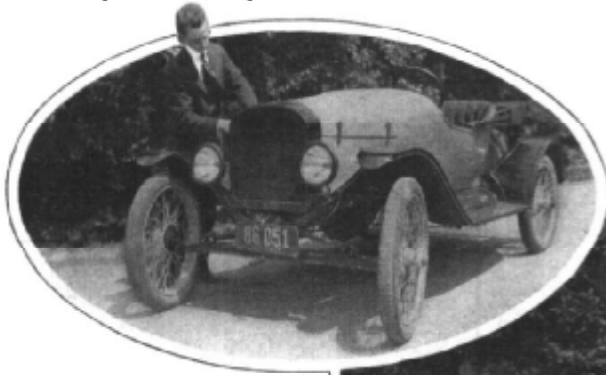


How to Build a Racing Body on a Ford Car

Suggestions for the Complete Rejuvenation of the Stock Ford Body from Rear Spring to Radiator, Culled from the Experience of Joseph Fried

The following article appeared in the October, 1917, issue of *Everyday Engineering Magazine*, published by Everyday Mechanics Company, New York, NY. This magazine was similar to today's *Popular Mechanics* or *Popular Science* except that it was filled with how-to-build articles which are far more complex than those seen today. In this particular issue were other articles on the construction of aeroplanes, radio components, a two-cylinder steam engine, and how to get the most out of your car, to name but a few.

By October 1917, just a bit over two million Model T's had been built. This figure does not seem too impressive by today's standards, but at that time it was phenomenal. The Ford had really just begun its real impact on the market: some thirteen million more were to follow; yet it was now known as a "flivver" and had gained its unique reputation for reliability and value. Note the "Once a Ford, Always a Ford" statement in the article, among other things.



Above: A stock-radiator cover fits over the old Ford radiator, disguising it. Right: Mr. Fried in his converted Ford. Note the long, low lines and how low the driver sits in the car.

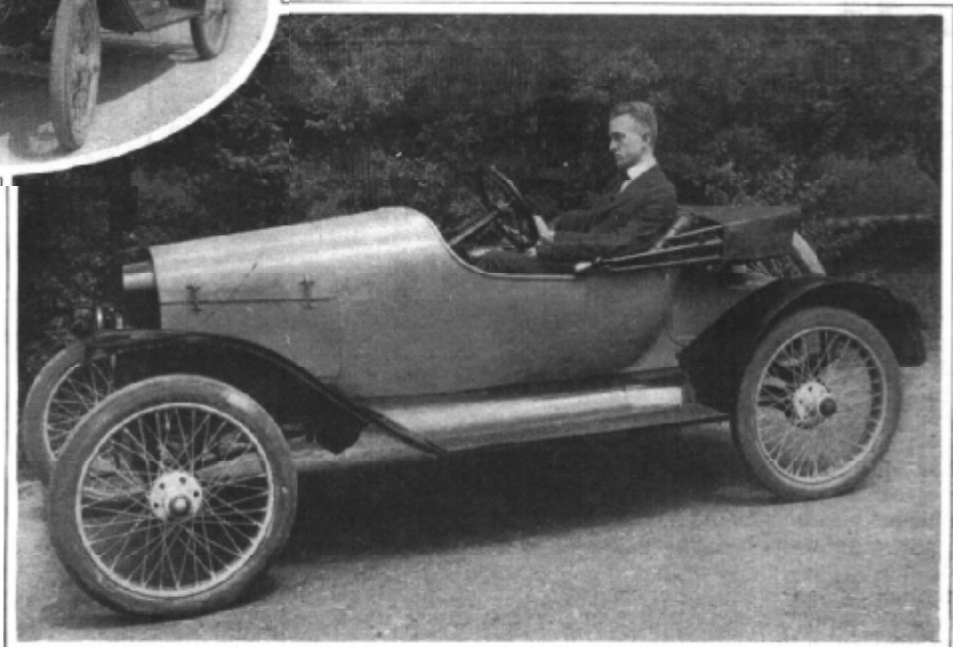
The Ford used in the described conversion no doubt was a 1915 or 1916 model, based on the fenders, radiator, and other items. Apparently the cost of a used flivver was fairly low, even though the car was relatively new, in 1917.

