

## STEEP GRADES USED IN TESTS

"Show Me" Hills Climbed by Victory Sixes to Show Ability of Car

Automobile hill climbing tests, heretofore confined to certain mountains, have been nationalized by Dodge Brothers in a series of tests to obtain a composite picture of Victory Six performance. Paved and unpaved inclines throughout the country, known to native motorists as "Show Me" grades, were picked to test the Victory's ability. All records were made by different cars and drivers under varied conditions. Some of them follow:

In Pennsylvania, the Victory Six started at the foot of the famous Uniontown hill in high gear with speed of 18 miles an hour. The three-mile climb to the summit around sharp curves and up grades of more than nine per cent was finished in high gear at 42 miles an hour.

Lookout mountain near Chattanooga, Tenn., was the scene of another test in which the Victory carried the driver and four passengers up the 4 1/2-mile climb in eight minutes. The winding highway to the top leads to an altitude of 2,300 feet, and the entire trip was made in high gear, the speed at some points reaching 45 miles an hour.

Cheyenne Mountain in High in the Rockies, Cheyenne mountain, towering 9,200 feet above sea level, was easily conquered with a car load of passengers without the use of low gear. The road to the top is six miles long, and reverse turns make the climb unusually difficult.

Corey hill, known to every Boston motorist and many tourists, was negotiated in high gear all the way. The hill rises 187 feet in 2,000 feet of highway, and at one point the grade is more than 15 per cent.

New York reported a test run up Fort George hill, which is 4-10 or a mile long with a 9 1/2 degree grade at the bottom and 11 degrees at the top. The start was made at five miles an hour in high gear at the bottom, and the car speed reached 25 miles an hour at the summit.

Stone Mountain Topped. It required just four minutes for the Victory to negotiate the two-mile winding highway up Mt. McGregor in New York state. The speed at the top was 25 miles an hour. Steep grades and hairpin turns make the climb one of the hardest east of the Rockies. Ascending Stone Mountain near Atlanta, Ga., proved a novel but successful venture. There is no road to the summit, and at one point it was necessary to go up a rock incline with a 25 per cent grade.

Various drivers making the tests cited the car's roadability and low center of gravity permitting safe speed on turns, as ranking next to engine performance in establishing the records.

## Driving Expenses For Average Car \$229 Each Year

Ten cents per mile pays all costs of operation of the average automobile, including every item of expense, according to Frank E. Reusswig, engineer of the Oregon State Motor association, which is affiliated with the American Automobile association.

Mr. Reusswig pointed out that while the range of operation costs is from 7.05 cents per mile for a light four-cylinder touring car to 11.73 cents per mile for a light six-cylinder coach, the average is ten cents per mile.

"Improvement in car design, development of good roads and standardization of motoring services have done much to lower the operating costs," he continued.

Mr. Reusswig said that the average motorist spent \$229 in 1927 for the operation and maintenance, excluding depreciation and garaging charges. This was divided into four principal items as follows: Replacement parts and supplies, \$41; tires for replacement, \$40; fuel and lubricants, \$101 and labor, \$47.

He declared that the average cost of operation for 1927 was considerably lower than 1919, when the average cost was \$281. Averages for other years were: 1921, \$221; 1923, \$222; 1925, and 1926, \$219.

ROLLING SPEED VARIES. The rolling speed, the speed at which a car gets the best mileage on gasoline, changes as each condition that may affect an auto. Head or tail winds are the greatest influences of rolling speed. Much depends upon tire pressure, motor condition and weather, with several minor influences. It is a case of "feeling" that the motor is running best.

CLUTCH PLAY NEEDED. The clutch motion in the clutch pedal is an allowance for wear on the face of the clutch discs. As they wear, the play is reduced until finally it reaches the vanishing point. An adjustment should be made before clutch becomes tight.

## Ain't It a Grand and Glorious Feeling



CLARE BRIGGS, celebrated cartoonist, creator of world famous comic strips, says it really is a "grand and glorious feeling" to leave one's home in a Silver Anniversary Buick.

## Northern California Valleys Present Good Bird Hunting

Since the California quail season opened on November 1 in District 1 1/2, points on the Pacific highway north of Red Bluff have become popular objectives of hunters wise and willing enough to drive two or three hundred miles from San Francisco and Oakland to find regions where real sport is assured, reports E. A. Crowley, general manager of the Pacific Highway association.

Tehama, Trinity, Shasta and Siskiyou counties are sufficiently remote from the central California metropolitan area to permit multiplication of game and fish to make up for their destination each season. As the Sacramento valley narrows to the northward, quail bunch together in the foothills in a semicircle radius about Redding.

