No. 640,580. Patented Jan. 2, 1900.

A. E. MILLER.

SWINGING SHELF.

(Application filed Oct. 16, 1899.)

(No Model.)

Fig. 1.

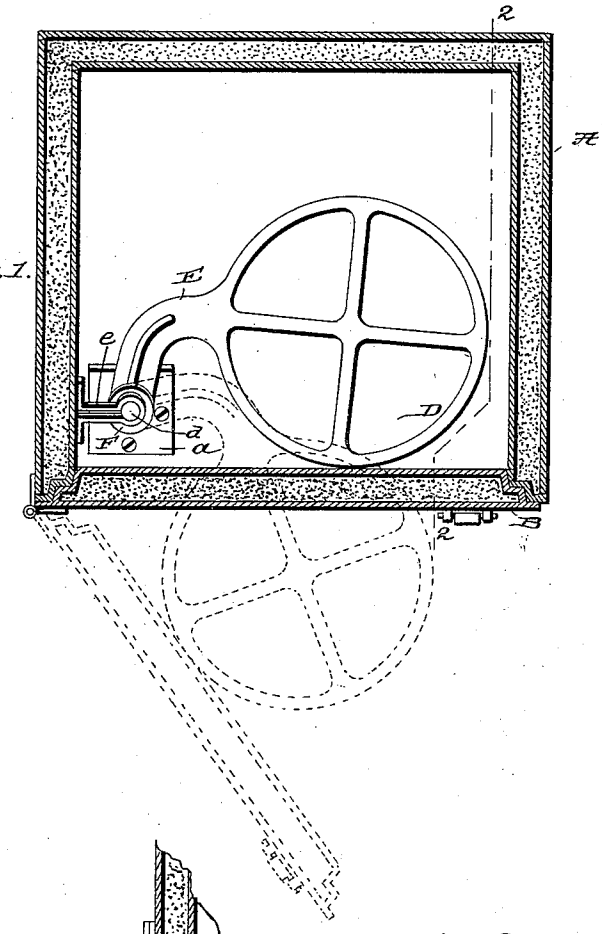


Fig. 3.

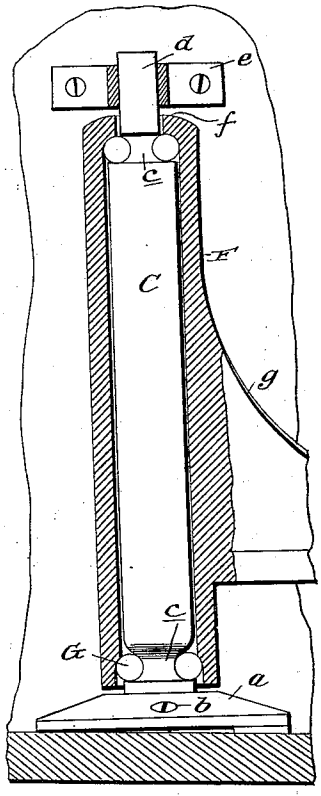
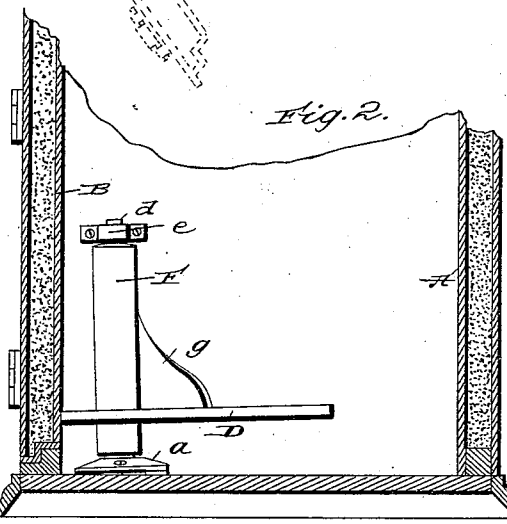


Fig. 2.



Witnesses:
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UNITED STATES PATENT OFFICE.

ARCHIBALD E. MILLER, OF BARABOO, WISCONSIN.

SWINGING SHELF.

SPECIFICATION forming part of Letters Patent No. 640,580, dated January 2, 1900.

Application filed October 16, 1899. Serial No. 733,776. (No model.)

To all whom it may concern:

Be it known that I, ARCHIBALD E. MILLER, a citizen of the United States, residing at Baraboo, in the county of Sauk and State of Wisconsin, have invented new and useful Improvements in Swinging Shelves, of which the following is a specification.

