

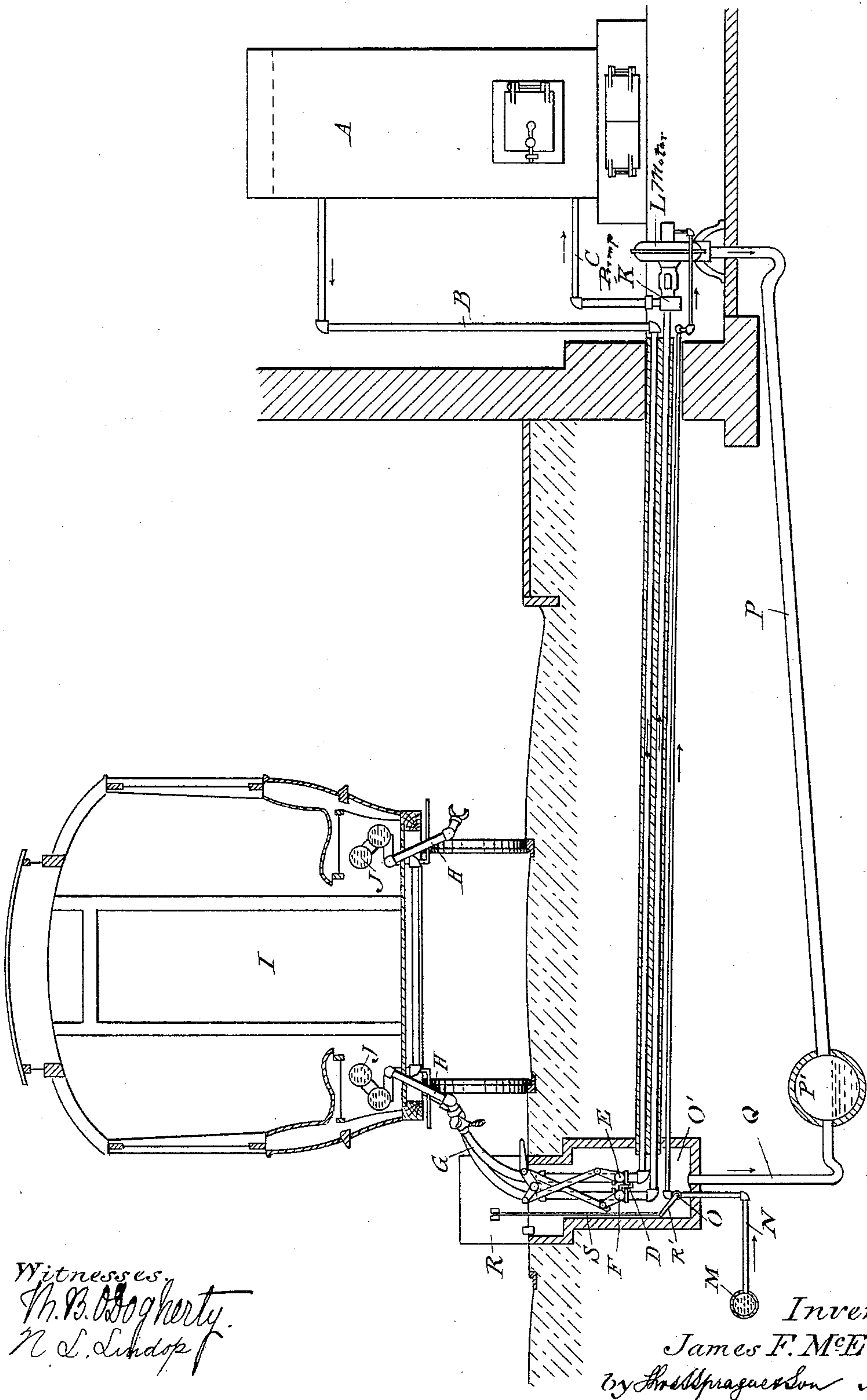
(No Model.)

J. F. McELROY.

SUPPLY STATION FOR CAR HEATING SYSTEMS.

No. 480,777.

Patented Aug. 16, 1892.





# UNITED STATES PATENT OFFICE.

JAMES F. McELROY, OF ALBANY, NEW YORK, ASSIGNOR TO THE CONSOLIDATED CAR-HEATING COMPANY, OF WHEELING, WEST VIRGINIA.

