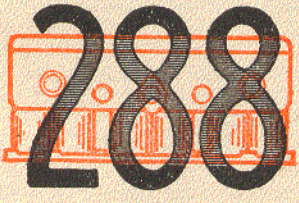
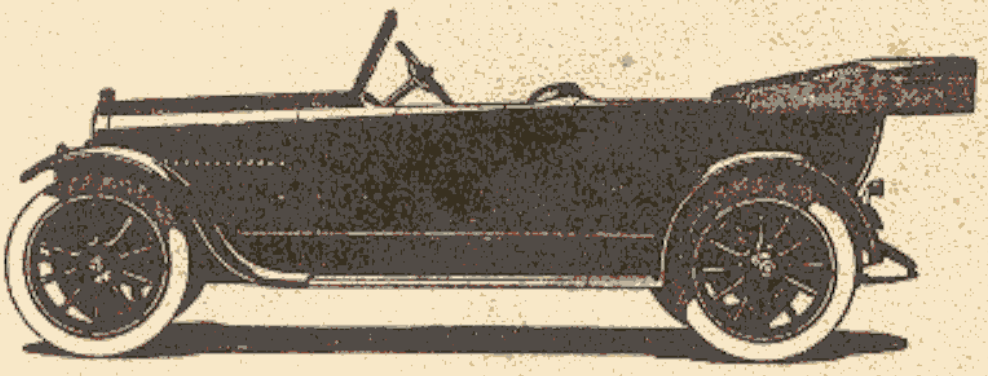
HUDSON SUPER-SIX

Six Little Cylinders

SIX LITTLE CYLINDERS



HUDSON MOTOR CAR COMPANY
DETROIT, MICHIGAN



The Hudson Super-Six

INTRODUCTION

THIS is a year of "cylinders." Body styles and chassis are improved each year, but increasing the number of cylinders cannot be considered an improvement.

It is unnecessary.

With one end in view—"performance," "pick-up," "power," it may be justified to a small degree.

But that has not always been the ideal. Rather has it been in order to sell their product, that multiplicity of cylinders is urged by some manufacturers.

Don't buy an automobile just because it has more cylinders than your old car.

Insist on comparing all types of engines —6's, 8's, 12's—all of them have merits— but the simplest is best.

If you can find a car with one cylinder that will perform as well as twelve— won't you be attracted to it?

The Hudson Motor Car Co. have not entered the multi-cylinder field without exhaustive engineering research. Their engineers, headed by Howard E. Coffin, have developed their "six"—the successful "six" of three seasons, because the number of cylinders alone did not appeal to them.

It was greater flexibility, more power, speedier pick-up that was demanded.

It can be obtained through **Six Little Cylinders** *—more are not necessary.*

"Six Little Cylinders"

THE motor in the new Hudson Super-Six is a little motor, 3½ x 5 inches, bore and stroke. It is therefore economical of maintenance and simple. A glance of comparison reveals instantly that it dominates the entire field of design.

You can understand it.

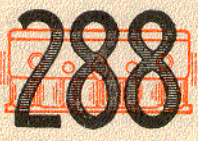
It is so accessible that *everything* is exposed, yet within this little engine there is 76 horsepower, an increase of 80% over the best sixes built of comparative size.

This is efficiency.

How has it been accomplished?

By perseverance on the part of Hudson engineers. By a policy that said, "We will build the right kind of an engine—irrespective of how many cylinders it involves," and with these ideals we invented a new type of power transmission in the motor, a new crankshaft and cylinder design, based on engineering laws and not on spectacular complications.

The little Hudson engine is only of 288 cubic inches volume—the size of



motor that has predominated in racing for the past two seasons.

This size motor was selected three seasons past by Howard E. Coffin as the ideal type of motor, yet until last year it fell short of our ideals despite the fact that we built more sixes than any other manufacturer, and our output was always over-sold.

Now we can offer the public a fine car, the "Super-Six," a car equipped with an engine that will attain a speed of 60 miles an hour in 25 seconds from a standing start. (Speedway record for stock car, top on, etc., 75.68 miles per hour. Speedway acceleration record standing start to 60 miles an hour, 23 seconds.)

