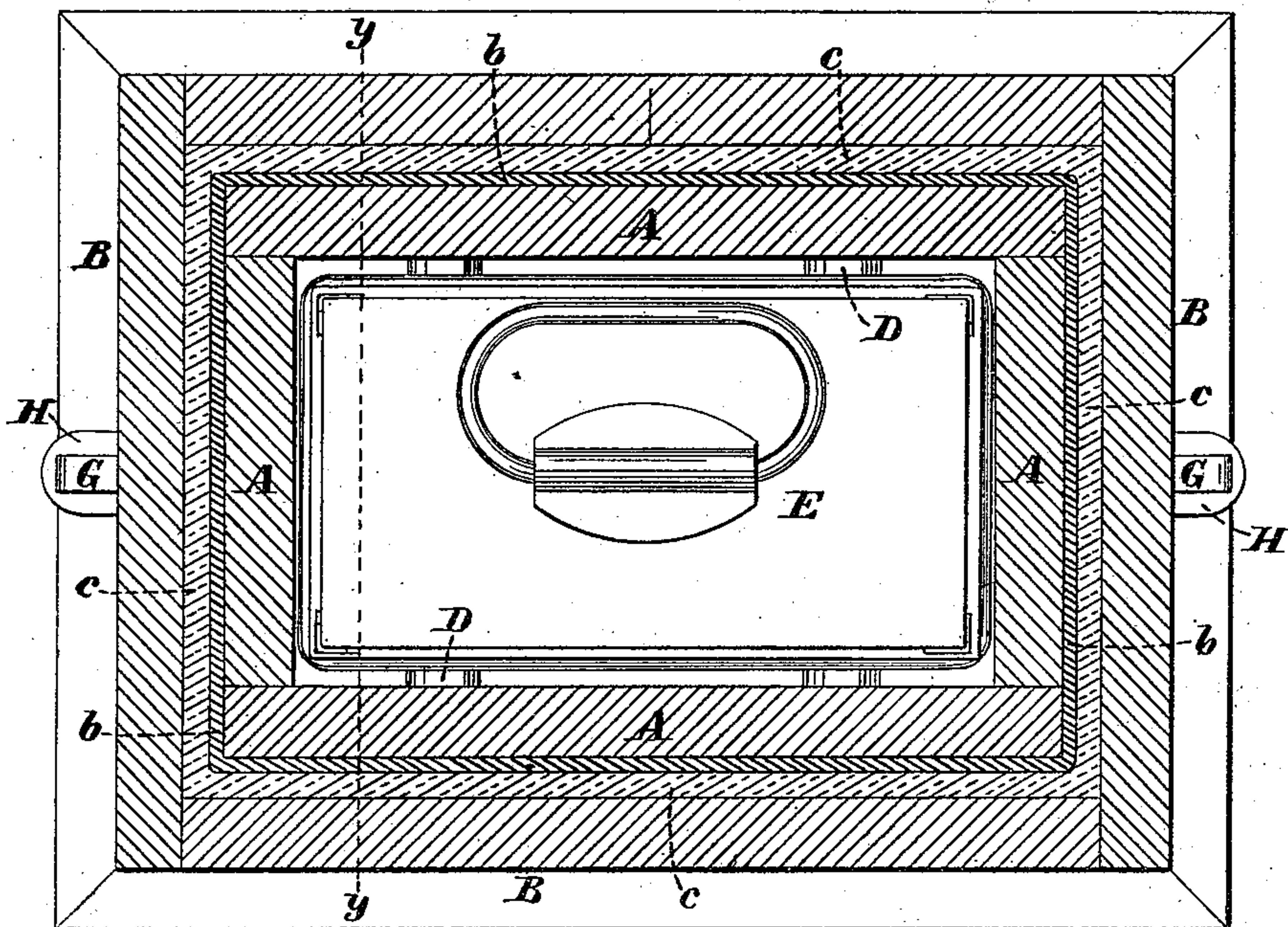
