Sept. 27, 1932. H. G. McCOMB 1,879,372

ADJUSTABLE SHELF

Filed Aug. 22, 1930

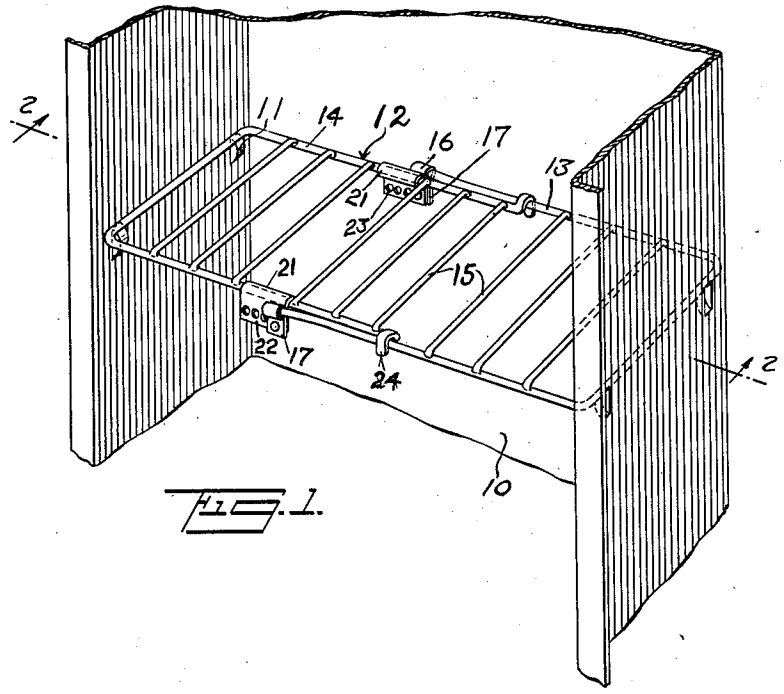


FIG. 1.

FIG. 2.

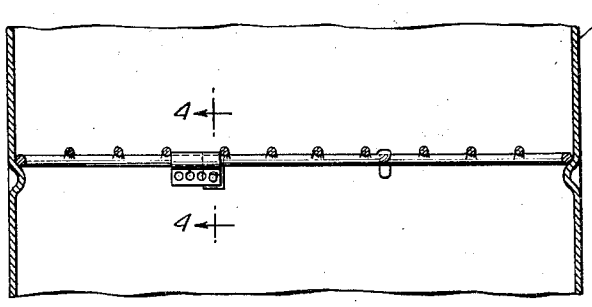


FIG. 3.

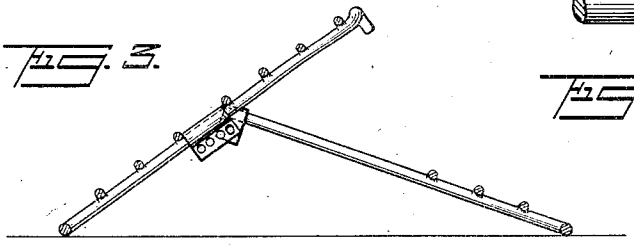
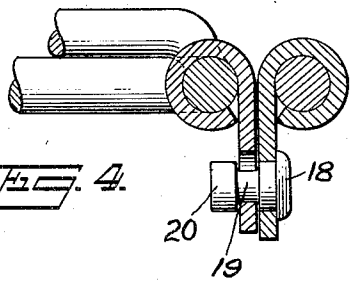


FIG. 4.



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UNITED STATES PATENT OFFICE

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ADJUSTABLE SHELF

Application filed August 22, 1930. Serial No. 477,075.

My invention contemplates an improved form of shelf particularly adapted to be used in connection with a refrigerator cabinet.

One of the objects of my invention is to provide a shelf comprising two parts hinged or otherwise adjustably connected together in such a manner that the shelf may be folded in order to facilitate placing it in and removing it from the interior of a cabinet.

Another object of my invention is to provide a shelf of variable length which hence may be used in refrigerator cabinets of varying dimensions and a shelf which will accommodate slight variations in width of cabinets due sometimes to buckling of the liners. This is of particular advantage as it is thus necessary to manufacture only one size shelf for use in connection with different sizes of refrigerators.

Further objects and advantages will be apparent from the following description considered in connection with the accompanying drawing which forms a part of the specification, and on which:

Fig. 1 is a perspective view of a portion of a refrigerator liner in which is placed a preferred embodiment of my invention;

Fig. 2, a cross-section on the line 2—2 of Fig. 1;

Fig. 3, a cross-section of the shelf in a folded position; and

Fig. 4 is a detail cross-section view on the line 4—4 of Fig. 2.

