

Stearns-Knight, Full Classic[®] from 1925 used a sleeve-valve engine; but in 1930 it was all over

Next in the Classics A to Z Series

Periodically the *Roadrunner* runs stories about Full Classics[®] made in America. In this issue we continue the series with Studebaker and Stearns-Knight. Prior stories can be found on our web site, www.arizonacca.com. Click on "Classics A to Z" at the top of the home page. Watch for a story on the Stutz in our next issue.

The roots of the company dated back to a 1896 Ohio machine shop

By Les Jackson

One of the more expensive Full Classics[®] was the Stearns-Knight, anointed by CCA for 1925 through the end in 1930.

The roots of the company dated to 1896 when 17 year old Frank M. Stearns of Cleveland, Ohio, built his first car. He had access to his family's well equipped shop which enabled his endeavor.

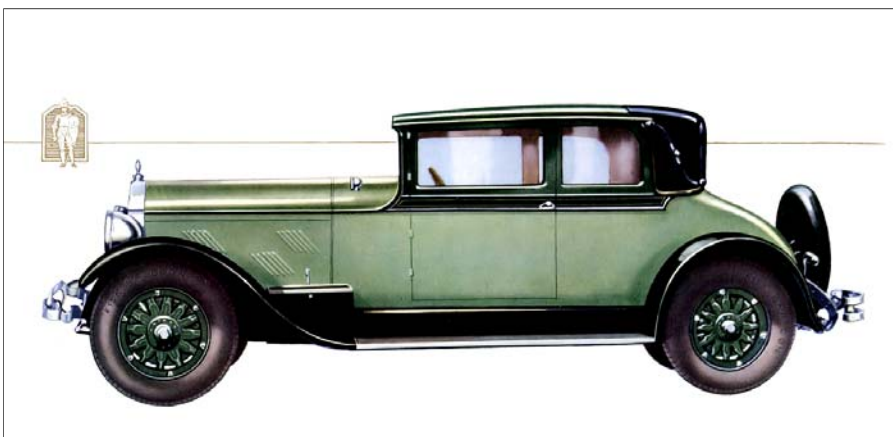
By 1900 the company he formed was in commercial production. In 1911 the company bought a license for use of the English developed Knight sleeve

valve engine.

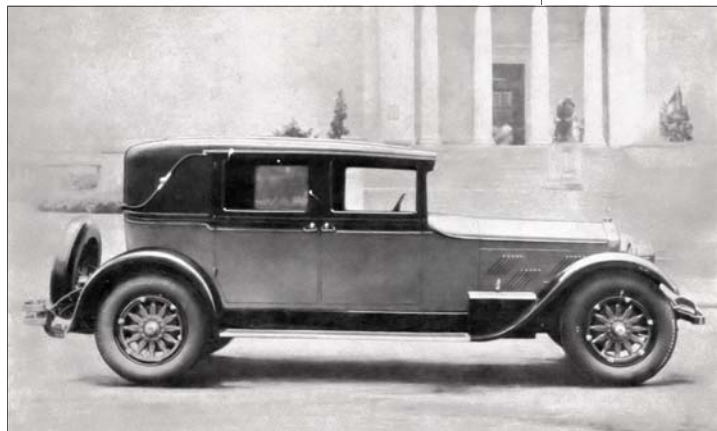
In 1916 Stearns retired from the company, citing illness; however, he would live until 1955.

In late 1925 John North Willys bought the company. Within two years a straight eight engine was introduced to the line, whereas previous engines during the Classic Era had been four or six cylinders. Prices of the six cylinder cars in 1925 varied from a low of \$1,875 to a high of \$3,395.

By the time of the final 1930 models, the Stearns-Knight offered only eight cylinder 127 horsepower



Was this for four or five passengers? It is a 1928 Stearns-Knight "Four passenger coupe", however the description says "...a straight rear seat that can hold three...and two forward-tilting Pullman seats, of unusual comfort and size. It is series 8-85 with an 8 cylinder engine of 3½ inch bore and 5 inch stroke. Wheelbase is 137 inches. Note the hood louver design.



