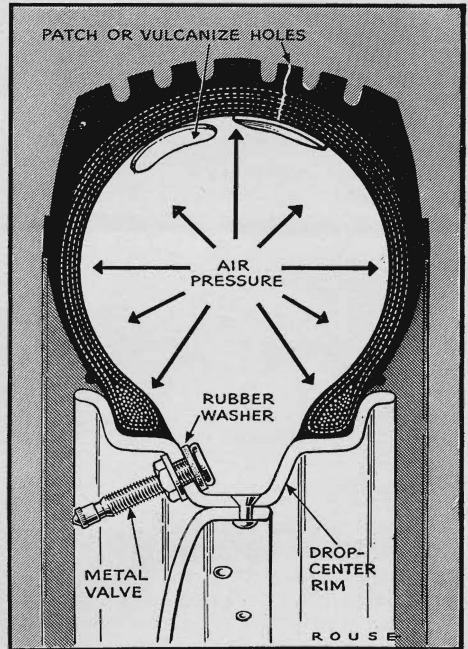


TUBELESS TIRES . . .

Oklahoma Motorists Ride on Inflated Casings



IF YOU have four tires but are short an inner tube, you can drive without it, says J. B. McGay, a Tulsa, Okla., manufacturer, who has worked out a method of mounting ordinary casings without tubes so that they can be inflated and run at normal speeds. About 700 tires so mounted are in operation in Tulsa alone, some of them having run as much as 12,000 miles in three months. The casings, it is reported, lose no more air than do tires with tubes.

Radical as this idea may appear to motorists who have always taken inner tubes for granted, there have been hints that tubeless tires are coming after the war. In fact, one of the leading rubber companies has already announced the invention of a new type of truck tire that requires no tube and effects a rubber saving of from 7 to 17 percent, although the details are being kept secret in the interest of national defense.

The technique of mounting ordinary tires without tubes is surprisingly simple. An old-style metal valve stem is fitted, with a suitable gasket, into the existing valve hole in the metal rim. Then any puncture holes and breaks in the old casing are cold-patched or vulcanized. Both beads are

cleaned and rough places sanded smooth. Any corrugations on the beads must be ground off. The outside tire bead is pressed onto its shoulder with the rim or wheel so supported that the casing hangs free.

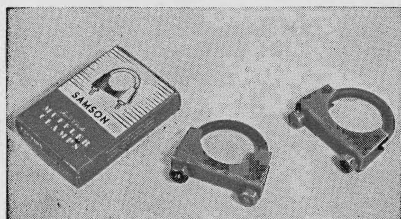
The valve core is removed so that air can be introduced quickly, and while the hose is applied, the casing is beaten lightly with a mallet to cause the lower bead to make contact with the rim and form the seal. When it snaps into place, the valve core is inserted and the tire brought to normal pressure. It is then submerged in water to check against leaks. Most satisfactory results are obtained by putting about a quart of tire-sealing fluid into the casing before it is mounted.

Mr. McGay suggests that, if all car owners mounted their tires this way and turned in their tubes, a stock pile of 250,000 tons of excellent rubber would be available for other uses. The Army, by mounting tires in this way, he estimates, could save 100,000 tons of crude rubber now allocated for tubes. According to Mr. McGay, the plan would leave the nation with a surplus of 139,000 tons above military requirements, with which to recap essential civilian tires.

Auto Ideas



WAR TIRES made almost exclusively from reclaimed rubber by Goodyear are identified by a "war tire" seal. Shown at left being prepared for curing, and at right being taken from the vulcanizing mold, these new tires should yield as much as 10,000 miles if used carefully.

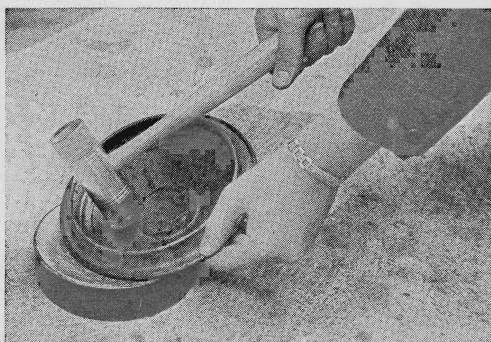


MUFFLER CLAMPS of the full-circle type, which consist of an extra-heavy stamping, a U bolt, two nuts, and washers, have been designed to connect muffler and pipes snugly when the pipes are out of round. Said to reduce leaks and installation time, these new clamps are available in sizes for every type of private car, as well as for the new Reo, White, and Willys-Overland Army trucks.



A SPEED-LIMITATION HORN for gas-and-rubber-saving drivers, toots its warning when the speedometer needle makes contact with a button set at the 35-mile mark on the dial. Contact opens a valve in the exhaust, which in turn blows the horn.

A LUBRICANT containing 22 percent by weight of colloidal natural (not synthetic) graphite dispersed in complete suspension in water, has been developed for all types of water pumps and cooling systems. Containing no oil, alkali, or chemical, the lubricant does not affect rubber or antifreeze, and is said to coat parts with a surface which repels rust.



A HUB-CAP DOLLY and a plastic hammer are the answer to the problem of straightening out dented hub caps. Six inches in diameter and weighing seven pounds, the iron dolly has two concave surfaces—a deep one for the smaller caps and a shallow one on the other side for the larger.