Stanley

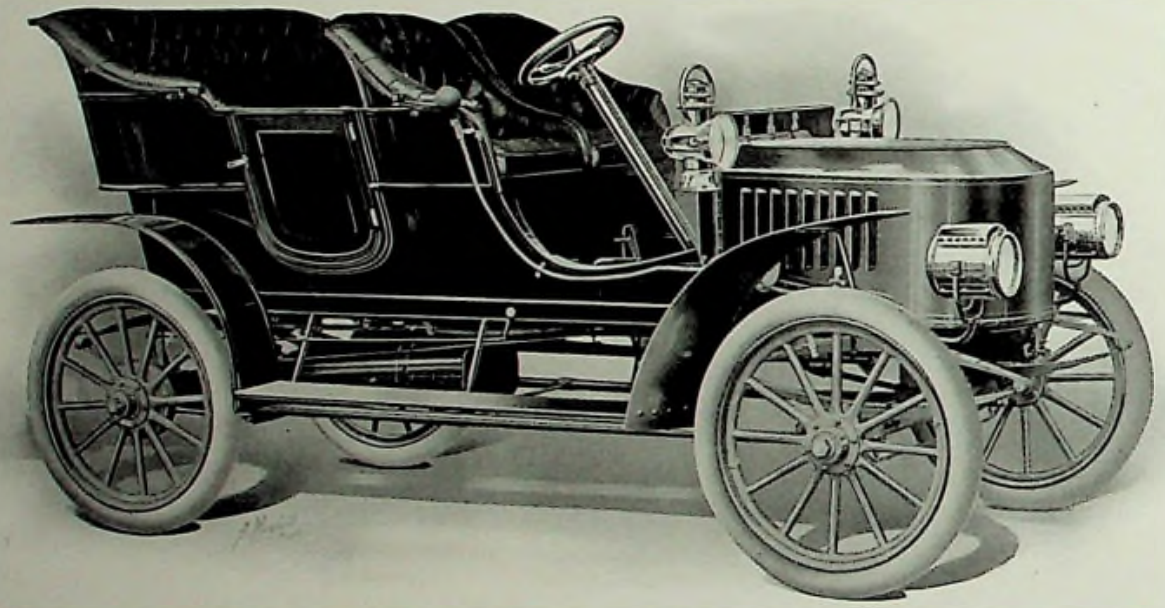
STANLEY STEAM CARS

THOSE who are acquainted with the Stanley Steam Cars will find in the following pages, we believe, satisfactory evidence of the progress we are making; and will also find here styles and prices sufficiently varied to meet a wide range of needs.

To the unacquainted we beg permission to say what is already familiar to those who know our car — that we deliver a greater amount of speed, power, comfort, utility, reliability, hill-climbing ability, and style; and less odor, noise, and vibration, than any other manufacturer can deliver, for even many times the price asked.

STANLEY MOTOR CARRIAGE COMPANY
Newton, Mass.

STANLEY STEAM CAR



MODEL F Side Entrance Touring Car, Seating Five. Wheel steer. Throttle and by-pass lever sub-imposed on steering wheel. Artillery wheels, 34 x 3½ inch tires. Wheel base, 100 inches; track, 54 inches. 23-inch boiler and burner in front, under hood. 3⅝ x 5 inch engine. Full elliptical springs. Divided front seat. Gasolene capacity (tank at extreme rear), 150 miles. Water capacity (tank under front seat), 40 to 50 miles. Internal expanding hub brakes, in addition to band-brakes on driving gear. Oil lamps and horn. Cape top, $85 additional. **Price, $1,500**

MODEL F TOURING CAR

Our Touring Car is a genuine Touring Car; it will spin along noiselessly over the boulevards; and has reserve power enough to take it at high speed over the steepest and longest hills and through the roughest and sandiest roads. For the short run or the long distance tour, there is no car in the world better able to get you and your party "there and back."

The gasolene tank holds sufficient fuel for a run of 150 miles or more; and the water capacity is great enough for 40 to 50 miles.

