

## 1912 Thomas Models

For 1912 the E. R. Thomas Motor Car Company, of Buffalo, N. Y., offers four new and distinctive types of open fore door bodies. The seven passenger touring car and five passenger phaeton are built on a chassis with a wheel base of 134 in. The

graceful appearance. All of the spring bolts and shackles have been equipped with automatic compression cups, front and rear. The starting crank bracket has been changed to hold the crank in an upright position when not in service. The front axle is of

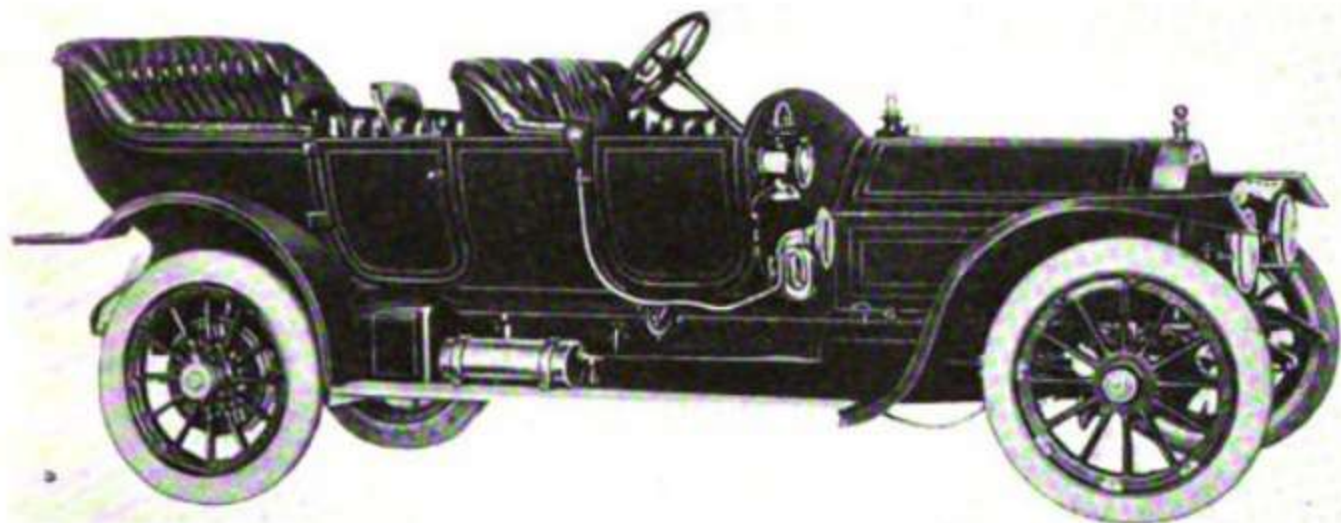


Fig. 1. Seven-passenger Thomas, 1912 Model. Both the five and seven-passenger are the same price, viz., \$4,000. The wheel base is 134 in. The same chassis, but with a frame measuring 126 in., is used for the four-passenger surrey and the runabout.

same chassis, but with a frame measuring 126 in., is used for the four passenger surrey and the two passenger runabout. 1912 cars are designated as the Thomas Six-Forty Model M. C.

In line with the Thomas policy of specializing on but one type of car, the factory production will be devoted exclusively to six cylinders. While no radical changes have been made in the 1911 Thomas Six-Forty, Model M. C. chassis, some decided refinements have been accomplished.

### 1912 Improvements.

Beginning at the front of the chassis, the frame horns have been raised to give a more

very heavy section, and is now made entirely of nickel steel. The steering bolts are topped by a Timken roller bearing and the wheel spindles are of unusually large diameter. A straight steering cross rod is used. The front axle is hung on the spring 1 in. forward of center; thus tilting the steering bolt backward and giving the car a tendency to run straight and thereby producing easy steering.

