Pierce-Arrow

Who's Who in Automobilia,
By Walter O. MacIlvain,
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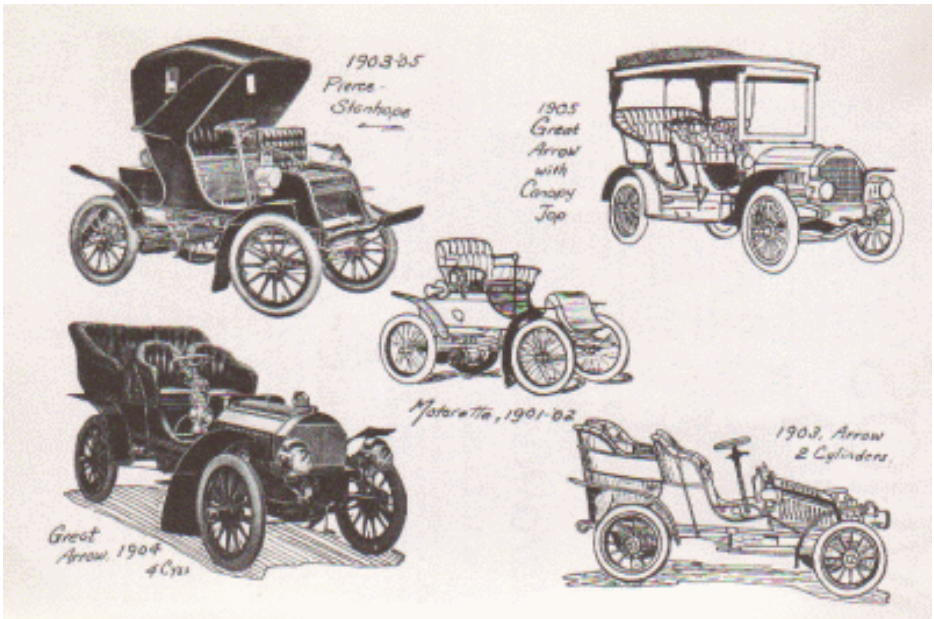
What is the mental reaction of the veteran motorist at the mention of the name Pierce-Arrow? We think of a little motorette with a high buggy top. We think of an early application of a steering-column gearshift. We think of a great six with engine hood as long as the little old motorette; of headlights built into gracefully moulded fenders. Of a conservatism that held to right drive and bulb horn clear up to 1920. Of the biggest and longest American car. Of 38 x 5-1/2 tires, of a beautiful exhaust sound bespeaking the true aristocracy of motordom.

The Pierce car was conceived in the age when the bicycle held sway, and by bicycle makers. The George N. Pierce Co. was formed in 1883 to manufacture small items of hardware, such as bird cages and went into the bicycle business when that market became evident. The far-sightedness of the company again manifested itself in November, 1901, when the Motorette was offered through the already established bicycle dealer organization. It was patterned after the very successful DeDion Motorette, of French origin, with bicycle type tubular frame, wire wheels, and very small, high-speed (1 200-1400 - r.p.m.) engine at the rear. The first Motorettes sold for $800 without and $850 with reverse gear, the carriage being sufficiently light that a man could push it to do whatever backing was necessary. Reverse gear was standard equipment in 1902.

From the Motorette it was a far cry to the Sixty-Six, but the ascent was made in easy stages. The Pierce Stanhope was a more powerful Motorette for 1903. The power was stepped up from 1-3/4 to 3-1/2 in '02, to 6-1/2 in 1903 and 8 h.p. in 1904. It was continued through 1906.

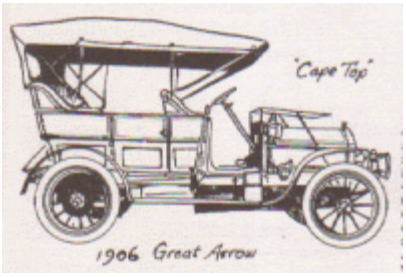


In 1903 the two-cylinder Arrow car was added. The name 'Arrow' had been applied to an "Arrow Locomotor" built at Buffalo in 1896 with a 3-1/2-h.p. gasoline engine. The first Pierce-Arrow was still built on French lines, but more like the Mors, or Darracq, with sloping hood, a water cooling coil beneath, at the front. Its frame was of Shelby seamless tubing with the motor and gearset on an angle steel sub-frame. Oil was circulated by a gear pump, the reservoir being atop the engine where exhaust heat would keep it fluid at all times. From there it would flow by gravity to the bearings. The Panhard type progressive transmission was shifted by a lever beneath the steering wheel. Since it was a progressive shift there was no lateral motion of the lever as in the modern car. Shifting was a straight-line motion. However, the shifter handle was right where you find it today, from 1903 to 1909, when the 'conventional' type arrangement was adopted with levers outside the body at the right. The body was the rear entrance tonneau-type. Engine bores were finished by grinding, an expensive process.

