

1901/02



THE STORY
OF A
BLUE
RIBBON

MADE IN CHARLES RUTHER BATES, N. Y.

THE
BLUE BADGE
OF
QUALITY

There is a certain sky-blue ribbon in our possession that money couldn't buy.

It is a trophy of honor — the proof of victory in a hard-fought race.

It was won by the Foster Steam Wagon in the recent 500-Mile Endurance Race between New York and Buffalo — and is the mark of demonstrated merit in automobile construction.

Further on we'll explain the why and the how.



THE FOSTER STEAM WAGON

MADE BY

FOSTER AUTOMOBILE
MANUFACTURING CO.

ROCHESTER, N. Y.

ABOUT AUTOMOBILING IN GENERAL

Automobiling has ceased to be regarded as a freakish fad—a sort of jestful mode of uncertain travel.

It is no longer considered in the same doubtful light as the air-ship or telegraphic communication with Mars.

It is here and adopted.

It has settled down into a modern, comfortable, economical method of locomotion.

But the public has been a-studying—not automobiling in general, but automobiles in particular.

It knows what it wants—and means to get it.

It has no further patience with the horseless steed that has erratic tendencies.

Good-road autos, like fair-weather friends, go back upon you when you need them most.

There are balky machines that, like David Harum's nag, "stand without hitching"—that come to a helpless, hopeless stop when

the road becomes uneven—that are as good for hill climbing as bob sleds. These are the sort of machines that are being weeded-out by buyers and devotees to the art of auto travel.

One of these weeding-out processes—a veritable instance of the survival of the fittest—was the 500-Mile Endurance Race between New York and Buffalo, which was inaugurated by the Automobile Club of America and completed September 13th, 1901.

The Foster Steam Wagon made a glorious showing in the contest.

About the Foster.

The Foster is a good, honest steam wagon—without any toy features.

It is as heavy as it needs to be—for strength, and the ability to get over bumpy city pavements and rough country roads. At the same time it is an attractive Boulevard machine—its simple, classic beauty and easy speed make it an auto for show as well as for accomplishment.

The Foster is not complicated. It is built on plain, right principles, readily understood. Easy to operate.

About the Contest.

Why, How, and So Forth.

We entered the 500-Mile Endurance Race with Standard Foster Steam Wagons—our regular models. Two machines were started from New York and they both finished officially in Rochester but continued through to Buffalo to complete the record.

We were awarded by the Automobile Club of America a first-class certificate and the accompanying blue ribbon, which represent the highest honors attainable. Eighty-one starters left New York and few—very few—were equally honored. This is not an argument in favor of our wagon but a hard, cold fact. It stands for a performance the authenticity of which cannot be questioned. Our entries were standard carriages and the record can be duplicated with any of our present models.

The total distance covered in the contest was divided into runs varying in length from 26 to 48 miles—two such trips had to be made every day, one in the morning and one in the afternoon.

With the exception of the longest controls, in which we had to take water, we made the

runs complete from start to finish without a stop.

The Foster Steam Wagon is especially adapted for long and trying runs. The engine is perfectly designed and receives exceptional care in its construction. It is very evident, in order to secure good results when making a continuous run of 40 miles through heavy mud and a pouring rainstorm, that there must be perfect protection from the flying particles of sand and dirt, a constant and efficient system of lubrication and such locking devices as will positively prevent any change in the adjustments of the bearings.

As the lower parts of our engines containing the shaft and connecting rod are enclosed and made oil-tight, we, at the same time, keep out the dirt and keep in the oil. With every down stroke, each connecting rod dips into the reservoir of oil and splashes some of the lubricant over the other bearings. Great care has been taken in the selection of suitable materials and combinations of materials so as to not only reduce the amount of wear to a minimum, but, in places where it cannot be avoided, to have it occur on parts that are easily replaced. The eccentrics, the connecting rod and crank bearings, the cross-heads and pin, the link and link blocks are

all made of the very best of tool steel hardened and ground accurately to size. Those parts, however, with which these come in contact, and which are comparatively easy to replace, are made of phosphor bronze or of a milder grade of steel.

Probably the best evidence of the many good qualities mentioned lies in the fact that the engine in one of our carriages made the run from New York to Rochester with absolutely no adjustment whatever. This represents, with the preliminary testing, a little over 600 miles of the hardest kind of traveling, without repacking the stuffing boxes or even tightening them, and with absolutely no adjustment of the bearings.

Such results require no expert handling—you or anyone can attain them with the Foster Wagon.

