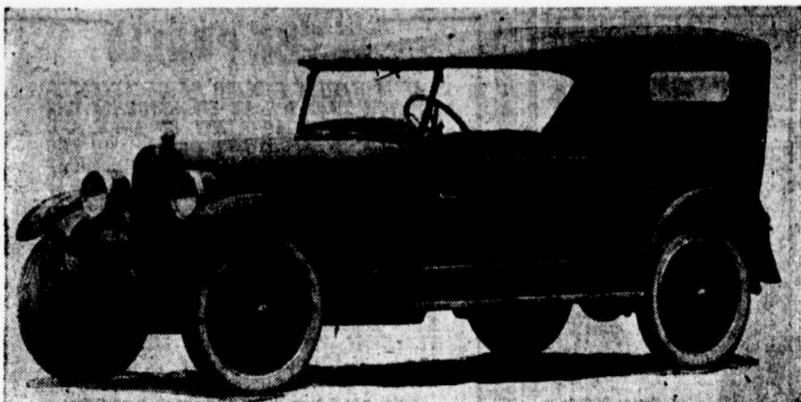


NEW SERIES CHALMERS TOURING A CAR OF EXCELLENT LINES



WILLYS-KNIGHT IS RATED AUTO OF REAL LUXURY

Closed Models Have Great Features to Insure Comfort of Owners.

Beauty of line, fine workmanship, and excellence and economy of operation have been happily combined in the Willys-Knight cars exhibited by R. M. Reynolds & Sons at the automobile show.

The sedan shows to particularly good advantage one important factor in the Willys-Knight design—unusually long underslung rear springs of chrome vanadium steel, making possible unusually low center of gravity with the consequent ease in riding and freedom from side sway and skidding on curves. The body itself is an exceptionally handsome example of well-designed coachwork, roomy, but not of bulky appearance, with a pleasing suggestion of comfort and restrained power.

Nothing has been overlooked for the comfort and convenience of the passengers. One sinks into luxurious cushions as in an easy chair. Windows are raised and lowered with a turn of the hand. The interior color scheme is rich and harmonious, while the finish of the interior metal work is particularly effective.

There is a vanity case on one side of the rear seat and a smoker's set on the other. As the rear doors open, the doorways and running boards are automatically illuminated. The dome light can be operated easily from the rear seat. The windshield is set at an angle giving ample room for the front seat and eliminating glare at night. Brackets hold the adjustable upper section firmly in place and prevent rattle.

The Willys-Knight coupe is of equally artistic design and incorporates all the little conveniences and advantages that are a regular part of the Willys-Knight closed cars. Ample carrying space is provided in the rear of the driver's seat and at the back of the car.

Of course, the vital factor of any motor car is the motor under the hood, and in this case, all questions are quickly settled, as it is the famous sleeve-valve Willys-Knight, the motor which improves with use.

AUTOMOBILES EQUAL 300,000,000 HORSES

"The automobiles owned in the United States have a power equal to that of more than 300,000,000 horses," says the Chicago Journal, "while the total number of real horses and mules in the country is less than one-tenth that amount."

The Touring Club of Belgium is raising a fund to mark out specially the route from Mount Kemmel to the sea, that is, the route along which the German advance was stayed in 1918.

5,800 Miles of Concrete Roads Built in 1921

The January issue of the Concrete Highway Magazine (Chicago) says: "Altogether the country has added the equivalent of more than 5,800 miles of concrete-paved highways eighteen feet wide to its State and county systems during 1921, an achievement of construction engineering which is a credit to highway builders."

"Pennsylvania led all the States of the Union during 1921, completing approximately 640 miles of eighteen-foot concrete. New York was second with 530 miles, and Illinois third with 450 miles."

NEW STANDARD HAS DRY SUMP OILING SYSTEM

Don C. McCord Explains Principle of Getting Cool Lubrication on Bearings.

"When you stop to think how important it is to get cool, fresh oil to the bearing surfaces of an automobile engine at all times, you can often wonder why there has been so little progress made in the design of oiling systems," said Don C. McCord, vice president of the new Standard Motor Car Company of Pittsburgh, manufacturer of the new Standard Eight.

"The majority of cars today are equipped with the same type of splash or combination splash and pressure systems that we used back in 1910 and earlier, and while there have been some refinements it has been left to aeroplane service with its exacting demands to evolve the exclusive dry sump system used on the new Standard Eight."