The custom sedan for 5 passengers by Stearns-Knight for 1927. The company said about this model: "delightfully comfortable, very compact, full leather back enclosure of the distinctive landaulet type." Standard colors for this model were black in the upper structure with dark gray lower body and red belt and white and gold stripe. The company also claimed the car to be "America's Most Luxurious Motor Car". This model was powered by an 8 cylinder engine and rode on a 137½ inch wheelbase

cars and the prices ranged from \$5,500 to \$5,800. There is no estimate of sales that year, because production had actually ended in the last few days of 1929 and the company was dissolved. The so-called 1930 models were assembled from left over 1929 parts. In 1929, the last year of full production, some 1,143 cars were manufactured, which included a number of six cylinder models, rated at 70 horsepower and ranging in price from \$2,495 to \$2,945.

Opposite Page: This shows two of the 1929 six cylinder Stearns-Knights. The top car is called the cab roadster with rumble seat on a 126 inch wheelbase. Below that is the 7 passenger limousine on the 134 inch wheelbase. It sold for \$2,945 new. Horsepower on both was 70.

Tech Notes from the Twenties

When did you last see a sleeve-valve engine?

What makes it different from the poppet valves in the cars we know?

Valves in a car admit fuel and air to the combustion chamber and permit the burned gases to escape. These days cars use “poppet” type valves. Both the sleeve-valve and the regular internal combustion modern engines operate with pistons moving operating from the crankshaft and connecting rods.

The sleeve-valve engine however, inside the cylinder and between the piston and the cylinder wall, has two perfectly machined and precision fitted sleeves, one inside the other with precision fit sliding up and down.

These sleeves are powered by a camshaft with short connecting rods, one for each sleeve to push them up and down.

In the sides of the sleeves are slots or holes. These slots match ports in the intake and exhaust manifolds in proper timing to act as valves. One side is the inlet valve and the other is the exhaust valve.

The sleeve valve engine is essentially the same as a conventional engine except for the operation of the valves.

The operation is of dual sleeve-valves passing each other on a film of oil and driven in exact ratio to the piston travel by the short connecting rods, actuated by the eccentric shaft which revolves at one half the speed

Plenty of optimism in January 1928 for Stearns-Knight's sales

In the January 1928 MoToR Annual, the comprehensive look at the coming year in the automotive industry, Stearns-Knight took out a full page ad.

It read in part: “1927 was a big year...1928 will be an even greater Stearns-Knight year. The new models are beautiful. The performance is amazing. The luxury is incomparable.” It continued: “Stearns-Knight today—more than ever before stands for supreme luxury in motor cars.”

The company said it offered 17 different body styles for 1928, including six and eight cylinder models. Prices started at \$3,250 in Cleveland, Ohio for the least expensive cars.

Production in 1927 was 927 which increased to 1081 in 1928. But the end was near as the stock market crashed.

of the crankshaft.

First the two ports (or slots) slide past each other and a fresh mixture rushes into the combustion chamber increased by suction by the downward action of the piston. All ports are closed as the piston ascends on the compression stroke and remain closed at the instant of ignition. The spark occurs at the dead center of the chamber to assure rapid and complete fuel consumption. At the end of the power stroke the exhaust ports open and the return of the piston pushes out the burned gases. With the piston again at the top, the chamber is ready to begin the cycle again.

Claims of superiority of the sleeve valves to the poppet valves are that the valve openings are much larger, the gas sweeps across the piston head and the ignition is directly overhead and the spent gasses leave opposite the intake ports. This caused the proponents of the sleeve-valve engine to claim it was the most efficient approach.

It was said that the sleeve-valve engines used more oil than the poppet type and that they had a shorter life span and were difficult to repair. In any case, that system faded from the automotive picture when Minerva, a European Full Classic[®], quit using it in 1939.

Some of the American Full Classics[®] that used the sleeve valve engine were the Stearns-Knight and some Willys Knights. Another non-classic that used the system was the Falcon Knight.



Studebaker aimed for the luxury market starting in 1928 with the President Series

Eight cylinder cars were introduced with bigger sizes and much larger price tags

By Les Jackson

The Great Depression had not occurred yet and there was a perception of prosperity in the land. The time was early 1928. Luxury cars were selling well and more auto manufacturers were starting to sell more powerful and higher priced cars.

The wheelbase was 131 inches and the engine developed 100 horsepower at 2600 rpm with a 3 d" bore and 4 d" stroke. Like all Studebakers in 1928, brakes were the 4 wheel type.

