

(No Model.)

R. P. STEEL.
REFRIGERATOR.

No. 413,578.

Patented Oct. 22, 1889.

Fig. 1.

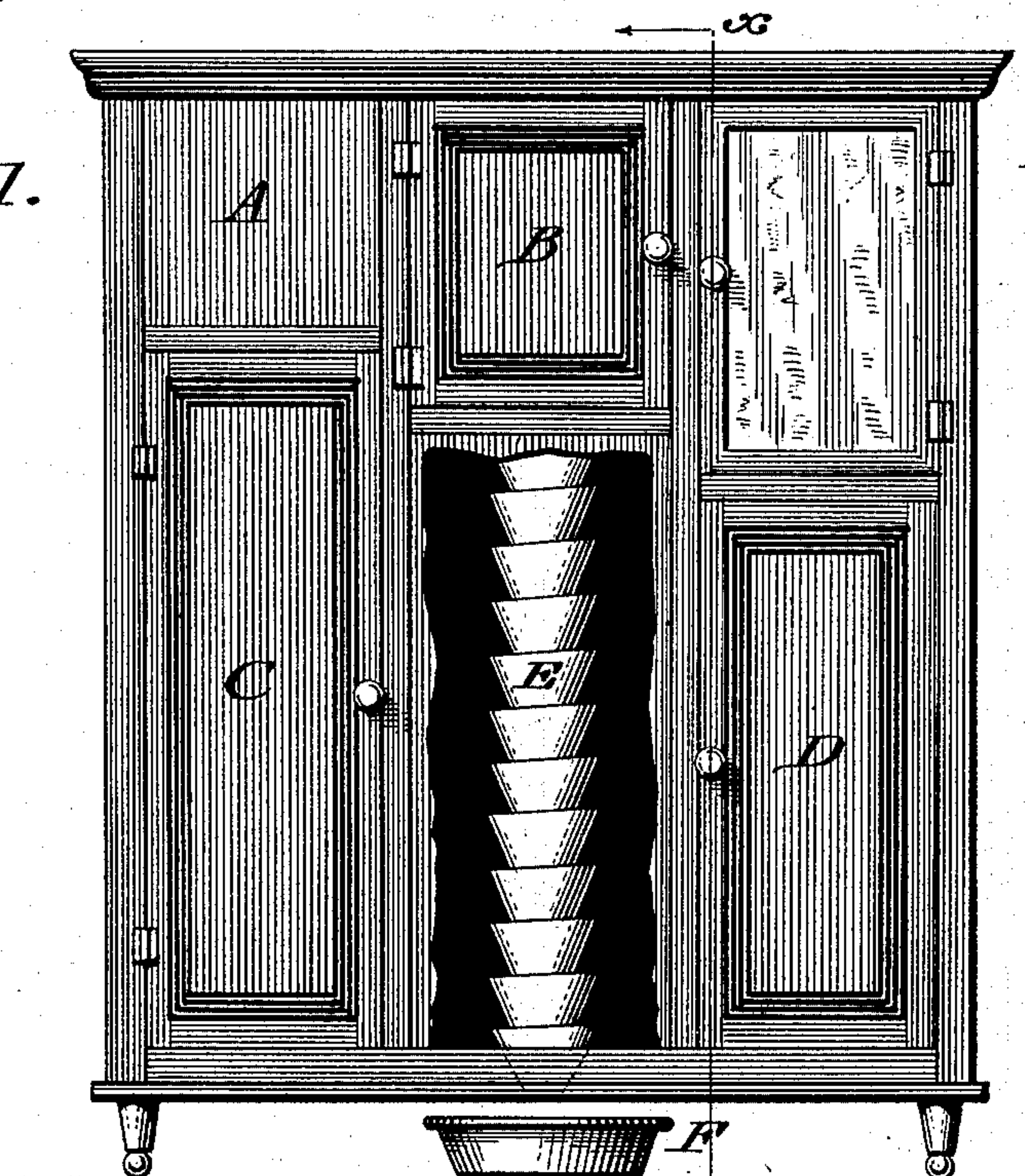


Fig. 3.

