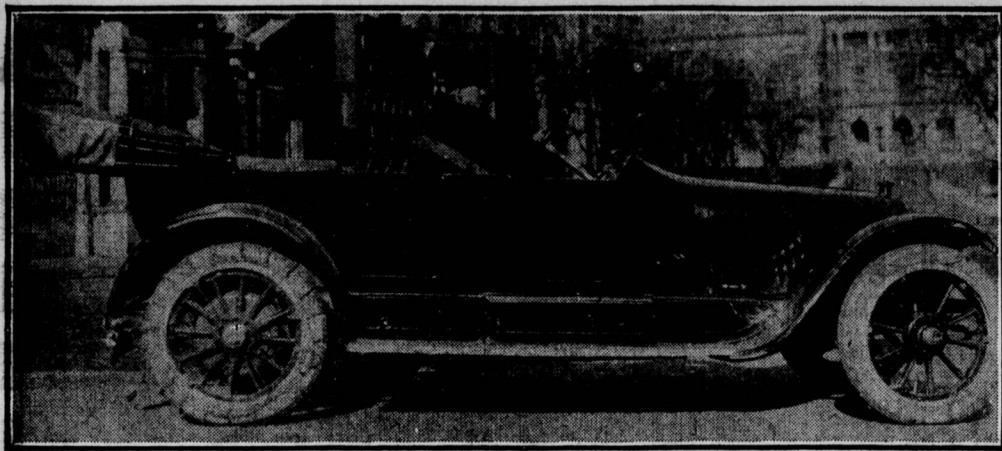


I. W. DILL AND STREAMLINE HUDSON SIX



I. W. Dill may be classed among the pioneers in automobile salesmanship. Years ago when rubber tires first became popular on buggies, Mr. Dill decided to ride in rubber cushioned vehicles and he has been sticking close to the elastic substance ever since, and when they began to propel vehicles by gas instead of horse-power, Dill was among the first to see its future possibilities. Various cars have been sold by him, but they have all been passed up for the Hudson which is only made in six-cylinder models this year. For those who want a four-cylinder, the Krit line is offered this season.

ECONOMY IN THE NEW SIX-40 HUDSON CAR

Mistake to Consider Four Cylinder Motor More Saving Than Six



By Howard E. Coffin

Designer of the Hudson Sixes

The relation of power to gasoline consumption, weight of motor, weight of car, etc., is one of the Six as against the four-cylinder, but one of piston displacement purely. A Six of the same piston displacement as the Four will use less rather than more gasoline, other conditions being in proportion along the line.

A given piston displacement divided among six cylinders makes possible a lighter motor, lighter parts all the way through the driving mechanism and a lighter car in total weight, than does the same piston displacement divided among four cylinders. This lighter weight, the lighter reciprocating parts, the absence of vibration in the Six, etc., all tend to make the Six the more economical motor.

On the Six-54 we have a piston displacement of 420 cubic inches. This amount of piston divided among four cylinders would be approximately equivalent to a four of 4 1/2 bore by 6 1/2 stroke, of 4 1/2 x 6, of 5 1/2 x 6, etc.

Any Hudson dealer will agree that the 1914 Six-54 is more economical of gasoline than is any 4,000 pound car of which they ever heard of any of these cylinder dimensions mentioned.

Motors Same Size

The Six-40 3 1/2 x 5 motor has a piston displacement of 288.6 cubic inches, while the Model 37 1913 had 280 cubic inches. These motors are approximately the same size, yet the Four-37 engines weigh 610 pounds while the Six-40 engine weighs 550 pounds. The 37" 4-cylinder car weighed 3,460 pounds ready for the road, while the Six-40 weighs approximately 2,940 pounds. The average mileage per gallon obtainable with the 1913 "37" was about 9 to 13. The mileage per gallon on the 1914 Six-40 is 13 to 17.

The 1913 "37" was a 5-passenger car with a wheel base of 118 inches. The 1914 Six-40 is a 6 or 7-passenger car with a wheel base of 123 inches. The 1913 "37" sold for \$1,875, while the 1914 Six-40 sells for \$1,750. In

speed, power and economy of upkeep the 1914 Six-40 will greatly excel the 1913 4-cylinder "37."

