July 26, 1938. R. P. CONSIDINE 2,125,000

RACK FOR REFRIGERATORS

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Fig. 1

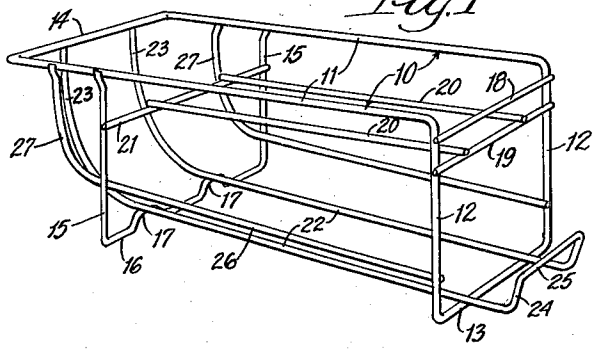


Fig. 2

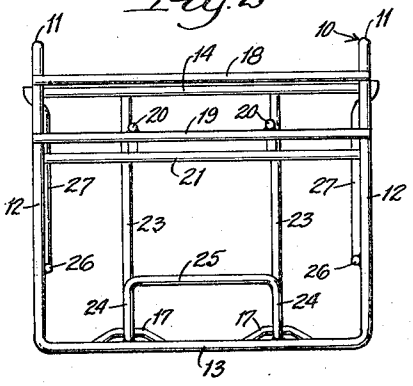
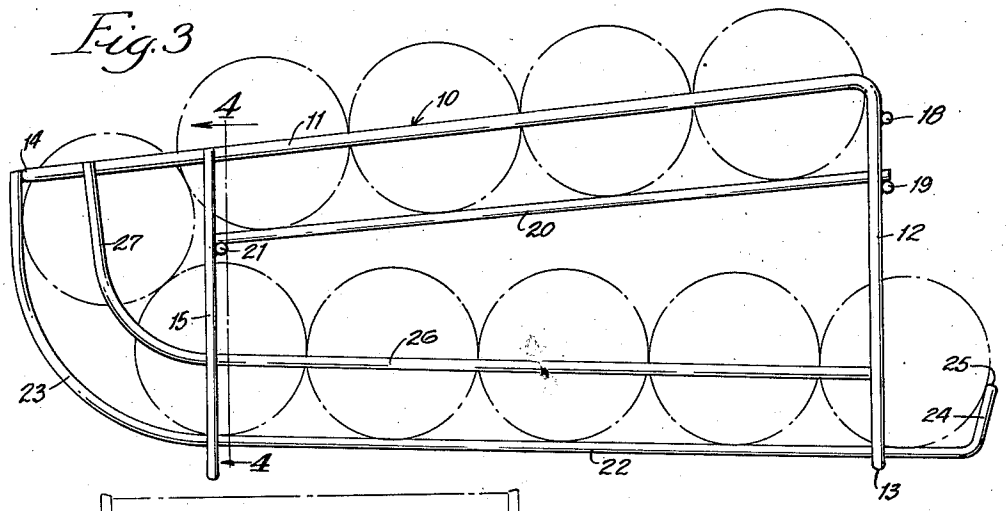