### Radiator and Fan.

The radiator filler cap is a ball with the word "Thomas" engraved upon it. The radiator cap is hinged and is opened by lifting the ball. When the ball is seated, three

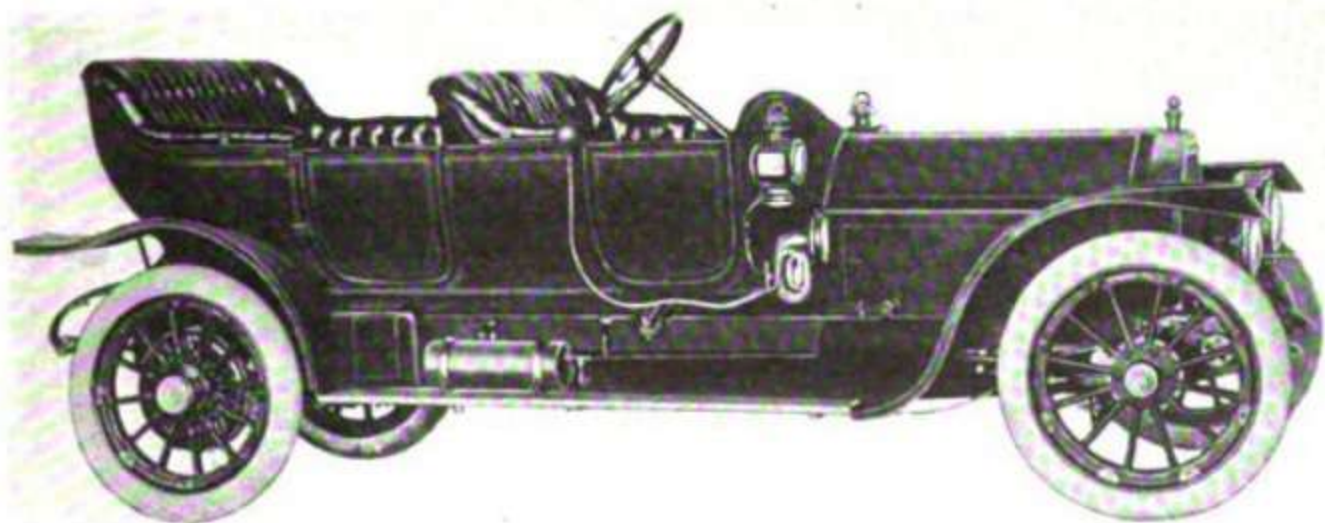


Fig. 2. Five-passenger Thomas Touring Car. This has the same chassis as that of the seven-passenger, the only difference being in the bodies. The cowls on the front are equipped with ventilators which may be opened or closed at will.



plungers inside the cap lock it in place. The radiator is equipped with a spreader to distribute the returning water upon the tubes.

The fan is of new design and the fan belt is held tight by spring tension. When necessary a new belt can be quickly substituted.

#### Motor.

The motor is a six cylinder,  $4\frac{1}{4} \times 5\frac{1}{2}$  in. The cylinders are cast in pairs, of "T" head type.

The oiling system is of the circulating type. The pump is of the eccentric type and is embodied in a brass plate, which is held to the bottom of the motor base by cap screws. This pump is driven by vertical shaft and spiral gears on the cam shaft.

each other, even including the switches on the switchboard.

#### Clutch and Transmission.

The Thomas clutch is still used, as it has given satisfaction everywhere. This is of a single disc type. The disc is made of brass and equipped with cork inserts.

The cross type of universal joint is used between the clutch and transmission, and the entire mechanism is covered by an aluminum shield which is held by clamps and thumb screws. This shaft not only assures the retention of grease around the universal joint, but catches any oil which might be thrown out from the transmission front bearings.

