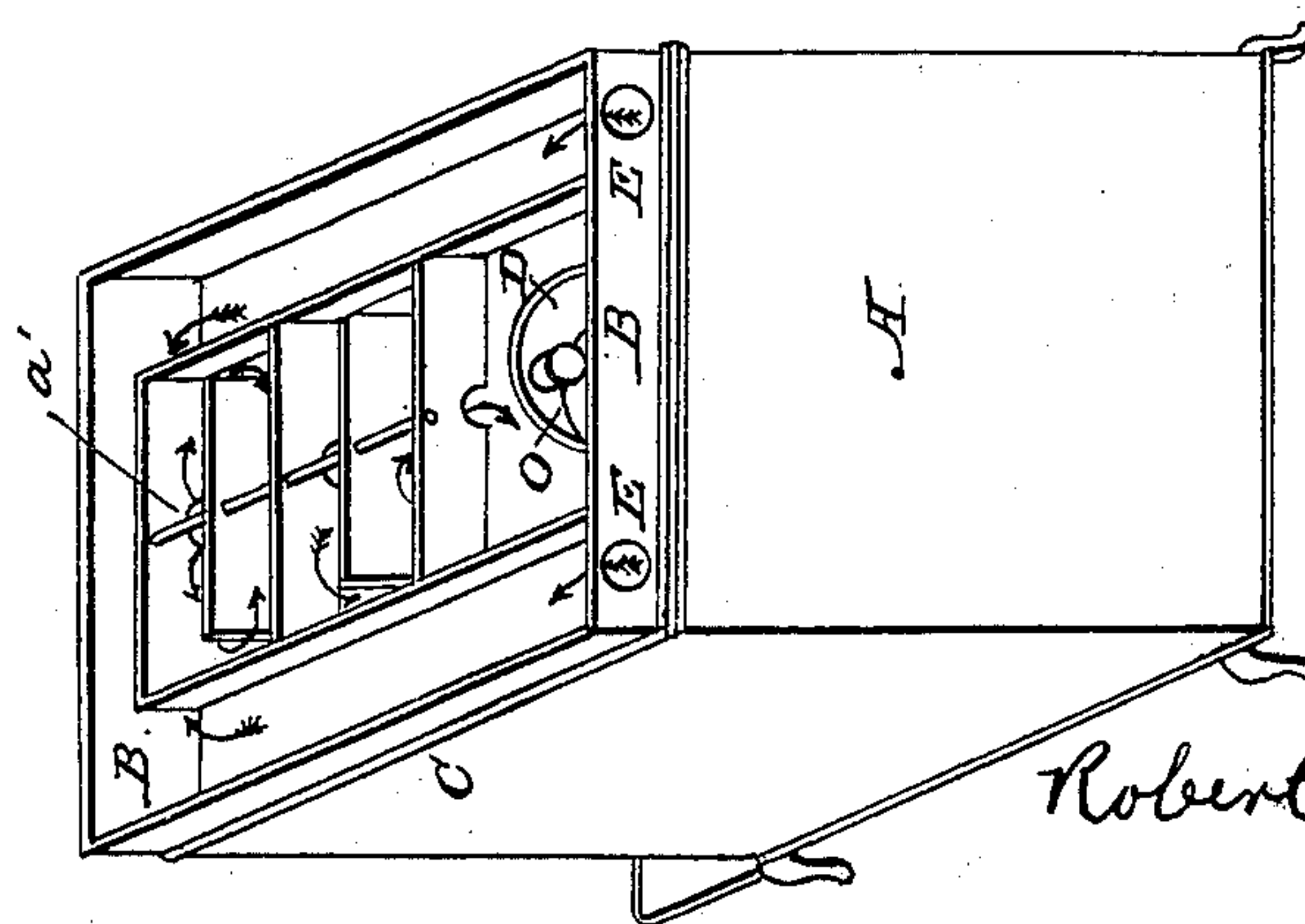
