

RIGID TEST SYSTEM FOR CADILLAC CARS

Mechanism Must Be Perfect When It Leaves Factory.

EVERY PART IS TRIED OUT

Four Hard Trials Must Be Passed Before Finished Car Is Sent Out to Dealer.

BY H. M. COVEY.
President, Covey Motor-Car Company.
From one to another, there are innumerable thousands of tests which go into the manufacture of a good motor car. For instance, there are material tests—of wood and metals,

make a fourth check on the work which has gone before and there is considerable rivalry between them and the rough testers to catch any small defects which might have escaped the latter.
The dependable wearing qualities of Cadillac cars are in no small part due to the licenses of these inspectors in ferreting out the insignificant errors in assembly which later would cause inconvenience and delay, if allowed to pass without rectification.

CARE OF TRUCK IS IMPORTANT
Mack Distributor Emphasizes Need of Protecting Investment.

Whenever statistics that have to do with the cost of motor truck operation are compiled one of the most important items that should receive consideration, but which is absolutely intangible, is the human element. More than any other single factor of importance in computing costs, according to F. C. Atwell, of the International Mack corporation, distributors here for Mack trucks, is the attitude of the owner of driver toward the truck.
Given a high-grade truck, one that is built right in the first place, the degree of satisfactory service received will depend almost wholly upon the attitude of the operator. If the truck is handled by a careless or indifferent operator, it makes no difference how

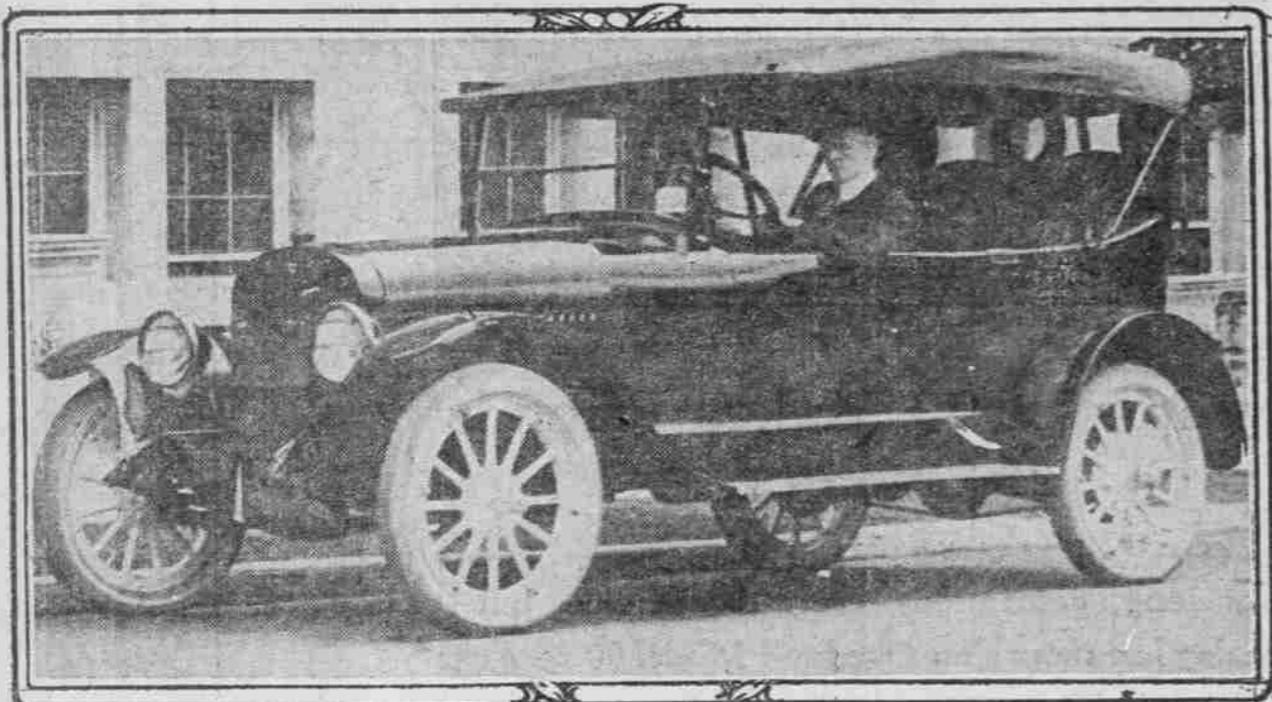
URQUHART ROAD BOOSTER

COAST CHIEF FOR WHITE COMPANY TALKS.