Fig. 3



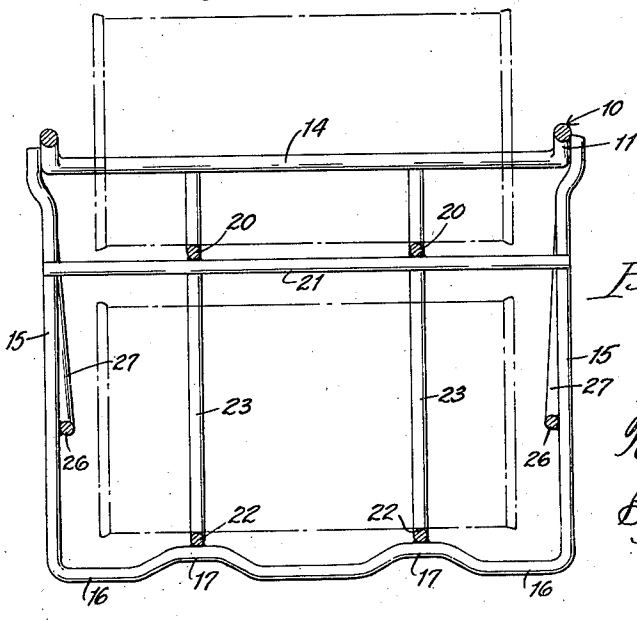


Fig. 4

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Fig. 5

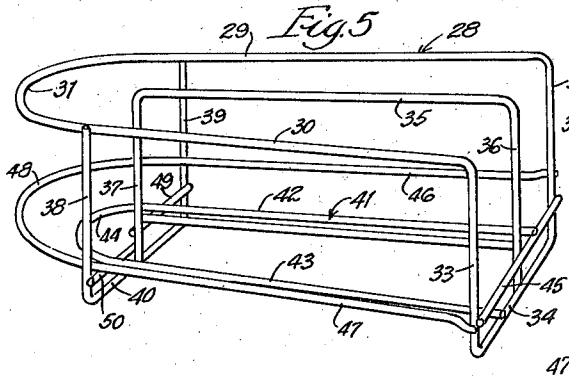


Fig. 6

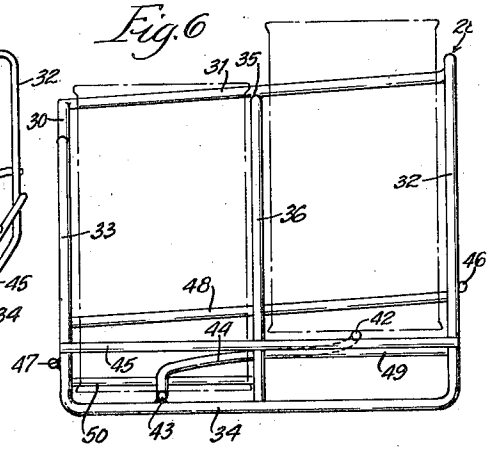


Fig. 7

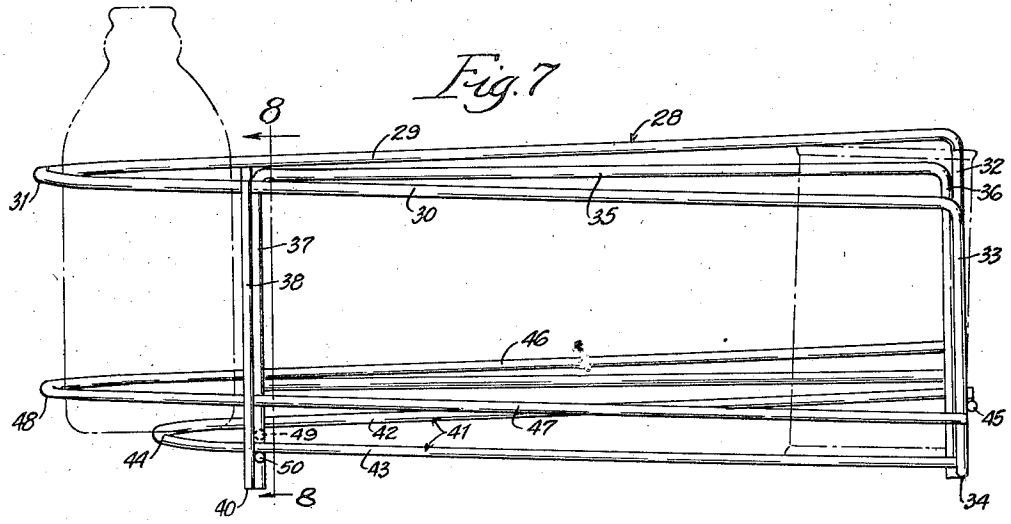
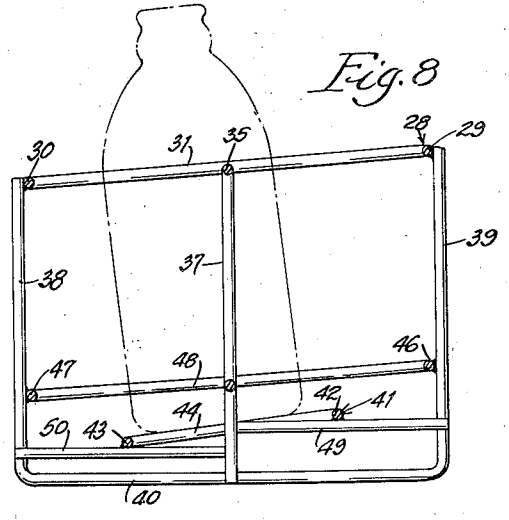


