

Fifty Persons in Ten Automobiles on DYNAMO SUPPLIES THE CURBENT 4,000-Mile Tour, New York to Los Angeles.

pathfinder, A. L. Westgard.

The promoters have the assistance and

p-operation of the American Automobile

Electricity to Start Motor, Light the Car and Perform Other Unique Service on the 1912 Models.

motor is started and ignited, and whose start to finish will cover fully 4,060 miles. lamps are lighted by electric current from from New York to Los Angelas. The route are lacking the same sources--- dynamo on the motor. Never before, in a gasoline car, has known as "The Trail to Sunset," officially electricity been utilized to such an extent. surveyed last fall by the automobilist and The adoption of the dyname for ignition supplants the usual magneto. The driver has two complete ignition sources at his command-the dynamo and the Delco distributer system, each with its individual set of spark plugs.

The electrical plant consists of a comsuch an expedition. pact and powerful dynamo which is operated by the engine and charges a storage battery.

To start the motor the operator simply retards the spark lever and disengages the clutch

When the clutch pedal is pushed forward, automatic engagement is made between a gear on the dynamo and gear teeth on the engine fly-wheel. The current from the storage battery operates the dynamo, which becomes an electric motor for the moment-and the engine is "turned over" the same as if the operator were in front of the car using the old style crank.

As soon as the engine begins to draw in the gas from the carburstor and runs on its own power, the operator releases the pressure on the clutch pedal and immediately the motor gear disengages its connection with the engine and the car is ready to be driven. The dynamo then resumes its function as a generator and its energy is devoted to ignition and to charging the storage battery. This has a capacity of 50 ampere-hours, and as soon as that capacity is reached, the charging automatically ceases.

Practical Tests Satisfactory. Practical tests have shown that the storage battery is of sufficient capacity to operate the starting device and "turn over" the engine for a space of about twenty minutes, although it seldom requires more than a second or two to start the engine. In fact, the Cadillac engine so frequently starts on the spark that the use of the electrical starter is not always required.

The storage battery also supplies the current for lighting. The car is equipped with two specially designed electric headlights, with adjustable lamps to focus the rays properly-two front side lamps, tail lamps and speedometer lamp.

The dynamo also supplies current for ignition. Up to 280 to 800 R. P. M. the ignition current comes from the storage battery, while above that speed it is direct from the dynamo through the high tension distributor to the spark plugs. For ignition purposes the dynamo performs not only all the functions of the most highly developed magneto, but possess even greater efficiency, having more flexibility. and a greater range of action. When compelled to drive slowly in crowded thoroughfares, over very bad roads or on hills, with the usual magneto the driver may stall his motor, because the magneto is not driven fast enough to generate current, and it becomes necessary to switch for the battery, if he has one. With the Cadillac system, if it becomes necessary to drive so slowly that sufficient current is not generated, the battery automatically suts in. When the speed is increased, the fynamo again automatically takes hold. It wholly obviates the necessity of the driver's keeping continually on the alert to prevent stalling the motor.

general run of transcontinental tours, in that comfort and a route of unusual interest have been considered above speed. The to Start October Two day's run will average less than 100 miles and every Sunday is scheduled as a day of

against accidents and delay. The party will be accompanied by a Garfield motor truck equipped with spare parts, extra tires, tubes, etc., in charge of an expert NEW YORK, Aug. 36 -A novel transconmechanician. The truck, which will, be tigental automobile tour will leave this city high-geared and capable of good speed. on October 2. This tour will be on a scale will carry part of the hand baggage so as The usual policy of the Cadillac Mo- and plan that has not hitherto been at- not to overcrowd the cars with bagsage. tor Car company to produce the ex. tempted. Fifty persons in ten seven-pas. Through New Mexico and Arizona a comceptional brings out for 1912 a car whose renger cars will make the trip, which from missary and camping outfit will also be carried for the few occasions where hotels chosen for this coast to coast tour is that In selecting early October for the start

the tour can safely count on fine weather throughout.