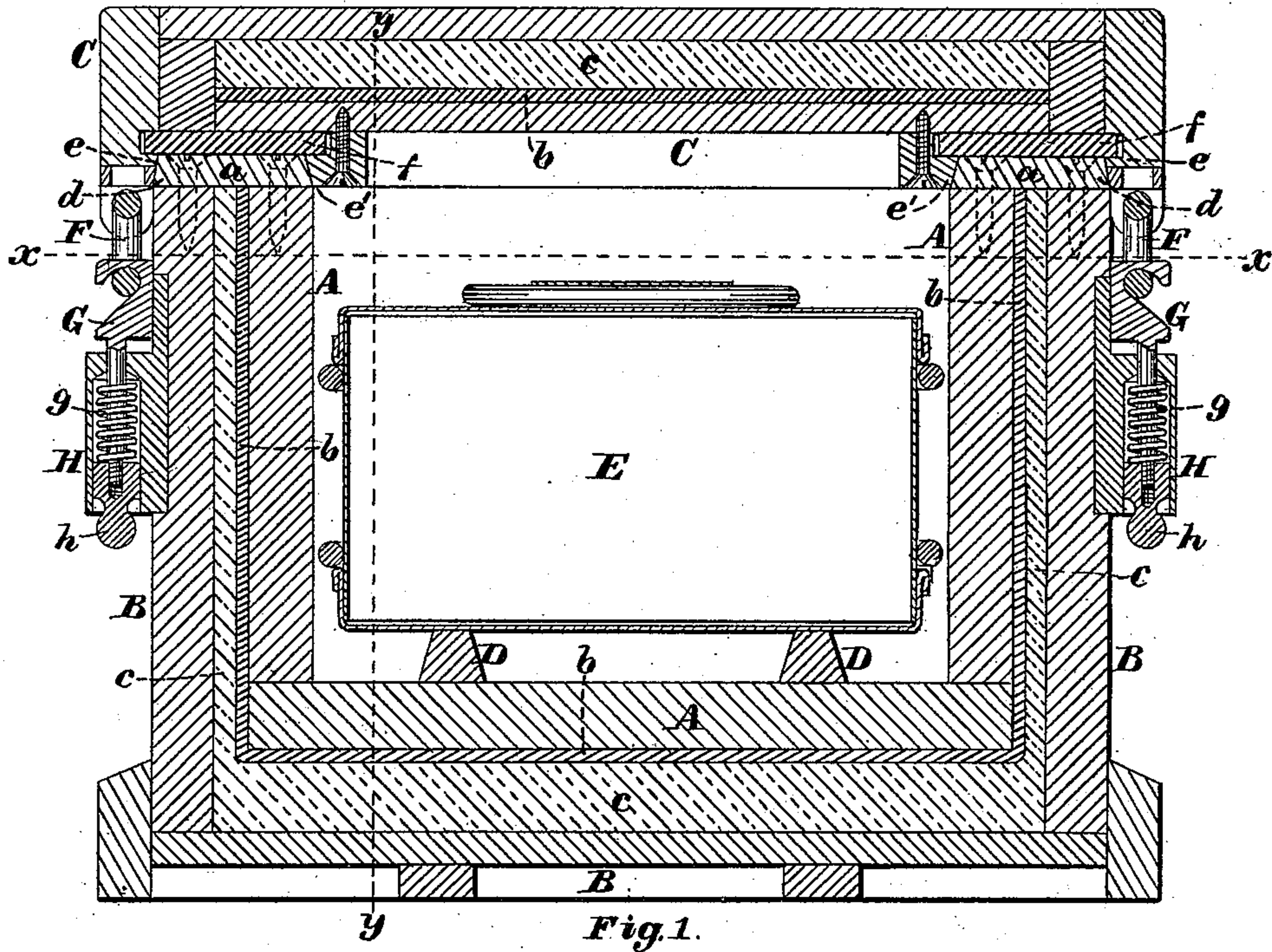


