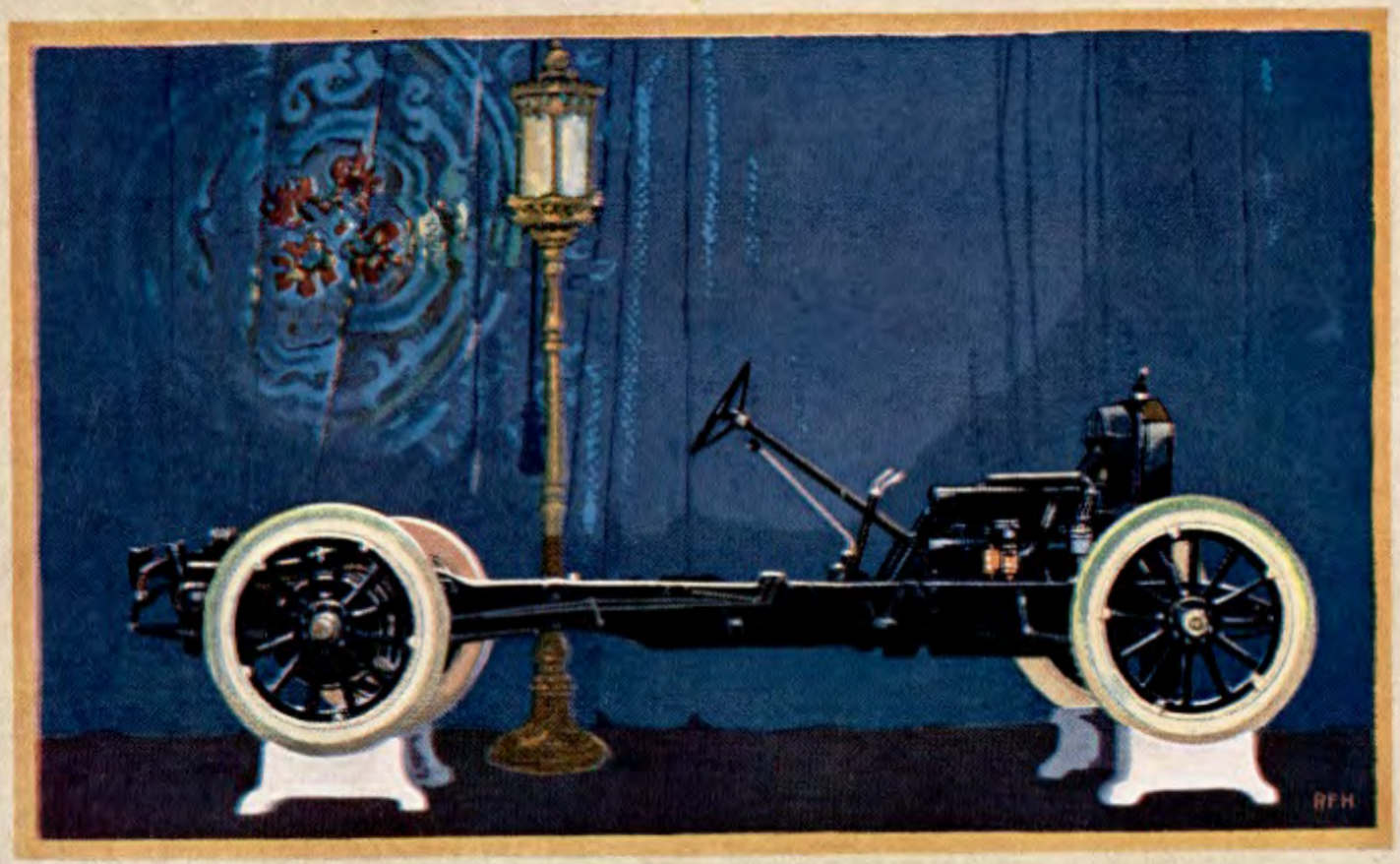
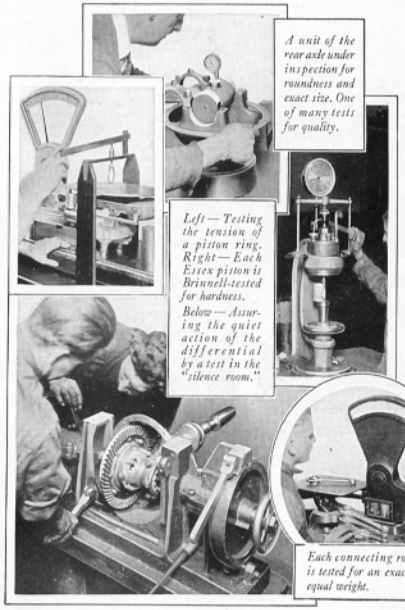


Details of

ESSEX CONSTRUCTION

How Essex Quality Is Kept High



A unit of the rear axle under inspection for roundness and exact size. One of many tests for quality.

Left — Testing the tension of a piston ring. Right — Each Essex piston is Brinnell-tested for hardness. Below — Assuring the quiet action of the differential by a test in the "silence room."

Each connecting rod is tested for an exact, equal weight.

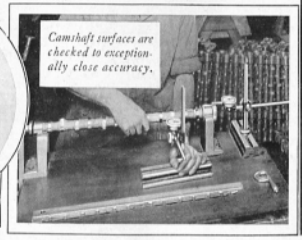
When Essex buyers are told that the cars have been manufactured to a watch-like accuracy, they may possibly feel that the salesman's enthusiasm is getting a bit ahead of him. As a matter of fact the salesman's statement in some respects is too conservative. In the manufacture of the Essex, a thousandth of an inch is decidedly a coarse dimension and an ounce is a weight so great that it is divided into small fractions.