Costs Less to Build

As a direct contradiction to the argument that the six-cylinder engine is a more costly engine to build and hence must necessarily make the six-cylinder car a more costly car for the purchaser to buy, it may be cited that the Six-40 motor actually costs less to build than did the 4-cylinder "37."

Differences in motor cost are, generally speaking, made up of differences in material costs. The material cost of the Six-40 six-cylinder motor is less than the material cost of the 4-cylinder "37" of approximately equal piston displacement, because the Six-40 motor weighs about 60 pounds less than did the Model 4-37 motor.

Built in Multiple

The cost of machine work upon the materials for the building of a 6-cylinder engine varies little from the cost of operations in building a 4-cylinder engine of the same piston displacement. In this day and age of machine tool development, practically all motor building operations are done in multiple. Upon the Four-37 motor all four cylinders were bored at one and the same time. Upon the 1914 Six-40 also all six cylinders are bored at the same time. Moreover, these cylinders being smaller in diameter and shorter than were the cylinders of the Four-37, the six cylinders of the Six-40 are actually bored in a shorter time than were the four cylinders of the Four-37.

All connecting rods are drilled at one setting, it matters not whether there be four or six. Every boring operation on the crank case is done at one setting and the holes bored with gang tools at the same time, so that it matters not whether there are to be six or four cylinders placed upon it. Every hole in cylinders or crank case is drilled at one and the same time by means of jigs and gang tools, so that there can be no possible difference in the time of the operation, whether the motor be a four or a six-cylinder.

The Differences

The fly-wheel of the Six-40 is much smaller and much lighter than the Four-37, hence uses less material and requires less time to machine. The pistons of the Six are much smaller and lighter than the pistons of the equally powered Four and hence the six smaller parts may be machined with very little advance in time over that required for the four larger ones of the equally powered Four.

The cam shaft of the Four and of the Six is machined with gang tools and several cams are formed at one and the same time, so that there can be little difference in the time of the machining of these parts.

The crankshaft of the Six is somewhat more expensive than the crank shaft of the Four, but inasmuch as one man upon one machine tool will machine 30 six-cylinder crank shafts per day of 10 hours as against 33 four-cylinder crank shafts per day, and inasmuch as one man upon one grinder will grind 32 six-cylinder shafts per day as against 35 four-cylinder shafts per day it may readily be seen that the difference in cost upon this item amounts to little. As a matter of fact, the saving in other directions upon the Six will more than offset this added charge upon the crank shaft item.

The Six is Favored

The number and sizes of gears are no more or no less either with the six or the four-cylinder engine.

In general it may be pointed out that while a greater number of parts such as valve port plugs, valves, pistons, connecting rods, etc., are used in the Six than in the Four, these parts in the Six are so much smaller and so much lighter in weight than are the same parts in the equally powered Four, the cost for the finished parts for two such motors are practically the same. If any difference exists, that difference will be found to favor the Six, because of the reduced material cost of the lighter weight motor.

ECONOMY AND LIGHT WEIGHT IN 1914 CAR

Official of Jeffery Company Explains Lead His Company Has Taken

By J. H. HILL
Designer of the Thomas D. Jeffery Company

An interesting lesson has been taught to far-sighted American motor car manufacturers by the European show, and this lesson was further brought home to them this year by the Jeffery 1914 car.

The Thomas B. Jeffery Company has passed through identically the same development as have other manufacturers in this country, excepting in the one instance of the 1914 car which is the result of the entire experimental stage of the extremely light and inefficient car to the heavy and still inefficient car which we have recently ceased to build.

We felt certain that there was coming a time when the motor car buyer would turn his attention to economy, and economy meant lightness, and lightness meant less weight. And so, in company with my associates, I did look to Europe. We attended the Paris show. And in that one exhibit I saw out of eighty-six models exhibited fifty-two that did not show a single model with as large a piston as is used in the Jeffery Four.

The thirty-four manufacturers that did exhibit larger motors also had smaller bodies.

