



The



GROUT

Steam Wagons



IT REQUIRES ONLY A  
MATCH TO START

GROUT BROTHERS,  
Orange, Mass., - U. S. A.  
STEAM WAGON MAKERS.

THE Largest  
Steam Wagon  
Factory in the  
World where all  
parts of the Groat  
Bros.' Wagons  
are made. We  
built the first  
factory in the  
United States es-  
pecially for the  
manufacture of  
Automobiles.



Established  
1896.

Groat  
Bros.,

Orange,  
Mass.,  
U. S. A.

Long Distance  
Telephone 14-12

Cable Western  
Union Code.



RECOGNIZING the demand for a Self Propelled vehicle which shall embody the qualities of **Noiseless Running** with an **entire absence** of **vibration** or **smell**, combining **elegance** of **design** with **ease of manipulation**, we place the **Grout Vehicles** before the Public in the absolute conviction that our Vehicles will commend themselves to those who are in a position to appreciate their unique points of construction.

After a very careful study of the relative merits of Hydro-Carbon, Electricity and **Steam**, we have chosen the latter as our Motive Power, being convinced that it is at once the simplest, cleanest and the most efficient in the end.

In the following pages we have endeavored to describe the construction of the carriage and its working parts, and we shall claim nothing for our Vehicles which we are not prepared to substantiate by **actual tests** on the road.

#### **COMPENSATING GEAR.**

In the centre of the rear axle a compensating device composed of bevel gear wheels is placed, which permits the driving wheels to turn at different speeds when negotiating sharp curves, these are so well braced that it is impossible for them to wear or get out of line.

#### **STEERING GEAR.**

The steering is controlled by a lever placed in the centre of the car which can be adjusted as to height and angle to suit convenience of driver. Having overcome the vibration common to centre-steered vehicles, we unhesitatingly recommend our method as far in advance of the more complicated side steerer.

#### **BURNER.**

We have the simplest possible arrangement for starting; neither heated irons, torches, nor methylated spirits being necessary; we **start it with a match**.

After the fires have once been set going (an operation of 3 minutes), all control is regulated **from seat**, enabling the operator to economize both fuel and water to a very appreciable extent.

By means of this arrangement the vehicle can be left standing for hours without attention, the pilot light alone maintaining the pressure on a very small consumption of gasoline, and when it is desired to continue the journey, one turn of the seat valve is all that is necessary for getting under way at once.

## BOILER

Is made of copper, having a heating surface of 45 square feet, tested to 600 lbs. cold water pressure. A steam gauge placed under the driver's observation indicates the exact pressure in boiler, and a safety valve, designed to blow off automatically at 265 lbs. prevents this pressure being exceeded. This boiler is perfectly safe under all conditions. A screw union with detachable nozzle is provided for filling the boiler direct; this can be done in a couple of minutes with a hose.

## ENGINES.

Six H. P. two cylinder, double-acting, vertical, link motion, with part ball bearings. Frames of phosphor-bronze. All parts are interchangeable and of best possible workmanship.

## PUMPS.

Automatic water pump, worked off crosshead of engine, controlled **from seat**, fills the boiler automatically from water tank. The exact level in gauge glass being visible in mirror in front of the driver. An auxiliary hand pump is also provided, which will fill the boiler in a short time even against very high pressures.

## WATER TANK

Is of copper, having a capacity of 26 and 30 gallons. The tank is divided into compartments to prevent splashing whilst the car is in motion. A large screw manhole is conveniently situated for filling.

Some  
Special  
Features  
of the  
Grout  
Steam  
Vehicles.

