

H. BRÜGGEN. Refrigerator.

No. 224,383.

Patented Feb. 10, 1880.

Fig: 1.

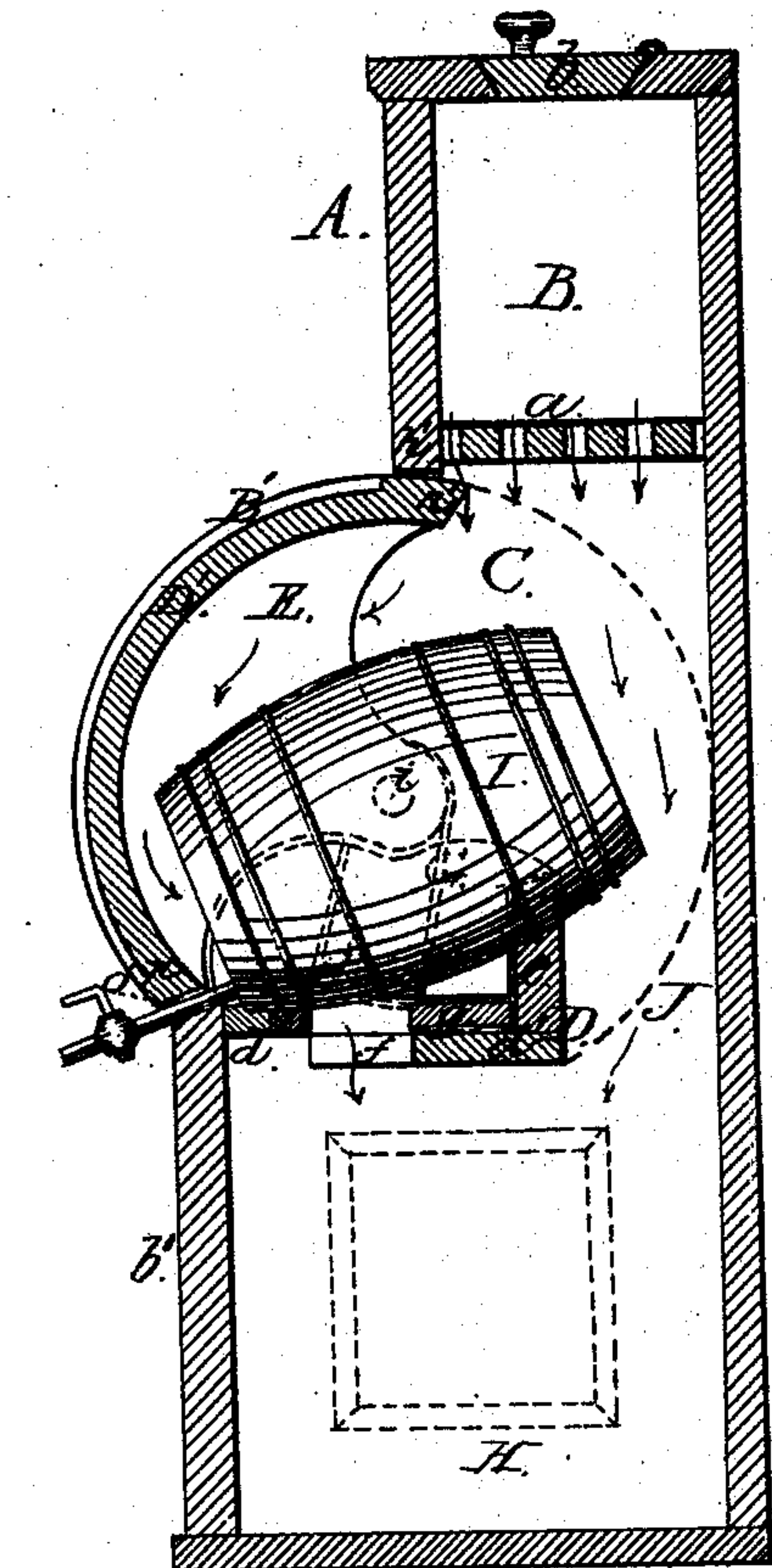


Fig: 2.

