

COOLING SYSTEM MOST IMPORTANT

Many Motorists Experience Considerable Trouble From Their Engines Overheating.

MEANS TO PREVENT TROUBLE

Most Essential That There Be Free Circulation of Water, Freedom From Scale and Strong Current of Cooled Air.

Every automobile owner or driver knows from experience that a car engine becomes hot after running for some time. This is due to the explosions or rapid burning of the gas inside the cylinders.

A large percentage of the heat developed in the cylinder goes to heat up the cylinder walls and if these cannot be cooled either by strong blasts of air or water circulation around them, they will become so hot that they will crack and break apart or at least become warped out of shape and become useless. By far the greater number of cars use what is known as the water-cooling system.

How Water is Cooled.
The water flows around the cylinder walls and then through piping and rubber hose connections into the radiator where it is spread out in thin sheets or small pipes which have all immense amount of surface exposed to the air. In this manner the water is cooled and then flows back to the engine in order to keep it, also, cooled to the proper temperature.

If any part of the cooling system fails to function properly, the cylinders are not cooled and we say that the engine overheats. Water, as we know, cannot be heated above 212 degrees F. without boiling under pressure. Therefore, the water which flows around the cylinder walls cannot be heated above this temperature. If the water is not kept slightly below this temperature, it will rapidly evaporate by boiling. If the engine is run without water in the water jacket the cylinder walls will be heated above their normal temperature, with the result that the oil will be entirely burned off the cylinder wall surface and the piston will begin to cut small slots lengthwise on the wall with the result that often the engine will, in a few minutes' time, be seriously damaged.

Necessary Conditions.
In order that the cooling system work properly, we must have the following conditions:

Plenty of water, free circulation of water throughout the entire system, freedom from scale in the radiator, and a strong current of air passing continuously through the radiator to cool the water.

It follows, that if the engine overheats, some of the previous conditions are not being fulfilled. Usually we look at the fan first, as this is where the trouble most frequently occurs. See that the fan blades are free and that the belt is tight enough to drive the fan with very little slipping, also have the fan blades tipped at the proper angle to draw the air through the radiator.

While the fan belt must be tight enough to turn the fan, care must be taken not to tighten the belt so that it will be broken in a few minutes of running. Next see that there is plenty of water in the radiator; feel of the rubber hose connections to see whether they feel flabby. If they are soft, it is very likely that the inner walls of the hose have softened and pretensions entirely filled the opening so that the water cannot flow through.

You Auto Know

That the carburetor, strainer should be cleaned and drained regularly in order that the dirt can pass into this delicate mechanism, which is, in reality, the "lungs" of the automobile. Trouble with the carburetor is generally due to the presence of some tiny bit of dirt which has passed the strainer and which, like a morsel of food swallowed "the wrong way," interferes with the breathing. Even the smallest particle of foreign matter in the needle valve or the intake valve of the vaporizer will cause the engine to sputter and spit and it is seldom that this trouble can be eradicated until the dirt or dust has been removed.

Even the straining of gasoline through wire gauze or a piece of chamois does not do away with the danger from fouling the carburetor, for a considerable amount of sediment always accumulates in the gasoline tank, and this will be carried forward to the carburetor. For this reason, the strainer itself should be drained off regularly and then thoroughly cleansed, in order to insure the proper function of the "lungs of the car."

(Copyright, 1922, by The Wheeler Syndicate, Inc.)

tion and wear result. If the majority of the motorists realized that such conditions can be very largely overcome by using a quality oil at a higher initial cost, a great deal of trouble with most automobiles would be eliminated.

Seen In "The Fall of Pompeii"



The Gladys Hight Ballet Groupe in the Serpent Dance of the Egyptian Priestesses Before Arbaces, At "The Awakening", July 24-Aug. 5.

Interpretative dance, by the Gladys Hight Ballet Groupe, of the Chicago Opera Co. form one of the high spots in the dramatic season of the pyrotechnic classic "The Last Days of Pompeii" to be seen at "The Awakening," Shadokem Grotto's wonder spectacle which opens on July 24th for a two weeks' run at Davison Avenue and Dexter boulevard, Detroit, Grotto Stadium, where the spectacle will be staged, requires 40 acres of ground, 15,000 seats, six stages, an artificial lake, a race track and a specially constructed glass top stage for the presentation of the large ballets in their fire days.

A complete circus composed of the highest class acts in America, balloon ascension with parachute drops, chariot races and a 60-piece band are among the attractions. Supplementing the Gladys Hight ballet will be 200 trained dancers from the various Detroit schools of interpretative dancing, rehearsed for weeks under the tutelage of Lucille La Verne, premier danseuse with the Gladys Hight ballet. The entire cast of entertainers will include 2,000 men and women.