"Briefly, the oil is carried on a four-gallon tank mounted on the chassis of the car and cooled by the rush of air as the car moves forward. This tank is connected to the pressure oil pump and oil is forced through the hollow crank shaft to the main connecting rod and cam shaft bearings, piston and cylinder walls. From these surfaces it drains into the crank case where the scavenging pump forces it back to the tank where it is screened, filtered, cooled and sent on its return journey to the engine."

"In this way the oil is kept cool, clean and sweet, retaining its original color and lubricating qualities and eliminating smoking, carbonizing, and in every way making for higher efficiency and power in the engine."

COAST BOASTS WHOLE CIRCUIT OF BIG TRACKS

Races Staged in Two New Bowls Attracts Wide Attention.

During 1921 automobile racing enjoyed a success that it has seldom, if ever, known in California and the Pacific Coast. Two new tracks were constructed and others staged races that attracted nation-wide attention.

The first new bowl to be constructed during the past year was that at Cotati, half way between Petaluma and Santa Rosa, promoted by the North Bay Counties Speedway Association with J. Francis O'Connor named as president. Two thrilling events were staged at this saucer, which measures a mile and a half to the lap, and both races attracted record numbers of fans. The first new speedway was put up at San Carlos and fostered by the Greater San Francisco Speedway Association.

Track at Cotati.

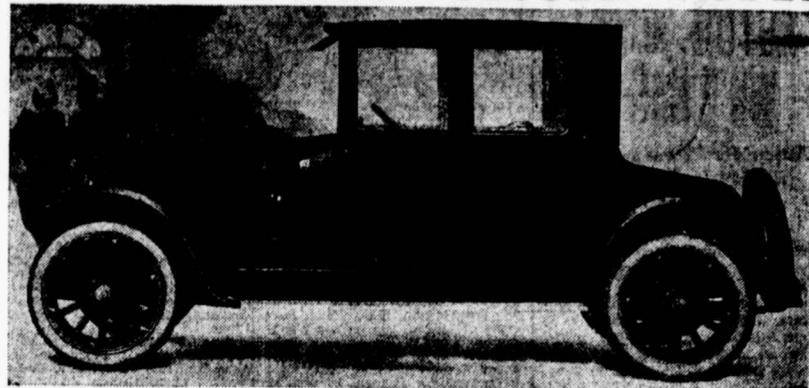
The new track at Cotati was dedicated on August 14 with a 150-mile race, which was won by Eddie Hearne in spectacular fashion driving a powerful Distel-Duesenberg. Hearne was pressed for honors in this race by such stars as Roscoe Sarles, Tommy Milton and others of note. The second race held at

A LIGHT TIP

An electric lighting system using a single bulb in each head lamp, the dimming effect being secured by passing the current in series through the two bulbs and the full lighting by passing the current through the bulbs individually, the change being made from dim to full lights by a dash switch; trouble was experienced by one lamp burning very dim and the other burning at almost full brightness when the dash board switch was in the dim position. The car was continued in use and finally when the switch was in the dim position one lamp would not burn at all, that is, it would show no light and the other burned very bright. An electrical engineer suggested that two new bulbs be put in the headlights, which was done and the trouble was remedied. His explanation was that the filament of one lamp was almost burned out so that very little current was needed to make it burn at full brightness, although he said that while it appeared bright if the candlepower was measured, it would be found that the lamp was badly worn out. His reason for putting in two new lamps was so that each would use an equal amount of current and burn with the same candlepower.

Cotati was, if anything, more brilliant in results than that which was held in August. On October 23 Roscoe Sarles hurled across the finishing line at Cotati, a scant winner over Joe Thomas. In this race Jimmy Murphy, of Grand Prix fame, competed, as did also Ralph de

NASH FOUR PASSENGER COUPE A POPULAR CLOSED MODEL



Palma, the sensational Italian-American pilot.

Both Los Angeles and Fresno held sensational events, the Los Angeles race attracting a great crowd on Thanksgiving Day. In the Fresno race Earl Cooper, veteran pilot, did a "come-back" and defeated a select field for first honors. At the San Carlos speedway, Jimmy Murphy, the redoubtable San Francisco driver, turned in a sensational victory over the 250-mile course, defeating Tommy Milton, who went into second place.