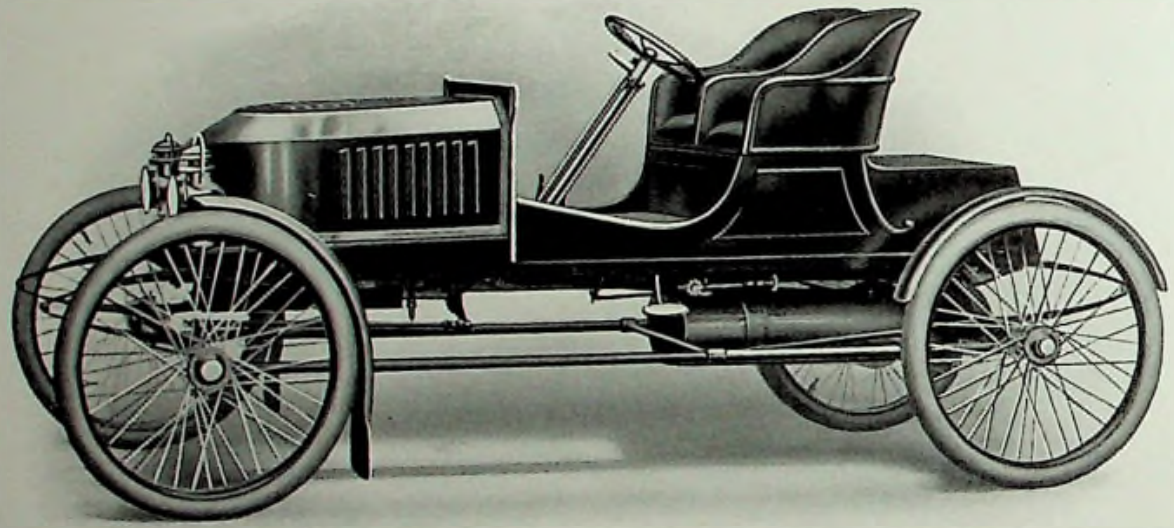
Its speed on the road is not limited by its power, but simply by the condition of the road and the traffic. On account of the increase in the size of the boiler (now 23 inches in diameter) and of the water-pump, it will maintain its steam pressure and water-level at top speed.

The total weight of the car is about 1,700 pounds empty. This light weight, combined with the uniform drive and lack of gear changes, reduce the tire cost and tire trouble to a minimum; furthermore, they reduce the fuel cost and the repair cost to the lowest possible point.

There is no changing of gears — speed from a creeping pace to a mile a minute or more is to be had by simply opening and closing the throttle, sub-imposed on the steering wheel. When at a temporary standstill there is no odor, no vibration, no racing engine; nor is there any cranking for a new start. The extreme flexibility and the power to get back to high speed instantly under any conditions without shifting gears remove the temptation to take chances on dangerous corners or in congested traffic. Again, this flexibility makes it possible to use our car at high speed in going from the country to the city, and to use it with perfect comfort and peace of mind for shopping in town. It is a combination of high-powered car for country roads and a flexible, quiet cab for city streets.

There is no gasolene car in the world, at any price, which will take so many people so fast, so far, and so comfortably at so small a cost for fuel, repairs, and tires as the Stanley Touring Car; and there is no American gasolene stock car, at any price, which is so speedy on road, hill, and track.

S T A N L E Y S T E A M C A R



MODEL H Gentlemen's Speedy Roadster, or Fast Touring Car, Seating Two. Wheel steer. Throttle and by-pass lever sub-imposed on steering wheel. Gasolene capacity (tank at extreme rear), 200 miles. Water capacity, 50 to 60 miles. Divided seat. Wire wheels, 34 x 3 inch tires. Wheel base, 100 inches; track, 54 inches. Full elliptical springs. 23-inch boiler and burner in front, under hood. 3⅝ x 5 inch engine. (Same power-plant and running gear as in Model F.) 20 H. P.

