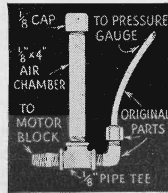


Useful Hints for Motorists

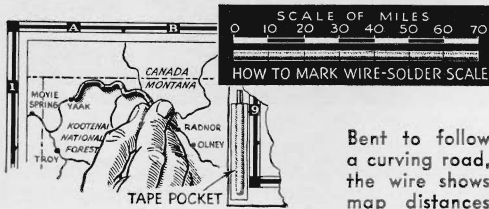
Air Chamber Cushions Oil-Line Knock

WHEN my new car knocked, I traced the noise to the oil line. I could even feel the pounding by touching the pipe leading to the oil-pressure gauge on the dashboard. The sound obviously was caused by the alternate stopping and releasing of the oil flow from the pump by the drilled crankshaft. I secured a $\frac{1}{8}$ " pipe tee, a $\frac{1}{8}$ " by 4" pipe, and a pipe cap, and assembled them as shown. I inserted the assembly into the motor block in place of the oil-line elbow, which I connected to the device. The upright pipe then provided an effective air chamber to cushion the pulsating oil and stop the knock.—E. G. G.

Installed in the oil-gauge line, the device eliminates oil knock



Soft-Wire Scale Tells Map Distances

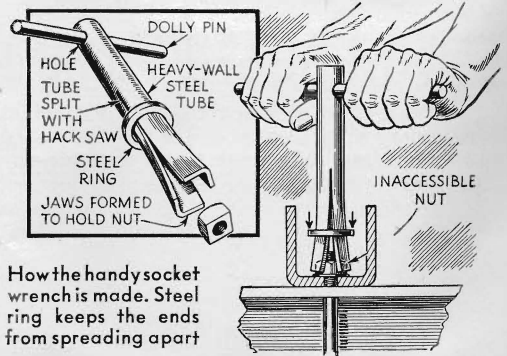


Bent to follow a curving road, the wire shows map distances

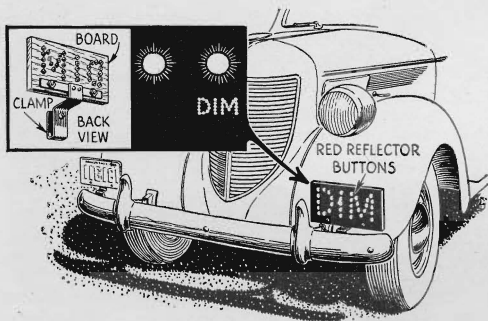
A SHORT piece of lead wire or wire solder, notched at intervals to conform to the mileage scale on a road map, helps you to estimate distances on trips. The soft metal wire bends so easily that you can shape it with your fingers to conform to the projected route on the map. The distance is then indicated by the notches. You can tape the wire to your map to keep it handy.

Homemade Socket Wrench Gets in Tight Places

FOR getting at inaccessible place, a socket wrench can be made by hacking a slit half-way through the length of a piece of steel tubing, and drilling a hole in the solid end for a dolly pin. Add a steel washer as shown at the right, and form angles at the slotted end of the pipe. The washer will keep the wrench from spreading when severe pressure is applied to turn a nut in an out-of-the-way place.

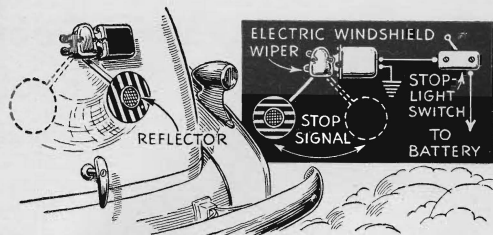


How the handy socket wrench is made. Steel ring keeps the ends from spreading apart



Reflector-Button DIM Sign Reminds the Other Fellow

RED reflector buttons mounted on a board to spell the word DIM, and fastened to the front bumper of your car, give an impressive but courteous hint to the driver of an approaching car at night to dim his headlights. Illuminated by the bright beams of the approaching lights themselves, the buttons appear to the approaching driver to go out as soon as he switches his lights to their depressed beams.—A. H. W.



