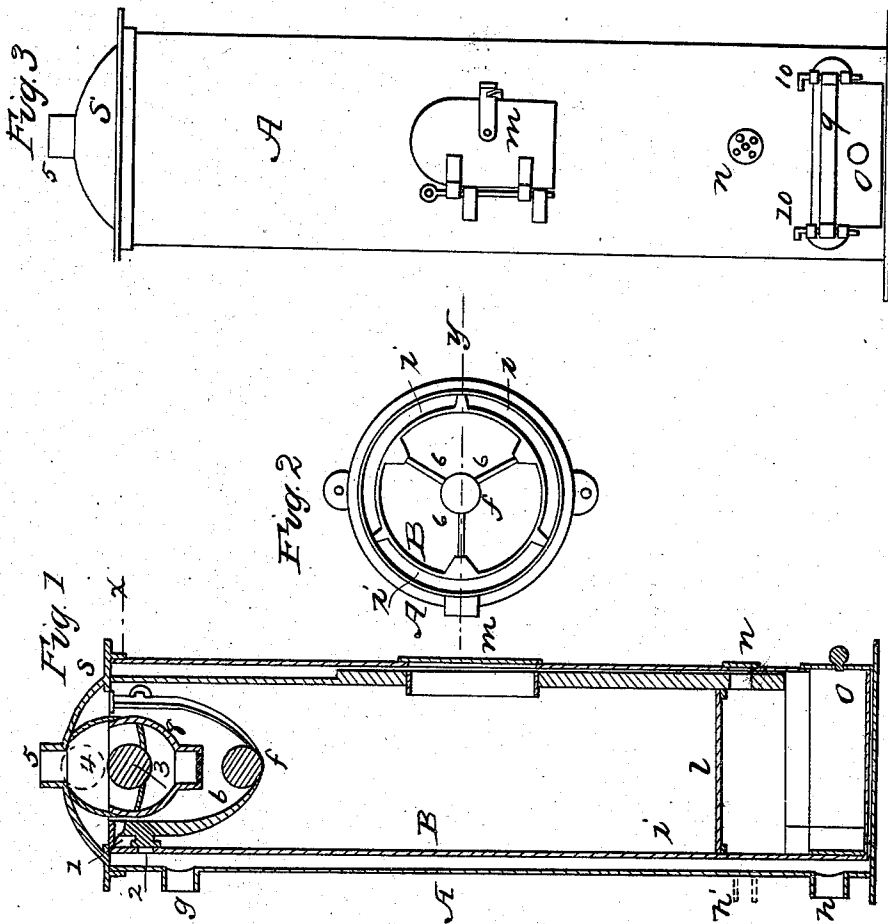


W. MELLER.
 Railroad Car Heater.

No. 100,543.

Patented March 8, 1870.



Witnesses
 A. G. Johnston
 R. H. Boyd

Inventor
 Wm. Meller
 by his attorney
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United States Patent Office.

WILLIAM MELLER, OF McKEESPORT, PENNSYLVANIA, ASSIGNOR TO HIMSELF AND JOSEPH SUTTON, OF SAME PLACE.

Letters Patent No. 100,543, dated March 8, 1870.

IMPROVEMENT IN RAILROAD-CAR HEATERS.

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, WILLIAM MELLER, of McKeesport, in the county of Allegheny, and State of Pennsylvania, have invented a new and useful Improvement in Stoves for Railway-Cars; and I do hereby declare that the following is a full, clear, and exact description of the same, reference being had to the accompanying drawings which form part of my specification, and to the letters and figures marked thereon.

The nature of my invention consists in surrounding a stove with a water-chamber, and connecting therewith pipes for distributing heat through the car; also, so arranging the water-chamber with relation to the stove, that in case of an accident to the cars, and the stove should be "upset," the water will flow from the water-chamber into the stove, and thereby "drown out" or extinguish the fire in the stove.

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

In the accompanying drawings, which form part of my specification—

Figure 1 is a vertical section at line *y* of my improvement in stoves for railway-cars.

Figure 2 is a transverse section of the same when cut through at line *x*.

Figure 3 is a side elevation of my improved stove for railway-cars.

In the accompanying drawings—

A represents the casing which surrounds the stove. The space *i* between the casing A and stove B forms the water-chamber.

To the casing A are attached pipes *g* and *h* *k*. The pipe *k* should be connected with a water-reservoir, which should be elevated at least as high as the top of the stove.

The pipe *g* should extend along the sides of the car near to the floor or along on the floor of the car, and return back and be connected to pipe *h*.

To the top *s* of the stove is attached a valve-cage or chamber, 8, for the ball-valve 3.

To the top *s* are also pivoted at 1, valves 6, which close openings 2, communicating with water-chamber *i* near the upper end of the stove B.

The valves 6 are held against the openings 2, so as to keep them closed, by means of a heavy metal ball, *f*, but the valves 6 may be so constructed that they will close the openings 2 by a weight on the lower end of the arm of the valve.

l represents the grate of the stove.

o represents the ash-pan, which is held closed by means of the iron strap 9 and pins 10, as shown in fig. 3.

m represents the door.

n represents a register for regulating the admission of air below the grate.

5 represents openings for the stove-pipe.

As the construction and arrangement of the several parts of my improvement in stoves for railway-cars will be readily understood from the foregoing description and by reference to the accompanying drawings, I will, therefore, without further description of the construction, proceed to describe the operation, which is as follows:

The water from the water-reservoir flows through pipe *k* into the water-chamber *i*, and from it through the pipes *g* and *h*. Fire being placed in the stove B will heat the water in the chamber *i*, and the hottest water will flow out through pipe *g* and return back into the lower part of water-chamber *i* through pipe *h*, and thereby heat the car by the hot water circulating through pipes, arranged as hereinbefore described. In case of an accident to the cars, and the stove should be "upset," the weight *f* will fall to one side, and one or more of the valves 6 will fall back so as to allow the water in chamber *i* to flow through one or more of the opening 2 in the stove B, and thereby "drown out" or extinguish the fire in the stove.

If the stove should be "up-ended," valve 3 will close the opening 5 of the stove-pipe, as indicated by the dotted lines marked 4.

The advantages of my improvement in stoves for railway-cars are, equal distribution of heat through the car, and the extinguishing of the fire in the stove in case of an accident.

Having thus described the nature, construction, and operation of my improvement,

What I claim as of my invention is—

The combination and arrangement of the water-chamber *i*, pipes *g*, *h*, and *k*, valves 5 and 6, openings 2, and stove B, the whole being constructed, arranged, combined, and operating substantially as herein described, and for the purpose set forth.

WILLIAM MELLER.

Witnesses:

GEO. H. THOMAS,
JAMES J. JOHNSTON.