

ON THE BARNES ROAD IN A NEW LIBERTY SIX.

FUNCTIONS OF PISTON RINGS ARE EXPLAINED

Efficiency of Packing Depends on Keeping Pressure.

TIGHT FIT IS ESSENTIAL

Softer Substance Necessary for Moving Parts to Prevent Wear on Cylinder Walls.

Piston rings perform a vital function in the automotive engine, for upon them depends whether all the force put into the cylinder is used to create power. Should a part of this force escape and be wasted it means unnecessary fuel consumption.

Piston ring efficiency is based entirely upon the rings forming a perfect packing between piston and cylinder walls, and as the piston must be slightly smaller than the cylinder to allow for expansion when heated, the ring, to perform its proper function, must of necessity be so constructed that the expansion or pressure against the cylinder wall will be uniform at all points. In addition, the ring should be so constructed that it will not in any manner injure the cylinder walls by scoring them or scoring them and at the same time must have lasting or staying qualities.

Rings Made in Two Ways.

Piston rings are divided into two classes, the one-piece ring and the multi-piece ring composed of two or more pieces. Likewise they are divided into two processes of manufacture, separately poured, individual castings and those made from larger or pot castings. The small individual castings are much closer grained, have fewer flaws, certain less hard spots besides having greater tensile strength by more than 2000 pounds a square inch than do pot castings. The individual castings cost from three to five times the price paid for pot castings, and are made from virgin iron, while pot castings may contain a quantity of old iron remelted, which not only weakens, but hardens the ring. A piston ring must necessarily be of softer material than the cylinder walls, or the constant friction will wear the cylinder wall, necessitating regrounding and buying new pistons.

It is without question the best engineering practice to use one-piece piston rings, as has been proven many times by engineering laboratory tests conducted by large companies, who after conducting many of the exhaust tests adopt one-piece piston rings. They are more easily placed on the piston, less liable to breakage and perform their function longer and better than the multi-piece ring.

Scale Is Important.

The outer crust or scale of cast iron gives it added life, tensile strength and spring where it is used under intense heat, as is the case with piston rings, and to obtain the best result any piston must have this scale left on the inside. Where the scale is removed the ring soon loses its life, just as an apple will rot if the skin is removed and very shortly falls to pieces even and firmly against the cylinder walls, thus allowing compression to escape and oil leakage, so detrimental to motors.

It is practically impossible to leave the scale on multi-piece rings, because it is necessary to grind them so the pieces will fit closely together and this accounts in a measure for their short life. The joint or tension that is so essential to piston ring perfection. To obtain this tension or uniform pressure against the cylinder walls at all points the best type one-piece rings are cast out of round a sufficient amount of the rings, small pieces taken out of the rings when the joint is cut.

There is a different joint for every make of ring, but the principle of construction is essential to a good ring. At the same time the joint must be so constructed that the cylinder and ring wear and the joint expands it will close tightly to prevent gas and compression escape and still keep the oil out of the combustion chamber.

FIVE ENTER AUTO RACES

DURANT TO BE SEEN IN ACTION AT LOS ANGELES.

