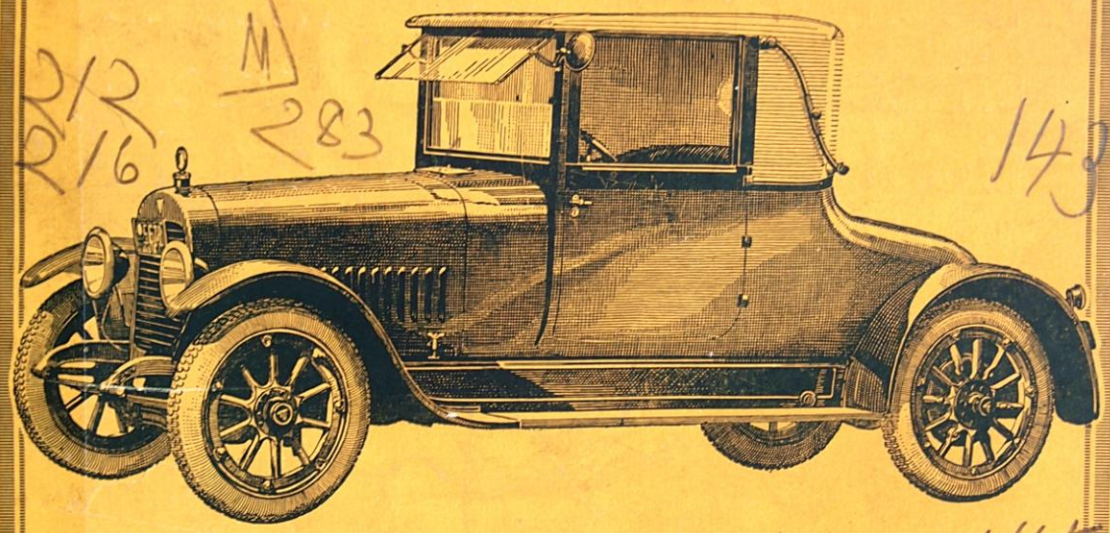
AUTOMOBILE TRADE JOURNAL

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A New Type Super-Six

This is the Hudson Runabout Landau, distinctively a Hudson creation. The new car of the year.

It is just the model for the owner who frequently does his own driving, who wants a car of the cabriolet type, or an open roadster. Its wonderful riding qualities over rough roads make it the car for men who make many trips from one town to another.

No car built by any maker this year is quite as distinctive as this Super-Six. It is exclusively Hudson.

HUDSON SUPER SIX

Hudson Motor Car Company
Detroit, Mich.

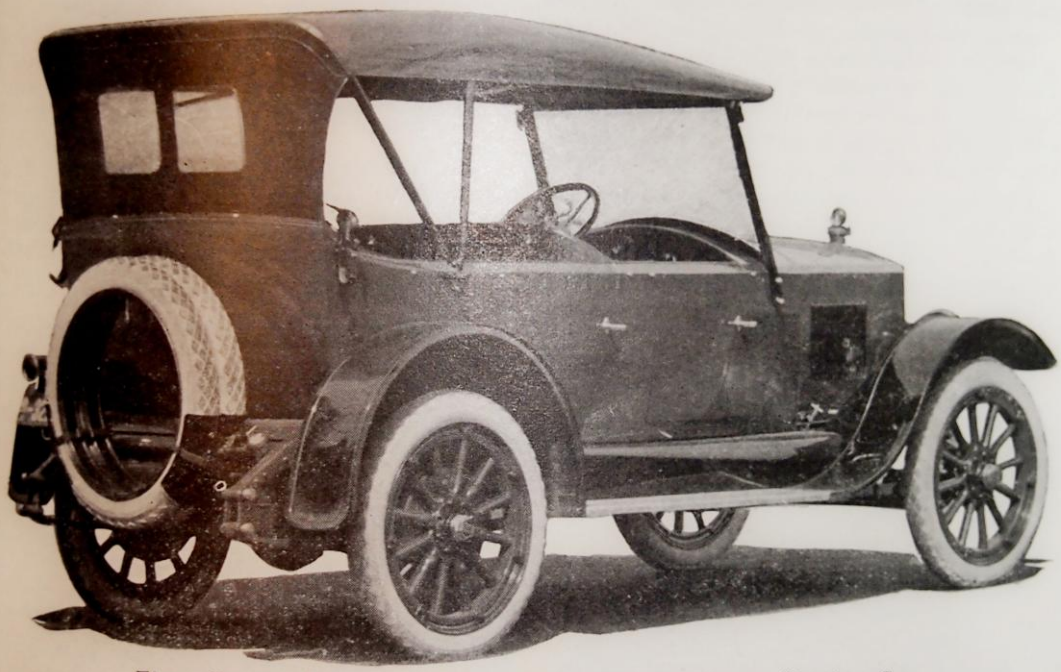
CHILTON COMPANY, PUBLISHERS, PHILADELPHIA, PA.