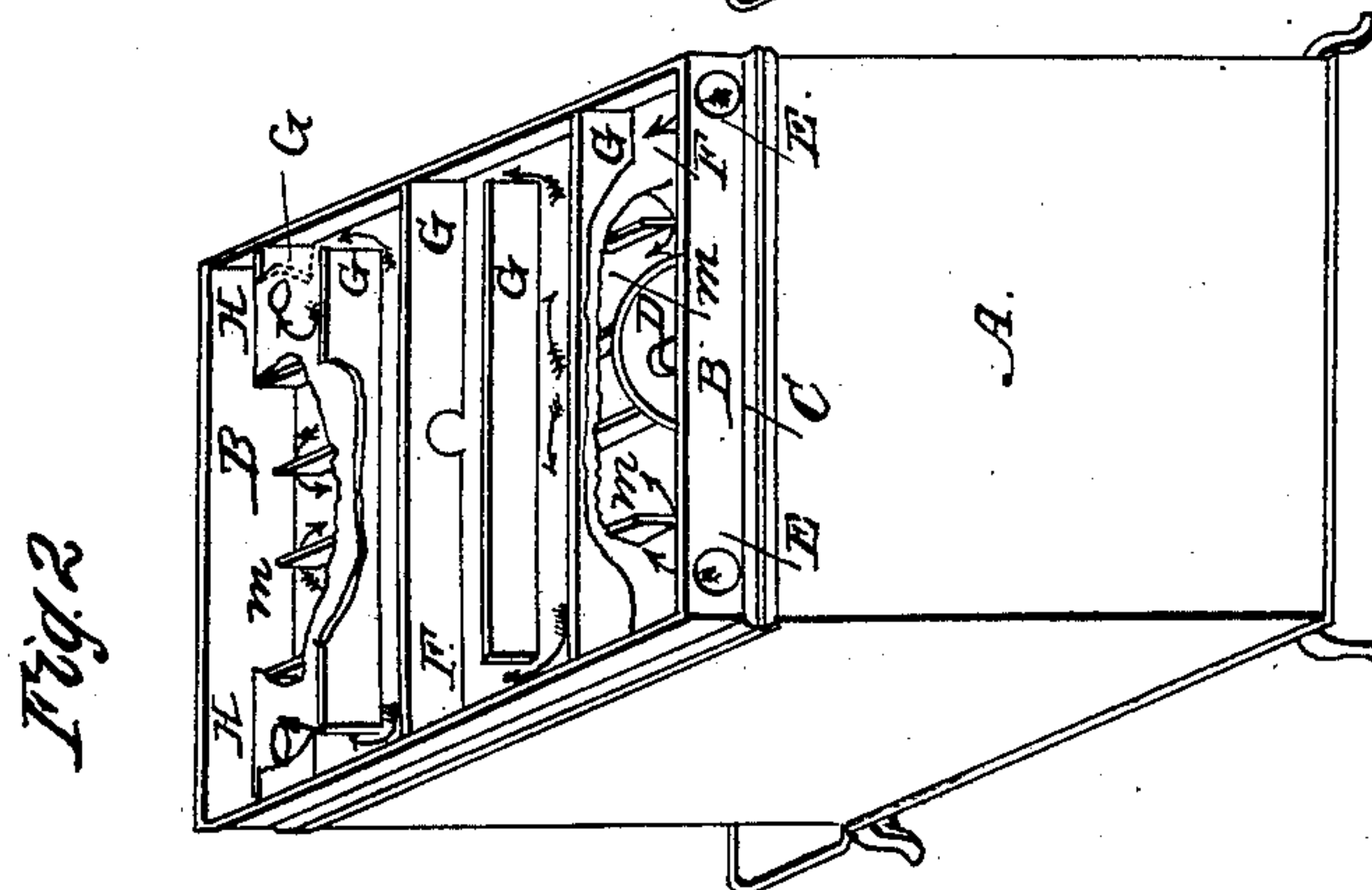