1. We **START IT WITH A MATCH** and go ahead.
2. **NO NOISE, NO VIBRATION, NO SMELL.**
3. Once lighted, **MANIPULATED ENTIRELY** from **SEAT.**
4. By means of a special device the **PILOT FLAME** will maintain the pressure, permitting the Vehicle to be left unattended for any length of time, when it is **ALWAYS READY** to be started **FROM SEAT.** This feature will commend itself to Doctors and those whose vocations necessitate their making frequent calls.
5. The gasoline tank holds sufficient fuel for an **Average Run** of 50 to 60 miles.
6. Our burner is so designed as to render **Blowing Out Impossible** even in the stormiest weather.
7. The body of the carriage is slung on springs constructed on entirely novel lines, and consequently its **Easy Running** on the **Roughest Roads** will be a revelation to those who are accustomed to even the most **Luxurious Traveling.**
8. **Hill-climbing Capabilities Unrivalled.** We won the Nelson hill-climbing contest in 2 minutes 45 seconds, which puts us on record as the fastest hill-climbing machine in the world, this was in the 500-mile endurance contest from New York to Buffalo. Eighty-one vehicles started.

# DESCRIPTION.

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## THE BODY

Is of elegant Stanhope design, made to accommodate either two or four persons, black being Standard finish. The panels and running gear can, however, be colored according to customer's taste.

Crests and Monograms can be affixed at a slight additional charge.

The coachwork is of the best possible workmanship, only the finest materials being used.

## WHEELS, RIMS AND TIRES.

Cycle type wheel, tangent spokes, driving 30 inch diameter, steering 28 inch diameter, running on ball bearings, of extra strong construction, and fitted with best 2½ inch Pneumatic tires. Wood wheels if desired.

## RUNNING GEAR.

The body is slung on a tubular frame of heavy gauge, strongly braced to withstand the great strains occasioned by fast traveling over rough roads. The necessary flexibility is secured by means of three springs; the two rear ones attached to each corner of the body and the rear axle, whilst the front one, hinged to the forward axle, supports the fore-carriage by two gondola arms.

## FUEL AND AIR TANKS

Are of copper very strongly made, seamless and tested for high pressures. The fuel tank has a capacity of 6½ gallons of gasoline, or sufficient for a run of about 55 to 60 miles. The pressure in air tank is registered on a gauge provided for the purpose.

## WATER GAUGE

Has hand and check valves and can be closed and re-opened for renewing glasses when necessary. A small tap is provided for checking the accuracy of the water level.

## SAFETY VALVE.

An automatic pop safety valve blows off at 265 lbs. and reduces the pressure by about 10 to 15 lbs.

## BRAKE.

A slight depression of the driver's right foot actuates a powerful double acting band round the drum of the rear axle and will bring the carriage to a standstill very rapidly, either back or forward.

## IN GENERAL.

The coachwork is the finest known to the carriage maker.

The engines, etc., are the best that the latest automatic machinery and skilled labor can produce, every part being made interchangeable.

Every part of our vehicle being produced at our works, we are enabled to supervise their manufacture from start to finish and to give attention to the minutest details.

## STANHOPE—Spindle Back.



MODEL A.

## SPECIFICATION.

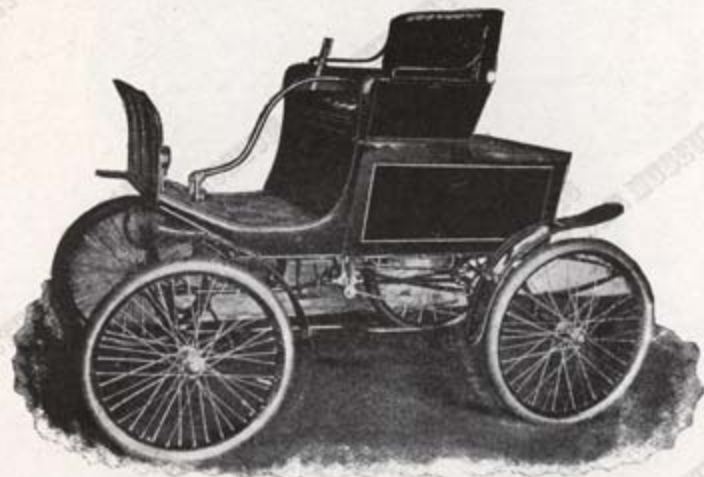
To CARRY . . . . .	Two passengers.
WHEELS . . . . .	Steering 28 ins., Driving 30 ins. Tangent Spokes, very heavy.
TIRES . . . . .	2½ inch Pneumatics.
TRACK . . . . .	4 feet, 8 inches.
EXTREME LENGTH . . . . .	7 " 4 "
" WIDTH . . . . .	5 "
" HEIGHT . . . . .	5 " 4 "
CAPACITY OF FUEL TANK . . . . .	6½ gallons.
" WATER " . . . . .	26 "
WEIGHT, EMPTY . . . . .	660 pounds.
" WITH TANKS FULL . . . . .	900 "