> Sunflower Philosophy. White Hes get soiled almost as easily as

association representative, Westgard, will If the successful suitor gets her mother's consent, he has a majority sufficient to pilot the tour. Having driven over this route twice within the last eight months. what has become of the old-fashioned red petticoat with which the midnight ex-press used to be flagged and saved -Atchison Globe. no one is better equipped than he to lead

The idea seems to be a variation from the

Autos in Road Race Hope of Gotham Men

> Will Not Prevent a Little Sport.

mobile association took the Vanderbilt cup country. and deposited it in Savannah, motorists

liced circuit of Savannah transplanted to thoughts of reckless spectators encroach Long Island. For the first time in the ing upon the course, are able to give all history of automobile racing on Long their attention to the steering wheel and island regular state militia will patrol urge their mounts to records. In Indiana, the course, holding in check the surge of at the Lowell-Crown Point races two years

forms and allining gun-barrels imply. as past Vanderbilts have been. This militia policing is an absolutely surety.

will guard the course. The order has been signed by the brigadier general and has been forwarded to Washington. Assurances have been received by W. J. Dallon

who is premoting the race, that the order NEW YORK. Aug. M-High-powered will be returned with the approval of the machines will plunge through clouds of powers that are. "This lining of the roads sasoline and dust in road-racing competi- by the soldiery will make the race the ion on Long Island this autumn. After most picturesque event of its kind that months of regret that the American Auto- has ever been held in this section of the

Savannah has had the troops for its hereabouts will be pleased to hear that Grand Prize cup contests in the past. big road meeting will, after all, be held That's why Savannah has come to be near this city. On September 30, a race looked upon as the best place to hold will be run at Riverhead. It will be an automobile races. No crowds press forunusual race-cars will rumble between ward on the turns at Savannah. There lines of bristling bayonets held by troops are bayonets to stop them. Also, that is in uniform.' It will be the perfectly po- why the drivers unhampered by any

the crowds by all that their militant uni- ago, they had the militia, too. The same the Fourth Baptist Church Vacation Bible Philadelphia North American

It ise a distinct innovation and should conditions will feature the contest at make the Riverhead event as important Riverhead, and for the first time hereguarded properly. That this will boom the racing game in the vicinity of the Great precaution will be taken to provide Taking of Vanderbilt Cup to Savannah The Forty-seventh regiment of Brooklyn greater city there is no doubt. Given the

same tools to work with, what Savannah has done. Long Island can do. HONEY BEES WITHOUT A STING

Children Play with Handfuls of Them and Not a Child Feels the Stinger.

Two hundred children playing with \$5,000

delphis. The children were members of the vaca- the hypnotizing, or demoralizing, as the tion Bible schools of the Fourth Baptist experts call it, and the busy little honey and Northern - Liberty Presbyterian makers were perfectly harmless. churches and the bees were inhabitants of To prove that the demonstration wa

company building, 8 and 10 Vine etreet.

perfect conditions prevailed More these school, the children saw the bers being "hypnotised." and then gave practical demonstration of their belief that the abouts a good speed circuit will have been sects were harmless by holding them their hands.

In addition to demonstrating now the bees could be hypnotized, or demoralized. Mr. Beiser gave a lecture, in which he told | the children how the bees so about their work and how they "stay on the job" un ul they accomplish what they set out to do When the children were taken to the roof they were fearful of the buzzing little

insects Half an hour later they had lost their fear and all were convinced that bees are nociable, despite their reputation for stinging.

When the smoke had thoroughly frightve honey bees on the roof of a city build- ened the bees Mr. Belser dumped them ing furnished an unusual sight in Phila- into a cone-shaped funnel. From this they dropped into a tin scoop. This completed

an aplary on the roof of the A. I. Root successful Mr. Selser dumped the 25.00 bees into the outstretched hands of the As guests of W. A. Selser, manager of children. Their silence gave ample evithe apiary company and superintendent of dence that the bees were hypnotized.

