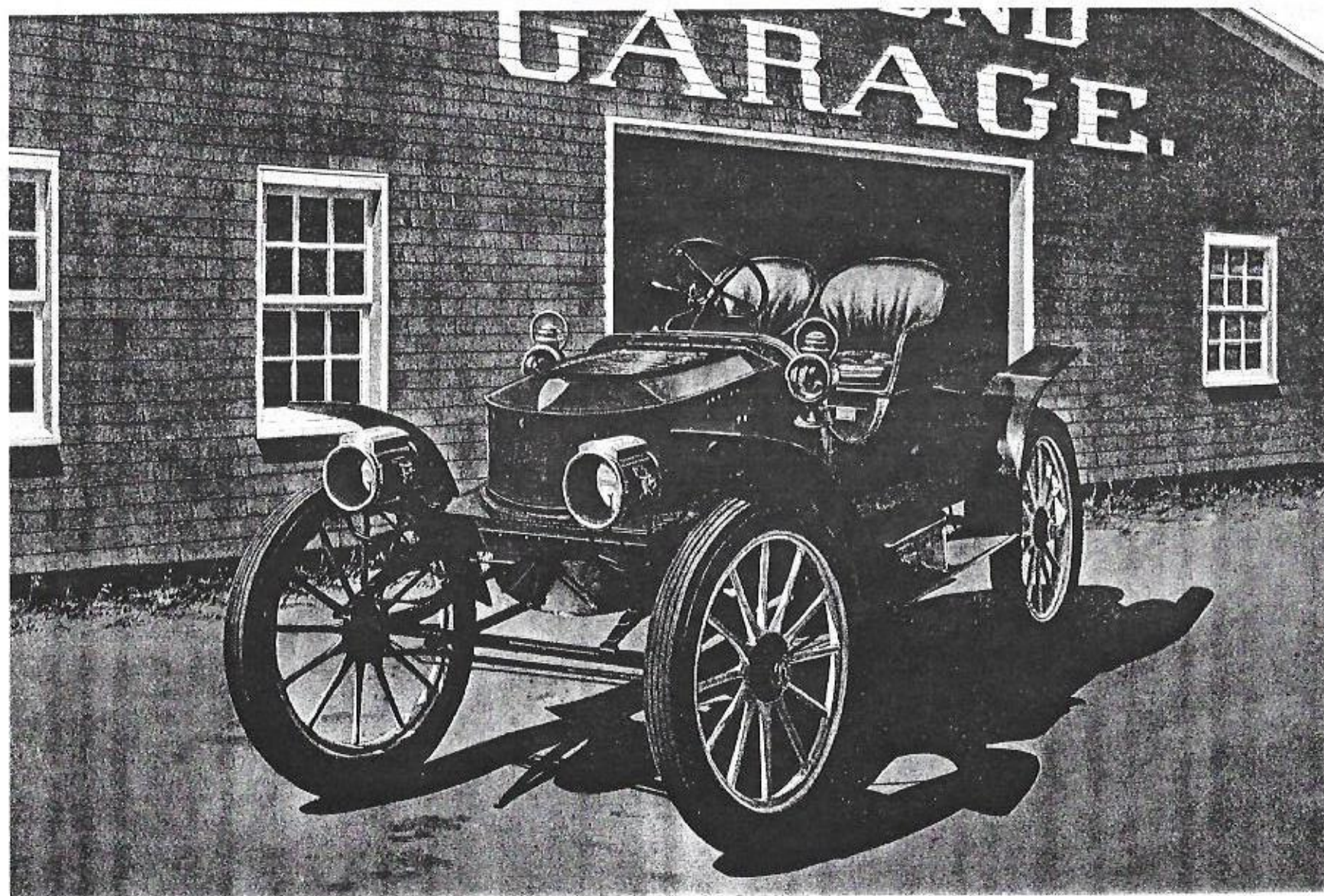


ANTIQUE AUTOMOBILE

OFFICIAL PUBLICATION OF THE ANTIQUE AUTOMOBILE CLUB OF AMERICA, INC.



A brief study of the history of the automobile shows that it is not the product of the invention of any one individual, or of the men of any one century, but men of the eighteenth, nineteenth and twentieth centuries. And, yet, while the automobile is old, the automobile age or period in which the automobile became an important factor in transportation dates back only to the beginning of the present century.

So far as history records, the first "road wagon" propelled by its own engine was made by Nicholas Cugnot of Paris, in the year 1770. This was a steam vehicle, having three wheels, with the power applied to the single front wheel. It had a speed of $2\frac{1}{2}$ miles per hour, but owing to insufficient boiler capacity it had to stop every few hundred feet to get up steam. The next year Cugnot made a better machine and this is now in a museum in Paris.

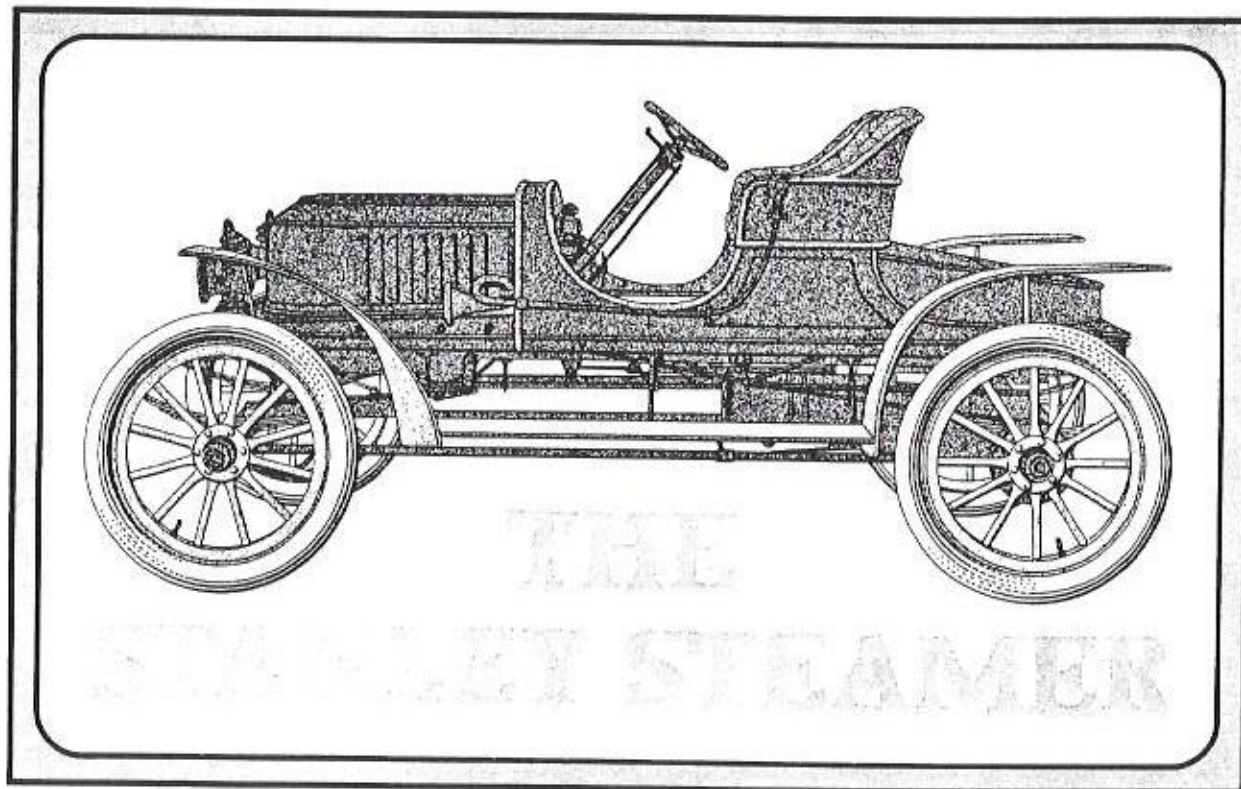
From 1771 to 1820 but little was done in the automobile line. But between the years 1824 and 1828 Gurney, an Englishman, built three steam coaches, each carrying 16 to 20 passengers. They were used on routes between towns near London, and competed with the horse-drawn coaches.

