

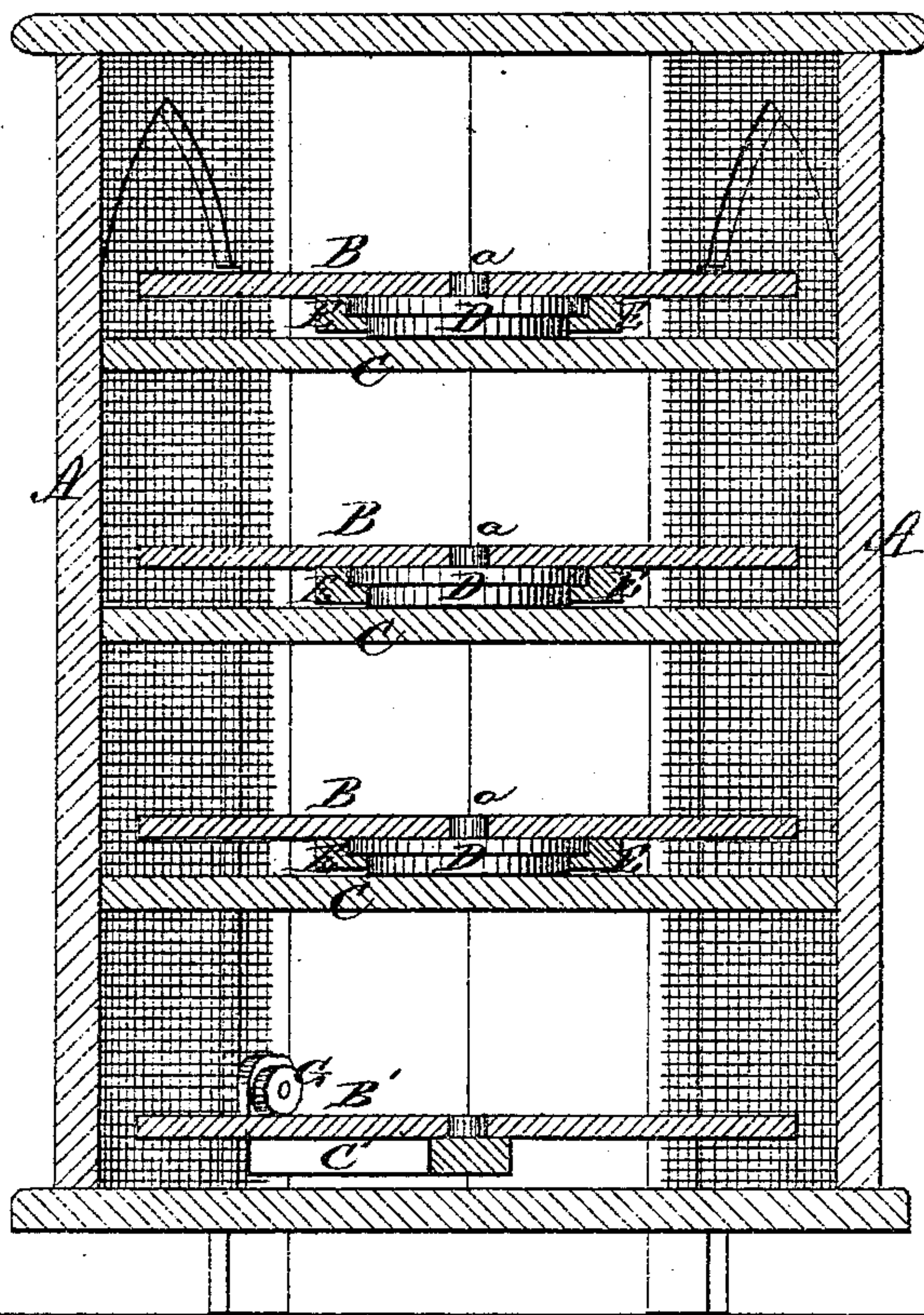
JAMES W. CASE.

Improvement in Milk Safes.

