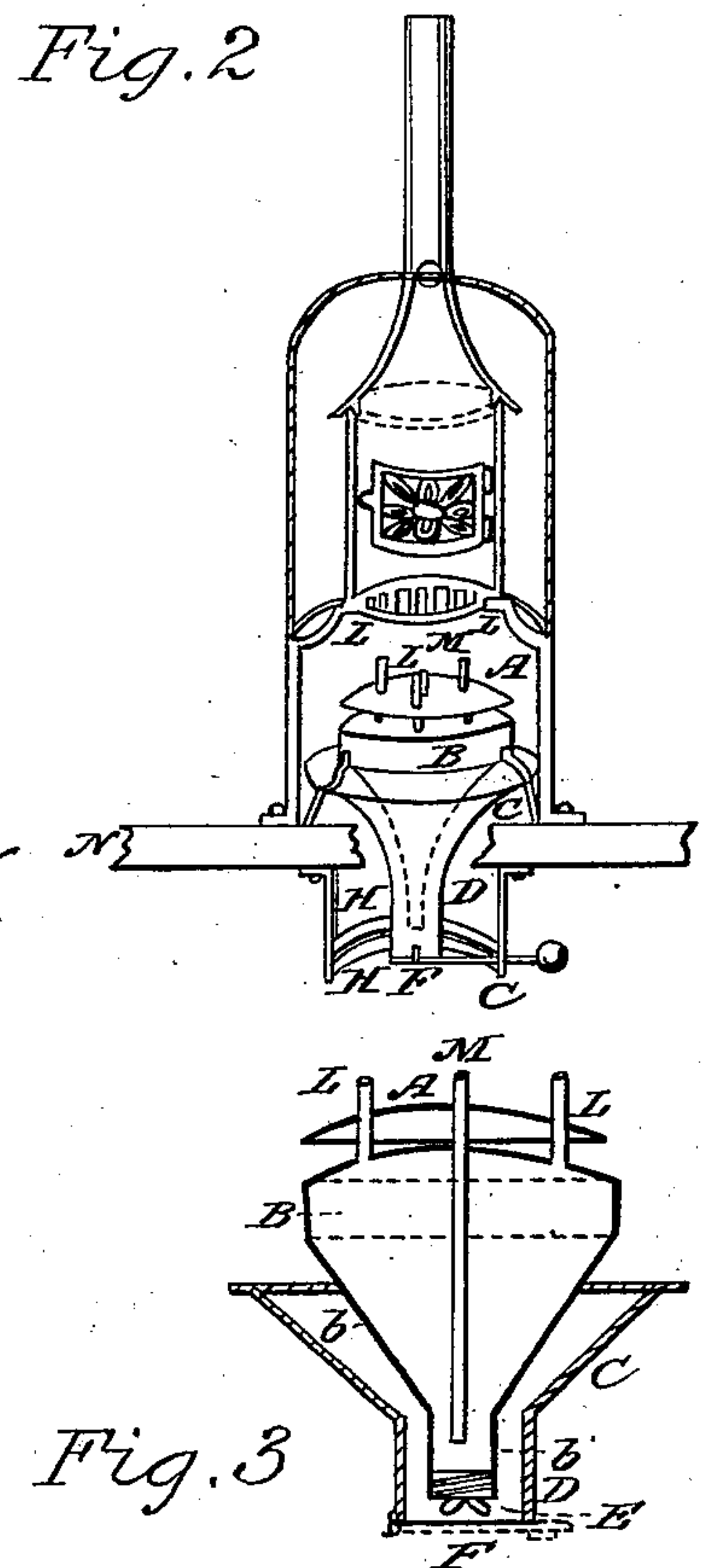
