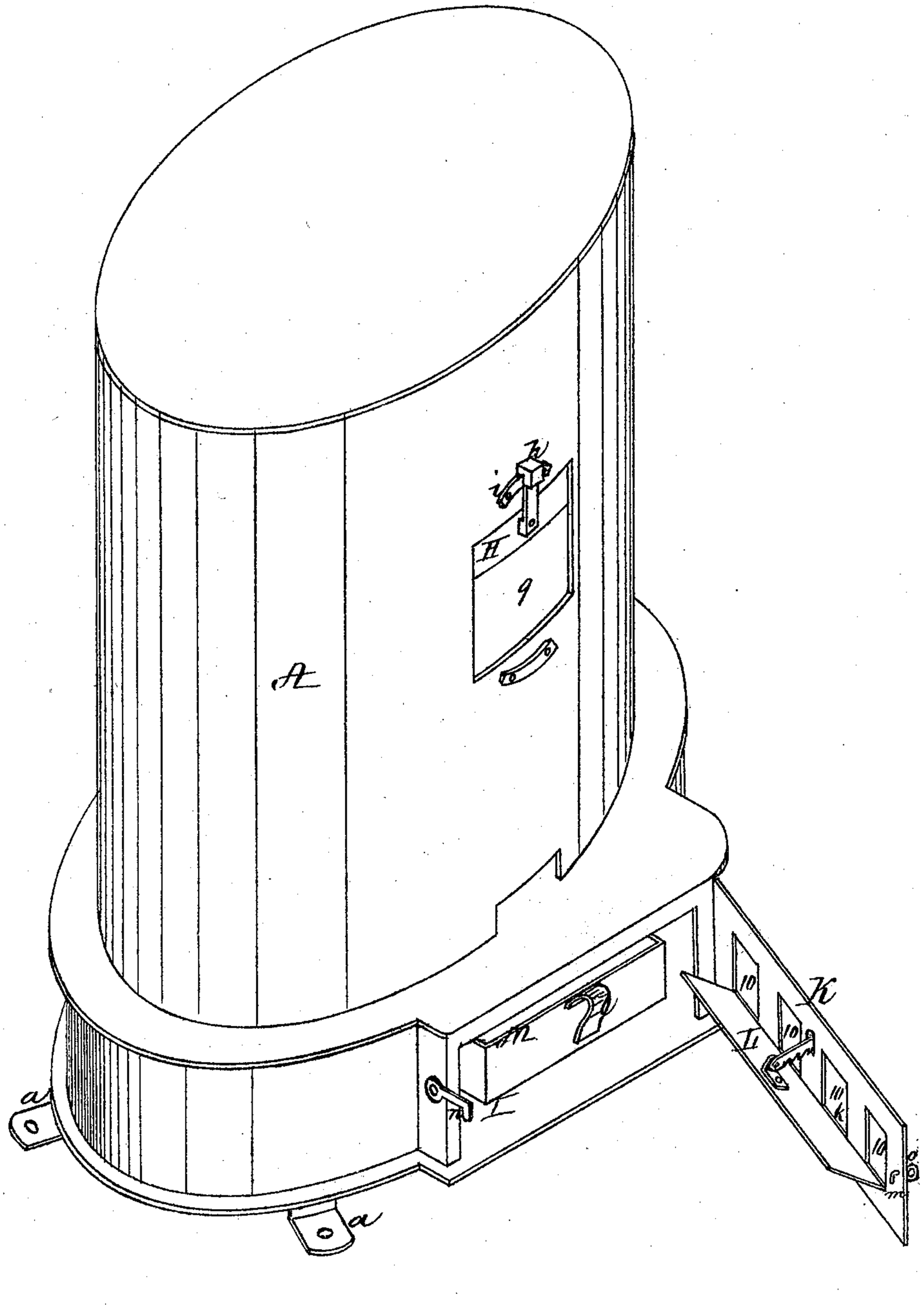
3 Sheets--Sheet 1.

# C. L. HOLBROOK.

## Railroad-Car Stove.

No. 128,624. Fig. 1. Patented July 2, 1872.




