# MITCHELL LIGHT. SIX IS LUXURIOUS

### Economy of Operation and All the Superb Appearances of the Best Cars Built

The Mitchell Light Six, according to Ream & Son, local dealers, presents more than economy in first cost. Not only is this car sold for less than half the price of the so-called high-priced cars, but it is also the cheapest to maintain and operate because it is built on the right lines, and with special regard to husbanding the money of its user. There is nothing in practical automobile work that this car will not do. It is as good as any touring car at any price, in all the essentials. Only in operating cost does it differ, and the saving is great enough to attract to it the patronage of the prospect who would like to own a six-cylinder car, but who hesitates to make the purchase because of the cash outlay from week to week to keep the machine going.

This is the really serious expense of motoring. There are many who could stand the first cost, which is really comparatively trivial. But it is important to look closely into operating expense, which is a weekly item that never ceases while the car is in active service, and which is likely to increase as it begins to age, to pass the years of its best service and to need more repairs to keep it going.

When we speak of the Mitchell Light Six as effecting a virtual revolution in presenting economy of operation we wish to emphasize that this is not a skimped, cheapened production. It is not an economy at the cost of quality. Back of every promise is a service guaranteed by one of the wealthiest automobile-making concerns in the world, by a local representation that has made a reputation for caring for its customers and has a plant able to meet any demands. The wheelbase is 128 inches. It is thus a big, little car. It will carry six persons any time to any place and under any conditions. The six cylinders assure absolute flexibility.

This car will do its work at half the gasoline and tire consumption that would be required for the high-priced machine costing about $4,500. It has the same comfort and economy as the finest car. It has all the superb appearance of the best car built. A low rakish effect is gained by fitting the rear springs under the axle instead of above it. This results in lowering the body five inches and makes a substantial difference in the appearance of the car. In fact, it gives it the look of the best foreign production, while at the same time permitting enough axle clearance to permit operation on the inequalities of American roads.

The Light Six is made in a variety of models. In the touring car it is made in two, five and six-passenger models. It is to be obtained in all Mitchell forms in the closed cars, which naturally at this season of the year are in special demand for all the many diversions of winter that make a demand for comfortable transportation from home to theater, opera, dance, dinner, reception, wedding, etc.

The coupe, coupelette, sedan and limousine all have the powerful motor of the Light Six, and all present its many advantages of power, comfort and economy of operation. All of these closed models, except the limousine, are so arranged as to be driven from the interior of the machine by the owner. The limousine has a seven-passenger capacity and is driven from the outside. In addition to the Light Six, which costs $1,585, we will also show the Special Six, with 132-inch wheelbase, for $1,895, and the Big Six, with 144-inch wheelbase, for $2,350.

The Light Six is a combination car, equally well suited for work in the country as in the city. Its elegance of appearance makes it hard to distinguish from the high-priced machine. For this car any test is welcomed, regardless of distances or road conditions. In fact, it is sold on this basis.



# DETROITER EIGHT AMONG NEW ONES

### Model Introduced at New York Show Now With Local Dealer

Complete preparation for the manufacture and marketing of a low-priced eight-cylinder car on a large scale, without a word leaking out about its plans, is the remarkable achievement of the Briggs-Detroiter Company of Detroit, Mich., which exhibited its new "Eight" at the Palace Show, New York. The price of the new model car is $1,295. "We have been experimenting with eight-cylinder cars for more than a year," says Claude S. Briggs, president of the Briggs-Detroiter Company, "and the remarkable work of the car under every conceivable condition has been a revelation to us.

"An investigation of the possible market for a moderate-priced eight, covering a period of several months, has proved to us that the demand is going to exceed the supply quite materially."

The Detroiter "Eight" will be exhibited at the Capital auto show in Kelker street hall by Connover and Mehring, local Detroiter dealers.

The Briggs- Detroiter Company had one of the new eight-cylinder touring car models and a chassis, as well as its four-cylinder models, on exhibition at the Palace Show, New York. While following closely the stylish and distinctive lines of its older brother, the 1915 Detroiter "Four," the new "Eight" is more elaborate in finish and appointments, and embodies many of the most advanced ideas of American motorcar construction. The "Eight" touring car is finished in a handsome Kimball green, with gold stripe, and has Turkish type upholstering in real leather. The chief interest of the New York show patrons naturally centered in the motor, a compact, clean-cut power plant, for which much is claimed in the matter of power, flexibility and economy of operation.

The cylinders are in two en bloc sets of four each, the cylinder dimensions being 2¾ by 4½ inches. The S. A. E. formula gives the motor a rating of 24.25 horsepower, but this rating is not applicable to the Detroiter type of motor, which is rated at 34 horsepower at 1,800 revolutions. The two-cylinder blocks bolt to an aluminum crank race, which has a removable bell, flywheel housing. The crankshaft has two main bearings, front being 1⅝ by 2 3-32 inches, and the rear being 1¾ by 4¼ inches. Both sets of connecting rods connect with this shaft, one throw bearing taking care of a pair of rod ends in opposite cylinders. In order to operate in the same bushing, one rod is yoked on the end, the other rod end fitting within this yoke.