Price, $1,000

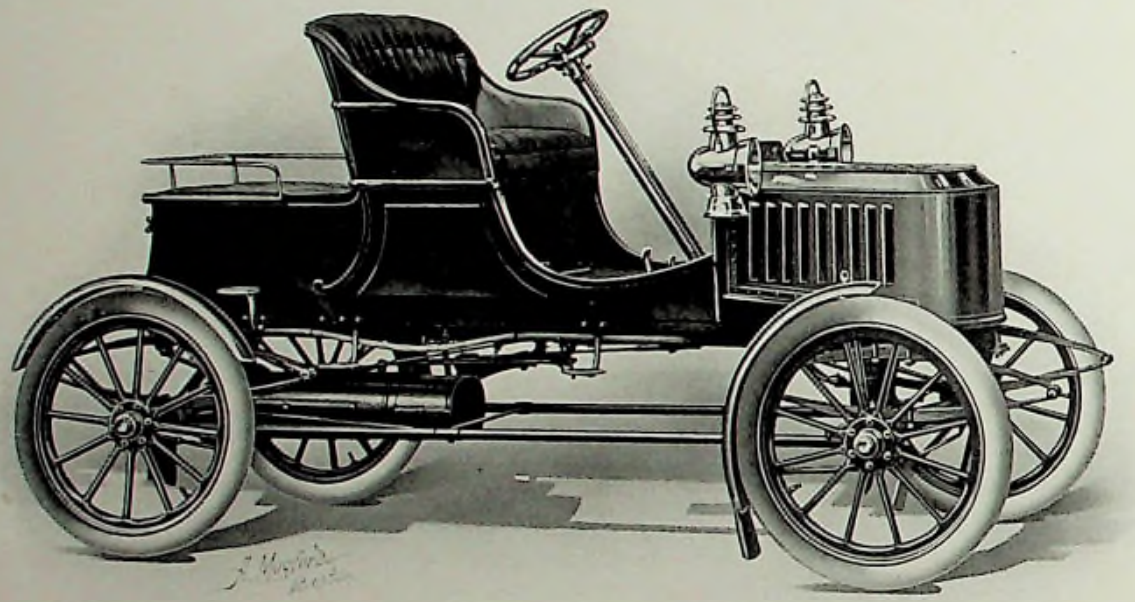
MODEL H
SPEEDY ROADSTER

Model H, our Gentlemen's Speedy Roadster, is a light car for two people, and is the fastest stock car in the world. It won the 15 miles Price-handicap race at Ormond in 13 minutes and 12 seconds, beating its competitors by four or five minutes. It is indeed a gentlemen's speeding car, and is intended for those who wish to hit up a speed of 75 or 80 miles an hour on a good safe road, without going to the expense of importing a $10,000 racing machine with its noisy cylinders and high expense for tires and maintenance.

This car can go a mile in 42 seconds, and can maintain a speed of 65 to 70 miles an hour as long as any road will permit it. It is equipped with the same power-plant and running gear as our Model F touring car.

It has a water capacity for 50 to 60 miles, and gasolene capacity for 200. It is equipped with divided front seats. Its total weight empty is about 1,350 pounds. It has 34 x 3 inch tires, and, as on all our cars, the tire cost is reduced to a minimum. It is graceful and rakish in outline; and, unlike any gasolene car that can attain an equal amount of speed, it has no odor, noise, or vibration. It could be run through city streets without attracting the least attention except for its neat appearance.

It has ample room at the back for a basket or baggage, thus making it an excellent fast touring car for two people.



MODEL EX RUNABOUT
Rear Seat Closed

Wheel Steer. Throttle and by-pass lever sub-imposed on steering wheel. Sliding rear seat, with collapsible back. Artillery wheels, 30 x 3 inch tires. Wheel base, 90 inches; track, 54 inches. Full elliptical springs. Gasolene capacity (tank at extreme rear), 150 miles. Water capacity (tank under seat), 40 to 50 miles.
18-inch boiler and burner in front, under hood. 3 x 4 inch engine (10 H. P.). Oil lamps and horn.

