April 23, 1940. E. E. DALTON 2,197,789

DISPLAY RACK

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Fig. 1

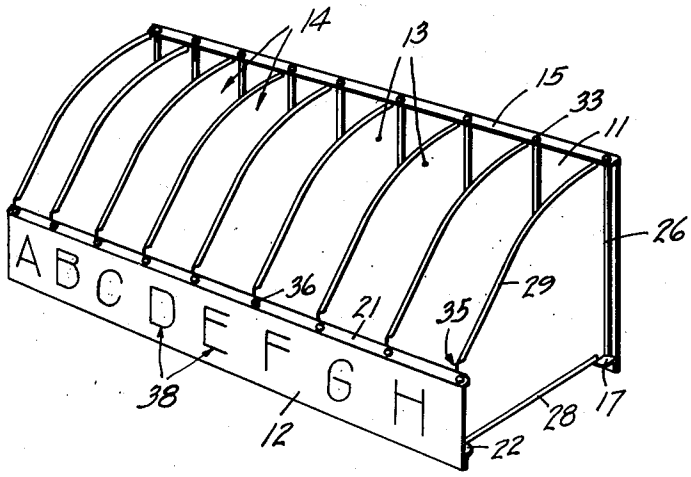


Fig. 3

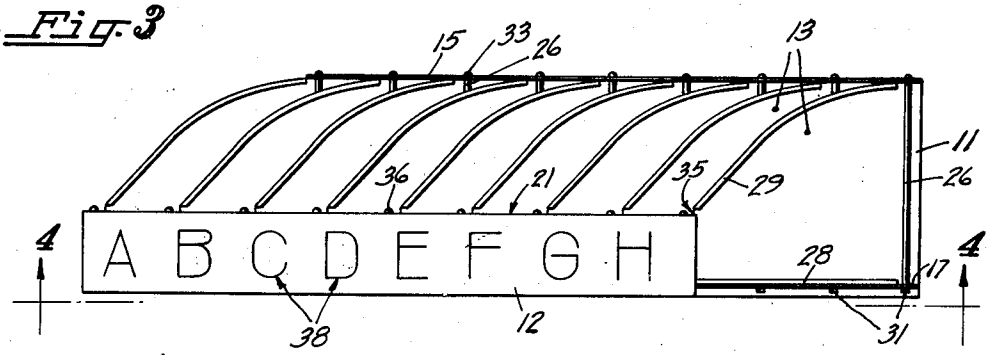


Fig. 4

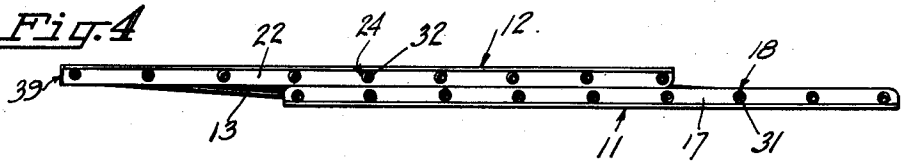
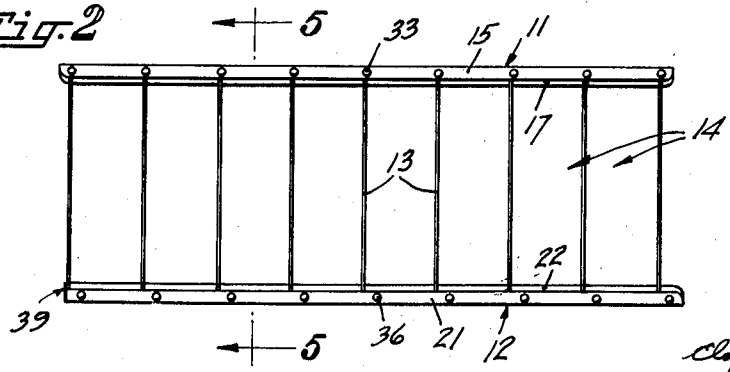