J. DOOLING.
Refrigerator Packing Box.
No. 230,252. Patented July 20, 1880.



Witnesses:

O. A. Hemmenway.
F. L. Wallis.

Inventor:

James Dooling
by N. Lombard
Attorney.

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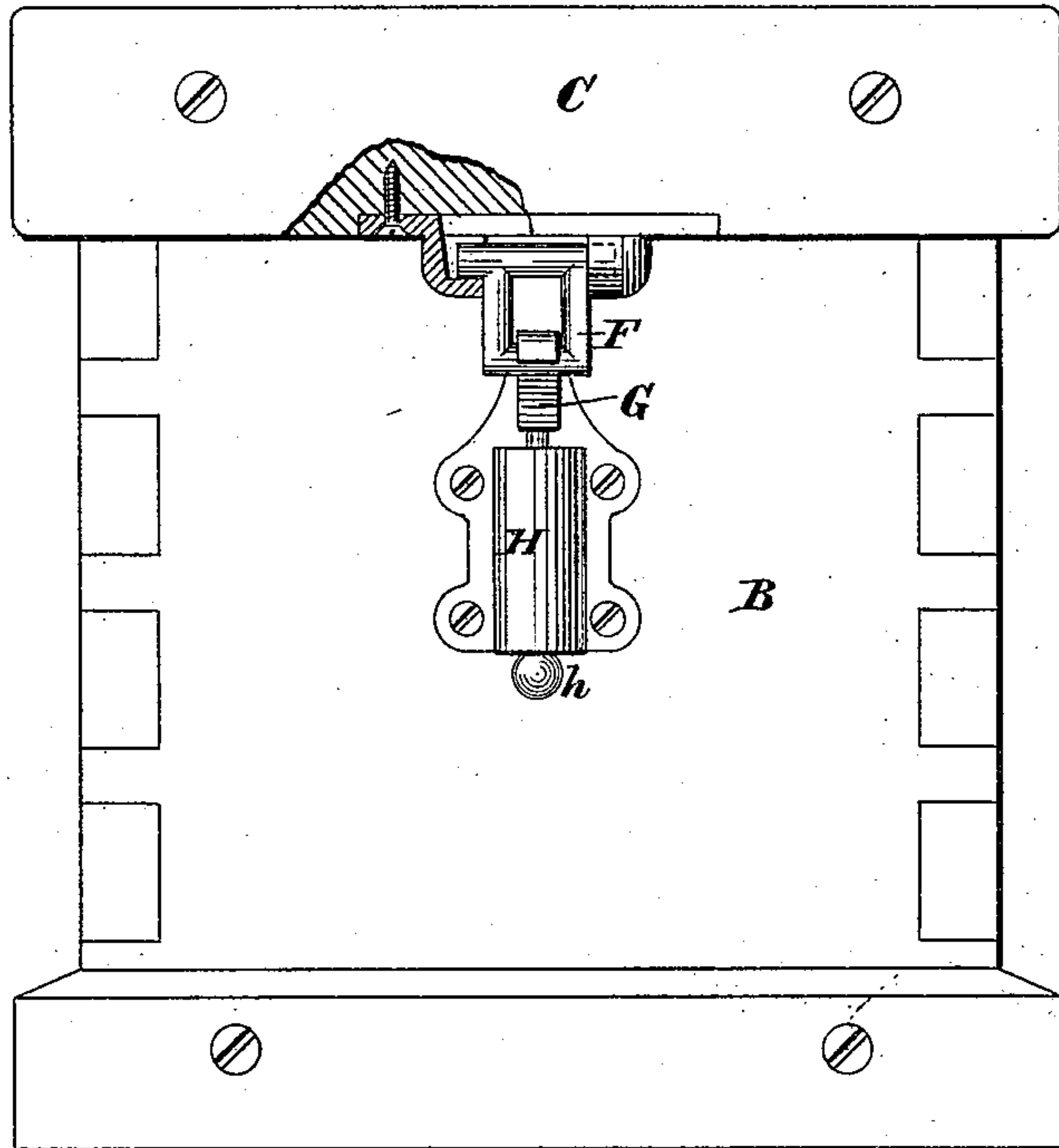


Fig. 3.