High-Speed Engine in New Essex

WHILE it has been known in the trade for some time that Essex Motors, organized in Detroit last fall, was to place a car on the market this summer, details, aside from the fact that it was to possess a four-cylinder engine, have been carefully guarded until recently. Added interest was given the enterprise from the fact that the directors of the Essex Motors also are officers of the Hudson Motor Car Co., and that the new car will be manufactured in the Hudson plant and marketed through Hudson dealers, although it is stated that the two organizations are to be kept as separate as their names imply.

The engine is exceptionally compact and is of the light weight, high-speed type. It has a bore and stroke of 3⅜ x 5 in., and, although it develops in excess of 55 h.p. at 2800 r.p.m., and is so geared that at 3000 r.p.m. the car speed is 60 miles per hour, it is only 29 in. over all, thus occupying little of the wheelbase space. When it is considered that the car complete, with gasoline tank filled and spare tires, weighs but 2580 lb., it will be seen that at the ratio noted there is one h.p. for every 52 lb. of weight.

The engine has four cylinders, cast in a single block. The top of the cylinder head is removable, the manifold carrying the carburetor being bolted directly to the head, as are the water outlets, one for each cylinder. Intake valves, with a clear diameter of 2 1-16 in, are in the head of the engine and the exhaust on the right side. The location of the carburetor is such that the flow of gas is downward into the cylinders. This gives a very thorough distribution, and should have the effect of making for easy starting in cold weather. Unusual care has been exercised in connection with the cylinder head and manifold passages, which are internally machined, this tending to assist in the even distribution and free flow of the gas. The ports are of large diameter, and in every other respect the best practices



Three-Quarter Rear View of the Essex Five-Passenger Touring Car

Price is $1395. The engine is a 4-cylinder, 3⅜ x 5-in. type, and the wheelbase 108½ in.

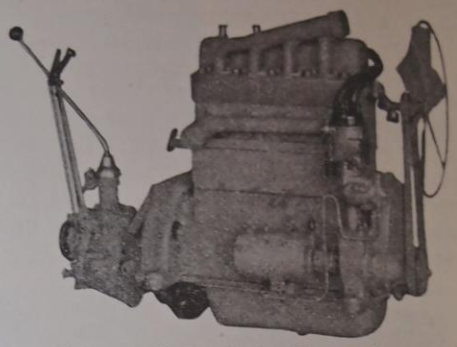
There are many distinctive features about the Essex that incorporate standard principles. The first thing that holds interest, of course, is the appearance of the car, both because of its graceful lines and the appearance of roominess, which is borne out by actual measurements, and which is brought about in an ingenious manner. Although the car has a wheelbase of 108½ inches, it gives the impression of being much longer because of the low hung body, the short hood and the long cowl, this illusion being strengthened by the beveled edge hood and body and the straight lines of the radiator, together with the rakish slant of the windshield.

in relation to high speed engines have been incorporated. This is noticeable in the crankshaft, which is of large diameter, and fully counter-balanced so that, combined with the use of Lynite aluminum alloy pistons, the vibration at high or low speed is not perceptible. There are three bearings, their respective dimensions from front to rear being 2 1-16 x 2¼ in.; 2 3-32 x 2⅛, and 2⅛ x 2⅝ in. The cams are integral with the shaft, of extra large diameter, and the shaft is carried on four nickel babbitt bearings. The intake valves are operated through rocker arms and the exhaust through straight push rods. Timing is through helical gears of wide face, cut at such an angle as to assure quiet operation.