Prospects for the present year look unusually good. The San Carlos Speedway has a race scheduled for

the near future while the Cotati track will hold a thrilling battle of motor cars on May 8.

28,000 MILES OF ROADS WERE BUILT IN 1921

According to Government figures, a total of 28,000 miles of good roads were built in the United States last year, or a distance equal to ten times the width of the country. Half of this mileage has been built by the State governments in conjunction with Federal aid. The remaining 14,000 miles were constructed independent of Federal assistance.

PEDESTRIAN IN FRANCE PAYS "JAY WALKING" FINE

In France, the first arrest was made recently of a pedestrian proceeding on the highway in Paris. A fine of one franc was paid. According to a new law, persons are prohibited from walking in streets, gutters or elsewhere, other than on the sidewalks.

As a measure of economy and suit all kinds of traffic, Kansas experimenting with a road, part the surface of which is dirt and the remainder concrete or brick.



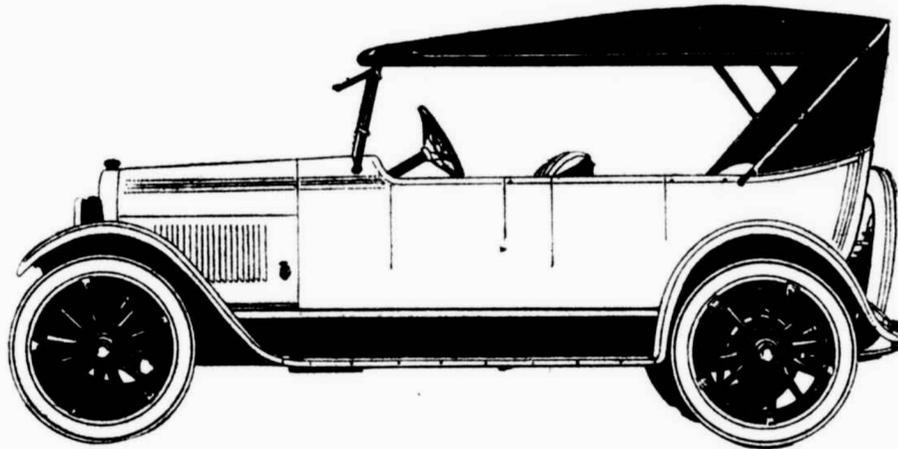
FEATURES

- Simplicity and strength of construction.
- Accessibility of all parts to minimize maintenance cost.
- Rigidity of chassis frame—the foundation of the car—accomplished by the use of the "tubular backbone" (patent applied for), which prevents distortion of frame and eliminates all racking and squeaking of body.
- Motor designed by Durant engineers, valve-in-head type, powerful and flexible, embodying features not usually found in engines of the combustion type. No piping or attachments in the underpan. Pistons can be taken out through lower part of cylinder block, making it unnecessary to remove head casting.
- Single plate clutch closed in and forming part of flywheel. Removable by detaching four bolts without disturbing the power plant.
- Special designed floating axle with removable shafts. Timken bearings. Chrome nickel ring gear and pinion adjustable to wear.
- Alumite system of lubrication. Steering gear with controls on top of wheel. Genuine leather trimming.

SPECIFICATIONS

- MOTOR—Four-cylinder, overhead-valve type, fully enclosed. Bore, 3 3/8"; Stroke, 4 5/8"; S. A. E. rating, 24 h.p.; Brake h.p. at 1,800 r.p.m., 35.
- COOLING—By centrifugal pump through honeycomb radiator; adjustable fan.
- ELECTRICAL SYSTEM—Two-unit; generator with starting motor; distributor and coil mounted on generator; battery of ample capacity.
- BRAKES—External and internal on rear wheels; 12" diameter.
- TIRES—31" x 4", straight side cord; on demountable rims.
- WHEELBASE—109".
- EQUIPMENT—Latest drum shaped headlights with legal lenses; dash light; flosser holder; electric horn; speedometer; demountable rims with extra rim; ignition lock; robe rail; Alumite pump; complete set of tools.

"Just a Real Good Car" — W. C. Durant



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Built in both four and six cylinder models

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- To operate with more than the usual economy
- To be maintained with more than the usual ease
- To transport its passengers with more than the usual comfort.

Automobile Show Space No. 29

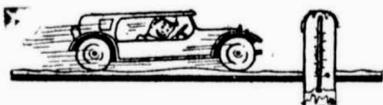
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