June 28, 1938. R. A. KIDWELL ET AL 2,122,322

ROLLER RACK

Filed Nov. 6, 1935

Fig. 1.

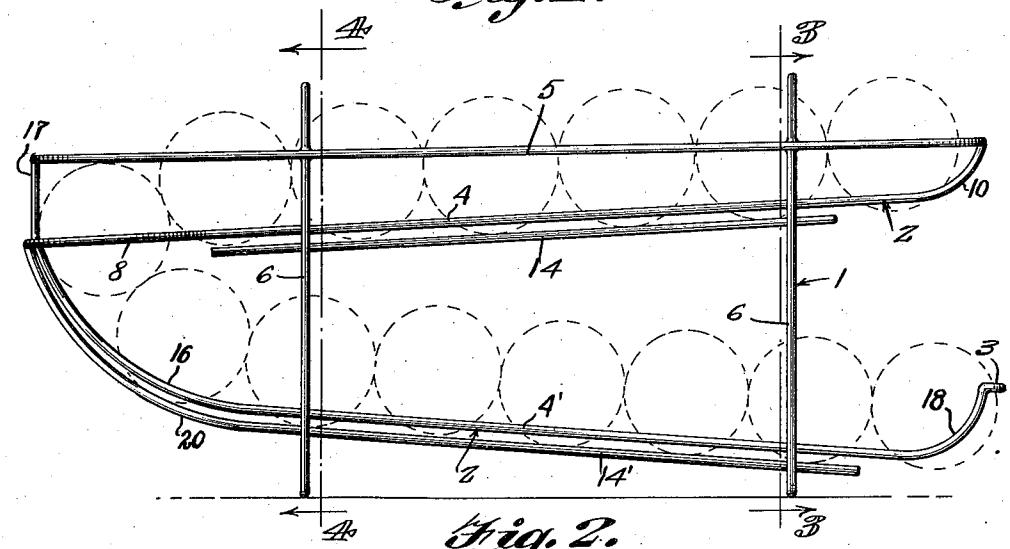


Fig. 2.

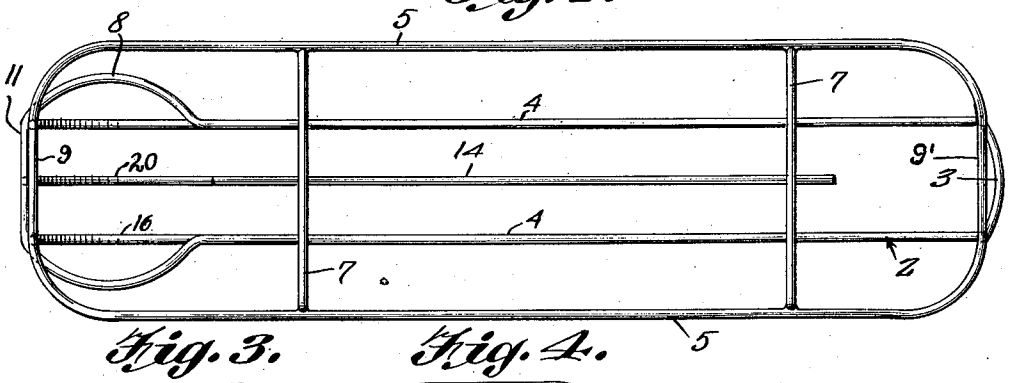


Fig. 3.

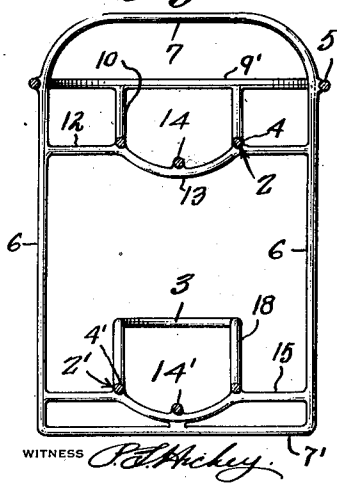
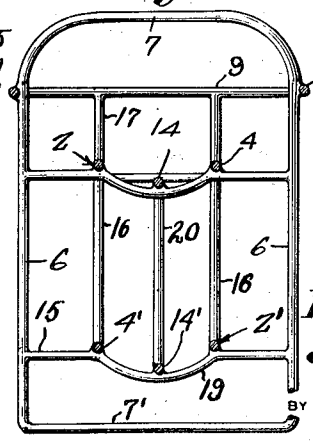


Fig. 4.



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ROLLER RACK

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2 Claims. (Cl. 211—49)

This invention relates to racks for the storage and dispensing of various articles or foods either in package form or in their natural state or shape, and has for the primary object the provision of a device of this character which will conserve space, prevent damage and waste and permit dispensing of the oldest article in the device, thereby avoiding staleness and spoilage caused by new or fresh articles of food being obtained in advance of older stock.

With these and other objects in view, this invention consists in certain novel features of construction, combination and arrangement of parts to be hereinafter more fully described and claimed.

For a complete understanding of our invention, reference is to be had to the following description and accompanying drawing, in which

Figure 1 is a side elevation illustrating a rack constructed in accordance with our invention.

Figure 2 is a top plan view illustrating the device.

Figure 3 is a transverse sectional view taken on the line 3—3 of Figure 1.

Figure 4 is a transverse sectional view taken on the line 4—4 of Figure 1.

Referring in detail to the drawing, the numeral 1 indicates generally a rack constructed according to an embodiment of this invention, which is formed of wire, or relatively small diameter rods which may be bent to shape and will retain their shaped configuration.

