

### TRUCK OWNERS SAVE MONEY ON TRAILERS

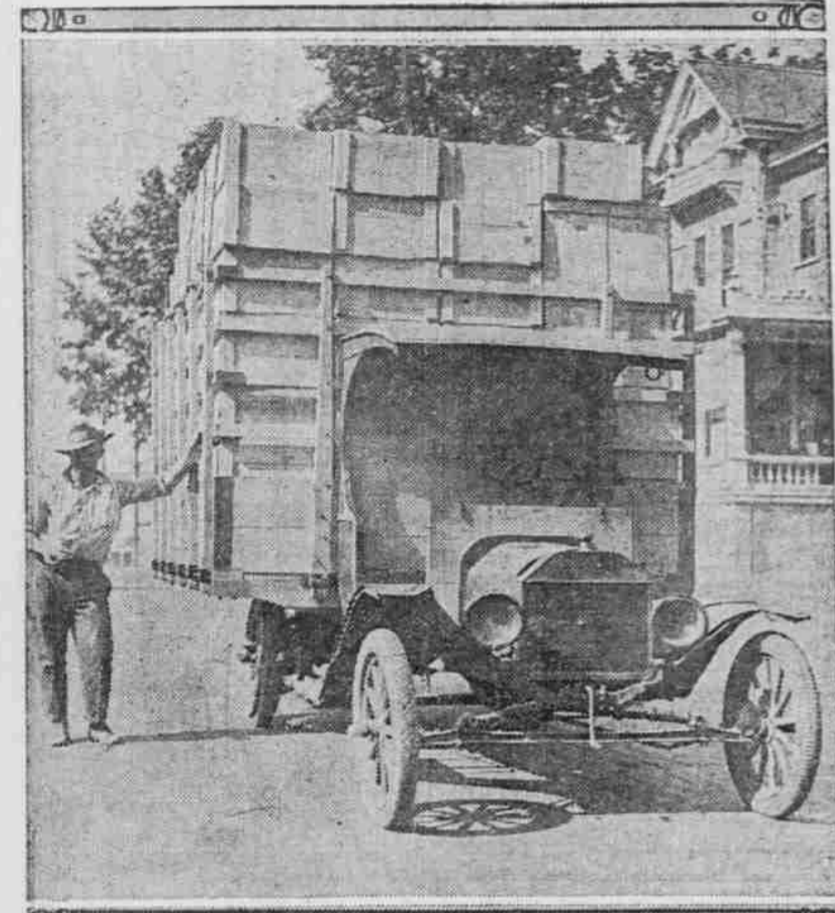
Bigger Loads Pulled Than Can Be Carried.

### HUGE TONNAGE HAULABLE

Average Truck Can Draw Three or Four Times as Much as It Can Carry.

A factor of prime importance in the development of transportation over the highways is the trailer. Unquestionably the trailer has come to stay, says W. D. Albright, manager of the B. F. Goodrich Rubber company, and its use

### PRETTY GOOD LOAD FOR SUCH A LITTLE FELLER!



Day in and day out, this Ford car, converted into a truck, carries a load like this and still is well and hearty. There are 193 boxes in this load. Sometimes it carries even more.

and importance will multiply as the nation's roads become improved. So economical has the trailer proved in many lines of haulage that every operator of motor trucks should carefully analyze his delivery in view of adopting trailers.

From the farmer who hitches a two-wheeled gig to the rear of his automobile and speeds away with ten cans of milk to make the 3 o'clock train, to the contractor who hauls 40 tons of crushed stone in trailers with one motor truck's power, business men everywhere are realizing that the principle of the trailer is sound.

The average well-built truck is able to haul behind it three or four times as much as it can carry. A striking example of the efficiency of the tractor powers of a motor truck was demonstrated by an eastern street commissioner recently who conducted an experiment to cut down the cost of collecting and hauling garbage from the city to the disposal plants.

Forty tons to one truck.

Regular horse-drawn wagons were used to collect the garbage from the districts, bringing it to a designated place, where the horses were unhitched and the loaded wagons attached to a five-ton truck. A load of four and one-half tons of scrap iron was placed in the truck body in order to give traction to the driving wheels. The road traveled passed under viaducts, around sharp turns and up steep grades. The total load including the weight of the trailers was 27 tons. The test covered a round trip distance of 2 1/2 miles and resulting in the city purchasing trailers and disposing of more than half of the horses previously used.

