

(No Model.)

T. SAUNDERS & W. H. PATTON.

HEATING AND LIGHTING CARS.

No. 394,018.

Patented Dec. 4, 1888.

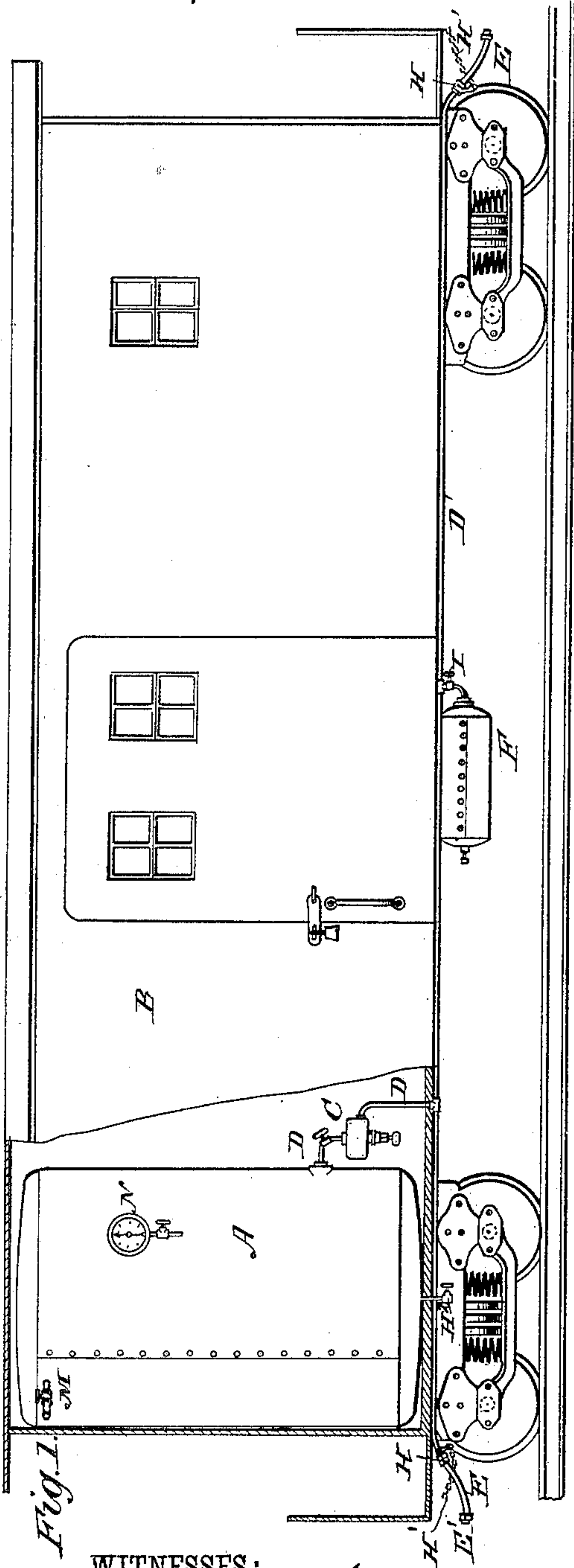


Fig. 1.

WITNESSES:

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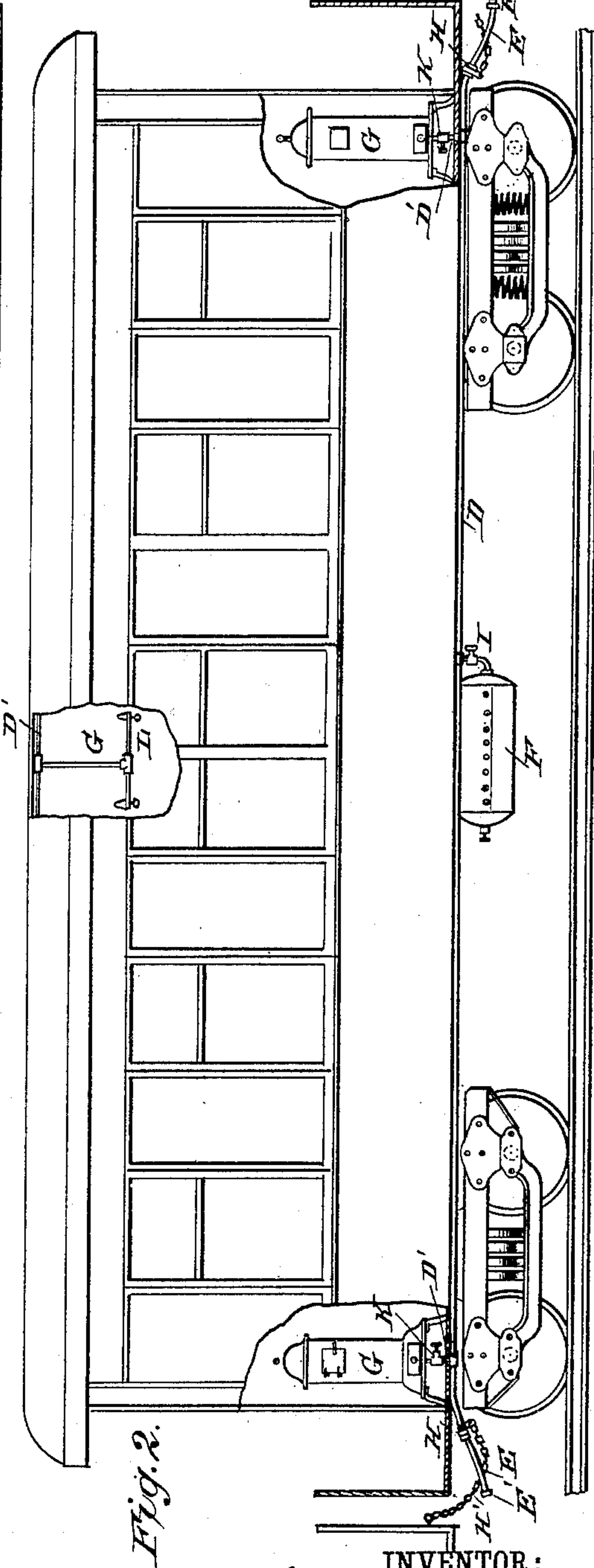


Fig. 2.

