

E. F. Bailey,
Card Board Drier.

No. 68146.

Patented Aug. 27, 1867.

Fig. A.

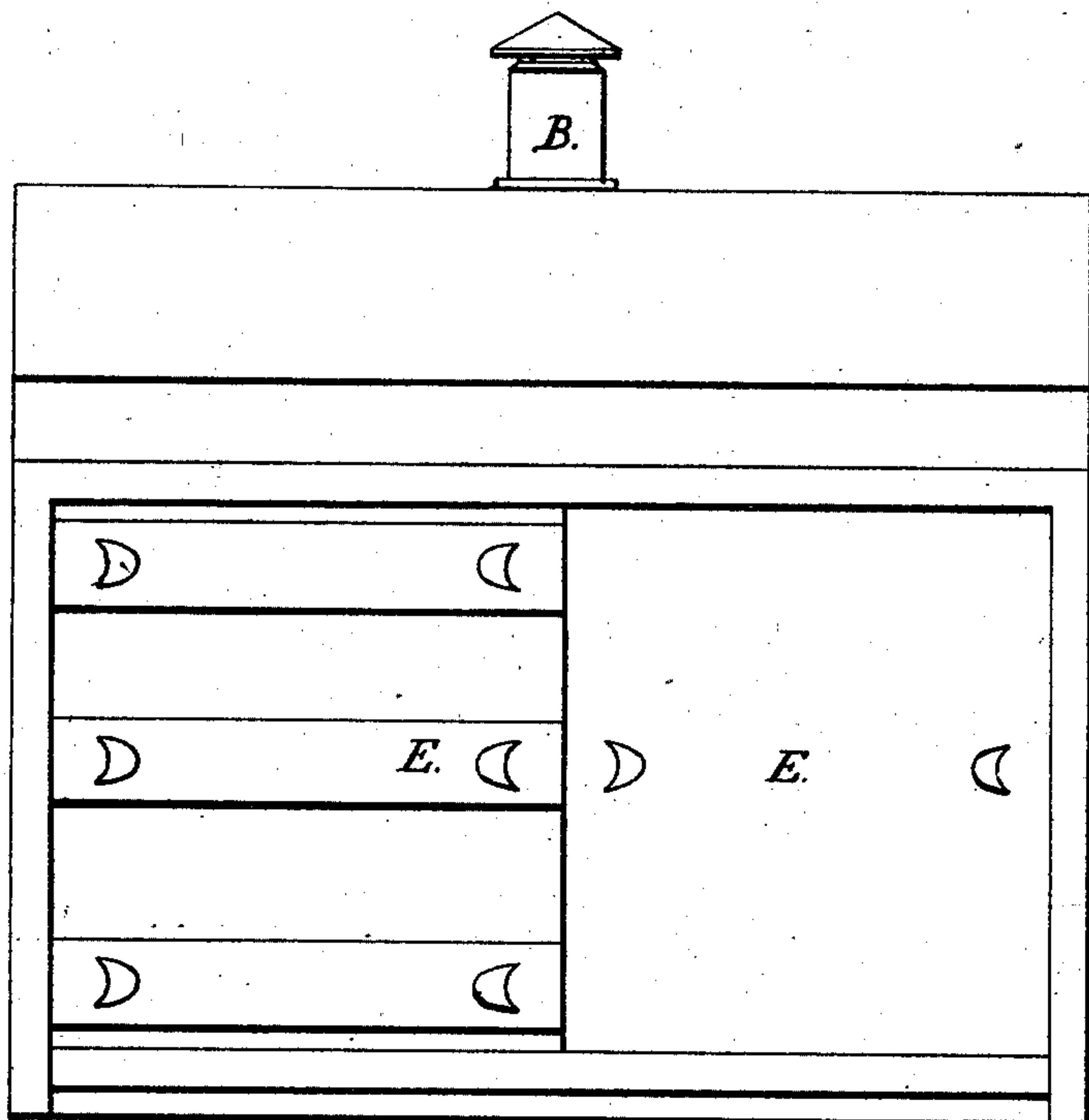
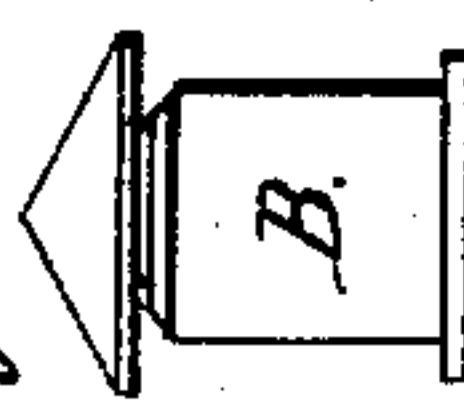


Fig. 2.



