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N. M. THOMAS ET AL

2,123,837

WIRE RACK

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Fig. 1.

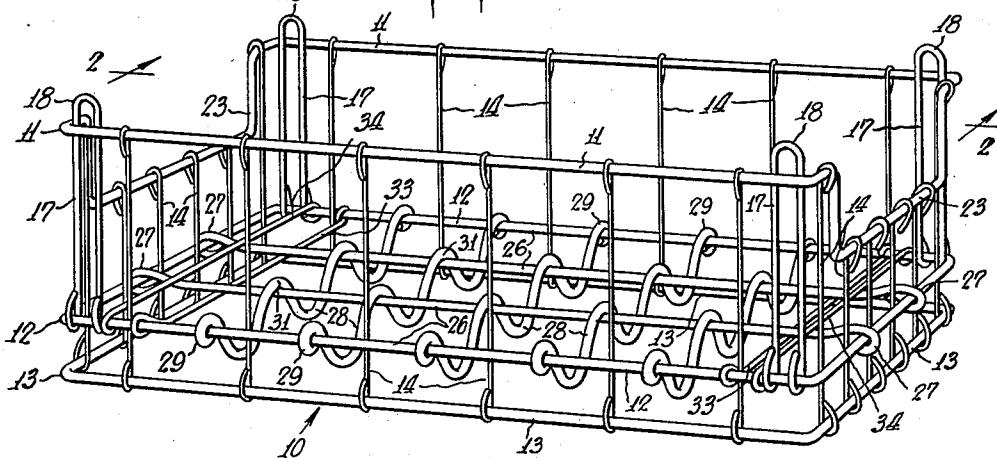


Fig. 2.

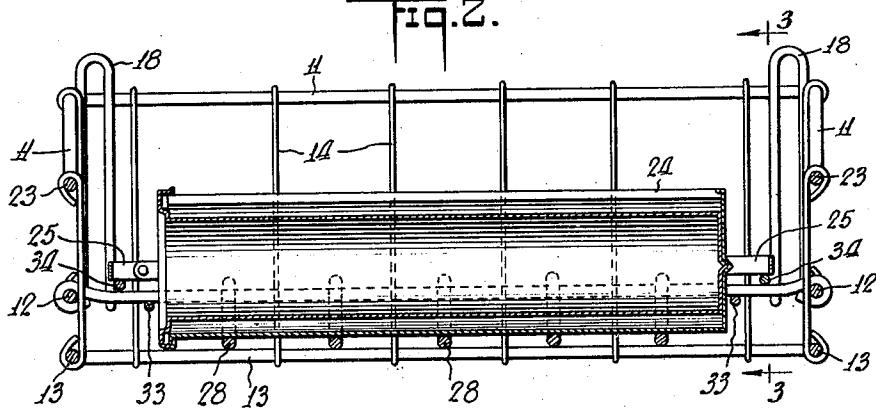
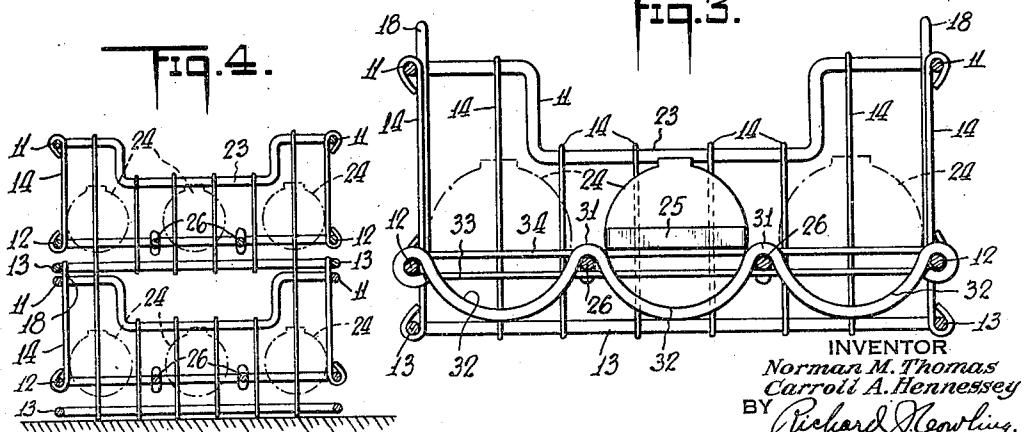


Fig. 4.