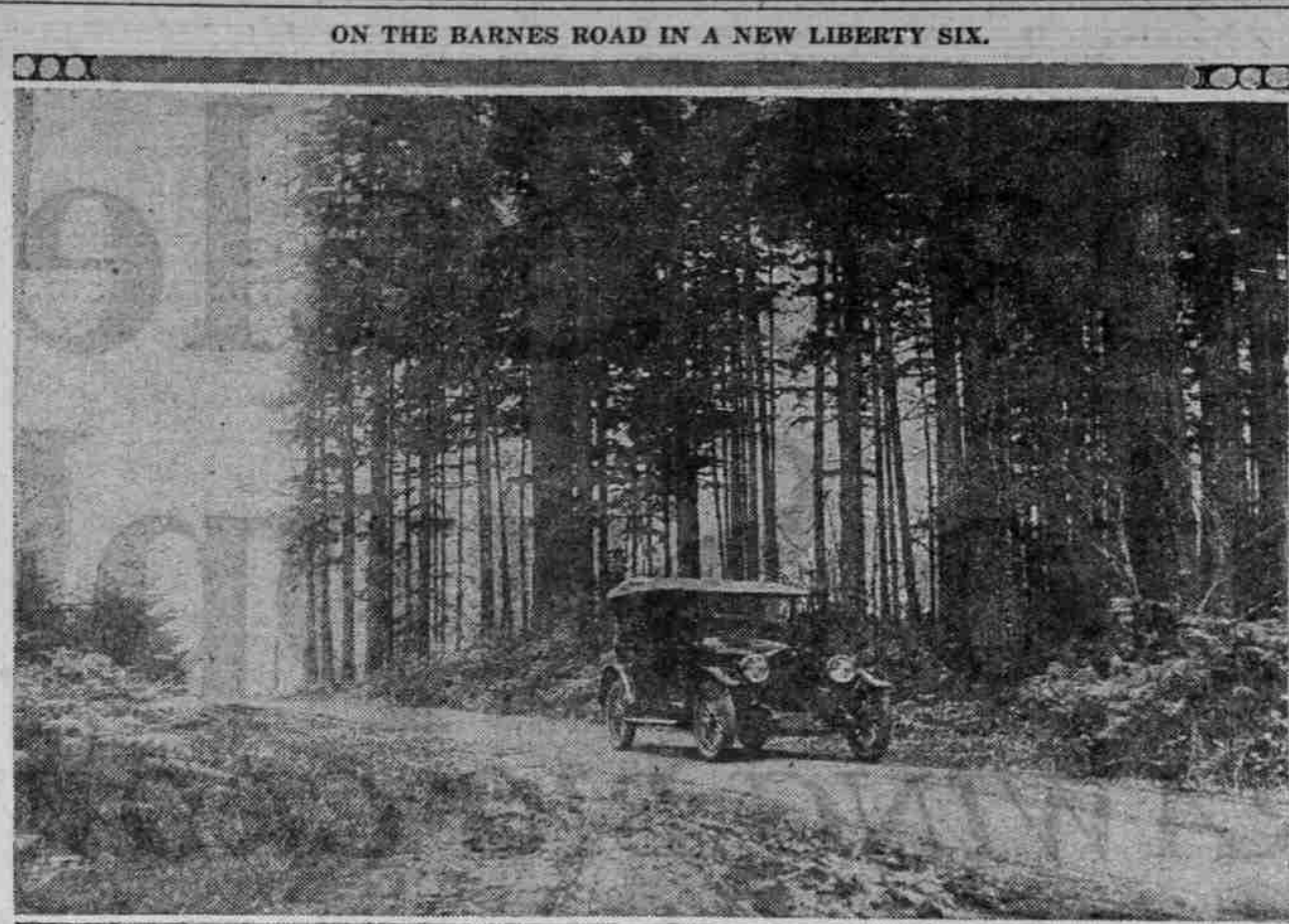
Manufacturer, Aviator and Auto Racer Leads List of Entries for February 21 Event.

LOS ANGELES, Jan. 17.—Five entries for the opening race on the new Los Angeles Speedway at Beverly Hills on February 21 have been announced by Manager A. M. Young of the Los Angeles Speedway association. As was to be expected from his well-known preference for the numeral "1" as a decoration for his speed car, Cliff Durant, automobile manufacturer, aviator and racing driver, led the list of entries, his entry having been on file ever since the first issuance of the blanks, according to Manager Young. Durant is likewise the first entrant for the Indianapolis race this year, according to dispatches from that city, and it seems certain that if any luck does attach to No. 1, Durant will be in a position to grab it in the two major events of the opening of the racing year.

Whether Durant will drive a 200-cubic inch Chevrolet special or the new small car that he is having built at the Chevrolet factory at Oakland is still a matter of doubt. The new car is built to conform to the 183-cubic inch piston limits that will rule at Indianapolis this year, yet reports of its preliminary trials credit it with speed that will enable it to meet the 200-inch cars and ask no odds of any of them. It is very possible that Durant may elect to drive the new little racer and it is certain that if he does the performance of the car will be watched with the keenest possible interest.