Obviously (and sadly), the references to components then available are not valid today. We are reprinting the article solely for its interesting content, as well as a look at what was being done in 1917.

Just a year ago, in the October 1916, issue of this magazine to be exact, there appeared in the Technical Adviser section the following:

"M. R., Glasford, Ill., writes: Could you publish plans for building a racer from a Ford engine and chassis? I have seen a number of them in Peoria, built by amateurs, and I believe such an article would be of general interest to your readers. I have seen several plans for building such a car from motorcycle engines, but they are not serviceable enough to be of much value. Ans.--Your suggestion is a happy one, and we shall act upon it in an-early issue. In-accordance with our established policy, we shall first 'do the trick ourselves.

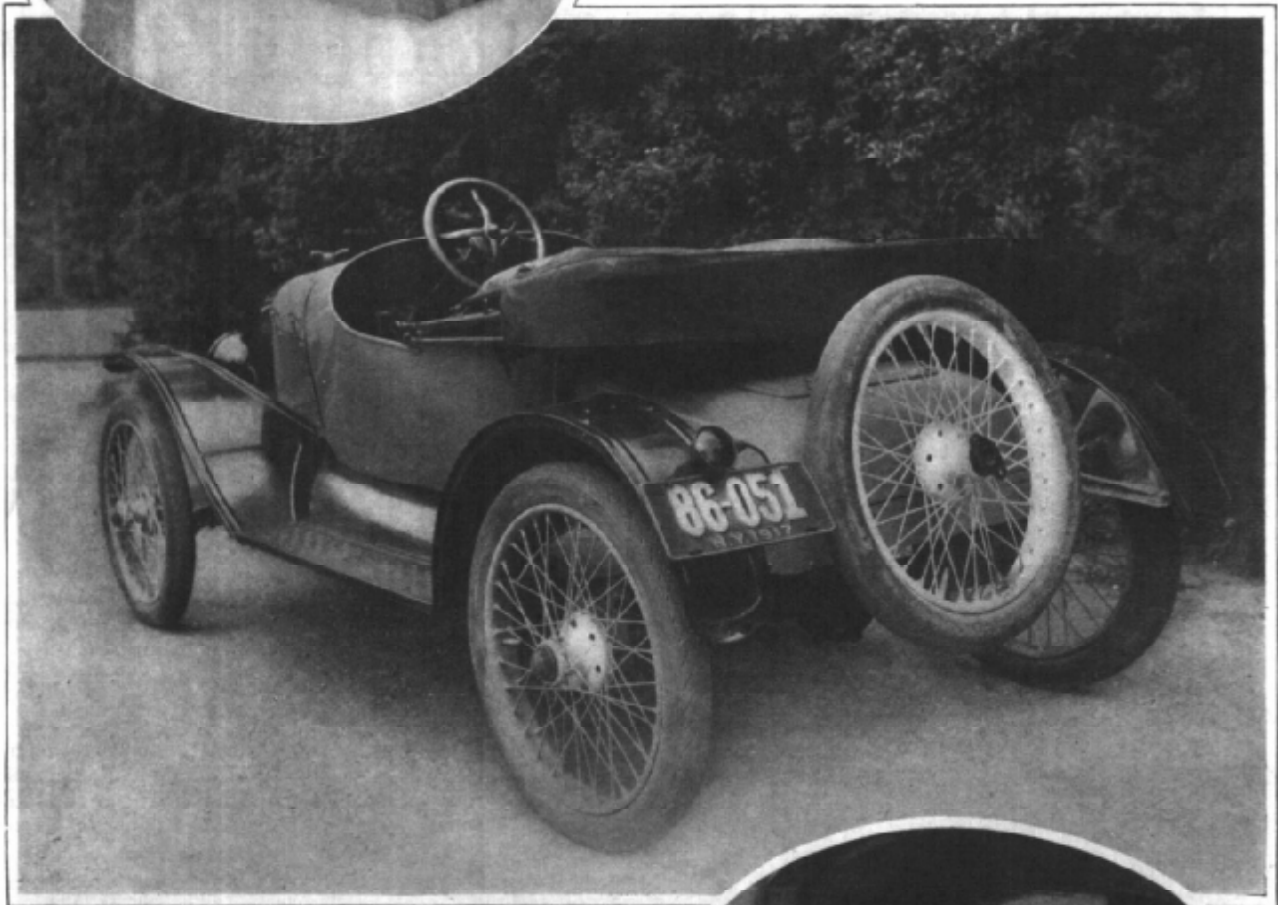
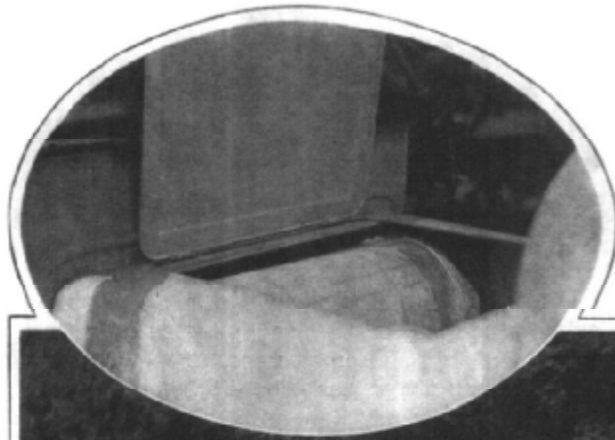
For just one year our editorial eyes, so to speak, have been kept wide open and in that time we