HOT WATER HEATERS.

Equipped with Rubber Mat, two Side Lamps, 5-inch Gong, complete set of Tools and Hose connection for filling boiler direct, Syphon Water Raiser, extra Chain Links, Gauge Glasses, two Oilers.

Price \$800.

## STANHOPE—Panel Back.



MODEL B.

## SPECIFICATION.

To CARRY . . . . .	Two Passengers.
WHEELS . . . . .	Steering 28 ins., Driving 30 ins. Tangent Spokes.
TIRES . . . . .	2½ inch Pneumatics.
TRACK . . . . .	4 feet 8 inches.
EXTREME LENGTH . . . . .	7 " 4 "
" WIDTH . . . . .	5 "
" HEIGHT . . . . .	5 " 4 "
CAPACITY OF FUEL TANK . . . . .	6½ gallons.
" WATER " . . . . .	26 "
WEIGHT, EMPTY . . . . .	700 pounds.
" WITH TANKS FULL . . . . .	1000 "

HOT WATER HEATERS.

Equipped with Rubber Mat, two Side Lamps, 5-inch Gong, complete set of Tools and Hose connection for filling boiler direct, Syphon Water Raiser, extra Chain Links, Gauge Glasses, two Oilers. Mud Guards extra on this style.

Price \$825.



MODEL C.

**STANHOPE—Panel Back with Victoria Hood.**  
SPECIFICATION.

To CARRY . . . . .	Two Passengers.
WHEELS . . . . .	Steering 23 ins., Driving 30 ins. Tangent Spokes.
TIRES . . . . .	2½ inch Pneumatics.
TRACK . . . . .	4 feet, 8 inches.
EXTREME LENGTH . . . . .	7 " 4 "
"    WIDTH . . . . .	5 "
"    HEIGHT . . . . .	7 " 4 "
CAPACITY OF FUEL TANK . . . . .	6½ gallons.
"    WATER " . . . . .	26 "
WEIGHT, EMPTY . . . . .	700 pounds.
"    WITH TANKS FULL . . . . .	1000 "

Equipped with Rubber Mat, two Side Lamps, Hot Water Heaters, 5-inch Gong, complete set of Tools, and Hose connection for filling boiler direct, Syphon Water Raiser, extra Chain Links, Gauge Glasses, two Oilers.

**Price \$875.**

**Model D with Removable Side Curtain Top.**



MODEL E.

**QUEEN STANHOPE—Closed.**

Equipped with Rubber Mat, two Elegant Side Lamps, Hot Water Heater, 5-inch Gong, complete set of Tools, Hose connection for filling boiler direct, Syphon Water Raiser, extra Chain Links, Gauge Glasses, two Oilers, Mud Guards and everything complete.

**SPECIFICATION.**

Same as Queen Stanhope Open.

## LIGHT DELIVERY.



MODEL G.