In addition to the car that he will drive himself, Durant made a second entry, but did not name the driver who will handle the wheel. Announcement as to who will drive the second Chevrolet special is shortly expected, however.

The trio of light, tremendously fast Frontenac racers also signed up this week for the opening classic on the speedway. Roscoe Saries will pilot one of the cars, Joe Thomas and K. V. Goodson entering the other two. Saries needs no introduction to speed fans anywhere. His record for 1919 won him second place in the official rating of Motor Age, just published this week. Thomas is well known through his long association



One of the many attractive spots on this scenic road, which leaves Portland from the head of Washington street. W. C. Montgomery, Liberty salesman for the W. H. Wallingford company, driving the car.

with the Mercedes racing team and Goodson has been associated with Louis and Gaston Chevrolet and is thoroughly familiar with the Frontenac cars.

The fact that the race on February 21 will carry a purse of \$25,000 and that it will be the first speedway contest of 1930 to be recognized as a championship event by the A. A. A. in making their official rating of the leading lights of the eastern racing scene, in order to give the drivers as much opportunity as possible for practice.

With only about six weeks remaining before the big event, work on the completion of the track and grandstands is proceeding with utmost rapidity, in order to give the drivers as much opportunity as possible for practice.

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TYRUS COBB SELLS TIRES

DIAMOND IS PREFIX TO NAME OF BASEBALL PLAYER.

Big Leaguer Arranges to Transfer Active Interests to Big Tire-Selling Organization.

Now it's Diamond Tyrus Cobb. The greatest baseball player of the universe has a new prefix to his name. And it is of his own selection. No baseball scribe handed him the new moniker. Cobb selected this name from among more than 200, and it wasn't any "hit-or-miss" choice either. Furthermore, he didn't elect to be called "Diamond Tyrus" wholly because of his affection for the great sport played on the diamond. That was only part of his reason.

His new title comes from what is to be his post-baseball avocation. Cobb is now a full-fledged automobile tire distributor. He is distributor for Diamond tires in northern Georgia. Reports from Augusta, headquarters for Ty's company, say that he has entered the tire business with the same dash and enthusiasm he displays in circling the bases or swatting a baseball.

Diamond Tyrus is in the tire game to stay longer than the long term of years he has cavorted on the baseball field. He foresees that only superhuman energy could see him through indefinitely as America's premier diamond star. And Cobb had long since decided that he would remain in the game as an ordinary player. He began to lay plans for a business future.

"I am arranging to transfer my active interests from the baseball diamond to the Diamond," is the way Ty himself puts it. When he drops his mighty bat to grasp the reins of his tire selling organization, Cobb will have his new venture well under way. His recently closed contract with the rubber company called for a large initial order and even now Georgians are riding tires sold them by their "favorite son."

During his career as a "big leaguer" Cobb has earned the most enviable record of any American athlete, no matter what the sport. Year after year he has led both major leagues in either batting or base running, or both. For nearly a score of years Ty has been nearer the 400 mark than the "paltry" 300 score sought by most high-class ballplayers. Cobb's speed and daring as a base runner and a stealer has never been equaled. 1919 rounded out his 14th year in baseball's fastest company.

Baseball records show that Cobb made his debut in Augusta in the spring of 1901 and that before fall he was a member of Detroit Tigers, by the purchase route. On the renowned 1905 August team with Cobb were three other players who afterwards figured in world's series battles. They were "Nap" Rucker, Clyde Engle and Eddie Cicotte.

Georgia folks declare that Diamond Tyrus is a keen business man. They say everything he touches "turns to money." He has always had a hankering for the automobile business, especially the tire end. Cobb has been an ardent motorist for years.

In business, as in baseball, he will be "champion of the Diamond," says his partner and pal, Bill Sanford, who is assisting the "Georgia Peach" in establishing a "hit" record with automobile owners.

Reinforcing Seat Covers.

The seat covers used in motor cars generally wear first at the seams. In order to prevent this it is a good plan to reinforce the seams by sewing over

them a strip of imitation leather about an inch wide. The strips are sewed to the cover cloth on each side of the seam. This reinforcement also prevents dust from accumulating in the seams and thereby adds to the cleanliness of the cover.