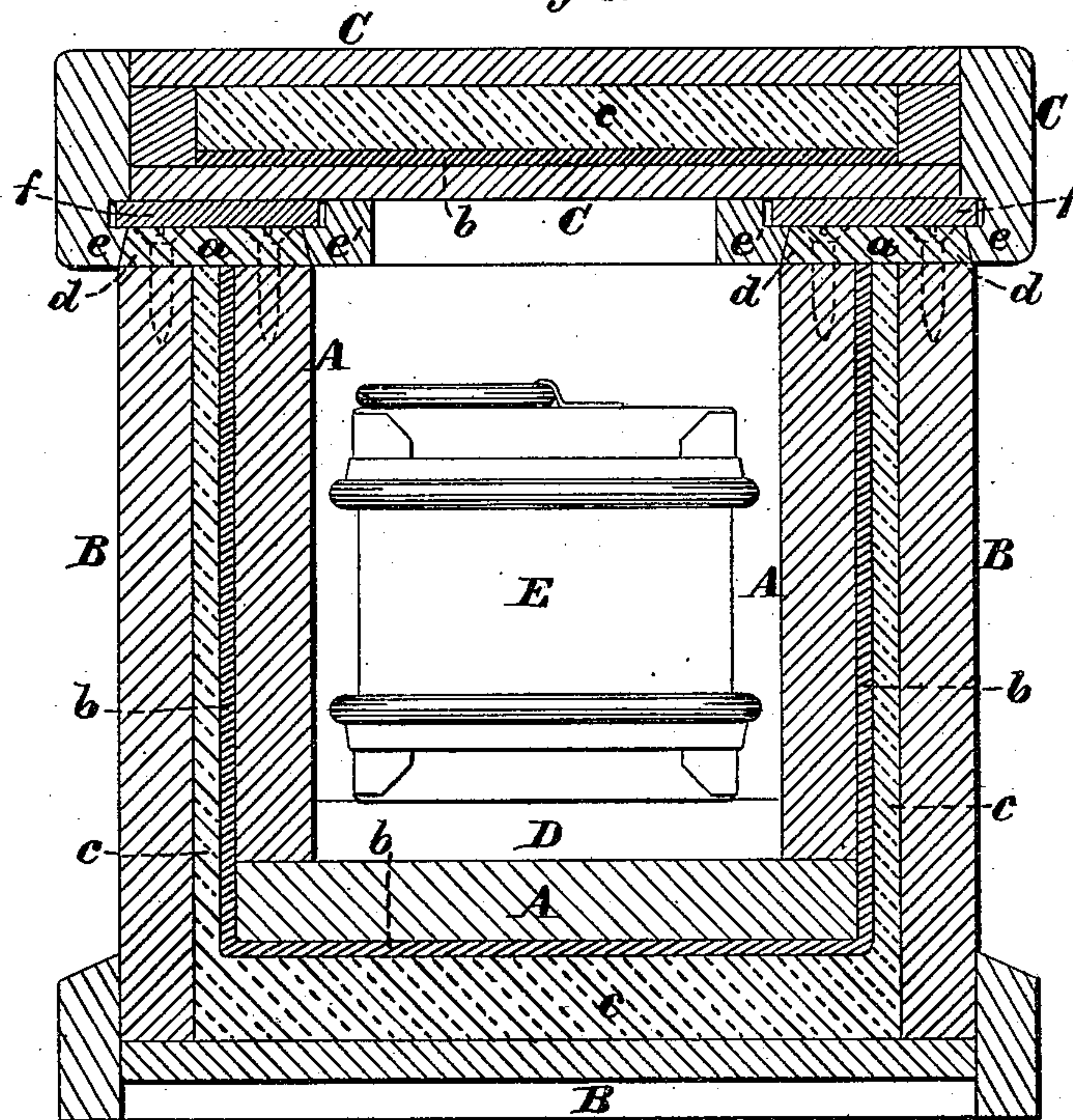


Fig. 4.

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UNITED STATES PATENT OFFICE.

JAMES DOOLING, OF BOSTON, MASSACHUSETTS.

REFRIGERATOR PACKING-BOX.

SPECIFICATION forming part of Letters Patent No. 230,252, dated July 20, 1880.

Application filed February 27, 1880.

To all whom it may concern:

Be it known that I, JAMES DOOLING, of Boston, in the county of Suffolk and State of Massachusetts, have invented a new and useful Process and Apparatus for Preserving Perishable Articles, of which the following, taken in connection with the accompanying drawings, is a specification.

My invention relates to an improved apparatus for preserving perishable articles, and especially such articles as require to be kept in a temperature below the freezing-point, and is especially adapted to maintaining ice-cream and other articles of like nature in a frozen state during the interval between its manufacture and use, and has for its object a material reduction in the cost of such maintenance; and it consists in a packing-box having a removable cover, in combination with a rubber packing permanently secured to said cover in position to engage with the upper edge of the box, and a spring clamping or fastening device for securing said cover to the box, and adapted to press the rubber packing hard upon the edge of the box, and thereby close said box air-tight.

Figure 1 of the drawings is a central vertical longitudinal section of my improved ice-cream packing-box adapted for a single mold of the brick or rectangular form. Fig. 2 is a horizontal section on line *x x* on Fig. 1. Fig. 3 is an end elevation with a small portion cut in section to show the construction of a portion of the fastening, and Fig. 4 is a vertical transverse section on line *yy* on Figs. 1 and 2.