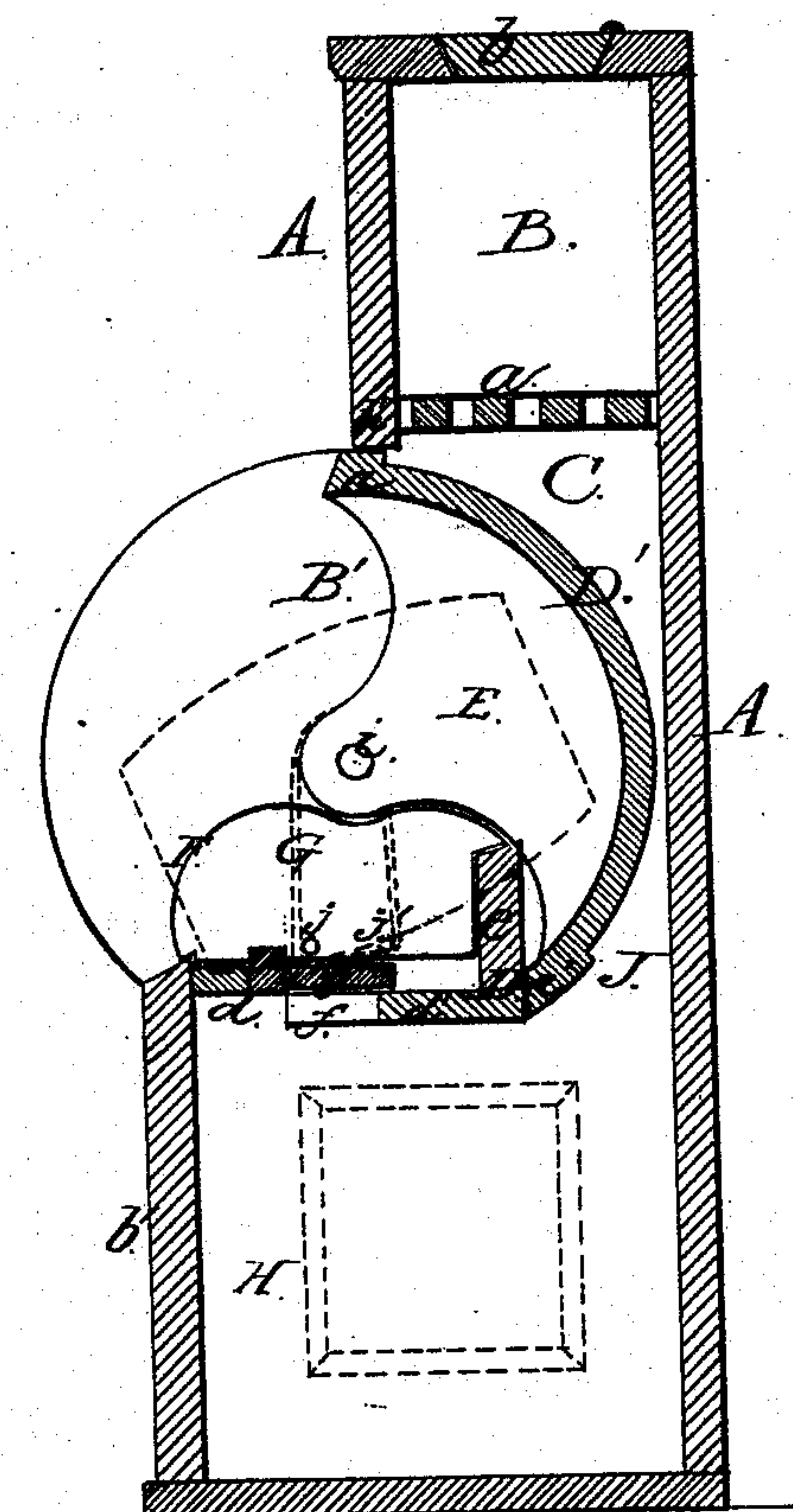