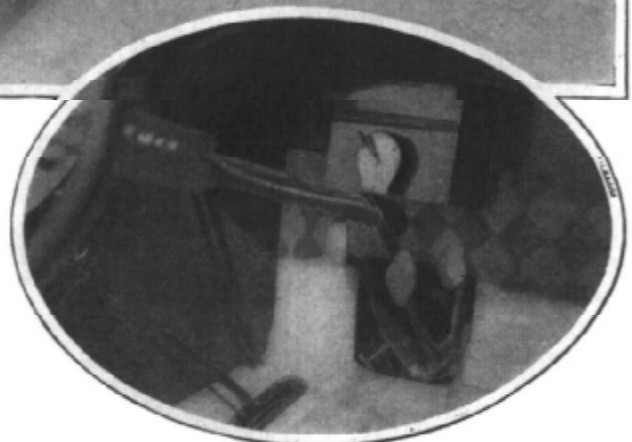
are solely in the nature of a hobby. However, by that as it may, we took our hats off to Mr. Fried the moment we spotted his piece of work, and believing the readers of *Everyday Engineering Magazine* would feel the same way about it, we decided to make Mr. Fried's car the answer to the query of M. R., Glasford, Ill.

Cost of the Transformation

Mr. Fried declares that, exclusive of his time of course, the total cost of his new body was about