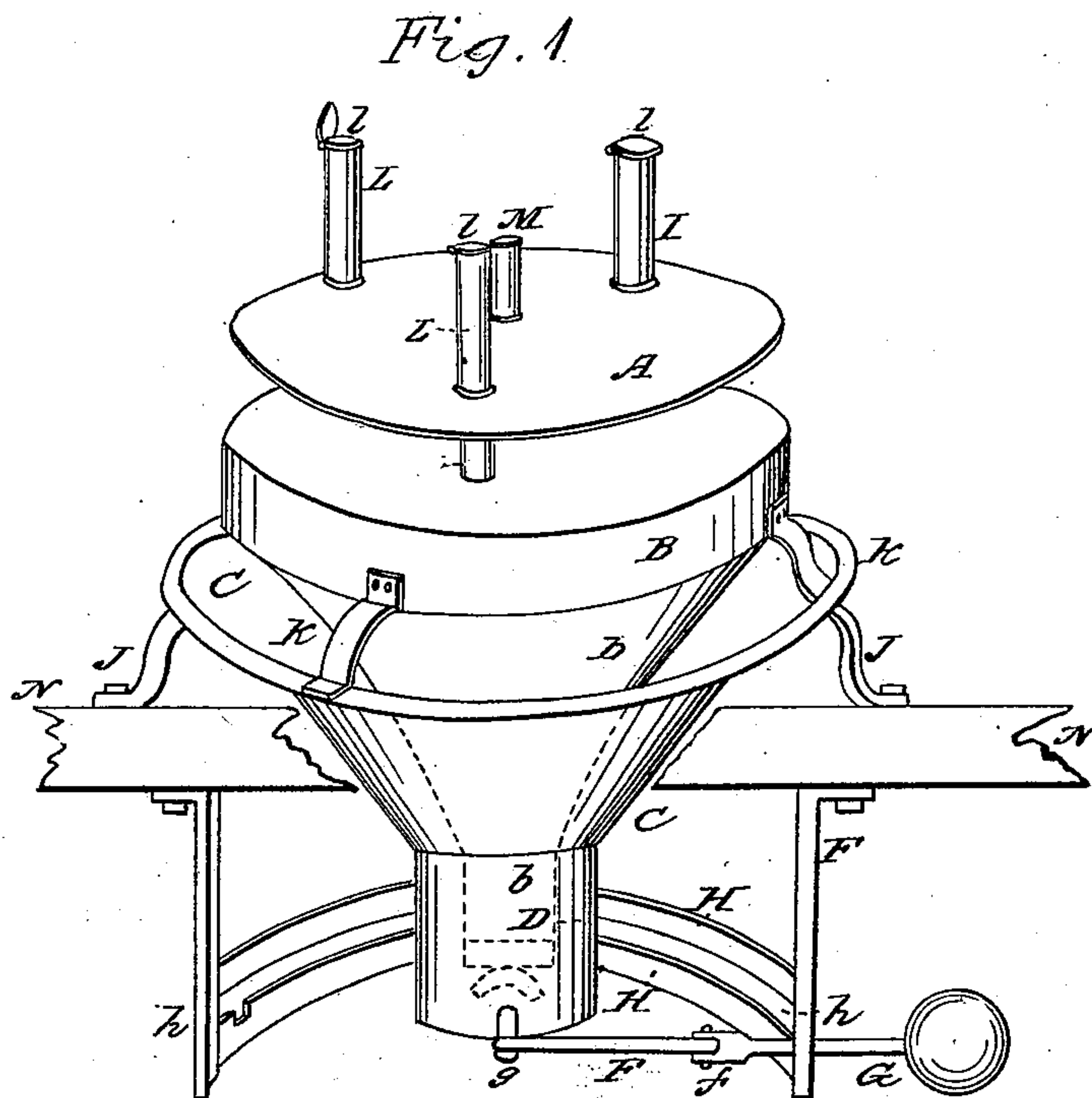