This case is not exceptional. In Detroit a dealer in crushed stone hauls 30 tons regularly with one truck. In Los Angeles recently a trailer-truck transported a 40-ton load over a distance of 23 miles; in an Indiana town a two-ton truck pulled a train of six trailers carrying 300 sheep, and in Chicago recently an enormous dynamo weighing 43 tons was hauled by one motor truck.

The trailer uses the surplus power of the truck's engine which would be otherwise wasted. In addition to carrying capacity every truck has drawbar pulling power. If the motor truck operator is not availing himself of the latent power of his truck he is neglecting a factor which might reduce his transportation requirements by 200 or 300 per cent.

Motor truck operators must bear in mind, points out the Goodrich company, the amount of load which a truck can haul behind it in trailers depends upon the conditions of the road and grade met with. For instance, a three-ton truck loaded to capacity ascending a 20 per cent grade could hardly haul a single empty trailer behind it, so nearly has its capacity for drawbar pull been reached. But this same three-ton truck spinning along the level street could haul probably 24 or even 30 tons.

Many experiments have been conducted to determine the resistance offered by various kinds of pavement and road surface to show the effect on the operation of the motor truck. The following table gives the generally accepted results of these investigations:

**Table of Road Resistance.**

Material—	Per Ton.
Asphalt.....	20
Wood block.....	24
Smooth brick.....	25
Poor brick.....	35-50
Hard, dry clay or gravel.....	35-60
Soft macadam.....	35
Ordinary clay road.....	100
Country sand road.....	120
Sand 3 inches deep.....	175-200

The effect of grade or incline is determined mathematically—a 1 per cent grade requires a 1 per cent pull. For example, a truck with a gross weight of 10 tons, driven up a grade of 6 per cent will require a force of six-tenths of a ton, or 1200 pounds. For each per cent of grade to be encountered a drawbar pull of 1 per cent of 2000 pounds is required, or a drawbar pull of 20 pounds for each ton. When road resistance an "resistance due to grade has been computed, they must be added together in order to give the total resistance offered by the given haulage condition. Say a 3 1/2-ton truck, weighing

7 1/2 tons, loaded, must climb a 4 per cent grade over an ordinary clay road. The resistance is computed as follows:

(1) Road resistance, 100 pounds per ton for 7 1/2 tons, 750 lbs.  
 (2) 4 per cent grade resistance, at 150 pounds for each 1 per cent, 600 lbs.

Total.....1350 lbs.

In other words, it requires nearly 1400 pounds of drawbar pull to carry the trucks up this incline over a country clay road. Compare this condition with that of the level asphalt street, where the total resistance would have amounted to 150 pounds.

### CARHOUSE IS COMING HERE

Watch for Harry Glenden Who Travels in Real Comfort.

PETALUMA, July 26.—Harry Glenden, owner of the famous carhouse car "Wanderlust," left this week for Oregon, where he will spend three months. He is going up the valley and return via the coast.

Glenden's housecar is equipped with electricity, gas and has all the latest conveniences of city homes.

He has traveled in the outfit in most every state in the union and has no home, staying at one place for a few months and then starts traveling.

Beware of Oil. For the benefit of the hundreds of thousands of new car owners which

## Announcing

# The TEMPLAR

## The Superfine-Small Car

**The Car You Have Waited for. The only Moderately- Priced Car Built on a Quality Basis**

A car that will give you years of continual service, pleasure, economy, and a car that gives pride in ownership.

Speedy, powerful on hills, extremely quick on the pick-up and easy to handle.

Best equipped car on the market today, and no ad will ever do justice to the TEMPLAR.

See this marvelous-built car, with valve-in-head motor, long stroke, high speed, counter-balance crank shaft.

See this car and test it. Ride in it and feel its qualities and you will buy it.

A shipment is due the 1st. Place your order early if you want a TEMPLAR.

*The Car of a Lifetime*

4-Passenger, \$2500  
5-Passenger, \$2500

Sport Roadster  
\$2700

## Wray Motor Car Co.

90 N. BROADWAY

### CAR THIEVES NOW ACTIVE

THIS IS SEASON WHEN THEY WILL TAKE ANYTHING.

Never Leave Car, Even in Front of Own Home, Without Some Good Lock Device.

This is the particular season of year when car stealing is at its height and owners will do well to observe every precaution. If they would display a small fraction of the ingenuity shown by the crooks there would be a very material reduction of the evil.

It is practically impossible to prevent stealing entirely, but there is no gain-saying that drivers and owners' carelessness makes it altogether too easy for even amateurs successfully to engage in car stealing.