Referring more particularly to Fig. 1, reference character 10 indicates a metallic liner such as is used to form the interior of a refrigerator or other cabinet. Projections 11 are formed at suitable points in the sides of the liner by stamping the metal. Preferably four such projections are provided at points where it is desired to support a shelf.

Supported by projections 11 is a shelf 12 comprising a pair of substantially U-shaped frames 13 and 14. Transverse members 15 are secured to the sides of frames 13 and 14 in any suitable manner as by welding and serve as supports for anything placed on the shelf. Secured to the ends of frame 13 are collars 16 provided with depending flanges 17. Rigidly secured to these flanges are studs 18, the ends of which extend inwardly, said studs 18 comprising shank portions 19 and enlarged heads 20. The studs 18 serve the double purpose of allowing adjustment of the shelf and acting as pivots upon which the two parts of the shelf may be hinged about each other. Secured to the intermediate portion of the arms of frame 14 are collars 21 provided with depending flanges 22 in which a series of holes 23 are provided. These holes are large enough for the heads 20 of studs 18 to pass through, as is clearly shown in Fig. 4. The ends of member 14 are formed as hooks 24 which are adapted to engage the arms of member 13, as shown.

Cross members 15 are provided on member 13 only near the right-hand end thereof as viewed in Fig. 1 and hence the ends of the arms may be sprung away from each other sufficiently to allow studs 18 to be disengaged from flanges 22. The resiliency of member 13 will tend to hold studs 18 in holes 22 and shank portion 19 in combination with head 20 and will aid in maintaing the parts in engagement.

Shelf 12 may be readily placed in and removed from the refrigerator by pivoting its parts to a position similar to that shown in Fig. 3. In this position the over-all length of the shelf is of course less than when straightened out and hence it may be readily passed through the doors of the refrigerator. When the shelf is placed in the refrigerator in this partially folded position, one end thereof is rested upon a pair of supporting members 11 and the shelf is straightened out, whereupon the other end rests upon supporting members formed on the opposite wall. Hooks 24 prevent the shelf from pivoting beyond the straight line position and, when the shelf is resting on the four supports, it occupies a substantially straight line position.

The provision of the holes 23 in flanges 22 makes it possible to vary the length of the shelf and thus adjust it to fit refrigerators of different sizes. It will be noted that this adjustment is very easily accomplished inasmuch as it is unnecessary to remove nuts, cotter keys or the like.

My invention results in a refrigerator cabinet which may be easily and thoroughly cleaned as the shelf may be easily removed therefrom and the remaining interior surface is free from such projections as hooks and offers no interference to the passage of a cleaning cloth over the surface.

While I have illustrated and described a more or less specific embodiment of my invention, it is to be understood that modifications thereof such as might be made by one skilled in the art fall within its scope and the invention limited only by the appended claims viewed in the light of the prior art.

I claim:

1. A shelf comprising a frame having a series of apertures, a second frame provided with a plurality of studs for selective engagement with apertures of the first frame, resilient means for maintaining said studs in said apertures and cooperative means on said frames for maintaining them in operative article supporting position.

2. A shelf comprising a frame, flanges secured to said frame and provided with a series of apertures, a second frame, studs secured to the said second frame and adapted to selectively engage apertures in said flanges, resilient means for maintaining said studs in said apertures, means on the first frame for engaging an intermediate portion of said second frame.

3. A shelf comprising a first frame, flanges secured to the sides of said frame and provided with a series of apertures, a second frame, studs secured to the sides of said second frame, said studs having heads slightly smaller than said apertures and shanks smaller than said heads for engaging the walls of said apertures.

4. A shelf comprising, in combination, a first frame, flanges secured to the sides of said frame and provided with a series of apertures, a second frame, studs secured to the sides of said second frame, said studs having heads slightly smaller than said apertures and shanks smaller than said heads for engaging the walls of said apertures and resilient means tending to maintain said studs in engagement, and transverse members on said frames.

5. A shelf comprising, in combination, a first frame, flanges secured to the sides of said frame and provided with a series of apertures, a second frame, studs secured to the sides of said second frame, said studs having heads slightly smaller than said apertures and shanks smaller than said heads for engaging the walls of said apertures, means on the ends of the sides of said first frame for engaging an intermediate portion of said second frame.

6. A shelf comprising, in combination, a first frame, flanges secured to the sides of said frame and provided with a series of apertures, a second frame, studs secured to the sides of said second frame, said studs having heads slightly smaller than said apertures and shanks smaller than said heads for engaging the walls of said apertures, means on the ends of the sides of said first frame for engaging an intermediate portion of said second frame, and transverse members on said frames.

In testimony whereof I affix my signature.

HENRY G. McCOMB.