## SUPPLY-STATION FOR CAR-HEATING SYSTEMS.

SPECIFICATION forming part of Letters Patent No. 480,777, dated August 16, 1892.

Application filed June 18, 1891. Serial No. 396,778. (No model.)

*To all whom it may concern:*

Be it known that I, JAMES F. McELROY, a citizen of the United States, residing at Albany, in the county of Albany and State of New York, have invented certain new and useful Improvements in Supply-Stations for Car-Heating Systems, of which the following is a specification, reference being had therein to the accompanying drawing.

This invention relates to new and useful improvements in a supply-station for a car-heating system, and relates to that class of car-heaters in which the heating fluid is contained in receptacles on the cars and is periodically renewed by withdrawing the fluid which has radiated its heat and supplying in place heating fluid from a heater at the station.

The invention consists in the peculiar construction and arrangement of a heater, a circuit of pipes extending from the heater to within proximity of the railroad-track, and means for connecting the outgoing and return pipes of said circulating system with a receptacle on the car, and, further, in the peculiar construction, arrangement, and combination of the various parts, all as more fully hereinafter shown.

In the drawing I show my invention in elevation as applied to an ordinary street-railway, a section being made through the street and station.

A is the water-heater, of any desired construction, which is located in a building beside the railway, and from the top of which an outgoing pipe B extends and into the bottom a return-pipe C connects. These pipes extend beneath the roadway to a point adjacent to the railway-track and are connected at their outer ends by a connecting-pipe D. The outgoing pipe is controlled by a valve E and the return-pipe by a valve F. To each of these pipes is secured a coupling-section G, adapted to couple with the outgoing and return pipes H upon the car I, which connect into the receptacles or radiators J thereon.

K is a pump placed near the heater A in the return-pipe C and operated by a water-motor L, or by any other suitable motor. This motor is connected with the street-main M by a pipe N, which is controlled by a valve O, arranged in the well O', in which are located,

also, the valves E and F. The exit-pipe P from the motor L discharges into any suitable place, such as the sewer P', to which also the well O' is drained by means of the pipe Q. 55

R is the cover for the well, hinged to one side thereof and connected to the lever R' of the valve O by means of the connecting-rod S.

The parts being thus constructed, they are intended to operate as follows: When the car comes on the track beside the well, the cover R is lifted, allowing the water to pass from the main M to the pipe N, to the water-motor, to operate the pump K, starting the water rapidly to circulating through the circuit of pipes up to the well and back. The operator then couples the sections G and H together and opens the valves E and F, when the circulation will be established through the receptacle in the car, drawing out the cold water and replacing it with hot. As soon as the return-pipe is heated, showing that the tank is full, the valves E and F are closed, the coupler-sections G and H are disconnected, the cover R of the well lowered, and the pump stopped by closing off the water-supply to the water-motor. The circulation of water now continues through the pipes B and C and the connecting-pipe D, preventing the freezing up of this system and keeping a supply of hot water near the connection with the coupler-section at all times, so that no time will be lost in waiting for the displacement of cold water before connecting up with the receptacle on the car. The opening and closing of the valve O by means of the cover insures the operation of the motor only during the time it is desired to be used and starts the circulation rapidly in the right direction, so that when the receptacle J is brought into the circuit the cold water therein is quickly replaced by the hot water in the heater. 85

What I claim as my invention is—

1. A supply-station for a car-heating system, in which a receptacle on the car is periodically supplied with a heating medium, said station comprising a fluid heater, a circulating system of piping extending to within proximity of the track, a pump in said circulating system, valves for connecting the outgoing and return pipe of said system with the car, 95 100

a well in which said valves are located, and a cover for said well controlling the action of the pump, substantially as described.

2. In a supply-station for car-heating systems, the combination, with a heater, of outgoing and return pipes communicating therewith, means for connecting said pipes to tanks on a car, a pump in the return-pipe, a pipe leading from a water-supply to the pump, a valve located in said pipe, an arm on the valve, a casing for the outer ends of the out-

going and return pipes, means for gaining access to said casing, and a connection between said means and arm on the valve in the water-supply pipe, substantially as described. 15

In testimony whereof I affix my signature in presence of two witnesses.

JAMES F. McELROY.

Witnesses:

EDWIN A. SMITH,

JOHN B. BRAIDWOOD.