

CARS FOR EVERY PURSE AND PURPOSE

SEASON'S MODELS ANSWER EVERY REASONABLE DEMAND

There Are Roadsters, Touring Cars, Limousines, Etc., and All Represent the Last Word in Motor Car Construction

(Continued From Preceding Page.)

cluded in one end of the motor generator. The spark advance is automatic.

The clutch and gearbox are in unit with the motor, and drive is taken by a torque tube.

Three-quarter-elliptic springs are used in the rear, and tires are 32x3 1/2 and the wheelbase is 114 inches.

The Dodge is to be found in the display of the Covey Motor Car company on the second floor.

HUP CHANGED SLIGHTLY

Details in Finish Noted in New Hupmobile.

Only minor changes have been made on the Hupmobile and these consist largely in details of finish rather than in mechanical improvements.

Probably the most important mechanical change is in the redesigning of the clutch linkage, allowing the clutch to be disengaged with much less effort.

An innovation in the way of lighting is also a rather prominent feature of the 1917 Hupmobile. This is in the use of a new dimming device which gives graduated brilliancy of the head lights.

The tail light now operates independently of the other lamps and there is a new combination switch for ignition and lighting. Another electric improvement is in the ammeter which shows the rate of charge and discharge of battery.

Previously no ammeter was fitted. In the body the most radical change is in the adoption of a new color, this being blue with the fenders black and an option of three colors for the wheels.

There is a new type of demountable rim, the Firestone, and a new type of rim carrier to coincide with the latter.

Some improvement has been made in the fittings of the car, particularly in the addition of a never-leak top, the material of which is black outside and tan inside.

A special Hupmobile design of Bishop door curtain carriers is used. These fold with the curtains which is said to be an exclusive feature.

The curtains also open with the doors in the latest approved fashion. A note which should be made in a review of the Hupmobile is the distinctiveness of its styling system.

This is probably the only car using a drilled crankshaft without an oil pump to force lubricant through it. Oil is picked up by the flywheel and thrown by centrifugal force into a bell mouthed opening in a pipe which conducts it through a screen and thence to the crankshaft.

Oil also goes to the chain which drives the auxiliary shafts and a separate lead supplies the valve chamber so that the tappets operate in a constant bath.

Owing to the use of the flywheel for lubrication the clutch is assured of plenty of oil and the type used is the steel to steel design with 15 plates.

HUDSON REMAINS THE SAME

Radiator Damper Provides New Point.

A better performing car has been obtained by the recent addition of a radiator damper, and this is the only change for 1917 in the Hudson line.

It provides the dealer with a strong talking point, because it means that the operation of the motor is not so dependent on atmospheric or temperature conditions.

It means better carburetion in cold weather. The damper comprises a series of swinging vanes installed in front of the radiator and controlled from a plunger located on the cowl dash.

In warm weather these vanes may be held open, while in extremely cold weather they may be closed, and between these two limits the setting may be varied as desired.

The price of the device is \$15, and with Boyce moto-meter \$25.

The moto-meter is an essential part of the equipment in that it shows at all times whether the motor is running too hot or too cold, and consequently whether the vanes should be opened or closed.

To install it is only necessary to remove the radiator, take off the standard radiator shell and replace it with a special shell housing, vanes and operating mechanism.

A hole is drilled in the cowl board and another in the dash for mounting the operating plunger. No machine work is required.

The six-cylinder, 3 1/2x5-inch, 76-horsepower motor, brought out a year ago, is continued without change.

The features of this motor is a specially balanced crankshaft which eliminates a large amount of vibration and consequently reduces the friction and increases the horsepower.

All the models are continued, the line including a three-passenger roadster and seven-passenger touring car, coupe, sedan and limousine.

The Hudson is shown in the booth of the Boss & Peake Automobile company.

FORD'S NEW 1917 RADIATOR

Local Agents to Be Represented by Collective Exhibit.