Witnesses,
N. W. Stearns
W. J. Cambridge

Inventor,
Chas L Holbrook

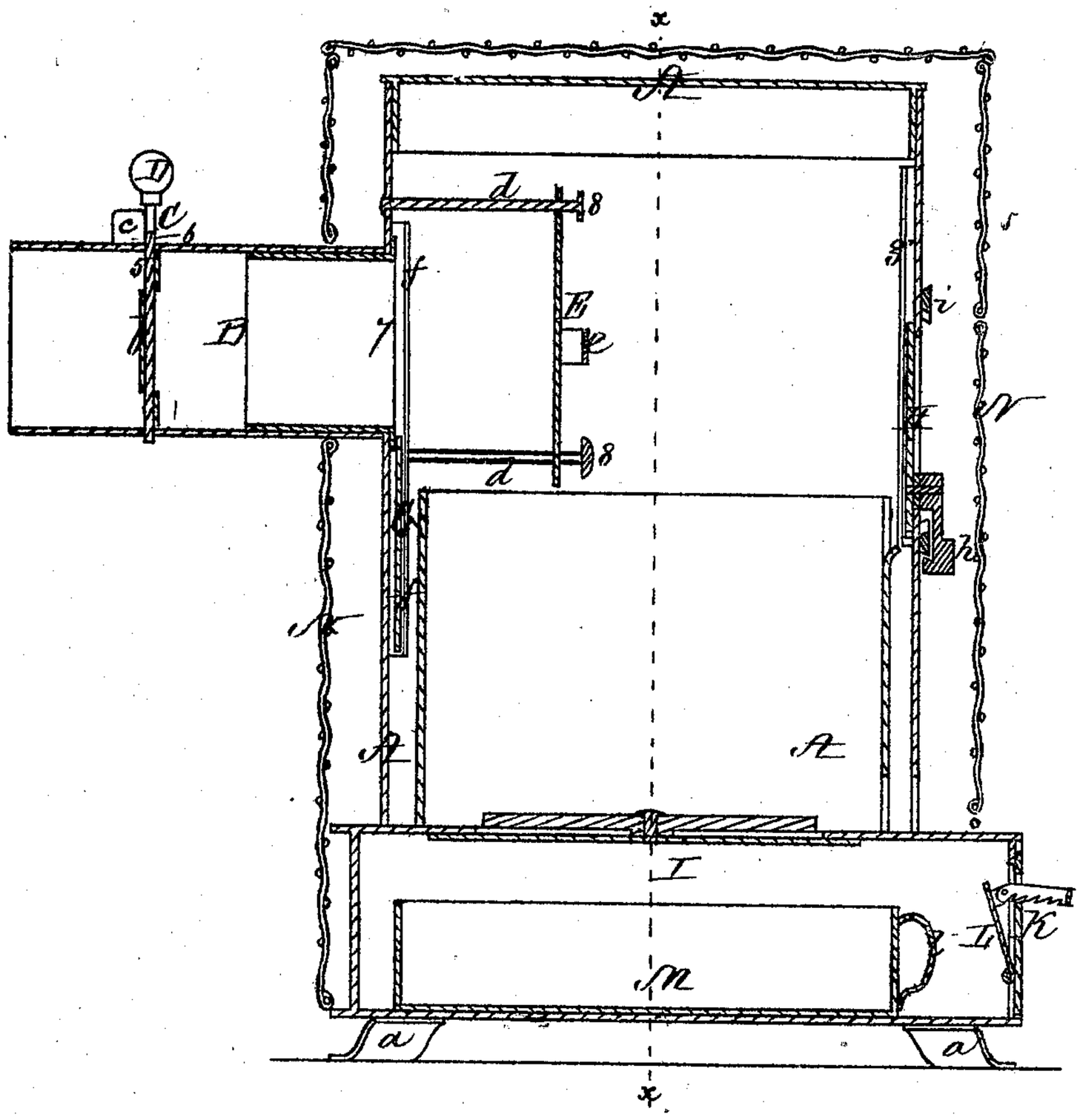
3 Sheets--Sheet 2.

# C. L. HOLBROOK.

## Railroad-Car Stove.

No. 128,624. Patented July 2, 1872.