Cadillac progress

in scientific research marks a well defined line between the motor car of the past and the motor car of now

Automatic electric starting device. Electric lights. Two complete ignition systems. Scientifically developed carburetor. More Power. Larger wheels and tires. Larger brake drums. Steel bodies of latest accepted designs. Numerous refinements of essential details.

The improvements incorporated in this year's specifications will give a pronounced impetus to the conditions which have constituted the Cadillac a law unto itself.

These improvements are obviously the result of an economic and evolutionary development; hence, it is useless to seek them elsewhere. They are the fruits of Cadillac research; of close and accurate measurement; and of scientific standardization.

The simple, centralized, Delco system of starting, igniting and lighting is merely a phase, or an integral part of that process.

To combine these elements of efficiency, for the first time, in a unit, exercising the three separate functions, is of itself an interesting achievement, although such a system as an adjunct to an indifferent car, would be of doubtful value.

Auxiliary Distribution. In addition to this ignition, the Cadillac is provided with the auxiliary Delco distributor system. This is separate and distinct, with its own act of spark plugs. and in itself is thoroughly efficient for running the car, entirely independent of the main system.

The entire electrical plant has been designed with a view to compactness and efficiency, simplicity and positiveness; and to obviate, as far as possible, the necessity of attention

The Cadillac company makes but one type of chassis, but offer a line of six different types of bodies, vis: Five-passenger touring car, four-passenger phaeton and two-passenger roadster, each \$1,800; fourpassenger torpedc, at \$1,900; three-passenger coupe, at \$2,250, and seven-passenger limousine, at \$3,250.

Other noteworthy improvements are made in the 1912 car, the more important of which are increased power, larger wheels, larger tires and larger brake drums; increase in the gasoline capacity of all models and a gasoline gauge on the dash

The size of the cylinders is not increased, but the increase of power is gained in other ways. For instance, the valve openings are larger, the intake manifold is larger and the shape changed to insure more uniform distribution of the gas to the cylinders, and a new carburetor, of Cadillac design, is developed in the Cadillac laboratories, is used. Not only does it simplify adjustments, but has maximum efficiency and flexibility from low to high speeds. The only adjustment to be changed under varying conditions is the air, which is controlled by a small lever the steering wheel.

In the transmission the front and rear drive shaft bearings are made oil tight by the addition of stuffing boxes.

The rear axle is of the same general construction as 1911, with some improved details, the principal change being in the brake and hub clutch. The rear hub will be shorter, and the brakes are increased from fourteen inches to seventeen inches in diameter, with an improvement in the brake operating mechanism.

Down, Where It's Hot.

The deepest hole in the world up to date is the boring bagun ten years ago at Cauchow, Silesia, with the object of attaining a depth of 2,500 meters, and which has now reached a depth of 2.340 meters (7.349 feet). The bore is forty-four centimeters in diameter at the top and diminishes progressively to five centimeters. Measurements of tem-perature have been made regularly. At 3.100 meters the temperature is 514 degrees C. (182 degrees F.). This gives a "geo-thermic degree" (amount of descent corre-sponding to a rise of temperature of 1 de-gree C.) of 31.5 meters. The change of tem-perature does not proceed uniformly. In fact, an interesting "temperature inver-sion" occurs between the depth of 640 and 1780 meters, where the temperature actually falls, with descent, about two degrees.)-Scientific American. to five centimeters. Measurements of tem-

Little Surprises.

"Mister, you left this diamond shirt stud in your laundry last Monday." "Hello: Is that Mr. Smithers? . . . This

is your bast girl!" "Mrs. Dunham, here's the umbrells mam-ma borrowed from you a month or two

"Firty, are you? That isn't old. Hang your cost on that hook: you can have the job, sir."

"George, if you want me to marry you, why don't you sprunk up and ask me?" "All your watch needed, sir, was wind-ing. No charge. Fine day, isn't it""_ Chlcago Tribune.

Never too late to enter the Booklovers Contest

Consider what an augmentation of comfort is implied in these two announcements, emanating from the Cadillac Company, which has never promised what it did not fulfill-

First, A surpassingly fine car made infinitely finer; and Second, a hitherte unattainable ideal resolved into a practical reality.

