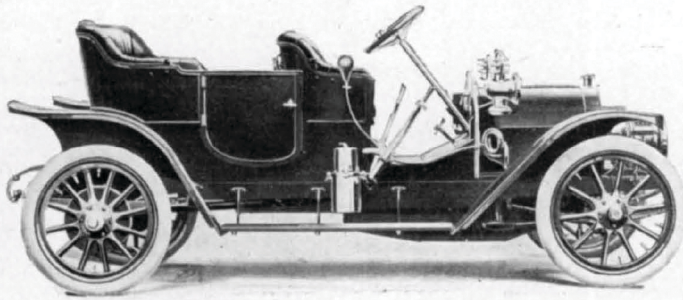


1909 MODELS—CHALMERS-NEW-DETROIT

PRICE: \$1500
 BODY: Touring car, tourabout or runabout
 SEATS: Depending on body
 WEIGHT: Runabout, 1,900 lbs., tourabout, 1,900 lbs., touring car, 2,000 lbs.
 WHEEL-BASE: 110 inches
 GAUGE: 55 inches
 TIRES-FRONT: 32 x 3½ inches
 TIRES-REAR: 32 x 3½ inches
 STEERING: Worm and gear type
 BRAKES: On drive shaft, 8 inches diam. x 3 inch face; on rear hubs, 14 inch diam. x 2 inch face
 SPRINGS: Semi-elliptic, front; ¾ elliptic, rear
 FRAME: Pressed steel
 HORSE-POWER: 24 (A. L. A. M. rating)



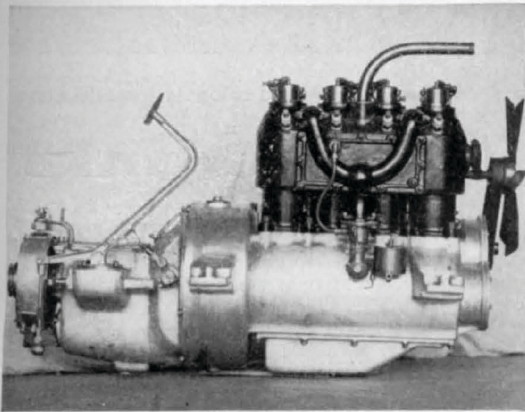
Manufactured by
 E. R. Thomas-Detroit Co.,
 Detroit, Mich.

BORE: 3¾ inches
 STROKE: 4½ inches
 CYLINDERS: 4, cast *en bloc*
 VALVE ARRANGEMENT: Exhaust at side; inlets in top of cylinders
 COOLING: Water
 IGNITION: Jump spark
 CURRENT SUPPLY: Storage battery. Provision for magnetos with separate spark plugs
 LUBRICATION: Constant level splash system, operated by gear pump. Sight feed on dash
 MOTOR CONTROL: Spark and throttle on steering wheel
 CLUTCH: Multiple disk
 CHANGE-GEAR: Sliding type
 SPEEDS: 3 forward and reverse
 CHANGE-GEAR CONTROL: Selective system
 DRIVE: Shaft and bevel gears

TO meet the demand for a high-grade car at a low price the E. R. Thomas Detroit Company has brought out for 1909

water-jacketing. The intake valves are placed in the head of the cylinder and the exhaust valves at the side. This arrangement makes

it possible to use very large valves, 2¼-inch intake and 1½-inch exhaust. The exhaust valves are operated by the usual direct method, the intake valves through rocker arms with four keys set at equal distance around it engaging in corresponding key-ways on the gears. All shaft gears and pinions are thoroughly



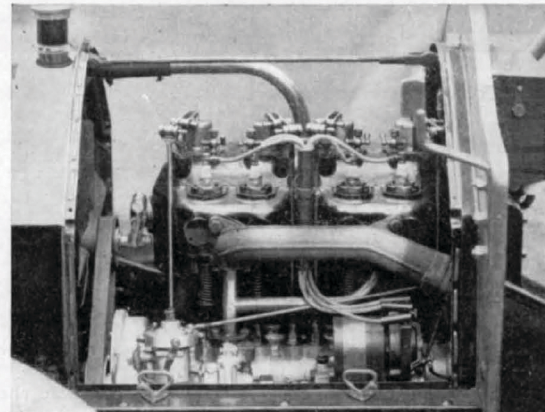
The motor, clutch and change speed gear.

it possible to use very large valves, 2¼-inch intake and 1½-inch exhaust. The exhaust valves are operated by the usual direct method, the intake valves through rocker arms.

Clutch.—The clutch is the multiple-disc type, consisting of alternating discs of phosphor bronze and steel. The former engage with studs on the flywheel, and the latter are keyed on the main driving shaft of the transmission, all of them running in a bath of oil. Both clutch and foot brake are operated by a single pedal.

Change Speed Gears.—

The transmission is of the selective sliding gear type, and gives three speeds forward and reverse. The gears slide upon a round shaft



Valve side of the motor, exhaust and water piping.

heat treated. The propeller shaft runs through a long tube fixed to the differential housing.

Lubrication.—Fresh oil is continually supplied to the interior of the engine by a gear-driven pump drawing oil from a reservoir at the bottom of the crank case. Individual compartments are provided for each crank throw and partitions have been placed in the engine base, which prevent an excess of oil at either end when the car is going up or down a steep hill. With this system a single filling of oil is ample for a 500-mile run.