My improved packing-box is made up of an inner box, A, an outer box, B, and a hollow cover, C, all made preferably of wood, the inner and outer boxes, A and B, being made of such sizes relative to each other that when placed one within the other there shall be a dead-air space between their walls and bottoms, the two boxes being connected together only at their upper edges by the cap-plates *a a*.

The outer surface of the box A is inclosed in a coating, *b*, of paraffine-wax, and this in turn is enveloped in a covering of felt, *c*, which fills, or nearly fills, the space between the paraffine coating of the inner box and the inner surface of the outer box, as shown. The cover C is also made hollow or double, and the space

between the inner and outer board of the cover is filled, or nearly filled, with a coating of paraffine and a packing of felt, in the same manner as the space between the walls of the two boxes A and B is filled.

The paraffine coating may be applied to the inner surface of the outer box, B, and the outer board of the cover, instead of to the inner board and box, or it may be applied to both the inner and outer boxes and boards without affecting the principles of my invention.

D D are ribs secured in the bottom of the box A, to support the cream-mold E in a position sufficiently raised above the bottom of said box to permit a free circulation of air beneath it.

The receptacle illustrated in the drawings is adapted to a single mold, E, which nearly fills it, leaving just sufficient space all around said mold for the free passage of air from the top to the bottom, or vice versa, with room enough above the mold for a thin layer of broken ice whenever it may be desirable to use ice.

The upper inner and outer corners of the receptacle are beveled, as shown at *d d*, to receive the correspondingly-beveled lips *e* and *e'* of the cover C, which fit closely thereto, and aid in rendering the receptacle air-tight when said cover is forced to its seat and retained there by the fastening, to be hereinafter described. The cover C is also provided with the rubber packing *f*, which rests upon the plates *a a*, forming the upper edge of the receptacle, and by its yielding and elastic nature packs the joint between the receptacle and the cover to make it air-tight.

The cover C is secured in position by means of a spring-fastening adapted to force the cover hard down upon the box with sufficient force to compress the rubber packing, and thus render the box air-tight, and at the same time adapted to be readily and easily disconnected from the cover to enable it to be removed. As this fastening device is to form the subject-matter of another application, it need not be described in detail here.

These packing-boxes are designed to be made of various sizes, adapted to receive one or any desired number of molds or other articles, and by their use the expense of preserving ice-cream and kindred articles during the interim be-

tween their manufacture and use is very much reduced.

Heretofore ice-cream molds have been packed in tubs or buckets open at the top and filled with a mixture of ice and salt, which entirely surrounds the mold or molds, and is several inches thick. This, although very effectual in preserving the cream in a frozen state if not kept too long, is quite expensive on account of the quantity of ice and salt used, and again on account of the great weight to be transported, which is quite an item when large quantities are to be sent some distance, as is quite often the case. Another objection to the old way is that the ice, being exposed to the warm atmosphere of summer, soon melts, and the cream cannot, as a consequence, be kept frozen as long as it is sometimes desirable to keep it, and it sometimes happens that the salt-water comes in contact with the cream and spoils it. These difficulties are all overcome by the use of my improved process and packing-box, either with a small quantity of ice spread over the top of the mold and confined in an air-tight receptacle, so as to prevent contact with the warm atmosphere outside, or by packing the molds in the same air-tight and non-heat-conducting box in an atmosphere at a tempera-

ture below freezing without the use of any ice in the packing-box.

It will be seen on reference to the drawings that the rubber packing *f* is permanently attached to the cover C, and is removable from the box therewith.

What I claim as new, and desire to secure by Letters Patent of the United States, is—

1. An ice-cream packing-box provided with a removable cover, in combination with the rubber packing *f*, permanently secured to said cover and removable therewith, and a spring clamping or fastening device for securing said cover to the box and rendering it air-tight, substantially as described.

2. A refrigerating-receptacle having a double-beveled upper edge, as at *d d*, in combination with a cover provided with the beveled lips *e* and *e'* and the rubber packing *f*, and a spring clamping or fastening device for securing said cover to the receptacle, substantially as described.

Executed at Boston, Massachusetts, this 24th day of February, A. D. 1880.

JAMES DOOLING.

Witnesses:

E. A. HEMMENWAY,
F. G. WALLIS.