

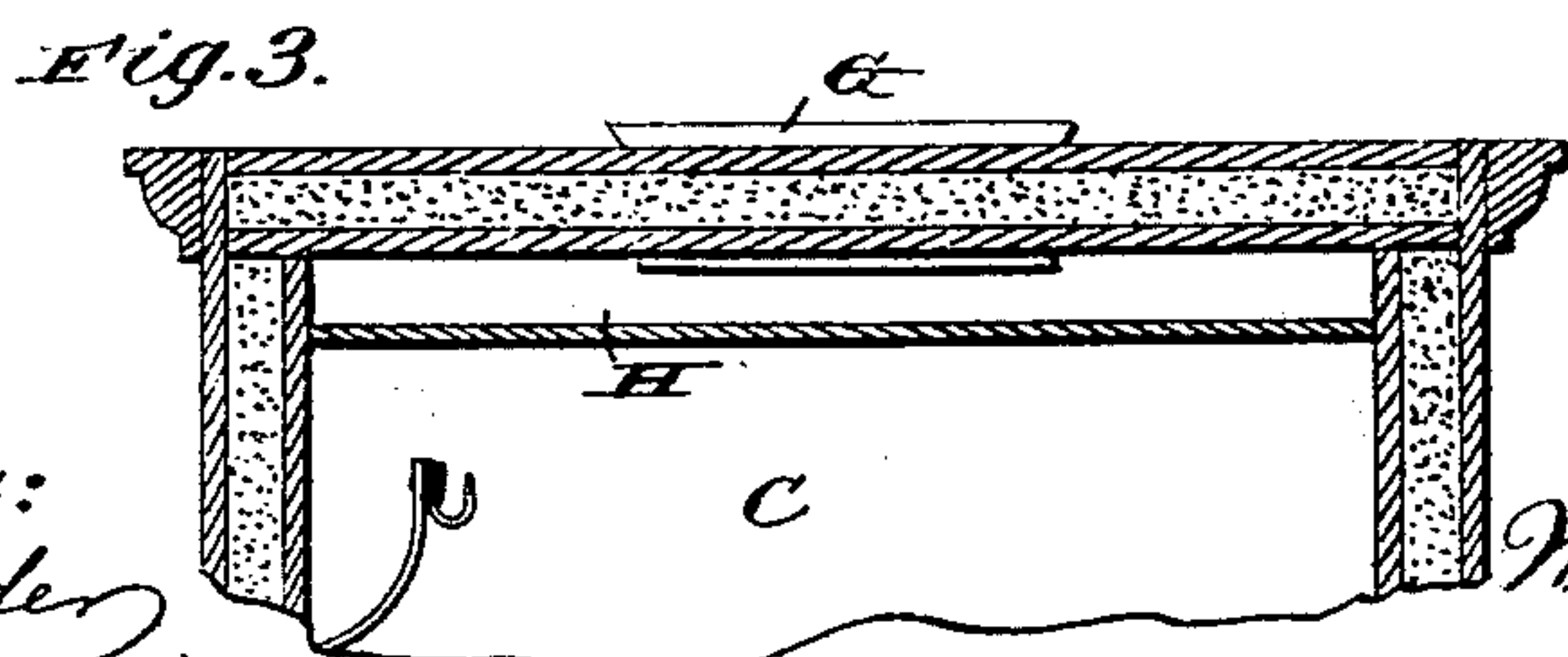
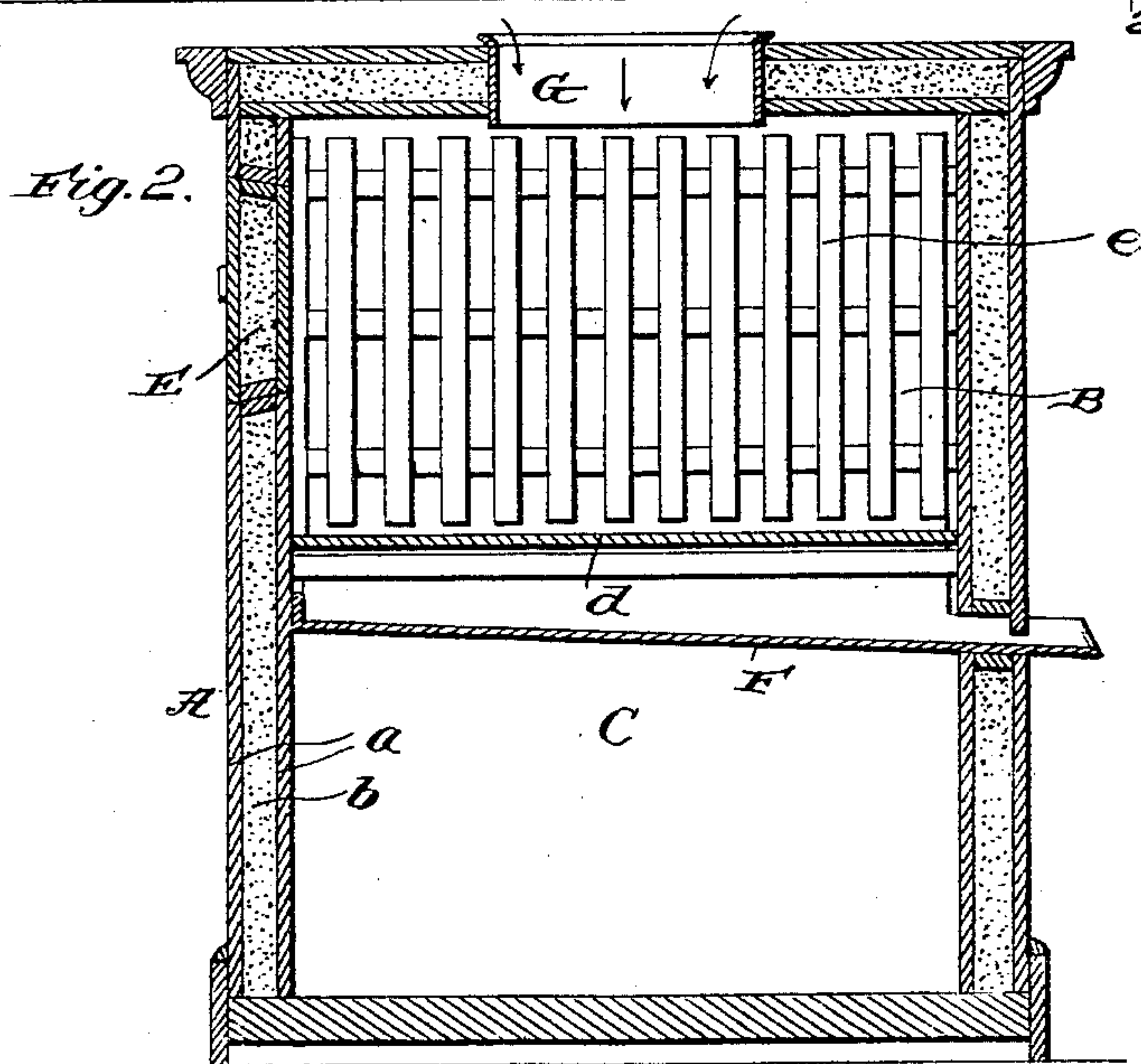