Fig. 8



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Patented July 26, 1938 2,125,000

UNITED STATES PATENT OFFICE

2,125,000

RACK FOR REFRIGERATORS

Robert P. Considine, Fulton, Ill., assignor to The Collis Company, Clinton, Iowa, a corporation of Iowa

Application February 4, 1936, Serial No. 62,323

4 Claims. (Cl. 211—49)

This invention is directed to a rack for use in a refrigerator or other place of storage for foods or like commodities, and is intended to provide for the travel of bottles, cans or similar containers, by progressive stages from the front to the rear of the refrigerator and back to the starting point, so that, as new bottles or cans are introduced into the rack for cooling, the entire procession of bottles or cans will be moved around the rack, and those previously introduced will travel to the starting point for removal. This arrangement provides for the easy introduction or removal of bottles or cans containing beverages or the like, and utilizes the refrigerating space to the fullest degree, which is frequently impossible under ordinary circumstances where jars, cans or other containers are usually crowded into place in the front of the refrigerator, thereby interfering with access to the rear and to the more inaccessible portions of the refrigerator.

The use of the device furthermore insures that in regular use the bottles or cans will be thoroughly cooled before removal, since such containers will be removed in the same order or sequence in which they are introduced into the refrigerator, thereby insuring against the removal of partially cooled containers.

Further objects and details will appear from a description of the invention in conjunction with the accompanying drawings, wherein,—

Figure 1 is a perspective of the rack of the present invention;

Fig. 2 is a front elevation of the same;

Fig. 3 is a side elevation of the same;

Fig. 4 is an enlarged sectional view taken on line 4—4 of Fig. 3;

Fig. 5 is a perspective view of an alternate form of rack;

Fig. 6 is a front elevation of the same;

Fig. 7 is a side elevation; and

Fig. 8 is a section taken on line 8—8 of Fig. 7.

The rack of Figs. 1 to 4 inclusive comprises a main frame 10 which is preferably formed of a continuous section of wire bent to afford rearwardly inclined upper side rails 11, which are downturned at their front ends at a slightly acute angle to afford vertical front standards 12 connected by a transverse front base section 13, and the side rails at their rear ends are connected by an upper rear cross bar section 14.

The main frame is supported near its rear end by a continuously formed rear standard comprising side posts 15 which are secured at their upper ends to the side rails 11 and are connected at their lower ends by a rear base rail 16 having formed therein a pair of upwardly struck offsets 17.

The vertical front standards 12 of the main frame are provided with upper and lower cross bars 18 and 19 respectively, the upper bar serving as a guard rail and the lower bar affording support for the front ends of upper track rails 20, which stand in spaced relation to one another and furnish an inclined upper trackway for the bottles, cans, or other containers. The rear ends of the track rails are supported upon a rear cross bar 21 having its ends secured to the posts 15 at a proper elevation to afford the desired incline.

The rear standard is located sufficiently in advance of the rear cross bar 14 of the main frame to provide for the rolling over and down of the cylindrical receptacles delivered from the upper trackway, which thus move on to a lower trackway comprising inclined track rails 22 which are upwardly curved at their rear portions 23 and have their ends secured to the cross bar 14.