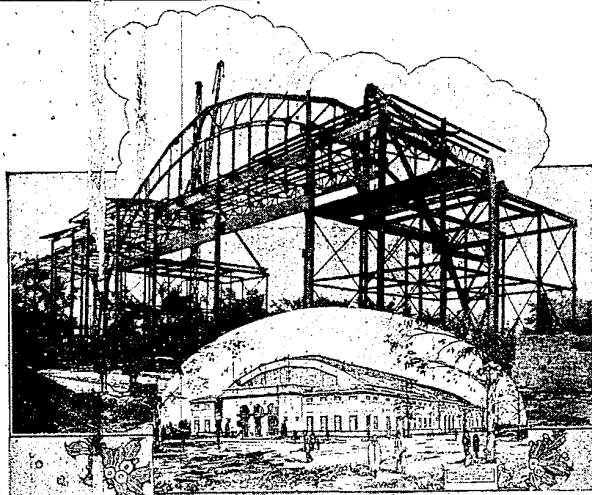
To assist in the success of the production the Detroit Street Railway

is constructing special loops at the grounds for the Trumbull and Hamilton cars, and the Detroit Edison has set 40 poles to carry the high tension wires for the lighting of the mammoth arena.

Each night during the entire length of the show a Haynes automobile will be presented to some person in the audience, and on opening night, July 24th, two Haynes cars will be given away.

Advance sale of tickets, both admission and reserved seats, is being held at Grinnell Bros. music store, 1515 Woodward avenue, Detroit.

New Michigan State Fair Coliseum



In this new \$300,000 building, now under construction on the Michigan State Fair grounds at the northern outskirts of Detroit, the horse show and historical pageant at the exposition, September 1 to 10, will be staged. The building is of reinforced concrete and steel construction and is rapidly nearing completion as this picture indicates.

TEMPERATURE IS IMPORTANT

Point Below Boiling Point of Water Prevents Condensation and Excessive Wear.

To get the greatest efficiency from a motor and at the same time with maximum economy, it should be operated at a temperature point a little below the boiling point of water. This prevents condensation of gasoline, bad results from cold oil, and excessive wear to motor parts, not only because of poor lubrication, but also because motor parts have not had the opportunity to expand properly. In other words, hot motor parts fit. And the motor should reach the proper temperature point as quickly as possible. For this reason radiator or shutters and a thermometer are standard equipment on some cars. They insure long life and continued satisfactory performance.

AUTOMOBILE MAINTENANCE

Tighten the fan belt.
Test the wheels for wobbling.
Examine cylinders for carbon.
See that every moving part is well oiled and greased.
Check up on tires and see that they are in proper condition.

If you have a car, ready done so, clean out the cooling system.

Care should be exercised not to use hard water in the cooling system.

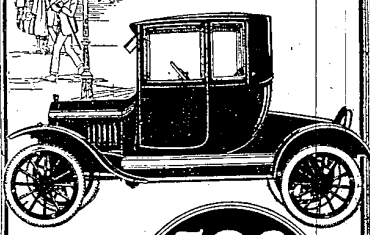
NEW PEDAL CONTROL ON ELECTRIC AUTO IS EXHIBITED IN NEW YORK



Miss Helen Hoffmann is shown in the photograph demonstrating the new pedal control on the electric coupe. Note the round heel pedal close to the seat. By shifting from the forward control, on which her foot is placed, to the heel pedal she can reverse at once, with no danger of stripping gears.

Ford

THE UNIVERSAL CAR



\$580

Most for Your Money

And remember—the lowest cost, the lowest value of any motor car ever built.

F.O.B. Detroit

No other car of this type is priced so low — no other will give you more real motor car value—more convenience, more comfort, more dependability than a Ford Coupe. Equipped with electric starting and lighting system, demountable rims, extra rim and non-skid tires all around, it makes the ideal enclosed car for business or for pleasure. Reasonably prompt delivery. Terms if desired.

FORD SALES & SERVICE

Phone 151

Farmington, Mich.

BEST TIRES AT BEST PRICES

U. S. TIRES—PLAIN—USCO—KNOBBY—CORD
GOODYEAR GOODRICH

BUY YOUR TIRES NOW

FORD SALES & SERVICE



Daily Service to PUT-IN-BAY and SANDUSKY

(On the Big Steamer Put-in-Bay)

Finest exclusive Excursion Steamer, Largest Ball Room, Finest's Orchestra. No extra charge for dining. Steamer leaves on Eastern Time.

Every day from Detroit at 9:00 a. m. for

Put-in-Bay—Connecting with Cleveland and Buffalo Steamship Co. and Steamer Arrow for Middle Bay, Kelley's Island and Lakeside.

Sandusky—Connecting with Railroads and Suburban Lines, Fare \$1.40

Cedar Point—15 min. by ferry from Sandusky, Fare including ferry, 1.75

Excursion fares, (returning same day)

Put-in-Bay, week day, 80c; Sunday, Holiday, \$1.15 Round trip.

Sandusky, every day, \$2.00 Round trip.

Four hours at Put-in-Bay: Bathing, visit to Caves, Perry's Monument.

Put-in-Bay, Groves, dancing and many other attractions, several Hotels.

Cedar Point—Fresh water rival to Atlantic City, Large Hotels, Board Walk, Thousands Lathes here daily.

Return: Leave Cedar Point by Ferry for Sandusky. Leave Sandusky from Big Four Dock 2:30 p. m. Put-in-Bay 4:30 p. m. Arr. in Detroit 8:00 p. m.

Dancing Menagerie, Leave Detroit 4:15 p. m. Fare 75c.

Write for map folder

Ashley & Dustin Steamer Line

Foot of First St. Detroit, Mich.