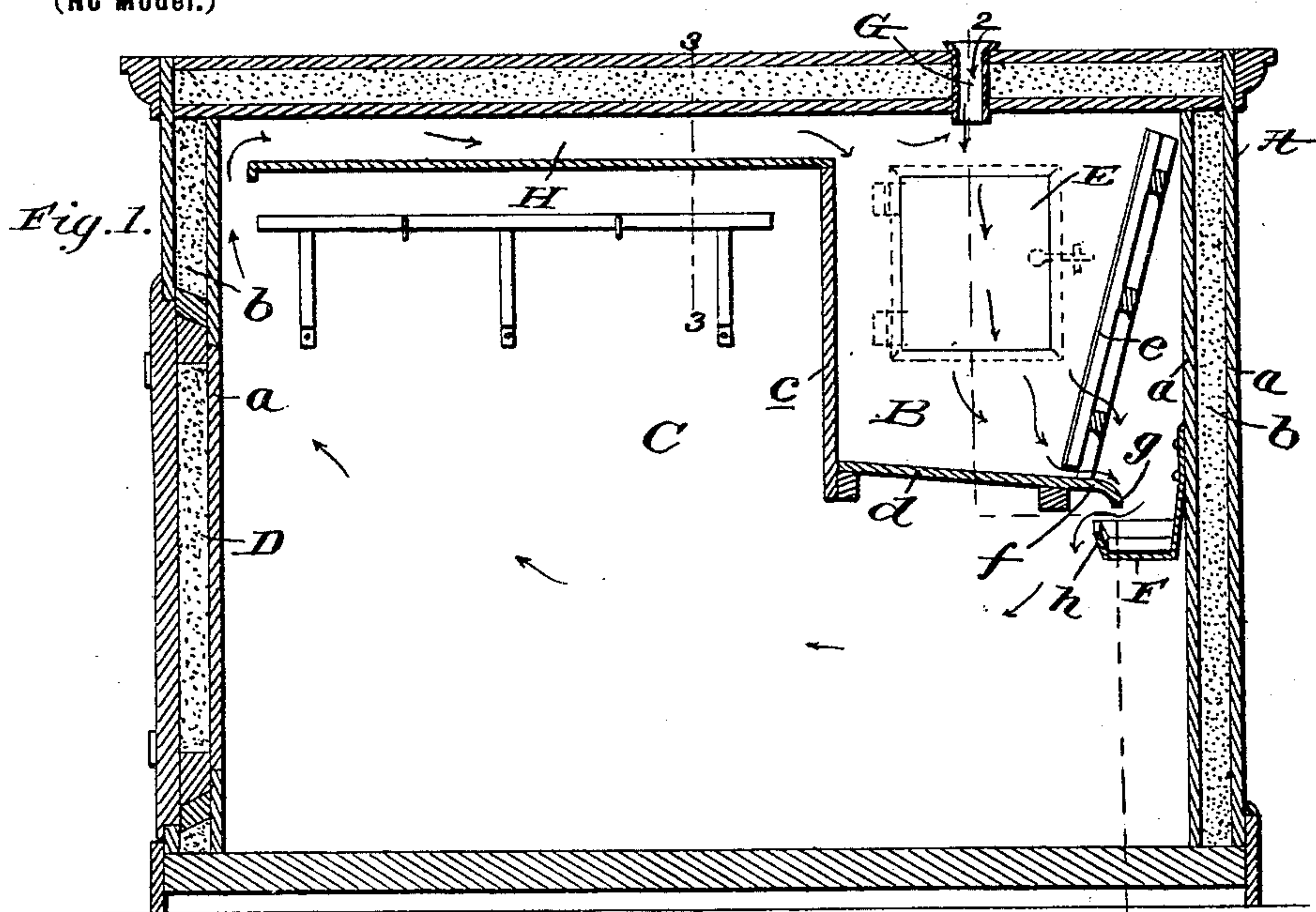
No. 677,380.