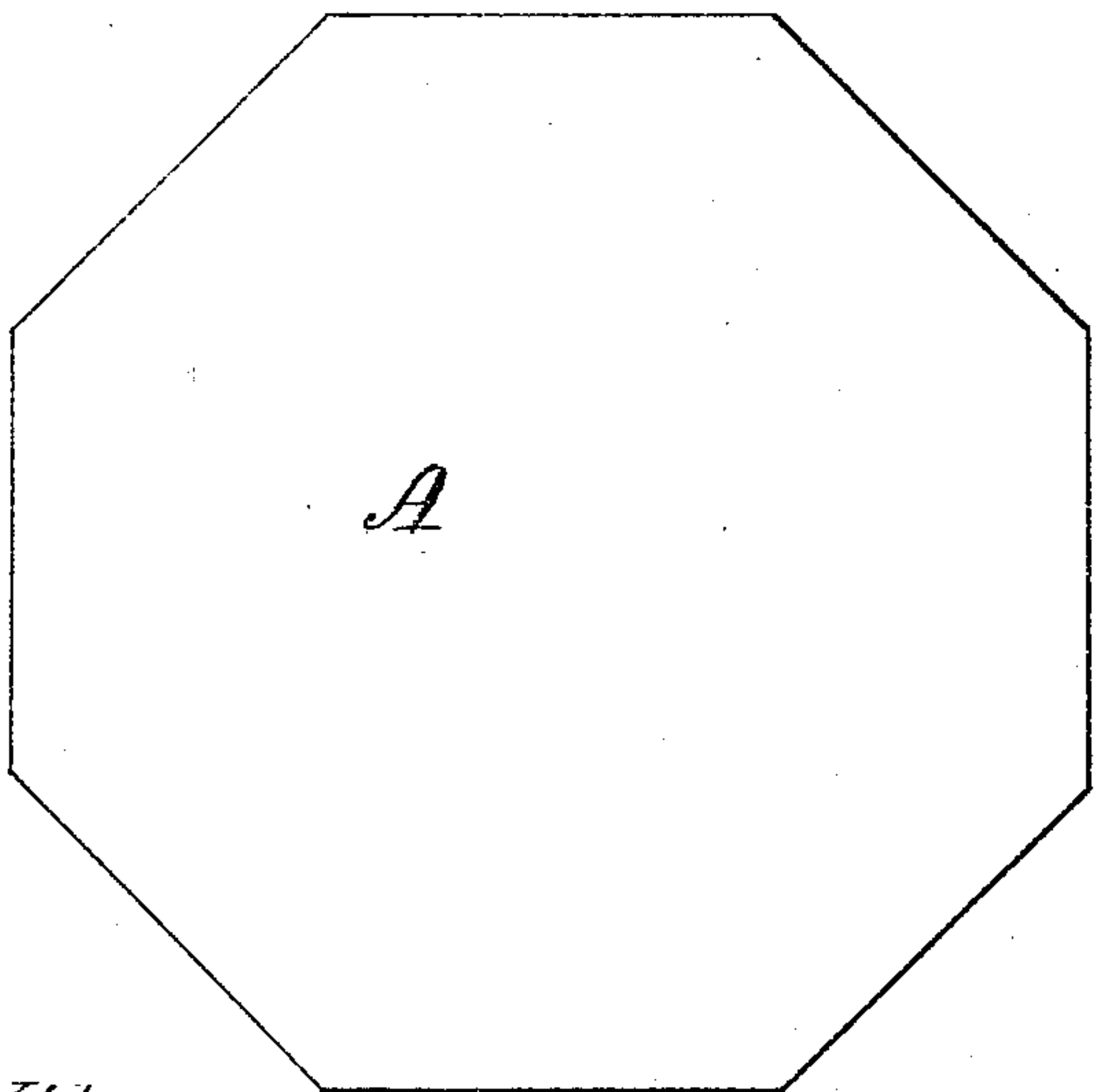
No. 123,453.

Patented Feb. 6, 1872.