Windshield Wiper Drives Wigwagging Stop Signal

A DISCARDED or second-hand electric windshield wiper in good condition can be readily converted into the power plant for driving a wigwagging automobile stop signal that commands instant attention. Mounted on the rear of a car, it is visible day or night for a considerable distance. To the wiper-blade arm, a metal disk four inches in diameter is soldered or bolted with brackets so that it is securely mounted. Paint the disk in alternate stripes of yellow and black, and attach to its center a red reflector button of the type used to mount license tags on their brackets. Bolt the wiper motor to the center of the luggage-compartment cover, or any desired point where it will be protected by the car's rear bumper from accidental damage. If the unit itself is found to be grounded when installed, connect the "live" terminal of the motor to the lead wire from the stop-light switch. When the brakes of the car are applied, the circuit is closed, and the wigwag swings rapidly back and forth like a pendulum, to signal cars behind you. If the unit is not grounded, it will be necessary to connect one of its terminals with the car chassis by means of a wire. Solder all connections.—J. H. G.

Asphalt Paint Protects Brake Line from Acid

OVERFILLING of automobile batteries mounted under the hood can be the cause of hydraulic-brake failure if the battery acid runs or drips down on the hydraulic line, resulting in corrosion and leakage. If any acid has been spilled in this way in your car, the first thing to do is to take it to a good mechanic who is capable of determining the possible damage. If the damage is only slight, wash the hydraulic line with soda solution along the length that has been exposed, and then dry it thoroughly. Then with a brush apply a coating of good asphalt paint to the pipe line. This will prevent damage if acid should accidentally be spilled on the line again.—R. P. O.



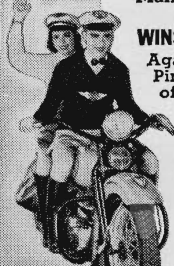
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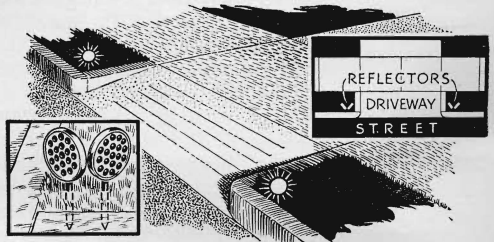


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Carpet over Garage Door Wipes Snow off Car Roof

It's not very good for a car to allow it to stand all night in a garage with a couple of inches of snow on its roof that may take hours to melt. I nailed up a piece of heavy carpet along the top of my garage doorway so that it hangs down far enough to act as a brush when the car is driven in, sweeping the snow off the back. In addition, I keep a big rag handy so that before closing the garage doors for the night I can wipe away any snow that still clings to the luggage-compartment cover.—O. B. N.

Reflectors in Ground Mark Driveway Entrance



IF YOUR driveway is located at an awkward bend in the road, or on a fairly dark street, so that it is not easy to find at night, the stunt illustrated in the drawings above will be found helpful as you and your friends drive up to your house after dark. At a bicycle or hardware store, you can obtain bicycle reflectors at a reasonable price. Reflectors two or three inches in diameter are best suited to the purpose. File or cut the metal brackets to a point and stick the points firmly into the ground a half foot or so from the street curb and about the same distance from the edge of the driveway on both sides of it. While one reflector can be used on each side of the drive, two on each side will show the width of the entrance as a driver approaches from either direction. As shown in the inset above, each reflector in a pair faces so that one is always visible from up or down the street.—R. M.

Handy License Holder

A GOOD place to carry the car owner's registration certificate is over the sun visor where it can be readily tucked into a small envelope. The envelope can be fastened securely in place by means of a few daubs of rubber cement.—B. J.