GEORGIA STUNG ON TRUCKS

Army Vehicles Are in Too Poor Condition to Operate.

ATLANTA, Ga., Jan. 17.—The public works committee of the Fulton county board of commissioners has notified the state highway department that it would not accept any more army trucks and that the six trucks now on hand would be returned to the government. This action was taken following a report which showed that the trucks were in such bad condition that they were not worth the freight it cost to get them here, and the expense of having them inspected by an expert. The report stated that the six trucks now on hand have spent most of their time in the repair shops and have given very little service.

STANDARD CAR POWERFUL

EIGHT MAKES HIGH GEAR IN EASTERN STATES.

Express Train Time Is Bettered in Dash From Pittsburgh to New York.

The following account of the performance of a Standard eight in a run from Pittsburgh to New York in high gear, the time of the trip beating that of railroad trains, appeared in a recent issue of the Seattle Times. The Standard eight, which is handled here by the Lewis E. Obye Motors company, only recently arrived in this territory. Here are extracts from the account:

"Over Lincoln highway from Pittsburgh to New York in high gear, carrying seven passengers on the trip and mounting to elevations of 3300 feet, is the record recently established by the new Standard eight. The Standard made the trip as fast as the swiftest express train. The time is considered one of the most remarkable high gear tests ever made by a motor car."

"Power has always been the outstanding feature of Standard eight," says The Times. "The first model was a powerful car, and the only variance—year to year—from the original chassis has been progressive in power, with its inseparable elements of greater endurance, wider range of utility, thorough dependability, more decided economy of operation and maintenance. In the present model a stabilized design has been reached that the car expresses permanence of structure, vivid ruggedness and very manifest value."

"Its tremendous driving power directly applied is constantly indicated from the driving wheels, as they send the car over the road with the smoothness of flowing water superior to difficulty, accommodated to obstruction, silent, irresistible; or, climbing like a thing of air, with the swish of wings floating into the greater altitudes that are impossible to equal horsepower indirectly applied."

"Many of the most formidable hill obstacles in the country have been easily taken by Standard eight in high—among them George's hill, New York; Hermit Lane hill, Philadelphia; the big foothills and great ranges of the Alleghenias and Blue

Ridge. Mountain heights are as levels before its master power. "It is the car of superior service and ultimate performance, results accumulating from direct production by Standard Steel Car company, in one of the company's 15 great initial plants for steelmaking and railway rolling stock construction. In the research laboratories have been developed a special steel for every vital part of the Standard eight, and from the company's own converters these steels go into Standard machine shops, where supervision of car production in every detail is the most exacting known to this industry."

LE MANS RACE IN SEPTEMBER

French Grand Prix to Be Over a Course of 500 Miles.

The grand prix de France will be run next September over a fast course near Le Mans, according to advices received here. A cylindrical capacity of 183 cubic inches and a minimum weight of 1653 pounds will be the essential conditions of the European classic.

The race will be for a distance of about 500 miles over roads which will be treated with tar before the race in order to make them dustless. The race is not being held by the Automobile Club of France, as in the past, but by the provincial clubs of Sarthe.

Italy also proposes to hold a good race next fall for machines having a maximum cylindrical capacity of 183 cubic inches. It is believed that the course will be over a set of fast roads in the neighborhood of Brescia.

Longer Tube Life.

When the car owner lets his rims become badly rusted, rough particles of the rust and scale act as sandpaper would on the inner tube and the result is a worn spot and a premature blow. An occasional coat of aluminum paint when the tires are removed will act to prevent rusting and give longer life to the tubes.

PEACE OFFICERS POETIC

HOOD RIVER SHERIFF WARNS MOTORISTS IN RHYME.

Poetic Advertisement Starts Out Mildly Enough, but Ends With a Real D'Annunzio Kick.

HOOD RIVER, Or., Jan. 17.—(Special.)—Because the usual formal warnings that Hood River county and city authorities have issued to automobile drivers in former seasons seem to have been in vain, so far as putting a stop to speeding is concerned, Deputy Sheriff Hughes, instructed by Sheriff Johnson to write a notice for this year, was inspired to rhyme.