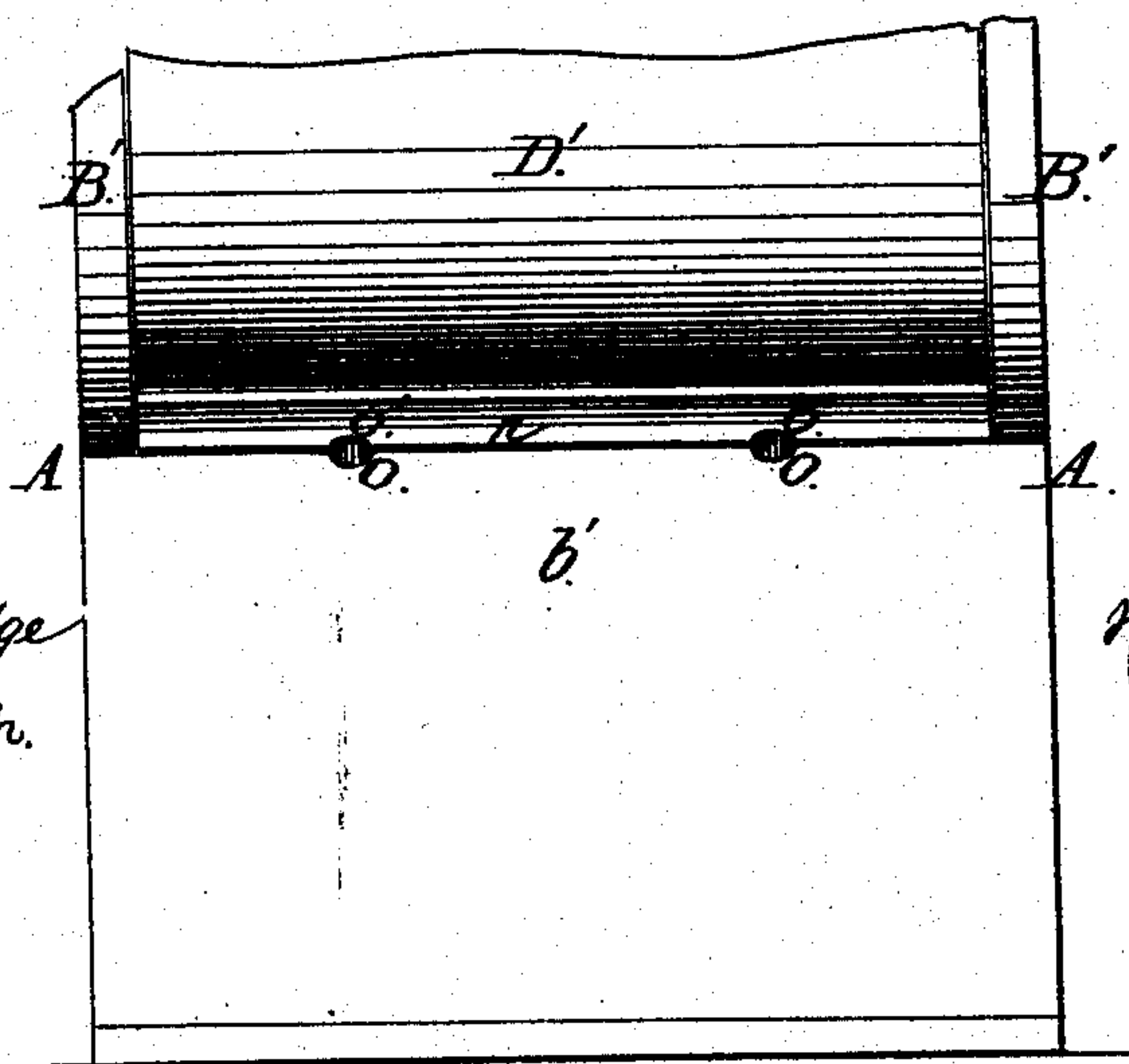