The Ford agents of the city will be represented by a collective exhibit in the second floor show room at the Armory. Here will be shown the standard cars and also educational features which will depict the progress in factory methods.

The Ford of the year underwent its change in the middle of last year and since adopting the curved line radiator and the crowned fenders, the factory has never been able to come anywhere near the demand.

The exhibit will show the latest models of Ford closed cars, which like their bigger brothers, show the same remarkable strides towards greater comfort and increased service ability in all kinds of weather.

THE CONVERTIBLE KISSEL

Latest Addition to Line Includes Town Car.

The dominating Kessel feature is the extensive use of the detachable tops, transforming an open car into a closed car and vice versa.

The latest addition to the line is a town car, mounted on the hundred-joint six chassis. The coupe and sedan bodies are continued, as well as the sedan top for the larger six.

Any of these models may be purchased at a reduced price without the winter top.

The hundred-joint six has many improvements, including a balanced crankshaft, straight frame members, the substitution of oil cups for grease cups, to render lubrication more easy, except at two points, underlugs and springs.

Remy generator and ignition distributor, detachable leather heads and double tire carrier.

Wide door openings, deep leather upholstery with cushion springs and curled hair, adjustable driver's seat—body mounted on soft felt packing to eliminate rattles and squeaks are some of the body features.

The new town car, an unusually interesting model, affords a stylish car for winter use, as well as an ordinary open touring car for summer.

The top looks as though it were permanently mounted and fits perfectly because of the wood molding around the top edge of the tonneau compartment is removed before the winter top is bolted in place.

Only ten bolts are used and the change may be accomplished in one hour, it is said. The rear compartment is upholstered in cloth and the windows are curtained.

The front windows slide up and down. Due care has been taken to make the body rattle proof and for this reason a double lock is used on the doors. Two auxiliary seats are fitted.

A sedan and coupe are similarly mounted on the five-passenger and runabout models respectively. Ventilation is secured by dropping the win-

doors into the lower halves of the doors. The Pacific KisselKar is exhibiting the line here.

MARMON'S WEIGHT MINIMIZED

Economy of Fuel and Tires Is Thus Attained.

The Marmon is 1000 pounds lighter than other cars of equal ability and luxury. Excellent economy of tires and gasoline, and extreme hill-climbing power result from the light weight.

The touring car weighs 3450 pounds, ready for the road. This minimum weight has been attained by the extensive use of aluminum—the cylinder casting is made from the metal as is also the body panels, radiator shell, rear axle gearbox and fenders—and the use of a Z-section frame in which running board is employed to strengthen the frame.

This gives maximum strength with minimum weight. The particularly easy-riding qualities are obtained by the use of the compound cross-suspension cantilever.

The list of bodies is quite complete, including three, four, five and seven-passenger open bodies and sedan and limousine. The closed models are notable in that they are particularly low and light. An average man can look over the top when the car is standing by the curb.

The Northwest Auto company is showing a beautiful model of this scientifically built light weight car.

MAXWELL GOES UNCHANGED

Minor Improvements, However, Make for Comfort of Car.

The Maxwell 25 is continued with few changes, save for several minor improvements that tend to make it more attractive and comfortable. Mechanically the greatest change is the water-Kent ignition instead of magneto. The Simms starting motor and generator are used.

The appearance of the dash has been improved by adding a gasoline gauge and dash lamp—small items, yet ones that are important. The rear seats of the five-passenger model have been widened three inches and the front seats of all models are two inches wider.

This has been done without increasing the width of the body, but by cutting down the thickness of the upholstery on the sides of the seat. The compartment beneath the rear deck of the roadster is larger and more accessible. Instead of opening at the rear the compartment is covered with a door that covers practically the entire rear deck. The rear springs have been lengthened nearly six inches, making the car more comfortable and steadier on rough roads.

On the sedan the type and so arranged that all wind or rain may be excluded in winter and yet open for ventilation in summer.