Mr. Hughes' warning notice, tendered to local papers for publication as an official advertisement, follows: The notice is signed by Sheriff Johnson and City Marshal Frazier.

AUTO OWNERS AND DRIVERS
On Hood River roads,
You're warned for the future—
Don't haul overloads.
Two lights are required
On the front of your car
And one in the rear
To be seen from afar;
The speed of your car
You will have to control,
Or sheriff or constable
Will surely ask toll.
There are other requirements
Laid down by the state
You will have to abide by
Or "toll" be too late.
The city and county
Have agreed a warning
Three laws of the road
As a matter of course.
The first of next month
Is the day set apart
For rigid enforcement.
Of these rules to start:
No day of grace
After will be given;
No excuses accepted,
No offenses forgiven.

Don't drive without adequate lights.

Ford

THE UNIVERSAL CAR

Quick Delivery

"When can you send it?" "Can I get it today?" These are questions of vital importance to you and to your business.

"It will be there before noon"—"Before 5 o'clock"—"It will be there before you get home"—these are answers that impress customers and increase sales.

Equip your delivery service with Ford One-Ton trucks. Each one can be made to take the place of three horses and three men. The Ford truck is the most economical and efficient quick transportation possible. You may pay more but you cannot buy more than the Ford truck gives you—the highest quality worm-driven truck at the lowest price; the greatest dependability and most service with the lowest upkeep.

Get this wonderful truck working for you. Standardize on Ford trucks and Ford cars for your business needs.

Place your order now. Delivery when wanted is possible by ordering now before the overwhelming spring demand begins.

Runabout \$500
Touring Car \$525
Self-Starter \$75 Extra

Truck Chassis \$550
These Prices F. O. B.
Detroit

Coupelet \$750
Sedan \$875
Equipped With Self-Starter

For Sale by the Following Authorized City Dealers:

Wm. L. Hughson Co.
Broadway and Davis

Rushlight & Penney
East Third and Broadway

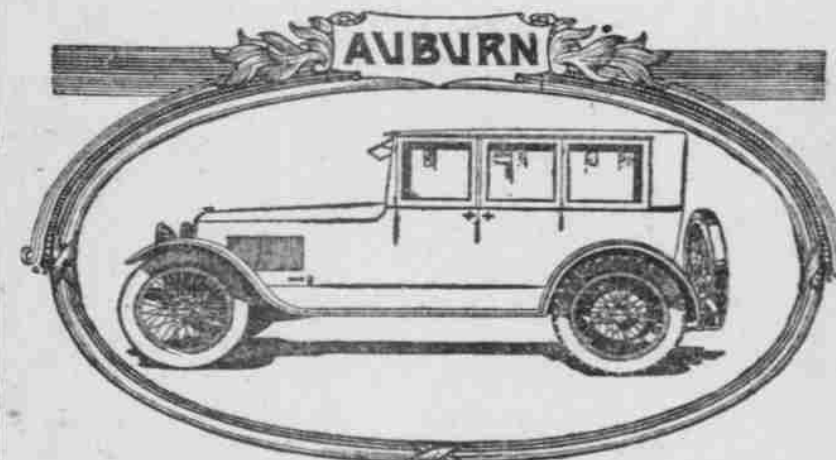
Robinson-Smith Co.
Sixth and Madison

Talbot & Casey
East Ankeny and Grand

Francis Motor Car Co.
East 13th and Hawthorne

Palace Garage Co.
Twelfth and Stark

A \$25.00 Deposit Places Your Order on File



AUBURN Beauty-SIX Sedan

The Auburn Beauty-SIX Sedan pre-eminently satisfies the demand for a car of year-round service-ability and distinctive elegance.

Its lines are bold, radical and sweeping, yet neither ultra-modish nor freakish. It embodies every refinement of appointments, every luxury of comfort known to motor car designers. Pride of possession, engendered by the Auburn's beauty, is enhanced by its performance.

Sedan	\$2775
Coupe	\$2775
Touring Car	\$1795
Tourster	\$1795
Roadster	\$1845

Demonstration on Request. Auburn Beauty-SIX DeLuxe Catalogue Now Ready.