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THOMAS SAUNDERS AND WILLIAM HENRY PATTON, OF PUEBLO, COLORADO.

HEATING AND LIGHTING CARS.

SPECIFICATION forming part of Letters Patent No. 394,018, dated December 4, 1888.

Application filed May 26, 1887. Serial No. 239,487. (No model.)

To all whom it may concern:

Be it known that we, THOMAS SAUNDERS and WILLIAM HENRY PATTON, of Pueblo, in the county of Pueblo and State of Colorado, have invented a new and useful Improvement in Heating and Lighting Cars, of which the following is a specification.

Our invention relates to novel means for lighting and heating railroad-cars with gas; and the improvement consists, in general terms, in the combination, with a main storage-reservoir provided with a pressure-regulating valve located upon one of the cars to supply gas for lighting and heating the other cars of the train, of a smaller or auxiliary reservoir located upon each of the cars to be lighted charged with gas from the main or storage reservoir, and flexible pipe-connections, automatic valves and couplings for connecting the reservoir-pipes of one car with those of another car, as will hereinafter appear, and in certain other details of construction hereinafter particularly described, and set forth in the claims.

In the accompanying drawings, Figure 1 is a side elevation of the car carrying the main storage-reservoir, with a portion of the car broken away; and Fig. 2, a similar view of one of the passenger-cars provided with our improved apparatus, as will hereinafter appear.

The main storage-reservoir A is located upon one of the forward cars, B, of the train, preferably the baggage or mail car, and is connected with an automatic pressure-regulator valve, C, through pipes D, which extend from said regulator-valve and run under each car from end to end thereof.

The ends of the pipes D are connected between the cars by flexible pipes E and couplings E', similar to those used in connecting the pipes of air-brakes. The pipes D are connected by branch pipes D' with the gas fixtures and burners G, controlled, respectively, by valves K and L. Stop-valves H, at the ends of the pipes D, serve to open and close communication with each car. A stop-valve, I, between the reservoir F and pipes D, permits the said reservoir to be cut off from the gas-supply pipes D D', when desired. The main storage-reservoir has valves H² for the escape of accumulations in said reservoir, a valve, M,

through which the reservoir may be charged with gas, and a gage, N, to indicate the pressure therein. The valves H are connected by chains H' with the adjoining car of a train to close the said valves automatically when the couplings and connections are broken by the separation of the cars at the time of an accident.

The main storage-reservoir A is capable of carrying a sufficient quantity of gas under high pressure to heat and light an ordinary train of cars while in transit between the supply-stations, where gas can be conveniently procured, and is charged by the use of an ordinary compression-pump attached to any gas supply or main. The pressure-gage upon the reservoir will indicate when the required pressure therein is attained, and when the cars are coupled together and the gas is being consumed the pressure-regulator valve secured to the storage-reservoir will open by the reduction of pressure in the delivery-pipes below a determined minimum, and may be of any well-known or preferred construction.

The delivery-pipes supply the burners from the main storage-reservoir when the train is made up, and gas is supplied to said burners from the auxiliary reservoirs when the cars are side-tracked or disconnected from the rest of the train.

In case of a wreck or accident to the train the cars will become uncoupled or telescoped in such manner as to break the connections between the pipe-couplings and instantly extinguish the lights and fires. When the cars separate, the chain from the platform to the valve upon the adjoining car will close said valve and will extinguish the lights, after which they may be relighted by opening communication with the auxiliary reservoir beneath the car.

It will be understood from the foregoing that the auxiliary reservoir F, charged at the supply-points in like manner to the main reservoir, is shut off by valve I, which latter is similar to the pressure-regulator valve employed on the main storage-tank from communication with the service-pipe D, except when the car carrying the same is side-tracked or is otherwise broken out of a train except in case of accident. In running the trains

the valves I of the auxiliary reservoirs are closed, so that in case of accident and closure of the valves H, in the manner before described, the lights and fires will be instantly
5 extinguished, thus avoiding the danger of setting fire to the car or cars.

We claim as our invention and desire to secure by Letters Patent—

1. In a system of lighting and heating cars,
10 the combination of a storage-reservoir located upon a car at one end of the train provided with a pressure-regulating valve, with the distributing and gas-supply pipes, the burners, and auxiliary reservoirs beneath said cars,
15 and the valves H, having a connection with the contiguous cars, whereby the ends of the supply-pipes are automatically closed when the connections between the cars are broken, substantially as herein described.

20 2. In a system of lighting and heating cars,

the combination of a storage-reservoir located upon a car at one end of the train and provided with a pressure-regulating valve, the gas-supply pipe and the pipes connected with
25 said reservoir and regulator-valve and extending under each car, branch pipes connecting the supply-pipes with the burners, an auxiliary reservoir connected with said service-pipe, a valve between said pipe and auxiliary reservoir, and valves at the ends of the cars,
30 said valves being connected with the contiguous cars, whereby they are automatically closed upon the parting of the cars, substantially as herein described.

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Witnesses:

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