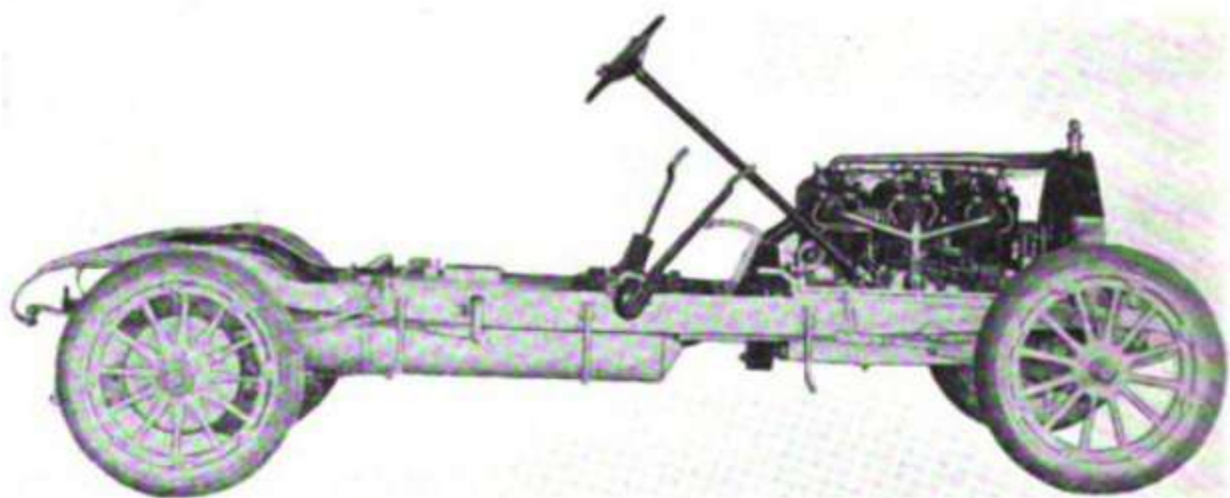


Fig. 3. Right side view of Thomas chassis, showing six-cylinder motor of 40 h. p. Note the curve to frame, giving great strength. This cut also shows very clearly the spring suspension.

Try cocks are used on the side of the motor base, one of which is stamped "full" and the other, "safety." If oil flows out of the safety cock, there is sufficient reserve for 30 to 50 miles. Handles rise from these cocks to a convenient position on the side of the motor.

The level is maintained in the crank case proper by means of dams and overflows to the reservoir beneath. A pipe from the oil pump leads to the switch board and flows through a sight feed; the waste pipe from this leading back to the motor. Oil flowing through this sight feed is evidence that the pump is working.

The car is equipped with Miller carburetor and the gas passes to the motor through a three finger "Y" manifold, giving a specially clear passage to each block of cylinders and the angles are such that gasoline cannot accumulate in the pipe from condensation.

#### Ignition.

Two independent systems of ignition are used, one battery system composed of commutator-distributor, with a single vibrating coil, and the other system is standard Bosch high tension.

Two sets of spark plugs are used and the two systems are absolutely independent of

The transmission is a selective type, three speeds forward and reverse; both shafts being carried on imported ball bearings and a ball bearing thrust is used in addition to take the thrust of the clutch. The transmission is supported by cross members of the frame. Spicer joints connect the transmission and rear axle on each end of the propeller shaft.

#### Steering Gear.

The Thomas steering gear is still used except that the steering wheel spider has been changed by carrying out the wood rim along the spokes for about 3 in. for the comfort of the hands, and the spokes are set to form a vertical cross when steering straight ahead, the upper spoke in this position being the only one not covered with wood, being reserved for Klaxon horn button.

#### Axles, Brakes and Springs.

The pinion shaft of the rear axle is now placed in a horizontal position, giving both the universal joints the same angularity.

The torque of the rear axle is taken up by the torque tubes supported by housing at the front end, and this is maintained by spring tension in this housing.



These tubes are Shelby tubing with  $\frac{1}{4}$  in. wall.

The rear axle is loose in the spring pad and drive is taken through the rear spring

The rear axle is extremely heavy and equipped with nickel steel sleeves on which the wheel bearings are placed. The bearings on the rear axle are Timken rollers.

The brake drums are 17 in. diameter and  $2\frac{1}{2}$  in. face, giving 525 square in. of braking surface, both brakes being on the rear wheels. The axle is full floating type.

Rear springs are three-quarters elliptic,

board, extending across the entire front, which switch board is within easy reach of the driver while seated behind the steering wheel.

