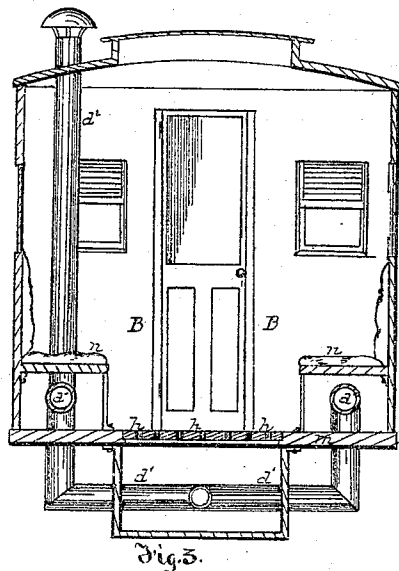
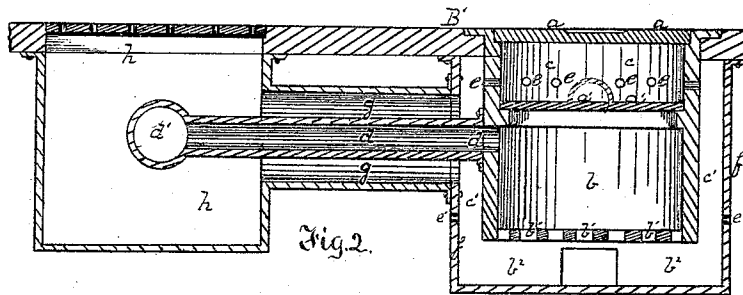
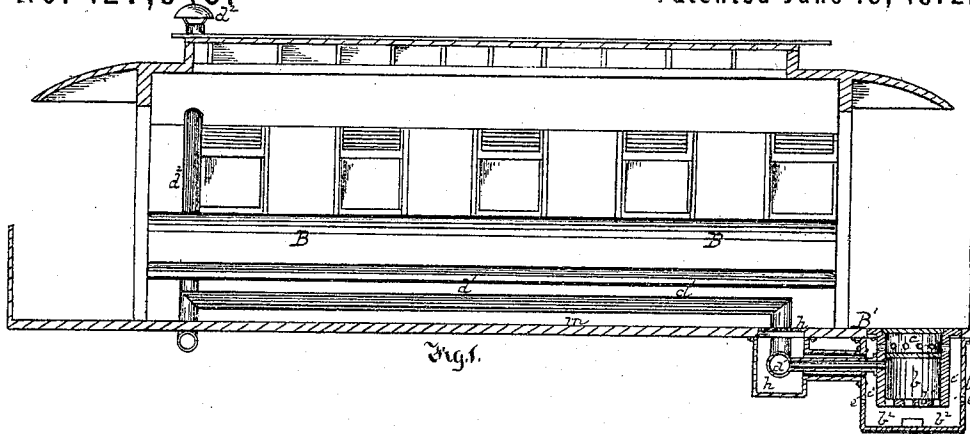


THOMAS B. ATTERBURY.
Railroad-Car Heater.

No. 127,945,

Patented June 18, 1872.



WITNESSES.

Albion Bakewell
Jno. P. Matthews.

INVENTOR.

Thomas B. Atterbury,
by Bakewell, Christy & Kerr,
his Attys.

UNITED STATES PATENT OFFICE.

THOMAS B. ATTERBURY, OF PITTSBURG, PENNSYLVANIA.

IMPROVEMENT IN RAILROAD CAR-HEATERS.

Specification forming part of Letters Patent No. 127,945, dated June 18, 1872.

SPECIFICATION.

To all whom it may concern:

Be it known that I, THOMAS B. ATTERBURY, of Pittsburg, in the county of Allegheny and State of Pennsylvania, have invented a new and useful Improvement in Car-Heaters; and I do hereby declare the following to be a full, clear, and exact description thereof, reference being had to the accompanying drawing making a part of this specification, in which—

Figure 1 is a longitudinal vertical section of a street passenger-car furnished with my improvement. Fig. 2 is an enlarged sectional view of the car-platform and of the heating apparatus; and Fig. 3 is a transverse sectional view through the register and car.

Like letters of reference indicate like parts in each.

One great objection to the common street passenger-car is the difficulty of warming it in cold weather. Various forms of heating apparatus have been devised for this purpose; but none of them, so far as I am aware, has proved so far practicable as to come into general use. That hereinafter described I have had in practical every-day use for some months with most satisfactory results.

To enable others skilled in the art to make and use my invention, I will proceed to describe its construction and mode of operation.

The car B is of any of the known forms of construction, with at least one platform, B'. Under this platform, and attached thereto, I arrange a fire-pot, *b*, with grate-bars *b*¹ at or near the lower end; and from a point a little below its upper end a smoke-pipe, *d*, leads, by pipes *d*¹, to an escape-pipe, *d*². The top of the fire-pot *b* is closed by a removable lid, *a*¹, so that a chamber, *c*, shall be left above it, and below the removable lid *a*¹, which covers the whole at or about the level of the platform. Below the fire-pot *b* is an ash-pit, *b*², which has suitable openings for the admission of air to the fire on the bars *b*¹. The fire-pot *b* is surrounded by a jacket, *f*, so as to leave an air-chamber, *c*¹, between the two. External air is admitted to this chamber *c*¹ through suitable apertures *e*¹, and like apertures *e* lead from the upper part of the chamber to the chamber *c*, so as to allow a free circulation or flow of air

through it and over the lid *a*¹. The air is thus caused to pass up along the heated sides of the fire-pot and a portion of it over the top, so as to become heated. A hot-air pipe, *g*, surrounding the smoke-pipe *d* (so that the air will become still further heated,) conducts the heated air from the chamber *c*¹ to the register or registers *h*, which are arranged in any desired number in the floor of the car, in the usual way. If but one register is used, (and this in most cases will be found sufficient,) it is preferably arranged at or near one end of the car. The smoke-pipe *d* passes into the register, and there is preferably divided into two branches, *d*¹, which pass outside the register to opposite sides of the car, up through the floor *m* of the car; thence along back under the seats *n* on either side, and off by one or more pipes, *d*². The pipes *d* under the seats give off a considerable portion of the heat, which they take up from the smoke, hot gases, &c., passing through them, so as still further to heat the car.

Fuel is applied to the fire by lifting off the lids *a* *a*¹ and turning it in at the top. If hard coal or coke be used, the supply of fuel need not ordinarily be replenished more than once or twice each day. The heat given off through the upper lid *a* will keep the driver comfortable at all times.

Any suitable arrangement of dampers or sliding registers may be employed to regulate the fire or supply of air; and in long cars, with a platform at each end, the like devices may be combined with each platform and car-end, and the smoke be carried off by a pipe at the middle of the car.

What I claim as my invention, and desire to secure by Letters Patent, is—

A car-heater arranged under the platform, with a chamber, *c*, between the level of the platform and the top of the fire-box, such chamber having air-openings *e*, so that the entire top area of the fire-box may be utilized in heating the air, substantially as set forth.

In testimony whereof I, the said THOMAS B. ATTERBURY, have hereunto set my hand.

THOMAS B. ATTERBURY.

Witnesses:

A. S. NICHOLSON,
G. H. CHRISTY.