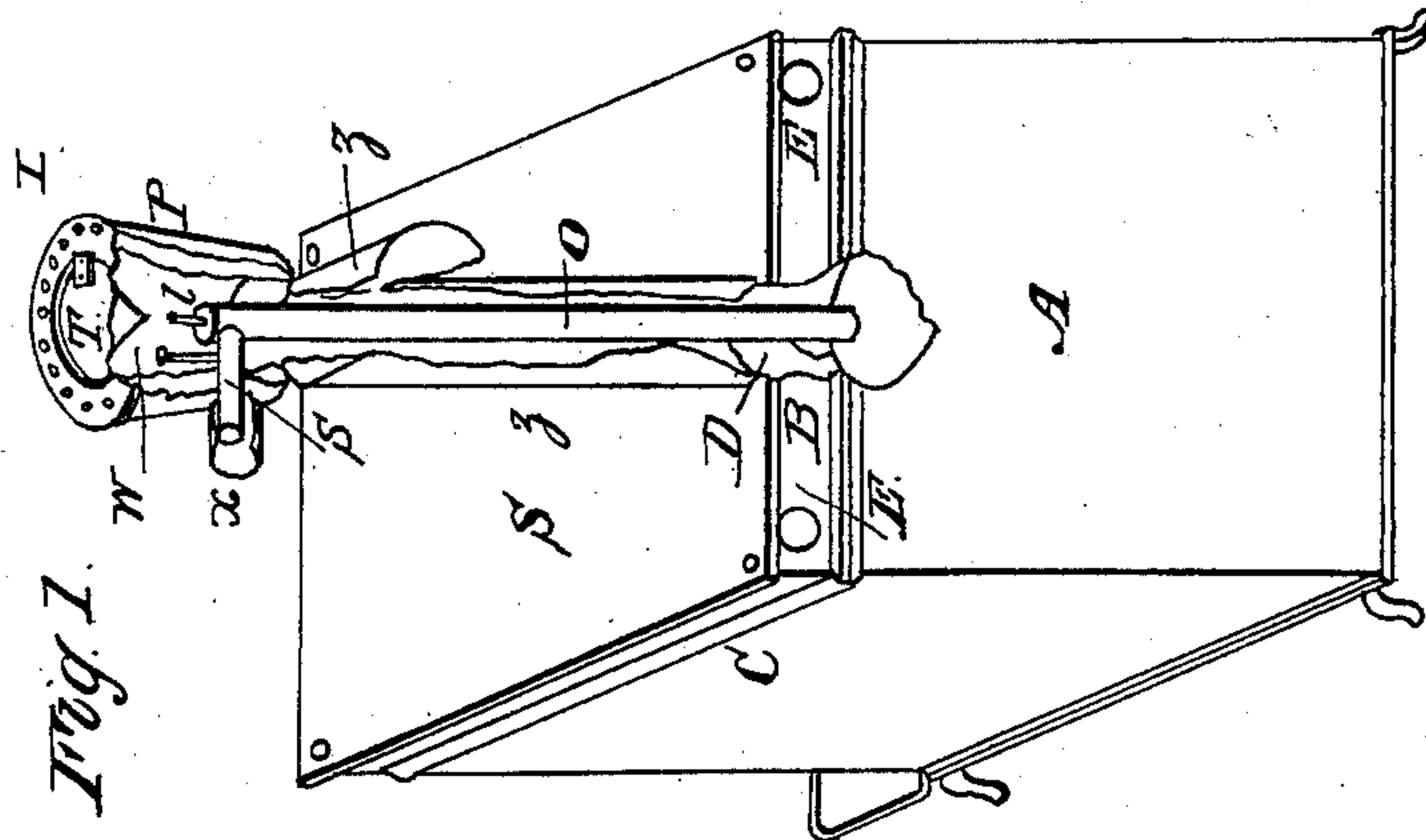