To me this was most significant. It meant that here again was coming a great change in motor car building. On my return from Europe and in executive session with the officers of the Thomas B. Jeffery Company we decided that we would anticipate the demand which we felt would come, and we built the Jeffery Four.

In building the Jeffery Four we have maintained an extreme lightness without sacrificing either strength or comfort; reduced friction in the road-car not only with a view to road and wind resistance, but with the important purpose in mind of producing power, the minimum of upkeep and the maximum of pleasure.

It is only natural that you might ask, "How could we reduce the weight of the Jeffery without reducing the durability of its construction?" Another natural question for you to ask would be, "How could we increase the efficiency of the power chain without increasing the cost of the finished product?"

By the use of vanadium steel we are able to carry the body for five passengers with a saving of sixty-seven pounds, which is possible only because we use vanadium steel. In numerous other ways throughout the entire car we have been able to decrease the weight which would ordinarily be necessary for a slow-speed over-weighted motor, and consequently in using the motor in which the number of explosions is far greater than in the larger slower motors the strain does not become so much of a trip-hammer vibration, and consequently the springs and frame used may be of a much lighter but exceedingly tougher material.

Let us not forget the specifications or the construction of the Jeffery Six or the Four—true to the great many specifications that characterize cars of at least three times the cost.

For instance, we use the Rayfield water-jacketed carburetor, which is the highest priced carburetor that the Rayfield people make. We use also the most expensive light system that we can buy; the most expensive magneto system and the most efficient axle that we have been able to find. In fact, every piece of material that goes into the Jeffery Four is considerably lighter and just a little stronger than that which goes into another car.

We are trying to build a car for five people and to carry these five people as comfortably as any car made in the world. We have accomplished this.

We have plenty of room in the body, which, by the way, is of the famous Rothschild type, not the streamlined but the Rothschild type which made the sensation of the Paris show and which we alone, exclusive of all other motor car manufacturers, are showing this year in New York. The Jeffery Four has more distinctiveness, more real stamina, than cars weighing twice as much and costing four times the price.

I can't believe that it would have been possible for us to produce a more efficient car.

Why worry when your auto suddenly takes a notion to quit running. Just pass the time away tossing the following questions at your fellow-passenger:

When is a motor car like a mirror? When it has a glass front.

What part of motor car is mentally unsound? The crank.

What car sings best? Car-uso.

What class of literature reminds you of motor cars? Autobiography.

When water freezes in a motor car radiator what does it become? Ice.

What part of an automobile spins best? The top.

Why can't a motor car grow fat? Because it eats only gasoline.

What part of a motor car is most ladylike? The bonnet.

Why is the freight on an ocean liner like gasoline in a motor car? It makes the car go.

When is a motor car in the same class with a dog, a peddler and a poet? When it has a license.

When is a motor like a horse housed for the night? When it is stalled—Honk Honk.—Exchange.

Henry Ford has furnished the answer to the question: "Why is it so many thousands of young men refuse to marry?" During the first week of the profit-sharing increase in wages, fifty of the men in Ford's employ became bridegrooms.

ABBOTT-DETROIT AT THE SHOW THIS YEAR

Strong Features of Models Emphasized by Factory Representative For Eastern District

BY C. D. STEWART
Manager Harrisburg Branch Abbott Motor Car Company

The Abbott Detroit cars are fast winning their way into the hearts of the people of Harrisburg and vicinity, the same as they are in the large cities of the country, and the answer is this:

Anyone versed in car construction knows full well that Continental motors, Warner transmissions, Timken bearings, Spicer universal joints and Auto electric starting and lighting system are points that know no superior, and in addition to these the "Buildog line" has many other features that appeal to the discriminating buyer. For instance, the six-cylinder Abbott car has a four forward speed transmission, with direct drive on third gear, the fourth gear being used in instances where it is desired to drive above forty miles per hour.

The electric starter is worked from the regular shifting lever; this means



C. D. STEWART

you cannot have your gear in low or reverse and start it accidentally, as you are apt to do where your electric starter is worked independently from the shifting lever. This is a remarkably strong feature and worth a very careful investigation.