Easy starting is facilitated by the addition of two priming cups, one mounted on each branch of the intake manifold. Last year instead of the priming cups threaded plugs were screwed into the manifold, and though the engine could be primed, it could not be primed readily. The amount of nicked or polished metal surfaces on the car has been reduced to a minimum. The lamps, instead of having nicked rims, are all black enameled.

The Maxwell is shown in the booth of the Boss & Peake Automobile company.

MITCHELL HAS INNOVATIONS

1917 Car, However, Is Unchanged in Essential Details.

More than a score of small features have been added to the Mitchell six, although in all essential details it is the same as the 1916 car. The new features may be considered additional selling points and are little things which provide additional comfort or convenience or add to the life of the car.

A unique detail is the hinging of the headlight reflectors so that the complete reflector may be swung up so that the motor and rear of the car may

be illuminated in case it is necessary to do any work at night on the road. The position of the headlight is also adjustable and the headlight is carried in a bracket which is riveted to the radiator shell, making a very neat, yet substantial construction.

The use of a radiator shell enables the radiator to be finished with a baked-on enamel. The body convenience is so much changed that it is difficult to compare the new body with the old. It is six inches longer, and of this, five inches has been taken up by increasing the depth of the tonneau and the other inch in enlarging the front compartments.

Besides this, the radiator is entirely new, having a deeper shell and a flat instead of a rounded front. This refined model is known as 34 and is a continuation of the 32. Model 59, the eight-cylinder car, is continued without change.

Although six inches has been added to the body, the wheelbase has been increased two inches—from 110 to 112. The additional body space has been secured by giving four inches more overhang in the rear. To take care of the larger capacity 32 by tires are now fitted in place of the 32 by 3 1/2. The new body is also easier riding through the adoption of 51 inches semi-elliptic springs in place of 49 inches three quarter elliptic.

The Hotchkiss drive has been continued with the new spring. Mechanically, the refinements are of a detailed nature, but have had practical results as is evidenced by the fact that the increase of six horsepower has been given the engine without altering its dimensions.

This is an overhead valve design and the principal difference is in a rearrangement of the valve timing and the use of an offset fulcrum on the valve rocker. This now gives a reduction of two to one whereas the former had a one to one arrangement. The result is more lift and a longer dwell or open period of the valve and taken in conjunction with a new timing, this gives a higher volumetric efficiency and hence the gain in power.

The Oldsmobile is being shown by the Oakland Auto Sales company, of which E. A. Mitchell is manager.

OLDSMOBILE IS IMPROVED

New Car 20 Per Cent More Powerful Than Last Year's.

Changes have been made in almost every important detail of the Oldsmobile eight, so that the model 45 is practically a new design. The present car is 20 per cent more powerful than the product of a year ago. The engine has been considerably improved; the electrical equipment has been overhauled and remounted; a better oiling system is installed; the drive units have been changed; the spring suspension bettered; the tires increased, and the spark plugs relocated.

Improvements in the power plant have resulted in the production of 66 horsepower at 3200 r.p.m., whereas with the former car, 46 was secured at 2800 r.p.m. This increase in power is largely due to the redesigned manifolds and a quicker lift to the valves with a longer open period. The redesigned manifolds give

NATIONAL NOW ON DISPLAY

Body Details Improved in Accordance With Custom.

The National on exhibition is a beautiful gray model of the six-cylinder type. The National also makes a 12. The six featured here is in essential much the same as the car of last year but body refinement and detail show the tendency to keep abreast of the times.

The chassis does not show much change and is practically the same as that used in the 12. The National uses the long cantilever spring which is almost flat under normal load and keeps the body down close to the ground. An unusually large number of leaves are found in this spring, which add stiffness for normal load, yet have the "give" for a rough road.

More power is taken from the Continental motor built especially for the National factories. Careful attention to finer points in its construction gives the greater efficiency without radical departure from the previous engine types which made the National well liked wherever it went.

