

# A Kit of Ideas for Motorists

*If the Fan Belt Breaks, or You Need Tire Chains in a Hurry, Here's the Remedy—And Some Other Handy Kinks*

**N**EGLECT to carry a trouble light in the tool kit of the car may cause no end of annoyance on the road at night in the event of some minor difficulty. However, often it is possible to obtain all the light necessary for a small repair on the ignition system or the carburetor by using a small hand mirror to reflect the beams from the headlight to the desired point. If no hand mirror is available, unscrew the rear view mirror and use that.

## Snow Hooks of Hose

**W**HILE chains of the ordinary type usually will give you traction in snow or mud, it is a dirty



If you have no trouble light, one can be improvised by using a small hand mirror to reflect headlight beams.

is of this type you can make it sound three different notes by the use of resistances and buttons wired as shown in Fig. 4 at the right.

Two rheostats such as are sold for use in building radio receivers can be used. As you will note from the diagram, pressing the right-hand button allows the current to flow unimpeded to the horn mechanism. Pressing the center button places the resistance of one rheostat in the circuit, and pressing the other allows the current to flow through the second

## Ten Dollars for an Idea!

August Grosze, of Collinsville, Ill., wins this month's \$10 prize for his suggestion of a novel bushing press (Fig. 2.) 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 the usual rates.

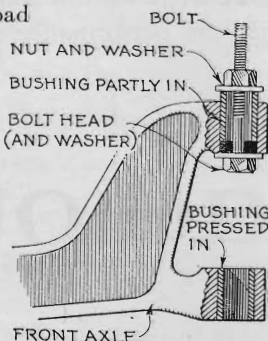


Fig. 2. Bolt, nut and washers are used to press on a king-pin bushing.

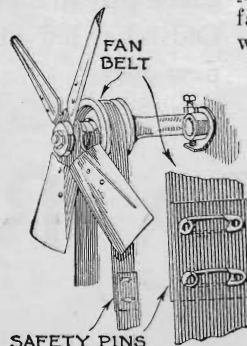


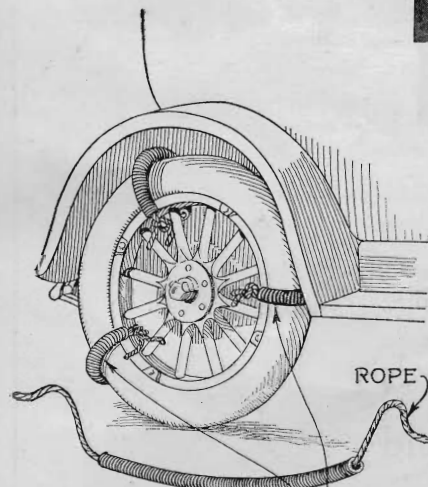
Fig. 3. Fan belt repaired by joining broken ends together with pins.

rheostat. The horn mechanism may require slight adjustment for best results. The resistance of the rheostats will depend on the current drawn by the horn and how much resistance is needed to cause the required change in tone.

## Novel Bushing Press

**O**NE bolt, one nut, and two washers will permit you to press king-pin bushings, or any similarly assembled bushing, into place just about as well as it can be done in an arbor press. And there is no risk of deforming the edge of the bushing, as there would be if you pounded it into place. Fig. 2 shows the method.

The bolt should be a loose fit through the hole in the bushing, and the washers should be some-



## PIECES OF OLD GARDEN HOSE

Fig. 1. Emergency tire chains made by threading rope through hose and tying on.

job to apply them. And when most of the route is clear, with only a short section of road in bad shape, chains will come in for a lot of unnecessary wear besides chafing the tires.

Fig. 1 shows a simple solution of the problem. Take pieces of old garden hose and through each piece pass a length of strong rope. When you reach the bad place in the road it is the work of but a few moments to tie them in place as shown. They can be removed with equal facility when the bad part of the road is left behind. Pieces of hose attached in this way are particularly effective in deep, soft snow but they are, of course, no good on ice, where ordinary chains should be used.

## Three-Tone Horn

**T**HE note produced by one type of auto horn depends on the voltage applied to it. If your horn

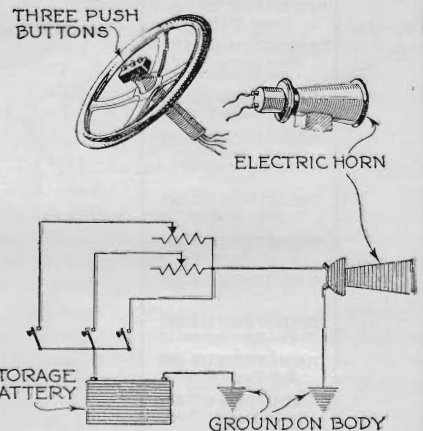


Fig. 4. This diagram shows how to wire horn to produce any one of three tones.

what larger than the outside diameter of the bushing. If the washers are thin, use two or three at each point.

## Fan Belt Repair

**I**F YOUR auto motor is equipped with a plain, flat fan belt made of either fabric or leather, it is possible to repair it well enough to get to the nearest service station. You will have to loosen the belt-tightening adjustment to obtain the necessary slack so that you can overlap the ends, and fasten them together with safety pins, as shown in Fig. 3. If that is not possible, you can pin a thin piece of leather to the two ends to hold them together.

If the distance to the service station is not too far, tying the ends together with a strong cord may serve as an emergency repair. The belt should be replaced with a new one as soon as possible.