No. 667,612.

Patented Feb. 5, 1901.

J. BETTENDORF.

REFRIGERATOR.

(Application filed Sept. 15, 1900.)

(No Model.)

Fig. 1.

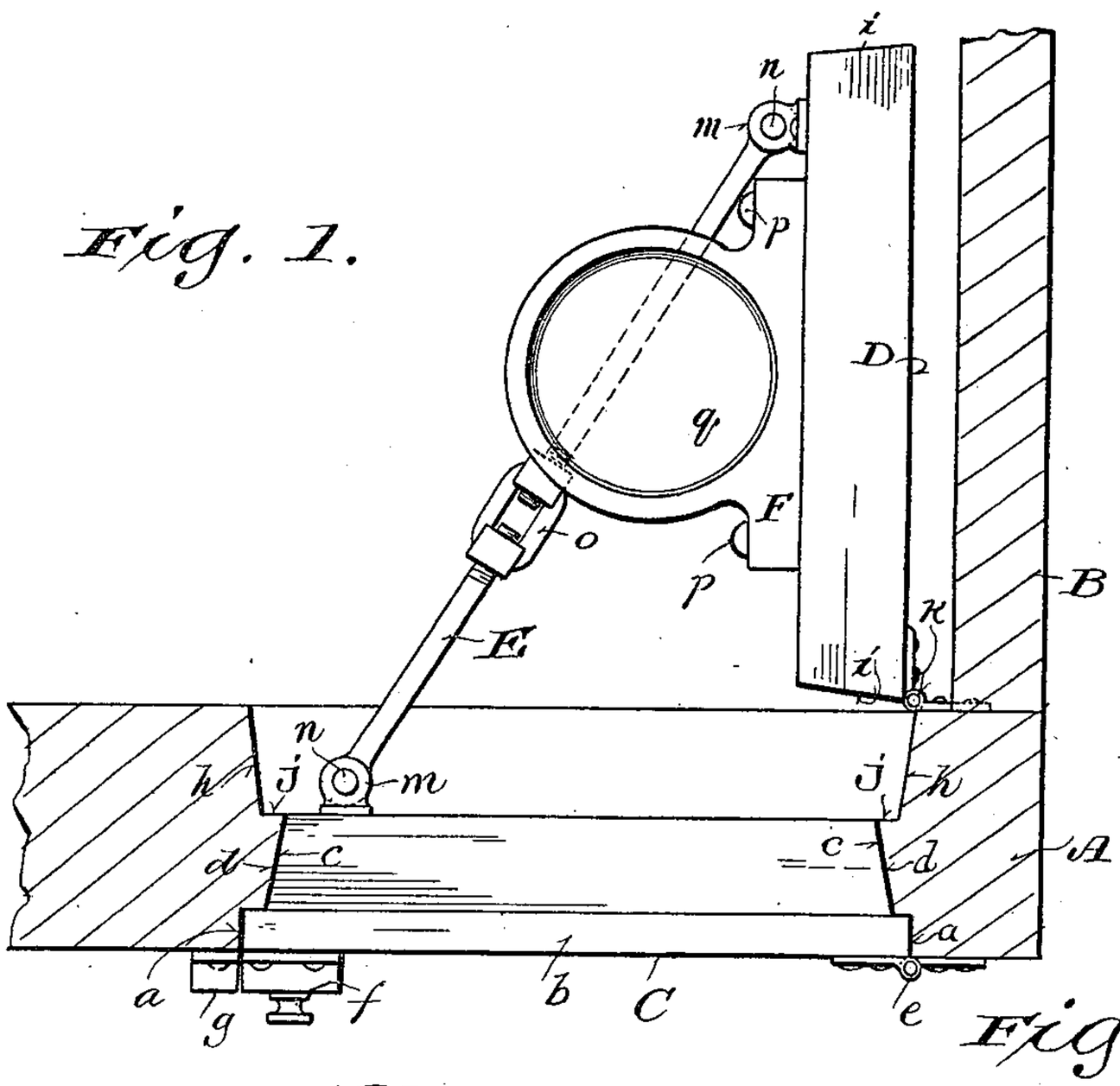
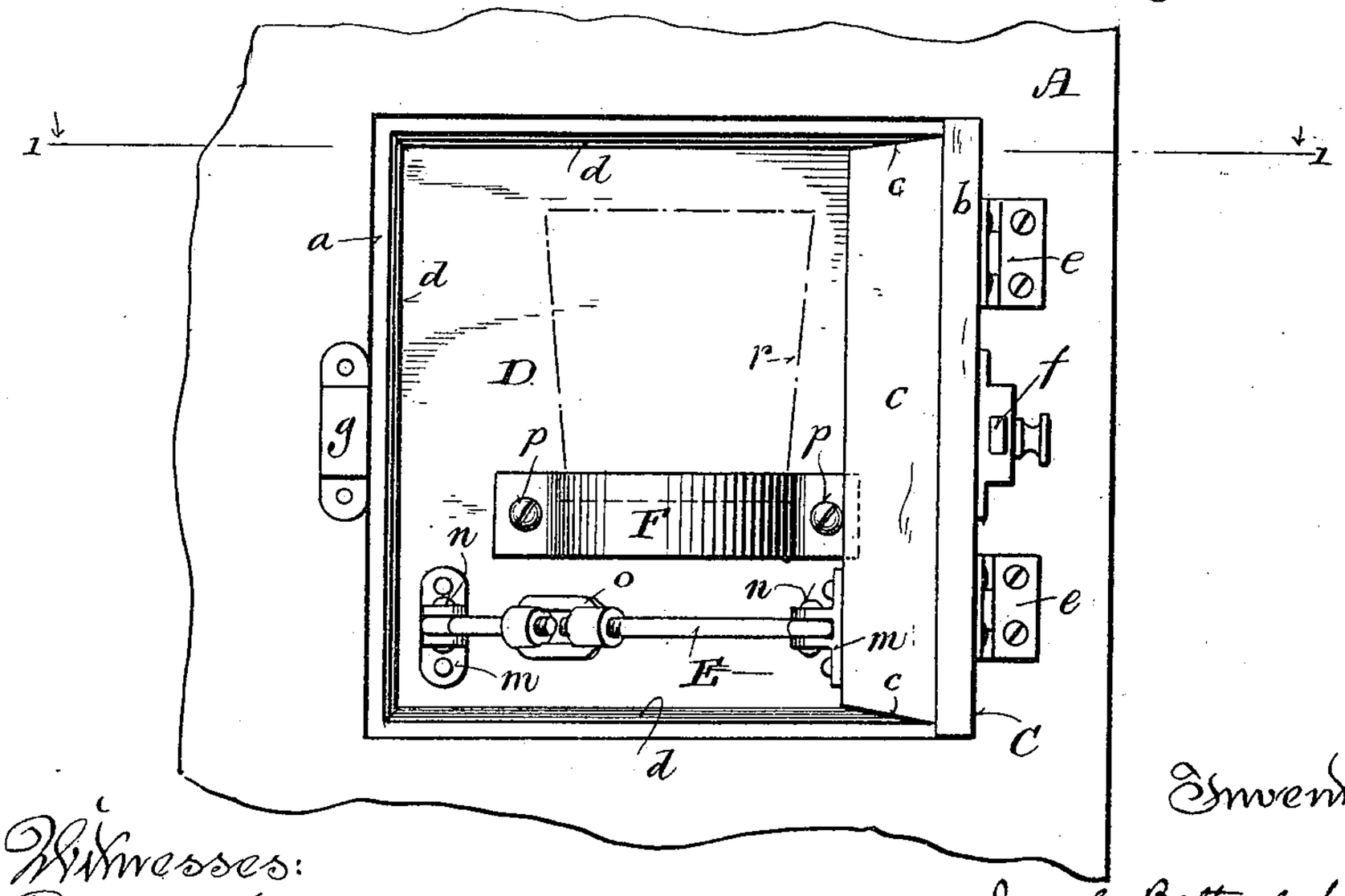


