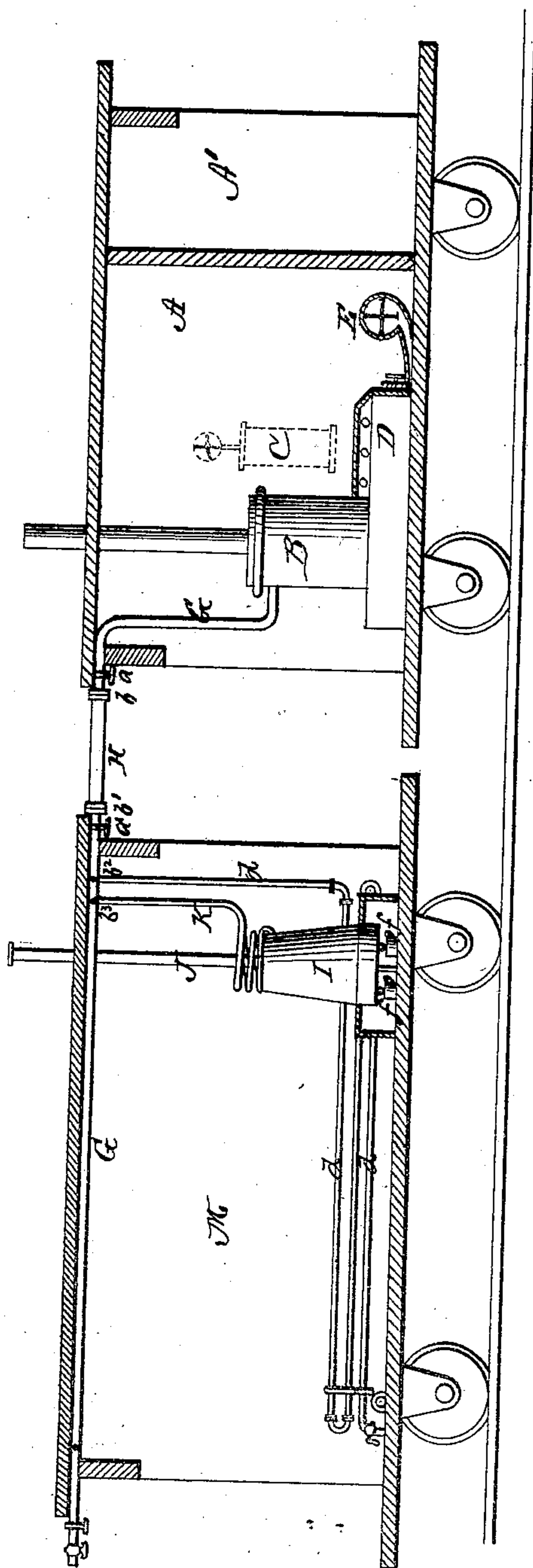


E. S. SCRIPTURE & W. STACKMAN.

Railroad Car Heaters.

No. 142,737.

Patented September 9, 1873.



Witnesses

John A. Ellis

C. Alexander

Inventors  
Elihu S. Scripture and  
William Stackman

Per

C. H. Watson & Co.  
attys.



# UNITED STATES PATENT OFFICE.

ELIPHALET S. SCRIPTURE AND WILLIAM STACKMAN, OF BROOKLYN, N. Y.

## IMPROVEMENT IN RAILROAD-CAR HEATERS.

Specification forming part of Letters Patent No. 142,737, dated September 9, 1873; application filed May 29, 1873.

*To all whom it may concern:*

Be it known that we, ELIPHALET S. SCRIPTURE and WILLIAM STACKMAN, of Brooklyn, in the county of Kings and State of New York, have invented certain new and useful Improvements in System of Warming Railroad-Cars, and for cooking purposes; and we do hereby declare that the following is a full, clear, and exact description thereof, reference being had to the accompanying drawings and to the letters of reference marked thereon, which form a part of this specification.

The nature of our invention consists in the construction and arrangement of devices for heating a train of railroad-cars for cooking and for other purposes, as will be hereinafter more fully set forth.

In order to enable others skilled in the art to which our invention appertains to make and use the same, we will now proceed to describe its construction and operation, referring to the annexed drawing, which represents a longitudinal vertical section of a kitchen-car and one car of the train.