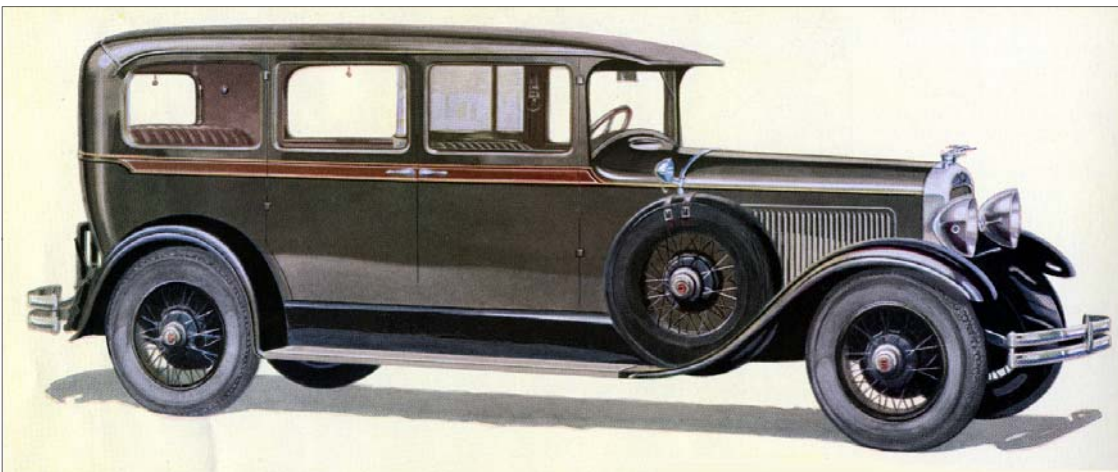
Standard Silk Curtains!

Some of the standard features were silk curtains and assist cords, upholstered arm rests, "engraved, jeweler's finish hardware, moldings and door panels in two tone American walnut" or two tone lacquer, silver medallions on the door panels, an upholstered foot rest, a heavy ornamental robe rail and large pockets in all four doors.

Tires were 31 x 6.2 inches.

For 1929 and 1930, the President line came in two sizes with 125" and 135" wheelbases. In addition, several models were added to the choices including 2 door roadsters, cabriolets and Victorias.

Prices for the 125" wheelbase models were between \$1,735 for the roadster and

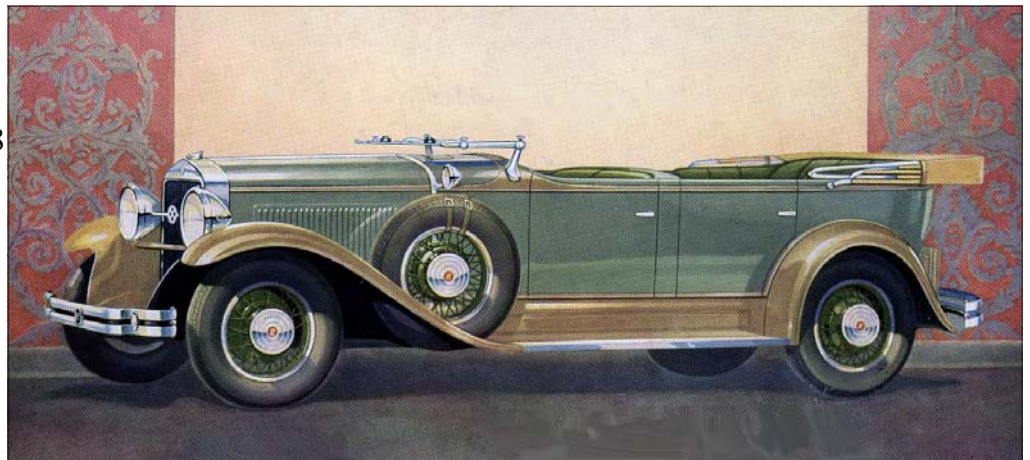


Studebaker's most expensive car in 1928 was the President State Limousine for 7 passengers at \$2,450. It came with a glass partition separating the front and rear compartments and leather upholstery in the front. The rear upholstery was a choice of mohair or broadcloth. Top speed was advertised as 80 mph.

One of these was Studebaker, which introduced the new President Series FA eight for 1928, the first Studebaker 8 cylinder series.

CCCA recognizes as Full Classics® 8 cylinder President Series Studebakers from 1928 through 1933 (except for the series 82 President in 1933).

The 1928 Presidents were priced from \$1,985 for the 4 door 5 passenger sedan to \$2,450 for the 4 door 7 passenger limo. Other Studebakers that year had 6 cylinder engines.



