

UNIQUE ROAD TESTS TO START SHORTLY

Trial Sections of Various
Types of Pavement Built.

STUDY TRUCK WEAR, AIM

Valuable Data on Pavement Dura-
bility to Be Secured at
Pittsburg, Cal.

Road engineers, supervisors, com-
missioners and the entire motor
trucking industry of the United States
will be interested in the results of the
tests that will be made beginning this
fall on a specially constructed track
at Pittsburg, Cal. An oval track of a
little more than a quarter mile in
length has been built for the definite
purpose of determining the effect of
truck wear on the various types of
concrete pavement such as are now
in use on the Pacific coast. The test
track has been built through the co-
operative efforts of the Columbia Steel
company of San Francisco, the Cali-
fornia highway commission and motor
truck dealers.

According to H. H. Harwood, man-
ager of the Portland branch of the
Mack-International Truck corpora-
tion, his organization has been deeply
interested in the proposition ever
since its inception. The pavement on
the 1771-foot track has been laid in a
number of sections, each embodying
different methods and several having
a different sub-grade. The sections
vary from plain concrete up to those
having 49 tons of steel per mile re-
inforcement. The test will be
thorough to the degree that the pave-
ment is worn out. If the trucks do
not succeed in destroying all the
types of pavements, then a govern-
ment tractor which weighs 28 tons
and has a speed of 25 miles an hour
will be assigned to the job.

"In almost all parts of the country
trucks are being accused of damaging
the highways," said Mr. Harwood. "To
what extent the responsibility rests
in the road construction will be de-
termined by the test. The trucks do
amount of damage to the highway
will be demonstrated and the kinds of
pavements that stand up best will be
shown, so that in the future roads
may be built to meet the demands of
the traffic."

"It is planned to put 40 trucks on
the track, 20 traveling in each direc-
tion, and this will subject the road to
a greater strain, considering the num-
ber and weight of vehicles, than any
section of highway is called upon to
withstand under the demands of nor-
mal traffic."

"If a certain type of roadbuilding is
improper on a certain sub-grade it
will be ascertained and in many ways
other ways the results from the tests
will be of great value. Indicating the
degree to which the engineers have
gone to make their tests accurate is
the fact that four tunnels have been
built beneath the pavement for the
purpose of taking observations on the
under side of the slabs. In this way
engineers will determine, if possible,
what happens to the under side of the
slab and the air under the road, the
blows of a heavy truck. The effects
of truck weights and speeds will be
indicated by self-recording instru-
ments showing the degree of flexure.
To determine the effect of inadequate
drainage, ditches have been built on
either side of the test road and ar-
ranged so that water can be turned
into them and raised to the height of
the sub-grade. Holes in the pave-
ment have been drilled with wooden
plugs, which can be easily removed
so that borings can be taken in the
sub-grade. The surface of the high-
way has been divided into six-foot
squares numbered and lettered so that
if a crack appears in any section it
will be recorded on a chart. Subse-
quently this chart will show the loca-
tion of each crack. The concrete
pavement varies in thickness from
five to eight inches, the engineers con-
sidering that anything less than five
inches is too shallow to merit consid-
eration."

MAIN TRUNK ROADS OPEN

CONDITION IN INLAND EMPIRE
IS FAIRLY GOOD.

Tourists and Local Travelers Able
to Reach Most Any Point on
Graveled Highways.

WALLA WALLA, Wash., Nov. 12.—
(Special).—Main trunk routes
throughout the inland empire are
open and in fairly good condition,
according to reports received by the
Tri-State Auto club. Dirt roads have
been improved by rains, but continued
rains will make them muddy and in
some instances impassable.

Tourists and local travel are able
to reach almost any point, however,
as there are gravelled roads nearly
everywhere.

Conditions in brief follow:
Walla Walla to Portland via Col-
umbia highway—Good all the way
via Pendleton, Umatilla, The Dalles
and Hood River, with exception of
section where paving is being done
near The Dalles. This stretch, how-
ever, can be made early in the morn-
ing after 6 o'clock, between 12:15 and
12:45 and just at 10 and 2 o'clock.

Walla Walla to Portland via North
Bank highway—Good via Pasco, Ken-
newick, Prosser, Goldendale. It can
be made via White Salmon and Van-
couver, but travelers are advised to
go from Goldendale to Maryhill, then
ferry to the Oregon side and take the
Columbia highway.

Walla Walla to Seattle—Good road
via Pasco, Kennewick, Prosser, Yaki-
ma, Ellensburg, with exception of
section to Ellensburg, which is poor.

Walla Walla to Spokane via Central
ferry—Good via Dayton, ferry, Col-
fax, with exception of detour between
Colfax and Skopac.