R. A. HUNTER.

Heating Drum.

No. 90,267.

Patented May 18, 1869.



Witnesses
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ROBERT A. HUNTER, OF IONIA, MICHIGAN.

Letters Patent No. 90,267, dated May 18, 1869.

STOVE-DRUM

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

Be it known that I, ROBERT A. HUNTER, of Ionia, in the county of Ionia, State of Michigan, have invented a new and useful improvement in caloric generators, conductors, and distributors; and I do hereby declare that the following is a full, clear, and exact description thereof, which will enable others skilled in the art to make and use the same, reference being had to the accompanying drawings, forming a part of this specification, and to the letters of reference marked thereon.

Like letters indicate like parts.

Figure 1 shows a part of my invention in perspective.

Figure 2 shows the box or vessel, in which hot air is generated, as having a double chamber.

Figure 3, the same, with single chamber.

This invention has for its object to furnish a simple, cheap, and effective means of generating hot air, and diffusing it in a room or rooms other than that in which the heater sits, as desired.

A, in the drawings, represents an ordinary box-stove.

B is the box in which the hot air is generated, which I term the generator.

It is a cast-iron box, having a flange, C, all around the outside, midway between its top and bottom, and corresponds in size and shape to the top of the stove, in which it is dropped as far as the flange.

D is the smoke-hole, in the rear end of the generator.

E E are orifices, in which the cold air enters.

A thin iron plate, F, is fitted tightly in the inside of the generator, in a plane with the flange on the outside; thus it is divided into two chambers.

On the top side of the plate F, strips of sheet-iron, G G, are set up edgewise, equidistant apart, and are tightly fitted to the plate.

The stove-top Y fits all the edges of the strips and sides of the generator, but air-passages are left at the ends of one strip, and in the middle of another, alternately.

Air entering the orifices E E takes the course indicated by the darts, until it reaches those in front, H H, through which it is drawn by the draught in the under chamber.

Strips of sheet-iron, M M, are therein arranged, so that the air can only pass around the end of one, and the opposite end of the other, alternately, until it reaches the mouth of the conductor, O, by the course indicated by the darts in the drawings.

The conductor is arranged within the stove Z, coming out at the elbow Z', and entering the distributor, P, which is arranged in the floor and ceiling like a common ventilator, through which stove-pipes pass into an upper room before entering a flue, as is sometimes the case. The distributor, P, is funnel-shaped somewhat.

The rims I, which hold the outside and lining together, are perforated, to admit cool air freely between, so that the outside does not get hot, to burn the wood-work it touches.

The lid T, shaped somewhat like an inverted cone, does not fit the top of the distributor closely. The current of air is equally divided by the conical shape presented by the lid, and, as it passes from the distributor, its force is not broken in its ascent.

The conductor, O, is provided with a valve, V, to shut off so much of the hot air as is desired to be conducted elsewhere through side pipes.

The side pipe S connects with the conductor, O, and is inserted within a larger pipe, X, which connects with the distributor, P. Air is allowed to circulate within the larger pipe, and enters through perforations in the side of the distributor.

Side pipes, to conduct the hot air to other apartments, are arranged beneath the floor, between it and the ceiling.

The distributor is used on the end of all branch-pipes, having its top secured in the floor, though the bottom need not reach through the ceiling.

Side pipes enter the sides of branch distributors, the connection and means for ventilation being the same in those as in the distributor, P, hereinbefore described.

Fig. 3, in the drawings, shows the generator arranged with single chamber. The air enters the orifices E E, and passes in the direction indicated by the darts, until it reaches the orifice α , through which it passes, in the course indicated by the darts, until it reaches the mouth of the conductor, O, thence taking the course hereinbefore shown.

The damper W, in the pipe S, is to shut the hot air off, if desired to be done, in order to keep it all in one room.

The means for ventilating the distributor, P, and side pipes, by arranging them in larger casings, and admitting cool air through perforations, as shown, is not new in itself, as I am aware that this mode of ventilation has been used in connection with other devices, and I do not claim to have conceived the idea of placing tubes to conduct hot air from one apartment to another, between the ceiling and floor; nor do I claim to have conceived the idea of arranging a hot-air conductor within a stove-pipe, and passing it out in the elbow; but:

What I do claim as new, after having thus fully described my invention, and desire to secure by Letters Patent, is—

1. The generator B, arranged with a double or single chamber, as shown, and being arranged to set in the top of the stove A, and to connect with the conductor, O, and having flange C, orifices E E, and smoke-hole D, substantially as and for the purpose set forth.

2. Constructing the distributor, O, funnel-shaped, as shown, and providing it with a conical-shaped lid,

T, substantially as shown, and for the purpose set forth.

3. Connecting the pipe S, within the distributor, P, to the conductor, O, and providing it with a damper, W, as and for the purpose herein specified.

4. As a combination, the means described for ventilating the distributors and side pipes, and arranging the latter between the ceiling and floor, to connect the main conductor with other distributors, and the

arrangement of the conductor, O, within the stove-pipe Z, and passing it out at the elbow Z', when it is used to connect the generator B with the distributor, P, substantially as and for the purpose herein specified.

ROBERT A. HUNTER.

Witnesses:

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