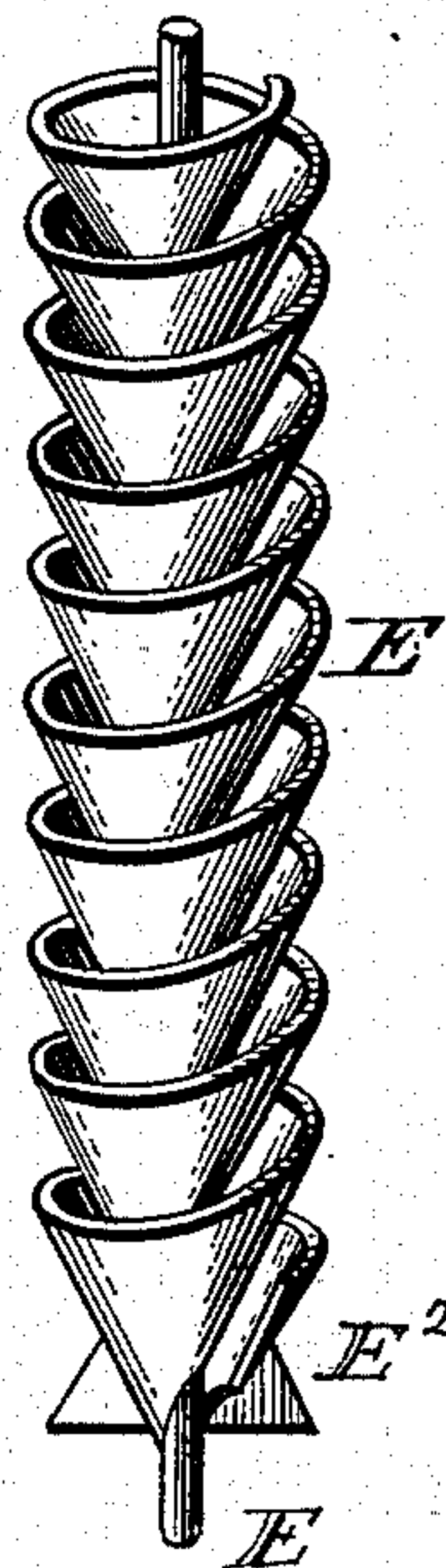
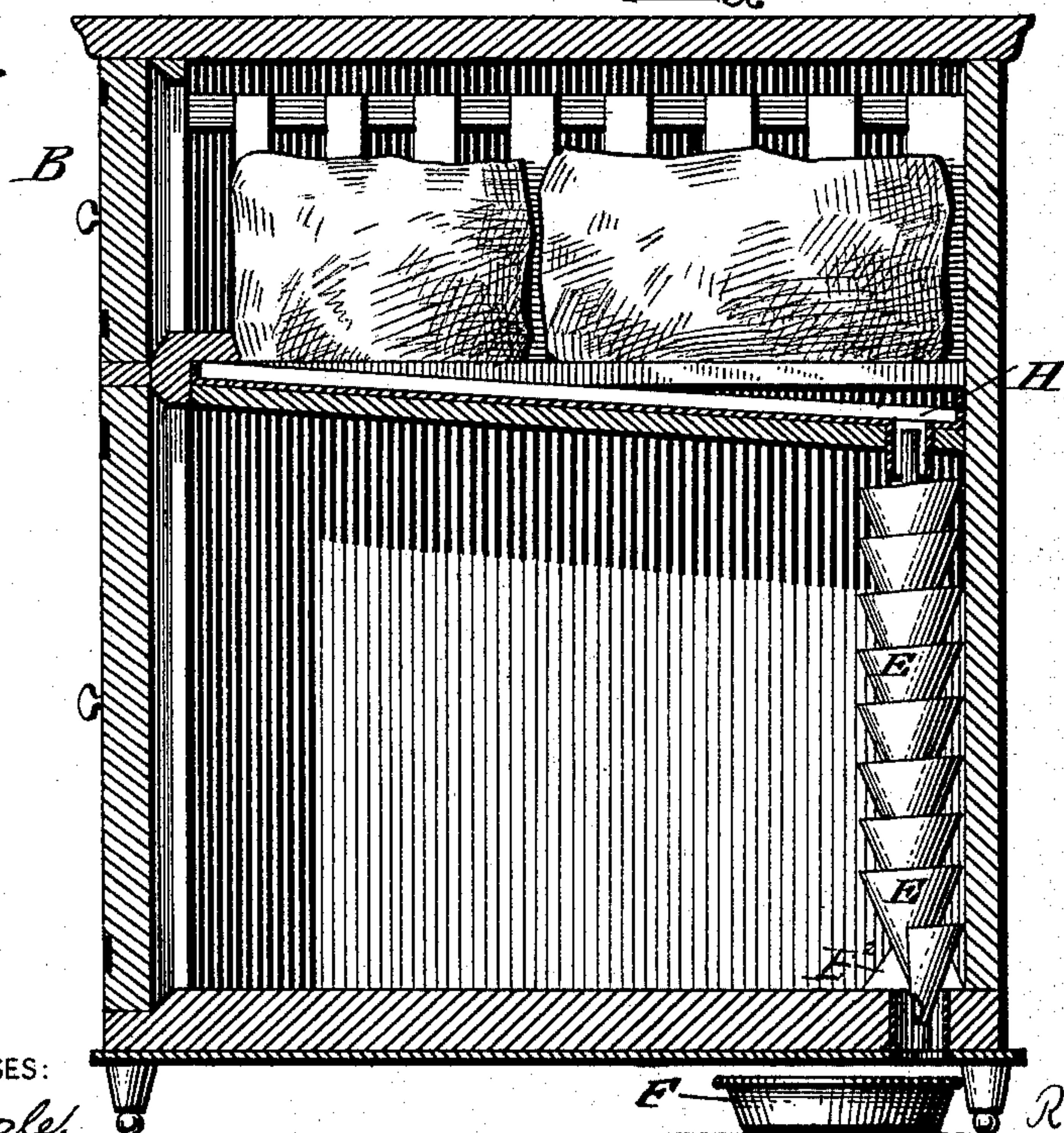