About this time Walter Hancock built and operated a similar machine and started the manufacture of nine others.

The power plant in these cars consisted of a boiler and engine, situated at the rear end of the machine, with coal as fuel. They were capable of a speed of 20 miles an hour, were double deckers, and had steel tires.

The novelty and time-saving element of these machines made them extremely popular, and the stagecoach owners were confronted with a condition

EDITOR'S NOTE: The following narrative, dated May 19, 1930, was found among the papers of Harold H. Anthony, who with Frank Horton, his brother-in-law, owned a Stanley Steamer Agency in Fall River, Massachusetts. We thank Mr. Anthony's grandson, Anthony A. Waring, for sharing this gem of automotive history with us.



by F. O. Stanley

that would, if allowed to grow, absolutely ruin their business. So they did the thing that was easiest and most effective. They went to Parliament and secured the passage of the "red flag law." This law stipulated that a self-propelled wagon when being driven on the public highways must have a man walking in front carrying a red flag by day and a red lantern at night. And in addition to this, owners of the toll roads and toll bridges raised their rates for motor cars so high that it was impossible to make them pay.

So the industry was killed by law, and practically nothing was done in the automobile line in England till the "red flag law" was repealed in 1896. During this period from 1831, when the law was passed, until its repeal in 1896, a period of 65 years, the automobile business in England was at a complete standstill.

About the year 1894 there began to develop great interest in self-propelled vehicles. This was particu-

larly true in France and Germany. And a little later it spread to the United States. The gas engine, electricity, and the steam engine were used as powers. In 1895 four cars were produced in the United States. In 1929 there were produced in the United States upwards of 4,000,000 cars.

In the fall of 1896 my brother and I began to make drawings of a steam automobile. We knew but little about steam engines and less about boilers. We got the Mason Regulator Company to make our first engine. Mr. Mason was an experienced engine maker, having at one time been employed by the United States Government in designing engines. We told him we wanted an engine having two cylinders, $2\frac{1}{2} \times 4$, double acting and made as light as possible. We had estimated the car should weigh, when completed, about 500 pounds. But the engine, when we received it, weighed over 400 pounds.

Our first boiler was an upright fire tube boiler, 14 inches in diameter, and tubes 13 inches long. This was made by Roberts Iron Works Company and weighed over 200 pounds. So our power plant, including the burner, which we designed and made, weighed over 150 pounds more than the estimated weight of the finished car.

Yet we were not discouraged. We could see that the weight of the boiler and engine could be greatly reduced. Later, through the help of A. R. Penny of J. W. Penny and Sons, Mechanic Falls, Maine, we had an engine made that was 2½ by 3½ and only weighed 35 pounds. And we designed a boiler that was safe at 600 pounds pressure, the same size as the one made by the Roberts Company, and it weighed only 90 pounds.

Our first car, having the Mason engine, was completed in September 1897. I shall never forget our first ride. We went out our alley-way on to Maple Street and turned towards Galen Street. A horse hitched to a produce wagon was standing headed toward Galen Street. He heard the car coming, turned his head around, took a look, gave a snort and jumped so quickly that he broke the whippletree, but did not move the wagon, ran out to Galen Street, turned around, took one more look, and then ran up Galen Street, through Newton Square, and did not stop running until he reached Newtonville Square. This occurred in the forenoon. That afternoon the owner called at our office and told us we owed him \$25. We claimed we owned him nothing; at the same time if he would take his harness and wagon up to Murray's and have them repaired we would pay the bill. The bill amounted to \$2.00.

That first trip we went as far as Newtonville and back without further trouble.

The next day we thought we would be more ambitious, so we went to Cambridge and back. On our return, on Brattle Street, another horse hitched to a market wagon felt such jealousy of his coming rival that he ran away. We naturally concluded from those two trips that the life of an automobile driver was not a happy one.

During the fall of 1897 and the winter and spring of 1898 we made three more cars. Two of these were two-passenger cars, and one a four-passenger surrey.

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My brother claimed ownership of one of the two-passenger cars and I the other. These cars had the light engine designed by A. R. Penny and built at the factory of J. W. Penny and Sons, Mechanic Falls, Maine. The boilers were of our own design and made by us.

These boilers were a marvel of lightness and strength. The shell and tubes were of copper. The heads were of steel. There were approximately three ½-inch tubes to each square inch of boiler head surface. Each tube served as a stay bolt to resist boiler pressure. The copper shell was wound with three layers of high-grade steel wire. And these boilers would stand 2000 pounds cold water pressure.

The surrey mentioned was not a success so we dismantled it. But the two-passenger cars were very successful and afforded us much pleasure.

We had many chances to sell these machines but declined to part with them. But in September one man, Mr. Methot of Boston, had been so persistent that I decided to part with my car and sold it to him for \$600. I sold this car with full knowledge we could make a better one. Up to this time we had not the slightest idea of ever engaging in the manufacturing of automobiles as a business. It was an interesting hobby and not a trade.

Early in October of that year, 1898, there was held in Boston, in Mechanics Hall, the first automobile show held in New England. On exhibition at that show there were, as I remember, four cars. Two gas cars, one a DeDion from Paris, the other a Haynes-Apperson, a steam car made by Mr. Whitney, and an electric car made by Mr. Riker, later of the Locomobile Company. At the close of this indoor meet, an open-air meet was given at Charles River Park, Cambridge. This park, you remember, had a third-of-a-mile track and a grand stand having a seating capacity of over 5000, and was used for the then popular sport of bicycle racing.