AUBURN AUTOMOBILE COMPANY
Auburn, Indiana
Automobile Engineers for Twenty Years

Auto Sales Co.
Ninth and Couch Sts.

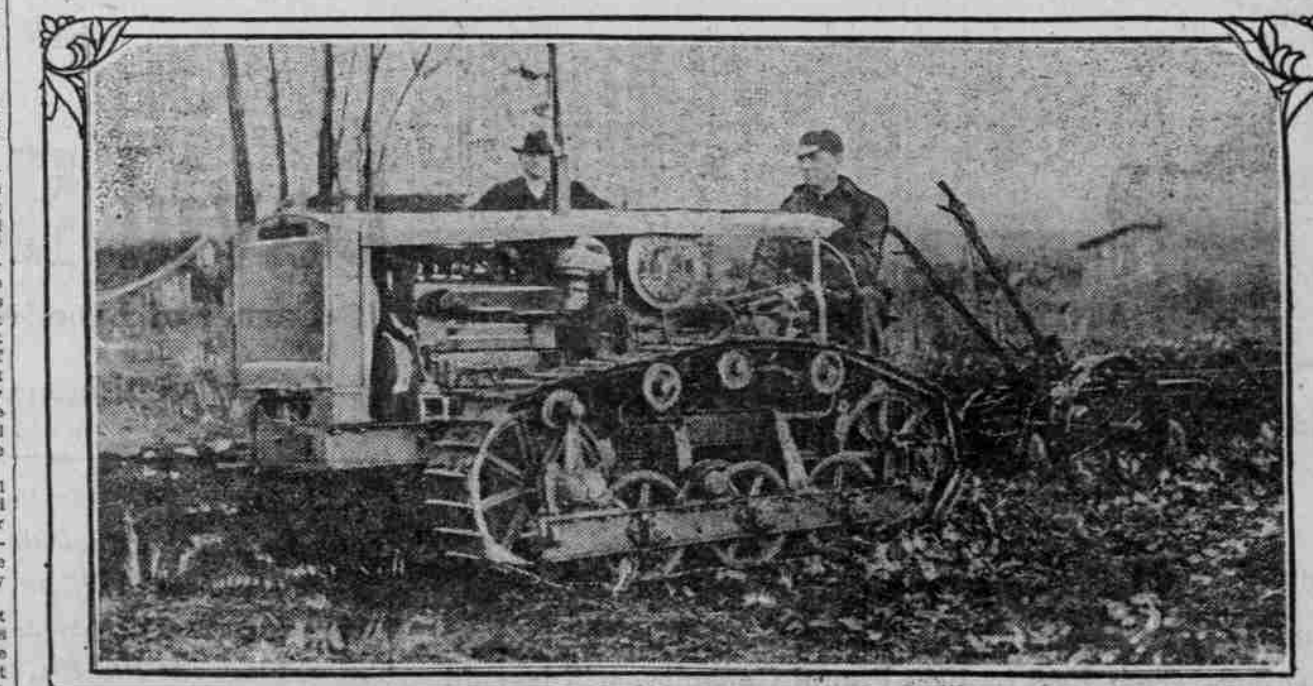
DIAMOND



—the nation's freight car—
Ask Nick Spady
763 East 10th St. N.
what he thinks of Diamond T Trucks and Service.

Diamond T Truck Sales Agency
89-91 North Ninth Street. Phone Broadway 476

NEW SMALL SIZE MONARCH TRACTOR ESPECIALLY ADAPTED TO ORCHARD WORK.



HERE IS THE NEW LIGHTFOOT MONARCH TRACTOR MODEL JUST RECEIVED BY THE MITCHELL, LEWIS & STAYEN COMPANY, WHICH DISTRIBUTES IT IN THE NORTHWEST. This tractor has been tried out under various field conditions throughout the northwest. In the photograph a Monarch is shown pulling a two-bottom, 14-inch plow. It is rated at 16-horsepower on the belt and 9-horsepower on the drawbar. It is only 50 inches high, which makes it especially adapted to orchard work. Features of this small-size Monarch are short turning radius and an unusual amount of traction surface.