Walla Walla to Spokane via Lyons
ferry—Fair to good via Dixie, Walla-
burg, Starbuck, ferry, Ritzville and
Cheney. Paved Cheney to Spokane.

Walla Walla to Lewiston—Good via
Dayton to Dodge, fair to poor rest
of way. Roads out of Lewiston fair
to good. The best road to Lewiston
now is by way of Colfax, which is
about 30 miles further, but the trip
is an hour shorter going this way.

Walla Walla to points east via
Old Oregon trail; excellent for 65
miles via Pendleton to top of Blue
mountains; from there on to Holgate,
very bad, bad to La Grande, fair the
rest of the way.

More than 42 per cent of the sur-
faced roads in the United States are
gravel, 55.25 per cent are sand and clay,
10.98 per cent are asphalt and other
bituminous materials, 2.91 per cent are
concrete and .62 per cent are brick.

USE OF TRUCK HAS MEANT EXPANSION FOR HILLSBORO LUMBER COMPANY.



R. L. TUCKER LUMBER COMPANY TRUCK, WITH BIG LOAD OF CEILING.

Use of a Duplex motor truck, which the company recently purchased from the Shives Motor company of this city, local distributors, has meant expansion of business for the R. L. Tucker Lumber company, the leading company of its kind in Hillsboro. The truck has enabled the company to serve its customers more rapidly than ever before, it is stated, and has increased the territory throughout which the company operates. Deliveries are much more prompt and rapid than was possible with the old horse-drawn equipment. In the photo above the big Duplex is shown with a load of 3500 feet of ceiling.

BATTERY USER IS TAUGHT

EDUCATIONAL WORK PART OF
WILLARD SERVICE.

Car Owner Owes Much of Satisfac-
tion to Manufacturer and Per-
sonal Instructor.

How about tracing out trouble in the electrical circuits on your car, or correcting the timing of the motor, or grinding the valves? Could you do these things if either were necessary in an emergency?

Most garage men, and they are in position to know, believe that you are to be congratulated on your knowledge if you are one of the old-fashioned few who can do any of these things.

The long and short of it seems to be that the substantial construction of the car and its parts and the frequency of service stations makes all this "do it yourself" knowledge superfluous. The up-to-date driver, instead of loading up his memory with a mass of details, remembers only a few items of routine care—things that he must do to keep the car running smoothly and continuously. It is this sort of information that the industry has made popular.

Hardly a day goes by in any garage or service station without the men noting the effect of the educational work that has been done by the automobile manufacturers and car builders during the past few years. The storage battery in particular has received an unusual amount of attention. The Willard Storage Battery company has found that the greatest part of their sales and service work is really educational in nature, and that they must teach the battery user how to take care of his battery, according to a statement sent out by the Cleveland office.

There can be little doubt that the car owner owes a good deal of his satisfaction to the efforts of the manufacturers and car builders who have taught him what to do to keep each part of his car in prime condition.

"How can that little glass 'dolt' tell whether a battery is fully charged or not?" dubiously queries some fair lady motorists during the day's work at the average battery service station. And many a man would like to know more about the same subject, but he does not like to confess his ignorance—his curiosity is not quite so keen.

The explanation is simple indeed and very reasonable when one gives it sufficient consideration. It happens that the sulphuric acid used in a battery solution is heavier than water alone, and the hydrometer used for battery testing merely indicates the relative weight of the solution compared with the weight of pure water.

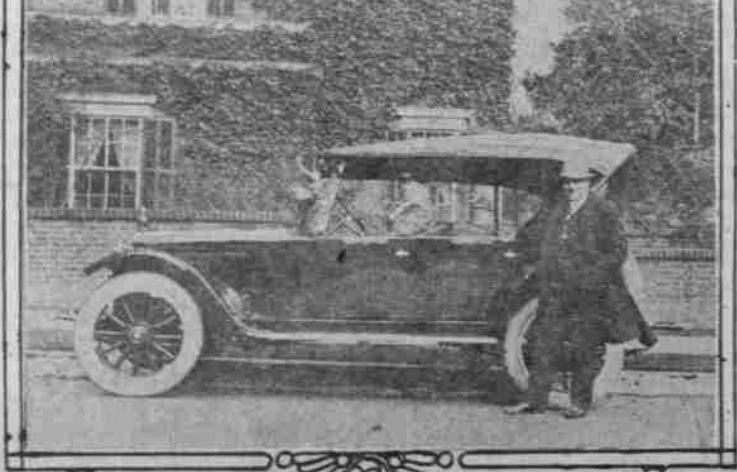
When a battery is discharged, a great amount of the acid in the battery solution has combined with the lead compounds in the plates. Naturally the solution is weak in acid and the float rises deep. But when the battery is fully charged and the acid is in the solution—the solution has become heavier—and the hydrometer float rises high.

