

ADVANTAGES FOUND IN ROADS OF BRICK

Agricultural Department in Bulletin Shows How Cost Is Regulated.

HIGHWAY HED BIG FACTOR

Rapid Increase of New Type of Road Is Noted Throughout Country. Easy Traction, Durability and Maintenance Are Favorable.

WASHINGTON, D. C., Sept. 25.—A rapid increase in the mileage of vitrified brick roads in this country is predicted in a new bulletin of the United States Department of Agriculture.

First, they are durable under all traffic conditions; second, they afford easy traction and moderately good foothold for horses; and third, they are easy to maintain and keep clean.

Local Conditions Affect Cost. The cost of a brick pavement depends so much upon so many variable factors such as the quality, freight rates and the distance from brick kilns that it is not possible to make any definite estimates.

However, should be considered entirely apart from the cost of the pavement, for the grading would have to be done no matter what kind of a road was to be built.

Delivery of Materials Assumed. In this formula C equals cost of cement, S equals cost of sand and aggregate, B equals cost of coarse paving bricks for 1000, and L equals cost of labor an hour.

Uniformity in Size Is Necessary. Paving bricks should be uniform in size, reasonably perfect in shape, tough in order to resist crushing, hard in order to resist abrasion, and uniformly graded in order that the pavement may wear evenly.

With good paving brick, the crushing strength varies from 10,000 pounds to 20,000 pounds a square inch when the load is applied uniformly over the entire top surface of the test specimen.

Loss in Weight Ascertained. Briefly the test consists of inclosing 10 dried bricks in a steel barrel in which there are 100 cast-iron spheres.

Road Bed Character Important. Equally important with the character of the brick is the character of the road bed on which it is to be laid.

Strong, desirable clumping is necessary for all brick pavements in order to prevent the material from coming displaced, which event would result in deterioration.

Many New Chassis Are Out. Cantilever Spring Shows Growth, While Others Revert to Type.

"Approximately a total of 100 different chassis models will be produced by American makers of motorcars during 1916," says V. Hartford, president of the Hartford Suspension Company.

"Of course it is without saying that, taking these 100 1916 chassis, the semi-elliptic front spring is used on nearly all of them, and that 65.62 per cent of them use the popular three-quarter elliptic rear spring.

"The cantilever spring is used on 21.74 per cent of the chassis—a rather surprising growth for a spring that has only been in use for two years."

BIG FIGHT CHAMPION BUYS AUTOMOBILE IN CHAMPIONSHIP TIME.



JESS WILLARD SOON AFTER BUYING A COLE EIGHT. Jess Willard, world's champion, broke another record in the purchase of an automobile. Just 20 minutes after he jumped into a big Cole Eight, the company had a roll of bills that represented the price of the car, and a telegram was on the way to Los Angeles to the local Cole dealer to deliver an "Eight" to Mrs. Willard.

WILLS ARE LAID TO WAR

Commodity Manufacturers Get Materials From Auto Men.

PACKARD PRICE TO RISE

Forces That Keep on Lookout for Needed Supplies Are Doubled at Many Factories in East.

Not a few of the automobile dealers and distributors of Portland are complaining that they cannot get deliveries from the factories.

Price of Packards to Rise. Frank C. Riggs, distributor for the Packard, received an announcement last week that the price on the new Packards would be raised between \$150 and \$200 and that it might go even higher.

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NOVEL AUTO IS LIKED

KISSEL "ALL-YEAR CAR" MEETS WITH BIG DEMAND. Machine Has Divided Front Seat and Only Two Doors and Can Be Entirely Closed In.

"The increasing announcements of so-called convertible cars justify the prediction of last Winter that Kissel's invention, the 'All-Year Car,' would be generally imitated."

"In May, 1914, the Kissels introduced for the first time in America the touring body design known as the corridor car, a car with a divided front seat and only two entrance doors. The favorable reception of this two-door design suggested the 'All-Year Car,' a plan scarcely feasible in connection with a four-door touring body, because of the necessarily makeshift appearance of the forward part of the car with the top attached."

"The 'All-Year Car,' which is now an established Kissel trade name, was first announced in August, 1914, and deliveries began almost immediately afterwards. It was an instantaneous success and constantly grew in favor until, at both New York and Chicago last Winter, it was one of the most widely discussed features of the big National automobile shows, among members of the industry as well as the public at large."

"It kept the Kissel plant running overtime during the usually lean months of Winter, and the season's indications are that it will be in universal demand. The new Kissel designs include a coupe as well as a sedan top. Both are built in the Kissel shops as an integral part of the car, which is largely the reason they are so different from any other convertible type."

