Helpful Ideas *for the* Car Owner

A Handy Floor Board Tool Box—Fitting the Piston Rings—Ingenious Indicators—Locking the Gas Tank

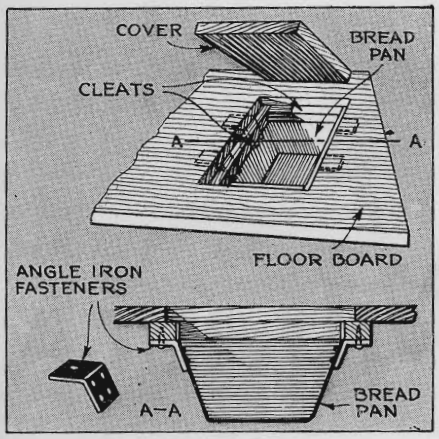

Fig. 1. How to construct an ingenious and simple floor board tool box from an ordinary bread pan.

A NEAT and simple floor board tool box made from a bread pan is shown in Fig. 1. To install, cut out a piece of the floor board with a keyhole saw. Underneath the opening nail two strips to form a support for the piece you have sawed out, which will be the cover of the box. To this strip fasten four angle iron pieces set as shown in the drawing.

If you use another kind of pan—for instance, one with straight sides—it will be necessary to rivet or bolt the sides of the pan to the angle iron pieces. The tool box can be located at any point where the play of the springs will not cause any part of the running gear to hit it. An advantage of this type of tool box is that it is concealed by the floor mat and consequently there is little chance of the tools being stolen.

Stop Light Indicator

THE common method of hooking the dash light in series with the tail-light, using three-volt bulbs at each point, works nicely with the tail-light, but the system does not work with the stop light, which uses a much more powerful bulb, for no one wants a large bulb shining from the dash. The wiring arrangement shown in Fig. 2 eliminates this difficulty. A one-and-a-half-volt flashlight bulb is connected across the wire that leads to the stop light from the stop light switch. When current flows through a wire, there is a loss in voltage which can be read by means of a voltmeter connected at both ends of the wire. The flashlight bulb requires very little voltage to make it glow, and the drop in voltage in the wire leading to the stop light is sufficient to operate it. The beauty of the system is that if the stop light bulb burns out the flashlight cannot light, but if the flashlight burns out it will not affect the operation of the stop light. If the flashlight does not glow brightly enough add a few feet to the wire marked X in the diagram.

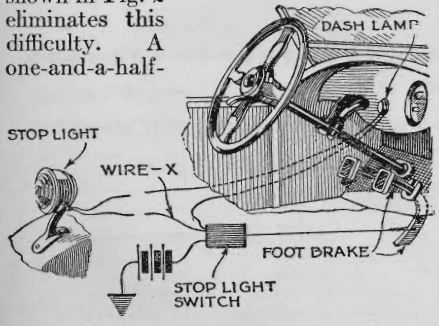

Fig. 2. The prize winner—the arrangement of a novel flashlight indicator that tells condition of stop light.

Ten Dollars for an Idea

James Pesek, of Chicago, Ill., wins this month's $10 prize for his suggestion for a stop light indicator, shown in Fig. 2, in lower left-hand corner of page. Each month POPULAR SCIENCE MONTHLY awards $10, in addition to regular space rates, for the best idea sent in for motorists. Other contributions used are paid for at usual rates.

Fig. 3. A tin can with top and bottom removed aids in sliding new piston rings into piston grooves.

Installing Piston Rings

ONE of the simplest ways to fit piston rings to the grooves of a piston is to take a tin can slightly smaller than the diameter of the piston and cut away the bottom and the top and slit it on one side. Slide the rings on to the can, as shown in Fig. 3. Push the can down over the top of the piston until the edge of it is at the edge of the lowest ring groove. Slide one of the rings down into the groove. Pull the can back to next groove, and so on.

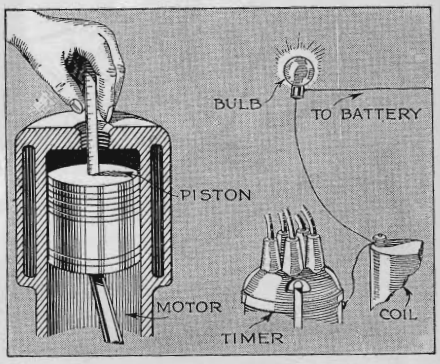

Fig. 4. When the timer contacts are closed, the bulb lights; when they break, the light goes out.

Spark Time Indicator

IT IS difficult to locate the exact point at which the contacts in the timer break and thereby cause the spark in the cylinder. You can, however, wire an electric light bulb, as shown in Fig. 4, to get an absolute indication of the exact moment when the contact breaks. One terminal of the bulb is wired directly to the battery and the other to the terminal of the coil that is connected to the timer. When the contacts are closed the bulb will light. When the contacts break, the bulb will go out.

This method of timing or checking the ignition system is one which will be found helpful not only to the garage mechanic but to the motorist who works on his own car in his spare time. It does away with guesswork, and because of its simplicity of operation saves considerable time on the job.

Locking Your Gasoline

GASOLINE thieves will be foiled by the fuel tank cap lock shown in Fig. 5. This is an ordinary small cabinet door lock which should be riveted, or screwed and riveted, to the under side of the tank cap. Make sure that the lock does not project far enough to interfere with placing the cap on the tank. Mark where the bolt of the lock comes when the cap is tight down and cut a slot in the inside of the opening into which it may drop when the key is turned.

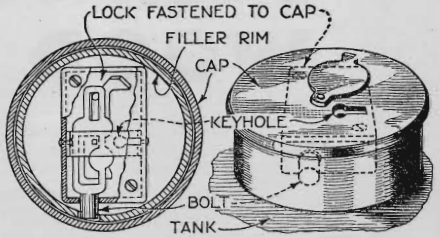

Fig. 5. This fuel tank cap lock is an ordinary small door lock riveted or screwed in place under cap.