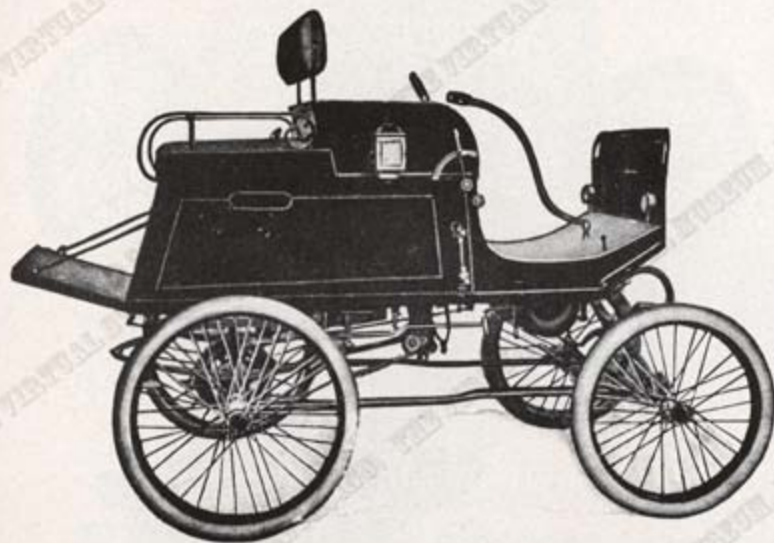
## SPECIFICATION.

To CARRY . . . . .	Two Passengers.
WHEELS . . . . .	Steering 28 ins., Driving 30 ins.
TIRES . . . . .	2½ inch Pneumatics.
TRACK . . . . .	4 feet, 8 inches.
EXTREME LENGTH . . . . .	7 " 4 "
"    WIDTH . . . . .	5 "
"    HEIGHT . . . . .	7 " 4 "
CAPACITY OF FUEL TANK . . . . .	6½ gallons.
"    WATER " . . . . .	26 "
CARRYING SPACE {	LENGTH 3 feet, back of seat.
	WIDTH 3 "
	DEPTH 3 " 6 inches.
WEIGHT EMPTY . . . . .	900 pounds.
"    TANKS FULL . . . . .	1100 "
HOT WATER HEATERS.	

Equipped with Side Lamps, Rubber Mat, 5-inch Gong, complete set of Tools, Hose connection for filling boiler direct, Hot Water Heater, Syphon for raising water, extra Chain Links, Gauge Glasses, two Oilers.

Price \$1,000.

## DOS-A-DOS—for Four People.



MODEL F.

## SPECIFICATION.

To CARRY . . . . .	Four Passengers.
WHEELS . . . . .	Steering 28 ins., Driving 30 ins.
	Tangent Spokes.
TIRES . . . . .	2½ inch Pneumatics.
TRACK . . . . .	4 feet, 8 inches.
EXTREME LENGTH . . . . .	7 " 4 "
"    WIDTH . . . . .	5 "
"    HEIGHT . . . . .	5 " 4 "
CAPACITY OF FUEL TANK . . . . .	6½ gallons.
"    WATER " . . . . .	26 "
WEIGHT EMPTY . . . . .	800 pounds.
"    TANKS FULL . . . . .	1000 "
HOT WATER HEATERS.	

Equipped with Rubber Mat, two Side Lamps, 5-inch Gong, complete set of Tools and Hose connection for filling boiler direct, Syphon Water Raiser, extra Chain Links, Gauge Glasses, two Oilers. Mud Guards extra on this style.

Price \$900.



## QUEEN STANHOPE—Open.

Full Swell Sides, Round Corners, Very Stylish Wide Seat, considered to be the finest ever known to the carriage-maker's art. Will send you photograph of their style if you are interested.

### SPECIFICATION.

TO CARRY . . . . .	Two Passengers.
WHEELS . . . . .	Steering 28 ins., Driving 30 ins.
TIRES . . . . .	2½ Pneumatics.
TRACK . . . . .	4 feet, 8 inches.
EXTREME LENGTH . . . . .	7 " 4 "
"    WIDTH . . . . .	5 " "
"    HEIGHT . . . . .	7 " 4 "
CAPACITY OF FUEL TANK . . . . .	6½ gallons.
"    WATER " . . . . .	26 " "
WEIGHT, EMPTY . . . . .	800 pounds.
"    TANKS FULL . . . . .	1000 " "
HOT WATER HEATERS.	