Fig. 2.



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UNITED STATES PATENT OFFICE.

JACOB BETTENDORF, OF MILWAUKEE, WISCONSIN.

REFRIGERATOR.

SPECIFICATION forming part of Letters Patent No. 667,612, dated February 5, 1901.

Application filed September 15, 1900. Serial No. 30,097. (No model.)

To all whom it may concern:

Be it known that I, JACOB BETTENDORF, a citizen of the United States, and a resident of Milwaukee, in the county of Milwaukee and State of Wisconsin, have invented certain new and useful Improvements in Refrigerators; and I do hereby declare that the following is a full, clear, and exact description thereof.

My invention has especial reference to the doors of the refrigerator; and it consists in certain peculiarities of construction and combination of parts, as will be fully set forth hereinafter in connection with the accompanying drawings and subsequently claimed.

In the said drawings, Figure 1 is a transverse sectional view of a portion of a refrigerator embodying my invention, taken on the plane indicated by the line 1 1 of Fig. 2, but representing the outer door closed. Fig. 2 is a detail elevation of the said part of the refrigerator, but representing the outer door open and the adjacent inner door closed.

Referring to the drawings, A represents the front wall, and B the adjacent side wall, of one corner of a refrigerator, the said front wall being of increased thickness to accommodate the double doors, whose novel construction, arrangement, and attachment form the subject of my present invention.

