

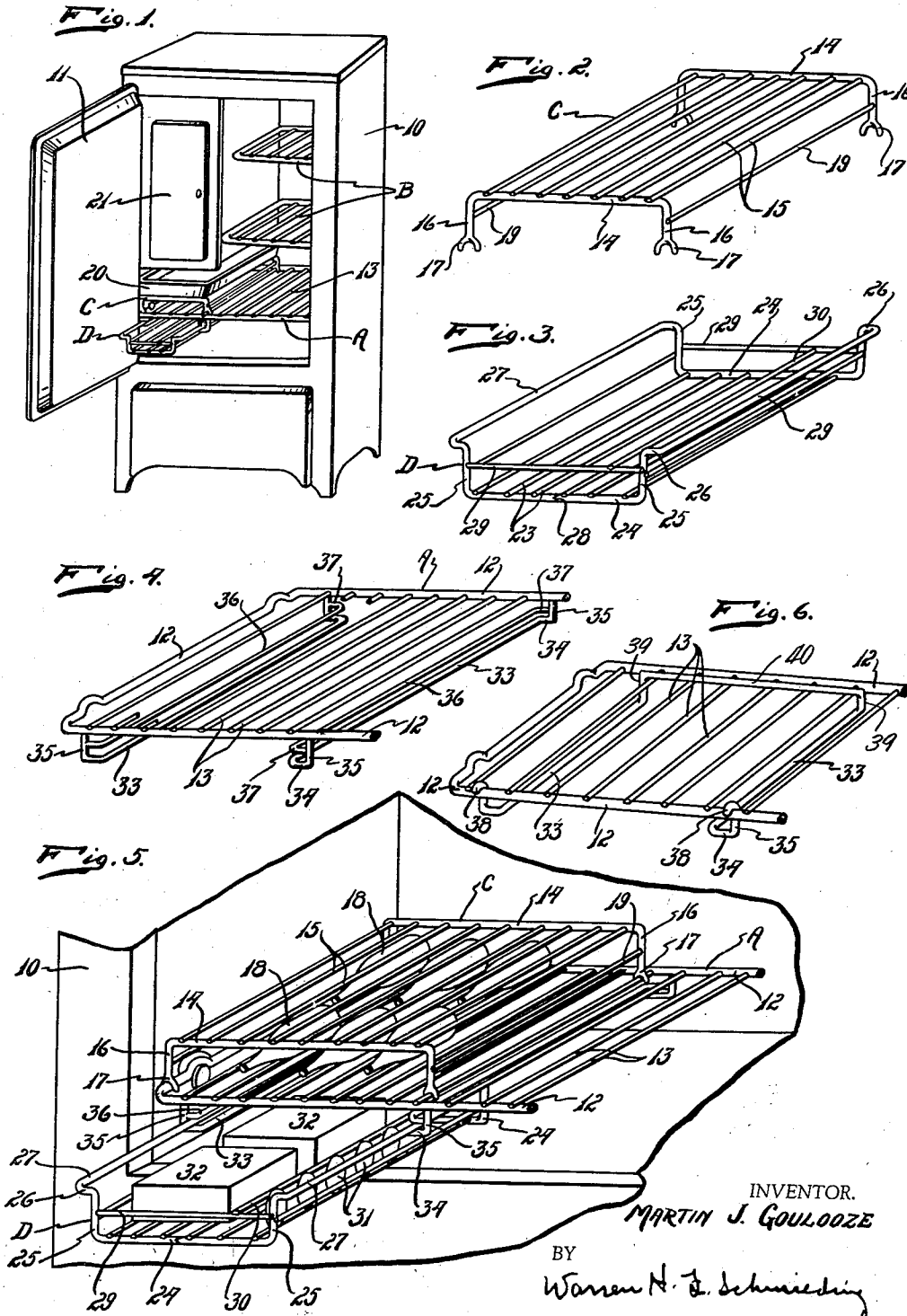
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REFRIGERATING APPARATUS

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REFRIGERATING APPARATUS

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5 Claims. (Cl. 211-143)

My invention relates to shelves and racks for refrigerator cabinets and more particularly to a special shelf arrangement for storing small articles in a refrigerator.

5 It is an object of my invention to provide an improved shelf arrangement for refrigerator cabinets comprising means by which various articles may be segregated from other articles in a convenient manner and to which access may be had without disturbing the arrangement of other articles on the refrigerator shelves.

Another object of my invention is to provide a refrigerator shelf with a secondary shelf supported thereby and in the form of a slidable tray or rack so arranged as to receive a plurality of loose articles, such as eggs, in a neat and orderly arrangement.

20 It is also an object of my invention to provide a refrigerator shelf with an auxiliary shelf covering a portion of the same but spaced therefrom to provide a space suitable for receiving a plurality of bottles arranged in a horizontal position.