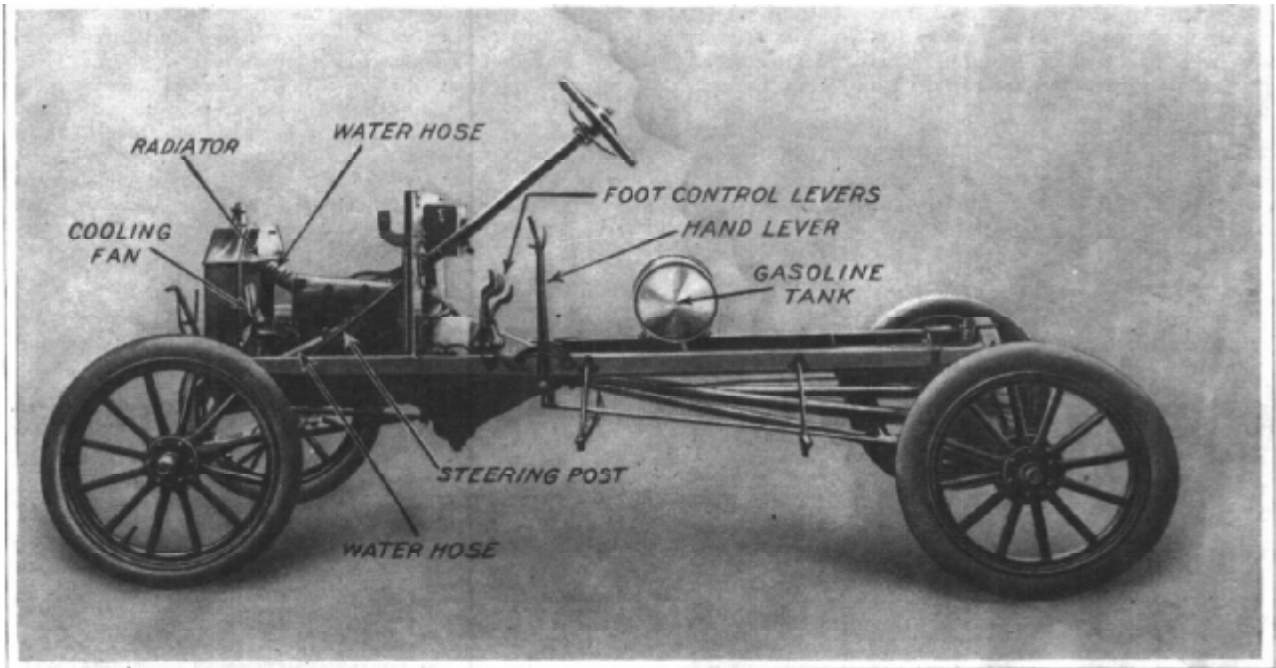
Top: The gasoline tank has been moved back under the tail piece. It is readily accessible, yet its removal has made possible the lowering of the seat. Above: Rear view of the finished car. Note how the objectionable Ford rear spring has been concealed. Below: A glimpse under the cowl, showing control levers.



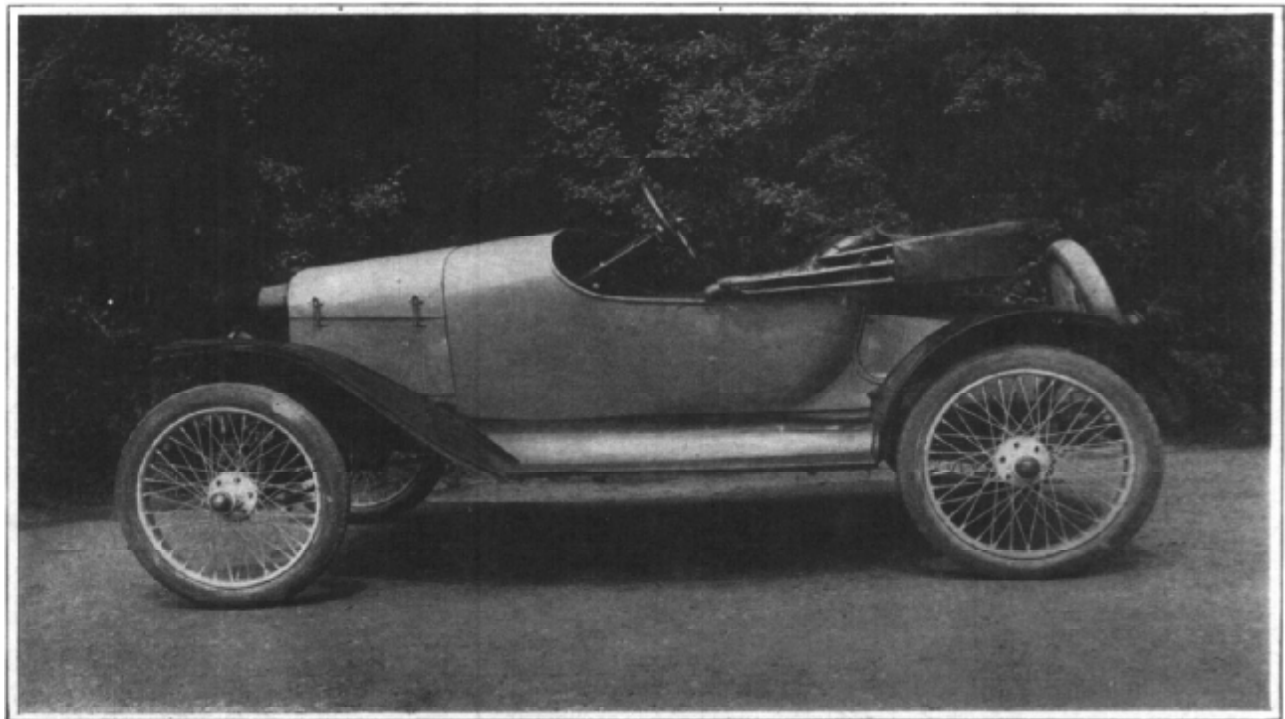
seen literally oodles of Fords, Near-Fords, Converted-Fords, and just plain Fords. But one and all bore graphic witness to the truth of the saying, "Once a Ford, Always a Ford."

