J. O. OSBORNE.

RAILWAY CAR-HEATER.

No. 186,495. Patented Jan. 23, 1877.

Fig. 1

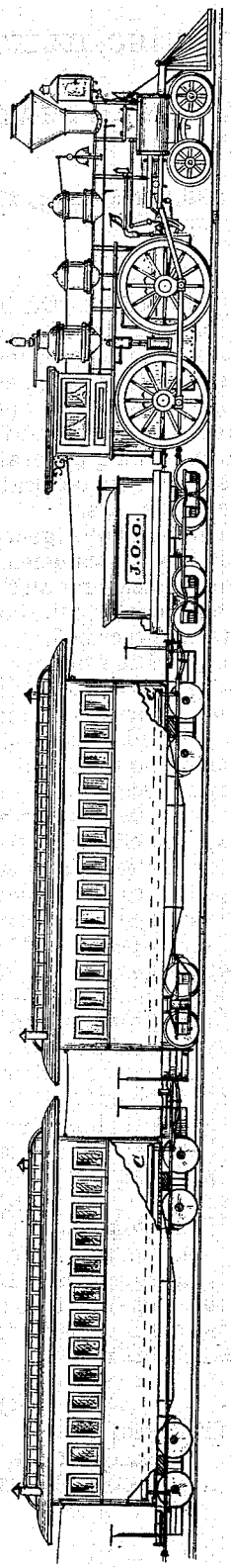


Fig. 2

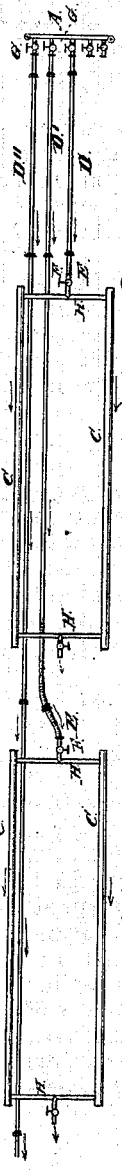
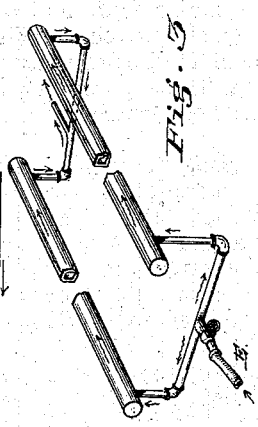


Fig. 3



Attest
L. M. Harris.
E. Lloyd.

Inventor
John O Osborne

UNITED STATES PATENT OFFICE

JOHN O. OSBORNE, OF CHICAGO, ILLINOIS.

IMPROVEMENT IN RAILWAY-CAR HEATERS.

Specification forming part of Letters Patent No. **186,495**, dated January 23, 1877; application filed March 15, 1876.

To all whom it may concern:

Be it known that I, JOHN O. OSBORNE, of the city of Chicago, in the county of Cook and State of Illinois, have invented a new and useful Improvement in Steam-Heat Apparatus for Railway-Cars, which is fully described in the following specification, reference being had to the accompanying drawings, in which—

Figure 1 is the side elevation of a railway-train with my heater attached. Fig. 2 is a top or plan view of my heater detached from the cars, and Fig. 3 is a perspective view of the portion of the heater which is attached to one car.

My invention consists in the peculiar arrangement and combination of steam-pipes and couplings in connection with railway-cars, and a steam-generator, as will be hereinafter fully described, whereby the cars are heated by steam generated at a distance from them, each car being warmed independently of the others.

In the accompanying drawings, A represents a pipe, which is connected with the steam-generator. I have shown it connected with the locomotive-boiler B. There are steam-pipes C arranged in each car suitable for heating it. These pipes are connected to separate pipes D D′ D″, one for each car, which extend to the steam-generator. The pipe D″, that conducts steam to the rear car, extends beneath all the other cars, being coupled between the cars by couplers E. Each car has a pipe, D D′ D″, &c., connected to its heating-pipes at its forward end, and extending to the steam-generator, and these pipes are coupled together by an ordinary coupling, E, placed in a flexible tube that can be readily coupled and uncoupled as the cars are attached to or detached from the train. F are steam-cocks for controlling the admission of steam to the heating-pipes, and G are similar cocks for shutting the steam off from any of the pipes leading to the cars at the generator. H is a cross-pipe at either end of the car, for connecting the pipe D D′ D″, &c., to the heating-pipe, so that the heater may be connected to pipes D D′ D″, &c., at either end of the car, and thus accommodate the turning of the car to run the other end foremost.

By coupling the pipes D D′ D″, &c., between the cars when the train is made up, the steam-heating apparatus is ready for use, and the cars can be heated without having any fire in the cars.

The steam is generated in a locomotive-boiler, or a steam-generator suitable for generating steam for all the cars, and is conveyed to each car in suitable quantities to heat the cars, as described.

I avoid the danger arising from the fire in the cars in cases of accident. This I deem of great importance, and I accomplish it by a simple and inexpensive device, that can be readily handled and controlled by any ordinary railway employés.

Having fully described the construction and operation of my invention, what I claim, and desire to secure by Letters Patent, is—

1. The combination, with railway-cars, of the steam-pipes C, arranged to heat the cars, and the pipes D D′ D″, &c., one for each car, to convey steam from the pipe A to the pipes C, and constructed as described, so as to be coupled between the cars, substantially as specified and shown.

2. The combination of pipes C and independent pipes D D′ D″ with the pipes H and suitable coupling devices, whereby the cars are adapted to be attached to the steam-supply pipes at either end, substantially as set forth.

3. The combination of the receiving and distributing pipe A, the steam-generator, the independent pipes D D′, &c., attached thereto, the stop-cocks G, and the pipes E, with stop-cocks F, substantially as and for the purpose set forth.

JOHN O. OSBORNE.

Witnesses:
L. A. BUNTING,
HEINRICH F. BRUNS.