What Can Be Done for State by Roads Shown by Case of California, He Says.

Officials of the White company have taken a leading part in the good-roads movement from the start of the automobile industry. One man who has been advocating good roads ever since he arrived in the west is G. A. Urquhart, coast manager of the White company, with headquarters in San Francisco.
Urquhart has been in the motor car and truck business for many years. He started with the industry and has grown up with it. He was a good roads booster when the first cars were built and has been a tireless worker in this cause ever since.
"I remember when the first automobiles came to the coast," says Mr. Urquhart. "The roads then were the old-style county highways, roads in name only a good part of the year. In winter they were full of mud and holes and travel was necessarily slow. Few

CROW-ELKHART MAKES BOW TO PORTLAND.



David A. Pepp of the Daniels sales agency has taken on this well-known line to handle in conjunction with the Daniels Eight and the Revere. The Crow Elkhart comes in four and six-cylinder models, the four-cylinder having a Lycoming and the six a Rutenbur motor. It's a classy-looking little car. In this picture also is Jack Cunningham, salesman for Mr. Pepp.

fabrics and finishes, oils and compounds. There are manufacturing tests, organizations and methods, of machining and assembling, of new ideas and principles.

Each reveals efficiency, or exposes the lack of it. Each adds an element of certainty to the performance of the finished product.

The only absolute guarantee, however, that the finished mechanism will be as good as the elements which have gone into it is the test of the machine itself. Cadillac final tests are, in part, tests of Cadillac materials and manufacture; but above all, they are the proof of Cadillac standards of assembly.

Each Cadillac driving unit, engine, transmission and rear axle, before it becomes a part of the chassis, is given a thorough test in the department where it is built. Each test is designed to give the unit a good work-out under every kind of operating conditions. Each part is watched and particularly listened to.

Testers Have Keen Ears.
Every Cadillac eight-cylinder engine is given a block test of several hours under various loads at various speeds. During this period it is under the watchful eye and ear of an expert tester, who has been raised mechanically to the tune of an eight-cylinder motor. The slightest trouble which may develop during this time is cause for turning it back to the motor assembly department. No block test is removed, all bearings are examined and adjusted, if necessary, and valves and seats are inspected and finally set.

Engine, transmission and axles are then assembled in the frame and the car started up under its own power. From the chassis assembly it goes to the dynamometer room. Here the rear wheels are jacked up and connected with silent chain to the dynamometer. The engine is again started and the testing goes on. The chassis is operated in high, medium and low gears, as well as reversed, at all speeds and under all loads. Here, for the first time the car, as a complete driving mechanism, is under inspection.

Cadillac testers receive a liberal education before they are set to judge the soundness of a new automobile. They are men who have graduated from many other departments. They have seen the car in all phases of manufacture. They have at their fingers' ends all the ailments which an automobile is heir to. They know what a good automobile should be. The slightest sound, which the owner or even the average garage mechanic wouldn't even notice, means something definite to them.

Final Test Hardest of All.
When the car passes the dynamometer test satisfactorily, it is put through a rough road test. It is the ambition of the rough tester to catch any mistake which may have previously been missed. Any trouble here, and the car is taken out of production and sent to the chassis repair shop.

From the rough road test the chassis goes through the final painting and baking process, after which it is sent to the final assembly room for its body.
Still one more test is made, the final test with the car completed as it stands ready to ship. Final testers

good it may be, neglect of attention and abuse will result in making the truck appear unsatisfactory. This state of affairs accounts for the wide range in the cost of operation reported by the owners for the same make and model of truck.

"There are some operators who persist in driving their truck at a higher speed than it should be driven for the rating of the truck and the load carried," said Mr. Atwell. "Others neglect to give the proper attention to lubrication, one of the most important in connection with truck operation. They fail to realize what this neglect means until a bearing is burned out. Then they look at the oil. Tires are a big item also and excessive speed under load is ruinous to tires.