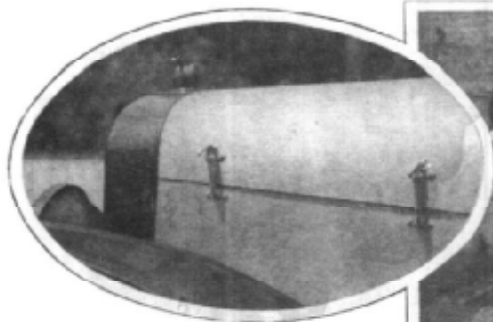
Then, from out of the clear blue sky, came the life saver in the person of Joseph Fried, whose ingenuity and mechanical ability conceived and executed the very creditable transformation pictured in this article. Mr. Fried is an electrical engineer by profession and his activities in the direction of un-Flivving Flivvers

\$14.00, which sum includes the paint. The original car was purchased second hand for a nominal figure and it is admitted that considerable cleaning up and repair work were necessary to produce the quiet-running machine now in evidence. But, notwithstanding that, its owner now has a car of which he may well be proud.

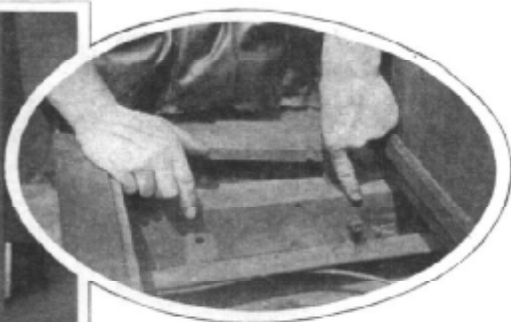
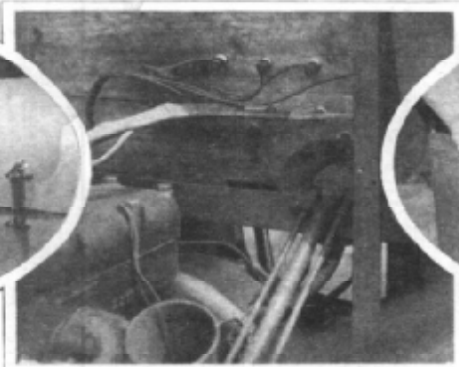


Above: The typical Model T Ford chassis and, Below: the converted car. Note how the steering column has been lowered and also how the new body has been made to cover completely the rear spring suspension.





Above: The top of the new hood is secured with standard clamps.