The lower track rails 22 are supported immediately in advance of their curved rear ends upon the offsets 17 and are supported near their forward ends upon the cross bar 13, and as shown the two lower track rails are formed of a continuous section of wire, and are connected at their front ends by bending the wire to afford upright sections 24 and a cross guard section 25.

The lower track rails are located inwardly from the sides of the frame, and in order to prevent lateral displacement and to afford additional rigidity to the structure, side guard rails 26 are provided which are secured at a higher elevation directly to the front standards 12 and the rear posts 15 and have their ends 27 upturned to make connection with the side rails 11 of the main frame near the rear ends thereof.

The receptacles, which may be in the form of bottles or cans of cylindrical configuration, are first placed upon the upper inclined trackway and roll down thereon and around the rear curving trackway and upon the lower trackway until they arrive at the point of removal, at which point they are arrested by the guard rail 25. After the rack has been filled with the intended number of bottles or cans, the entire procession will be held against displacement by the contact of the front bottle or can in the lower line. As soon as this container is removed for use the procession will roll forward, thereby opening up a new space at the end of the upper tier for the introduction of another bottle or can, so that, by removing the bottles or cans from the front of the lower track and introducing new cans or

bottles to the upper track, the continuity of the procession will be maintained and the bottles removed as required, with the assurance that those removed have been subjected to cooling action within the refrigerator for the longest period of time.

The rack construction shown in Figs. 5 to 8 inclusive is intended for a similar purpose, but in this instance the procession of bottles or cans moves in a horizontal line from the point of introduction to the adjacent point of removal, the advance of the procession being reversed at the rear end of the rack.

The rack includes a main frame 28 having upper side rails 29 and 30 with a connecting curved rear section 31. It is preferred to incline the upper rails 29 and 30 and the connecting section 31 by a continuous inclination, so that the rack will be higher on the receiving end, illustrated at the rear in Fig. 5, than at the discharge end. The side rails 29 and 30 are downturned at their forward ends to afford front standards 32 and 33 respectively, the standard 32 necessarily being higher than the standard 33. The standards are connected by a front base section 34.

The space between the side rails 29 and 30 is divided by a partition formed of a continuous section of wire bent to afford a top rail 35 and front and rear vertical standards 36 and 37 respectively. The side rails are supported near their rear ends by a wire standard comprising vertical posts 38 and 39 and a cross base section 40.

The cans or bottles standing vertically are supported upon a single base track 41 formed of a continuous section of wire bent to provide track sections 42 and 43 respectively, with a curved connecting rear section 44, the base track being continuously inclined from a higher level on the receiving side to a lower level on the discharging side.

In order to afford support for the front end of the base track section 42, and also to provide a guard at the discharging end of the runway, a cross bar 45 is provided, which is connected at its ends to the front standards 32 and 33, and connected at an intermediate point to the front vertical section 36 of the partition member.

In order to prevent lateral displacement of the upstanding cans or bottles, a continuous side guard member is provided, comprising side rail sections 46 and 47 and a curved rear connecting section 48. The side guard member is continuously inclined to follow the inclination of the side members 29 and 30 of the main frame. Support for the base track member 41 is afforded by cross bars 49 and 50 arranged at different levels, and connected at their outer ends respectively to the posts 39 and 38 and at their inner ends to the upstanding section 37.

The cans or bottles standing vertically are introduced at the far side of the rack as viewed in Fig. 5, and are forced rearwardly in processional form and around the curving rear portion of the track and thence forwardly to the discharging position where they are arrested by the cross guard rail 45. The inclination of the base rail 41 at the rear turn serves to tilt the upstanding bottles, as shown in Fig. 8, and this assists in overcoming the increased friction at the point where the direction of movement is reversed and the procession is directed forwardly.