A very important and necessary item in the making of a long continuous run is steam and we had plenty of it. We have a burner that gives abundance of heat. It will stand a great amount of abuse and has never been known to light back. Our boiler is 16 inches in diameter, and having 400 fire tubes gives a large heating surface. It will make steam fast and keep on making it, and owing to the large volume of water contained is

capable of a tremendous output for short bursts of speed or hill climbing. By way of illustration, the official figures, 1 hour 49 minutes is the total time consumed by one of our wagons in making the 34.1 miles between Hudson and Albany. (19 miles per hour.) This includes several minutes' delay at the Albany swing bridge. There were two steep hills encountered in that run, and the good showing was due to the excellent steaming ability of the boiler and the efficient manner in which the engine turned that steam into distance. We are not citing this one case because it is the only good run, for our record shows that we covered the 201.3 miles from New York to Fonda in the official time of 12 hours 5 minutes, or at an average speed of 16 $\frac{2}{3}$ miles per hour.

A good power outfit is not enough to make a successful machine. Every part must be constructed with a view to withstanding the terrible vibration attendant upon high speed over rough roads. We noticed in our earlier models the havoc which the shocks and jars encountered in every day travel produced upon the wooden frame work upon which the machinery was assembled. We came to the conclusion that it was not a proper construction to have wood braces in

contact with the boiler nor where the heat radiating from the burner would be directly transmitted to them, so we planned to substitute metal cross-bars, and this led us up to the construction of an angle iron frame work which would carry all the mechanism and support the weight of the gasoline and water.

There are several advantages gained by this method of construction and a few more due to its peculiar design.

Having a very large margin of safety and being riveted together there is absolutely no danger of breakage or of the parts becoming loose and disconnected. A very severe test was given this construction last summer when a customer of ours undertook to turn his wagon around in a very narrow road, and losing control, backed the machine down a five foot bank into a ditch. The carriage stood squarely on its end and the miracle is that it did not go over backwards and injure the driver. Four men and a team of horses succeeded in placing the wagon once more on the highway, when it proceeded on its way none the worse for the accident.

As the mechanism is carried by the steel frame work, the body has only to support the seat and passengers, and is therefore merely a shell which can be removed at will. The

machinery is thus left in full view and in the most accessible form.

It is possible by removing the footboards to stand, stoop, kneel or sit in front of the engine and have plenty of room all around for cleaning or adjusting it.

A point that told very strongly in our favor when we struck the bad roads in the Endurance Contest, was the large diameter of our wheels and their consequent easy rolling properties. They are a new design having large hubs and flanges, and we have never yet broken a spoke on any one of these wheels.

The running gear is built of very heavy-gauge seamless steel tubing and heavily reinforced at all connections. It has four flexible joints to allow it to ride easily over obstructions.

The compensating gear is of the enclosed spur type and carries enough lubricant to run it through a season.

Not a little of our ability to keep in front, and finally finish with royal honors, is due to the ease with which every good point of the Foster Wagon is brought into play at the driver's will and when traveling at full speed. A continuous run of 35 or 40 miles, such as was often made in the New York-Buffalo

race, consumes gasoline, and consequently reduces the air pressure which forces that gasoline to the burner. By opening a valve, reached from the seat, a steam pump is started and the pressure restored to its former height.

On one of our wagons a little packing worked its way under the check valve of the engine pump, preventing its proper operation, but a larger auxiliary water pump operated from the seat enabled the last two miles of that control to be made at full speed, regardless of the regular water supply.

The path of the machine is controlled by a side steering device so arranged to eliminate all vibration and to give the driver complete, positive and easy management under all variations of speed and road surface.

One other salient feature, and one that is entirely original with us, is our system of fire control. We have in connection with our burner a pilot light to enable the driver to turn his main fire on and off at will from the seat. It always ignites at the pilot. We equip our machines with an automatic fuel regulator which varies the fire in inverse ratio to the steam pressure, and usually checks the main burner when 160 lbs. of steam have been obtained. This regulator does not put the fire out. In this way it is possible to operate

without the pilot light by allowing the regulator to control the fire. This has a disadvantage in hill climbing or whenever it is advisable to use a higher steam pressure than the regulator will allow. To overcome this we have provided a separate passage, also controlled from the seat, which makes it possible to pass the gas into the burner regardless of the action of the regulator. On the Endurance run we found this to be of immense advantage for maintaining a high rate of speed continuously and for hill climbing. For all ordinary driving it is necessary to keep the auxiliary fire closed and allow the regulator complete control, as otherwise the pressure would run up until the safety valve gave relief.

The Foster Steam Wagon has earned, not only by its splendid showing in the recent contest, but by its many obvious and individual good points, a title to the consideration of every intending buyer.

We are making an honest statement when we say that we do not believe that there is another machine which so splendidly combines that triumvirate of virtues—service, speed and sightliness.

If you contemplate purchasing an automobile, we solicit a letter of further inquiry.

We are confident that the Foster Wagon will satisfy you in every regard—for every practical purpose.

*FOSTER AUTOMOBILE
MFG. CO.,*

ROCHESTER, N. Y.

Gift - Hara Mueller 12.75 Value 4000

Gift - Hans Mueller 12-75 Value 40⁰⁰₋

