

# Helpful Kinks for Your Car

## Opening Garage Doors Without Leaving Car—Simple Tester For Valves—Handy Trouble Light—Single Contact Bulb

**W**HEN you come back from a drive it is a nuisance to have to get out, unlock and open the garage doors, climb back in the car, and drive in. A novel and ingenious way to arrange self-opening garage doors is shown in Fig. 1, and details of construction are given in Fig. 2. Instead of stopping the car you reach out and pull the end of cord placed conveniently near the driveway and some distance from the garage doors. The doors at once swing open and you continue into the garage.



Fig. 1. Closing garage doors after opening them by pulling cord to operate the weights and driving in without leaving car.

The secret lies in the peculiar leverage that translates the downward pull of two weights into effective opening pulls on the doors. Note that the point of attachment for the end of the cord is on the end of wooden frame so that as the door swings outward the point of attachment moves to let the weight go downward. Fig. 2 shows the release latch which should, of course, be fitted to the door which has a bead to keep the other door closed.

### Handy Trouble Light

**T**HE best place for a trouble light is where it will shed its rays on the work as nearly as possible in

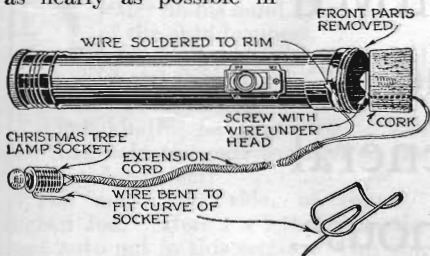


Fig. 3. Design for a trouble light for attachment to your hat brim so that it shines always directly on work anywhere about your car.

line with the line of sight. When working around a car you constantly shift your point of view, so no matter where you fasten the light there are often shadows just where you want to see what you are doing. Fig. 3 shows how to fix up a trouble light that will always be where you want it. A cork takes the place of the regular reflector and lens, with a screw in the center of the cork to make contact with the center electrode of the battery. A Christmas tree lamp socket or a standard miniature lamp socket is connected to a length of electric light drop cord with one of the wires connected to

### Ten Dollars for an Idea!

**WALTER E. BAILEY**, of Maywood, California, wins this month's \$10 prize with his suggestion for garage doors opened without leaving the car (Figs. 1 and 2). Each month Popular Science Monthly awards \$10, in addition to regular space rates, for the best idea sent in for motorists. Other contributions published are paid for at usual rates.

the screw in the cork and the other to the case by jamming it under the lens retainer ring threads. The socket is attached to the brim of your hat by means of a wire bent as shown in the illustration.

### Improved Bulb of Single Contact

**SOMETIMES** it is impossible to obtain in an emergency a single-contact auto bulb of the candlepower you desire.

However, if you can obtain a double-contact bulb of the required candlepower, a minute's work with a soldering iron will convert it for single contact use. Remove the gob of solder on one of the contacts and flow it down over the insulation so that the solder makes a firm contact

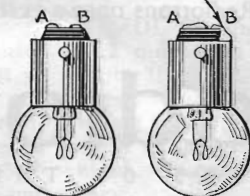


Fig. 4. How to alter the soldering on a double contact bulb to make it single.

on the metal shell. Then add solder to the remaining contact in the form of a gob that reaches over toward, without quite touching, the other contact. The changes are illustrated in Fig. 4, at bottom of the page.

### Tin Can Valve Tester

**I**T IS not necessary to do very much grinding to make an auto valve gas-tight unless the valve is badly warped or pitted. In fact, too much grinding makes the seat too wide. It

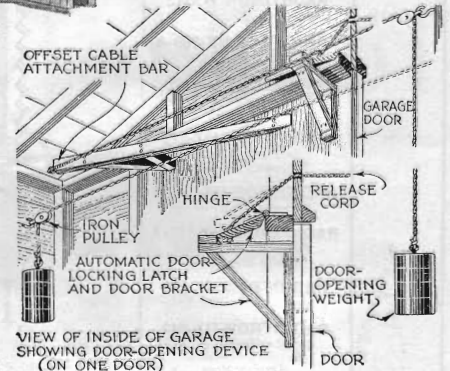


Fig. 2. Arrangement of weights and pulleys to open garage doors and the release latch which is used to put the handy device in operation.

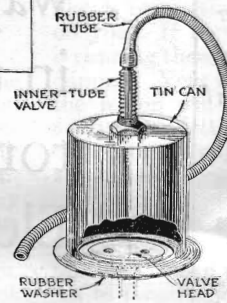


Fig. 5. Place this device over the valve and if you can blow into it continuously the valve tested is not gas-tight.

is, however, difficult to tell when the valve is actually gas-tight. Fig. 5 shows a simple way to make a valve tester that will tell at once if the valve is gas-tight.

Through the bottom of a tin can drill a hole large enough to let the stem of a tire valve pass through. Use washers cut from an old inner tube to make the valve stem an air-tight fit and also cut a large rubber washer that can be placed under the edge of the can as shown in the illustration. A short section of rubber tubing slipped over the end of the valve stem completes the equipment. To test a valve, wipe both the face and seat so that they will be free from oil or grinding paste, press the can tightly over the valve with the rubber washer under it, and blow in the tube. If you can continue blowing it proves that air is leaking past the valve and further grinding is needed. Make sure the tester is air-tight by testing it on a flat metal surface. The piston top will serve as a test surface.