The evening before this outdoor meet was to come off, the sporting editor of the "Boston Herald" called me up and asked if we were going to have our cars there. I told him only cars would be allowed there that had exhibited in the show. He told me Mr. Isaac Davis, who had charge of the show, would call on us in the morning and arrange for us to be there.

Mr. Davis came early the next morning and arranged for my brother to take part in the meet. My car, you remember, had been sold.

There were to be two important events at this meet: speed trials and a hill-climbing contest. An artificial hill had been constructed having a 5, 10, 15, and a 20% grade. At our suggestion, another length was added having a 30% grade.

In the speed trials my brother's trial came last. Only one of the other cars had succeeded in negotiating three laps of the track under 3 minutes. The DeDion car went the mile in 2:58. Then came my brother's turn. He circled the track three times in 2:11, establishing a new world's record. The world record at that time for one mile was 2:32, made in a straight course near Paris.

In the hill-climbing contest the Whitney steam car succeeded in getting its front wheels on to the 20% grade. In starting this hill climb the cars were allowed a level run of only 10 feet. Men had been provided to assist the cars in backing down in order to prevent a possible accident. When it came to my brother's turn I went down out of the grand stand and told Mr. Davis to have the men go to the very top. He thought that unreasonable and the men remained at the 20% grade. The Stanley car shot up to the very top of the grade and my brother held it there by the engine until the men got up to him and helped him down.

Never before or since have I seen such enthusiasm as was created by these two performances of this little car. This was the last event of the day, but we were kept there over an hour answering questions and explaining the construction of the car. And in less than two weeks from this event we had received orders for over 200 cars similar to the one shown there. It was then, for the first time, we decided to engage in the manufacture of automobiles.

Adjacent to our dry plate factory, and separated from

it only by a driveway, was a factory formerly used by Sterling Elliott for the manufacture of bicycles. This we purchased at a fraction of its cost, equipped it with machinery, and began manufacturing.

I now come to a very important episode in the history of the Stanley Steamer. One morning about 7 when I passed through our front office, I saw a man sitting there I had never seen before. I merely glanced at him as I passed by and having reached our private office and hung up my hat and coat, our treasurer came in and told me the man in the front office wished to see the Stanley brothers. I told her to send him in. He came in and at the same time my brother came in. The visitor said, "I am John Brisben Walker, the owner of the *Cosmopolitan*, and I have come to buy a half interest in your automobile business." Had he said he had come to buy a half interest in our wives, I doubt if we would have been more surprised. We told him we didn't know as we had what might be called an automobile business, and we certainly did not want a partner. That we had difficulty enough in getting along with each other, and we did not want to increase our troubles by taking in a third party. He cited the great advantage offered by the *Cosmopolitan* as an advertising agent. We told him what we seemed to need was not advertising, but cars to fill our orders, and we could not see how the *Cosmopolitan* could help us in that. He was very persistent and offered many reasons why his plan seemed to him a wise one, but we were stubborn and he had to leave greatly disappointed. This occurred early in February 1899.

About the middle of April following, one afternoon Mr. Walker appeared again. He then offered to buy our entire automobile business. This was an entirely different proposition, and we told him if he would call in the morning we would give him our price.

We were then busily engaged in making cars for which we had orders for over 200, all of which had come unsolicited. We had finished one car which I was using in place of the one we had sold. This car was much better than any we had made and was a duplicate of those in process of manufacture.

That evening my brother and I decided there were several reasons why we should not sell our business. But as we had agreed with Mr. Walker to give him a

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price, we would make the price so high that it would drive him away again disappointed.

When we arrived at the office the next morning a little before 7, we found Mr. Walker waiting for us. We told him we had decided upon a price, and that the terms must be cash. Also whether he accepted or not the price must not become publicly known. "Certainly, certainly," he said, "of course I expect to pay cash, and it is as much for my interest to have the price kept a secret as it is yours." We then told him our price was \$250,000. "Exactly the figure I had in mind, a quarter of a million," he said. He took out his check book and handed us a check for \$500 to bind the bargain while he made out an agreement for the payment of the balance and the delivery of the property.

With the aid of one of our stenographers he made an agreement which we took aside for careful study. We found it difficult to understand, and quite ambiguous, but on the whole safer for us, than for him, so both parties signed it. He took a copy and departed, leaving us in doubt as to whether we were a pair of fools or knaves. For the entire money we had spent in the business up to that time, including the purchase of the factory, was less than \$20,000. And to sell for \$250,000 a business that cost in money only \$20,000 seemed to us, at least, very unusual. But how great was our surprise the next morning to read in the "*Boston Herald*" a complete account of the deal, price and all, and a lengthy history of the wonderful achievements of John Brisben Walker.

This we did not like, but it revealed the nature of the man we were dealing with. In studying the contract very carefully we decided it should be changed for a better one, as the one we had might involve us in a law suit. It practically gave him a 60 days' option on our automobile business for only \$500. On the other hand, there was no definite time set for delivery. Hence we

might keep the business indefinitely if we chose to do so.

In order to straighten the matter out I went to Irvington, N.Y. and called on Mr. Walker. I pointed out the defects in the agreement and suggested we have a new one. He agreed with me and asked me to write one as he was obliged to go to New York that morning but would be back in the afternoon.

I told him before we made out a contract we had better have a more definite understanding about terms. I asked him how long a time he wanted to raise \$250,000. He said 10 days. I then asked him how much money he was willing to give for a 10-day option. He said \$10,000.

That was definite and I made out an agreement embodying those terms. When he returned from New York that afternoon he read the contracts and said they were perfectly satisfactory and we signed them. I gave him back his check for \$500 and he gave me a \$10,000 check and I came home feeling I had done a good job.

But the fun was not over. In fact it had just begun. For when I got home, I found a telegram waiting for me asking me to go to New York with the car as he could not interest millionaires without something to show them.

The next day Mrs. Stanley and I rode down to Providence in the car and she came back by train. I put the car on board the boat bound for New York. Had I been the King of England I could not have received more attention. The captain gave me a fine box stall in which I could lock up the car. He insisted I dine with him in his private dining room, and he gave me the best stateroom on the boat, and told me when we landed in New York, I would be the first to disembark. No questions were asked about how much gasoline there was or whether the steam pressure shown by the gauge was dangerous.

Some time before we reached New York I fired up and got up enough steam, so that when we reached pier 18 I had full boiler pressure.

As we were approaching pier 18 the Fall River boat came alongside and I was surprised to see on board my friend Sterling Elliott. He, too, was going up to Irvington to see John Brisben Walker about his addressing machine.