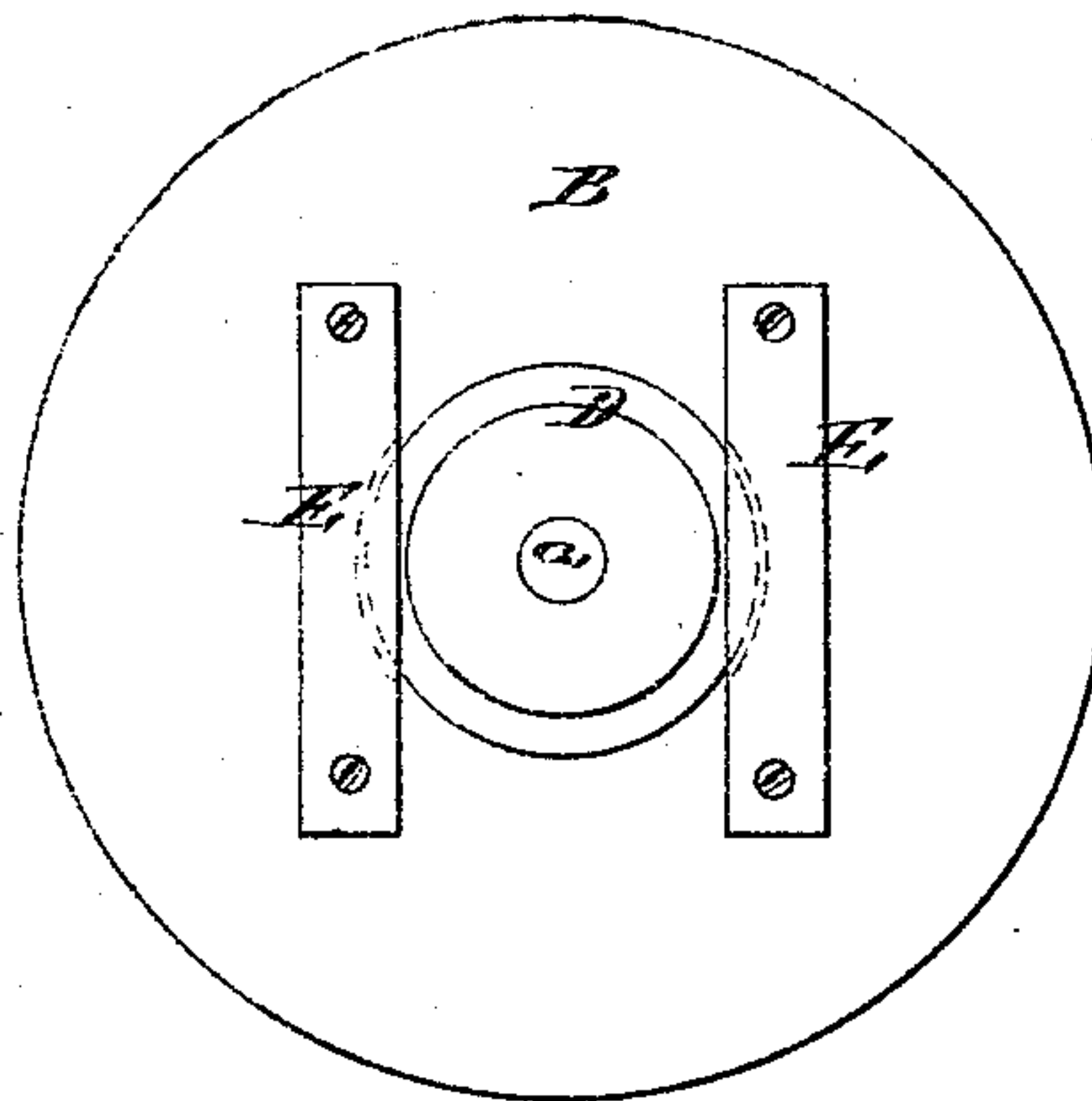
*Fig. 1.*



*Fig. 2.*



*Fig. 3.*



Witnesses

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# UNITED STATES PATENT OFFICE.

JAMES W. CASE, OF YPSILANTI, MICHIGAN.

## IMPROVEMENT IN MILK-SAFES.

Specification forming part of Letters Patent No. 123,453, dated February 6, 1872.

*To all whom it may concern:*

Be it known that I, JAMES W. CASE, of Ypsilanti, in the county of Washtenaw and State of Michigan, have invented certain new and useful Improvements in Milk-Safes; and I do hereby declare that the following is a full, clear, and exact description thereof, reference being had to the accompanying drawing and to the letters of reference marked thereon which form a part of this specification.

In the milk-safes now most generally in use there is a central upright shaft, upon which or around which a series of shelves revolve, said shaft passing through the centers of the shelves; but by such an arrangement a great portion of the surface of the shelves—namely, the center—is rendered useless, and only such articles can be placed on them as do not take up any more room than from the central shaft to the outer edge of the shelf. To remedy this defect is the object of my invention; and it consists in a series of shelves, arranged one above the other within a safe, each shelf having its own support, and revolving independently of the others. My invention also consists in the means for supporting, guiding, and revolving each separate shelf, as will be hereinafter more fully set forth.

In order to enable others skilled in the art to which my invention appertains to make and use the same, I will now proceed to describe its construction and operation, referring to the annexed drawing, in which—

Figure 1 represents a vertical section. Fig. 2 is a plan view; and Fig. 3 is a bottom view of one of the shelves.

A represents a milk-safe, constructed in the usual manner, either round or polygonal, of panels and wire-cloth, and with doors of suitable size. In this safe is a series of shelves, B B, with a horizontal cross-bar, C, underneath each shelf, each end of said cross-bars being firmly fastened or secured to the sides of the safe. Upon the cross-bar C the shelf revolves by means of a wood or iron pivot, *a*,

through the center of the shelf, and a connecting circle, D, or flanged wheel made of wood, iron, or other suitable metal, screwed to the cross-bar. To this circle or flanged wheel the shelf is connected by means of two parallel grooved slats or cleats, E E, screwed or otherwise secured to the under side of the shelf, thereby strengthening and steadying the motion of the shelf, and holding it firmly in position. This support and connection removes all obstructions to the free use of the whole surface of the shelves, so that the safe can be used for protecting cheese and other large articles.

In place of the cross-bars C C for supporting the shelves, I may substitute an arm, C', as shown, under the bottom shelf in the safe, or a bracket, made of wood or iron, and extending from either side of the body of the safe to the center, and at this end of said arm or bracket is a pivot on which the shelf B' revolves. In this case I also employ a friction-roller, G, located above the outer end of the arm or bracket, and bearing upon the upper surface at the edge of the shelf, so as to properly steady the same and keep it in its position.

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

1. A series of revolving shelves, arranged one above the other within a safe, each shelf having an independent support on the cross-bars C C, thus exposing the entire upper surface, substantially as set forth.

2. The combination of the shelf B, cross-bar C, pivot *a*, wheel D, and guides E E, all constructed and arranged substantially as and for the purposes herein set forth.

In testimony that I claim the foregoing as my own I affix my signature in presence of two witnesses.

JAMES W. CASE.

Witnesses:

MIRTILO WARNER,  
MARK L. VINING.