

UNITED STATES PATENT OFFICE

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REFRIGERATING APPARATUS

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2 Claims. (Cl. 312-174)

This invention relates to refrigerators and more particularly to auxiliary shelves for receiving and supporting articles while other articles are being placed into or removed from the refrigerator.

In placing articles into or removing them from a refrigerator, it is frequently necessary to move other articles out of the way while this is being done. Often times, there is no readily available place for the temporarily removed articles because of the crowded condition of the shelves, and it is then necessary to place such articles at another location which may be a considerable distance from the refrigerator. This is frequently a great inconvenience to the housewife or other person.

One of the objects of the present invention is to provide a refrigerator with a readily accessible auxiliary shelf on which articles temporarily removed during the placing into or removal of other articles from the refrigerator, may be quickly and conveniently disposed.

Another object is to provide an auxiliary shelf which is made readily available for use by the opening of the refrigerator door.

Another object is to provide an auxiliary shelf of the character described which is slidably mounted within the refrigerator and which is automatically moved into and out of article supporting position by the swinging movement of the refrigerator door.

With the above and other objects in view, the present invention consists in certain features of construction and combinations of parts to be hereafter described with reference to the accompanying drawing, and then claimed.

In the accompanying drawing which illustrates a suitable embodiment of the invention;

Figure 1 is a perspective view of a refrigerator showing the door open and the auxiliary shelf in article receiving position;

Figure 2 is a transverse section taken through the refrigerator above the auxiliary shelf shown in Figure 1;

Figure 3 is a view similar to Figure 2, the refrigerator door being closed and the shelf being in its inoperative position;

Figure 4 is an enlarged fragmentary front view of the refrigerator shown in Figure 1, more clearly showing the auxiliary shelf and its operating means; and

Figure 5 is an enlarged perspective view of the shelf actuating arm and supporting bracket.

In my copending application, Serial No. 718,187, filed March 30th, 1934, I have shown auxiliary shelves of the swingable type suitable for sup-

porting articles while other articles are being placed into or removed from the refrigerator. The present invention relates to an auxiliary shelf which is slidably moved by the swinging movement of the door into and out of its operative article supporting position.

Referring to the accompanying drawing in which like numerals refer to like parts throughout the several views, I have shown a refrigerator 10 having a swinging door 11 and a shelf 12. The shelf 12 is preferably provided with downwardly extending portions 13 which carry a pair of oppositely disposed horizontal guide elements 14, as shown in Figure 4. The guide elements 14, however, may be mounted in any other suitable manner.

The guide elements 14 slidably support the auxiliary shelf 15 of the present invention which is slidably movable thereon from the inoperative position illustrated in Figure 3 to the extended operative position illustrated in Figure 2.

The shelf 15 here shown, is in the form of a grid or grill like element, having a transverse slide rod portion 16 at its forward end. The shelf 15, however, may be of any other suitable construction.

Associated with the shelf 15 is a swingable actuating arm 17 which functions when the door 11, is opened to slide the shelf 15 from below the shelf 12 to its extended position.

The arm 17 is preferably provided with a downturned portion 18 which is journaled in a supporting bracket 19 secured to the door, the opposite end of the arm 17 being bifurcated to provide spaced projections 21 disposed at opposite sides of the rod portion 16.

Surrounding the downturned portion 18 is a coil spring 20 having one end anchored in the bracket 19 and its opposite end engaged with the arm 17 so that the tension of the spring tends to swing the arm 17 outwardly toward the door 11.

When the refrigerator door 11 is swung open, the tension of the coil spring 20 is increased due to the resistance of the shelf 15 to sliding movement, thus causing the arm 17 to swing outwardly through the door opening, one of the projections 21 of the arm engaging the rod portion 16 and sliding the auxiliary shelf 15 to its extended article receiving position as indicated in Figure 2, so that when it is desired to place articles into or remove them from the refrigerator, those articles which may be in the way, may be conveniently disposed on the shelf 15.

The shelf 15 is so shaped that when the door 11

is being moved to its closed position, the door engages with the rod portion 16 and slides the shelf 15 to its inoperative position as indicated in Figure 3.

5 The actuating arm 17 if desired may be omitted and the auxiliary shelf 15 moved manually to its extended article receiving position, upon the opening of the door.

10 While I have shown, the arm supporting bracket 19 as being mounted on the door, it is to be understood that it may be mounted to the refrigerator side wall and the spring continuously tensioned so that the spring causes the shelf to slide to its operative position whenever the door is opened.

15 The shelf arrangement is simple in construction and occupies a very small space within the refrigerator food compartment. Furthermore, the auxiliary shelf is conveniently located for receiving articles, while other articles are being placed into or removed from the refrigerator, and is quickly and easily moved to and from its operative article receiving position.

20 Aside from the specific embodiment of the invention herein shown and described, it will be understood that numerous details of the construction may be altered or omitted without departing from the spirit and scope of the invention.

What I claim is:

30 1. The combination with a cabinet having a door opening and a door for closing the same, of guide means mounted within the food compartment of the cabinet, an auxiliary shelf slidably

carried by said guide means, said shelf having a transversely extending rod portion, a bracket secured to said door, a swingable arm having an end portion hinged to said bracket and spaced projections at the opposite end thereof disposed at opposite sides of said rod portion for engagement therewith, and a coil spring surrounding said first mentioned end portion and having one end engaged with said bracket and the other end engaged with said arm whereby upon opening movement of said door said spring is tensioned and slidably moves said shelf to extended article supporting position.

2. The combination with a cabinet having an open doorway, a door for closing said doorway, guide means mounted in said cabinet, a shelf slidably disposed on said guide means, a slide rod secured transversely on the end of said shelf adjacent the door, a bracket secured to said door, a shelf actuating arm hinged at one end to said bracket for rotation in a substantially horizontal plane, a pair of projections extending substantially vertically from the free end of said arm and spaced on opposite sides of said slide rod whereby one of said projections draws the shelf outwardly when the door is opened and the other projection pushes the shelf into the cabinet when the door is closed, and a biasing spring connected to the shelf actuating arm for applying a biasing force tending to move the slidable shelf outwardly when said door is opened.

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