

F. S. BISSELL.
Self-Extinguishing Car-Stove.

No. 205,467.

Patented July 2, 1878.

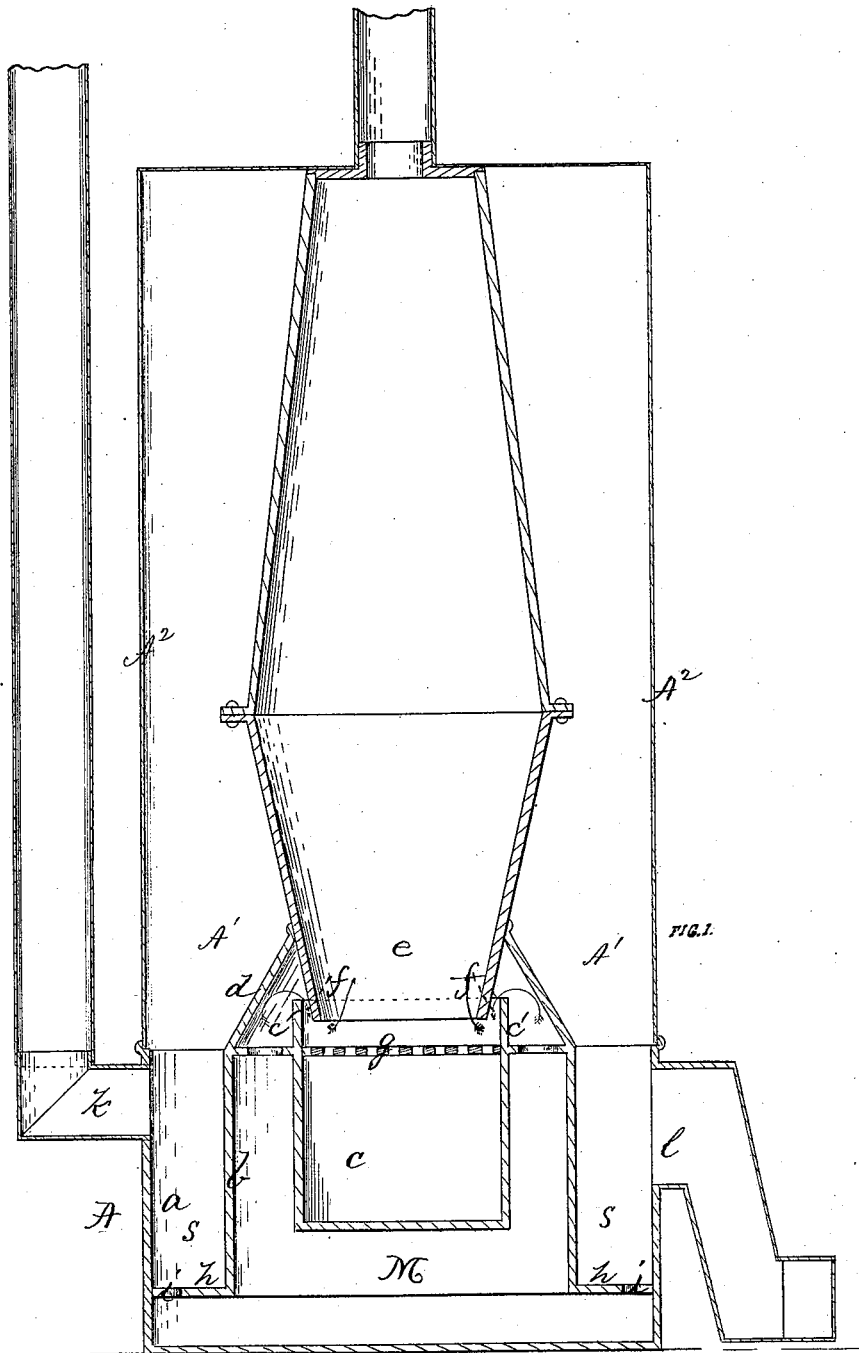


FIG. 1.

Witnesses.
R. A. Whittlesey
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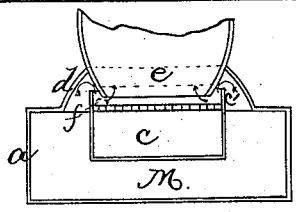


FIG. 2.

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UNITED STATES PATENT OFFICE.

FRANK S. BISSELL, OF PITTSBURG, PENNSYLVANIA.

IMPROVEMENT IN SELF-EXTINGUISHING CAR-STOVES.

Specification forming part of Letters Patent No. **205,467**, dated July 2, 1878; application filed May 31, 1878.