Price, $850

MODEL EX RUNABOUT

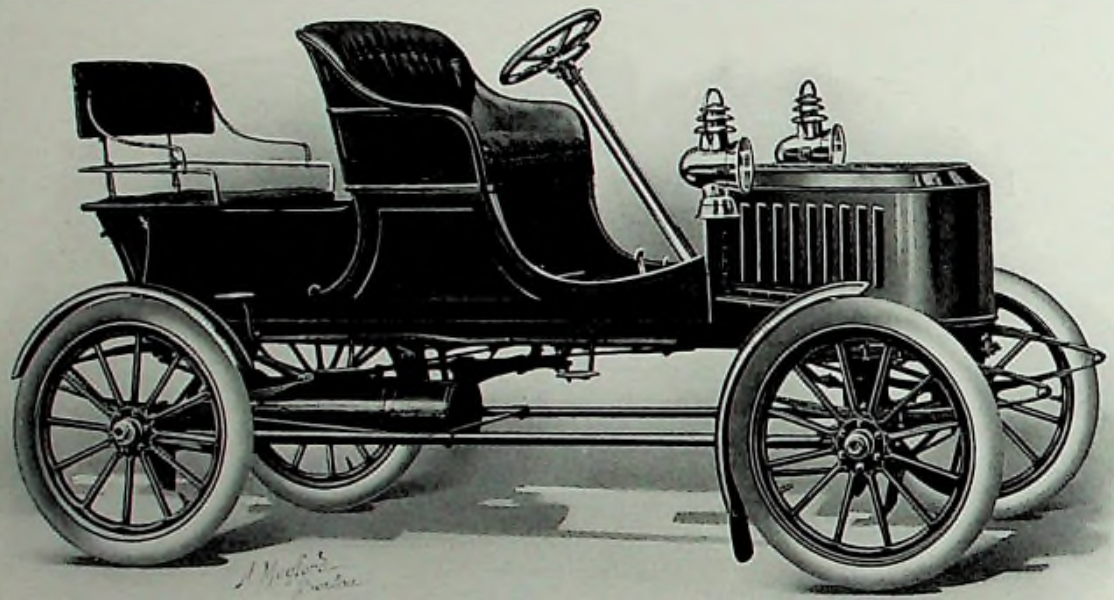
Model EX is primarily a Runabout; but with the ample baggage room at the back it makes a splendid touring car for two people.

It has gasolene capacity for 150 miles, and water capacity for 40 to 50. It has the same flexibility and lack of vibration that characterize our touring car. It can maintain a speed of from 40 to 45 miles an hour wherever the conditions of the traffic will allow it.

It is equipped with a sliding rear seat which will comfortably hold two extra passengers; and its power is so great that its speed is but slightly affected by such an addition. Many people use this Model EX as a regular four-passenger vehicle, and we can recommend it for such use; although it is intended for a two-passenger car with the extra seat for emergency.

The Model EX car weighs only about 1,000 pounds empty, and is equipped with 30 x 3 inch tires, the cost of maintaining which is reduced to the lowest possible point.

There is no Runabout in the world at any price that will do so much work so well, so reliably, and so cheaply as this car. It is as quiet as an electric; and is speedier on a level or on a hill than any $3,000 gasolene car.



MODEL EX RUNABOUT *Rear Seat Open*

SOME IMPORTANT FEATURES OF THE STANLEY STEAM CAR

NO simpler, more direct, or safer method of power transmission was ever brought into practical use than the method used in these cars. On the differential of the rear driving axles is a plain phosphor bronze spur gear. On the crank shaft of the engine is a hardened steel pinion. The engine is placed horizontally in such a position that the steel pinion engages the bronze gear, thus forming a direct power transmission. The front end of the engine is suspended from the body of the carriage and partakes of its up and down motion. The rear end of the engine is connected radially to the rear axle, thus keeping the gears always perfectly adjusted.

DIRECT SPUR GEAR DRIVE
(Patented)

The following are some of the advantages of this method of power transmission: First, no chain to break, fly off, require constant tightening, or wear out. Second, the whole driving mechanism is perfectly encased, protecting engine and gear from mud and dust. Third, by removing the case of the engine, which can be done in less than one minute, the engine is just as accessible as though it were lying on a bench in a machine shop. Fourth, much less power is lost than when chain or bevel gears are used.

ENGINE
(Patented)

The engine used in the Stanley Steam Car is of our own design and manufacture and is patented. The engine is two-cylinder double acting, of the locomotive type, with plain slide valves and link motion reverse.

This engine is more completely a ball-bearing engine than any other engine in use in an automobile. Even the crossheads run on balls. This particular feature has been in use by us more than five years and is one of the greatest improvements ever made in automobile engines. The use of balls in the crossheads does away entirely with the loss of power from sliding friction. One of the chief advantages of this complete ball-bearing construction, furthermore, is in the matter of lubrication, as it is only necessary to give the balls sufficient lubrication to keep them from rusting, since they run quite as well dry as when well oiled.