The invention, however, both as to its construction and use together with additional objects and advantages thereof, will best be understood from the following description of specific embodiments, when read in conjunction with the accompanying drawing, in which:

30 Figure 1 is a perspective view showing a refrigerator cabinet having disposed therein an improved shelf arrangement in accordance with my invention, the refrigerator door being shown in open position;

35 Figure 2 is an enlarged perspective view of the auxiliary shelf which provides, with the main shelf, a space suitable for receiving a plurality of bottles in a horizontally disposed position;

40 Figure 3 is an enlarged perspective view of the secondary shelf which is slidably supported by and below one of the main shelves;

Figure 4 is an enlarged fragmentary perspective view of one of the main shelves, showing the means for slidably supporting the secondary shelf;

45 Figure 5 is a fragmentary perspective view of the refrigerator cabinet showing the main, auxiliary and secondary shelves in their assembled relation and showing the secondary shelf partially withdrawn; and

50 Figure 6 is a view similar to Figure 4, but showing another embodiment of the supporting means for slidably supporting the secondary shelf.

Referring more particularly to the accompanying drawing, in which like numerals refer to like parts throughout the several views, I have shown 55 in Figure 1 a refrigerator cabinet 10 for purposes

of illustration, in which the door 11 is open, the cabinet being provided with a lower shelf A and other shelves B supported therein in any suitable manner.

The shelf A here shown is in the form of a float 5 grid comprising an open rectangular frame 12 having a plurality of spaced cross pieces 13 bridging the front and rear members thereof and which are arranged to support articles that may be disposed thereon. The shelf A, however, may be of 10 any other suitable construction.

Associated with the shelf A is an auxiliary spacing shelf C more clearly shown in Figure 2, which comprises a pair of end members 14 which are interconnected by a series of spaced members 15 in the form of rods, bars or straps of material which provide a supporting surface. The ends of the end members 14 are provided with depending elements 16 the ends of which are bifurcated to provide spaced projections 17. The 20 bifurcated ends comprise feet which are arranged to stand on the rodlike members 13 of the shelf A, as shown in Figure 5. As shown in this view, however, the two outermost feet stand on the outer side member of the shelf A adjacent the 25 side wall of the cabinet. It will be noted that the bifurcated feet 17 lie at opposite sides of the supporting rod members and thereby prevent shifting of the shelf C with respect to the supporting shelf A, and also provide a means where- 30 by the auxiliary shelf C may be bodily removed from shelf A very conveniently when it is not desired to use the same.

The depending elements 16 space the auxiliary shelf C above the shelf A and provide a space 35 therebetween which is particularly suitable for receiving bottled goods such as ginger ale, beer and the like, which are illustrated in Figure 5 by the bottles 18 disposed on their sides within this space. Shelf space is not always available for 40 supporting bottles in an upright position, and the means described provides a useful means for disposing bottles when a higher space is not available. Horizontally extending elements 19 may also be provided between the depending elements 45 16 to prevent the bottles rolling from the space described.

The auxiliary spacing shelf C, while providing a convenient means for retaining goods such as the bottles 18, also provides a suitable surface 50 for the disposal of other articles. In Figure 1, I have shown the auxiliary shelf C arranged in a position to support a drip pan 20 which in the refrigerator shown is disposed below the evaporator unit 21. 55

Also, associated with the shelf A is a secondary sliding tray shelf D, of a type which is slidably disposed below shelf A. The tray shelf D, more clearly shown in Figure 3, is in the form of a basket or rack comprising a frame having a plurality of spaced longitudinally extending strap or rod like elements 23 forming the bottom and sides of the basket or rack. The frame for the basket or rack, although it may be formed of a plurality of parts, is here shown as formed of a single piece of rodlike metal to provide spaced horizontal bottom elements 24 which are bent upwardly to provide side portions 25. The ends of the elements 23 are suitably secured, such as for example by welding or brazing, to the inverted U-shaped end pieces comprising horizontal elements 24 and side portions 25, as shown in Figure 3. The upper ends of the portions 25 are bent outwardly at 26 and are connected by integral longitudinal side elements 27, which, as seen in Figure 3, are disposed outwardly of the side rodlike elements 23 and which, as will be later described, form the sliding supports for the rack. The ends of the rod which comprise the rack frame are welded together at any suitable place such as at 28.

Extending between the upright portions 25 at each end of the sliding secondary shelf D is a horizontal cross piece 29 and these cross pieces are interconnected by a longitudinal element 30 which divides the tray or rack into two compartments, one of which may be of such width as to provide a space for the disposition of a plurality of small articles such for example as eggs, indicated by numeral 31 in Figure 5 thus allowing such articles to be removed from their original bag or container and disposed in a convenient and orderly arrangement where they will be readily accessible. The other compartment may be used for the storing of butter or other dairy products indicated by the packages 32 in Figure 5, or if desired may be utilized for the reception of bottles or any other articles.