Fig: 3.



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UNITED STATES PATENT OFFICE.

HANS BRÜGGEN, OF NEW YORK, N. Y.

REFRIGERATOR.

SPECIFICATION forming part of Letters Patent No. 224,383, dated February 10, 1880.

Application filed December 10, 1879.

To all whom it may concern:

Be it known that I, HANS BRÜGGEN, of the city, county, and State of New York, have invented an Improved Ice-Box, of which the following is a specification.

My invention relates to improvements in ice-boxes for the reception and cooling of barreled beer and ale, and for other similar purposes which necessitate frequent opening and closing of the cooling-chamber containing the barrels of beer, &c.

The object of my invention is to prevent the escape of the cold air from the ice-box and the access of the warmer exterior air to the ice-box when the cooling-chamber containing the barrels of beer, &c., is opened, and also to insure a free circulation when the said chamber is closed throughout said chamber and other parts of the ice-box.

My invention consists of a cooling-chamber for the barrels, kegs, &c., provided with a suitable bench for the kegs, &c., which cooling-chamber communicates with an ice-chamber and has a sliding bottom and a revolving cover or front, which is connected with the sliding bottom of said chamber, so as to close or open (as the case may be) a chamber below the cooling-chamber. The said lower chamber is for the reception of bottled beer and ale and other articles to be cooled.

The invention also consists in providing openings for the faucets partly in the revolving cover, and in other details of improvement hereinafter more fully described.

In the accompanying drawings, Figure 1 is a vertical cross-section of my improved ice-box with a beer-keg in position and the cooling-chamber for the kegs closed, so as to permit a free circulation of cold air throughout the ice-box. Fig. 2 is a similar view of the ice-box with the revolving cover of the keg-chamber thrown back to open said chamber and at the same time prevent the escape of the cold air and the admission of warm air, said view also showing the connection between the revolving cover and the sliding bottom of the cooling-chamber. Fig. 3 is a partial front view of the box.

Referring to the drawings, A is a box or case having in its upper portion an ice-chamber, B, provided with a grated floor or bottom,

a, and in the top or front of the case is a suitable door, b, to give access to the ice-chamber B. Below the ice-chamber the case A is made broader, so that the front b' of the case below the ice-chamber B projects forward of the front of the ice-chamber.

C is the cooling-chamber or receptacle for the kegs of beer, ale, &c. In the chamber C is a bench or support, D, placed horizontally. The bench D is composed of two flat portions, d d', extending from the front b' of the case back to a little more than half the depth of the lower part of case A, where a right-angled back portion, e, is joined to the rear edge of the part d'. Between the parts d and d' is a longitudinal opening, f, and on top of part d' is the sliding bottom g of the cooling-chamber, which is adapted to slide forward against the part d, so as to cover the opening f, and to uncover said opening by sliding against the back e. Each side B' of the case inclosing the chamber C is projected forward to or beyond the front b'.

D' is the revolving cover or front of chamber C. Said cover or front is formed of the segment of a cylinder of a length as nearly as possible equal to the width of the case between its side walls, or, in other words, of about the same length as the chamber C.

Each end of the cover D' is provided with an end piece, E, which abuts against the inside of the side B', and is connected with the side B' by a pivot, such as is shown at i, so that the said end E and the cover D' will turn freely on said pivot. The pivots connecting the end pieces, E, with the sides B' form the center of the circle, of which the cover D' is a segment.

F is a lining-piece placed against the inside of each side B', and having its upper edge curved to make a close connection with the curved edge of the end E when the cover is opened or closed, as shown in Figs. 1 and 2.

G is a rope or chain passed through or otherwise attached to the end piece, E, just above the pivot i. One end of this rope G is carried down between plate F and side B' of the case in front of the pivot i, around and under the pin or pulley j, and is attached to the front edge of the sliding bottom g, and the other end of said rope is carried down behind the

pivot *i*, around and under a similar pin or pulley, *j'*, and likewise attached to the front edge of the sliding bottom.

By drawing on the front end of cord *G* the sliding bottom *g* is moved over the opening *f*, and by drawing on the back part of said cord the bottom *g* is moved back from over the said opening. Any other suitable mechanism for connecting the sliding bottom *g* with the ends of the revolving cover may be substituted for that just described.

But one end *E* of the revolving cover *D'* is shown; but the other end is arranged in precisely the same way as the one shown.