Fig. 2



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Fig. 5

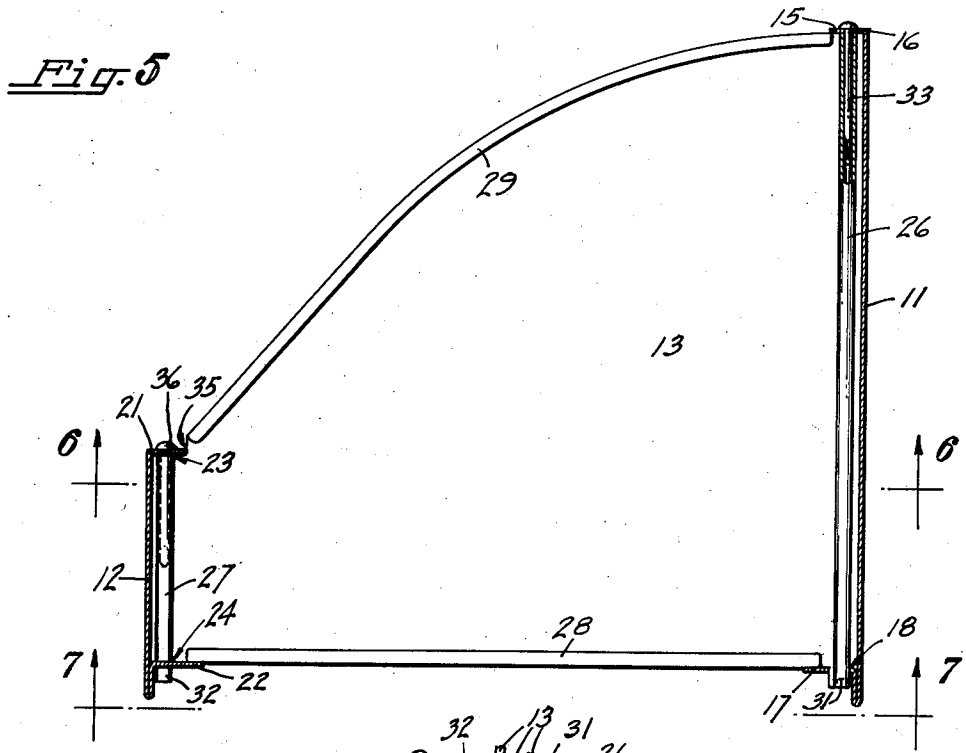


Fig. 8

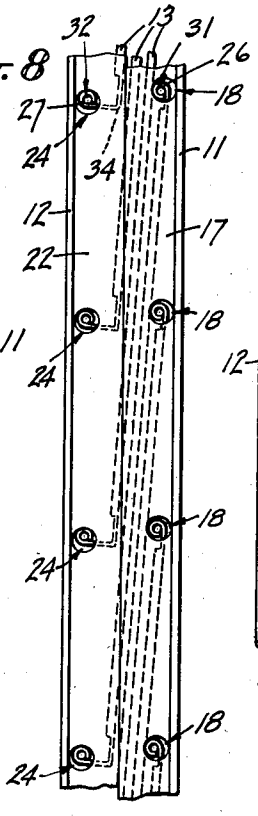


Fig. 6

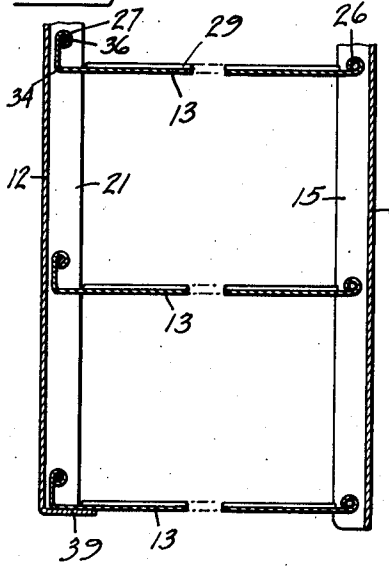
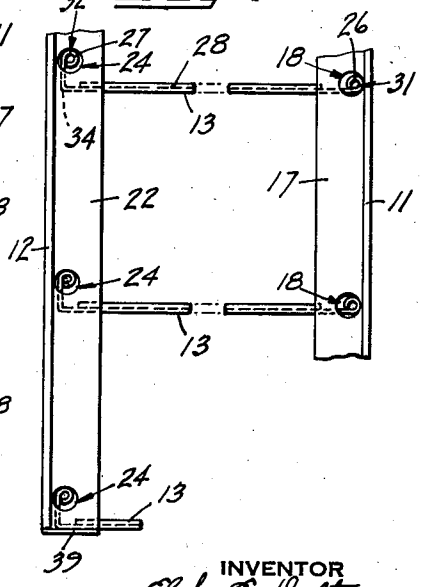


Fig. 7



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Patented Apr. 23, 1940 2,197,789

UNITED STATES PATENT OFFICE

2,197,789

DISPLAY RACK

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Application September 22, 1936, Serial No. 102,040

6 Claims. (Cl. 211—85)

The present invention relates to a display rack for containers or cans such as canned goods and has particular reference to and has for an object the provision of such a display rack which is collapsible, by a folding movement, into a flat compact form for shipment or storage and which may be readily expanded or unfolded into display position at which time it provides a plurality of pockets in which cans may be placed, there being preferably a lithographed section on a wall of the rack in front of each pocket designating the particular type of canned goods displayed in the pocket.

Numerous other objects and advantages of the invention will be apparent as it is better understood from the following description, which, taken in connection with the accompanying drawings, discloses a preferred embodiment thereof.