The gas tank on the six is carried in the rear. This not only makes it handier in filling, but it means safety, as tanks carried in the cowl are very near the engine and in case of an accident the chances of an explosion are decidedly greater. If you value your life, consider this point, then examine such cars as Packard-Peersless and other high-grade makes and you will see they carry the tank in rear. It costs the factory more to install them this way, but it spells safety and satisfaction for the user.

There is no car made that will stand the wear and tear any better than Abbott Detroit. Even down to the spring clips we consider material. They are all hand-forged. These items cost us more money than most car companies like to spend for these points, but in building Abbott cars the

A New-Type Six

Less Price—Less Weight—Less Fuel Cost Than Fours

This new car—the HUDSON Six-40—brings out many innovations.

The engine is a type first developed in Europe—a small-bore, long-stroke motor. And Europe which deemed the Six too wasteful, now acclaims this Six as the coming type of car.

It has made possible for the first time an economical Six—far more economical than Fours.

This new HUDSON Six-40 weighs 2,980 pounds. That's 400 pounds less than last year's HUDSON "37."

It consumes one-fourth less fuel. Yet the HUDSON "37" was a four-cylinder car, shorter, less roomy, less powerful.

Compared with other Fours in this class the difference is greater. Some same-class Fours weigh 40 per cent. more and consume one-third more fuel.

Price \$1750

And this HUDSON Six-40—a quality Six—far undersells any Four in its class. So a man who now buys this-class car pays more for a Four and more for its upkeep than this HUDSON Six-40 costs.

This means, beyond doubt, the doom of Fours above \$1500.

For several years no Four has been salable at a price which would buy a good Six. Eighteen high-class makers now build Sixes exclusively, and 54 of them build Sixes for best.

Now comes a modest-price, high-class Six—

a light-weight Six—an economical Six. And the price is less than many thousands of men have every year paid for Fours.

The Six is smooth-running. It has overlapping strokes. It is flexible, economical of tires. Riding in a HUDSON Six is much like constant coasting.

Men who find this out will not buy Fours at anywhere near this price.

A New Body Type—New Features

The design and equipment are almost the same as the new HUDSON Six-54. And that is considered the handsomest car of the year—a really distinguished car.

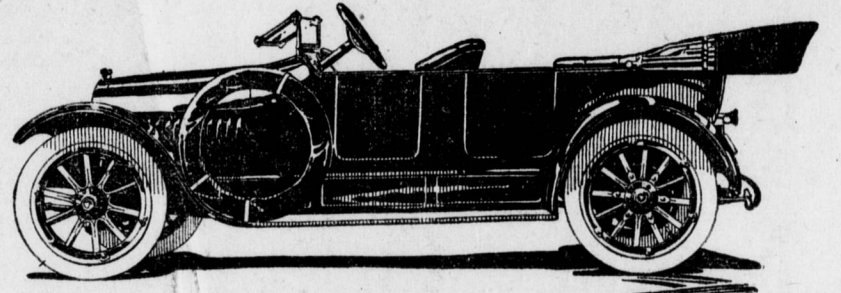
An ideal streamline body of the coming type. Hand-buffed leather upholstery. It has the convenient new "One-Man" top with quick-adjusting curtains attached.

Two disappearing tonneau seats. Gasoline tank in the dash. Extra tires ahead of the front door. Concealed hinges, concealed speedometer gear. Dimming searchlights, the Delco patent system of electric starter and lights.

Six-months ago there was no car at any price which offered so many attractions.

This new Six-40 is to-day the most interesting car on the market. The demand for it is breaking all HUDSON records. You may, when you see it, want an early delivery. If so, we urge that you come and see it now.

54 of the 79 Automobile exhibitors at the 14th National Automobile Show held in New York Jan. 3 to 10 this year, displayed six-cylinder cars. Eighteen showed Sixes exclusively. That emphasizes the dominance of Sixes.



Also Roadster type. Also Cabriolet completely enclosed, quickly changeable to open Roadster.