The single camshaft is directly above the crankshaft and has eight cams, one operating two opposite inlet valves or two exhaust valves, as the case may be. The cam assembly is on the under side of a plate which bolts to the top of the crank case between the cylinders. Positive lubrication is effected by means of a plunger pump, giving an ample oil flow for all moving parts within.

# CASE BUILT FIRST MOTOR VEHICLE?

### Pioneer Inventor Made Self-Propelled Buggy There Back in 1871

The transfer of the files to the new office of the Secretary of State at Madison, Wis., recently brought to light one of the most interesting pieces of automobile news that has been uncovered in the United States in many years.

Indisputable evidence was brought to light to show that the State of Wisconsin was one of the first, if not the very first, State in the Union to anticipate the dawn of the self-propelled vehicle.

J. S. Donald, Secretary of State for Wisconsin at the present time, has become so interested in the data he discovered in the old files of his office that he has prepared a formal statement to show when and how the the inception of the modern automobile came about.

Wisconsin back in the early 70's, and especially in the year 1875, developed an age of invention and the State Legislature encouraged every sign of progress and especially along lines of labor-saving devices.

That this enthusiasm was not spasmodic and superficial is borne out by the many inventions brought to light at that time. However, the greatest interest centered in the self-propelled road vehicle and in 1875, 1876, 1877 and 1879 the Wisconsin Legislature passed laws for the purpose of encouraging the work that was then going on along these lines.

Among the evidence that came to light during the moving of the files into the new Capitol of Wisconsin was an act appropriating $10,000 to the first successful inventor, who would produce a self-propelled vehicle that would pass tests, the rules of which were then laid down by the lawmakers, and, compared to the rules of the modern endurance test, they surely offer the best example of what the A. B. C. of modern automobile competition was like. This award was to go to the winner of what was probably the first endurance race ever held in the world for self-propelled vehicles.

That the State legislators of the great State of Wisconsin had foreseen the trend of the times and anticipated wisely, was shown by the seven self-propelled machines that were introduced to the public in 1878.

But back of the appearance of these machines was the invention of Dr. J. M. Carhart, of Racine, Wis., in 1871 in the machine shop of the J. I. Case Threshing Machine Company, the present builders of the Case car. Dr. Carhart not only invented and built a self-propelled vehicle in 1871, but also operated it and, according to the newspaper files of that time, was indirectly responsible for the activity at Madison, Wis., on the part of the State Legislature.

Upon discovering the data in the files showing the beginning of the automobile and realizing that because of the magnitude of the industry at the present time, almost everyone would be interested in the development of its earliest stages, the Secretary of State at Wisconsin wrote to the present officials of the J. I. Case Threshing Machine Company at Racine and the investigation followed which resulted in this account of the dawn of the modern self- propelled vehicle.

The vehicle itself is no longer in existence but the State Historical Society at Wisconsin has in its files a photograph of this most interesting machine.

When the present-day visitor is going through the great shops of the J. I. Case Threshing Machine Company, which rival in size and completeness, that of any other manufacturing institution, little does he dream that the modern high-class self-propelled motor car had, as its forerunner in 1871, a self-propelled buggy, minus ball bearings and roller bearings, and lacking anything that looked like the modern rubber tire. But the first automobile managed to travel over the then undeveloped country roads at the rate of about six miles an hour. There was no liquid fuel as the first motor car was steam propelled.

Dr. Carhart just before his death recently at San Antonio uncovered the following facts to be added to the history of the first self-propelled vehicle, discovered at Madison, Wis.:

"The foreman of the foundry and machine shop of the J. I. Case Threshing Machine Company aided me to the fullest extent, making my patterns, casting my cylinders and cylinder heads, boring out and turning the same together with the main shafting and the like. This timely and efficient aid made it possible for me to accomplish my task."

### RAINPROOF GOGGLES

Anyone wearing eyeglasses or goggles who has been caught in a rainstorm knows how great is the deficiency of vision caused by the water on the lenses, says the Motorcycle Review. But few persons are aware that this difficulty may be overcome by wiping off the moisture and then rubbing the outside of the glasses with the tip of the fingers covered with kerosenes. They will then appear dull, but just as soon as rain comes in contact with the glasses it will be possible to see clearly through them. When kerosene is used it will be essential to rub it over with the hand so that the raindrops may run evenly. The efficiency of a lamp may be maintained by similar treatment of the front glass.

### HEAT IN TIRES

A test of the heat of tires in running fast has shown that from 130 to 150 degrees Fahrenheit was reached. Unless run deflated, 200 to 212 degrees could not be exceeded.