The rack 1 comprises upper and lower troughs, designated generally by the numerals 2 and 2', respectively, which are disposed on an inclination to the horizontal, with the inclination of the trough 2 reverse to the inclination of the trough 2'. The troughs 2 and 2' are supported in spaced apart relation by means of a pair of supporting members comprising vertical side bars 6 connected together at their upper ends by an upper bar 7 and a lower bar 7' which form substantially rectangular supporting frame members.

An upper frame composed of side bars or rails 5 and end bars 9 and 9' is secured in substantially horizontal position to the vertical side bars 6, the side bars 5 and the end bars 9 and 9' being formed of a single piece of wire with the ends welded or otherwise secured together to form a rectangular frame, preferably provided with rounded corners as shown in Fig. 2.

The upper trough 2 comprises a pair of parallel side bars 4 which are upwardly curved at their upper ends, as shown at 10, and the upper ends of the bars 4 are welded or otherwise secured to the end bar 9' as by welding or the like. The opposite or lower ends of the side bars 4 are bent outwardly, as at 8, to form a discharge passage, and the lower ends of the side bars 4 are connected together by an integral bar 11. The trough 2 is supported within the vertical frames comprising the bars 6, 7 and 7' by means of transverse bars 12 secured at their opposite ends to the vertical bars 6. Preferably the supporting bars 12 are provided with a downwardly curved central portion 13 disposed between the side bars 4, and a bottom rail or bar 14 is secured, as by welding or the like, to the offset portions 13 and terminates inwardly of the opposite ends of the trough 2 as shown in Fig. 1. The lower end of the bottom bar 14 terminates short of the discharge passage formed by the outwardly curved portions 8 of the side bars 4 so that the articles rolling down the trough 2 may readily pass through the lower end of the trough 2 to the lower trough 2'.

The lower trough 2' comprises side bars 4' disposed in parallel relation, and the side bars 4' are secured as by welding or the like to transverse supporting bars 15 secured at their ends to the vertical frame bars 6 adjacent the lower ends thereof. The side bars 4' at their upper ends are curved upwardly as at 16 and secured as by welding or the like to the end bar 11 of the upper trough 2, and then continued upwardly as at 17 and secured to the end bar 9 of the upper horizontal frame.

The lower ends of the side bars 4' are also curved upwardly as at 18 to form a stop, and the upwardly curved portions 18 are then connected together by an outwardly curved bar 3 against which the articles are adapted to abut.

A bottom bar or rail 14' is disposed between the side bars 4', and is secured as by welding or the like to downwardly curved intermediate portions 19 formed in the transverse bars 15 between the rails or side bars 4'. The upper end of the bottom bar 14' is upwardly curved as at 20 on a curvature similar to the curvature of the side bars 4' shown at 16, and the upper curved end of the bar 14' is secured, as by welding or the like, to the end bar 11.

In the use of this device, the upper trough 2 is filled to capacity, as shown by the dotted lines, with articles, which are either cylindrical or spherical, and the lower trough 2' may also be filled to capacity with the lowermost article abutting against the end bar 3. The articles are removed from the lowermost end of the trough 2',

and as one or more of the articles are removed the remaining articles will gravitatingly move downwardly along the upper trough 2, through the discharge passage formed by the curved portions 8 of the side bars 4 and then along the lower trough 2'.

A device of the character described is capable of accommodating a large number of articles and will conserve space and will permit the articles to gravitate towards the discharge end of the device as an article is removed therefrom. Also, the device is so constructed that articles may be readily placed in the uppermost trough for filling the rack. This device due to its construction will be durable and inexpensive to manufacture.

Each trough is transversely curved so as to prevent the articles therein from becoming accidentally displaced therefrom by falling or rolling off sideways from the trough.

While the rack in this application has been described and shown as being made of a series of bars, it is to be understood that the rack may be composed of strips of metal to facilitate the manufacture thereof by a stamping operation.

Having described the invention, we claim:

1. A wire rack comprising an upper and a lower trough inclined in opposite directions, and a supporting frame for said troughs, said upper trough comprising a pair of parallel side bars provided with opposed outwardly offset portions at an end thereof, a pair of substantially rectangular vertically disposed frame members relatively wider than said troughs and disposed in spaced apart relation, a transversely disposed bar for each frame member secured at opposite ends to the vertical portions of said frame members and engaging beneath said side bars, said transverse bars each having a downwardly offset portion between said side bars, a bottom bar resting on said downwardly offset portion and terminating at one end adjacent said outwardly offset side bar portions, said lower trough comprising a pair of side bars provided with upwardly bent opposite end portions, a pair of transverse bars engaging beneath said latter side bars and secured at opposite ends to said frame members, said latter transverse bars having downwardly offset portions between said latter side bars, and a bottom bar secured to said offset portions of said latter transverse bars, the upwardly bent portions of said latter side bars at one end of said trough being secured to adjacent ends of said first side bars, and an endless horizontally disposed frame member secured to said vertical frame members and to an end of each trough member, said lower trough member being extended at one end upwardly above said upper trough member to connect with said horizontal frame member.

2. A storage rack constructed of wire or the like affording a trackway and guiding members for the progressive movement of articles to be stored, said trackway comprising an upper section and a lower underlying section secured in rigid spaced relation and having their intake and discharge ends respectively one above the other, and a rear downwardly and reversely curving section joining said first named sections at a point spaced from the said intake and discharge ends configured to receive articles from the upper section and reverse their direction of movement and transfer them to the lower section, the upper trackway section at its forward end being adapted to permit the introduction of articles in processional relation and the lower trackway section being provided at its forward end with an elevated guard member to block the advance of the procession at the point of removal of articles, the trackway sloping downwardly toward the point of removal.

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