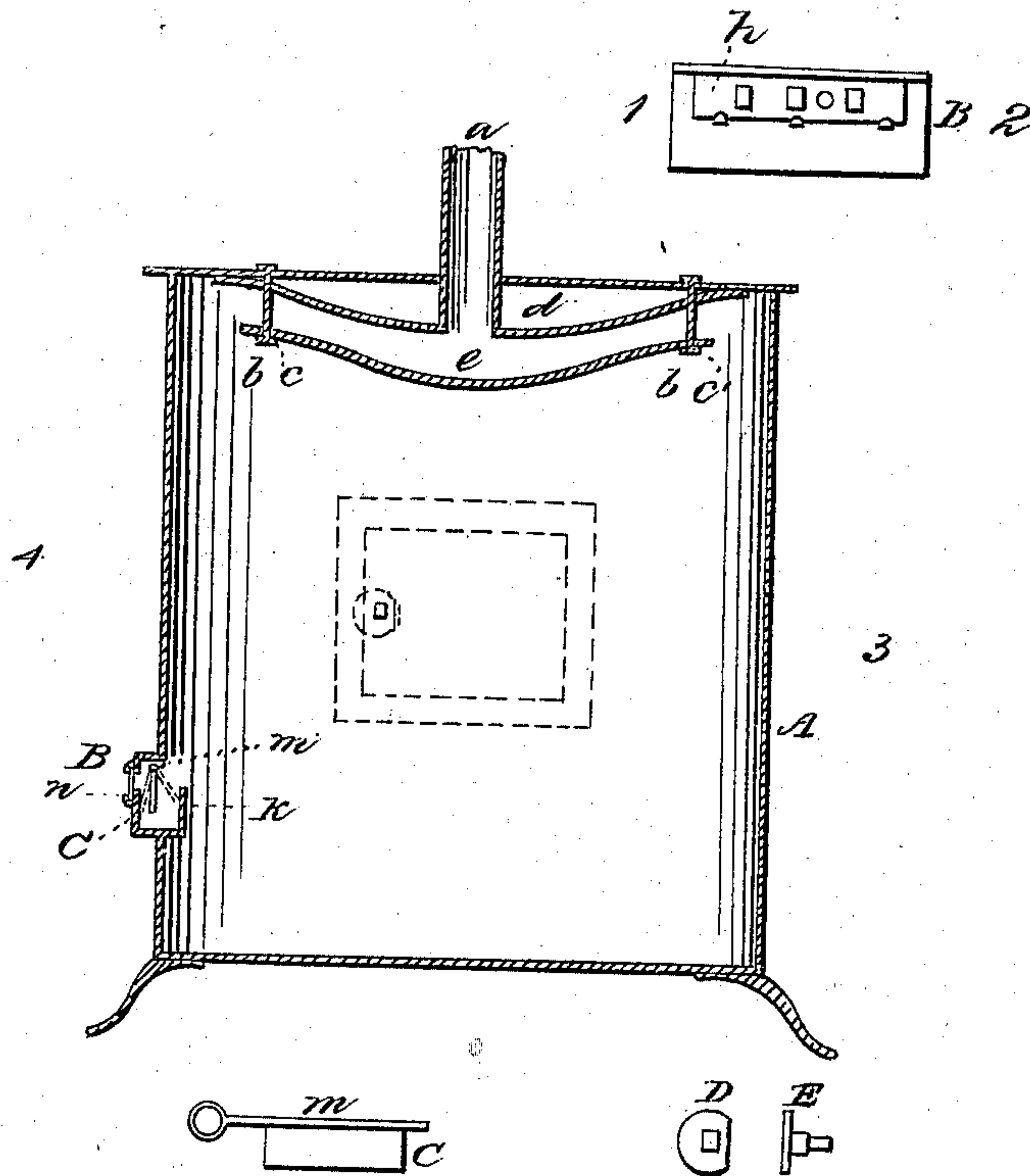


F. H. WHITMAN.

Car Heater.

