackets put out by the Laurel Motors Company. These are neat, light and strong and comparatively simple to attach. As it would be almost impossible for me to describe in detail all the various systems for underslinging your car I shall have to leave this up to



Profile of Hellcat

you and the company whose system you adopt. Besides, this question was covered fully in a splendid article in the October, 1919, Ford Owner. But whatever you do don't overlook this underslinging feature, for the regular Ford has an "up-in-the-air" appearance and no matter how much you dress up your car in other ways you can only get that smart, graceful, thoroughbred appearance by lowering the chassis.

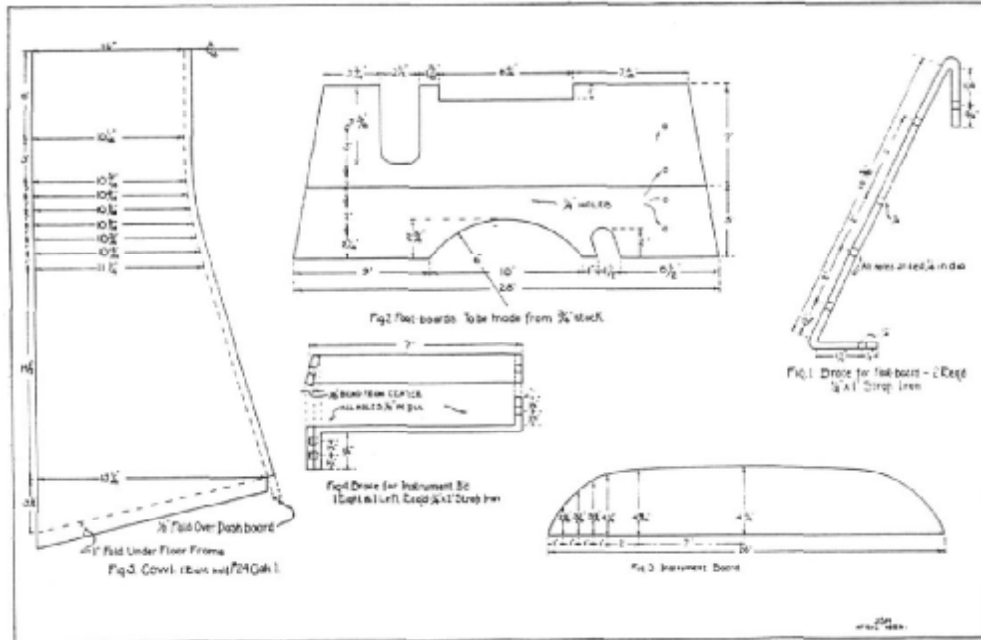
And when you lower the chassis you must, of course, lower the steering gear as well. This was done in much the same manner as that described on pages 50 and 54 of the October, 1919, issue mentioned above. An iron wedge was forged to go between the bottom flange of the chassis frame and the steering column bearing bracket, the dimensions of which are 4 long by 1-3/4 wide by 5/8 thick at the rear end. The dash support of the steering column consists of two iron straps 1/4 thick by 1 wide bolted to the rear of the dash in a vertical position. These straps have offset bends so that the base of the steering column fits securely against them when lowered to the proper position. These, together with the wedge, should be made by a blacksmith and should be fitted so that the lower edge of the steering wheel will be 15-1/2 above the level of the frame.

One of the biggest additions you can make to the clean-cut appearance of your speedster is to equip it with disc wheels. These are rather expensive, however, and you obtain the same effect by building up a false disc wheel by bolting on plates on each side of the spokes. This is accomplished by first removing the hub flanges and determining the diameter, location of bolt holes, etc. It is a good idea to make a paper pattern for this in the same manner that you would make a pattern for a gas-

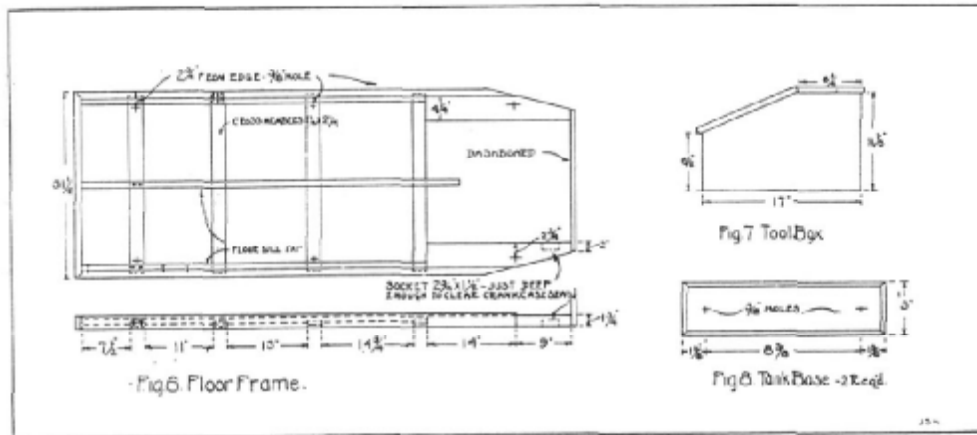
ket. Cut the plates or discs from No. 20 gauge galvanized iron and bolt them with light stove bolts to the outer rim in four places, between the lugs if you have demountable rims, taking care to see that the hole for the hub flange bolts are well centered. Then complete the assembly and tighten up well.