Cooling is effected primarily through thermo-syphon circulation, the water entering at the center of the left side and being carried off to the right and above the cylinder head, the jackets being of large capacity. The cooling system can be controlled to a large measure by the driver, the front of the cellular radiator being provided with hand-operated shutters that increase or decrease the flow of air, as desired. A Boyce motometer also is employed.

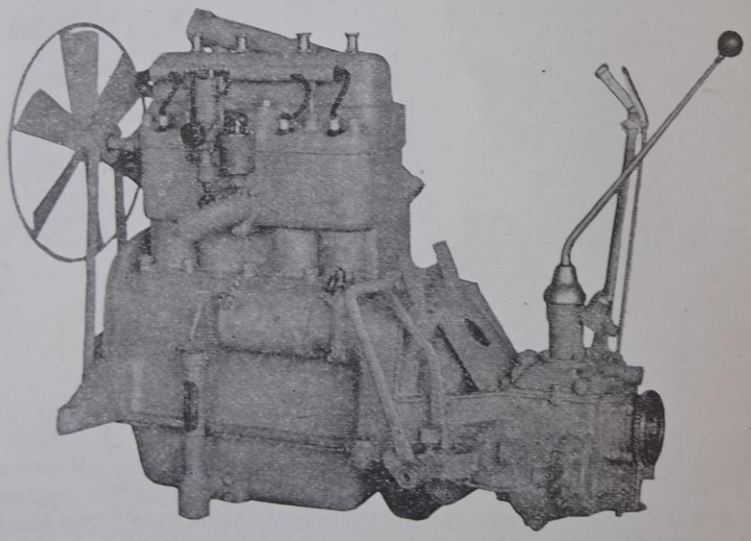
Lubrication is by constant level circulating splash, the reservoir being a pressed steel pan bolted to the bottom of the aluminum crankcase, so that its removal gives access to the main bearings. Because of the exposure of this pan, the circulation of air when the car is in motion cools the oil, tending to thorough lubrication and increased mileage per gallon. The flow of oil through the engine is controlled by the stroke of the oil pump connected with the throttle, making it automatic in action according to the speed of the engine. A pressure gage located in the cowl apron indicates the oil pressure and the condition of the circulating system.

Going back to the fuel supply, the carburetor is made especially for the Essex. It is of the piston type, self-adjusting through the fact that the piston is raised by the suction of the engine and in turn lifts the metering pin, which governs the gasoline feed. A strangler operating from the dash gives a heavy mixture for starting. The Stewart vacuum system is used, the 13-gal. gasoline tank being located at the rear, where it is protected by the frame extensions.



Exhaust Side of the Essex Engine

Showing distributor, generator and the unique exhaust manifold casting.



Intake Side of the Essex Engine

Metal conduit for ignition cables, oil filler and indicator and starting motor may be seen.

Starting and lighting is accomplished with the Delco two-unit system. The generator is mounted on the right side of the engine, a strap around the housing holding it to the crankcase. Drive is taken from the same gear which operates the distributor-timer unit. The starting motor is mounted on a flange on the left side of the crankcase, a screw gear giving engagement with the fly-

wheel. Lighting equipment is standard, and the electric switches are fitted with security locks and key.

The clutch is of multiple disc type, contained in an oil-tight case in the center of the flywheel. Both sets of discs are of steel, the drivers having cork inserts. The clutch is easy in its engagement, thus eliminating strain on the rear axle and minimizing transmission shock. The transmission, of conventional selective type, is bolted direct to the rear of the engine. Large sized roller bearings are used throughout, and a security lock is provided to insure the gears remaining in neutral.

