



• Twombly
Motor
Carriages


H. CUNTZ
1904

MANUFACTURED BY THE
TWOMBLY MOTOR CARRIAGE CO.
NEW YORK, U. S. A.



The TWOMBLY Motor Carriages



AFTER EXHAUSTIVE TESTS and much practical experience with explosive engines, electricity, and various other sources now available

for producing power for automobiles, it seems generally conceded by the best authorities in this country and abroad, that *steam* produced from materials readily obtainable and directly applied by methods free from complicated or delicate machinery (liable to get out of order) and quite independent of such dangerous chemicals as Naphtha, Gasolene and similar combustibles,— is by far the most reliable, flexible, economical, safest and most convenient power for general use, especially for pleasure vehicles or such cars as are likely often to be at a distance

The Twombly Motor Carriages

from usual opportunities for securing fuel supply.

The Twombly machine is the result of many careful experiments and presents numerous important features quite novel in their application to automobiles, but most of them based upon old, well-known, simple principles, that have stood the test of good work for years, though original and unique in their present combination.

What has been sought was simplicity of construction, freedom from noise or vibration, strength, durability, increased convenience and absolutely reliable automatic regulation and protection of the essentials constantly required—such as fuel and water supply, oiling of the working parts, and their protection from dust and exposure; especially avoiding delicate, small working parts liable to break or become disarranged and requiring frequent attention or repair; also extreme accessibility to all parts of the mechanism.

The Twombly Motor Carriages

This car is fire-proof throughout.

The working parts are concealed and protected from dust and weather.

An Automatic Lubricating System, having no complications, oils every wearing surface without requiring attention oftener than once in several weeks.

The total number of working parts in this entire machine are few, as compared with other first-class cars; many of whose numerous parts are small, and for that reason, delicate and dangerous, because the breakage or displacement of any of them often seriously interferes with the operating of the machine, usually far from repair shops at time of accident.

All Bearings are made extra large, with strong connections, hardly possible to break or get out of order in any ordinary use, and will wear for years with very slight attention—all bearings being easily adjustable.

It has an entirely odorless Kerosene

The Twombly Motor Carriages

Burner, the generator of which can be thoroughly cleaned in ten minutes without being removed from the car. This Burner is in three sections, either one of which can be run separately. The advantage of this fuel for long distance or touring cars, away from ordinary facilities for fuel supplies or repair, can readily be understood, whereas its safety and economy as compared with any other fuel are important items, it can be obtained at any grocery en route, and stored without consent of Fire Underwriters. This same Burner works equally well for gasolene.

A simple and reliable Water Regulator, maintains water in the boiler at any set level without attention, whether the car is running or standing still.

There is no pressure in the Main Fuel Tank at any time, one pint of fuel or less, in a separate holder, being all that is kept under pressure, which is regulated

The Twombly Motor Carriages

by an *Automatic Steam Pump*, so constructed as to maintain the same pressure whether the car is running or standing still.

There is an Automatic Fuel Regulator that controls the fire and keeps it in exact proportion to the steam used. *When the fire is once lighted, this machine can be left for hours at a time without attention, and will automatically maintain the same water level and the same boiler pressure, ready to start at a moment's notice by simply turning the lever, no lighting or pumping being needed.* The Burner consumes about two cents' worth of Kerosene per hour while standing still, with the fire lighted. It costs about one and one-quarter cents per mile to run this machine over ordinary roads.

This car is noiseless, when being started or running, with no vibration or odor and no exhaust, and under these conditions it can maintain a speed of from one to

The Twombly Motor Carriages

forty miles or more per hour at the will of operator.

All parts are standard and can be readily renewed from stock kept on hand, and all bolts, screws, etc., are such as can be obtained at any general supply store.

The Boiler is of the Horizontal Return Fire Tube Type, supplemented by a semi-flash coil containing sixty feet of $\frac{1}{4}$ " Shelby steel tubing placed directly over the fire, through which tubing the feed water passes on its way to the boiler. This arrangement markedly increases the efficiency of the boiler and adds materially to its steaming efficiency, protects it from scorching, and utilizes a greater part of the heat contained in the burnt gases. This gives an economical, quick-steaming boiler of great reserve power; an ideal generator for automobile use.