STEINHAUSER & SHREINER.

Car Heater.

No. 96,498.

Patented Nov. 2, 1869.



Witnesses:
John C. Ames
Jacob Stauffer

Inventors:
Frank J. Steinhäuser.
H. M. Shreiner

United States Patent Office.

FRANK J. STEINHAUSER AND HENRY M. SHREINER, OF LANCASTER.
PENNSYLVANIA.

Letters Patent No. 96,498, dated November 2, 1869.

RAILROAD-CAR HEATER.

The Schedule referred to in these Letters Patent and making part of the same.

To all whom it may concern :

Be it known that we, FRANK J. STEINHAUSER and HENRY M. SHREINER, of the city of Lancaster, in the State of Pennsylvania, have invented a new and improved Combined Water-Tank for Railroad-Car Stoves; and we do hereby declare that the following is a full, clear, and exact description of the construction and operation of the same, reference being had to the accompanying drawings, making a part of this specification, in which—

Figure 1 is a perspective view of our invention.

Figure 2, the same, as combined with a stove, on a reduced scale.

Figure 3, a section of fig. 1, also reduced.

The nature of our invention consists in providing a means of extinguishing the fire in the stoves of railroad-cars, acting automatically in case the car is overturned, and for the escape of the gas produced by the water suddenly thrown upon the fire, confined wholly to the stove, in order to prevent the calamity of a burning car, and consequent destruction of life and loss of property, as in several cases recently.

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

Fig. 1 shows a water-tank or reservoir, B, made of boiler-iron, or other suitable material, covered on top.

The lower portion *b* is conic, with a neck, *b'*, closed at bottom with a nut and screw, made water-tight, so that the water can be drawn out of the tank when the same is not in use during the summer-season.

This tank is supported, by brackets K, on the upper edge of a funnel-formed ash-pan, C, which surrounds the water-tank B *b b'*, and extends through the floor N of the car.

The neck or spout D also extends below the portion *b'* of the tank, where it is closed by a sliding valve, F, moving on a pivot, *g*, and connected with a rod, G, terminated by a weighted ball, as shown.

This rod G, when the valve F closes the opening of D, rests in a central notch, *h*, made in the lower guide-bow H; but when the car is overturned, the weighted ball opens the valve by sliding the rod to the right or left between the open guides H H, and lodges in a notch, *h*, made at the ends of these guides.

These guides H are held by brackets I, attached to the under side of the floor N.

The upper portion of this funnel C is supported by means of brackets J, connected to the upper side of the floor N of the car.

The water-tank B has three or more pipes L, communicating with the water within the tank, and carried upward, so as to open near the fire-grate within the stove.

Each pipe or tube has a hinged valve, opening upward.

There is also an intermediate shield or disk, A, between the furnace-grate and rounded top of the tank. This disk is supported by the pipes L and M.

(This latter pipe M also has a valve, *l*, and extends through the tank to near the bottom of the same, for supplying air as the water is discharged.)

The aforesaid disk A is convex above, so as to convey the ashes from the stove to the ash-funnel C, and also radiates the heat from the furnace, and protects the tank from the ashes lodging upon it, while the open space between the disk and tank, as well as that between the disk and grate, admits the cool air and draught to the stove.

The stove itself may be of any desired pattern, adapted to our invention.

Fig. 2 represents a stove over our arrangement below the grate, so combined as to be firmly united, with a closing-diaphragm and an outer shell or cover, to prevent any escape of the coal or ashes, when overturned, to enter the car.

The operation is briefly set forth, as follows:

The tank being filled with water, with the pipes below the grate, will discharge the contents directly into the fire when the car is overturned, while the weighted ball will swing to the one side and open the valve beneath the car, for the escape of the steam or gas generated by the action of the water on the fire, which will be speedily smothered and extinguished.

All the valves open by gravitation, so as to allow the water to flow out freely, as well as to supply air, through the central tube, to the interior of the tank.

The slide-valve, below the car, can also be operated by hand at any time, for discharging the ashes from the stove, which may be riddled down over the arched disk into the funnel-shaped ash-pan.

We do not, broadly, claim the use of a water-tank for discharging the water into the fire-box, independently considered.

We claim—

1. The arrangement of the ash-funnel C D, with its valve F and weighted rod G, guides H H, in combination with the tank B *b b'*, in the manner and for the purpose specified.

2. The arrangement of the disk A, in combination with the tubes or pipes L M, with their hinged valves *l*, constructed substantially in the manner and for the purpose set forth.

3. The combined arrangement of the tank B, disk A, spouts or pipes L M, ash-funnel C D, and valve F, in connection with a stove adapted thereto, operating substantially in the manner and for the purpose specified.

FRANK J. STEINHAUSER.
H. M. SHREINER.

Witnesses:

JOHN M. AMWEG,
JACOB STAUFFER.