*Fig. 2.*




Witnesses,
N. W. Stearns
W. J. Cambridge

Inventor,
Chas L Holbrook

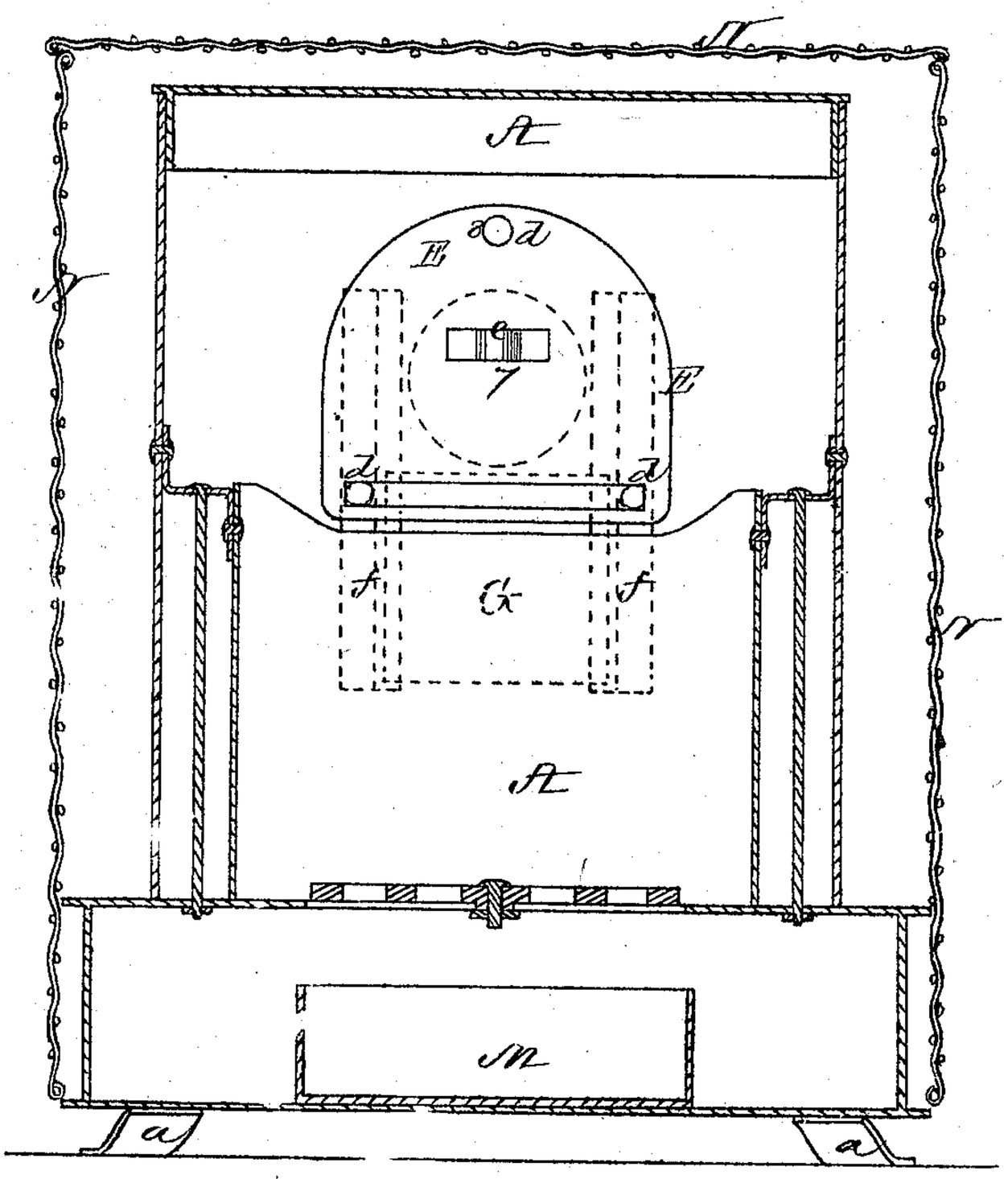
3 Sheets--Sheet 3.

# C. L. HOLBROOK.

## Railroad-Car Stove.

No. 128,624. Patented July 2, 1872.

Fig. 3.




Witnesses,
N. W. Stearns
W. J. Cambridge

Inventor,
Chas L Holbrook

# UNITED STATES PATENT OFFICE.

CHARLES L. HOLBROOK, OF BOSTON, MASSACHUSETTS.

## IMPROVEMENT IN RAILROAD-CAR STOVES.

Specification forming part of Letters Patent No. 128,624, dated July 2, 1872.

*To all whom it may concern:*

Be it known that I, CHARLES L. HOLBROOK, of Boston, in the county of Suffolk and State of Massachusetts, have invented certain Improvements in Stoves for Railroad Cars, of which the following is a full, clear, and exact description, reference being had to the accompanying drawing making part of this specification, in which—

Figure 1 is a perspective view of my improved stove for railroad cars. Fig. 2 is a vertical section through the center of the same, surrounded by a wire screen. Fig. 3 is a vertical section on the line *x x* of Fig. 2.