A stylish 1930 President model was the State Tourer for 7 passengers. It boaster a 135 inch wheelbase and a 115 horsepower engine. List price was \$2,145. Leather upholstery was standard on this model. There were two folding seats in the back compartment. Two toned paint was often used in the open models such as this.



One of the most attractive 1932 Studebakers was the President eight four-season convertible roadster for four with rumble seat. It had a 122 horsepower engine and rode on a 130 inch wheelbase. Note the golf club door on the right side of the car, popular in roadsters of that era.

streamlined by eliminating the built in visor and adding a sloped windshield The radiator appearance was also changed and inside sun visors were added. Also featured was the Startix automatic starting device.

Receivership and Suicide in 1933

In March of 1933 Studebaker went into receivership and the head of the company, Albert Erskine, committed suicide in July of that year. In the meantime Pierce-Arrow was acquired by a group of financiers for a million dollars and became an independent company again.

The President for 1933 was the last of Studebaker's Full Classics® with Series 92 (The Series 82 Presidents with a smaller engine are non-classic.)

Series 92 engines were powered by 132 horsepower at 3400 rpm. The name of the series was modified to be the President Speedway. There were new slanting "V" radiators (somewhat similar to the Packard

Light Eights of 1932), skirted front fenders (along with most other 1933 cars), mechanical power brakes, the automatic starter, freewheeling, automatic ride control and a 20½ gallon fuel tank. Displacement of the engine was 337 cubic inches with a 5.5 to 1 compression ratio. Tires were 17 x 7.

Prices dropped steadily after the stock market crash. For the 1933 President Speedways they ranged from \$1,685 for the 5 passenger 4 door sedan to \$2,040 for the 7 passenger State Limousine. Total production for the series was only 635 cars, about one-fourth of that for 1932.

\$1,875 for several other models, whereas the 135" wheelbase models ranged from \$1,785 for the 7 passenger touring to \$2,575 for the 7 passenger limousine. Prices were nudged up somewhat for 1930. Horsepower was increased to 114 at 3200 rpm.

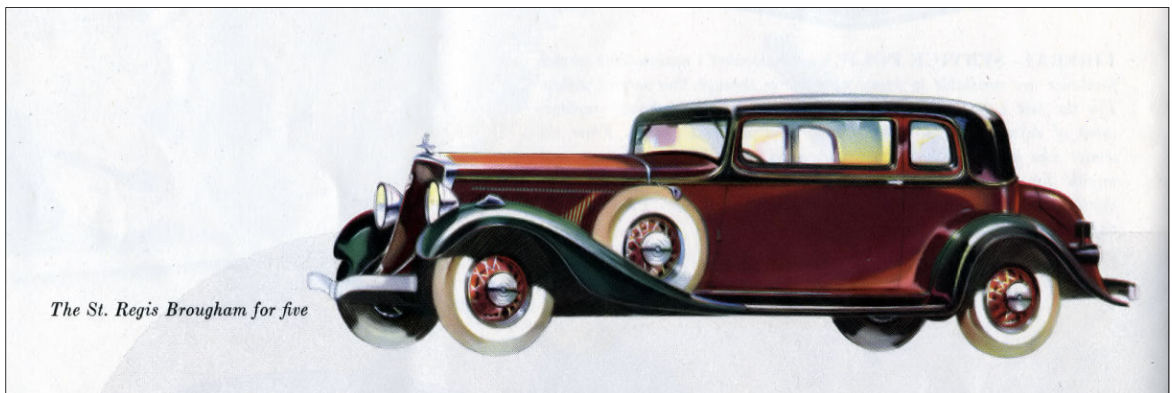
Regular increases in horsepower

The two wheelbase configuration for Presidents continued in 1931 with 130" and 136" versions. Horsepower again was boosted, this time to 122 at 3200 rpm.

In their glory days, Studebaker was setting speed records with their cars and even fielded a racing team for 1932 with a third place finish.

But by the following year everything started falling apart. Studebaker bought Pierce-Arrow in 1928 and introduced the new low-priced Erskine brand in 1932 which did not do well in the market.

The 1932 Presidents were all 135" wheelbases. The roofline was



The St. Regis Brougham for five

The last year of the Full Classic® Studebaker Presidents was the Speedway series of 1933. This is the St. Regis Brougham for five. Members of the region that are familiar with Bill Crumrine's 1932 Pierce-Arrow Club Brougham and Les Jackson's 1933 Pierce-Arrow Club Brougham will immediately recognize the similarity of the body design to the Studebaker shown here.