This more refined and efficient car, is a product of that process of ceaseless progress toward perfection, which has prevailed in the Cadillac plant for ten years.

CADILLAC ELECTRICAL SYSTEM Ignition Lighting Starting

The electric plant in the new Cadillac not only accomplishes what haretofore has been accomplished in a less efficient manner by separate systems-ignition and lighting-but goes further and includes in its functions a feature to which motorists have long looked forward, an automatic starter which obviates the necessity of cranking by hand.

The plant consists of a compact and powerful dynamo operated by the engine of the car. The dynamo charges the storage battery.

For starting the engine, the dynamo is temporarily and automatically transformed into a motor, the current to operate it as a motor being furnished by a storage battery.

To start the engine, the operator after taking his seat in the car. simply retards the spark lever and pushes forward on the clutch pedal. This automatically engages a gear of the electric motor with gear teeth in the fly-wheel of the engine, causing the latter to "turn over," thereby producing the same effect as by the old method of cranking. As soon as the angine takes in charges of gas from the carburetor and com-mences to run on its own power, the operator releases the pressure on the clutch pedal, the electric motor gear disengages its connection with the fly-wheel and the car is ready to be driven. The electric motor then again becomes a dynamo or generator and its energy is devoted to ignition and to charging the storage battery.

The storage battery has a capacity of \$0 ampere hours and as soon as that capacity is reached, the charging automatically ceases.

Practical tests have shown that the storage battery is of sufficient capacity to operate the starting device and "turn over" the engine about twenty minutes, although it saidom requires more than a second or two In fact the Cadillac engine so frequently starts on the spark that the use of the electrical starter is not always required.

The storage battery also supplies the current for lighting. The car is equipped with two especially designed Gray & Davis electric headlights with adjustable focus, two front side lights, tail light and speedometer light.

The dynamo also supplies current for ignition. Up to 280 to 300 R. P. M. the ignition current comes from the storage battery; above that speed the current is direct from the dynamo through the high tension distributor to the spark plugs. For ignition purposes the dynamo performs not only all the functions of the most highly developed magneto. but possesses even greater efficiency, having more flexibility and a greater range of action. When compelled to drive slowly in crowded thoroughfares, over very bad roads or on hills, with the usual magneto the driver may stall his motor because the magneto is not being driven fast enough to generate current, and it becomes necessary to switch to the battery--if he has one. With the Cadillac system, if it becomes necessary to drive so slowly that sufficient current is not generated the battery automatically cuts in. When the speed is increased the dynamo again automatically takes hold. It wholly obviates the necessits of the driver's keeping constantly on the alert to prevent stalling the motor.

In addition to the ignition before described, the Cadillac is provided with the auxiliary Delco system with dry cell current which has proven so satisfactory in the past. The extra system is separate and distinct. with its own set of spark plugs and in itself is thoroughly efficient for running the car, entirely independent of the main system.

The entire electrical plant has been designed with a view to compactness and efficiency. It is designed with the idea of simplicity and positiveness. It is designed to obviate to the greatest possible degree, the necessity of attention. Above all, it does what it is designed to do

But to combine them in the Cadillac adds lustre to that achievement, because it endows an extraordinary motor car with new and henceforth indispensable functions.

Without them, the Cadillac would still be the incarnation of ease, grace, elegance and economy.

With them, a new meaning attaches to the word luxury as applied to motoring.

The 1912 Cadillac automatically removes itself from the realms of competition.