Higher up, Mt. Shasta City and Yreka offer the added attractions of hunting mountain quail. They are unusually plentiful thereabouts this fall and afford the rarest sport of all, according to a regional recreation report issued this week by the Pacific Highway association.

Maps and travelogues are mailed free from the association's headquarters, 525 Market street, San Francisco.

When the quail season opens elsewhere in California on December 1, hunters are advised by the association to put at least 100 miles between them and the metropolis. Some of the highpoints recommended are the Cuyamaca mountains of San Diego county, the courses of the Ventura, Santa Maria and upper Salinas rivers, as well as a side trip from San Juan up the San Benito river to the vicinity of Vancouver's Pinnacles, a national monument and game refuge, also reached from Siskiyou.

## Tires Give Most Trouble To Cars, Ignition Second

The importance of attention to the tires and ignition system of the car is demonstrated beyond a peradventure in an analysis of emergency road calls made public today by A. M. Work, director of the Oregon State Motor association, which is affiliated with the American Automobile association.

"Out of hundreds of thousands of such calls from member of A. A. clubs throughout the country," said Mr. Work, "an analysis of 120,000 typical calls, based group of clubs, it was clearly shown that tire and ignition troubles were responsible for more than 50 per cent of the calls for emergency road service.

"At the same time it was revealed that car owners have not yet learned to check their gasoline tanks, as more than four per cent of the calls resulted from cars of A. A. members running out of gas."

The motor club executive pointed out that of the 120,000 calls selected for analysis, more than 30,000 were in connection with tire troubles and over 26,000 resulted from ignition systems.

Mr. Work declared that brake troubles, batteries, starters, carburetors and other motor ills were also represented in the analysis.

## Life Insurance

Is a necessity for most people. Comparatively few families can be left financially comfortable without it. Most people carry too little, considering that the income it will produce is about one dollar per thousand per week.

You may double or triple your estate by additional life insurance.

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## AUTO SHOW BRINGS 107 NATIONALITIES

Automobile men from many lands are expected to take part in activities of International Day, Monday, January 7, of the 29th Annual National Automobile show, to be held in Grand Central Palace, New York, January 5-12, 1929, in response to invitations which have been sent to over 7,000 automobile dealers, in 107 countries by President Alvin Macauley and the board of directors of the National Automobile Chamber of Commerce.

Opportunity for discussion of automobile merchandising problems will be afforded at a special meeting of visitors from abroad and factory executives arranged for Monday morning, January 7 at 10:00 a. m. Selling and servicing motor vehicles as well as wholesale and retail trade financing will be discussed.

On Monday afternoon a conducted visit to the automobile show is being arranged. Overseas visitors will be furnished guides and interpreters. Extensive displays of automotive products by forty firms making motor vehicles and three hundred and fifty manufacturers of automobile accessories and service equipment will be viewed there.

In addition to these activities arranged for Monday, guests from abroad will attend the annual show banquet at 6:30 p. m. Tuesday evening, January 8. Every leading figure in the automobile industry attends this event, which is looked forward to as an opportunity to renew old acquaintances and to make new ones. Arrangements will be made to permit guests from other countries to meet with factory executives here.

Following this event, groups of overseas visitors will inspect automobile plants in Detroit, Toledo, Cleveland and other car manufacturing centers.

The Foreign Trade committee of the National Automobile chamber of commerce is co-operating with S. A. Miles, manager of the show, in completing these arrangements. This committee is headed by John N. Willys, and includes B. C. Budd, Rufus S. Cole, J. S. Draper, J. E. Fields, R. G. Hudson, J. D. Mooney, Jay Rothman, Donald T. Stanton, Howard S. Welch, and George F. Bauer, secretary.

## Shipping Record Set By Graham

DETROIT, Nov. 10.—New production and shipping records for October were set by the Graham-Paige Motors corporation last month, raising the total output for ten months of 1928 to 70,406 cars, as compared with 18,800 for the same period of 1927, or a gain of 274 per cent.

Production last month was 52 per cent more than the best previous record for October, established in 1926, and was 3.6 times the total for October of last year. For ten months of 1928, under the Graham management, the factory has averaged 7040 cars monthly production, higher by 1200 cars than the total for the best single month of the predecessor company.

The office cynic's wife has found a book on child psychology very helpful. She uses it as a pad.