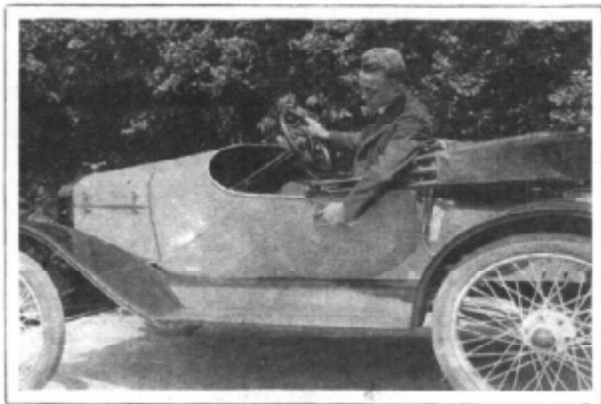


Above: This shows how the body was moved back to improve lines.



Top Center: In back of the new dash, the steering column is stiffened by means of a bar of steel running from side to side.

Above: The top of the hood lifts right off and the sides lift out, giving ready access to the engine.



Left: Looking forward under the cowl, showing footboard dash and the controls.



Above: The finger points to the union of the new and the old bodies. The driver sits within a few inches of the floor, thus altering the appearance of the car.

Features of the Disguise

The characteristic features of the Ford car of past seasons are so prominent that it is a work of art to cover them up. The high seats, radiator, and rear spring suspension have given amateur body builders more than a little trouble. In this model, the builder has disguised, modified, or concealed practically every tell-tale point so conspicuous in the original machine.

Starting with the actual conversion of the body, it may be well to call attention to the fact that the original stern was retained. This enabled the builder to turn out a body in which the rather pleasing lines of this fail piece are brought out to the fullest advantage. The graceful rounding of the sides, embracing the seats, could scarcely have been improved upon in a home-made body. In the illustrations the reader will, perhaps, note the place where the new body metal was

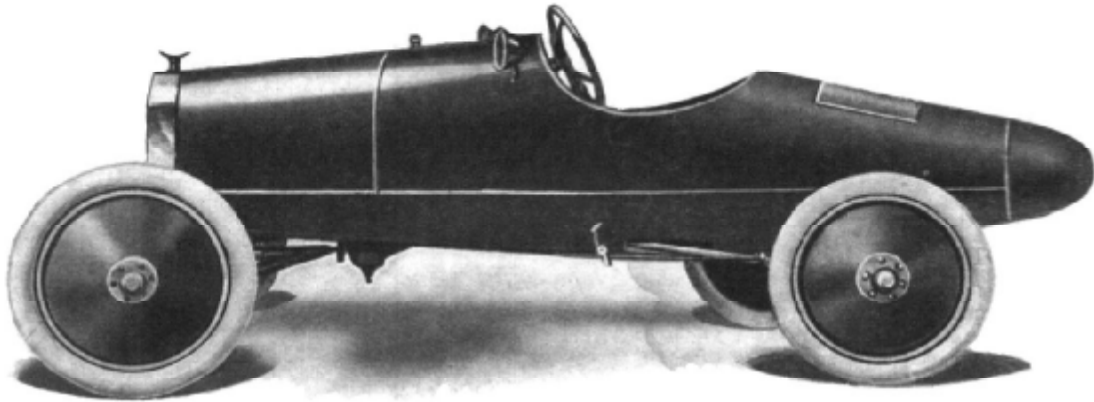
joined to the old. In making the pictures, the car was purposely placed in such a position as to bring out this juncture which, in reality, is scarcely noticeable unless one's attention is called to it.

Construction Details

In the first place the chassis was stripped of the body. In this condition, all the necessary repairs were made to the mechanism.

The gasoline tank was then removed and remounted within a short distance of the rear spring suspension. This was a simple operation.

In connection with the tank, we may as well point out the one striking feature among many which made for success in Mr. Fried's design. We have said that the original tail piece and the seats were retained; the entire stern was moved back, however, and the supporting brackets for the body turned upside down



A torpedo body design built from patterns available in the open market. The pressed steel tail-piece is supplied ready to place on the home-made body. Courtesy of the Kuempel Co.

so that not only does the tailpiece extend beyond the rear axle, but it comes down over the unsightly rear spring which is always a tell-tale mark of the Ford.