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WIRE RACK

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3 Claims. (Cl. 211—71)

The present invention relates to the art of making containers, and it has particular relation to a spaced wire rack of an improved construction which is suitable for receiving and supporting a plurality of cylindrical open-top molds designed for use in making frozen confectionery products.

An object of the invention is to provide a suitable rack of open, spaced wire, construction which is exceedingly light in weight and durable in construction, and which is very simple and inexpensive to make.

Another object of the invention is the provision of a spaced wire rack which is open throughout to permit the free circulation of refrigerant there-through to all surfaces of the molds contained therein.

A further object of the invention is to provide a suitable spaced wire rack for use in manipulating a plurality of open-top cylindrical molds simultaneously throughout various manufacturing operations, and which is capable of maintaining said molds in a fixed, upright position at all times.

Another object of the invention is to provide a rack of the character described which is suitable for stacking one upon the other; and

Other and further objects and advantages of the improved apparatus will be apparent from the following description, wherein a preferred form of embodiment of the invention is shown, reference being had to the accompanying drawing, forming a part thereof, in which:

Fig. 1 is a perspective view of a rack constructed in accordance with the principles of the invention;

Fig. 2 is a sectional view taken on the line 2—2 of Fig. 1, and also illustrating, partially in section, the position of a cylindrical open-top mold mounted in receiving and supporting position therein;

Fig. 3 is an end elevational view of the apparatus taken along the line 3—3 of Fig. 2, and illustrating the position of a plurality of molds of the type shown in Fig. 2 in supporting position therein; and

Fig. 4 is an end elevational view of two racks, viewed similarly to the rack of Fig. 3, and illustrating the manner in which the racks may be stacked one upon another.

Referring now to the drawing, there is shown a net-like rack of spaced wire construction 10, which is substantially rectangular in shape and consists of a top frame 11, an intermediate frame 12 and a bottom frame 13 secured in spaced vertical and parallel relation upon uprights 14 spaced

perimetrical thereof. The uprights 14 are joined to the top frame 11 and the bottom frame 13 by looping ends thereof about the frame structures, and the uprights 14 are joined to the frame 12 by spot-welding or other suitable means at each point of juncture.

The corners of the rack 10 are reinforced by upright posts 17 of hair-pin shape, having looped ends 18 projecting above the top frame 11. The posts 17 are secured to the frame 12 by bending the free ends thereof about the side members thereof, and are spot-welded or otherwise fastened to the top frame 11 at each point of juncture. The projecting loops 18 extending above the top frame 11 at the corners of the rack 10 provide means engageable with the bottom frame 13 of a similar rack, as best shown in Fig. 4, for facilitating the stacking of a plurality of such racks 10 one on top of another.

The top frame 11 is provided with bail-like ends, which have a centrally depressed portion 23. This depressed portion 23 provides easy access to the inside of the rack 10 for the insertion or withdrawal of the open-top cylindrical molds 24 therefrom, which are provided at each end with horizontal handles 25. In the event a plurality of racks 10 are stacked, as shown in Fig. 4, one on top of another, and it is desirable to move the entire stack, the depressed portion 23 also affords suitable hand gripping facilities intermediate the ends of the stack for pulling or sliding the stack of racks from one place to another.

