

# Seven Useful Ideas for Your Car

## Extra Wheels Save Chains When Driving on Snowy Roads

WHILE many motorists seem willing to take a chance on driving without chains on wet roads, such protection is absolutely indispensable in the winter when the roads are covered with deep snow.

Snow, however, often covers the road only in spots, and the chains wear rapidly when you strike the bare road surface.

A most ingenious way to get around this difficulty is to fit an extra wheel to each of your regular rear wheels, as shown in Fig. 4. Four wooden blocks are bolted to the spokes, and the extra wheel is mounted on these blocks. The diameter of the extra wheel should be enough smaller than the wheel to which it is bolted so that the chain will not touch the ground when you strike surface that is not covered with snow.

This arrangement has still another advantage in that the wide tread presented by the double wheel effect keeps the car from sinking into the snow.

### Wooden Wedge Supports Spring

WHEN it becomes necessary to replace the ordinary type of rear spring shackle bolts or bushings, you will find a wooden wedge extremely useful (Fig. 3). It should be made of hard wood, as wide as possible without sticking against the sides, and the wedge should be gradual.

When you want to remove the bolts, drive the wedge in place just tight enough to take the weight off the bolts. It is unnecessary to jack up the frame of the car.

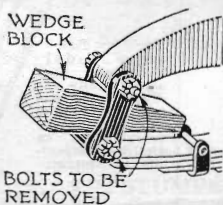


Fig. 3. Use a hard-wood wedge like the one shown above when you change spring shackle bolts. It will save jacking up frame

### Rubber Band Stops Chafing

FLAT tires are often caused by the chafing of the tube against rough or rusty spots on the rim between the beads of the shoe. A regular fabric flap is sold to eliminate this trouble. If you have no flap, a good substitute is to cut a strip from an old inner tube and place it as shown below in Fig. 6. If you cut a piece out of the band and cement the ends together, the spring of the rubber will hold the band in place. Sewing the ends of the band holds the joint tight.



Fig. 6. A rubber band cut from an old inner tube prevents chafing

### It Holds the Flashlight

REPAIRING or changing auto tires at night is a nuisance unless you can arrange to have sufficient light to see what you are doing. A standard



Fig. 1. A good flashlight at the correct height on a wire stand of this type will take much of the discomfort out of tire changes at night

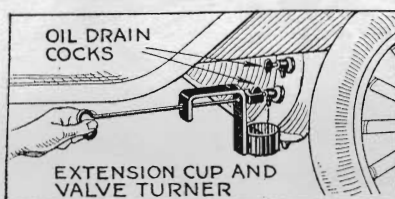


Fig. 2. Equip your valve turner with a cup of this type and avoid spilling oil on floor. Be sure that it turns freely

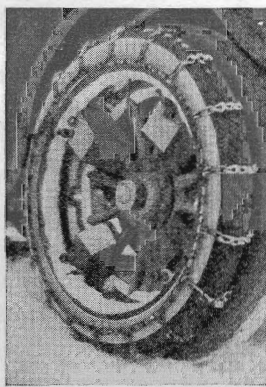


Fig. 4. An extra wheel bolted on in this way will prove useful in heavy snow and save unnecessary wear on the tire chains

type of flashlight will give enough light, but if you are alone in the car it is inconvenient to have to hold the light and work at the same time.

One way out of the difficulty is to bend up a simple wire stand as shown above in

Fig. 1, to hold the flashlight. Any piece of heavy wire will do. A loop bent as shown serves as a sufficiently firm base, and the upper end of the wire can be formed into a cradle for the flashlight.

### Cup Catches Oil Dripping from Petcock

ON CARS fitted with small petcocks to determine the level of the oil in the crank case, oil is bound to be spilled on the floor of the garage when the oil level test is made. A way to eliminate this trouble is suggested in Fig. 2.

Long-handled keys for these petcocks can be obtained in almost any auto supply store, and a small metal cup is riveted to a piece of thin strap iron that is bent as indicated.

The hole through the bent iron should be large enough to allow the cup to turn easily and consequently remain underneath the petcock as the latter is turned.

### Jeweler's Saw Saves Time

IT MAY frequently happen that a turnbuckle used to adjust the length of a brake rod on your automobile is turned so far that the ends of the rods are brought against each other, preventing any further tightening.

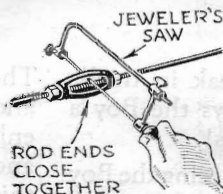


Fig. 5. A jeweler's saw will save time when a turnbuckle has reached the end of the adjustment. These blades will easily cut through all sorts of brake rods

It is possible, of course, to turn the turnbuckle backward until the rod ends are released, and then saw off a piece of each rod with an ordinary hacksaw. But a much simpler way is to use a jeweler's saw, as demonstrated in Fig. 5, and cut off the rods without disturbing the adjustment. The blade is tightened after it is passed through the opening in the turnbuckle.

### A Running-Board Ice Carrier

THE most convenient place to carry a large chunk of ice in an automobile is, of course, on the running board, but if you have ever tried it you know it is rather a difficult job to strap the ice in place satisfactorily.

A few special studs mounted on the running board will solve the problem. As shown in Fig. 7, they are made of  $\frac{1}{2}$ -inch carriage bolts with a hole drilled in the bolt to accommodate a  $\frac{1}{4}$ -inch pin. When not in use the pins can be lifted out of the holes in the bolts and then stowed away in the automobile.

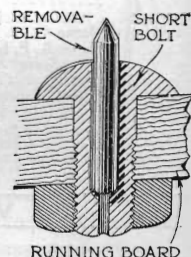


Fig. 7. Studs like these will make it easy to carry ice on the running board

### Ten Dollars for an Idea!

ROSS H. ARNETT, of Medina, N. Y., wins the \$10 prize this month for his suggestion of extra wheels to save chains in winter driving (Fig. 4). Each month POPULAR SCIENCE MONTHLY awards \$10 in addition to regular space rates to the reader sending in the best idea for motorists. Other published contributions will be paid for at usual rates.