To all whom it may concern:

Be it known that I, FRANK S. BISSELL, of Pittsburg, in the county of Allegheny and State of Pennsylvania, have invented a new and useful Improvement in Self-Extinguishing Car Heaters or Stoves; and I do hereby declare the following to be a full, clear, and exact description thereof, reference being had to the accompanying drawing, forming part of this specification, in which—

Figure 1 is a vertical central section of a car-stove embodying my invention, and Fig. 2 is a diagram of a modification.

Like letters refer to like parts wherever they occur.

My invention relates to the construction of that class of car heaters or stoves wherein the reservoir for water or other fire-extinguishing agent is so arranged within the base of the stove as to discharge its contents into the base of the fire-pot whenever the stove is tipped or overturned, as in the case of accidents.

The invention consists, first, in forming a communication or communications between a reservoir arranged in the base of the stove and the base of the fire-pot at a point or points just above the grate, whereby the water or other fire-extinguishing agent contained in the reservoir will be discharged directly into the base of the fire-pot without danger of obstruction from the ashes contained in the ash-pit; and, secondly, in extending the wall of the ash-pit, or substituting for such extension a ring or equivalent device, which will guard the lower end of the fire-pot, thus directing the ashes into the ash-pit and preventing them from escaping into the reservoir.

Self-extinguishing car heaters or stoves, as at present constructed, are commonly of two classes—first, those wherein the reservoir for the extinguishing agent is placed above the fire-pot or in the upper part thereof; and, secondly, those in which the reservoir is located in the base and communicates with the upper part of the fire-pot by tubes, and with the base of the fire-pot by ports in the bottom of the ash-pit; and in both cases much of the contents of the reservoir will be discharged without effect when the stove is reversed or even tilted, as frequently occurs in railroad accidents,

The object of the present invention is to simplify the construction and insure the effectual discharge into the fire-pot of the water or other extinguishing agent.

I will now proceed to describe my invention, so that others skilled in the art to which it appertains may make and use the same.

In the drawing, A indicates the base of the stove, preferably formed with an outer shell, *a*, and an inner shell, *b*, within which is the ash-pit *c*. One or the other of the shells *a b* is usually extended, as at *d*, to form a support for the lower end of the fire-pot *e*, whereby a channel is formed leading to the aperture *f*, between the lower end of the fire-pot and the grate *g*. Where the inner shell *b* is employed, which is preferable, said shell is the one formed or adapted at its upper end to sustain the fire-pot, and at its lower end is flanged, as at *h*, to divide the base into a main reservoir, M, and a supplemental reservoir, *s*, the two communicating by perforations or slots *i* in the flange *h*. The supplemental reservoir *s* is advantageous in washing and purifying the air, which enters through induction-pipe *k*, and, after becoming heated in space A¹, escapes through induction-pipe *l*.

In order to guard the lower end of the fire-pot *e*, the walls of the ash-pit *c* are carried up, as at *e'*; or in lieu thereof a ring or vertical flange is employed, which, rising above the lower end of the fire-pot *e*, forms a water-passage, and also prevents the ashes, &c., from being crowded over into main reservoir M. The cylinder is inclosed by the usual sheet-iron jacket A², forming the air-chamber A¹.

The operation of my devices is as follows: Should the stove be tilted upon its side, or overturned from any cause, the water or other fire-extinguishing agent will escape from the reservoir M through the channel, around flange *e'*, and through aperture *f* directly into the base of the fire-pot, as indicated by the arrows, while the bulk of the ashes, &c., in the ash-pit will be prevented from falling into and closing the water-way.

The advantages of my invention are great simplicity and effectiveness. The construction specified does not materially add to the cost of manufacturing, nor alter the general appearance of the heater.

I am aware that a reservoir has been heretofore arranged in the base of a car-heater, said reservoir communicating with the fire-pot, above the base thereof and opposite the body of fuel, by means of a direct passage, guarded and closed by a removable plate or ring, and do not claim such subject-matter:

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

1. In a car heater or stove, the combination, with the fire-pot, of a reservoir arranged in the base of the stove, and communicating with the fire-pot at its base, but above the grate, by means of a tortuous passage or ports, substantially as described, which pass around the ash-pit, for the purpose specified.

2. The combination, in a car heater or stove, of the reservoir arranged in the base thereof, the grate and fire-pot, and a ring surrounding the grate and inclosing the lower end of the fire-pot at a suitable distance therefrom to form a channel for the passage of water, guard the reservoir, and deflect ashes, substantially as specified.

In testimony whereof I, the said FRANK S. BISSELL, have hereunto set my hand.

FRANK S. BISSELL.

Witnesses:

F. W. RITTER, Jr.,
JNO. K. SMITH.