The Engine is also horizontal—a Single Acting Four Cylinder Compound, not new

The Twombly Motor Carriages

in principle, but in detail of construction and design. This engine is powerful, economical, simple, strong and durable, and will never knock or rattle. The Cylinders are opposed and directly connected to a solid Crank Shaft. *There are no Cross Head, Stuffing Boxes, Packing, Piston Rods, or delicate parts of any description.* The engine is enclosed, dust-proof, and all working parts run in oil; *no oil being injected in the steam pipes,* thereby saving constant trouble from oil in the boiler and condenser. It can be changed instantly from 12 h. p. Compound to a 24 h. p. Direct Acting Engine. The Horizontal position of the engine and boiler as here applied to Autos, we believe to be entirely novel and possesses many advantages as to space, accessibility and action. *Should any part of the boiler require repairs,* such as expanding or removing tubes, tightening connections, etc., every part

The Twombly Motor Carriages

is readily accessible and the end of every tube exposed without removing a single connection by simply opening a door on either side of the car as shown in the cuts, thus enabling repairs to be made in a few minutes on the road or elsewhere, without disengaging the boiler or removing it from the car, with all of the inconvenience and difficulties *that* entails, such as the necessity of generally taking the car to a repair shop with one or two days' necessary work, mostly spent in taking the entire machine apart and putting it together again, which if not done by skilled mechanics, familiar with that particular make of machine, often results disastrously. Every tube in this boiler can be expanded on the road, without blowing off steam, or putting out fire.

Feed Pumps are enclosed in dust-proof case, but with check valves exposed.

Plunger and Connecting Rods run in oil. They are driven direct from engine

The Twombly Motor Carriages

by a three-to-one bevel gear, thereby avoiding tendency of pumps to run away from the water at high speed.

The system of lubricating the engine is novel, so that no oil gets over to the boiler, thus avoiding danger of foaming or priming.

The exhaust steam is condensed back to water by a very efficient *fan-cooled condenser*. After passing through the condenser, the hot air is carried direct to the Burner, creating an ideal forced draft.

All control levers are directly under the steering wheel, enabling the operator to regulate his speed, reverse motion, or change from compound to direct acting, without removing either hand from the steering wheel.

Placed directly in front of the operator, on the dash board, are two dials that show in a novel manner the exact amount of fuel and water contained in the tanks

The Twombly Motor Carriages

at all times. When brake is thrown on, *it automatically cuts off steam* before brake takes hold, avoiding the danger of overstraining.

The machine will run about 150 miles on one charge of fuel and water.

This machine is designed to run for years with very little attention beyond the occasional adjustment of the different bearings, all of which are readily accessible.

A Limousine top is designed to be adjusted firmly over the regular tonneau body when required, and is particularly desirable for Winter use. This is a matter of consideration to the owner of an automobile, since after using it during the Summer and Fall, it can be made as available as any ordinary Brougham for service in Winter for shopping, calling, or night work. The interior of the limousine thus arranged is completely ventilated from the top and is warmed to any

The Twombly Motor Carriages

degree desirable from the exhaust from the engine, which features, we believe, are novel and such as must attract attention. If one has a reliable chauffeur, instead of dismissing him at the end of the usual season, he can be available during the Winter to greater comfort and ease and much less expense than the cost of keeping a carriage and horses in town or hiring them from time to time, and he will be on hand for another Spring and Summer campaign, thus avoiding the discomforts and uncertainty of securing new, untried, unfamiliar men. The limousine top also protects chauffeur from cold and storms, etc., and can be readily removed in a few moments and the usual open tonneau be immediately ready for service.

After the close of this Exhibition, parties wishing to try the Twombly Autos, can do so by making engagements as to day and hour, so that a ma-

The Twombly Motor Carriages

chine can be sent to meet them and any reasonable tests made as to distance, speed, etc.

We invite the closest scrutiny and examination by experts as to all the different features of this Automobile and shall be prepared to take orders for delivery during the coming season from May over according to priority of entries.

The present price for a complete machine is \$2,500; with Limousine top and accessories, \$3,000.

Experienced parties will be on hand at all hours to give full information as to any matters relating to the machine, or inquiries by mail addressed to W. Irving Twombly, Office 918, 52 Broadway, New York City, will receive prompt reply.

Twombly Steam Tonneau

PRICE, \$2,500

| | |
|---|-------------------------------|
| Seating Capacity | Five |
| Rated Horse Power | Twelve |
| Engine | Horizontal Compound |
| Wheel Base | 7 feet, 8 inches |
| Tread | 4 feet, 8 inches |
| Wheels, Imperial Wood (Artillery type), | 32 inches |
| Tires, G. & J. Extra Heavy Clincher, | 3½ inches |
| Weight | 1,800 pounds |
| Body | All Aluminum, double K. of B. |
| Capacity of Fuel Tank | 12 gallons |
| Capacity of Water Tank | 18 gallons |

Powerful steam or lever emergency brake

Foot-lever service brake

Automatic lubrication, all controls on steering wheel

Speed, 1 to 50 miles an hour

EQUIPMENT

Canopy top, side lamps, tools and tool box



Twombly Motor Carriages

H. CUNTZ
1904

MANUFACTURED BY THE
TWOMBLY MOTOR CARRIAGE CO.
NEW YORK, U. S. A.