My invention has for its object to guard against the danger of fire resulting from the overturning of the stove of a railroad car in case of accident thereto; and my invention consists in a stove so constructed that the various openings through which fire might escape are closed automatically at the instant the stove is thrown out of its proper position; and my invention also consists in guarding the opening through which fuel is supplied by a door sliding vertically and locked by a suitable device.

To enable others skilled in the art to understand and use my invention, I will proceed to describe the manner in which I have carried it out.

In the said drawing, A is my improved stove, placed, as usual, upon a piece of sheet metal, and properly secured to the floor by bolts passing through the legs *a*. B is a short pipe riveted to the stove, and connecting it with the upright funnel, (not shown.) Within this pipe B is a damper, *b*, secured to the upright portion 5 of a bent arm or lever, C, the horizontal portion 6 of which passes outside at the top of the pipe, and is provided with a ball or weight, D, at its outer end, which, in case of the stove being thrown on either of its sides, will cause the horizontal portion of the lever to swing round into a position for closing the damper, (if it be not previously closed,) and thus effectually preclude the possibility of the fire within the stove escaping therefrom at this point, stops *c c* being provided against which the horizontal portion 6 comes in contact, thereby preventing the damper swinging around so far as to again open the passage through the pipe.

I will now describe the device by which the opening 7 at the junction of the pipe D with the stove is closed when it is accidentally thrown over upon its back. *d d d* are three rods projecting from the back of the stove into its interior, and inclined down toward its front. These rods serve as guides, upon which a metal plate, E, automatically slides toward and against the sides of the opening 7 when the stove is thrown backward from its vertical position, this plate snugly fitting over the opening 7, and preventing the exit of fire from the stove in this direction. When the stove is in its proper upright position the plate E is intended to remain at the ends 8 of the rods *d*, and away from the opening, as seen in Fig. 2, the ends or heads 8 of the guide-rods being "upset," so as to prevent its sliding off therefrom. The side of the plate E toward the front of the stove is provided with a loop, *e*, in order that a poker may be inserted therein if it should be required to draw the plate forward to the ends 8 of the rods into its proper position.

In the event of the stove being turned up on its head, the plate E is not relied on for closing the opening 7 of the pipe B, as a plate, G, within the stove, and confined between vertical guide-pieces *f*, will drop or slide by its own weight down over the opening, so as to effectually close it in this position. The opening 9 in the front of the stove through which fuel is supplied is intended to be closed at all times (except when the fuel is being entered) by a plate or door, H, sliding vertically between guides *g g* within the stove, and this plate is securely fastened down by any suitable locking device.

From the foregoing it will be seen that no fire can escape from the stove through the opening 9 should the stove be thrown over upon its face or front, or in any other position, and the danger incident to an ordinary door being broken from its hinges is thereby avoided.

When it is desired to obtain access to the interior of the stove the door H may be raised and held in this position by a hook, *h*, thereon catching over a curved projection, *i*, secured to the front of the stove above the opening 9.

To guard against fire passing outward through the opening in the ash-pit I, I connect with its perforated door K, by hinges *k*, or otherwise, a longitudinal plate, L, which

will close by its own gravity were the stove to fall on its face; but the closing of the apertures 10 in the door by this plate, should it not move promptly, will be rendered certain by the handle *l* of the ash-pan M coming in contact therewith. The door K of the ash-pit is securely held (when closed) by a hook, *m*, of the ordinary style, and this hook is prevented from being accidentally turned by an auxiliary hook, *n*, catching into the eye *o* of the hook *m*, or by any other suitable means.

The various devices I employ for closing the openings to the stove being placed within its interior, all danger of their being struck and displaced, or broken by a collision, is consequently avoided. N is a screen of wire or wire-gauze, which may be placed over and around the stove to prevent the clothing of the passengers coming in contact therewith, this screen being also useful in case of accident, when applied to the stoves of mail-cars.

The features of my invention may, at a small cost, be readily applied to the various styles of railroad car-stoves now in use.

*Claims.*

I claim—

1. The weighted lever C D for closing the damper *b* with its stops *c c*, in combination with the plate E, substantially as described, and for the purpose set forth.

2. I claim the plate G, arranged to slide vertically within vertical guides *f*, constructed and operating as described, for the purposes set forth.

3. I also claim the door H for closing the opening 9, in combination with the plates G and E, as and for the purpose described.

4. I also claim the hinged plate L for automatically closing the apertures 10 in the door K, arranged and operating substantially as described.

Witness my hand this 1st day of May, A. D. 1872.

CHAS. L. HOLBROOK.

In presence of—

N. W. STEARNS,

W. J. CAMBRIDGE.