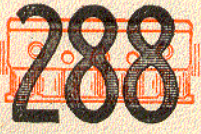
A car that will accelerate from a walking pace, less than five miles an hour, to birdspeed—50 miles per hour, in less time than it takes to realize it—20 seconds.

A car that will run 75 miles in one hour's time!

All done by *"Six Little Cylinders."*

Do you need more?

Six Little Cylinders, 3½ x 5," total capacity 288 cubic inches.



Simple, light and economical to operate.

Yet this Super-Six engine gives 76 horsepower.

An increase in power of 80% over former engines of its type, without added complications.

How Is It Accomplished?

We must review the history of the modern high speed, high-efficiency engine.

Four seasons past it was conceded that the Six was the logical finality in engines. It supplied continuous power with minimum size and weight.

The Six-Cylinder is Theoretically Almost Perfect

Six cylinders is the smallest number of cylinders that will produce continuous power in a gasoline motor. No motor with less than six cylinders will do this.

But *more* than six cylinders is *no better* than six—if the six is properly made.

Six is the *dividing line* between continuous, steady power and unsteady, intermittent, or jerky power.

Engineers long have known that if a six could be built as perfect mechanically as it was theoretically, there *never would be need for eights or twelves*, or for any number of cylinders more than six.

The public demanded an excess of power, smoothness of running, and fuel economy. They wanted quietness, greater flexibility, quicker acceleration and less need for changing gears.

Hudson engineers, to meet this demand, developed their famous Light Six. That Six, by reason of its excellence, soon became the pattern type.

Now it is the most widely copied motor in existence. It had a bore and stroke of 3½ x 5.

Six Little Cylinders!

In two years it quadrupled Hudson sales. It made the leading fine car.

All this because the small high-speed engine took the place of size and weight.

Old Style Sixes Not Perfect

But the speed of this engine was limited, as in all others, by vibration.

This vibration, the result of transforming energy obtained by the combustion of gasoline and air in the cylinder, into the power transmitted at the crank-shaft, caused a large percentage of the initial energy to be absorbed within the engine itself.

The energy was in the cylinder, but it was used up before it could be delivered to the wheels.

Vibration and the friction it causes is the foe of all machinery.

To eliminate it, and gain efficiency, is the ideal of every engineer.

And so, in 1914 Hudson engineers and others began to experiment with smaller cylinders because the lighter parts meant reduced vibration.

Smaller cylinders necessitated a greater multiplicity of cylinders, however. The "V" type engine was developed. The idea was that two sets of cylinders, set at an angle, would counteract vibration.

Hudson engineers built these eight and twelve cylinder motors and were among the first to test them in an automobile.

Hudson Engineers on the Right Track

But these engines did not measure up to the standard set by the ideal type of Six.

We redoubled our efforts to develop the ideal Six, although other manufacturers had seized upon the opportunity to adopt the now spectacular eight-cylinder engine.

Then, in the early part of 1915, some of our engineers discovered a way to build a vibrationless Six.

They calculated what their invention would do, and they set this down in writing to be filed as a check on the results they should obtain when the engine was completed.

It would increase the power by 80%.

It would excel any record made in the laboratory or on the road by any eight or twelve we had tested. It would be capable of so much more

engine speed that it would make the Hudson the most powerful and fastest car of its type.

It would be a SUPER-SIX.

And this Super-Six, when completed, met every prophecy of the Hudson engineers. Their theory was correct.

An Invention

On June 28, 1915, we applied for a basic patent on our invention, for this was too great an achievement to share with our rivals.

On December 28, 1915, the patent was allowed.

So this epoch-making refinement belongs to Hudson users only.

The basis of this patent is the result of a war against vibration, and Hudson engineers are the victors.

To explain how this is accomplished in a few words is no easy task, since a thorough account of the principles involved necessitates the use of terms too obscure to be of interest to any except the engineer.

Briefly, it is a balancing of the moving parts of the motor in such a manner as to prevent automatically, any

tendency to vibrate, or to spring out of line, either individually or as a whole, when transmitting power.

By maintaining the pistons, connecting rods, and other moving parts in harmony with each other, much less power is used up within the engine itself. We approach more nearly the ideal condition wherein all the energy derived from the explosion within the cylinder will be transmitted to the crank-shaft.

This enables us to use smaller cylinders than would otherwise be necessary in order to obtain equal power.