C represents the outer door, and D the inner door, of each doorway or opening of the said refrigerator, there being as many of these pairs of doors as desired, according to the size or style of the refrigerator, each pair of doors being connected by a link E, hereinafter more particularly described.

The outer door C has a square outer frame *b*, fitting in a square-shouldered recess *a* in the front wall A of the refrigerator, back of which the said wall is formed with a tapered opening therethrough, the four surfaces of which all converge inwardly, as indicated at *d d d d*, to receive the four correspondingly-tapered edges (marked *c*) of the said door C. The outer door C is hinged to the front wall A by hinges *e e* and may be further provided with a suitable latch or spring bolt *f* for engagement with a keeper *g* on said front wall.

The inner door D is preferably of somewhat greater width than that of the outer door, and it is essential that the two doors should be entirely independent of each other (save for the hereinafter-described link connection) and separately hinged to the refrigerator-walls. The frame or opening formed in the wall A for the inner door D is similarly tapered to the taper for the outer door, but from the opposite direction, as indicated by the lines *h h* in Fig. 1, and said door D is correspondingly tapered, as shown at *i i*, this taper, both of door edge and doorway, being continued all around the four sides thereof, and as the door D is wider than the door C this causes a four-square shoulder in the frame or way of the door D, as indicated by the lines *j j* in said Fig. 1. The inner surface of the side wall B is set back from the inner edge of the adjacent tapered wall of the opening for the door D to afford space for the hinges *k*, by which the said inner door D is secured to the inner surface of the front wall A. The two doors are thus in construction and hinging entirely independent of each other, but are each provided on their opposed faces with ears *m m*, to which the ends of the hereinbefore-referred-to link E are swiveled by bolts or pivot-pins *n n*, as shown. In its preferred form herein illustrated the said link is made in two parts, united by a turnbuckle *o*, whereby the said link may be longitudinally adjusted. The inner door is provided with a shelf F, secured thereto, as by screws *p p*, the one illustrated having an annular recess in its upper face, as shown at *q*, for the support of a butter-tub, (indicated by dotted lines at *r* in Fig. 2.)

My device is particularly useful in large groceries and other establishments, where perishable articles of food, such as butter, are kept in refrigerators the doors of which have to be constantly opened, as by the described double-door device the inner door closes the opening when the outer door is opened. A great advantage of my construction lies in the fact that the outer and inner doors are hung independently and that all weight of the article upon the door-shelf comes upon the inner door, whereby there is no liability of sagging in the outer door, which would otherwise have a tendency to cause it to hang out of true, and hence to close imperfectly. Another advantage lies in the construction of the link, whereby the degree to which the outer door must open in order

to fully close the inner door can be predetermined and regulated or adjusted as required at any time. This is very useful where space is to be economized and where there may be obstructions and inconveniences to the full opening of the outer door.

In practice where a heavy weight is to be supported by the shelf F it is desirable to strengthen the same either by brackets on the under side or by-braces extending from the edge of the shelf to the door D; but I have not deemed it necessary to illustrate the same in the drawings.

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

1. In a refrigerator, the combination with the walls thereof, having a door-opening therein, of outer and inner doors, independently hinged to said walls, each door being adapted to wholly close said opening, and said doors having ears on their opposed surfaces, connected by a link and pivot-pins.

2. In a refrigerator, the combination with the front wall thereof, having an opening therethrough, the four walls of which opening are tapered and converge toward the center; of outer and inner doors, the edges of which correspondingly taper, said doors being independently hinged to the refrigerator-walls, and connected together by a swivel-link.

3. In a refrigerator, the combination with the walls thereof, of outer and inner doors, independently hinged to said walls, and having ears on their opposed surfaces, and a longitudinally-adjustable link pivotally secured to said ears.

4. In a refrigerator the combination with the front wall thereof, having a door-opening therethrough, of outer and inner doors, independently hinged to said wall, and each adapted to wholly close said opening, and a link pivotally connected to said doors at a plane above, and free from contact with, the bottoms thereof.

5. In a refrigerator, the combination with the front wall thereof having a door-opening therethrough, of outer and inner doors, independently hinged to said wall, and each adapted to wholly close said opening, a shelf secured to and projecting from the inner door only, and a link pivotally connected to said doors at a plane below that of the said shelf, and above the plane of the bottoms of the doors.

In testimony that I claim the foregoing I have hereunto set my hand at Milwaukee, in the county of Milwaukee and State of Wisconsin, in the presence of two witnesses.

JACOB BETTENDORF.

Witnesses:
H. G. UNDERWOOD,
B. C. ROLOFF.