And now for the floor frame. This is shown in Fig.6 and should be made entirely out of maple or white oak. Above all, don't let anyone tell you that red oak "is just as good. It is not, and it is not at all suitable for this kind of work, so, if you wish to avoid trouble later stick to the above specification. For the side and cross members use 1-1/4 by 2-1/4 stock; cut the side members 5 9-3/4 long and the cross members 30 long. Chisel out mortises in the side pieces 3/4 wide and 1/2 deep, and cut the tenons on the cross pieces so that the under surfaces will be even with the bottom of the side members. These, as well as the rear member should be fastened as shown by three 3 finishing nails, first drilling for them. After the end piece is in place get out the two pieces for the forward end of the frame and fasten them in place, first making sure that they fit snugly over the crank case seats and cutting a slot in the left-hand piece for the emergency brake lever to work in. Cut the floor sills from 1 x 1 white oak or maple slotting them 1/2 where they cross the cross members so the 1/2 floor boards will fit flush with the top of the frame. The middle sill should extend five inches forward of the others and they should all be fastened as shown with 1-1/2 screws. When the whole frame is completed lay it on the chassis, center it up and bolt it down at points indicated to the brackets on the sides of the chassis.

While your blacksmith is making the braces



Details of Speedster Construction



shown in Fig. 1, get out the foot boards shown in Fig. 2. After cutting the openings as shown on the drawing you will have to bevel these out on the forward side so that the whole will fit neatly around the engine and other parts it will come in contact with. Its correct position is five inches back of the dash. With 1/4 stove bolts and lock washers bolt the braces to the dash board and fasten the bases to the floor frame with 1-1/2 steel screws. When you have gotten the foot boards so that they fit properly bolt them to the braces with 1/4 stove bolts.

Now get out the instrument board as shown in Fig. 3. Bevel this slightly on the ends so that it will conform to the flare of the cowl. Cut all openings for whatever instruments you intend to

mount and cover it with a piece of upholstering material, stretching it well and tacking it on the forward side.

The braces shown in Fig. 4 should be attached to the forward side of the instrument board about two inches from its upper edge and far enough apart to allow enough room to remove the top of coil box, using 3/4 steel screws. Now make two temporary braces or supports out of 1 x 1 pine or other material and screw these to the forward side of the instrument board at each end, adjusting the length so that when the iron braces of Fig. 4 are resting squarely against the dash the base of the instrument board will be exactly 15" above the floor of the car, leaving the heads out so that the nails can be withdrawn later. These supports are

put in for the purpose of taking up the strain when bending on the cowl, and are, of course, removed after the latter is in place.

The cowl should be made from No. 22 or No. 24 gauge galvanized iron, requiring a piece about six feet long and sixteen inches wide. First make a pattern as shown in Fig. 5 out of heavy paper; lay this on the sheet, mark around it and then cut it out with a pair of shears. When this has been done lay it over the dash and instrument board and bend it roughly to shape. Center it up, smooth out all bulges and, when in its proper position, clamp the bottom to each side of the floor frame. Beginning at the middle and working down each side fasten it to the dash with 1 common wire nails and to the instrument board with the same size copper or galvanized nails. Now hammer the fold over the dash, taking care to hold a heavy weight, such as a flat iron, over the cowl opposite the point where you are hammering so as not to raise a ridge and to enable you to make a clean, sharp fold. In the same manner fold the ends under the floor frame and nail. In order to cover up the nail heads over the instrument board solder over these, filling up the hammer marks generously, and file off the surplus solder to a smooth even surface. The rear edge of the cowl is finished off by soldering and riveting on a 1/2 half oval strap of galvanized iron.

The luggage or tool box should now be fitted on. The dimensions for this are given in Fig. 7 and it should be made up from 3/4 material. In fitting the bottom or floor of the box you will have to allow an opening for the rear spring seat which will project inside about two inches. The brass cabinet hinges are amply countersunk, and if you will use care in fitting the lid against the top this opening can be made entirely water tight. On the rear face of the box the tail light should be bolted, and a small hasp and pad lock placed in the center.

Out of half inch material complete the flooring of the car and then mount the tank. The standard Ford tank supports are used for this, one at each end, bolted through the tank base blocks shown in Fig. 8. These are made from 1 material and should be placed 1 forward of the tool box.

Almost any accessory manufacturer can supply you with the seats, or seat shells, and I would advise against your attempting to make them. Also, after the buggy has been painted, do a good job and let a professional upholsterer do the work needed along this line. It is well worth it.

As for the painting, remember that this is a sport model and a sport model should have sport colors. In any event, here you have a chance to reflect your personality and show off your artistic genius. I did. Hellcat is painted black and white.

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