

# Short Cuts for Car Workers

WIN A \$10 PRIZE

Each month we award \$10 for the best idea sent in for motorists. This month's prize goes to C. F. Blake, Oregon City, Ore. (Fig. 6). Contributions are requested from auto mechanics, both amateur and professional, and if published will be paid for.

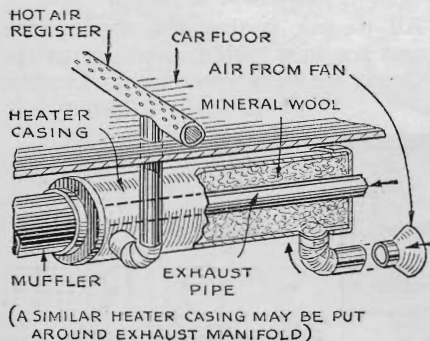


Fig. 1. By carrying a vacuum bottle full of boiling water and pouring it over intake manifold as shown, it is always easy to start engine in coldest weather

ONE of the best known ways of starting a motor car in extremely cold weather is to pour boiling hot water over the intake manifold. Of course care has to be taken to see that the water does not get into the air intake openings of the carburetor. The only difficulty is that when you need the hot water most, your car may be far from a source of supply. An ingenious way out of this difficulty is to place a large vacuum bottle filled with boiling water in the car before you start out. Then, no matter how many hours your car has been standing or how cold the weather is, when you want to start for home the contents of the vacuum bottle poured over the manifold will assure a quick start.

## Stop Air Draft

MANY types of car heaters consist of a sheet metal jacket over the exhaust manifold or over a portion of the exhaust pipe with arrangements so that air is forced over the heated surface and then into the car. Sometimes the flow of air is so fast that it does not pick up much heat



(A SIMILAR HEATER CASING MAY BE PUT AROUND EXHAUST MANIFOLD)

Fig. 2. Mineral wool stuffed into the jacket over exhaust manifold will stop a cold draft

and the resulting draft in the car is unpleasant. One way to slow down the flow of air and increase its heat is to stuff mineral wool into the jacket as shown in Fig. 2. The amount of material and the tightness of the packing will, of course, have to be determined experimentally.

## To Repair a Spoke

FIG. 3 shows a way to repair a broken spoke in a welded wire wheel when the break is close to the rim. The first job is to chisel off the stub of the spoke remaining on the rim. Then the hub cap is removed and a 15/32-in. hole drilled in center line of the spoke. The end of the spoke is threaded with 1/4 by 20 die. After that, a 7/16 by 1 1/4 inch cap screw is drilled lengthwise and tapped with a thread to fit the end of the spoke. The

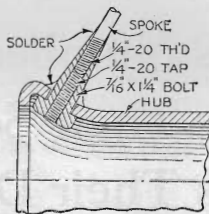


Fig. 3. This diagram shows how a wire spoke, broken close to rim, can be mended so as to be unnoticeable

bolt is screwed on tight. The job is finished by soldering around the bolt and filing to the contour of the others. After painting, the repaired spoke was not noticeable. Soldering is not absolutely necessary, but it hides the repaired spoke and prevents loosening by vibration.

## Lock in Plain Sight

TO BE effective, an auto lock must either be so strong that it cannot easily be forced, so carefully concealed that the thief cannot locate it, or so obvious that he is sure to overlook it. Fig. 6 shows an excellent lock of the third class. A double contact socket is mounted in a prominent place on the dash. The wire supplying the ignition circuit is cut and the two ends attached to the socket. Then a double contact plug is short-circuited with a short piece of wire. When you want to run the car, insert the plug in the socket. Remove the plug when you leave and a thief attempting to steal the car is sure to think that the socket has no other function than to permit the use of a trouble light.

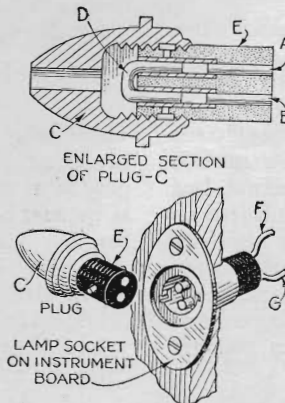


Fig. 6. Here is an auto lock so easily seen a car thief will think it is merely a socket

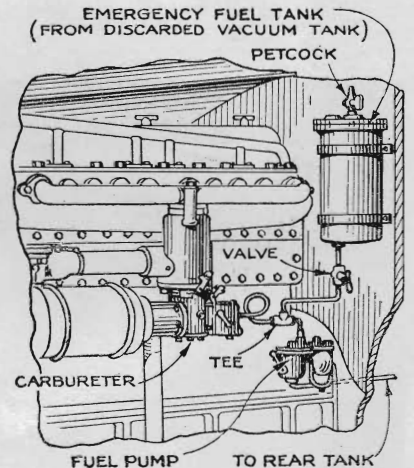


Fig. 4. A tank on the dash can be connected with fuel pump as emergency gas supply

## An Emergency Tank

FEW car owners realize that the characteristics of the fuel pump on the modern auto are such that the fitting of an emergency gasoline tank is easy. All the equipment you need is a discarded vacuum tank. Remove the "insides" from the vacuum tank and mount it on the dash at any convenient point as shown in Fig. 4.

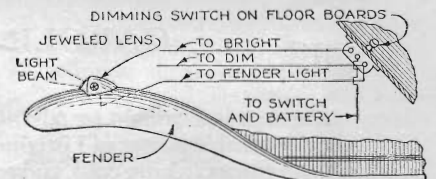


Fig. 5. Bulbs on the fender can be used to show whether bright or dim lights are on

Plug all holes in top but one; fit a petcock to that one. Put a tee in the fuel line between the carburetor and the fuel pump and connect it, by way of a shut off valve, to the vacuum tank. To fill the spare fuel tank, open both the valve and the petcock while the motor is running.

## Light Indicator

IT IS often difficult to tell, on brightly lighted streets, whether the bright or dim headlights are on. Fig. 5 shows a way to fit an indicator that will tell this. Clearance lights are mounted on the fenders and connected in parallel with the filaments that project deflected beams. When these lights are on dim lights are on.