Some Important Features of the Stanley Steam Car — *Continued*

SUPERHEATED STEAM (*Patented*)

The use of superheated steam is desirable in two ways. First, it saves water. While water practically costs nothing, it has to be carried, and this adds to the total load. Second, it saves fuel. This costs money. By our patented system of superheating we completely avoid one of the dangers attending the use of superheated steam, viz., overheating and consequent burning of the cylinder oil, thus injuring valves, cylinders, and pistons. Our system, while securing a high degree of superheat, renders it impossible to overheat.

CYLINDER LUBRICATION

The use of superheated steam necessitates much more perfect cylinder oiling than the use of wet steam. All our cars are equipped with a mechanical cylinder oiler which delivers a definite quantity of oil to the steam chest each mile the vehicle is run. Just as much oil goes in the last mile of the run as the first. This mechanism is very simple and reliable.

WATER INDICATOR (*Patented*)

As the carrying of high steam pressure is very desirable, since it means economy in water consumption and increased power, it became necessary to find a substitute for the water glass. This we have in our water indicator. It is more reliable than a glass, cannot break, never needs repacking, and is so constructed that the height of the water in the boiler can be determined by the sense of touch as well as sight, so it is not necessary to illuminate for night running.

Some Important Features of the Stanley Steam Car — *Continued*

FUSIBLE PLUG (*Patented*)

About the only objection to a fire tube boiler is the liability of being "burned out." While such an accident is attended with no danger, it is a nuisance, as it means that the boiler cannot be used again until it is repaired. All accidents of this kind are avoided by the use of our fusible plug. When the water in the boiler gets too low, the plug melts out and warns the driver, who at once shuts off the fire, and the boiler is protected.

This plug is so situated that it can be quickly removed and a new one put in its place, and after pumping water into the boiler the fire may be relighted, and in a few minutes the vehicle is under way again.

NO UP DRAUGHT

All the products of combustion together with the exhaust steam are discharged wholly downward and at the rear of the carriage. The advantages of this method are as follows: First, having no opening at the top into which air can be drawn, a much better draught is maintained when the car is running, and as a result the boiler steams better. Second, the absence of the upper opening prevents an upward draught of air through the boiler when the fire is shut off, and as a result the steam pressure will hold much longer. Another great advantage is the fact that, having no upward opening, currents of air, no matter in what direction or how strong, have no effect on the burner.

This construction is made possible by the peculiar features of the Stanley burner, which operates like a blowpipe, giving sufficient force to the flame to force the products of combustion up through the boiler tubes and down through the smoke pipe at the rear of the car.

Some Important Features of the Stanley Steam Car — *Continued*

THE STANLEY BURNER
(*Patented*)

The burner is so constructed that it secures perfect combustion and intense heat, and is entirely encased, there being no air inlet except the mixing tube; consequently, it is not affected by air currents and never blows out or back-fires.

It is provided with a pilot light which is not shut off by the automatic, but burns continuously after being lighted until shut off by the hand valve; and is just strong enough to hold the steam pressure and relight the main burner after the latter has been shut off by either the automatic which controls the steam pressure or the main valve. The car can be left standing for from one to five hours with the main burner turned off, and still have steam enough to run.

The pressure on the fuel in the auxiliary tank which supplies this burner is maintained automatically when the machine is running, and since there is never more than one quart of gasolene under pressure, it takes but a short time to pump up the pressure by hand before starting. This makes the system a very safe one as compared with machines where the entire gasolene supply is under pressure.

The main supply tanks hold sufficient gasolene to run the cars from 150 to 200 miles.

DOUBLE PUMP

Our cars are now equipped with a double water-pump, controlled by one lever. Each pump is of equal capacity as that formerly used on similar models; and together they pump double the stream as the single pump heretofore. The object is to make it possible to use one pump steadily to maintain the water-level without affecting the steam pressure, even at high speed; and to use them both together for an emergency.