The net result of this conversion is that the body is long and low and, through the addition of the extra wheel at the stern, the objectionable rear view is entirely modified.

The steering column was lowered fully thirty degrees after the old dash was removed. The column was passed through the new dash, which is well underneath the cowl. A bar of flat steel passes from one side of the dash to the other to stiffen and support the structure. Owing to the fact that a universal coupling is necessarily present at the base of the steering column, this modification presents no great difficulties.

The new dash is supported stiffly by brackets of channel iron which may be obtained from dealers in motor car repair supplies. The ignition apparatus is mounted underneath the cowl upon the new dash, which in this model has been covered with floor linoleum. This makes a practical finish for the dash which, of course, forms the foot rest in a low-seated car of this kind.

The brake pedal, high and low gear pedal, and reverse pedal pass through an opening cut into the new dash. The hand brake lever extends through the flooring to bring it inside the body instead of outside as it was originally. This lever was bent to lie close to the wall of the body as shown in the view looking under the cowl.

Radiator, Hood and New Body

The radiator shown in the pictures is one of the stock Ford radiator covers available in the open market for a few dollars. It fits right over the original radiator and alters the entire appearance of the front of the car.

The hood is formed of three pieces of sheet iron of the type known as "body metal" which can be procured through the dealer in repair supplies. The two side pieces, which are quite flat and of rectangular

shape, are arranged to lift out after the top or hood proper has been removed. Suitable fastenings at the base of the side pieces prevent them from coming loose, while the standard clasps riveted to the sides and hood top complete the assembly. The top, of course, comes off completely. Steel pins in the radiator and body, along the center line of the top, engage holes in the latter and help to keep the hood in place.

The body portion which extends from the seat of the old body to the hood is constructed of body iron cut to shape from paper patterns and formed over channel iron supports which give stiffness and strength to the whole structure.

The edge of the cowl and the sides of the body are bound with half round iron which is riveted all around to give a strong and neat finish.