The sliding tray shelf D is supported on suitable guides which depend from the shelf A. In the construction shown in Figures 4 and 5 these guides comprise a pair of spaced longitudinally extending bars 33 having their ends provided with opposed horizontal flanges 34. The flanges 34 terminate in upwardly extending portions 35, the ends of which are secured as by welding to the front and rear members of the frame 12. The bars 33 and flanges 34, as seen in Figure 5, slidably support the side elements 27 and horizontal flanged portions 26 of the tray or rack D, thus providing simple and efficient slide supports therefor. If desired, other rods 36 having flanged ends 37 secured to the upright portions 35 may be provided above the rods 33 to additionally guide the tray and to prevent tipping of the same should the center of gravity thereof be disposed beyond the shelf A when the tray D is withdrawn.

In the modified construction shown in Figure 6, the upright portions 35 of the guide rods 33, instead of being rigidly secured to the shelf A, are provided with hooked portions 38 which are disposed to detachably hook over the front end member of the frame 12 of the shelf A. The rear ends of the guide rods 33 are preferably rigidly united by an intermediate portion or cross piece 40 which may be integral therewith and which extends across between the upper ends of the upright portions 39 which extend upwardly from the guide rods. The intermediate portion 40

rests upon the shelf members 13. In this embodiment the guide rods 33 may be readily lifted and unhooked from any shelf on which they are installed or they may be readily installed upon any shelf desired by simply disposing the intermediate supporting portion across the upper sides of the parallel grid bars of the shelf whence the guide portions will extend under and parallel to the grid bars of the shelf. The hooks on the ends of the guide portions may then be disposed over any suitable portion of the shelf to fasten the guide means thereto.

It will be seen that I have provided an improved arrangement of shelves and racks for refrigerator cabinets which will segregate certain articles so that they will be readily available and can be conveniently removed without disturbing other articles that may be on the refrigerator shelves. Also, I have provided a novel means for the disposition of bottled goods in a horizontal position on a refrigerator shelf, by means of which they will be retained in their segregated positions and auxiliary shelf space is provided. Furthermore, I have provided a shelf with a secondary shelf or tray of a sliding nature in which articles such as eggs and dairy products may be conveniently located and by means of which such articles will be readily available.

While it is necessary for the purpose of illustration to describe the several disclosed forms of my invention in detail, it will be apparent that my invention is not so limited, and that other forms and applications thereof are embraced within the scope of the appended claims.

I claim as my invention:

1. The combination in a shelf assembly adapted to rest upon shelf supporting means in a refrigerator cabinet of a frame and parallel spaced bars secured thereto, means for providing a pair of spaced tray guides to slidably support a tray under said shelf comprising an intermediate portion extending across the uppermost sides of said spaced bars, depending guide portions extending parallel to said bars, hook shaped end pieces on the front ends of said guide portions for hooking over an adjacent portion of said shelf and means interconnecting said intermediate portion with the rear ends of said guide portions.

2. The combination in a shelf assembly adapted to rest upon shelf supporting means in a refrigerator cabinet of a frame and parallel spaced bars secured thereto, means for providing a pair of spaced tray guides to slidably support a tray under said shelf comprising an intermediate portion extending across the uppermost sides of said spaced bars, depending guide portions extending parallel to said bars, hook shaped end pieces on the front ends of said guide portions for hooking over an adjacent portion of said shelf, means interconnecting said intermediate portion with the rear ends of said guide portions and a tray shelf comprising outwardly turned side members disposed to slidably rest upon said guide portions.

3. A detachable supporting element for slidably supporting a tray under an open grid like shelf which comprises a metallic rod-like member having an intermediate portion adapted to extend across the upper sides of certain of the parallel bars of such a shelf, depending guide portions adapted to extend under the grid bars of the shelf on which it is disposed, vertical portions connecting the rear ends of said guide portions and the ends of said intermediate portion, hook shaped end pieces on the front ends of said guides

for engaging suitable portions of the shelf, and laterally disposed connecting portions for supporting said hook shaped end pieces in laterally displaced relation relative to the guide portions.

- 5 4. In a refrigerator storage compartment, a shelf adapted to be mounted in said compartment and comprising a frame on which are mounted a plurality of spaced parallel bars, an auxiliary rack including a wire rod frame extending horizontally on two sides of the rack to form parallel slideable supports, and a member comprising a wire rod shaped to form spaced parallel portions connected at one end by a shallow inverted U-shaped portion and having inverted hook portions at their other ends, said member being detachably mounted on said shelf with said U-shaped and hook portions overlying

said shelf bars and the spaced parallel portions beneath said shelf for slideably supporting said rack beneath said shelf.

- 5 5. In a refrigerator, the combination with a shelf having a plurality of spaced parallel bars, of an auxiliary rack having slideable supports, and a member comprising a wire rod shaped to form spaced parallel portions connected at one end by a shallow inverted U-shaped portion and having inverted hook portions at their other ends, said member being detachably mounted on said shelf with said U-shaped and hook portions overlying said shelf bars and the spaced parallel portions beneath said shelf for slideably supporting said rack beneath said shelf.

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