A represents a kitchen-car for heating and cooking purposes, which car may be divided by a transverse partition, so as to form a store-room, A', at one end. In the car A is a small upright tubular boiler, B, by which to generate steam for warming a whole train of cars, which may follow the same. C represents a small engine to drive a blower, E, and a force-pump, &c. D represents a continuation of the boiler-furnace, to be arranged for cooking purposes, that may be capable of preparing refreshments in a proper manner for all passengers occupying a long train of cars on long voyages. G represents the commencement of what we term the main trunk-pipe, which takes the steam from the boiler B, to be conveyed back and distributed throughout all the cars in a train. *a* is the first gate near the first coupling, *b*, which is attached to a flexible pipe, H, that shows, at its other end, a similar gate, *a'*, and coupling, *b*<sup>1</sup>, to connect with the continuation of the main trunk-pipe G. M represents the first passenger-car after the kitchen or heating car A, and through which the main pipe G passes. *d d* are distributing-pipes in this car, connected with the pipe G, and provided with a gate or stop-cock, *b*<sup>2</sup>, to let on or

shut off the steam when desired. I represents a small auxiliary trap-heater, which may be situated in a sink beneath the car, or upon the floor at the center of the car, or at any other location desired. The blaze from this heater passes upward through a pipe or flue, J, as shown. One or more of such flues may pass through the boiler and water in this heater, as may be deemed needful, the same being served with one or more lamps, *f*, as may be desired, in order to get up steam in such order of time as the emergency may call for. These lamps are to be supplied with such oil or fluid as shall be non-explosive, and with a wick as nearly indestructible as possible. The blaze from these is to be instantly put out, when desired, by a trap-extinguisher arranged for the purpose, therefore leaving no fire to be scattered about, nor any further consumption of fuel beyond the moment it can be dispensed with, which fire may be instantly rekindled, by the touch of a match, in its full force, when it may be required on special occasions, such as when a car has no connection with the heater B and pipe G, in cases like warming a car before making up a train, or when disconnected by accident or otherwise. The steam from the boiler of the heater I passes through a coil-pipe, K, which connects with the main pipe G, and has, at or near said connection, a gate or stop-cock, *b*<sup>3</sup>.

When a car is in connection with the main heater B the gate *b*<sup>3</sup> may be closed and the gate *b*<sup>2</sup> opened; or the gate *b*<sup>3</sup> may be left open, when the steam from the heater B may unite with that in the pipe K, when the same, with the heater I, may serve as a radiator, and the boiler as a receptacle of water from condensed steam descending from above. Small distributing-pipes may be arranged to suit.

The heater I is to be arranged with a float to trap off the surplus water from condensation, which will keep the auxiliary boiler always supplied with a proper head, ready to fire up, as occasion may require, to make up any deficiency of heat in the rear cars by means of the long distance from the main heater in the kitchen-car, or when the steam is cut off from the heater B and the pipes are to be supplied from the heater I. The main trunk-pipes are to be closed at each end of the car.



The peculiar features of this invention and system are the various important results attained by the use and management of the combination above set forth, and for cooking purposes on a large scale with the same fire that makes the steam to be passed through all the cars in a train, which steam may be used singly or in combination with the auxiliary heater I. This may also be made to warm a single car by itself when detached from a train and having no connection with the car A and heater B; or, when connected, the two heaters may act in perfect harmony in regulating and maintaining the desired warmth in one or a whole train of cars.

The heater I, with its pipe and boiler, serves three important purposes—viz., a generator of steam, a receiver of water from condensation, and a radiator of heat, as well as a water-trap.

A branch pipe may be arranged, connecting the pipes K and *d*, so that by closing the gates

*b*<sup>2</sup> *b*<sup>3</sup> the steam from the heater I may pass through the pipes *d d* while the steam from the main heater B is carried through the main pipe G to the cars in rear.

Having thus fully described our invention, what we claim as new, and desire to secure by Letters Patent, is—

In combination with the heater B and main trunk-pipe G with its gates and couplings, the pipes *d d* and auxiliary heater I with pipe K and lamps *ff*, all constructed and arranged and used substantially in the manner and for the purposes herein set forth.

In testimony that we claim the foregoing as our own we affix our signatures in presence of two witnesses.

ELIPHALET S. SCRIPTURE. [L. S.]  
WILLIAM STACKMAN. [L. S.]

Witnesses:

ALBERT FRIES, Jr.,  
GEORGE MILLWATER.