In both of the forms above described, the structure of the rack is one which renders it firm and rigid and capable of holding a full complement of cans or bottles without bending or warping. At the same time the rack is rectangular in its general configuration, so that it will readily fit into the refrigerator without waste of space and serve to cool the bottles of beer or other beverage in condition for removal from time to time as occasion may require without interfering with the manipulation of other articles of food elsewhere located within the refrigerator.

The construction of the rack in either form is one which brings the point of removal of the articles into contiguous relation to the point where they are introduced, and the general structure of the rack of either form is such as to provide for the travel of the cans or bottles without wasting any appreciable amount of space, since all of the cans or bottles composing the procession are maintained in closely contiguous relation to one another.

I claim:

1. A storage rack affording a trackway for the progressive movement of cylindrical articles, comprising a continuous frame having upper side bars and a rear cross connection and downturned at its forward end to afford front standards and a connecting front base section, a rear supporting member having upstanding posts connected to the side bars and being connected at their lower ends by a base section, a cross bar extending between the front standards, a cross bar extending between the rear posts, upper track rails having their front and rear ends supported on the front and rear cross bars respectively, and lower track rails below the upper track rails and having their rear ends upcurved below and behind the rear cross bar and connected to the rear cross connection of the frame and configured to transfer cylindrical articles from the upper track rails to the lower track rails.

2. A storage rack of the character described affording a trackway for the progressive movement of cylindrical articles, comprising a continuous frame having upper side bars and a rear cross connection and downturned at its forward end to afford front standards and a connecting front base section, a rear supporting member having upstanding posts connected to the side bars and being connected at their lower ends by a base section having upstanding offsets formed therein, a cross bar extending between the front standards, a cross bar extending between the rear posts, upper track rails having their front and rear ends supported on the front and rear cross bars respectively, and lower track rails below the upper track rails and having their rear ends upcurved below and behind the rear cross bar and connected to the rear cross connection of the frame and configured to transfer cylindrical articles from the upper track rails to the lower track rails, the lower track rails being supported at their front ends upon the connecting front base section of the frame and being supported in advance of the upcurving rear portions thereof upon the upstanding offsets formed in the base section of the rear supporting member to afford an incline for the lower track rails.

3. A rack of the character described affording a trackway for the progressive movement of cylindrical articles, comprising a continuous frame having upper side bars and a rear cross connection and downturned at its forward end to afford front standards and a connecting front base section, a rear supporting member having upstanding posts connected to the side bars and being connected at their lower ends by a base section, a cross bar extending between the front stand-

ards, a cross bar extending between the rear posts, upper track rails having their front and rear ends supported on the front and rear cross bars, and lower track rails below the upper track rails and having their rear ends upcurved below and behind the rear cross bar and connected to the rear cross connection of the frame and configured to transfer cylindrical articles from the upper track rails to the lower track rails, the front ends of the lower track rails being supported upon the front base section and being upturned and cross connected to afford an elevated guard member to block the advance of the procession at the point of removal of articles.

4. A rack of the character described affording a trackway for the progressive movement of cylindrical articles, comprising a continuous frame having upper side bars and a rear cross connection and downturned at its forward end to afford front standards and a connecting front base section, a rear supporting member having upstanding posts connected to the side bars and being connected at their lower ends by a base section having upstanding offsets formed therein, a cross bar extending between the front standards, a cross bar extending between the rear posts, upper track rails having their front and rear ends supported on the front and rear cross bars respectively, and lower track rails below the upper track rails and having their rear ends upcurved below and behind the rear cross bar and connected to the rear cross connection of the frame and configured to transfer cylindrical articles from the upper track rails to the lower track rails, the lower track rails being supported at their front ends upon the connecting front base section of the frame and being supported in advance of the upcurving rear portion thereof upon the upstanding offsets formed in the base section of the rear supporting member to afford an incline for the lower track rails, the front ends of the lower track rails being upturned and cross connected to afford an elevated guard member to block the advance of the procession at the point of removal of articles.

R. P. CONSIDINE.