R. HALE.

CAR-STOVE.

No. 188,127. Patented March 6, 1877.

Fig. 1.

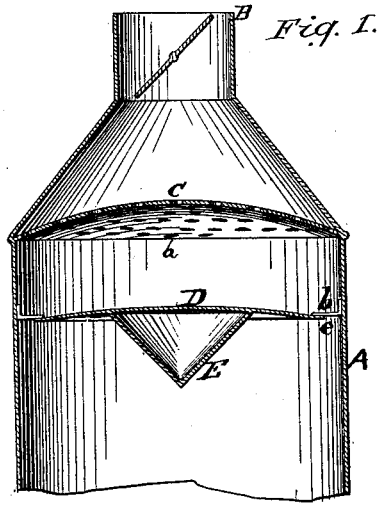
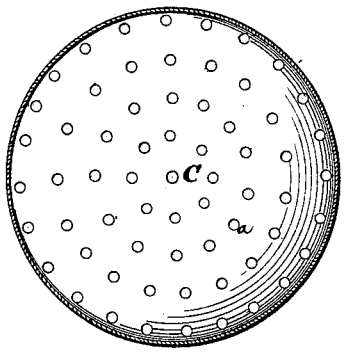


Fig. 2.



Witnesses:

C. Clarence Poole

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Inventor:

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by his attys

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UNITED STATES PATENT OFFICE.

ROBERT HALE, OF MINNEAPOLIS, MINNESOTA.

IMPROVEMENT IN CAR-STOVES.

Specification forming part of Letters Patent No. **188,127**, dated March 6, 1877; application filed February 1, 1877.

To all whom it may concern:

Be it known that I, ROBERT HALE, of Minneapolis, Minnesota, have invented a new and Improved Stove or Heater for Heating Railroad-Cars; and I hereby declare the following to be a full, clear, and exact description thereof, reference being had to the accompanying drawings, making part of this specification, in which—

Figure 1 is a view of the upper portion of a stove or heater with my improvements applied. Fig. 2 is a detail view of the diaphragm.

The object of my invention is to prevent the fire in a railroad-car stove or heater from egress at the stove-pipe hole in case of accident, and the overturning of the stove and disconnecting the pipe; and it consists in the combination of a perforated diaphragm across the heater near its top, with a fender located near it to receive the weight of the bulk of the coal in the fire-box, both diaphragm and fender being so constructed as not to interfere with the proper draft of the heater or stove.

In order that those skilled in the art may make and use my invention, I will proceed to describe the manner in which I have carried it out.

In the said drawings, A represents the upper portion of a car heater or stove, contracted at its top and connected with a pipe, B. Near the top I fasten securely a perforated diaphragm, C, having small perforations *a*, but in sufficient number to allow all the products of combustion to pass off.

A short distance below the perforated diaphragm I locate a fender, D, having a projecting conical portion, E. This fender is secured to the sides of the heater by means of knees *b*, so as to leave an annular opening, *e*, all around its edge for the passage of the products of combustion.

In case of accident, and the stove is upset, parting with the pipe B, the bulk of the coal or wood in the heater falls against the fender D, where it is retarded from approaching the perforated diaphragm. The smaller particles of the fuel undergoing combustion, which succeed in passing through the annular opening *e*, are caught against the perforated diaphragm C, and their exit prevented.

Having thus described my invention, what I claim as new, and desire to secure by Letters Patent, is—

The fender D, in combination with the perforated diaphragm C, for protecting the stove-pipe opening, substantially as set forth.

ROBERT HALE.

Witnesses:

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