Patented July 2, 1901.

W. THOMAS.
REFRIGERATOR.

(Application filed Jan. 10, 1901.)

(No Model.)



witnesses:

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UNITED STATES PATENT OFFICE.

WILLIAM THOMAS, OF PITTSBURG, PENNSYLVANIA.

REFRIGERATOR.

SPECIFICATION forming part of Letters Patent No. 677,380, dated July 2, 1901.

Application filed January 10, 1901. Serial No. 42,786. (No model.)

To all whom it may concern:

Be it known that I, WILLIAM THOMAS, a citizen of the United States, residing at Pittsburg, in the county of Allegheny and State of Pennsylvania, have invented new and useful Improvements in Refrigerators, of which the following is a specification.

My invention relates to refrigerators, and contemplates the provision of a refrigerator embracing a simple and inexpensive construction calculated to insure the constant circulation of dry cold air from an ice-chamber through a cooling or refrigerating chamber and thence back to the ice-chamber.

Other advantageous features of the invention will be fully understood from the following description and claim when taken in conjunction with the annexed drawings, in which—

Figure 1 is a vertical longitudinal central section of a refrigerator embodying my invention. Figs. 2 and 3 are transverse sections taken in the planes indicated by the broken lines 2 2 and 3 3, respectively, of Fig. 1.

In the said drawings similar letters designate corresponding parts in all of the several views.

The casing A of the refrigerator, which may be of any suitable shape, preferably comprises the usual inner and outer walls *a* and an interposed filling *b*, of suitable non-conducting material. It incloses an ice-chamber B and a refrigerating or cooling chamber C and is provided with doors D E, the former opening into the refrigerating-chamber, so as to permit of the ready introduction and removal of food products, and the latter communicating with the ice-chamber, so as to admit of the supply of ice being replenished whenever necessary.