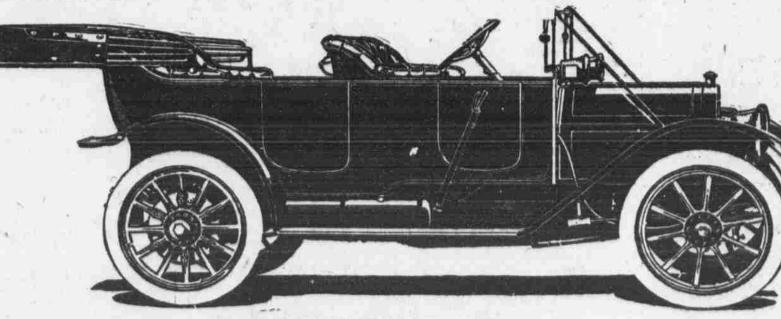
A Few of the Improvements in the 1912 Cadillac

Automatic electric starting device, electric lights. (See detail description in another column.) Increased power resulting from motor refinements and our own new carburetor. This new carburetor has not only simplified the matter of adjustments, but possesses maximum flexibility and maximum efficiency from low to high speeds without change of adjust-ment, excepting air adjustment controlled by small lever at the steering wheel.

Wheels and Tires. Increased from 34 in. x 4 in. to 36 in. x 4 in.

Brake drums. Increased from 14 in. to 17 in. diameter.

Bodies. Steel of later accepted designs; all fore doors, constructed upon new improved methods. Gasoline capacity increased to 21 gallons on all models excepting Phaeton and Roadsters, in which the increase is to 18 gallons Gasoline gauge on dash.



SPECIFICATIONS IN BRIEF

MOTOR-Four-cylinder, four-cycle: cylinders cast singly, 4%-inch bote by 4%-inch piston stroke. Five-bearing crankshaft. Five-bearing cam bote by élé-inch piston stroks. Five-bearing crankshaft. Five-bearing cam shaft. HORSE-FOWER-Nominal, A. L. A. M. rating, 32.4. Actual horse-power greatly in excess of that rating due to Cadillac design, Cadillac principles and Cadillac construction. COOLING-Water, copper jacketed cylinders. Gear driven contrifugal pump, radiator tubular and plate type. IGNITION-See description under Electrical System. LUBETOATION-Automatic splash system, oil uniformly distributed. CAREURITOR-Special Cadillac design of maximum efficiency, water jacketed. Air ad-justable from driver's seat. CLUTCH-Cone type, large leather faced with apecial spring ring in fly-whoel. TRANSMISSION-Sliding gears, running on five annular ball bearings; bearings oil tight. CONTROL-Hand gear-change level at driver's right, inside the car. Service braks, foot lever. Throttle accelerator, foot lever. Spark and throttle levers at steering wheel. Carburetor air tight adjustment, hand lever under steer-ing wheel. Direct shaft to bavel gears of special cut teeth to afford maximum strength. Drive shaft runs on Timken bearing. AXILSS Timken roller bearing. Front ype, special alloy steel live axie shaft timken roller bearing. Front ype, special alloy steel live axie shaft.

tionally easy in operation. Both equipped with equalizers. STREATHO GRAR-Cadillac patented worm and worm gear, sector type, adjustable. with ball thrust 1%-inch steering post 18-inch steering wheel with walnut rim; aluminum spider WEEEL BASE-116 inches TIMES-Sound rim, aluminum spicer. Wasaa same its inches. Tikking 16-inch by 4-inch Hartford or Morgan & Wright. Symmes—Front, semi-elliptical Rear, three-quarter platform. FINISE—Cadilac blue through-cut, including wheels: light striping, nickel trimmings. STANDARD EQUIPMENT—Dyname with 80 A. H. battery for automatic starter, elec-tric lights, and ignition. Also Delco distributor system. Lamps appecially designed for Cadillac cars, black enamel with nickel trimmings, two headlights; two side lights, tail light. Hans gasoline gauge on dash; horn; full foot rail in tonneau, half foot rail in front; robe rail; tire irons; set of tools, including pump and tire repair kit; cocos mat in all ton-neaux except closed cars. Speedometer, Standard, improved, with 4-inch face and electric light.

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CADILLAC MOTOR CO. Omaha, Neb.: Cadillac Company of Omaha, 2050 Farnam Street.

Detroit, Mich. Lincoln, Neb.: Copeland-Orr Motor Car Co., 127 So. 11th Street.