"The 'All-Year Car' is just as complete, convenient and refined as a touring car, as it is handsome, comfortable and practical as a closed coach."

Aberdeen and Hoquiam Connected. ABERDEEN, Wash., Sept. 25.—(Special)—After several years of agitation for a hard surface inter-city highway, Aberdeen and Hoquiam will be connected with such a roadway Monday.

IOWANS REACH PORTLAND IN HUDSON AFTER DELIGHTFUL 3000-MILE TRIP. Hudson arrived in Portland last week on route to Los Angeles, where its occupants, Mr. and Mrs. C. M. Witt and their son, Leroy C. Witt, will pass the Winter before returning home.

On the Road Fixed for Action. HUDSON CAR AND IOWA PARTY ON WAY TO LOS ANGELES. Littered with dust after a 3000-mile drive from Neola, Ia., a husky 1913 Hudson arrived in Portland last week on route to Los Angeles, where its occupants, Mr. and Mrs. C. M. Witt and their son, Leroy C. Witt, will pass the Winter before returning home.

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828 AUTOS REGISTERED

GAIN SHOWN IN STATE FOR 30-DAY PERIOD. Eastern Oregon Counties Make Biggest Increase Between August 15 and September 15.

That 828 automobiles were registered in Oregon during the 30 days ending September 15 is shown by the statistical statements prepared last week by M. O. Wilkins, publisher of the Automobile Record.

For a similar period ending August 15 Mr. Wilkins' report shows 417 1915 models and 128 1914 models, or a total new business of 555 cars, making an increase for the month of 67 new cars.

These figures relate to the new automobiles passing into registration for the first time. This increase is noted from the report to come from Eastern Oregon principally.

The increase over last month in Union County was from 10 to 32, Wasco County from 12 to 15, Malheur County from five to nine, Sherman County from three to seven. In the central part of the state Marion County shows an increase from 21 to 48, Washington County from 19 to 20, Linn County from 14 to 18, Clackamas from 19 to 25, Douglas County shows a decrease from 17 to 16, Jacksons from 25 to 16, Josephine from six to two, while Klamath a little

more than holds its own with seven and eight.

However, the principal increase in business occurs in Multnomah County, where the automobile trade has been the most active in demonstrating new cars. Here we find the figure increasing from 188 to 257, an increase of 69 cars.

Commercial car business shows a loss, dropping from 16 cars, for 30 days ending August 15, to 12 cars for the same period ending September 15.

YELLOWSTONE RULES PLEASE. Assistant Secretary of State Proposes Auto Tour of Parks.

HELENA, Mont., Sept. 25.—According to Stephen T. Mather, assistant secretary of the Interior, who passed through Helena en route to Glacier Park, the regulations governing automobiles in Yellowstone National Park worked smoothly this year.

The total last year was 20,088 and this year 47,358. The larger number of tourists went into the park over the Oregon Short Line, the entries via Yellowstone being 29,922.

The number of machines entering the park was 904, carrying 3242 passengers. Mr. Mather said he would take up with the American Automobile Association when he returned to the East the question of having a large party of Eastern auto tourists visit all the National Parks next year.

The plan is to visit those in Colorado first, then north to the Yellowstone and Glacier and west to the coast.

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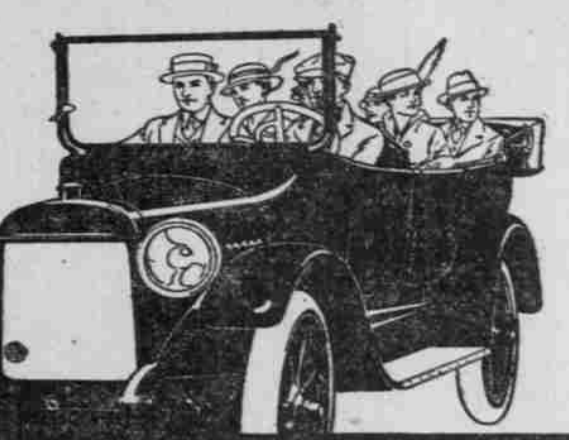
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Chalmers Six-40 \$1350



The Distinguishing Marks of a Distinguished Motor Car

No other car is so easily distinguished as a Chalmers Six-40 because no other car is so distinguished. Only one other American car has fenders like it—and its price is \$5000.

CHALMERS bodies are neither sprayed, dipped nor baked. Twenty-one operations are required to bring them up to Chalmers' "Quality First" standards.