## Herbert J. Oslind

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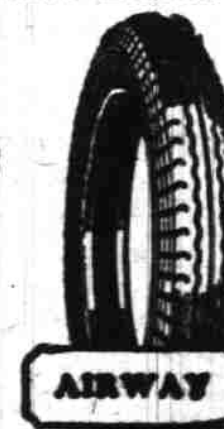
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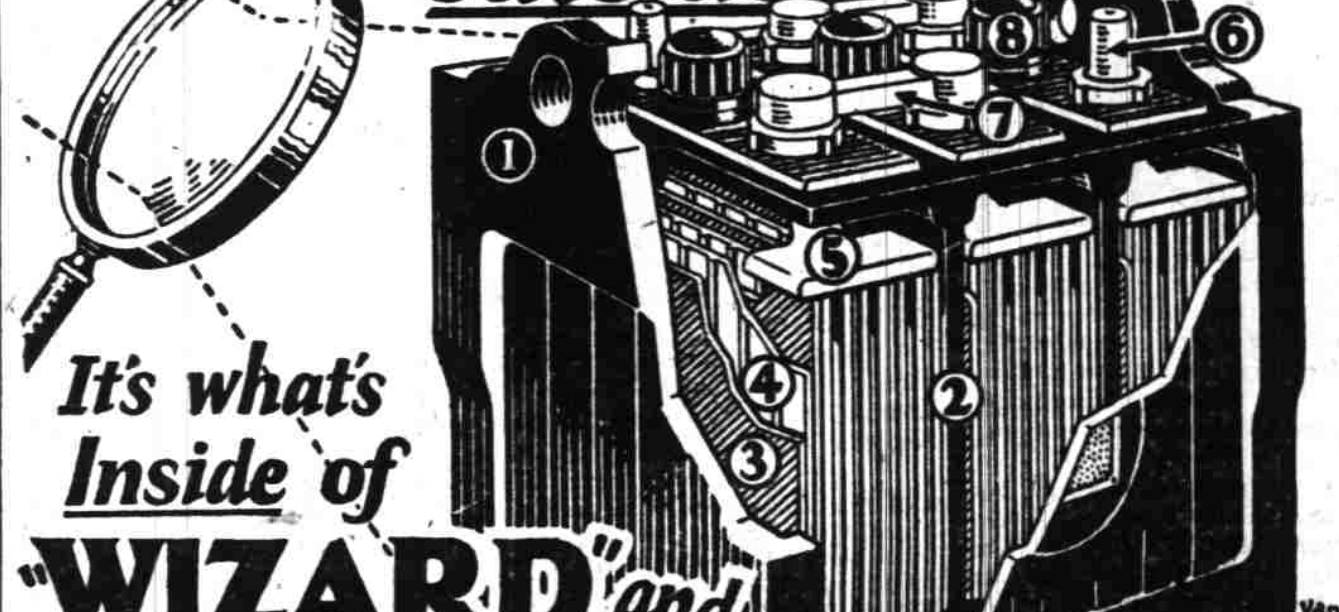
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It's what's Inside of "WIZARD" and "Western Giant" Storage Batteries - that Makes them Such Wonderful Values!

STUDY the 8 points of "Western Auto" battery superiority listed on the right . . . go to your nearest "Western Auto" store and have our salesman explain them . . . then install a Wizard or Western Giant in your car . . . and let months—years—of trouble-free satisfactory service prove to you that this inbuilt quality makes "Western Auto" batteries superior values . . . that are appreciated by thousands of Western motorists, who are replacing their present batteries with Wizards and Western Giants.

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Wizard Storage Batteries Guaranteed 2 Years Deduct Trade-In Allowance from These New Low Prices!

6-11 Standard	8.45
6-13 Standard	8.45
6-15 Standard	9.95
6-16 Standard	10.95
6-17 Standard	11.95
6-17 Z	16.50
12-7 Standard	11.95

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It is as good as cash in part payment for a new, fully guaranteed Wizard or Western Giant Storage Battery of any "Western Auto" more than 125 conveniently located stores.

"Western Auto" Service . . . A feature that saves you money. Service connections are maintained in all cities where we have stores, so that your car can be properly and promptly installed at a low flat rate . . . in many instances FREE OF ALL COST!

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4. SEPARATORS of high-grade white cedar thoroughly treated to insure greater capacity, allow current to flow freely and give complete insulation.
5. TERMINAL POST LOWER SECTION, to which plates are securely anchored, is proper size to insure easy current flow.
6. TERMINAL POST UPPER SECTION—correct size for cable connection. Rubber washer, just under terminal post nut, prevents acid leak.
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