Fig. 2.



WITNESSES:

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REFRIGERATOR.

SPECIFICATION forming part of Letters Patent No. 413,578, dated October 22, 1889.

Application filed April 11, 1887. Serial No. 234,382. (No model.)

To all whom it may concern:

Be it known that I, ROBERT P. STEEL, a citizen of the United States, residing in the city and county of Philadelphia, State of Pennsylvania, have invented a new and useful Improvement in Refrigerators, which improvement is fully set forth in the following specification and accompanying drawings, in which—

Figure 1 of the drawings shows a front elevation of a refrigerator with a part broken away, just sufficient to disclose my improvement in the rear of the refrigerating-box. Fig. 2 is a cross-section of Fig. 1, taken on line *xx*, Fig. 1, showing the ice-box and my improved drip-trough or conduit. Fig. 3 is a detail perspective view of the drip-trough or conduit.

Similar letters of reference indicate corresponding parts in the several figures.

The object of my invention is to supply refrigerators with a novel form of drip-trough for conducting the drip from the ice-box to the drip-pan ordinarily arranged below the refrigerating-chamber, as shown in Fig. 2; and to this end it consists in a novel apparatus, which is hereinafter described, and particularly pointed out in the claims.

Prior to my invention it was customary to allow the drip to fall from the ice-box through the refrigerating-chamber into a drip-pan or to conduct it by zigzag shelves back and forth to the same point, or to allow it to fall upon suspended wires, which broke it into spray, and in these ways increased evaporation was attained. My invention, however, is an improvement upon all of these devices.

Referring to the drawings, A represents the refrigerator; B, the door to the ice-box; C D, the doors to the refrigerating chamber or chambers, and E the drip-trough or conduit, of spiral form, as clearly shown in Fig. 3. This trough or conduit, which is formed with a central stem E', has a large spiral evaporating-surface, which extends from the bottom of the refrigerator to a point just below the drip-tube attached to the bottom of the ice-box, and in such manner that the escaping drip drops on the spiral surface and is carried down toward the drip-pan. By increasing the surface of the drip-pipe, as described, the temperature of the refrigerating-chamber is lowered, thus utilizing the escaping water as an additional means for cooling said chamber. The upper end of the stem E' of the

drip-trough is loosely inserted in an opening in an inclined tray located below the floor of the ice-box, the said tray and floor forming the passage H, from which the drip passes into the trough E. The lower end of the stem E' is loosely inserted in an opening in the bottom of the refrigerator, and is provided with a supporting-foot E², which rests on the bottom of the refrigerator on opposite sides of the opening, so that the drip-trough does not come in contact with the walls of the said opening, and thereby prevent the escape of an overflow of the drip-trough from the chamber through the said opening.

As before indicated, I am aware that it is old in the art to cause the drip to take a zigzag course through the refrigerating-chamber by allowing it to fall from one to another of a series of inclined troughs until it finally reaches the drip-pan, and also to spray the drip by letting it fall on suspended rods or wires in its descent. I am also aware that it is not new to bend the pipe in a zigzag or serpentine shape and to provide the same with perforations. I therefore lay no claim to these features, my invention being in the nature of an improved apparatus for giving increased evaporation.

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

1. In a refrigerator, an ice box or chamber in its upper portion, an inclined tray below said ice-chamber forming a drip-passage between the same and provided with an opening at its lowest end, and a refrigerator-chamber with a spiral drip-trough, having the upper end of the stem inserted in said opening in the tray and its lower end inserted in an opening in the refrigerator-chamber floor, said parts being combined substantially as and for the purpose set forth.

2. A refrigerator having an ice chamber or box, a tray, and a drip-trough of spiral form with a central stem with prolonged ends, the upper end being inserted in the tray and the lower end thereof in the floor, said trough being also provided with a foot which rests on the said floor, said parts being combined substantially as described.

ROBERT P. STEEL.

Witnesses:

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