Referring to the drawings:

Figure 1 is a perspective view of a display rack embodying the instant invention, the rack being shown in fully expanded display position;

Fig. 2 is a top plan view of the rack shown in Fig. 1;

Fig. 3 is a front elevation of the rack showing it in collapsed and folded position ready for shipment or storage;

Fig. 4 is a bottom plan view of the collapsed rack, the view being taken substantially along a plane indicated by the line 4—4 in Fig. 3 and looking up in the direction indicated by the arrows;

Fig. 5 is an enlarged transverse vertical section taken substantially along the line 5—5 in Fig. 2;

Fig. 6 is a horizontal section on a smaller scale of one end of the rack, the section being taken substantially along the line 6—6 in Fig. 5, looking up, parts of the rack being broken away;

Fig. 7 is a bottom plan view of the same end of the rack as shown in Fig. 6, the view being taken substantially along a plane indicated by the lines 7—7 in Fig. 5, looking up, parts of the rack being broken away; and

Fig. 8 is a view similar to Fig. 7 and showing the rack collapsed and folded, the ends of the rack being broken away to better illustrate the folding of the parts intermediate thereof.

As a preferred embodiment of the instant invention the drawings disclose a display rack for use on the counter of a grocery store or the like. The rack comprises a vertical back wall 11 (Fig. 1), and a vertical front wall 12 which are connected by means of hinge connections to a plurality of spaced and vertical transverse or division walls 13. These walls set off pockets 14 in which canned goods may be exhibited when the rack is in display position.

The back and front walls 11, 12 are of identical construction with the exception of the back wall being considerably higher than the front wall. The top edge of the back wall 11 is bent over horizontally and inwardly to form a right-angled flange 15 (Fig. 5). This flange constitutes a stationary hinge element for the back wall and is provided with a plurality of spaced holes 16, one for each of the division walls 13. The bottom edge of the back wall is folded back on itself and thence bent inwardly to provide a horizontal flange 17. This flange constitutes a stationary hinge element which cooperates with the upper hinge element 15 and is also formed with a plurality of spaced holes 18 (see also Figs. 7 and 8) disposed in vertical alignment with the upper holes 16.

Similarly the front wall 12 is formed with a right angled inwardly bent horizontal flange 21 at its top edge which constitutes a stationary hinge element for this front wall. The bottom edge of the wall is folded back on itself and then bent inwardly at right angles providing a horizontal flange 22 thus forming a stationary hinge element which cooperates with the upper hinge element. These flanges are provided with vertically aligning spaced holes 23, 24 as in the flanges of the back wall 11.

The division walls 13 are hingedly connected with the back and front walls 11, 12 by means of these stationary hinge elements just described. For this purpose the rear and front edges of each of the division walls are curled over to provide vertically extending hollow curls 26, 27 (Figs. 5, 6, 7 and 8). The bottom and top edges 28, 29 of the division walls are hemmed to provide smooth edges, the top edge being curved convexly from back to front to present a pleasing design, while the bottom edge is cut back in order to let the curled edges 26, 27 extend beyond the bottom edge of the wall. These extensions of the curled edges provide rear and forward trunnions 31, 32 for the division walls.

The trunnions 31 fit into the holes 18 formed in the horizontal flange or hinge element 17 of the back wall 11. At the top of the wall, pins 33 extend through the holes 16 of the flange or hinge element 15 and are preferably wedged tightly into the upper end of the hollow curls 26. This permanently connects the rear end of the division walls 13 to the back wall 11 and provides a hinged connection.

The forward edges of the division walls 13 are

similarly connected to the front wall 12 these edges being bent at right angles as at 34 and cut away at their upper ends in notches 35 to provide clearance for the top flange 21 so that free hinging movement between the front wall and the division walls may be obtained.

The trunnions 32 of the division walls fit into the holes 24 of the front wall lower flange or hinge element 22 while pins 36 extend through the holes 23 in the upper flange or hinge element 21 and project into the ends of the hollow curls 27. This permanently and hingedly connects the front end of the division walls 13 with the front wall 12.

With this simple construction of hingedly connected walls the display rack may be readily folded flat into a compact and neat form as shown in Figs. 3, 4 and 8, in which form it may be conveniently shipped and may be easily stored without occupying a great deal of space. It also may be very quickly unfolded or expanded for use and when in its expanded position as shown in Figs. 1 and 2 it provides a plurality of individual pockets for the storage of different kinds of canned goods. These goods may be designated on the front wall of the rack by lithographed labels or other insignia indicated in the drawings by letters 38.

Provision is made for limiting the hinging action of the walls when unfolding the rack so that their movement will stop when the rack is fully expanded. This is effected by a right-angled end flange or stop 39 (Figs. 6 and 7) which is preferably formed integrally with the front wall 12 at one end thereof (the left hand end as viewed in Figs. 1 and 2). This end flange engages against the side of the endmost division wall 13 when the rack is fully expanded and prevents further movement in one direction.

