G. C. BESTOR.

Fire Proof Railroad Car.

No. 106,771. Patented Aug. 30, 1870.

Fig. 1.

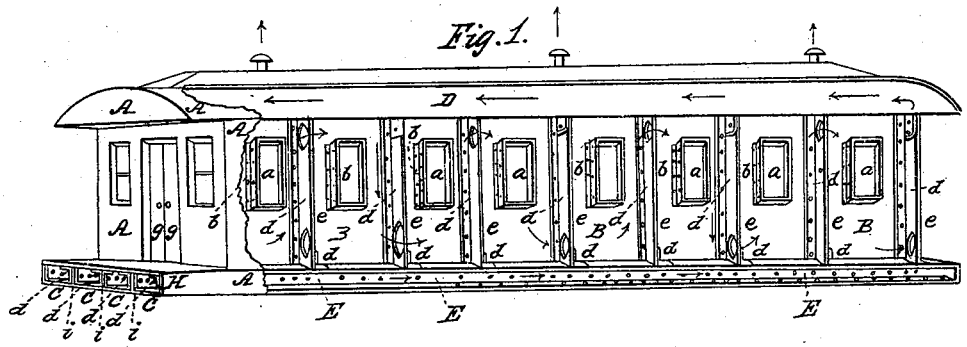


Fig. 2.

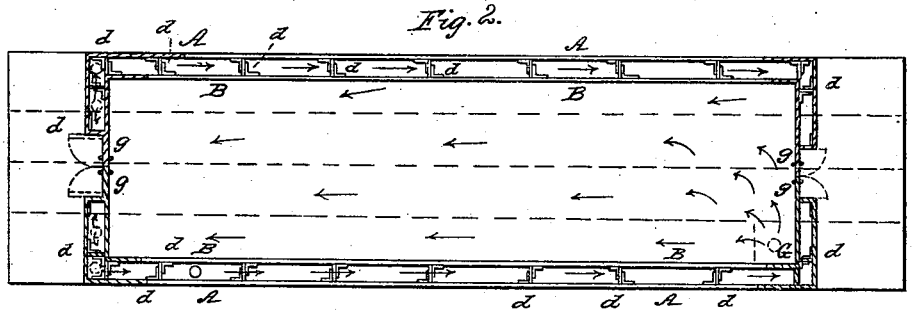


Fig. 3.

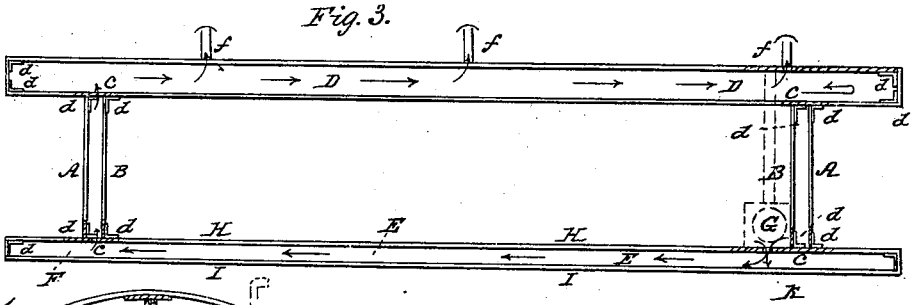


Fig. 4.

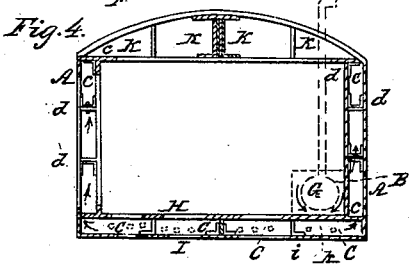
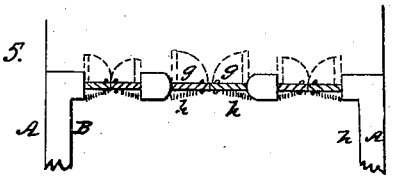


Fig. 5.



106,771.

Witnesses:

Edward Thurlow

Aaron Lovett

Inventor:

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United States Patent Office.

GEORGE C. BESTOR, OF PEORIA, ILLINOIS.

Letters Patent No. 106,771, *dated August* 30, 1870.

IMPROVEMENT IN FIRE-PROOF RAILWAY-CARS.

The Schedule referred to in these Letters Patent and making part of the same

To all whom it may concern:

Be it known that I, GEORGE C. BESTOR, of the city of Peoria, in the county of Peoria and in the State of Illinois, have invented a new and improved Fire-proof Railroad-Car; and do hereby declare that the following is a full, clear, and exact description thereof, reference being had to the annexed drawing making a part of this specification, in which like letters of reference refer to like parts, and in which—

Figure 1 represents a perspective view;

Figure 2, a plan view;

Figure 3, a longitudinal section;

Figure 4, a transverse section; and

Figure 5, a horizontal section of the end of the car.

This invention relates to the construction of a passenger or other railroad-car of iron or other incombustible material, with double walls in every direction around the interior space of the car, and through which the heat, either warm air or steam, may circulate freely.

If of metal, the sheets are corrugated or made sufficiently thick for requisite strength, the braces and partitions being strengthened with angle-iron.

The sheets of iron used are one-eighth and upward in thickness.

The bottom of car I is separated from the flooring H of same by a space of several inches, entirely tight at the ends and sides, excepting certain passages upward immediately into the wall-spaces of the car, through which the heat or steam circulates.

This space between the bottom and the floor is partitioned with metal strips, *i i i i*, longitudinally into two or three more parallel passages, C C C, to convey heat more equally under the floor, and to form a good support for the floor H, over which metallic mats may be laid, or wood flooring, insulated from the floor, if necessary, with some tolerable non-conductor of heat.

The furnace G, if fire is used, may stand in the usual place, or on the platform of car, whence the heat passes, by proper ducts, into the wall-spaces.

The walls A B, forming the body of car, are, also, as before said, double, the door and window-openings *a* being properly lined, to include all heat within the wall-spaces.

At intervals, the walls are connected with braces, *e e e*, provided with openings, *c*, and secured with angle-irons, *b b d d*, to give sufficient strength to guard against any breakage or doubling up of car by casual accidents.

The space between the ceiling and roof is, in like manner, divided longitudinally by passages, K K, with openings or vents, *c*, at certain distances, for the proper distribution of heat, the latter entering the roof and ceiling-spaces through the apertures over the wall-spaces, through the extension of the ceiling thereover. These openings should be placed only at the opposite end from that through which the furnace or heat-inducting passage enters the car, to secure a good circulation and distribution of heat.

The doors *g g* and windows are folding, or may be so constructed as to open outward under considerable pressure, to afford means of escape in case of accidents, no locks or catches being used.

For this purpose a spiral or other spring, *h h*, fig. 5, is attached to each of the folds of the door and the jambs, and of the windows and their jambs, so as to keep the respective doors and windows closed until there is need to open them, when some pressure on the folds will do this.

The remainder of car may be constructed in a similar manner to cars now in use.

Having thus fully described my invention,

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

1. A fire-proof railway-car, having spaces in the floor and roof, and hollow walls, all communicating with each other through holes in the longitudinal strengthening-partitions, as shown and set forth.

2. In combination therewith, the vertical bracing on the sides, with its openings and angle-irons *d*, as set forth.

In testimony that I claim the foregoing, I have hereunto set my hand this 10th day of December, 1869.

GEO. C. BESTOR.

Witnesses:

EDMUND THURLOW,

AARON LOVETT.