"It is a fact that on the whole owners of high-grade trucks are most attentive to them. Perhaps they realize more fully that they have a large sum of money invested in a machine upon the care of which depends the returns they get. I believe that owners of Mack trucks rate especially high in this respect. It has been our aim to impress all Mack owners that the truck is an investment and should be treated with the same consideration any other object representing the same amount of money would be shown."

NEW PLANT FOR SAXON

BIG FACTORY COVERS 40 ACRES NEAR DETROIT.

War Delayed Occupancy by Company as Buildings Were Used for Military Warehouses.

The huge concrete and steel plant built for the Saxon Motor Car corporation, according to officials of the company, will soon be ready for occupancy.

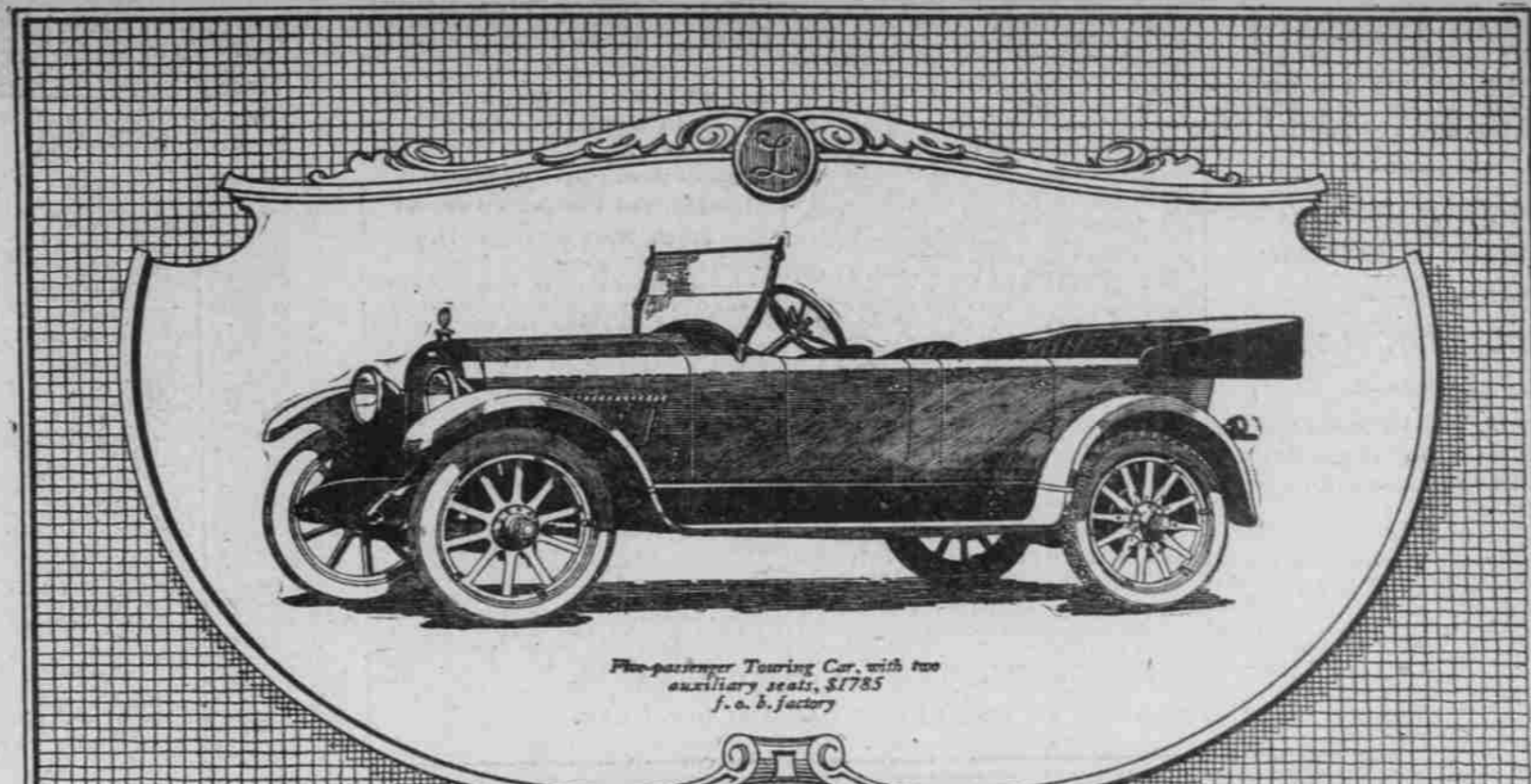
Just as the plant was nearing completion the country was plunged into war. The government, looking about for warehouses big enough to house the trappings of a nation at war, took over the new Saxon plant for the duration of hostilities. It became a supply depot for a vast treasure in military stores. Aircraft engines, war trucks, officers' cars filled the building and soldiers were on guard day and night.