True to his promise, when the gangplank was down, the captain kept the crowd back and I rode down to the wharf amid the applause of the other passengers. Mr. Elliott met me, and took a seat beside me, and we started on one of the most perilous journeys I had ever taken in my life. The street in front of the wharf was crowded with trucks and conveyances of all sizes and dimensions, all drawn by horses. The horses were frightened and the drivers hostile and apparently bent on our destruction. How we ever succeeded in running such a gauntlet without a smash-up I have never been able to figure out. But we did and we soon found ourselves well up on Broadway, where traffic was light and conditions apparently safe. But we soon learned what every automobile driver soon learns—that one is not safe when riding in an automobile: for a girl riding a bicycle, coming down a cross street, and looking over her shoulder, ran plump into the side of the car. The girl was thrown bodily into the arms of Mr. Elliott and was uninjured, but the bicycle was a wreck. A policeman was standing quite near and saw the whole accident. A crowd soon gathered. The girl was much excited and the crowd threatening. But the policeman came to our rescue. He severely criticized the girl for being so careless, and drove the crowd out of the way and we went on without caring to discuss the matter further.

The object of this visit to Irvington was to interest men of wealth in the Stanley Steamer, which would enable Walker to pay the \$250,000 due under the contract. The first demonstration was with George Gould, son of Jay Gould, then I gave his brother Eddie Gould a ride. They enjoyed the ride but did not care to invest.

Mr. Walker was very anxious to get the Rockefellers interested. About the third day he got a telegram from William Rockefeller asking him to have the car at Irvington at 4 o'clock and take him up to Tarrytown, a distance of about 7 miles. We went to the station at the appointed time and I was introduced to Mr. Rockefeller. He wished to be excused a moment to speak to a man and he stepped aside to do so. When he was out of hearing, Mr. Walker said to me, "I will take Mr. Rockefeller up to Tarrytown as it will give me an opportunity to talk to him." Of course I protested

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against such a foolhardy act and cited the fact that he had never driven the car a rod in his life, and such an attempt would be very dangerous. But he insisted, and Mr. Rockefeller came along and they got in and started, leaving me feeling decidedly guilty.

Now the station at Irvington is situated down by the river, and to reach Broadway, the street leading to Tarrytown, necessitated climbing a very steep hill. In going up the hill Mr. Walker mastered the steering and I saw him turn on to Broadway all right. I walked up to the stable where we kept the car, only a few hundred feet away. When I entered the stable Walker's son Randolph was cleaning off a horse. He said, "Where is the car?" I told him. He was frightened and said the valve between the water tank and the pump was leaking a little and he had closed it and forgot to tell me about it, but was not concerned as he knew I would know it. So Mr. Walker was driving the car and no water was going into the boiler. While this was not dangerous, yet if the car went far enough it meant a scorched boiler and the car put out of commission. I told Randolph to go to the phone and call a drug store about 3 miles away and ask the druggist to go into the road and stop the car and have Mr. Walker come to the phone for instructions. He did so, and Mr. Walker came to the phone and was told what to do and he did the right thing and made the journey to Tarrytown and back without an accident. When he got back he was completely exhausted and said he would not go through an experience like that again for all of Rockefeller's millions. He allowed he was so frightened he could not talk and that his interview with Rockefeller was a complete failure. But the next day he got another telegram from Rockefeller asking him to have the car at the station at 4 and have Mr. Stanley give him a ride. We did so and I gave him a ride of about 30 miles which he enjoyed immensely. At its conclusion

he asked me to tell Mr. Walker if he could get Mr. Flint interested in the enterprise they would finance it.

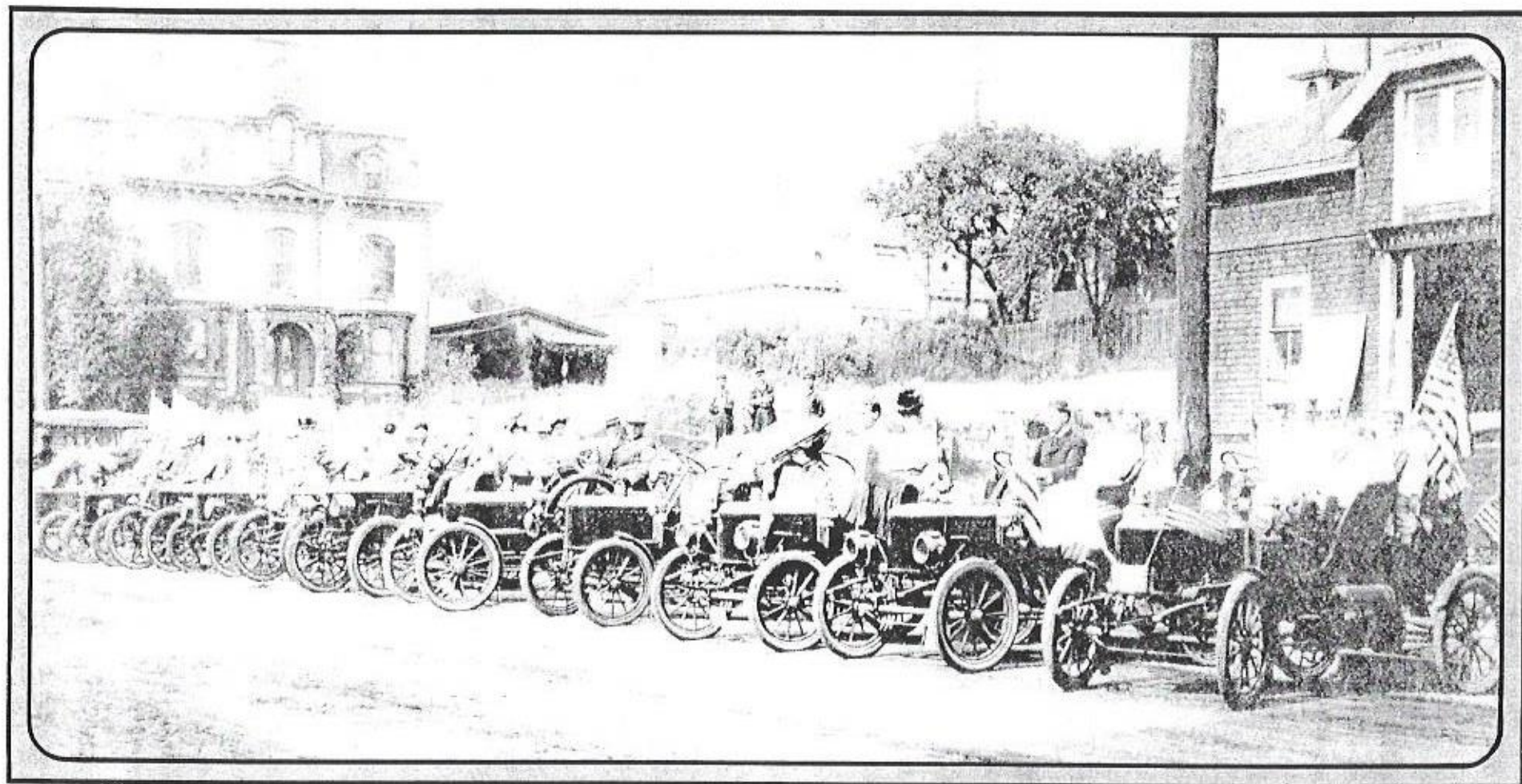
Mr. Flint at that time was president of the Rubber Trust. He had returned in his yacht from a hunting trip in Virginia. His yacht was designed by Mr. Mosher and was said to be the fastest steam yacht in the world. Mr. Walker got word to him and he agreed to be at Irvington Sunday (it was then Friday) and to ride in the car. I gave him a good ride. He told me if I could get rid of Walker he would take hold of the business with Rockefeller. But he would have nothing to do with it if Walker was to remain.