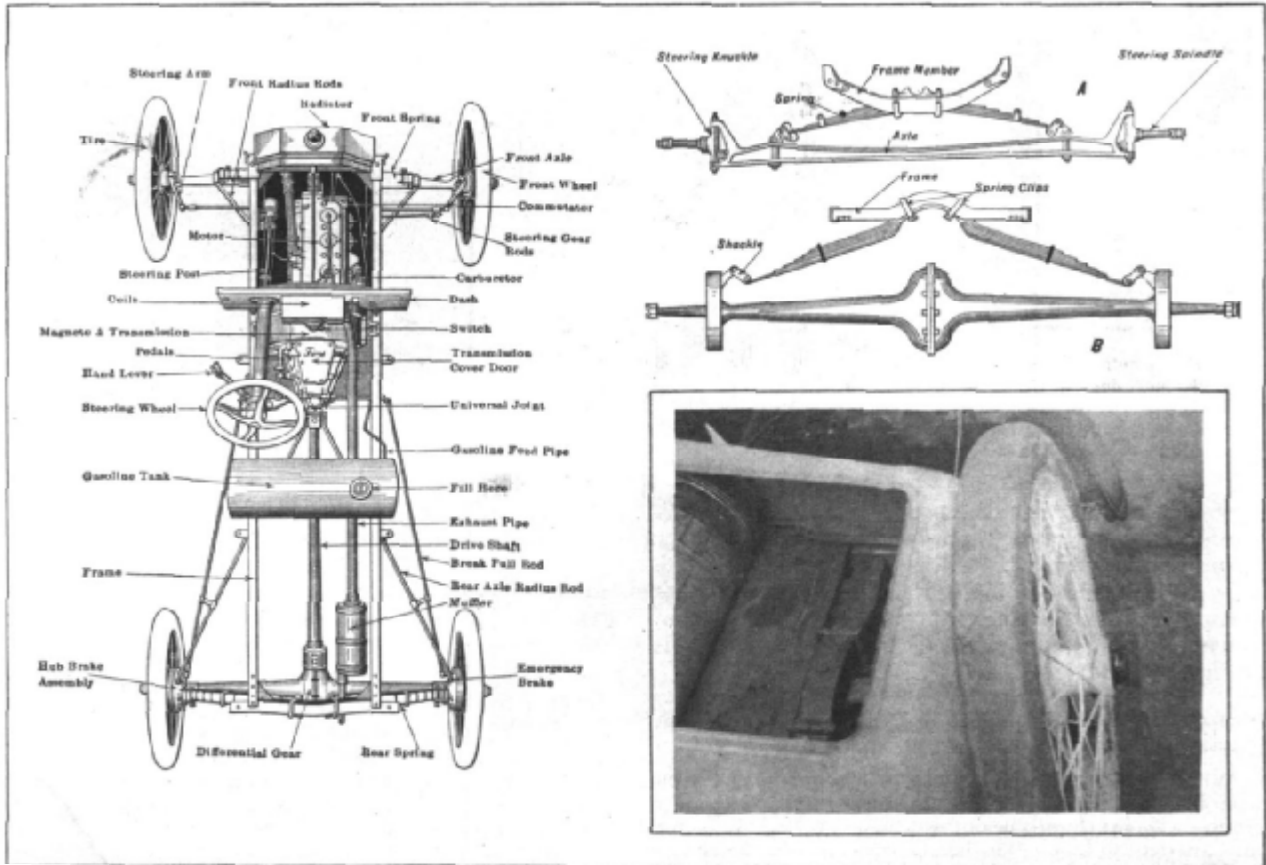
The new body is riveted and soldered to the old body where the two join. A heavy soldering copper made very hot and assisted with a blow torch will do the work readily, particularly if the edges have been made quite clean with sandpaper and a good soldering paste applied at the joint.

Lowering Seats

The upholstery was removed from the old body and the entire seating structure removed and lowered until the platform upon which the cushion rests is but a few inches from the floor of the car. With the cushion replaced the driver and his companion sit very low with their feet against the dash in front of them. The seat is comfortable and the appearance has been improved wonderfully by the change. This lowering of the seat is made possible, of course, only by the moving back of the entire body a distance of nearly a foot.

Standard Body Designs

Mr. Fried tells us that he designed his body first on paper in the form of sketches, then drawings, and finally full-size paper patterns. We regret that the time and space at our disposal will not permit of the reproduction of reduced patterns, even though these were of much practical value which they are not.



Drawings of the Ford chassis, showing chief constructional points and also, in the photograph, how the tail-piece comes down over the rear spring, which is such an eyesore on the standard Ford Car. (From "The Model T Ford Car by the Norman W. Henley Pub. Co.)

There are patterns for home-made bodies on the market, however, and in the event that the individual builder finds difficulty in making his own patterns or prefers a different design to that originated by Mr. Fried, he may do well to purchase a set of the full-size patterns referred to.

One of the most pleasing of the stock designs is that shown in the illustration on this page. It is of the torpedo line type and is comparatively easy to build as the pressed steel tail piece is supplied with the patterns and the builder has, therefore, no difficulty to encounter in this direction.

Is the? Labor Justified

Mr. Fried completed the work of remodeling his Ford in about a month, working only in the evenings. Perhaps he was fortunate in securing materials; perhaps his natural mechanical ability, coupled with his training as an engineer, did much to expedite his work. The fact remains, however, that he has set an example for countless amateur mechanics and artisans who wish to develop a practical car at minimum expense, and to inject a certain amount of personality into the design so that their car may be slightly

different from the other fellows without having the stigma of "freak thrust upon it.

To men with the average amount of mechanical ability who feel the call in this direction, we strongly commend the work of Mr. Fried as a shining example of what patience, the exercise of some ingenuity, and the expenditure of a very modest sum of money will accomplish.

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