The new body is three inches longer. It has a center cowl and there is an aisle between the seats. In the tonneau under the front seats are two locker compartments. The front seats are larger and more room for the driver has been secured through better planning of the body layout.

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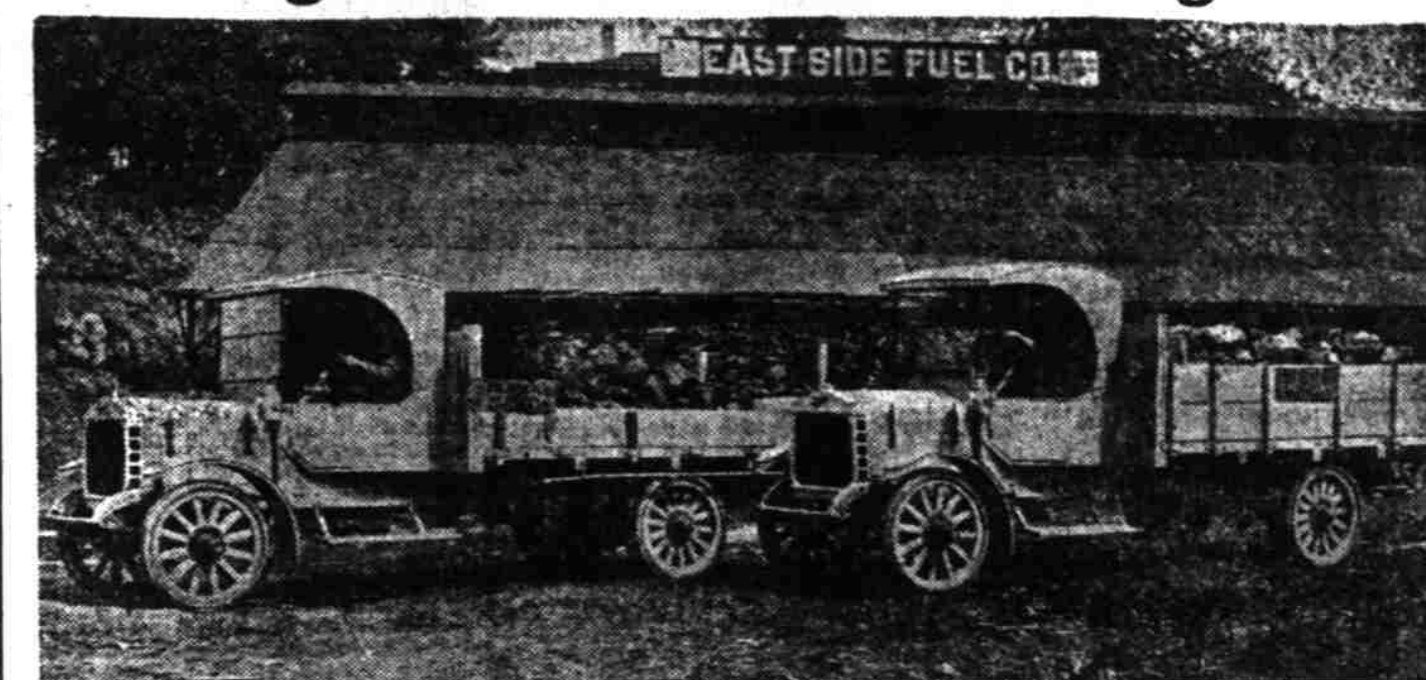
smoother gas flow and they are now cast separately whereas they were integral. The intake header is now hot-water jacketed, and the exhaust instead of being a cross pipe between

the blocks is a Y-shaped piece with the branches of the Y coming together under the floor boards. In refining the motor three studs have been added to the detachable head and it has a

greater water carrying capacity. With the three studs there is no tendency to distort the valve seat on tightening them. Lynite pistons are still used but

(Continued on Following Page.)

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