He then invited us on board his yacht, which lay at Irvington, and we took a long sail up the Hudson and had as fine a Sunday dinner as I ever ate.

Thus far Walker had made no progress in raising the \$250,000. Finally when the last day of the 10-day option came, and nothing done, I said to Mr. Walker, "Now you have failed to raise the cash; I have your \$10,000 check in my pocket. I will return it to you and go home satisfied with the fun I have had as full payment for my trouble and you will lose nothing. Instead of receiving that offer as an act of generosity on my part, he was angry and said with an exhibition of much temper, "I am going to get that money before six o'clock tonight." There was nothing for me to do but wait. A very few minutes after that conversation Mr. Amzi L. Barber came, and asked me to give him a ride in the Stanley Steamer. I took him for a long ride. He was delighted and gave Mr. Walker \$250,000 for a half interest in the business. The next day in company with Randolph Walker, then about 18 years old, I drove the car from Irvington, N.Y. to Newton, arriving before sundown in the afternoon, thus ending a most interesting experience.

The sale included the factory we had purchased and its equipment, and the cars and material in process of manufacture, also all patents and applications for patents pertaining to the steam car. It also included an agreement on our part not to engage in the manufacture of steam cars for one year from May 1, 1899.

The purchasers formed a new company called the Locomobile Company with Mr. Walker as president and Mr. Barber as treasurer. It was very evident to my brother and me that two men as unlike as Mr. Walker



Durfee Street at the corner of Walnut Street, Fall River, Massachusetts. The automobile parade for the Cotton Centennial in 1911. The parade took place on Tuesday afternoon of Carnival Week at 3:00 pm. Participants were (right to left) as follows: Auto #1, Dr. Ralph Jackson, son Eric, and friends; Auto #2, Mr. & Mrs. E. Gordon Thatcher; Auto #3, Dr. Philemon E. Truesdale & Miss Lillian Truesdale; Auto #4, Dr. Edmund Curry; Auto #5, Unknown; Auto #6, Mr. & Mrs. Harold H. Anthony, daughter Ruth (Mrs. Ellis A. Waring, mother of Anthony A. Waring), and friends; Auto #7, Unknown; Auto #8, Mr. & Mrs. Frank L. Horton; Auto #9-11, Unknown; Auto #12, Mr. James Jones, chauffeur, at wheel of auto owned by Mr. D. M. Anthony, father of Harold H. Anthony. The garage in the photograph, Mr. Horton's home (off the photo to the right), and the Hartley house are still standing. (Photo courtesy of Anthony A. Waring.)

and Mr. Barber could not work well harnessed double. But the break came sooner than we expected. In less than 2 weeks they had a disagreement they could not settle. Walker insisted his son, Justin, should be general manager; Barber was equally insistent his son-in-law, Davis, be honored with that position. The only possible settlement of a problem of that kind was a separation. This they did and for Walker's half of the factory and its

equipment in Newton, Barber paid him \$75,000. Barber retained the name Locomobile. Each had equal rights under the patents and application for patents, and all designs and models.

Mr. Walker organized the Mobile Company of America, built a large factory at Tarrytown-on-the-Hudson, and began manufacturing there in October 1899.

Mr. Barber built a large addition to the factory here, which he occupied only about a year and then moved to Bridgeport, Conn.

Both of these firms were a complete failure in the manufacture of steam cars, and the Mobile Company of America was soon in the hands of a receiver, and the Locomobile Company abandoned the manufacture of steam cars and began the manufacture of gas cars. In

May 1901 we bought back the factory we had sold with the addition Barber had built and all the patents we had sold for the modest sum of \$20,000. And about a year later we sold the White Automobile Company, then making steam cars, a right to use two of our patents for which we received \$15,000. So we had our factory back and our patents back, for which we received \$250,000 for practically only \$5,000.

During the interval between 1899 and 1901 we were not idle. We had designed a car far superior to any before made, so when we started manufacturing again in 1901, without advertising, we found ourselves overwhelmed with orders.

One event that occurred in the late summer of 1899 is worthy of mention. On August 25, 1899, Mrs. Stanley and I started from our home on Hunnewell Avenue in the car I used on the trip to New York in an attempt to climb Mt. Washington. As we arrived at Portsmouth about noon it began to rain, and as the car had no top we were obliged to stop. We took up our quarters at the Rockingham and had to remain until the next forenoon. We reached Rochester about noon. There we stopped for dinner. We then went up to Ossipee, where we spent the night. We had been told there were two hotels in Ossipee, one a good one and the other rather shady. But when we reached the village we had forgotten the name of the good one. We saw an honest-looking citizen coming out of a store and I beckoned to him. He came up to us and I told him that we had learned one of the hotels there was much better than the other, and if he would tell us which one was the better one, he would greatly oblige us. "Well," he said, "that is a very embarrassing question; I run that one over there." We had a good laugh and went to his hotel and it was the right one.

The next day we ran up to the Kearsage House, at North Conway, and remained there overnight. We took an early start the next morning and ran up to the Darby Field cottage, intending to climb the mountain that afternoon. But the man at the cottage said there were several teams up there and it would not be safe to go up that day. But the next day he would have the road clear and we could make the trial climb.

The next day was perfect. It was unusually clear and no wind. At just 9 o'clock we left the main road at the

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site of the Glen House to make the first climb up Mt. Washington. When we arrived at the halfway house the telephone was out of commission. To save weight I had taken but little water in the water tank, as we were told we could get water at the halfway house. When arriving there I found on examination we had quite a quantity of water left so we concluded to go on to the 5-mile point, where we could take water. But we passed the 5-mile point without seeing it and did not discover our mistake until we had reached the 7-mile post. Then I knew we did not have sufficient water to make the next mile. At that point the road was quite level and wide, and while I was examining the water tank Mrs. Stanley walked around the bluff to see what was ahead and came along back on the run saying a team was coming.