No Car Has Better Finish. Chalmers finish is superfine "coach" work and no car can have better. The body is carefully prepared for the finish by the process known as sand-blasting.

The Pride of Distinction. There is a certain pride of distinctiveness in the ownership of your Chalmers Six-40. You have the consciousness of being well groomed—your car's apparel is of the best weave and fabric.

Comfortable as Any Priced Car. No car at any price can be more comfortable than the Chalmers Six-40. The rear springs are of special vanadium steel construction and are 57 inches long—the longest springs on any car in the world at the price.

But springs alone will not give comfort in a motor car; neither will upholstery. It takes just as much thought and manufacturing skill to build comfort into a car as it does to make it mechanically perfect.

The Chalmers "Six-40" seven-passenger model is a big, luxurious car, roomy enough for seven grown-ups to lean back and ride at ease. It is as comfortable as your favorite arm chair.

The deep seats which are upholstered in leather and the deep side-walls furnish a support for the body that eliminates all strain and fatigue from motoring.

20% More Power. The powerful valve-in-head motor is the same type with which DePalma's and Resta's \$20,000 racers were equipped when they won the Indianapolis and Chicago races at the undreamed of averages of 90, 98 and 102 miles an hour.

The performance of this motor is simply marvelous. It is the "20 per cent more power motor"—the motor all Europe was using when the war stopped operations there.

It has the pull of a locomotive—a giant's strength in a man's body. It is "trigger-quick" and gets away like a racer. It is always eagerly pulling, like a high-strung setter on the leash.

H. L. Keats Auto Co.

Broadway at Burnside Portland Seattle "Let your next car be a Chalmers"

GLUTCH IS FEATURE

Model on Maxwell Is Lasting and Smooth-Running. LUBRICATION IS BY BATH. Leather Facing Is Dispensed With and Almost Indestructible Fabric Is Substituted—Simplicity of Cones Is Commended.

"One of the few original mechanical features of the new automobile models, now gaining general circulation, is the use in the 1916 Maxwell of a cone clutch, usually housed and run in a bath of ordinary lubricating oil," says C. L. Boss, local Maxwell dealer.

"Just why nobody ever produced this plan before is a problem over which engineers generally are now vainly castigating their souls. For the Maxwell plan has so many advantages that it is almost impossible for anyone to appreciate its value."

"Smoothness Is Most Important. Most important is the smoothness with which the oiled clutch can be engaged. It is almost impossible for even a deliberately 'rough' driver to snap back the heads of his passengers by lunging the car forward after a stop. The oiled clutch cannot 'grab,' but must take hold gently, much to the comfort of those who ride behind it.

An approach to this Maxwell smoothness has been found in some cone clutch cars, the clutch-leathers of which have been laboriously soaked in neat-foot oil.

"The constant renewal of this supply has always been a burden, however, and few motorists have been conscientious in giving their car this attention."

"Permanence Is Big Factor. Second in importance is the advantage of permanence. By running the clutch in oil, the Maxwell engineers are able to dispense with the leather facing usually used in cone clutches, and have substituted an almost indestructible piece of anti-friction fabric. This fabric is heavily impregnated with asbestos and cannot be burned out. Relieved of the fear of burning leather, the clever driver is thereby assured ability to manipulate his clutch as he sees fit, slipping it intentionally whenever the process can ease the motor or increase the comfort of the car's passengers."

"The complication of a multiple-disc clutch always has been a bar to its adoption by manufacturers who build cars in large quantities."

"The simplicity of the cone clutch has commended it for use on probably nine out of ten cars sold in the United States. With the enclosed feature and the oil bath, added by the Maxwell

engineers, motorists have now at hand a device which, in the judgment of engineers, approaches close to perfection."

DAIRY LAND SCHEME IS NEW. Realty Company Sells 70 Acres in Willamette Valley. A new departure has been inaugurated by the firm of Hartman & Thompson in developing the holdings of the Willamette Valley Irrigated Land Company, located between Turner and West Stayton, into dairy farms.

WALTER'S FREE TIRE SERVICE

Anywhere within a 10-mile radius of our store, day and night, we furnish ALL BRANDS OF TIRES. All you pay is regular retail price—No service charges. DO NOT FEE SERVICE MAN. Tube Vulcanizing. Our Specialty. John A. Walter Co., Inc. Broadway at Ankeny Broadway 2490

GASOLINE 11c

Monamobile Oil, Paraffine Base, Open Day and Night, at Same Price.

Stanley Garage and Machine Works

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