The ice-chamber B is located at the upper portion of the end of the casing remote from the door D and is formed by the side and top walls of the casing, in conjunction with a transverse vertically-disposed and imperforate wall *c*, which divides the ice-chamber from the refrigerating-chamber, an imperforate bottom wall *d*, and a transverse vertically-oblique wall *e*, the latter being arranged adjacent to the end wall of the casing and being of open-work construction, so as to

enable it to retain the ice in the chamber and permit of the passage of cold air, as presently described.

As best shown in Fig. 1, the bottom wall *d* of the ice-chamber B is extended beyond the wall *e*, as indicated by *f*, and is provided with a depending lip *g*, which overhangs the adjacent side wall *h* of a transversely-disposed trough F. The said trough is preferably of metal and is passed through an opening in one of the side walls of the casing after the manner shown in Fig. 3. By virtue of this construction the water formed by melting ice is quickly deposited in the trough F and carried by the same out of the refrigerator, which is advantageous, since it insures the dryness of the air subjected to the cooling action of the ice and prevents the same being laden with moisture prior to its passage into the refrigerating-chamber C.

G is a passage or opening formed in the top wall of the casing A, above and in communication with the ice-chamber B. This passage is provided for the entry of atmospheric air and is normally open, so as to enable the ice to draw such air into the refrigerator.

H is a flue which is arranged adjacent to the top wall of the casing and is preferably of a width corresponding to that of the interior of the casing, as best shown in Fig. 3. The said flue H communicates at one end with the upper portion of the ice-chamber B and extends therefrom to a point adjacent to the end wall of the casing remote from the ice-chamber. It is designed to receive the air after it has passed through the refrigerating-chamber among the food products therein and become more or less heated and conduct it back to the cooling-chamber.

In the practical operation of my improved refrigerator the ice in the chamber B draws atmospheric air into the said chamber through the conduit or passage G. This air is cooled by the ice in chamber B and descends through the open-work wall *e* and passes between the extension *f* of wall *d* and the trough F into the refrigerating-chamber C. Here it circulates among and refrigerates the food products placed in said chamber C, and when it has become more or less heated by its contact with said products it passes up into the flue H and

through the same back to the ice-chamber, where in company with fresh air drawn in through the conduit G it is again cooled and caused to again take the course described.

5 The removal of water from the chamber B and the refrigerator in the manner described as soon as it is formed by melted ice is an important feature of my invention, since it prevents the air being laden with moisture and
10 insures the passage of dry cold air only through the refrigerating-chamber.

I prefer to employ the passage or conduit G in my improved refrigerator, since the entry of fresh air into the ice-chamber and its subsequent passage into the refrigerating-chamber renders the latter at all times pure and wholesome. I do not desire, however, to be understood as confining myself to the use of
15 passage G, as when it is omitted a constant circulation of dry cold air through the refrigerating-chamber will be maintained.

Notwithstanding its advantages, as above pointed out, it will be observed that my improved refrigerator is simple and inexpensive
25 in construction. It will also be observed that the refrigerating-chamber is of large capacity, while the chamber necessary to hold a sufficient amount of ice is comparatively small.

Having thus described my invention, what
30 I claim is—

In the refrigerator described, the casing containing a refrigerating-chamber and an ice-chamber, the latter being located in the upper

portion of the casing at one end thereof and formed by the imperforate upright wall arranged adjacent to the refrigerating-chamber, the open-work upright wall *e* arranged remote from the refrigerating-chamber, and the imperforate bottom wall extending between the walls *c* and *e* and having the depending lip *g* at its edge remote from the refrigerating-chamber, the transverse trough arranged below the bottom wall of the ice-chamber and so that one of its walls is overhung by the lip *g* of said bottom wall, and a
35 passage for air is formed between it and said lip; the said trough extending throughout the width of the casing and outside the same so as to carry off water as soon as the same is received from the ice-chamber, and the flue arranged adjacent to the top of the casing and communicating at one end with the upper portion of the ice-chamber and extending therefrom to a point adjacent to the opposite end
40 of the casing whereby it is adapted to receive air from the upper corner of the refrigerating-chamber and thereby insure the circulation of air throughout the length of said refrigerating-chamber, as specified.

In testimony whereof I have hereunto set
45 my hand in presence of two subscribing witnesses.

WILLIAM THOMAS.

Witnesses:

ANDREAS MÜLLER,
ANTON ZAHNER.