As the telephone was not operating a man had come down with a pair of horses and a buckboard to find whether we were dead or alive. We told him our trouble and he went back up to the top of the mountain and brought down a large milk can full of water. We put the water in the water tank, he got his team out of the road, and we made the last mile of the climb quicker than it had ever been made before.

Since that time, hundreds of cars have climbed Mt. Washington, but that was the first, and it was an event of world-wide interest and that evening an account of it was published in the Paris edition of the "New York Herald."

Naturally from the very beginning of the automobile era, there was a great interest in the speed of the automobile. And it was discovered that the beach of Ormond, Florida was an ideal place for automobile racing. The surface of the beach was about as hard as cement, and after strong north or south winds, the surface was perfectly smooth. But a strong east wind, which, of course, brought the surf up at right angles to

the beach, was apt to leave the surface slightly wavy, and I will tell later what happened as a result of these waves.

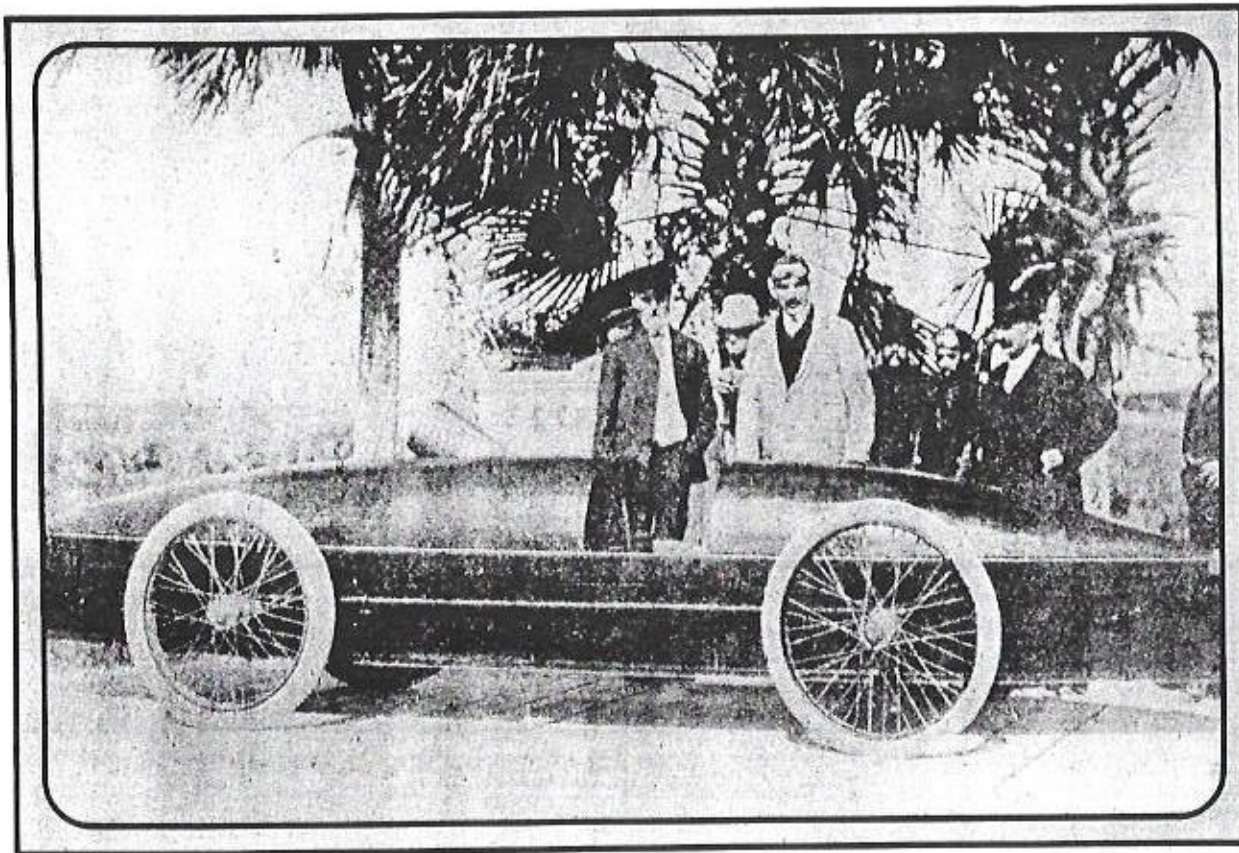
Now Sir Thomas Dewar, an Englishman and a great lover of clean sport, offered a cup, known as the "Dewar Cup," to be held by the one who could drive a car a mile in the shortest time. This cup was open to world competition, and the first international meet occurred at Ormond, Florida.

In January 1905, it was won by Louis Ross, whom many of you knew and admired, in the then record time of 38 seconds for one mile, and in a steam car. The power plant in this car consists of two 16-inch Stanley boilers in which was carried 800 pounds pressure, and two 2½ by 3½ Stanley engines.

The following January, 1906, we entered a car to compete in the Ormond races. This car had for a power plant a 30-inch boiler and a 4½ by 6½ engine. Now a 4½ by 6½ engine had with the same steam pressure practically four times the power of two 2½ by 3½ engines. This car was driven by Fred Marriott and won the Dewar cup, going a mile in 28 1/5 seconds. It also made 2 miles in 59½ seconds. This was the first car to go 2 miles in 1 minute.

The boiler pressure used in these trials was 1000 pounds. The engine made one revolution while the driving axle made two. So the engine made only 300 revolutions to the mile. And since the mile was made in 28 1/5 seconds the engine made 10½ revolutions per second and the wheels twice that number, or 21 revolutions per second.

In the following year, 1907, we sent another car to Ormond to again compete for the Dewar cup. This car had a much improved engine, and a boiler designed to stand a much higher steam pressure. But unfortunately the beach was in bad condition. There had been continuously strong east winds and the surface of the beach was wavy. But Thursday there came a strong Northwester and swept the beach in fine shape. The next day about noon the car was brought out and Fred was instructed to go over the course at about 2 miles a minute. He went the mile in about 29½ seconds, and discovered there was only one bad place in the mile. After some discussion my brother consented to have the trial made. The crowd was anxious and Fred was



Mr. Stanley (left) with Fred Marriott, standing behind the fastest vehicle (for its weight) the world has ever known. (From The Sterling Elliott Family, by Harmon Elliott, his only son. Published by The Elliott Addressing Machine Company, Cambridge, Massachusetts. Copyright ©, 1945.)

desirous of lowering the record. Fred went up about 9 miles beyond the starting line. He set the automatic so as to raise the steam pressure to 1300 pounds. When he crossed the starting line he was going at a rate of speed never before seen. But when he reached the bad place in the course the car left the ground completely for a distance of nearly 100 feet, and it turned slightly in the air and struck at an angle, and of course was instantly smashed. The boiler was torn out, and with a tremendous roar of steam from the broken pipe, rolled several hundred feet down the beach. When first reached Fred was conscious. He had several broken ribs, a bad cut on his head, and one eye hanging out of

the socket. Had it not been for Dr. Parks of South Boston, the eye would have been removed, but it was put back and later perfect sight was restored.