For 1904 the Mercedes cellular radiator was adopted and a new model, the Great Arrow, had four cylinders. Canopy top and glass front were supplied in 1904 at extra cost. The next year a cape cart top (folding type) was also available.

The progress in better car design can be seen in the lengthening of wheelbase in 1905 allowing for side entrance bodywork, in cast aluminum ("cannot dent"). A wide variety of custom coachwork was available by custom body-builders, notably Quimby & Company. The Truffault-Hartford shock absorbers, of French origin, were adopted.

The Pierce was never a racing car. It excelled as a touring car of great comfort and reliability, winning more Glidden tours than all other makes put together. Percy Pierce was a popular driver. Other tours and endurance contests were won at home and abroad.

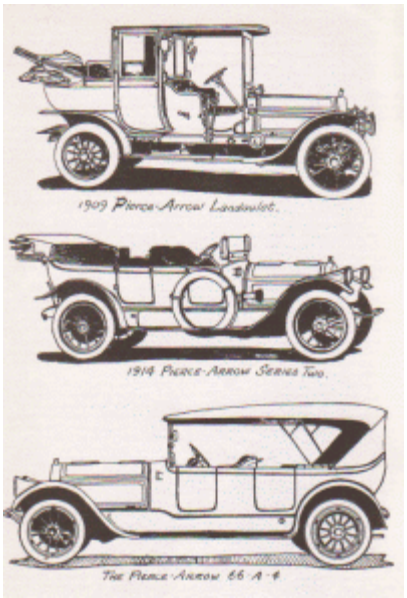


There were many minor improvements in the 1906 Great Arrow. There were two four-cylinder models, alike except for size, 24-28 and 40-45 h.p. Fuel feed was by exhaust pressure. A six-cylinder car was driven in the Glidden Tour that summer, a fore-runner of a long line of these cars. Its motor was separately cast as were the fours, with seven crankshaft bearings.

The six was placed on the market in 1907. At first it was a 6-40. Later a six-60 had 5 x 5-1/2 cylinders. When a six was brought out it was the custom simply to add two cylinders the same size as the existing four-cylinder engines. This gave Pierce four lines of Great Arrow cars, a 30-h.p. four and a 40-h.p. six with 4-1/4 x 4-3/4 bore and stroke, and a 40-h.p. four and 60-h.p. six with the larger size cylinders. All motors were T-head, with double ignition, a high-tension magneto supplemented with storage battery and coils. One extra coil was provided in each box for emergency use.

Minor improvements were made in 1908 and the factories were enlarged.

The first Pierce to have pair-cast cylinders was in 1909, a 24-h.p. four and 36 and 48- h.p. sixes. The 40-h.p. four and 60-h.p. six were continued. The cars were called simply Pierce-Arrow from that year forward.



Chassis were better concealed in 1910, filler boards being fitted between running board and frame. The line consisted of sixes, exclusively, the 38, 48, and 66, the trio which were to follow through as long as right-hand drive four-speed Pierce-Arrows were built. All motors were cast in pairs, the size of the new 66 was 5-1/4 x 5-1/2 inches. Wheelbase was 140, front tires 37 x 5, and rear, 38 x 5-1/2.

The Pierce-Arrow truck made its debut as a five-tonner in 1911, with the motor under a hood in front. Car models that year could be had with fore doors. Equipment included a single-cylinder power tire pump, and, for the first time, an accelerator pedal. Engine trend called for longer stroke, that of the 38 and 48 being increased.

Body design was really good in 1912, when cowl bodies began to come in, with levers inside the front door. A total of 21 styles gave a wide range of choice. A longer stroke (now 5 x 7) on the 66 gave a piston displacement of 825 cubic In., compared to 545 on the 48 and 386 on the 38.

Although electric light bulbs had been placed in side and rear lamps as auxiliary to the kerosene lights in 1911 and a light bulb was used as early as 1907 to illuminate the oil gauge on the dash of the touch of a button, it was not until 1913 that headlamps were electrified. Self-starting was also featured with a four-cylinder air pump on the transmission case supplying a reservoir suspended from the frame. A push-button on the dash released the compressed air to the cylinders. A nozzle was provided for tire inflation. That year the gravity tank oiling system was supplanted by a pressure feed direct to the bearings.