No. 80,525.

Patented July 28, 1868.



Witnesses:  
Henry C. Houston  
Mr. Frank Seavey.

Inventor:  
F. H. Whitman  
Per. Wm. A. Clifford Atty.

# United States Patent Office.

F. H. WHITMAN, OF HARRISON, MAINE.

Letters Patent No. 80,525, dated July 28, 1868.

## IMPROVEMENT IN STOVES FOR RAILROAD-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, F. H. WHITMAN, of Harrison, in the county of Cumberland, and State of Maine, have invented a new and useful Improved Stove for Cars, &c.; and I hereby declare the following to be a full, clear, and exact description thereof, which will enable others to make and use my invention, reference being had to the accompanying drawings, forming part of this specification, in which—

A shows a side vertical elevation of a stove.

B, the exterior of the "slide" or draught.

C, the curtain in the same.

D E, views of the cam and shank to fasten the door.

Great disasters have resulted from the coals and flames of the stoves used for heating cars being poured out, into the cars, when the same have capsized in running off the track, and other accidents.

It is the purpose of my invention to produce a stove from which, when the door is properly closed and secured, none of the fire can be shaken, even if the stove is turned over on one side, or completely capsized. It consists of a method of fastening the door, closing automatically the funnel and grate, or draught, when the stove is tipped or turned over or canted either way.

*a* is the funnel of the stove. *b b'* are two studs, let down into the stove from the top, with heads *c c'*. *d* is a plate, applied to the inside of the top of the stove. *e* is a plate, suspended on the studs *b b'*, and loosely hung, so as to slide up and down on the same.

Suppose the stove to be turned upside down, then *e* will slide up on the studs *b b'* until it strikes the plate *d*, and thus close up the funnel-aperture, so if, in case of an accident, it, the stove, should be turned over or thrown down, the sliding plate *e* will, when the stove is bottom side up, stop up the funnel-aperture.

The plates are represented somewhat convex, and this I consider the best form; but I am also aware that they may be made concave or flat.

When the stove is standing properly, the plate *e* rests as indicated in the drawing.

This device will thus close the funnel-aperture automatically, when there is any danger, from the position of the stove, that fire or coals can escape through the funnel *a*.

B shows the slide, draught, or grate, as common, on the exterior, except that the sliding slotted piece *h* will slide from side to side, so as to readily close the small apertures of the grate, if and whenever the stove is tipped or inclined from side to side. This slide *h* moves automatically; for instance if the stove is tipped toward 1 or 2, Fig. B, the slide *h* will move, so as to close the apertures, that is, it is free to do so. But there is another motion of the stove when tipping, which will not operate the slide *h*, that is, when the stove is so tipped as to bring the grate or draught B either on the top or bottom side of the stove, as it lies after being thus tipped. Under such circumstances, the slide *h* would not operate, and, if left open, fire might issue or coals drop out of the small apertures in the draught B. To obviate this, I suspend the curtain C in the grate, on the inside of the same, and make a lip or shoulder, *k*, on the inside of the stove.

Now, as you tip the stove either toward 3 or 4, it will be seen by the dotted lines that the curtain will close the draught, swinging freely, as it does, on the pivot *m*. If the stove is tipped toward 4, the curtain will strike the part *n* of the draught; if in the opposite direction, it will strike *k*.

Thus, whatever way the stove is tipped, the draught is closed, either by slide *h* or curtain C.

The door I fasten by means of a cam, D, having a shank, E, projecting on the outside, and operated by a removable wrench, so that the proper officer on the car can only operate the same.

I am aware of a patent for a fixed piece or sheet of metal placed across the funnel-aperture in a stove, but I do not claim such a device.

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

1. The plate *e*, suspended on plates *b b'*, so as automatically to close the funnel-aperture, substantially as herein set forth.

2. The self-closing grate or draught, substantially as and for the purposes herein set forth.

F. H. WHITMAN.

Witnesses:

WM. H. CLIFFORD,

HENRY C. HOUSTON.