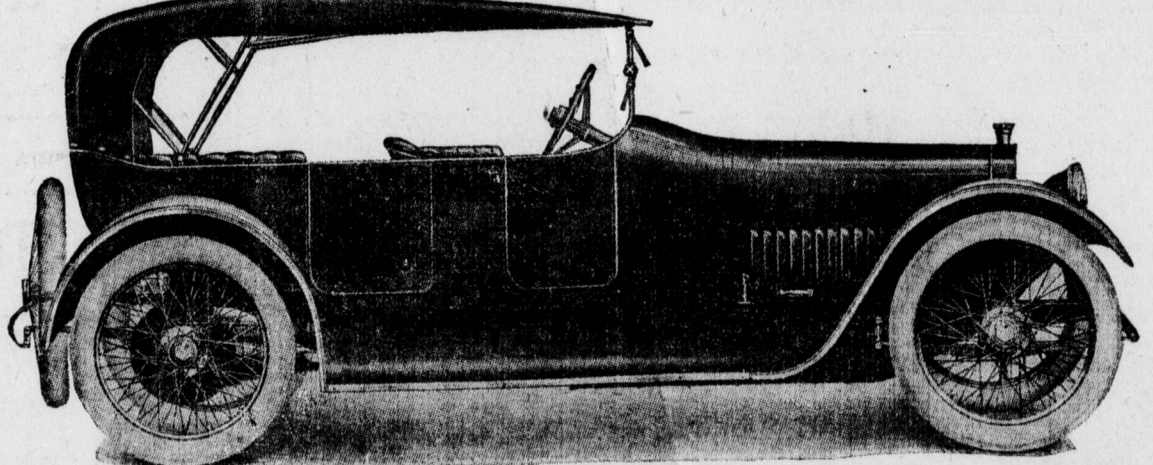
I. W. DILL East End Mulberry Street Bridge
Harrisburg, Pa.
A FULL LINE OF HUDSON MODELS AT THE SHOW

Abbott Motor Car Company considers first of all protection and long life. The upholstery, the painting and the tops are of the highest grade and safety is considered from beginning to end. In ignoring the streamline body

we are only keeping away from a fad that will soon die out and which is not used to-day by the high-grade builders. We have a line of cars that are individual and individually is what appeals to all particular buyers.

The Abbott Motor Car Company would like intending buyers to examine other cars, then see the Abbott Detroit. It means sales for the company and genuine car service and satisfaction for the buyer.

The ELECTRICALLY CONTROLLED GASOLINE AUTOMOBILE



Model 6---46A---\$2,500, Including

VULCAN ELECTRIC GEAR SHIFT

The Pullman 6-46A is a complete revelation. It is more than that. It marks an epoch in automobile construction. Its distinctive features will ultimately be adopted by other manufacturers of high grade motor cars. The Vulcan Electric Gear Shift alone puts it in a class by itself. Here is a car that a child can operate by the "mere touch of an electric button." No hard or awkward shifting of the gears. Everything is arranged for the driver with the least possible exertion.

See this car at the Harrisburg Auto Show. It will be the most artistic and distinctive car there. Ride in it and you will not wonder why it is called the "PALACE CAR OF THE ROAD."

MOTOR 3 3/4 x 5 1/4
WESTINGHOUSE STARTING
AND LIGHTING
BOSCH MAGNETO
STROMBERG CARBURETOR
FOUR SPEED TRANSMISSION

TIMKEN AXLES
WIRE WHEELS
ONE SPARE WHEEL
TIRES 36 x 4 1/2
CLEAN RUNNING BOARDS
LEFT HAND DRIVE

ONE MAN TOP
EUROPEAN COACH WORK
TURKISH UPHOLSTERY
GASOLINE TANK IN COWL
WHEELBASE 134-INCH
BODY 5 OR 7 PASSENGER

Exhibition in Charge of W. F. GROVE, Factory Representative

PULLMAN MOTOR CAR CO.,
YORK, PENNSYLVANIA

Oakland
"THE CAR WITH A CONSCIENCE"

Your visit to the Harrisburg Auto Show, March 14th to 21st, would not be complete without seeing the 1914 Oaklands—especially—the New Light Six—\$1785—which has revolutionized six-cylinder values.

Fours and Sixes
\$1150 to \$2500

Phila. Factory Branch
227 North Broad Street