Some Important Features of the Stanley Steam Car — *Concluded*

LOCATION OF PARTS

In all our cars the boiler and burner are under the hood in front. The mixing-tube, blow-off valve, fusible plug, and safety valve are at the very front, and in the most accessible place. The water tank is under the front seat and the gasolene tank is at the extreme rear of the car. The hub brake lever on the touring car and band-brake lever are both in position for the right foot, and the reverse lever for the left foot. The throttle valve and pump lever are sub-imposed on the steering gear. The burner valves, water indicator, and gauges are on the dash-board. The cylinder-oil tank and water and gasolene pumps are under the front foot-board.

HUB BRAKES

Our Touring Cars (Model F) are equipped with expanding internal hub brakes (one on each rear hub) which are controlled by a ratchet lever under the right foot, and can thus be suddenly applied without reaching for a hand lever. This brake is most powerful in design and is of minimum weight.

MINOR FEATURES

All our cars are equipped with wheel-steering apparatus, and all except Model H are with artillery wheels; and the selling price includes two oil lamps, a full equipment of tools, and a large serpentine horn. All Models are equipped with full elliptical springs, strong enough to do their work properly, and resilient enough to insure most comfortable riding. The cars have a clearance sufficient to reduce the dust nuisance to practically nothing. We supply a syphon with each car, making it possible to fill the water tank by suction without the use of hose or bucket.

THE FASTEST CAR IN THE WORLD

(Rate of 127.66 Miles an Hour)

This car, at Ormond, Fla., Jan. 21 to 28, 1906, established the following World's Records.

WORLD'S RECORDS		FORMER RECORDS	
1 Kilometre	.18⅜	Darracq	.21⅝
1 Mile	.28¼	Napier	.34⅝
1 Mile in Competition	.31¼		.41⅝
5 Miles	2.47⅕	Napier	3.17
2 Miles (World's record for cars eligible under the rules)	.59⅗		

The 5-mile record was made in competition, with a scoring start, and was at the rate of a mile in 33⅗ seconds, which is faster than any gasolene car built according to A. A. A. rules ever made for a single mile.

The power-plant in this car is exactly like that in the regular Stanley cars, except that it is larger, of about twice the power as the Touring Cars (Model F). It weighs 1,600 pounds, and has margin enough for another boiler of the same size (512 pounds) without passing the racing weight-limit of 2,204 pounds. The boiler is 30 inches in diameter and 18 inches deep. It contains 1,475 tubes, and has a total heating surface of 285 square feet. A steam pressure of 800 to 900 pounds is carried. The engine is 4½ x 6½, and makes 350 revolutions to the mile. The wheels are 34 inches in diameter, and make 600 revolutions to the mile. They are equipped with 3-inch G. & J. tires. The body is so designed that the largest cross-section it presents, including the wheels, is only 9 square feet.

STANLEY RECORDS

The first ascent of Mount Washington ever made by an automobile of any kind was accomplished by Mr. and Mrs. F. O. Stanley, in a 4½ H. P. $650 stock Stanley runabout, August 16, 1899. The time consumed was about two hours. Although several gasolene cars attempted this ascent, none ever accomplished it before September, 1902.

In the competition of August, 1904, out of over 20 starters, a stock Stanley $750 runabout ascended Mount Washington in 28.19⅘, being beaten by only a 60 H. P. Mercedes, which made the time of 24.35⅗.

In the competition of July, 1905, a stock Stanley $850 runabout made the ascent in 22.17⅗, being beaten by only one car, a 60 H. P. Napier, which made the ascent in 20.58⅘.

At Charles River Park, Oct. 11, 1898, a Stanley stock $650 runabout made a mile on a 3-lap track in 2.11. This was, at the time, the world's record for a mile.

At Readville, May 30, 1903, a Stanley racing car made a mile in 1.02⅘, making a new world's record for a mile on a track.

At Ormond, Fla., February, 1904, Louis S. Ross, driving a stock Stanley $750 runabout, made a mile in .55⅗. This is still a world's record for cars weighing less than 1,000 pounds.

At Ormond, Fla., January, 1905, the Stanley racing car won the Dewar Cup for a mile in competition, the Mile Open, the Mile Steam, and the Mile Record events; the Kilo Record event, and the 30-mile American car event; and made a new world's record for 5 miles; and the Model H Roadster won the 15-mile Price-handicap in 13.12.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