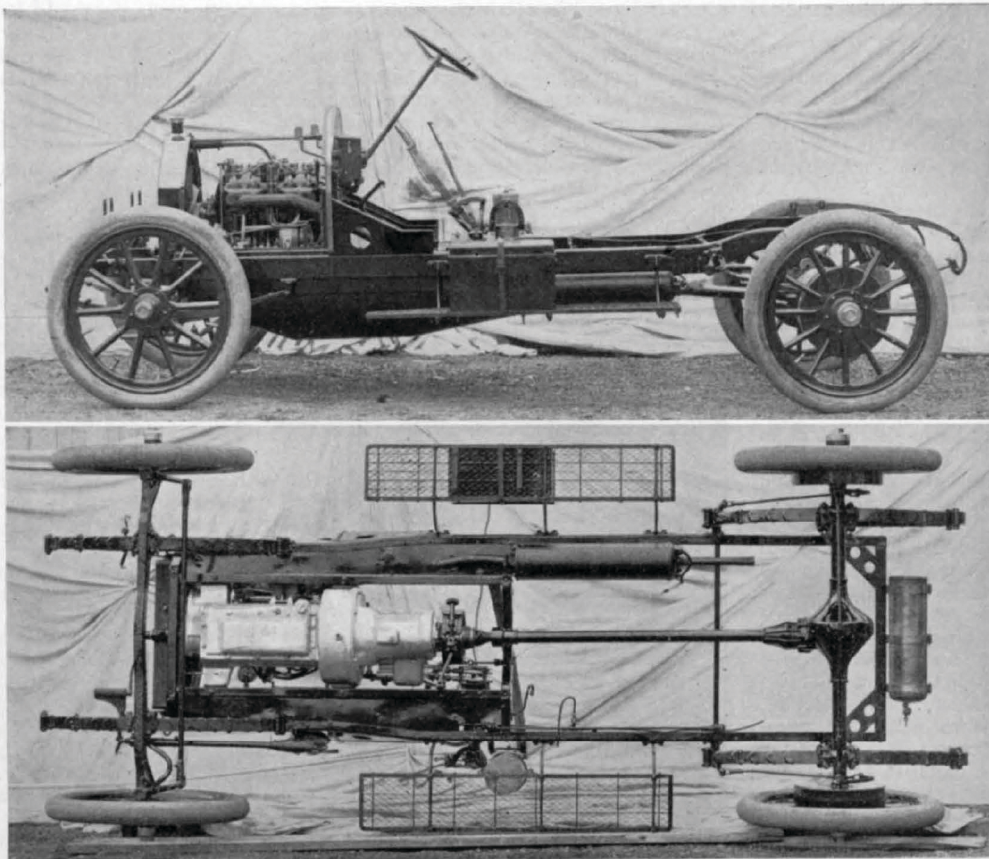
Cooling.—Water is circulated through the cylinder jackets and the vertical tube McCord radiator by means of a centrifugal pump located at the rear end of the camshaft and inside the flywheel casing. The radiator is of the same construction as that used upon the

(Cont'd pg. 108.)

a new 24 H. P. five-passenger model, selling at \$1,500. This new car is known as the Chalmers New Detroit, being named after Hugh Chalmers, president of the E. R. Thomas Detroit Company. Deliveries of the new model will begin June 20.

Power Plant.

The motor, clutch and transmission are all enclosed in a single casing flooded in oil and thoroughly protected from dust. The transmission case and clutch are attached directly to the flywheel casing and do not depend for their alignment on any attachment to the frame of the car. The entire power plant may be removed if desired by taking out six bolts. Throughout the motor and transmission and other parts of the car, annular ball bearings of extremely large size are used. All four cylinders are in a single casting, securing lightness, compactness and more satisfactory



Plan and elevation of the complete chassis.

THE CHALMERS-NEW-DETROIT.

(Continued from page 57.)

1908 Thomas-Detroit Forty and other high-grade cars. A novel detail is the method of supporting the radiator. Its entire weight is carried upon a trunnion at either side in such a way that strains on the frame of the car cannot possibly cause leakage.

Carbureter.—The same design of carbureter is used on the Chalmers New Detroit as has been used in the past on the "Forty." A distinct improvement has been introduced in the design of the gas intake. Instead of the usual intake pipe leading from the carbureter, gas passages have been cast in the water-jacket cover of the cylinders. Thus these passages are jacketed with warm water all the way from the carbureter to the combustion space of the engine. This renders it impossible for gasoline to condense and load up the passage.

Control.—Spark and throttle levers are located upon the top of the steering wheel. The steering gear mechanism is of the worm and gear type. The clutch and transmission brake are both operated by a single pedal. Pressure on this pedal first throws out disc clutch, continued movement on the pedal applies the brake on the drive shaft. This arrangement leaves the right foot free to operate the throttle. This foot throttle is claimed to be a decided improvement over the usual practice. Instead of a button or lever on which the foot must be held for varying throttle openings a swing movement has been adopted, permitting the foot to rest upon the toe board. This change should mean less fatigue for the operator's ankle. The emergency brake lever and gear-shifting lever remain the same as on the 1908 Forty.