A.

Witnesses:
Samuel N. Piper
Geo. H. Andrews

Inventor:
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by his attorney
R. M. Hardy

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Fig. 4.

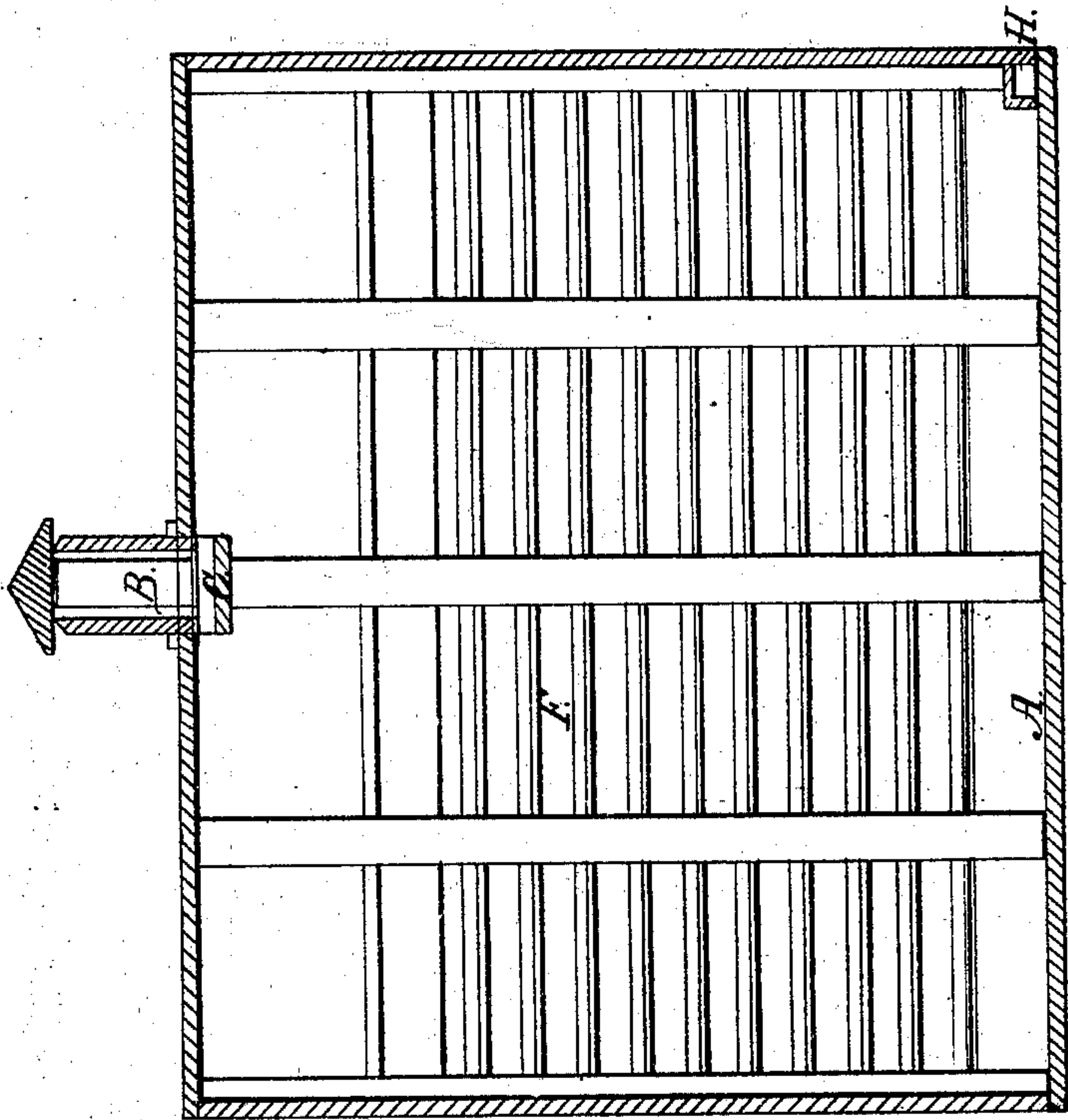
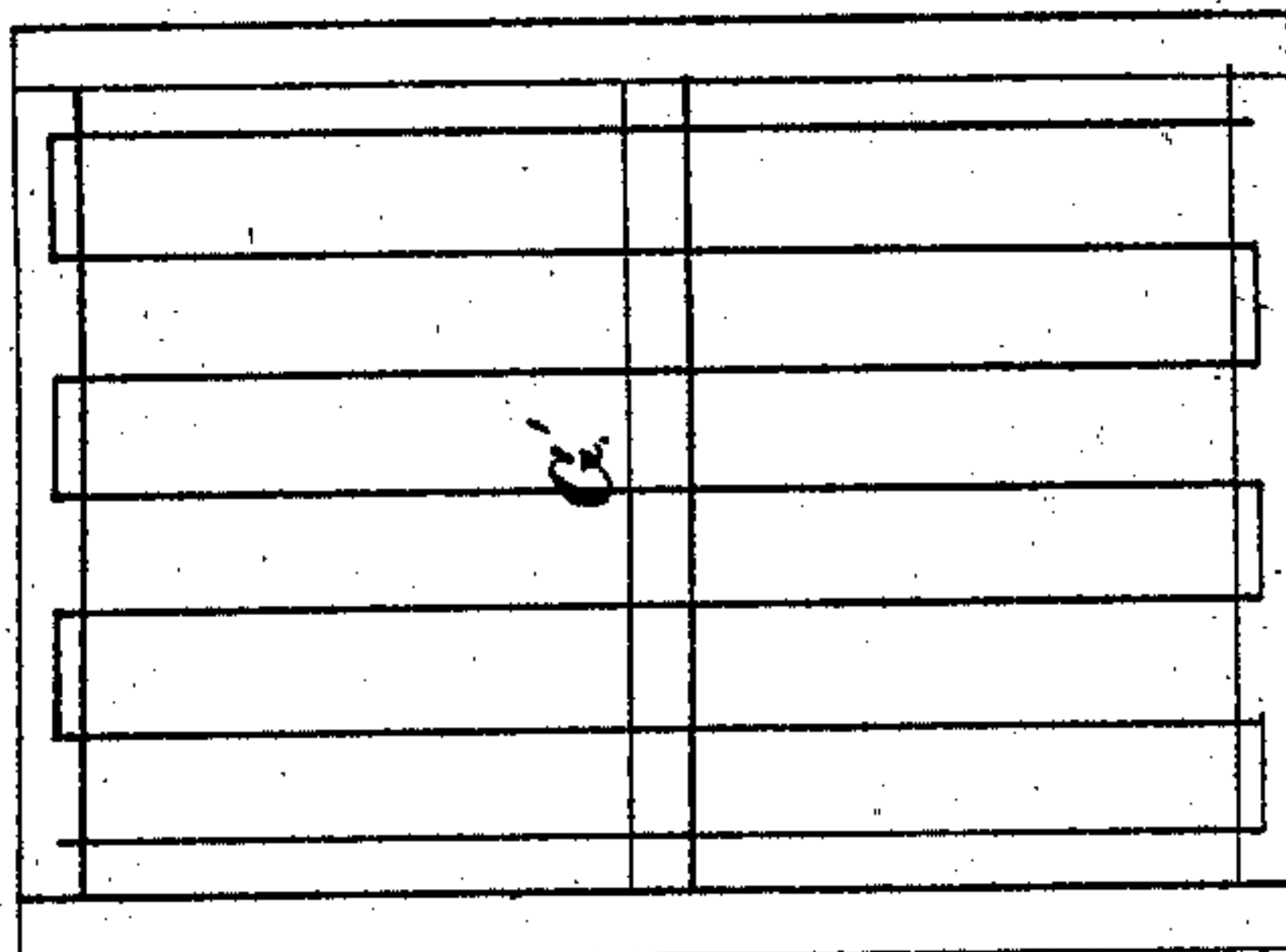


Fig. 5.