Efficiency—In Six Little Cylinders

And it has been accomplished without added complications in the way of cylinders.

Simplicity is *still* the keynote of the Hudson.

The increased engine speed made possible by this invention made it imperative that we increase the valve areas and develop a new type of carburetor.

Large valves of a higher quality,

and greater areas in the intake passages and valve ports insure economy and power with added reliability.

A New Carburetor

To do justice to the saving in vibration, a perfect gasoline-mixing device was needed. It would have to automatically proportion the fuel to the air for a much greater variety of speeds.

The Hudson engineers developed a pneumatically controlled carburetor, simpler than anything we had seen before, yet regulating the mixture with a precision that would be impossible by any other method.

This carburetor is a fitting adjunct to the Super-Six.

Simplicity

Six Little Cylinders—mean simplicity of a sort that can be understood at a glance.

Economy of upkeep—minimum repair expense—can only result from a simple, understandable design.

On this score, any comparison between the Hudson Super-Six and any eight or twelve can but result in one decision—the Six is supreme.

You can understand these ***Six Little Cylinders.***

Yet within this little engine is seventy-six horsepower. There is a vast reserve of power whenever you need it, for the Hudson is still a light Six, like the famous Six-40, and light weight makes for efficiency.

Wonderful Performance

You can use this reserve power to creep on high gear on hills and in places where it would be impossible to do so with an ordinary motor.

You can pick up—accelerate—as no other car can. You may drive as fast as 75 miles an hour if you so desire.

And all this wonderful reserve power is accomplished by conquering vibration—and, ***Six Little Cylinders.***

Tested Under Official Supervision

The Super-Six seven passenger car at Sheepshead Bay Motor Speedway, and under the official supervision of the American Automobile Association, has made new records for speed, endurance and acceleration.

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In a test of 100 miles, it required only 1 hour 20 minutes 21.4 seconds to cover the distance. This is an average speed of 74.67 m. p. h. And this was done with a 7-passenger STOCK car, not a specially prepared product. It carried two people and was fitted with a top and windshield.

A Standard Touring Car

In another test of one hour, under the same conditions this car covered 75.68 miles. It attained a maximum speed of 76.75 m. p. h. and ran with the regularity of a clock during the entire test.

In another test, with five passengers and the top and windshield up, it ran for one hour at a speed of 70.74 miles for the entire period.

In tests for acceleration this Super-Six excelled all other records.

From a standing start, changing through gears, it attained a speed of 50 m. p. h. in 16.2 seconds. Sixty miles an hour was attained in 23 seconds with three people and windshield up.

From a rolling start, on high gear, a speed of 30 m. p. h. was made in 10 seconds. Fifty miles an hour was

made in 19.4 seconds, with three passengers and windshield up.

Six Little Cylinders. Officially examined and checked up as a stock product before and after the tests.

This same car was driven 1350 miles at a speed exceeding 70 miles an hour without discoverable wear to any bearing or adjustment.

And pulling a seven-passenger body around a track continuously. Truly a wonderful record for endurance.

Such tests prove that no ordinary requirement you can make of the car in years of service will be beyond the ability of the car to deliver.

What more can be said in favor of these ***Six Little Cylinders?***

A Car to Match

We have built a car to match this motor. You never have seen a finer example of the body-building art.

It is higher in front and lower in the rear, to get perfect flowing lines.

The Phaeton is built with a double cowl, to give two compartments, each with a finished dash.

The windshield is slanted.

Each coat of finish is fixed by heat, to insure great durability. Equipment for this cost us $100,000.

A rare grade of grain leather is used in the upholstery.

Every detail shows the final touch. Here is all that art or cost can give you in luxury, comfort and beauty. Any other car under $2,000 will seem skimped in comparison.

And there are five bodies.

The Phaeton seats seven, but the two extra seats disappear when not wanted.

The Roadster seats three.

The Cabriolet is a fine coupe which quickly changes to an open Roadster.

The Touring Sedan is a luxurious 7-passenger closed car, like an electric brougham. But the windows drop in pleasant weather to give you a Touring Car with sides completely open.

The Town Car and the Limousine are the handsomest cars of their type.

But, with all these luxuries, the Hudson Super-Six, in Phaeton style, costs but $1375 at Detroit. That's because our production this year will reach $42,000,000.


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