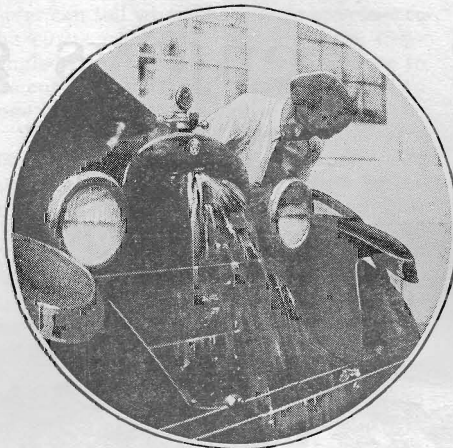


Eight Useful Hints for Autoists

Timely Precautions Result in a Smooth-Running Car

AFTER several years of service, many automobiles give trouble through overheating. Generally the cause is a clogged radiator and water jacket, although frequently worn rubber hose used to connect the parts of the water circulating system may be to blame. The best way to clean the inside of the radiator and the cylinder water jackets is to flush out the whole system with about five gallons of water in which about a half pound of lye has been dissolved. Fill the radiator with this compound and run the engine until it is hot, then drain the solution off and flush out the radiator several times with fresh water. While you are about it, you may as well clean the cooling fins by squirting water through them with the hose as shown in Fig. 1.

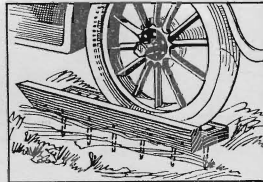
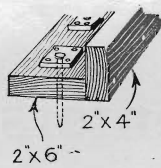
Do not direct the water against the radiator from the outside, as it will be sure to get on the car's ignition system.



How to Clean the Radiator

Fig. 1. In time, engines become overheated because of a clogged radiator and water jacket. This picture shows how to flush out the cooling fins with fresh water from a hose, the stream being directed outward

WHEREVER the roads are soft, automobilists are occasionally in difficulty because the car wheels sink so deeply in the mud. It is usually the custom in such localities to carry a block and tackle.



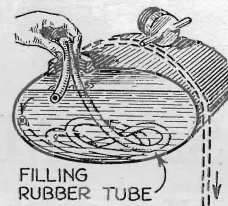
To Pull Car from Mud

Fig. 2. Wooden trough is a great help when a car is stuck in the mud

Figure 2 shows a simpler device. It consists of a wooden trough made of heavy planking. A row of large nails prevents the board from slipping in the soft mud. Wooden cleats should be nailed over the heads of the spikes. They will give traction to the tire and also prevent a puncture.

SOME automobiles are not fitted with a petcock between the vacuum tank and the main tank, so the only way to get gasoline out is to disconnect the gasoline pipes. This has its disadvantages, for the connection often leaks when it has been replaced.

If a piece of rubber tubing is available, the gasoline may be siphoned out. The pipe is pushed in slowly through the filler-cap opening until just a couple of inches remain outside of the tank. Then the outer end of the pipe is folded over against itself and held tightly (as shown in Fig. 3) while the other end is pulled out and put into the container, which should be as far below the level of the tank as possible.



A Gas Siphon

Fig. 3. Rubber tubing bent as shown will siphon gas

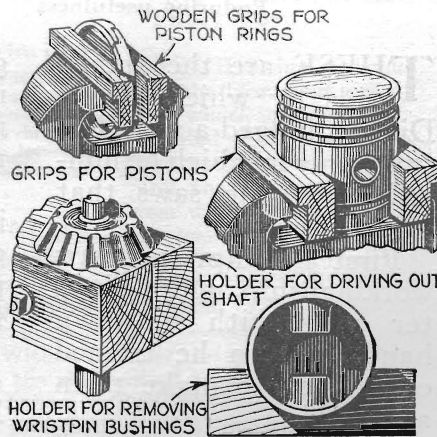


Fixing Gas Pipe

Fig. 5. A metal or leather sleeve over gas pipe prevents breaks

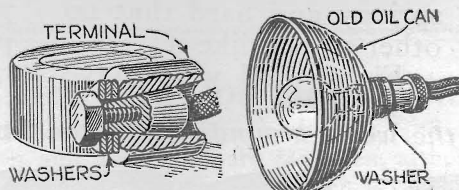
VISE marks on your work stamp you as a poor mechanic. Always use wooden blocks when you clamp any important part.

Figure 4 shows how to make wooden blocks



Wooden Blocks Protect Metal

Fig. 4. Vise marks on a car indicate carelessness. With a set of wooden blocks, pistons, rings, and gears may be supported, surfaces protected, and breakage reduced



Tightening Battery Terminals and a Trouble Light

Fig. 6. An ordinary iron washer will tighten up a worn tapered lead plug on cable end connecting with battery terminal. Fig. 7. A discarded oilcan makes a satisfactory trouble-light holder with nozzle removed, a standard socket soldered in, and a bulb added

support various parts. Besides protecting the surface of the part, the wood supports the metal and eliminates chance of breakage.

THE gasoline pipe that leads from the main tank to the carburetor or vacuum tank should be inspected occasionally to make sure that it has not loosened. When this happens, the vibration of the automobile results in continually rubbing the pipe against some part of the car so that the pipe wears thin, and a leak develops.

For dependable and easy repair, drain the tank or shut off the valve at the tank end of the pipe line and disconnect the pipe. Scrape the surface of the pipe at the thin point where it has chafed through and tin all around the hole with a hot soldering iron. Next, cut a sleeve of thin sheet brass and bend to fit the pipe. Now tin the inside surface of the sleeve, place it over the break, and sweat it in place until the solder has run in between sleeve and pipe.

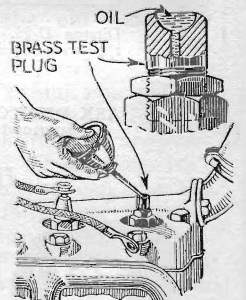
If any part of the car is found rubbing against the pipe, a leak may be avoided by fitting the pipe with a leather sleeve wired on, as shown in Fig. 5.

THE tapered lead plugs on the end of the cables that connect with the storage-battery terminals sometimes become worn. When this happens, use ordinary iron washers around the nut so that the tapered plug will be pulled tightly into the tapered hole in the battery terminal (as in Fig. 6).

AN OLD oilcan will make a good trouble-light holder. The nozzle is discarded and the bottom cut out, so that the edges of the hole are round and smooth. A standard socket is soldered in place, as shown in Fig. 7, with a washer for greater security.

IN TIMING the ignition system, it is necessary to determine the piston's top dead center.

A simple and accurate way is to make a test plug of an old spark plug and a piece of brass, as shown in Fig. 8. The brass piece is threaded and after a cup-shaped depression has been cut a small hole is drilled through the piece, using a No. 50 drill. Place a little cylinder oil in the cup and turn the crank slowly. The air in the cylinder will bubble up and stop at the top dead center.



Piston's Dead Center

Fig. 8. Spark plug and wire device show piston's top dead center