When that accident happened the car was traveling at nearly 3 miles a minute, or fully 260 feet per second. Now 260 feet per second is faster than the speed of a golf ball when it leaves the club of a powerful expert.

The most valuable lesson learned by this accident was the great danger such terrific speed incurs. So we decided never again to risk the life of a courageous man for such a small return.

The mile made in 28 1/5 seconds, on January 26, 1906, stood as the record for 6 years, and has never

been lowered by a car weighing only 2204 pounds, which was the limit at the time. Had the beach been in perfect condition in 1907, the record would have been lowered by Fred Marriott to close to 20 seconds, or at the rate of 3 miles in 1 minute.

Of course 2 miles in 1 minute, or at the rate of 120 miles an hour is slow compared with the speed made by Major Segraves when he drove a car at the rate of 231 miles per hour or at the rate of a mile in about 15 1/2 seconds. This record was made at Ormond Beach in a car that weighed nearly three times the weight of the Stanley Steamer driven by Fred Marriott.

From 1901 to 1910 the Stanley Steamer was a very popular car. It was very speedy, a marvelous hill climber, and required no gear shifting, as it was always in high. It required no cranking and was destitute of vibration. But it had one very serious defect. Its supply of water would enable the car to travel only about 50 miles without renewing its water supply. This was not then such a serious matter, for road transportation was done by horses and water troughs for the horses were a necessity. We had provided a steam siphon by which the water tank could be filled in one minute. But it required a halt and there was always danger that the trough might be empty.

So in 1912 we started building cars with condensers. This enabled the car to run several hundred miles on a tank of water.

The running quality of the Stanley Steamer was unequalled. But a steam car will not run without steam. And to produce steam requires a fire. The production of steam remained the great problem. While we had invented a burner in which the steam pressure automatically controlled the fire, and a very efficient boiler that was safe at any reasonable pressure, yet, when the car was left in the garage overnight, and the boiler allowed to become cold, it took from 10 to 20 minutes to get up steam. This was a waste of time the public did not like. But so long as the gas car user had to get out and crank his car when it stalled, and with always the danger of breaking an arm, many continued to prefer the steam car with all its defects.

But the invention of the self-starter sounded the knell of the steamer. While there are a few that continue to use a steam car, yet as a business

proposition it is a thing of the past.

Let me say in conclusion that I regard the invention and perfection of the gas engine, or to use a broader term, the internal combustion engine, one of the very finest and most useful inventions ever made by man. It has not only revolutionized land transportation, but it has enabled us to successfully answer the question of Darius Green, "The birds can fly, and why not I? Must we admit the little phoebe is smarter than we be?" And John Townsend Trobridge, of Darius Green and his flying machine fame, lived to take a flight in a modern flying machine, a very interesting coincidence.

What the future has in store for the automobile no one can tell. Its rule may be simply an interregnum between horses and aerial navigation. And future generations as they soar above the surface of the earth at a speed of 2 or 3 miles per minute in perfect safety may wonder what pleasure there could have been in travelling over our crowded roads at the slow speed of only 20 to 50 miles per hour. And it is quite possible the only pleasure cars to be seen will be found in the museums for antiques beside the Roman chariot and the stage-coach of the days of George Washington.

But before the flying machine can be made safe the problem of how to light must be solved, and I will close by repeating the moral at the end of the poem, "Darius Green and his Flying-Machine," written more than 60 years ago:

I just have room for the moral here:
And this is the moral,—Stick to your sphere.
Or if you insist, as you have a right,
On spreading your wings for a loftier flight,
The moral is,—Take care how you light.

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FOR
THE APPLICATION FOR
AACA'S GOLDEN JUBILEE TOUR
June 23-28, 1985
in the
March-April 1985 issue
ANTIQUÉ AUTOMOBILE

The 1908 Model K Stanley Steamer

by Hyde W. Ballard

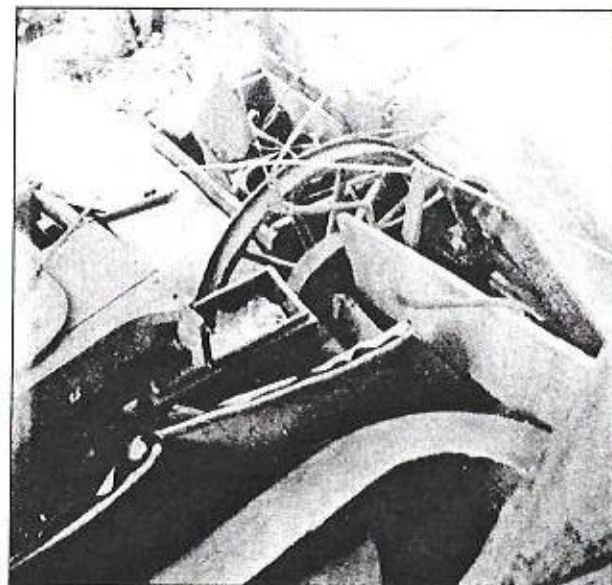
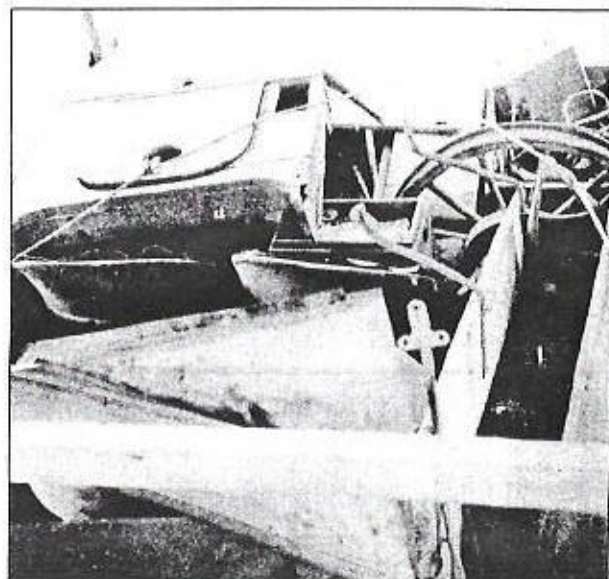
BACKGROUND NOTE*

As a young man, T. Clarence Marshall worked in his father's paper mill (\$1.25/day for 12 hours' work) and dreamed of owning a Stanley Steamer. The following headline in a January 1906 issue of "The Philadelphia Inquirer" fueled his ambition and strengthened his resolve to own a Stanley: "Fred Marriott, driving a Stanley Steamer at Ormond, Florida, makes more than 2 miles per minute, and smashes all records."