On the right hand side of this switch board are located the battery and magneto switches, the air pressure gage for gasoline tank, the hand pump for air pressure to gasoline tank, the hand pump for air pressure to oil tank, air pressure gage for oil tank and oil sight feed. The last shows a stream of oil in view when the motor is running. The pressure to gasoline tank is taken care of

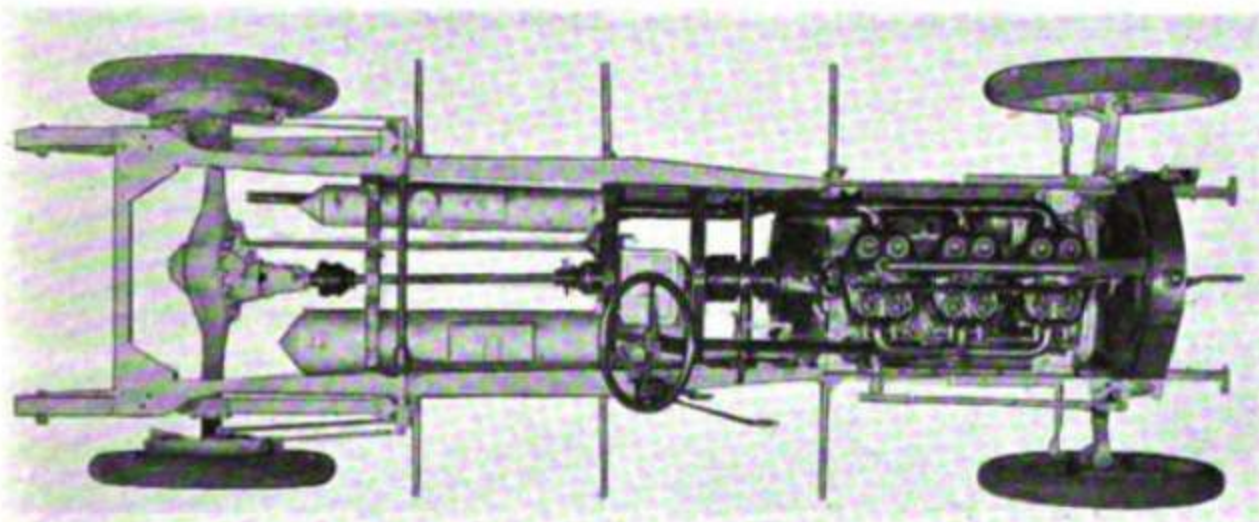


Fig. 4. Top view of Thomas chassis, showing fuel tanks, feed being by air pressure. The transmission gear set is located just aft of the clutch, the propeller shaft being universal jointed.

the upper portion being supported in a housing which is a part of the frame which is a Thomas patent.

#### Oil and Gasoline Tanks.

Slung from the cross members of the frame, one on each side of the propeller shaft, there are two tanks. The one on the right side is a pressed steel tank containing 24 gallons of gasoline; on the left side is an oil tank, similar in style, containing 6 gallons of reserve lubricating oil; a continuation of the brackets of the oil tank supporting the muffler also. These two tanks are an innovation which not only give large capacity for gasoline, but a large reserve supply of oil as well, and at the same time produces a low center of gravity in the chassis, and this, together with the position of the front axle, causes the car to cling to the road, especially noticeable when the tanks are entirely full.

Each of these tanks is equipped with an air dome which is another departure from the present practice. These air domes do not fill with gasoline or oil when the tank is fully charged, and as a result there is quite a volume of compressed air on hand when the tanks are entirely full.

#### Other Details.

The body equipment embraces new features in the style of cowl, and in addition, the equipment of this cowl with a switch

by a mechanical air pump contained in the motor assembly; the hand pump being used only when the car has been idle for a sufficient length of time for the pressure to go down, or in case of emergency.

The supply of the air pressure to the oil tank is by means of the hand pump only. When it is required to supply the motor with oil, pressure is pumped up by hand and then the valve is opened in the line to the motor base, the operator in the meantime watching his try cocks. The valve in oil line is to be closed when the motor base has been filled.

The running board brackets are pressed steel and splashers are so arranged that water will drain out beneath the running boards during a storm when in service, or when car is being washed.

The compartment under the front seat is occupied by a 10 gallon reserve tank of gasoline with gravity feed to carburetor.

Across the back of this front seat compartment and extending the full width of the car is a compartment for side curtains. This is accessible from the tonneau. The curtains are carried in a roll, thus obviating the necessity of folding the celluloid windows. The compartment under the rear seat is for miscellaneous storage. The bodies are also equipped with rear tool boxes suspended between the rear springs