It is thought that the invention and many of its attendant advantages will be understood from the foregoing description, and it will be apparent that various changes may be made in the form, construction and arrangement of the parts without departing from the spirit and scope of the invention or sacrificing all of its material advantages, the form hereinbefore described being merely a preferred embodiment thereof.

I claim:

1. A collapsible display rack for canned goods, comprising sheet metal spaced and parallel front and rear walls each having a flange portion at its upper and lower end extending inwardly of said rack, and a plurality of sheet metal intermediate walls hingedly connected to said front and rear walls and providing a series of pockets for the reception and display of canned goods, the hinge connections between said walls comprising hollow tubular curled portions formed integrally with each of said intermediate walls at the front and rear extremities of the latter, the lower ends of said curled portions having pivotal engagement with the said lower flange portions of the front and rear walls, and the upper ends of said hollow tubular curled portions having a pin connection with the upper of said flange portions of said front and rear walls, all of said walls being secured together and providing a unitary structure which is collapsible into a flat compact form for shipment and storage.

2. A collapsible display rack for canned goods, comprising a front wall and a rear wall each provided with a flange portion at its upper and lower end extending inwardly of said rack, and a plurality of transverse walls hingedly connected to said front and rear walls, the hinge connections between said walls comprising hollow tubular curled portions formed integrally with each of said intermediate walls at the front and rear extremities of the latter, the lower ends of said curled portions being pivotally mounted in the said lower flange portions of the front and rear walls, and the upper ends of said hollow tubular curled portions having a tight pin connection with the upper of said flange portions of said front and rear walls, all of said walls being permanently secured together and providing a unitary structure which is collapsible into a flat compact form for shipment and storage and which may be expanded into display position to set off a plurality of pockets in which canned goods may be placed.

3. A collapsible display rack for canned goods, comprising a front wall and a rear wall each provided with a flange portion at its upper and lower end extending inwardly of said rack, and a plurality of transverse walls hingedly connected to said front and rear walls, the hinge connections between said walls comprising hollow tubular curled portions provided on each of said transverse walls at their front and rear extremities, the lower ends of said curled portions being pivotally secured in the said lower flange portions of the front and rear walls, and the upper ends of said hollow tubular curled portions having a tight pin connection with the upper of said flange portions of said front and rear walls, all of said walls being permanently secured together to provide a unitary structure which is collapsible into a flat compact form for shipment and storage and which may be expanded into display position to set off a plurality of pockets in which canned goods may be placed, and an integral flange disposed on the end of one of said walls and engaging another of said walls for limiting the hinging action when the display rack is opened into its display position.

4. A collapsible display rack for canned goods, comprising a front wall, a rear wall, a plurality of transverse walls hingedly connected to said front and rear walls, said hinge connections including rearwardly and forwardly extending flanges disposed on said front and rear walls respectively and provided with spaced aligned apertures engaging the ends of vertically disposed curled portions formed integrally with said transverse walls, all of said walls being permanently secured together and providing a unitary structure which is collapsible into a flat compact form for shipment and storage and which may be expanded into display position at which time the walls set off a plurality of pockets in which canned goods may be placed.

5. A collapsible display rack for canned goods, comprising a vertical rear wall, a parallel vertical front wall, inwardly bent horizontal flanges adjacent the top and bottom marginal edges of each of said walls and having spaced and vertically aligning holes disposed therein, and a plurality of vertical transverse walls having their vertical edges formed with hollow curls and their bottom edges cut away adjacent the curls to provide depending trunnions serving as hinges connecting said transverse walls with said rear and front walls adjacent their lower edges, said trunnions being disposed in the holes in the lower flanges of said front and rear walls, and pins disposed in the holes in the upper flanges of said walls and extending into the upper ends of said curls forming a hinge connection between the transverse walls and the upper edges of said front and rear

walls, thereby providing a display rack having permanently and hingedly connected walls which may be folded into compact form for shipping and storage and which may be expanded into display position at which time the walls set off a plurality of pockets for the reception and display of canned goods.

6. A collapsible display rack for canned goods, comprising a vertical front wall, a vertical rear wall higher than said front wall, horizontal flanges formed on said walls adjacent their upper and lower edges, and a plurality of vertical transverse walls the top edges of which slope from rear to front, each of said transverse walls being provided at their front and rear edges with integral curled portions hingedly connected to the said horizontal flanges of the front and rear walls to provide a plurality of pockets for the reception of canned goods, each of said transverse walls being bent at an angle adjacent the front wall and cut away at their sloping top edges adjacent the said upper flange of said front wall to provide clearance for hinging action between these parts, whereby the display rack formed by these connected walls may be collapsed into a flat compact form for shipment and storage.

ELOF E. DALTON.