My invention relates to swinging shelves for supporting large receptacles containing butter, lard, and other substance in refrigerators and under counters and the like and facilitating the outward and inward movement of the same.

It has for its general object to provide a simple and inexpensive shelf susceptible of being readily placed and secured in position and one that is so constructed and arranged that its shelf proper is enabled when released by a refrigerator-door or other stop to gravitate outwardly and carry the receptacle supported thereon into such a position as to permit of ready removal of its contents.

With the foregoing in mind the invention will be fully understood from the following description and claims when taken in conjunction with the annexed drawings, in which—

Figure 1 is a horizontal section of a refrigerator equipped with my improved shelf. Fig. 2 is a section taken in the plane indicated by broken line 2 2 of Fig. 1 looking toward the left. Fig. 3 is an enlarged detail section illustrating the pivot-post of the shelf and the sleeve of the shelf proper thereon.

Referring by letter to the said drawings, A is a refrigerator, and B the usual hinged door thereof.

C is the pivot-post of my improved shelf. This post in the preferred embodiment of the invention rises from an integral base *a*, connected by screws *b* to the floor of the refrigerator at the point shown in Fig. 2, and is slightly canted or inclined outwardly toward the door B, for a purpose presently pointed out. It is provided adjacent to its lower and upper ends with circumferential grooves *c*, forming ball-races, and at its upper end has a reduced portion *d*, which is journaled in a bracket *e*, connected to the adjacent side wall of the refrigerator A.

D is the shelf proper, which is preferably circular in form, and has a curved arm E, terminating in a sleeve F. The said sleeve is loosely mounted on the post C and has an inwardly-directed flange *f* at its upper end surrounding the reduced portion *d* of the post. The arm E, which is integral with the shelf proper and the sleeve F, is preferably curved, as shown, so as to enable the shelf proper to swing into and out of a refrigerator of small size, and is provided at its upper side with a web *g* in order to increase its strength.

I have shown the shelf proper, D, as slightly inclined downwardly and outwardly, so as to enable it to rest in a plane at right angles to that of the post C and sleeve F. I do not desire, however, to be understood as limiting myself to such disposition of the shelf proper, as it might be arranged horizontally without departing from the scope of my invention.

G are antifriction-balls, which are arranged in the grooves *c* of post C and interposed between said post and the sleeve F. These balls have for their purpose to render easy the outward and inward movements of the shelf proper, and they materially assist the gravitating outward movement thereof.

In practice the receptacle to be supported is placed on the shelf proper, D, while the latter is in its outer position, and said shelf proper is then swung before the door B into the refrigerator. When the door B is unfastened and swung open, the shelf proper, with the receptacle containing butter or other substance thereon, gravitates to a position outside the refrigerator, as shown by dotted lines in Fig. 1, in which position the contents of the receptacle may be readily removed. To replace the heavy receptacle in the refrigerator, the operator has but to swing the shelf proper, D, which supports the same, into the position shown by full lines in Fig. 1 and then close and fasten the door B. This may be accomplished very easily notwithstanding the slight pitch or inclination of the pivot-post C.

When desirable, the sleeve F may be increased in length and equipped with two or more shelves proper without departing from the scope of my invention. I also desire it understood that while designed primarily for use in conjunction with refrigerators or ice-boxes my improved swinging shelf is adapted to be used beneath counters and in other spaces for the purpose of facilitating the out-

ward and inward movement of tubs of butter and other heavy articles.

Having thus described my invention, what I claim is—

1. In a swinging shelf, the combination of an inclined or canted pivot-post having a base, and also having circumferential grooves adjacent to its lower and upper ends, a shelf proper having a curvilinear arm, provided at its upper side with a strengthening-web, and terminating in a sleeve loosely mounted on the pivot-post, and antifriction-balls arranged in the circumferential grooves of the pivot-post and interposed between said post and the sleeve of the shelf proper, substantially as specified.

2. The combination with a casing having a swinging door; of a swinging shelf comprising an outwardly inclined or canted pivot-post connected at its lower end to the floor of the casing adjacent to the hinge-point of the door thereof, and a shelf proper having an arm terminating in a sleeve loosely mounted on the pivot-post; said shelf proper being adapted to be moved before and held in its closed position by the door, substantially as specified.

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

ARCHIBALD E. MILLER.

Witnesses:

HERMAN GROTOPHORST,

C. M. BLAKE.