The sliding bottom *g* at the end (not shown) is connected with the adjacent end *E* of the revolving cover in the same manner as the one shown, so that the said sliding bottom will be operated at both ends simultaneously.

Below the chamber *C* is a chamber, *H*, which may be used for bottled ale, beer, and other articles to be cooled.

Access is had to chamber *H* through a suitable door on the sides or front of the case *A*, said door being shown in dotted lines.

The operation of the apparatus is as follows: Ice is placed in the chamber *B*, and the keg *I* is laid on the bench *D*, with its rear or inner end resting on the upright back *e* of the bench, whereby the keg is held in an inclined position, with the spigot lying in a semicircular notch, *o*, in the top of front *b'*, and projecting out at the front of the case. The revolving cover or door *D'* being now drawn forward to the position it occupies in Fig. 1, it extends from the top of the front *b'* of the case to the bottom edge, *h'*, of the front of the ice-chamber *B*, thereby closing the chamber *C*. In the lower edge, *n*, of the said cover *D'* are semicircular notches *o'*, coinciding with the notches *o*, into which notches *o'* the spigot enters when the cover is shut down. By drawing forward the cover *D'* in this manner the rope *G* is caused to draw the sliding bottom *g* back, so as to leave the opening *f* uncovered, as in Fig. 1. Thus arranged the cold air from the ice in chamber *B* passes down through the grated floor *a* and circulates through chamber *C*, around about the keg *I*, and passes down through the opening *f* and space *J*, between the bench *D* and the back of the case *A*, into the chamber *H*, where it serves to cool articles that may be placed in said chamber.

The direction the cold air can take when the ice-box is thus arranged is indicated by the arrows, whereby it is plainly shown that a complete circulation of the cold air through the chambers *C* *H* is obtained, and at the same time chamber *C* is closed by the revolving cover *D'*, so that no cold air can pass to the outside from said chamber, nor can any warm air enter it from the exterior.

Now, if it becomes necessary to open chamber *C* to remove the keg to place another one on the bench, or for any other purpose, the revolving cover *D'* is thrown back into chamber *C* behind the keg, so that its edge *n* will connect with the bottom edge, *h'*, of the front of the ice-chamber *B*, and its edge *n'* will be in contact with the back of bench *D*, as shown in Fig. 2, and by this movement of cover *D'* the rope *G*, acting on the sliding bottom *g*, draws the said sliding bottom forward, so as to cover the opening *f*, as in Fig. 2.

In this way the front of chamber *C* and the bench *D* are exposed, so that the keg can be removed, if necessary. At the same time, however, that part of chamber *C* back of cover *D'* is shut in by the said cover, so that no cold air is permitted to pass outside from the ice-chamber, nor can any pass out of the opening *f*, which is closed, nor can warm air enter the ice-box. Consequently, when the cover *D'* is thrown back to open chamber *C* at the front, the admission of warm air and the escape of cold air are entirely prevented; but when the cover is closed down the cold air is permitted to circulate freely throughout chambers *C* *H*.

The notches *o* *o'* in front *b'* and cover *D'*, respectively, are given the same inclination as the spigot, so that said spigot will lie in the said notches without restraint and without interfering with the close joining of the edge *n* of cover *D'* and the top of the front *b'*, as shown in Figs. 1 and 3.

This arrangement permits a close and approximately air-tight connection to be made between the front *b'* and cover *D'* when the spigots project out, and also allows the cover *D'* to be opened and closed when the spigots are in the keg.

I claim—

1. The combination of the ice-box having ice-chamber *B* and cooling-chamber *C* with the revolving cover *D'*, for operation substantially in the manner described.

2. In combination with the ice-box having chambers *B*, *C*, and *H*, the pivoted revolving cover *D'*, substantially as described.

3. The bench *D* in chamber *C*, provided with the opening *f*, in combination with the sliding bottom *g* and the revolving cover *D'*, which is connected with said sliding bottom *g*, substantially as described.

The above specification of my invention signed by me this 8th day of December, 1879.

HANS BRÜGGEN.

Witnesses:

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