The intermediate frame 12, which is secured to the uprights 14 below the median plane of the rack 10, is provided with an internal supporting frame structure of lattice-like construction formed by a plurality of transversely spaced longitudinally extending rods 26 secured to the opposite ends of the frame 12 by any suitable means such as bending the ends thereabout, as indicated at 27, and by a plurality of longitudinally spaced transversely extending sinuate rods 28 secured to the opposite sides of the frame 12 in like manner, as indicated at 29. It will be noted that the sinuations of the rods 28 extend vertically of the rack 10, and are looped over the rods 26, as indicated at 31, at which points of juncture they are soldered, spot-welded or otherwise secured to the rods 26, thereby forming a plurality of longitudinally extending semi-circular cradle-like troughs 32 between the rods 26 of the rack 10. Obviously, any number of such troughs may be provided by merely increasing the size of the rack or the number of longitudinally extending rods 26.

A transversely extending straight rod 33 is mounted on the sides of the frame 12 and under the rods 26 thereof a short distance from each end of the rack. These rods 33 are spaced on the frame 12 a distance equal to the length of the molds 24 to be deposited in the rack 10, and, as best shown in Fig. 2, engage the ends of the mold 24 and prevent any longitudinal movement thereof in the rack 10. A second transversely extending horizontal rod 34 extends parallel to the rod 33 on the frame 12 between said rod 33 and the ends of the rack 10. This second rod 34, however, is mounted on the sides of the frame 12 at each end of the rack 10 above the rods 26 to which they have been fastened by spot-welding, etc. at the various points of juncture. These second rods 34 are adapted to engage the horizontal handles 25 of the mold 24, as best shown in Fig. 3, to prevent any rotation 20 or tilting of the open-top molds 24 in the rack 10.

Although we have only described in detail one modification which our invention may assume, it will be readily apparent to those skilled in the art that other modifications may be readily made 25 therein without departing from the spirit of the invention or from the scope of the appended claims.

What we claim is:

1. A net-like spaced wire rack of the character 30 described consisting in combination of substantially parallel rectangular top, intermediate and bottom frames, said frames being connected and secured in spaced vertical relation by uprights spaced perimetricaly thereof, said intermediate 35 frame having spaced longitudinally extending rods secured to opposite ends thereof and spaced transversely extending sinuate rods mounted vertically of the rack and secured to the opposite sides thereof, providing a lattice-like supporting 40 structure having a plurality of transversely spaced parallel semi-circular cradle-like troughs extending longitudinally thereof for receiving and supporting a mold, said rack having means mounted on said intermediate frame adjacent its ends and 45 extending transversely of said troughs for engaging the ends of said molds to prevent longitudinal movement thereof.

2. A net-like spaced wire rack of the character described consisting in combination of substantially parallel rectangular top, intermediate and bottom frames, said frames being connected and secured in spaced vertical relation by uprights 5 spaced perimetricaly thereof, said intermediate frame having spaced longitudinally extending rods secured to opposite ends thereof and spaced transversely extending sinuate rods mounted vertically of the rack and secured to the opposite 10 sides thereof, providing a lattice-like supporting structure having a plurality of transversely spaced parallel semi-circular cradle-like troughs extending longitudinally thereof for receiving and supporting a mold, said rack having means mounted 15 on said intermediate frame and adjacent the ends thereof and extending transversely and horizontally of said troughs for engaging the handles of said molds to prevent rotational movement thereof.

3. A net-like spaced wire rack of the character described consisting in combination of substantially parallel rectangular top, intermediate and bottom frames, said frames being connected and secured in spaced vertical relation by uprights 20 spaced perimetricaly thereof, said intermediate frame having spaced longitudinally extending rods secured to opposite ends thereof and spaced transversely extending sinuate rods 25 secured vertically to opposite sides thereof providing a lattice-like supporting structure having a plurality of transversely spaced parallel semi-circular cradle-like troughs extending longitudinally thereof for receiving and supporting a plurality of cylindrical molds, said intermediate 30 frame having means spaced from the ends thereof and extending transversely below the horizontal plane thereof for preventing longitudinal movement of said molds in said rack and likewise having transversely extending horizontal 35 means above the horizontal plane thereof for preventing rotational movement of said molds in said rack.

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