The Willard Storage Battery company and many other manufacturers recommend the regular and frequent testing of batteries with the hydrometer. Unless a battery has been meddled with by some inexperienced person, this makes a reliable test of the state of charge.

TAX ON GASOLINE DESIRED
Sacramento Asks That California
Take Such Action.

SACRAMENTO, Cal., Nov. 12.—The highway committee of the chamber of commerce here is to ask the par-
liament to indorse the request that a 1-cent gasoline tax be included in

HERE'S THE FIRST OF THE NEW MODEL HUMPHRIES SOLD AFTER THE RECENT PRICE DROP.



MR. AND MRS. G. F. McDONALD AND NEW CAR RECENTLY DELIVERED TO THEM BY MANLEY AUTO COMPANY.

BAY OCEAN WANTS ROAD

CONNECTION WITH TILLAMOOK
IS BEING URGED.

County Ready to Go Ahead if Prop-
erty Owners Will Pay De-
linquent Taxes.

Construction of an automobile road from Tillamook to Bay Ocean, the popular beach resort on the southwest side of Tillamook bay, is being booted by residents of that section and owners of summer homes in Bay Ocean and vicinity, and it is hoped to have the road open by next summer.

Although Bay Ocean has three and one-half miles of parking of its own, it has been virtually isolated so far as auto traffic is concerned, as the road from Tillamook has not been completed. Tourists and summer residents at the beach have had to take the ferry across by next summer.

Bay Ocean is but nine miles from Tillamook, and construction of but a mile and one-half of road between the two points will give a continuous road, those familiar with that section state. At the present time the road from Tillamook towards Bay Ocean runs for four miles, or as far as the shipyard which was in use during the war. To add year-time work that road was put in good shape at that time and is still in good condition.

At the other end of the line the road from Bay Ocean extends three and one-half miles toward Tillamook and is in excellent shape. This leaves a gap of but a mile and one-half about half way between the two points. This stretch will be heavy construction, however, and it is estimated to cost \$25,000. Tillamook county is already behind the road and recently moved a donkey and steam shovel into that territory.

This equipment is being used by the county for the road, will be kept busy throughout the winter. R. D. Mitchell, postmaster at Bay Ocean, was in Portland last week, boasting for the road. The county court has promised to go ahead with the work if owners of property in that section will pay taxes now due or delinquent, according to Mitchell, and he spent considerable time during his visit here getting in touch with Portland owners of Bay Ocean property, numbering about 550.

If the road is built into Bay Ocean it is believed that the government will build a road to the lighthouse on Cape Mearns, Mitchell stated, and if so this would be an added attraction of the beach. At the present time there is a trail to the lighthouse, with grade not exceeding 7 per cent, and it is believed this could be widened into a road. A road development for that locality for some time in the future will be construction of a highway to the lighthouse on Cape Mearns, Mitchell stated. This would be one of the most scenic roads in Oregon, he declared.

NEW CADILLAC ROADSTER OUT
Large Luggage Compartment and
Rumble Seat Are Features.
The new roadster, type 61, Cadillac, which has just been put on the market, is receiving a great deal of attention from business and profes-
sional men, says a report from the Cadillac factory to H. M. Corey, local distributor.

It affords quick, sure transportation for those who wish to make trips about town, to suburban residences or the country club, in a hurry.

It has ample speed for all emergencies and its rakish lines make a marked appeal to those who insist on smartness in their motor cars, the report states.

The convenience of the roadster is added to by an unusually large luggage compartment.

Refined by FRED G. CLARK CO., Cleveland.
WIGGINS CO., Inc., Refinery Distributors, Portland.

Watch for list of Dealers who sell HyVis.

THE PENNSYLVANIA MOTOR OIL OF GUARANTEED SPECIFICATIONS

Accidents Are to Be Avoided

—if you will LOOK TO THE RIGHT AND GIVE THE RIGHT-OF-WAY.

But—if an accident is unavoidable, your car will be given prompt and efficient service at the right price at

