

ENGINEERING

Soft Tires Best in Sand

➤ **SMALL**, fully-inflated truck tires seen ordinarily on commercial motor vehicles are satisfactory on hard-surfaced roads, but are found by the Army to be unsuitable for cross-country travel and to provide traction in sand, mud and snow. Only large, soft tires furnish sufficient flotation in these conditions to stay near the surface and to give sufficient traction to move the vehicle forward. All-wheel drive is another essential.

Army experiences in operating trucks and other motor vehicles over roadless, cross-country terrain, and through sand, mud and snow, were discussed at the S.A.E. Detroit meeting by Lt. Col. J. E. Engler, of the U. S. Army Desert Training Command, Camp Seeley, Calif.

Relatively large tires, with aggressive tread design, adequate ground clearance, and some deflation are satisfactory for operating in mud and snow, said Col. Engler. In sand, tires should be twice the normal size, with considerable deflation.

Army cross-country tests, he said, have demonstrated that a 200-horsepower, 96,000-pound loaded tractor-trailer, such as is used on construction jobs, can barely move about in soft level sand. If rebuilt into an all-wheel drive vehicle, it will, with the same engine, not only travel through sand, but climb a 17% grade, or tow an additional trailed load of 17,000 pounds.

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Pin-up picture for the man who "can't afford" to buy an extra War Bond!

YOU'VE HEARD people say: "I can't afford to buy an extra War Bond." Perhaps you've said it yourself... without realizing what a ridiculous thing it is to say to men who are dying.

The very *least* that you can do is to buy an *extra* \$100 War Bond. In fact, if you take stock of your resources, you will probably find that you can buy an *extra* \$200... or \$300... or even \$500 worth of War Bonds.

Sounds like more than you "can afford?" Well, young soldiers can't afford to die, either... yet they do it when called upon. So is it too much to ask of us that we invest more of our money in War Bonds... the best investment in the world today? Is that too much to ask?

**Let's all
BACK THE ATTACK**



Ersatz Prophet

➤ **THE GROUNDHOG**, who will soon be getting the blame for whatever goes wrong with the weather for the next six weeks, is no volunteer for this long-range forecasting job. He was drafted.

In Europe, the hedgehog is held responsible for the weather from Candlemas Day onward. Colonists arriving in America found no hedgehogs, so they transferred the job to the next handy animal—though the groundhog is very little like a hedgehog.

There's a joker in the game, too. The European hedgehog does come out of winter quarters for a look-see in mild weather. But our groundhog sleeps sturdily until about St. Patrick's Day, whatever the weather. So he never does see his shadow on Feb. 2.

Like many another harmless animal, the groundhog is called out of his proper name. He does live in a burrow in the ground, but he is no hog, nor any kin to one. Like that other miscalled mammal, the guinea pig, he is more nearly related to the rabbits, whom he resembles in his ceaseless nibbling at grass and other herbage. Under another alias, he is the woodchuck, that mythical manipulator of problematical quantities of timber. A third name, and really the more dignified and becoming to the animal, is marmot; but it is much less used.

The groundhog is a peaceable enough citizen most of the time, bickering mildly with his fellows, but letting the rest of the world alone. But if set upon by a four-footed bully he will turn to and show himself a "dour fechter." There is one case at least on record of a woodchuck giving a bulldog decidedly the worst of a battle.

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