

## USING CARE IN STARTING CAR SAVES CURRENT

Useful Hints Are Given for Starting Cars So That Energy is Conserved

Sam Steinhauer of Smoot & Steinhauer, agent for the Willard Storage Battery company, suggests the following pointers on care of the electrical system on a motor car.

"Every time you operate your self-starter or use your electric lights while the engine is not running a certain amount of energy is taken from your storage battery. This energy must be restored in some way or other. For this purpose a modern car carries an electric generator which puts back into the battery the current which has been taken out to operate the lights and starter.

"This generator must run at charging speed for several minutes to create

the same amount of electrical energy that is consumed by the electric starter in a few seconds. Therefore, considerable care should be exercised in starting your car in order not to let the motor turn over and over for a long time before its starts.

"Ordinarily a motor should start on a very few turns in warm weather, and unless it does, something is probably wrong with the gas or the ignition. Be careful to see that you have gasoline in the tank and always set the gas and spark properly before trying to start. Release the starter button as soon as the motor begins to turn on its own power because as long as the starter button is pressed down the starting motor is taking current from the battery.

"The generator should always be kept properly adjusted and clean and this should be done by an expert. Otherwise, the amount of current delivered from the generator may be too small to keep the battery charged to the proper point. If a battery is constantly used in an uncharged condition the process of deterioration becomes more and more rapid and may result in the battery being ruined."

The police of Caldwell, N. J., are looking for the young woman who passed two bad checks, both of which bore the forged name of H. D. Austrian.

## MOTOR HONKS

By Otto Horne

The high standing of Goodyear Tires abroad is indicated by their use by M. Arteman, the principal winner in the recent automobile races at Seville, Spain. Arteman finished first on Goodyears in five events.

A new car may show only seven or eight miles per gallon because of the tightness of its parts, yet after it has been driven 500 miles it may show ten or twelve or more because there is not so much power lost overcoming friction.

A feature which The Goodyear Tire & Rubber Co., Akron, Ohio, has proven practical and popular, is the Suggestion System, which enables employees to offer their ideas for improving machinery, methods, conditions and product. Hundreds of dollars are paid to employees annually for suggestions accepted by the company.

Hercules, by his exploits in diverting the river Alpheus, accomplished only the cleaning of a stable. By changing the course of the Little Cuyahoga river which flows through

Akron, Ohio, The Goodyear Tire & Rubber Company is reclaiming acres of land for a site for future extensions to the Goodyear plant. Upon a portion of this reclaimed land the new mechanical goods plant and the new chemical plant are being built, to take care of Goodyear's rapidly increasing business in mechanical goods.

About fifty deaf mutes from The Goodyear Tire & Rubber Co., Akron, Ohio, recently made the trip to Rugles Beach, on Lake Erie, to attend the annual picnic of the C. A. T. This is an outing held each summer by members of the Cleveland, Akron and Toledo branches of the National Fraternal Society of the Deaf. Sports and a general good time were features of the affair. In the evening a chicken supper was served, and the picnicers proved that the absence of the ability to talk and hear constitutes no handicap when it comes to eating. Goodyear's deaf mute employees are among the best workmen in the factory.

Brig-Gen. Mills, in charge of the organized militia of the United States, has authorized Governor Henderson to have a regiment of cavalry raised immediately in Alabama for border service.

## DODGE BROTHERS CARS PERFORM GREAT FEATS

A strange coincidence occurred at the Dodge Brothers plant recently when letters were received in the same mail from Cape Town, Africa, and Fairbanks, Alaska, each announcing a record breaking performance by a Dodge Brothers car.

In South Africa a Dodge Brothers car had climbed to the top of Pearl Rock mountain, a mass that looms on the horizon of Cape Town. Almost since the day motoring began in Africa, Pearl Rock peak has been the objective of ambitious motorists. Failure after failure was recorded, but that did not deter others from attempts. For several months a prize of 50 pounds (\$250) has been posted for the first car making the ascent.

A Dodge Brothers car owner conceived the idea that the money might be of some benefit to the martyrs of war, so he took the rocky trail. "It will interest you to know," writes H. W. Allkin, Dodge Brothers district representative in South Africa, "that one of our standard model cars made the climb without difficulty on June 24. The feat has been vouched for and certified by the editor of 'Motoring in South Africa.' The 50 pounds will be turned over to the editor for distribution among the war funds."

The Alaskan feat was that of Grover Frame, who, in a standard Dodge Brothers touring car, broke all records in a trip from Fairbanks to Chitina, Alaska. The time for the 360 miles was 46 hours, 30 minutes, including stops. This is six hours less than ever accomplished before.

### SOME AUTO FACTS

The pressure in the combustion chamber of a motor sometimes reaches as high as 400 pounds per square inch.

Cup grease is made by the saponification of a fatty oil with calcium hydroxide in the presence of water. When saponification is complete hydrocarbon oils are needed.

The viscosity of oil for use for cylinder lubrication affects the horsepower and fuel and oil consumption. Increase the viscosity and the horsepower and oil consumption increases.

The piston travels faster when the crank is in the upper half of the crank circle than when the crank is in the lower half, which means that the pistons arriving at top dead center have more inertia than those arriving at bottom center.

About 17 per cent. of the energy of the fuel in an automobile engine is converted into useful work, over fifty per cent. is absorbed by the cooling water, and more than 20 per cent. is lost in the exhaust. The remainder is lost in friction in driving the camshaft, etc., at the bearings.

The piston heads of an automobile engine may attain a temperature of 900 degrees F. while the lower portion of the piston may reach a temperature of about 500 degrees. The piston rings have a temperature of about 400 to 450 degrees because they come in contact with the cool wall of one side and the hot piston on the other.

Lance Thackeray, painter and illustrator, died at Brighton.

### TY COBB'S FIFTH AUTO IS A DODGE

Ty Cobb, greatest of ball players, has recently purchased a Dodge Brothers car and drives it constantly while the Tigers are at home in Detroit. This is the fifth car owned by the

famous batting star and he declared that it is his favorite.

Two other members of the Detroit team, Bobby Veach, the hard hitting left fielder, and "Big Spig" Stange, first string catcher of the Tigers, also bought Dodge cars this year.

# White Trucks and AUTOMOBILES PREDOMINATE

## Mechanical Theories versus Performance

There are four different types of final drive in motor trucks and automobiles advocated by their makers. Each has its merits and demerits. It is impossible for the purchaser to determine their comparative values on a theoretical basis. He cannot reconcile the conflicting claims of rival engineers.

The wise buyer brushes aside mere theories of construction and selects the make which holds the record for performance. That is the only value he can know and the only value he can use. The White record is reflected in its predominant annual sales.

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Schuman Carriage Co., Ltd.

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Agents

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