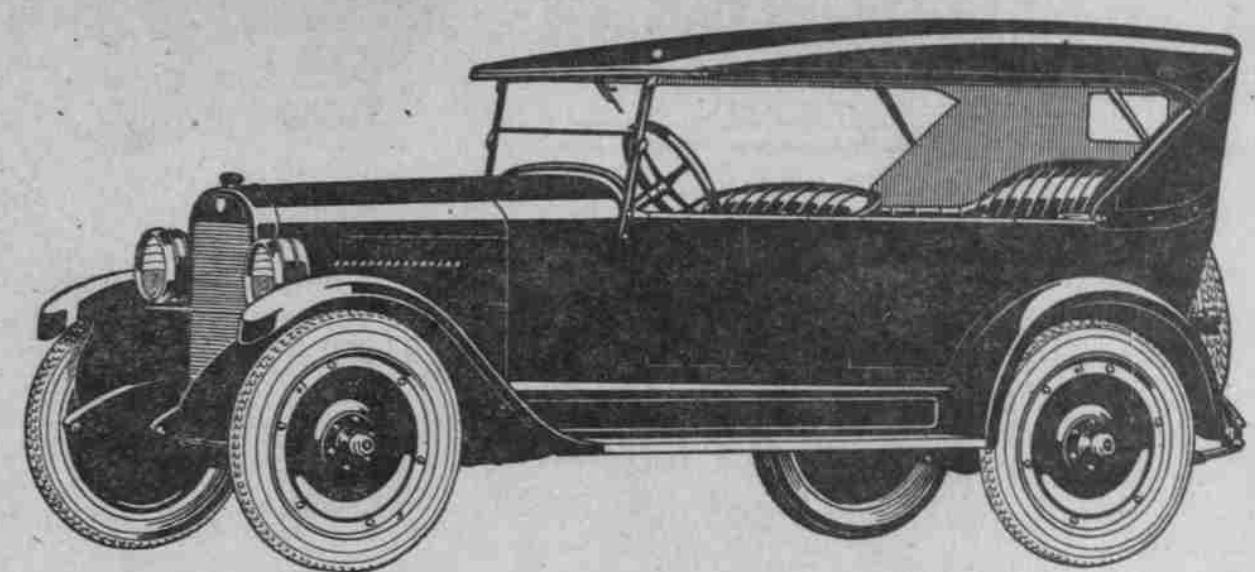
Broadway Gerber's 11th and 4331 Davis

"The Radiator Man"

Motor Equipment Co.
Piston Pins and Ring Specialists,
72 South Broadway, Near Oak.
Phone Broadway 3327, Portland, Or.

CAN YOU GUESS ITS NAME?

New Model of Famous Make of Automobile Will Soon Be on Market Here



This is a new model of one of the best-known cars in the land—one that has been on the market more than 15 years. Hundreds of Portlanders drive this make and it is sold by one of the leading automobile houses here.

This model is going to establish a new standard of appearance, service and price for cars of its class. It is equipped with steel wheels and is the last word in automobile design.

It will sell at a price that will take your breath.

Guess its name, if you can. Anyway, be prepared for one of the biggest announcements that has been made in automobile circles this year.

Get the picture of this car in your mind—there's going to be big news about it soon.

gage compartment under the rear deck and also an extra luggage space just back of the seat. The rear deck is designed to make possible the use of a concealed rumble seat for two.

A. A. A. OFFICIALS ON TOUR

Cleveland Six Roadster Being Used for Long Trip.

WASHINGTON, D. C., Nov. 12.—Promoting the interests of good roads, their construction and maintenance and strengthening the big, broad, national work of the American Automobile association, representatives of the A-A-A's organization re-

cently left Washington, D. C., on a tour which eventually will embrace the entire United States. A Cleveland Six roadster, in conjunction with an attached trailer carrying camping equipment and supplies, is being used by the A-A-A's representatives. The car carries the insignia of the organization and has already made its appearance in many localities throughout the east.

American Automobile association clubs, non-affiliated automobile clubs, all of the larger chambers of commerce of the country, good roads associations and similar allied clubs and organizations will be visited by the A-A-A's tour.

A tentative route of tour has been laid out for the A-A-A car and crew, but

weather conditions in various parts of the country will probably necessitate occasional changes in this plan. Points in the west, including San Francisco, Los Angeles, Oakland, Portland and Seattle, are on the route schedule; but it is believed that the coast points will not be reached before spring, unless the A-A-A's decide to ship the car and crew from some point in the east during the coming winter in order to take advantage of the good touring conditions which prevail there at a season of the year when it is practically at a standstill in the eastern parts of the country.

Drain Crank Case and Refill with HYVIS

THE specifications of HyVis Motor Oil—stamped on every drum—guarantees its uniform high quality. There is no guess work in buying HyVis. It is sold to dealers and users on the basis of guaranteed specifications—the recognized standard for measuring the quality of a motor oil. But the best way for you to know HyVis quality is to try it out in your own motor in actual service. Ask your dealer to drain your motor crankcase and refill with HyVis.

THE PENNSYLVANIA MOTOR OIL OF GUARANTEED SPECIFICATIONS

Refined by FRED G. CLARK CO., Cleveland.

WIGGINS CO., Inc., Refinery Distributors, Portland.

Watch for list of Dealers who sell HyVis.

We Announce a 20% Decline in Prices of

McClaren Autocrat Cord Tires

McClarens are recognized as leading non-skid and long-mileage tires.

You will have a new feeling of assurance and security against skidding when you ride on McClaren Cords.

Oregon Rubber Company

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Northwest Factory Distributors

Sold by Dealers Throughout the State