With the cuts in automobile manufacture dictated by the government, all plants found their facilities ample for building the passenger car schedules permitted by the government. Under normal circumstances the Saxon company would have suffered hardship in being unable to enjoy the increased manufacturing facilities afforded by its new plant. But the curtailment dictated by Uncle Sam made possible the taking on of more war contracts.

The Saxon company was awarded contracts for building the government standard one-ton truck known as style AA. The company is still engaged in turning out these trucks along with its regular passenger car manufacture.
As the government is able to divert its war materials into civilian uses, its great military warehouses will be emptied. The new Saxon plant then will be available as the ultra-modern home of Saxon Six.

In March, 1897, in the New York Journal, a writer described his first motorcar ride as follows: "In search of a new sensation I went yesterday and rode in a horseless carriage. I dreamed once that I walked down Fifth avenue in my pajamas in the fall tide of the afternoon; promenaded and almost died with shame, before I awoke. Yesterday I had something of the same strange feeling as I sat there and felt myself pushed forward into the very face of grinding, staring and sometimes jeering New York."

Under the auspices of the Duluth (Minn.) automobile club, a move has begun to test the city wheelage tax in the courts. The tax, which is held unjust, in addition to the personal property tax on automobiles, is 50 cents per horse power for cars and 10 per ton for trucks.



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Norway's Ruler Uses United States Tire Equipment.

When King Haakon of Norway goes forth to ride in his limousine these days he makes his journey on American tires. His car is equipped all round with the Nobby tread pattern of United States tires.

Cord tires have not yet gained much of a foothold in Scandinavian countries, as the cars there nearly all call for equipment of the old clincher type. American tires are in great favor and their popularity gives indication of remaining permanent.

The allied nations put on so tight an embargo against rubber during the war that the Scandinavian countries suffered a great tire shortage, their proximity to Germany making tire shipments to them inadvisable. A high wave of buying followed the lifting of the embargo.

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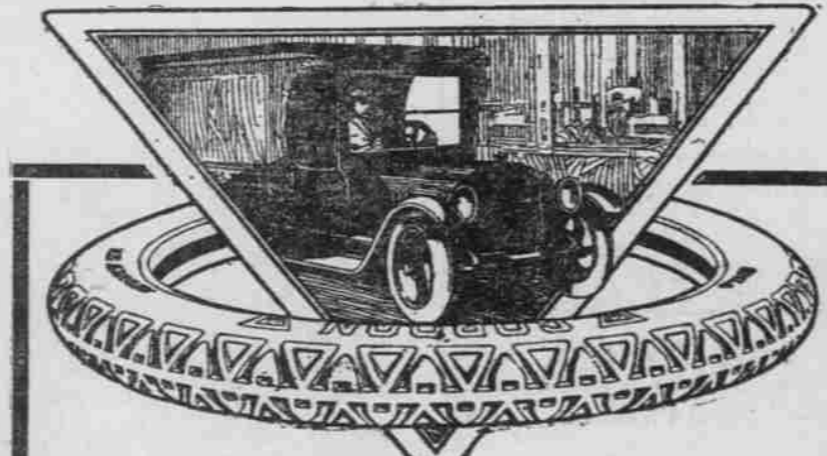


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