Price \$1,000.

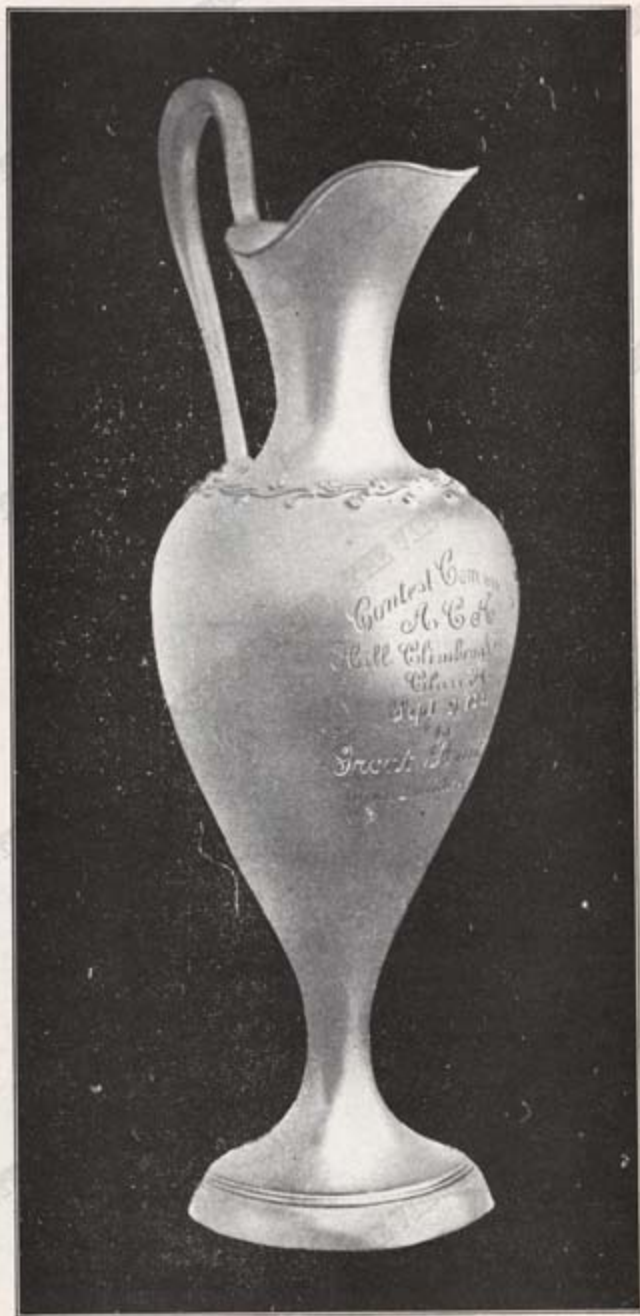


MODEL E.



TESTING YARD.

We court inspection, and shall at all times be happy to give intending purchasers every facility for examining and testing the merits of the GROUT VEHICLES.



Won in Nelson Hill Contest, eighty-one competing.



As the Grout appeared at Syracuse in the 500-mile Endurance Test from New York to Buffalo.

The vehicle which beat every American-made machine on Nelson Hill and won the cup.

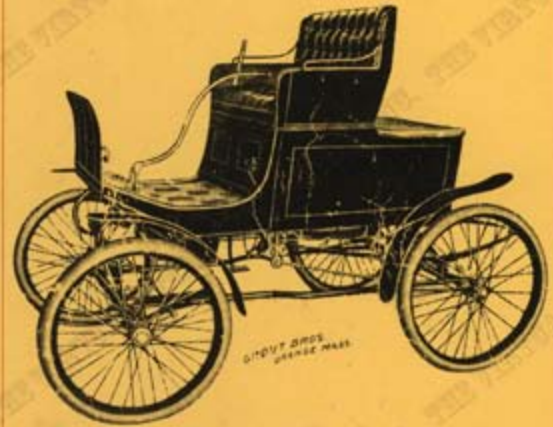


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