Final drive is through two universal joints and a light but strong shaft to the rear axle of floating type. A housing of reinforced pressed steel contains the driving gears and differential, the separate carrier being bolted to the main housing. Accessibility is one of the distinguishing features of the rear axle, as with this arrangement the carrier and gears can be removed without taking the axle from the car. Driving gears are of helical type, the rear axle ratio being 4.75 to 1.

Brake Drums are Large

Brake drums follow the standard practice, being located on the rear wheels. The brakes, however, are of unusual size for a car of this weight, being 14 in. diam. and 1¾ in. wide. The wheels are 32 in., fitted with 4-in. tires.

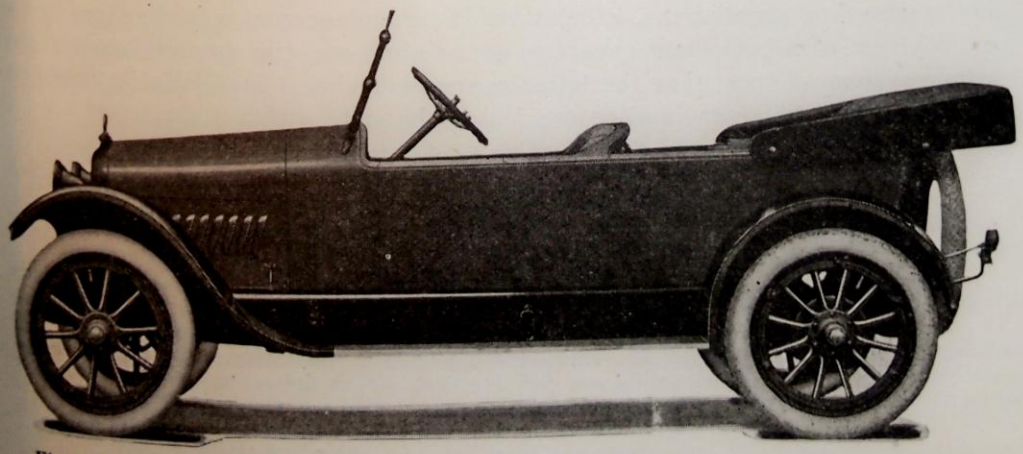
Investigating the spring suspension, it is found that considerably more than 80 per cent of the wheelbase length is cared for by the semi-elliptic springs, an exceptional proportion. The front springs are 2 in. wide and 36 in. long. The rear are of the same width, but 54 in. long, giving a total spring length of 90 in.

Maximum strength is incorporated in the channel-beam frame, which is 6 in. deep at the greatest point of stress. The frame is strengthened at both front and rear by tubular cross members, and the power plant is bolted direct to a cross member at the rear, connection also being made with the frame at this point.

Comforts and Style

To the passenger as well as the driver, the Essex appeals, because of the commodious five-passenger body. This has been made possible without lengthening the chassis because of the compactness of the engine, which, as noted, takes up but a trifle more than one-quarter of the wheelbase. The beveled edge running from front to rear gives a distinctive appearance. The seats are of high back type, reaching the passengers' shoulders, while the cushions are deep and set sufficiently low so that the knees of the occupants do not show above the car edges. There is plenty of leg room for the driver, whatever his height, and all operative levers are within easy reach. The top is fitted with minute adjusting curtains, and when extended it is anchored to the standards of the windshield with large thumb nuts.

Completely equipped, the Essex, which for the present will be confined to a 5-passenger car, sells for $1395.



Elgin Six, Four-Passenger Military Scout Model. It is Mounted on the Standard Chassis

The Elgin Motor Car Corp., Chicago, Ill., has just recently presented a typical sport model which is distinctive because of the straight lines, beveled edges and full-sized rear fenders. The name, Military Scout, is said to be significant because of the record recently made by the Elgin Six War Scout, a standard touring model, which made a run from Chicago to San Francisco and return, a distance of 6,202 miles with hood, clutch and transmission sealed during the entire journey. Supplied with the usual line of equipment, this car sells for $1195.