Altogether too few cars stolen are recovered. A fairly high per cent is credited to the police of Detroit, who, of the 1547 cars so far stolen this year, have recovered 1149. Figures for some of the larger cities for last year on the number of cars stolen and recovered are as follows: Boston, 866, 607; Chicago, 2611, 1954; Cincinnati 748, 291; Cleveland 2076, 1186; San Francisco 1122, 1082.

Cars should never be left without some locking device or with an alarm set so that any attempt to steal the car will be immediately recognized by the police. Most cities forbid locking of a car so it cannot be moved in case of fire or other emergency, so do not chain or lock a wire wheel to a lamp post, for instance. One owner who did that had only the wire wheel to show for his pains when he came out.

Experience also shows that it is not sufficient to leave a boy in charge of the car, for the owner's instructions to the boy may be overheard by someone who can pass himself off as the owner if of the same build and description. Spare tires also should be locked.

### Maxotires

MADE IN U.S.A. — TREAD PATENTED

**TOUGH RUBBER TREAD**

CROSS SECTION OF THE MAXOTIRE (Patented Others' Fend)

SEMI-CURED PROTECTION FLAP

WILL RESIST WEAR TO NEW TIRES

(Note the Construction of This Tire)

**MAXOTIRES**

stop tube chafing, eliminate tube pinching and strengthen over-loaded tires. Pay for themselves in tire repairs and remove all fear of tire trouble.

**NO BLOW OUTS**

95% Puncture Proof

**NO RIM CUTS**

**Maxotire Sales & Supply Co.**

Bdwy. 684. 522 1/2 Wash. St.

as some make a specialty of stealing these and even tires in use. Two brand new cord tires were removed from the rear wheels of a car, leaving it standing on the rims in front of a lighted theater in New York.

The foreign demand for cars is being taken advantage of by thieves who are doing a very nice export business. It is said about 90 per cent of the cars stolen are exported. A fence for stolen cars has been discovered in Cuba from which port they were exported to other parts of the world. Shippers should be more particular about the antecedents of any used car offered for export.

Slack in Drop Light Cords.

An convenient arrangement for taking up slack in drop light cords is to put the cord on two pulleys placed at convenient locations. The cord should be fastened at two places to pieces of heavy twine, clothes line will do, and then a weight is hung on each end of the line. The cord as suspended from these lines will be just long enough to hold the lamp off the floor.

Spark plug spares are frequently injured while being carried in the tool box. An excellent method of guarding against this is to slip each plug into a section of rubber hose, closing each end up with a bit of waste, to prevent the plugs working out.

Don't let the car rest on a deflated tire. Better remove the tire or jack up the wheel.

## Buy your car more power

**McQUAY-NORRIS**

**LEAK-PROOF**

**PISTON RINGS**

12 QUARTER 3+ PUMP

*To Control Excess Oil*

Turn all the gas you buy into power. Make sure that none of it leaks past your piston rings. Make certain all your gas is compressed and turned into power. You can do it by installing the genuine McQuay-Norris Leak-Proof Piston Rings.

Their exclusive two-piece design insures equal action all around the cylinder wall. That's why they are the only piston rings of their kind. There's no such thing as a "leak-proof type" of piston ring. Leak-Proof is the trade-marked name of this particular ring. Be sure you get the genuine.

They are made in every size and over-size to fit every model and make of motor.

Your repair man can get the proper sizes for you promptly from his jobber's complete stock. Buy more power for your car.

McQUAY-NORRIS MFG. CO., ST. LOUIS, U. S. A.

## The Ace of Earth and Air

On earth, the automobile long ago carried Silvertown supremacy around the world. Then the aeroplane, to ease the jar of landing, enlisted Silvertown's flexible, yet sturdy cable-cord body, and lifted its supremacy to the air.

On earth, or in the air, Silvertown is acknowledged "The Ace of Tires."

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You see Silvertown difference the instant you see how its trim gracefulness adds elegance to a car.

You feel Silvertown difference the instant you ride on its easy riding resilience.

You know Silvertown economic difference the instant you check its List Price with its More-Mileage Adjustment.

\*\*\*\*\*

For cord or fabric tires, Goodrich List Prices joined with Goodrich More-Mileage Adjustment—8,000 miles for Silvertowns; 6,000 miles for Black Safety Treads—give you the standard by which a knowing tire user proves up the true value-of tires.

\*\*\*\*\*

Compare Goodrich Prices and Adjustment with others, and know why the Goodrich Tire is to-day the talk of the motoring world.

*Buy Goodrich Tires from a Dealer*

**ADJUSTMENT**

Fabrics, 6,000 M.—Cords, 8,000 M.

# GOODRICH

## SILVERTOWN CORD TIRES

**"BEST IN THE LONG RUN"**