The object of this great care is to assure parts which fit each other so smoothly that they may move or revolve on each other with no appreciable vibration or friction. This saves power, makes for long wear, and brings about the smooth running satisfaction which Essex owners know.

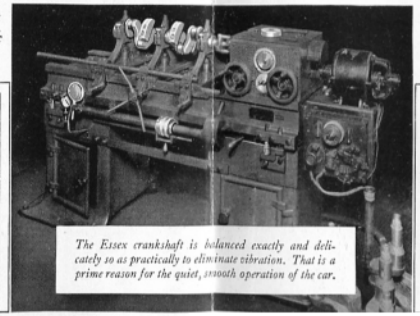
So precise are the standards of accuracy that the human senses cannot comprehend them. Piston pins, for example, are held to a precision of one quarter of one-thousandth of an inch. Try to imagine a quarter of an inch divided into 1,000 equal parts. Or — the same thing — try to imagine a hair from your head split into 10 equal parts. The task is manifestly impossible with human senses; it is necessary to have sensitive inspection instruments of the latest design.

Modern Scientific Inspection Instruments Assure Great Accuracy

As Essex is built in the same plant as the famous Hudson Super-Six, it has available the best modern devices to detect and correct the most minute inaccuracies. Hudson and Essex are inspected to the same high standards. In hundreds of parts, an error of one-thousandth of an inch means rejection.



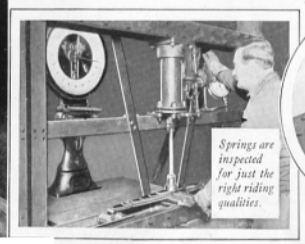
Camshaft surfaces are checked to exceptionally close accuracy.



The Essex crankshaft is balanced exactly and delicately so as practically to eliminate vibration. That is a prime reason for the quiet, smooth operation of the car.

Essex has been designed so that these many inspections do not necessitate high costs. When engineers planned the car, they had in mind the most economical methods of production through the use of automatic machinery. These machines can work to a higher standard of accuracy than human hands. They can do it week in and week out, not as a sort of laboratory experiment but as a part of the day's work.

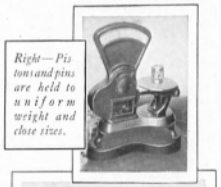
Thus a combination of careful design, which takes advantage of the best modern automatic facilities, and a full equipment of scientific inspection instruments works out to give Essex owners a car of remarkable quality at a most unusually favorable price. In many of its features Essex has as fine workmanship as any car whatsoever, regardless of price, because it is humanly impossible for anyone to do better work on these units than is done on the Essex.



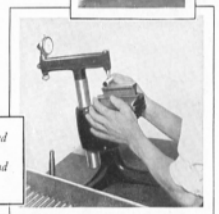
Springs are inspected for just the right riding qualities.

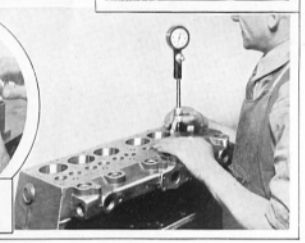
Above — Valve springs are tested for the right tension. Below — Cylinders must be round and of an exact uniform size.

All valves must be of exact dimensions.



Right — Pistons and pins are held to uniform weight and close sizes.





ESSEX MOTORS DETROIT USA

THE NEW ESSEX SIX is built by Hudson under Hudson patents; combined in it are the principles of design and building which Hudson has learned in 15 years of successful manufacture.

Before this car was decided upon, a study was made of requirements which motorists of today are demanding, in the light of the every-day use of a motor car as an essential instrument of transportation. A car was then designed with these specific needs in mind.

The new Essex is distinctively a car of today. Yet in its construction will be found no mechanical methods or devices not thoroughly tested through long experience.

It is designed for useful and ideal every-day transportation. It is believed that the new Essex, with its quite astounding qualities of comfort, economy, endurance, smoothness and liveliness, will establish a new standard for cars of moderate price.

Brief Detailed Information on the New Essex

MOTOR — 6-cylinder — 2⅝x4, 130 cubic inches. Tax horse-power, 16.5. Block casting integral with crankcase. L-head type. Super-Six design crankshaft, 2⅜ diameter, 3 main bearings. Split aluminum pistons. Camshaft and accessories driven by adjustable silent chain. Roller tappets. Four-point suspension. Thermo-syphon cooling with hand-controlled shutters on radiator. Lubrication by circulating splash with geared-down plunger pump. American Bosch electrical system. Bendix starter pinion. Full automatic spark advance. Constant velocity self-regulating carburetor. Steel flywheel.

CLUTCH — Multiple disc clutch — cork inserts, running in oil

TRANSMISSION — Unit with engine. 3-speed and reverse, aluminum case. Hyatt bearings on main shaft. Neutral lock. Spicer universal joints and tubular propeller shaft.

REAR AXLE — Semi-floating, Timken bearings throughout, fully adjustable. 14½x1¾ brakes.

WHEELS — Wood — 31x3¼ Cord Tire. Spare carrier at rear of car.

STEERING — Worm and full worm wheel — 17 inches, with wood wheel with aluminum spider.

GASOLINE TANK — Located at rear of car — 9½ gallons.

CHASSIS LUBRICATION — Hudson patented oilers.

WHEEL BASE — 110½ inches.

BODIES — 5-Passenger Phaeton. 5-Passenger Coach.

NOTE — *The Hudson Motor Car Company reserves the right to make changes or improvements at any time without incurring any obligation to install same on any cars previously sold.*