I. F. RANDOLPH.

APPARATUS FOR LIGHTING RAILWAY-CARS.

No. 169,658. Patented Nov. 9, 1875

Fig. 1

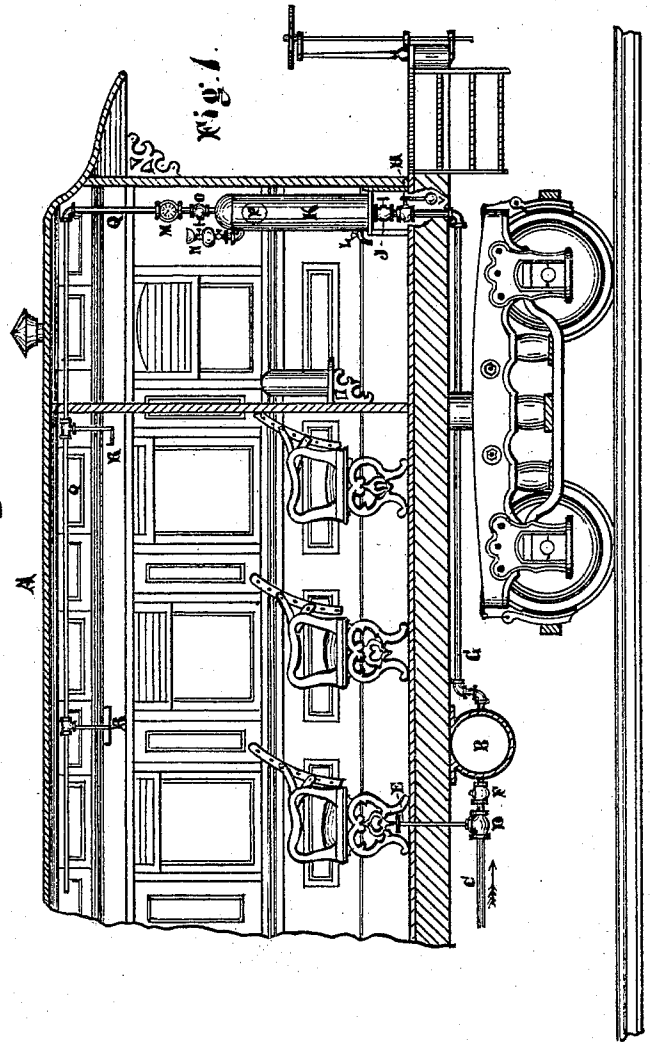
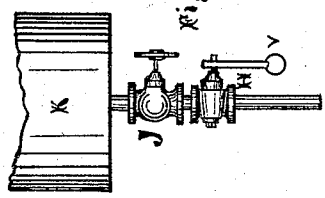


Fig. 2



Witnesses;

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UNITED STATES PATENT OFFICE.

IRA F. RANDOLPH, OF INDIANAPOLIS, INDIANA.

IMPROVEMENT IN APPARATUS FOR LIGHTING RAILWAY-CARS.

Specification forming part of Letters Patent No. **169,658**, dated November 9, 1875; application filed January 20, 1875.

To all whom it may concern:

Be it known that I, IRA F. RANDOLPH, of Indianapolis, county of Marion and State of Indiana, have invented an Improved Apparatus for Furnishing Gas in Railroad-Cars, of which the following is a specification:

The object of my invention is to arrange a gas-generator in the saloon of a car, and connect it with an air-reservoir placed at any convenient place under the car, in such a manner that the pressure of air in the reservoir—which is obtained from any air-brake or air-pumping device—is carried to the gas-generator through suitable pipes, and has to pass a safety-cock before entering the generator. This safety-cock is used to cut off the supply of compressed air to the generator in case the car should become upset, as in an accident, and extinguish the lights, thus preventing gas from setting the car on fire.

Figure 1 represents a sectional view of part of a car embodying my improvement. Fig. 2 represents the arrangement of the pressure-valve and safety cut-off cock below the gas-generator.

A represents the car. B is a reservoir, placed at any convenient place on or under the car, and into this reservoir the pipe C, with the valve D and check-valve F, enters. This pipe C conveys the air from any air-brake or air-pumping device into the reservoir, and the check-valve F holds it from leaking back. The air is conducted from the reservoir B to the gas-generator K by means of the pipe G, and has to pass the safety-cock H and regulating-valve J. The safety-cock H is provided with a weighted arm, V, which is always open when it hangs down, and is so arranged that while the car is in an upright position the ports are open and the air flows freely through into the generator; but should the car turn over, as will sometimes happen in an accident, then the weighted arm will be carried to one side or the other, and held there by a spring-catch, and shut the supply of air off from the generator K, and the lights will be extinguished. This safety-cock can be placed above the generator, if necessary. P represents a hand-hole in the generator K, and is used to convey the materials that form the gas into the generator. N represents an oil-valve to supply oil to the generator. L is a waste-cock used to draw off any surplus oil that may accumulate in the bottom of the generator. O is a valve in the pipe Q, and is used to regulate the flow of gas from the generator to the burners R R. M represents a regulating pressure-gage.

The operation of my improved apparatus is as follows: The reservoir B is charged with compressed air from any air-brake or air-pumping device, and if the reservoir is large enough to hold a supply sufficient to run all night, then the valve D can be closed by means of the extended stem E in the car, and this valve, in connection with the check-valve F, holds the air from leaking back. The air then passes through the pipe G into the generator K, and in its passage thereto it has to pass the safety-cock H and valve J. The gas that is generated in the generator mixes with the air from the reservoir, and flows out of the generator, under pressure, through the valve O, gas-regulator M, and pipe Q to the burners. In case the cars should be turned over the weighted arm V on the safety-cock H turns to one side or the other, and the supply of air is cut off and the lights extinguished.

I do not broadly claim the air-reservoir or the gas-generator, as they are old.

What I claim as new, and wish to secure by Letters Patent, is—

The combination, with an oil-gas generator for a railway-car, of the safety-cock H and reservoir B, for compressed air, substantially as and for the purpose set forth.

In testimony whereof I have signed my name to this specification in the presence of two subscribing witnesses.

IRA F. RANDOLPH.

Witnesses:

S. C. FRINK,

E. O. FRINK.