The first appearance of fender headlamps was in mid-1913, at first high-mounted on otherwise Conventional fenders. Series Two had streamlined cowl, lower bodies, and electric starting, instead of air. The 66-A had a wheelbase of 147-1/2 in.

Series 3 was announced in June, 1914, and introduced that fine fender styling characteristic of Pierce-Arrow, plain crown in section and following the tires '~lmo~tdown to the ground." Body lines were simplified, frames lowered three inches. A purchaser of an enclosed car had his choice of dome roof with arched doorways or a flat top with rounded corners. To protect the front fenders with their streamlined-in head- lamps a spring-mounted bumper was provided, probably the first time as stock equipment. A rear bumper covered the gasoline tank, but not the fenders. Engine hood and radiator lines were unchanged. The instrument board with its multitude of dials and instruments, was flanked with locker compartments. Equipment also included a voltmeter, bulb and motor- driven horn, power tire pump, clock, inspection lamp, trunk rack and shock absorbers.

Perhaps Pierce-Arrow's long continuation of the right drive might be that many of these cars were chauffeur-driven, and a chauffeur could dismount more efficiently from the right side to assist Madame to the curb. And of course the bulb horn would be just as well understood in city traffic and more quickly brought up to its full tonal volume than the motor-driven type.

Series Four was made in 1917-18, production being somewhat curtailed because of war work.

The Series Five was the dual valve Pierce-Arrow. It had four valves per cylinder, unusual in a six-cylinder car. Other changes included detachable cylinder heads, lighter pistons, gear-type oil pump; a thermostat was inserted into the cooling system and dashboards were new. Model 48 was the

principal model produced; the 38 and 66 were built on order.

For 1920 a Delco dual ignition system replaced the magneto. The four-speed gearset was redesigned for an easier change downward. Shock absorbers were now Gabriel Snubbers. Side lights were replaced by dimmers in the headlights and the ventilators in the top of the hood were no longer considered necessary.

Traditions were overthrown in 1920-21,Model 32 having left drive and center control, a bloc-cast T-head motor, multiple disc in place of cone clutch, and three-speed transmission. Rear springs were changed from 3/4 elliptics to semi-elliptic, underslung. A single wheelbase model was offered. Headlamps were optionally mounted on fenders, or in separate trunnions between the fenders. Body sides were higher and door lines were squared. In the motor, valves and cylinder heads were enclosed for sound- and dust-proofing. By subsequent modifications this became Model 33 in 1922. It had four wheel brakes at $250 extra in 24. Model 36 for 1926-27 was five inches lower, had new brakes with B.K. vacuum booster, balloon tires and lacquer finish.

Entrance to the $3000 price bracket was made in 1925, with Series 80, a car of conventional design throughout, having balloon tires, four-wheel brakes and headlights on the mudguards. This was succeeded in 1927 by Series 81, with emphasis on closed cars whose metal sides were carried up over the corner of the roof. For the first time a crest was mounted on the radiator shell as an emblem on Series 81 and 36.

Control of Pierce-Arrow passed into Studebaker Corp. hands in 1928.

For 1929 straight eights replaced both existing lines of six-cylinder cars. Prices ranged from $2285 to $8500. There were three series in 1931, these using free-wheel transmissions (a Studebaker innovation in 1930).

Twelve-cylinder V-type motors in two sizes and an eight for 1932 had Startix automatic starting, rubber engine mounting and synchro-mesh transmission with silent intermediate speeds.

In the fall of 1932, with the Studebaker-White merger, the manufacture of Pierce-Arrow trucks was discontinued at Buffalo and the machinery was moved to Cleveland.

The Pierce Silver Arrow was a sensation at the 1933 shows, an ultra-streamline job in which lamps and front fenders were blended into the body lines. Stewart-Warner power braking required only an accelerator-type treadle for their application. The familiar radiator lines were skilfully incorporated in a V-front. The Silver Arrow had the first steel top.

The company became once more economically independent of Studebaker in 1934. Twelves had 175 h.p. motors, stepped up to 185 in 1936. There was a return to the 147-inch wheelbase in that year.

An attempt to solve Pierce-Arrow's financial difficulties by bus and house trailer manufacture failed in 1938, another fine old name passing into oblivion.