Perseverance paid off—D. Walter Harper, the Philadelphia Stanley agent, finally procured a used, 20-hp runabout and Marshall had his Stanley. In the ensuing years, Marshall closely followed the exploits of Harper and Marriott as they repeatedly frustrated the gasoline-powered competition at various hill climbs. In 1910, Harper consented to sell Marriott's famous 1908 Model K to Marshall. And the story continues . . .

When I entered the picture, it was early 1945. Clarence Marshall and I had made a deal—he wanted a roadster and, in return, would find me a 30-hp Stanley. The car that was to be mine was located in a shed near Avondale, Pennsylvania, in various pieces! I made several trips to that shed in Avondale from my home in Merion to sort out pieces and parts of pianos, farm machinery, and the usual accumulation of things that collect on a farm. Determined not to let any parts of the car go, I tried to arrange the various pieces, but the job appeared almost beyond hope. First of all, the boiler, burner, and engine were nonexistent. With assistance from Ote Corriher, I obtained a boiler. Then Dick

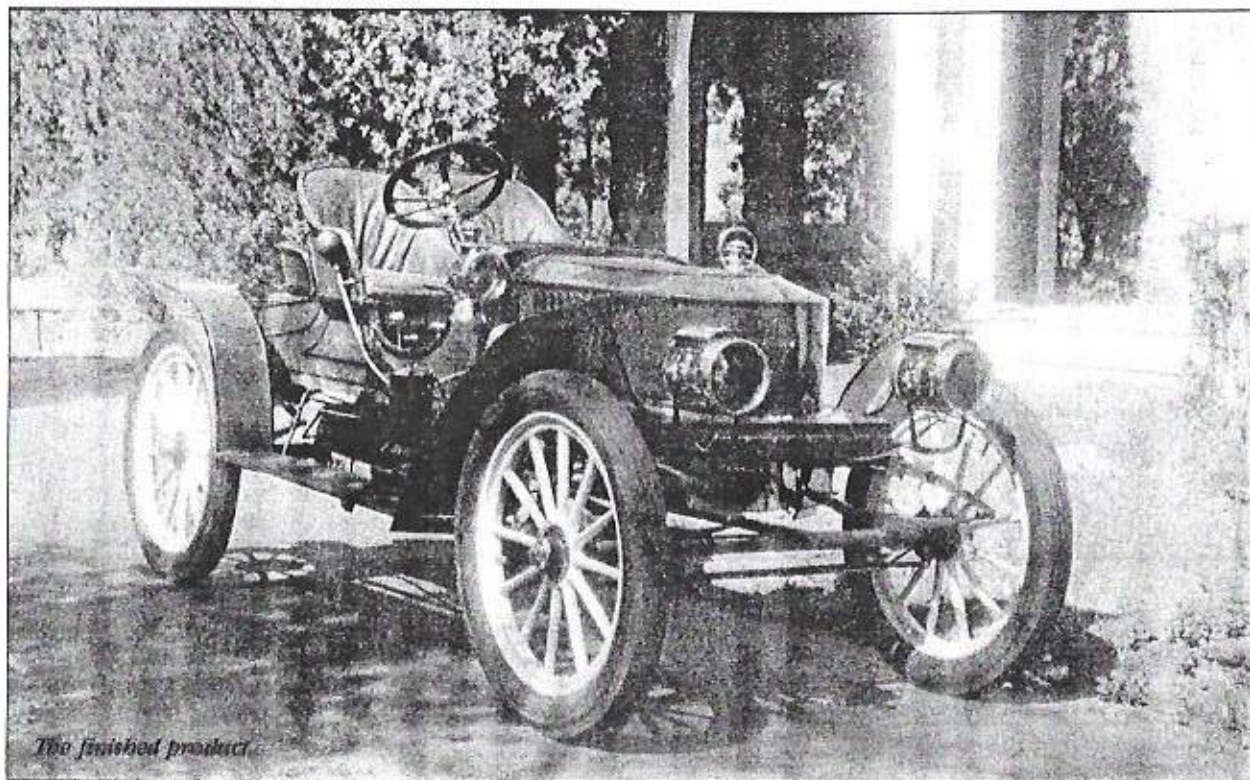
*The complete story of Marshall's love affair with steam can be found in the December 1951 issue of ANTIQUÉ AUTOMOBILE.



Before the restoration.

French helped cast a three-section burner. The engine presented quite an obstacle: while 30-hp engines were available, a 30-hp engine with a small frame was another matter. But all things come to him who is patient. Fortunately, all the lamps but one were found, even the left front, with the cracked lens. Incidentally, when I took the lamps to Mr. Smith for restoration, I instructed that the crack be left as is. When I got the lamp back, however, the crack had been turned 180 degrees from the original, necessitating unsoldering the retaining ring and adjusting the lens to its proper position; otherwise, the lamps were gorgeous.

The next step was the matching of the pieces to build a new car, being careful to save any original parts. John Mattson was in charge of the woodwork, while I did the plumbing. The next challenge to face us was the bearings in the rear wheels. I had the axles and the wheels, which could be used as found, but there was insufficient metal to accept the balls in the manner as originally fitted. Bearings usually do not prove a problem in restoration, but in this instance there seemed to be no solution other than redesigning the whole axle housing. I happened to mention my problem to a friend over lunch one day, and he suggested that I bring the bearings to his office. His engineers took the bearings assembly but the balls were loose and had no retainers. Before long I got a call to come



The finished product

MODEL K STANLEY STEAM CAR Semi-racer, seating two, with rumble seat added. 26-inch boiler and burner in front. $4\frac{1}{2} \times 6\frac{1}{2}$ inch engine. 30 horsepower.

Divided seat. Throttle and bypass lever subimposed on steering wheel. Gasoline capacity (tank at extreme rear), 13 gallons (125-150 miles). Water capacity, 36 gallons (40-50 miles). $36 \times 3\frac{1}{2}$ inch tires. Wheel base, 108 inches; track, 54. Full elliptical spring. Oil lamps, gauge lamp, and horn.

This Model K is a fast stock car for two people with an extra rumble seat. It is intended primarily as a car for the fastest kind of road work and is geared to a very high speed. It is entirely practical for everyday use, except that it is unnecessarily powerful and fast for any such purpose. It can, of course, like all Stanley cars, be throttled down to a snail's pace, and there are no cylinders to get overheated and no disagreeable odor or vibration while running slowly, or standing still, in city streets. It is equipped with 26-inch boiler, and $4\frac{1}{2} \times 6\frac{1}{2}$ inch engine. The boiler capacity, on account of the greater diameter and greater depth, is 50% more than that of the 23-inch boiler.