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EDWIN F. BAILEY, OF HOLDERNESS, NEW HAMPSHIRE.

Letters Patent No. 68,146, dated August 27, 1867.

CARD-BOARD DRIER.

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

TO ALL PERSONS TO WHOM THESE PRESENTS SHALL COME:

Be it known that I, EDWIN F. BAILEY, of Holderness, in the county of Grafton, and State of New Hampshire, have invented a new and useful Card-Board Drier; and I do hereby declare the same to be fully described in the following specification, and represented in the accompanying drawings, of which—

Figure 1 is a front elevation,

Figure 2 an end view,

Figure 3 a transverse section, and

Figure 4 a longitudinal section of it.

Figure 5 is a vertical section of it, taken through one of the air-distributing channels, and its steam-heating pipes, and so as to exhibit the framing for supporting the card-board carriers.

The purpose of the invention is to dry sheets of pasteboard, or card-board, or other articles of like character, after being made.

In the drawings, A is a close box or building, formed as represented, and provided with a ventilator, B; such ventilator being placed at the middle part of the top of the said box or building, and furnished with a valve, C, to be opened or closed as occasion may require, by means of a rope, D, or other device. Each side of the box A is open, and provided with sliding-doors E E for the purpose of closing such side, as occasion may require. Within the said box there are arranged two frames, F F, and with a space, G, between them, such space being at the middle of the box, and continuing vertically up to the upper part H' thereof. Each of the frames F F is to be constructed as a frame is usually made for holding a series of drawers, that is to say, with parallel guides for supporting the drawers, and enabling them to be moved into and drawn out of the frame. The frames F, however, have the guides arranged at inclinations with the horizon, as shown at *a a a*, in fig. 3, and they are for supporting a series of card-board carriers G', one of which is shown in top view in Figure 6, it being a rectangular frame, having wires or threads stretched across it. They, that is, the carriers, with card-boards on them, are to be run into the frames F, or the divisional parts thereof, and are separated by such, and so arranged that there may be a space both above and below each of the said carriers, for the hot air to circulate through. Between each of the said frames F and the door opening next thereto, and in or within the floor of the box or chamber A, is a channel, H, for receiving air, the top of the said channel being foraminous, or provided with numerous openings, to enable the air, when forced into the channel, to escape therefrom against one or more pipes I arranged immediately over the air-channel; such pipe or pipes, when in use, being connected with a steam-generator or other proper means of heating such pipe or pipes by the introduction of steam, hot water, or hot air therein. It is intended that the air-channel or channels H shall be connected with an air-blast apparatus by which air may be forced into it or them. Such air, on being discharged against the heating pipe or pipes, will become heated by such, and from thence will be caused to flow upward and through the frames F F, and in contact with the wet sheets of said board arranged within such. The vapor created by the evaporation of the moisture of the card-boards will rise and be discharged with the air through the ventilator.

A card-board drier of the above-mentioned kind will be found of great advantage to paper-makers, or those engaged in making pasteboard.

I make no claim to the fruit-drying apparatus, as described in the United States Patent No. 28,775, in which several series of inclined drying-frames are so arranged directly over one another and an air-heating chamber that the hot air, after having passed between the frames of one series, is caused to pass between those of the next one. With my improved arrangement of the frames, each set has a hot-air space or chamber in front of it and over the apparatus for heating the air, and such air passes between all the frames at once, each current of air carrying off its moisture without going a second time between any two frames. The air charged with the moisture escapes into a common vertical space, G. Thus it will be seen that my arrangement is much more favorable for drying the card-boards than that described in such patent.

I claim the arrangement of the foraminous air-channel or channels, the heating pipe or pipes, the carrier supporting-frame or frames, provided with inclined guides, with each other and the air-chambers at either end, and the box A, constructed and provided with doors, and a ventilator and valve thereto, substantially as described and for the purpose specified.

EDWIN F. BAILEY.

Witnesses:

F. P. HALE, Jr.,

R. H. EDDY.