Sept. 18, 1962 L. A. LOVELLA 3,054,508

FOLDING DISPLAY RACKS

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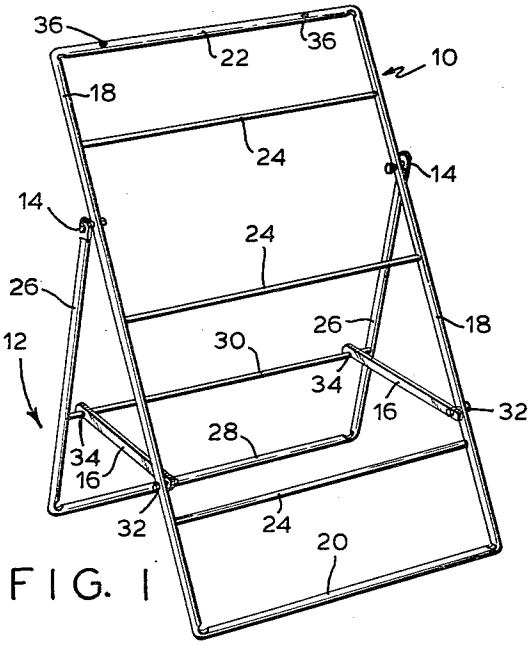

FIG. 1

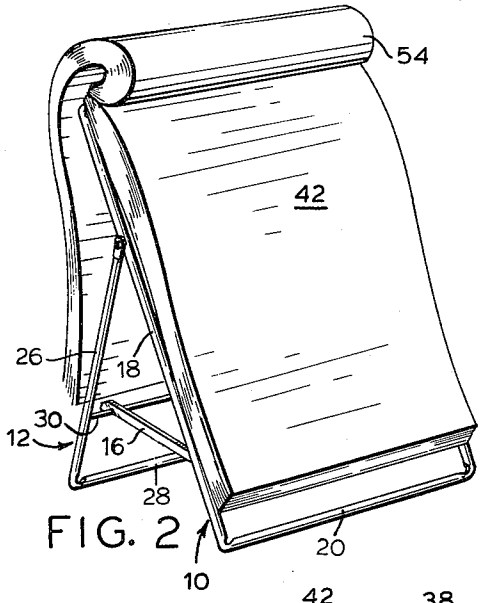

FIG. 2

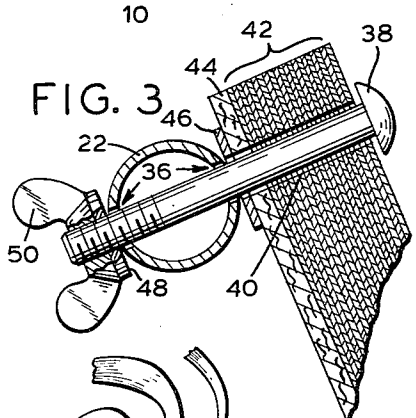

FIG. 3

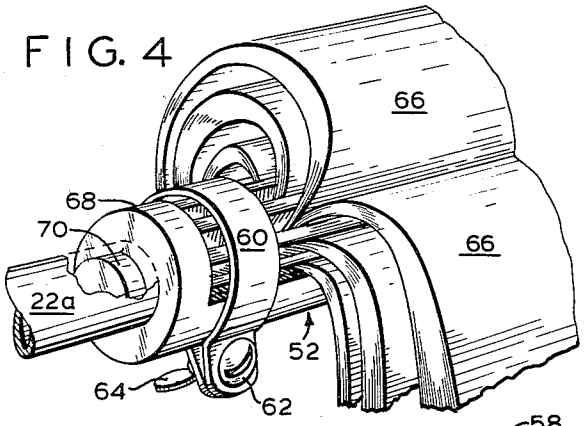

FIG. 4

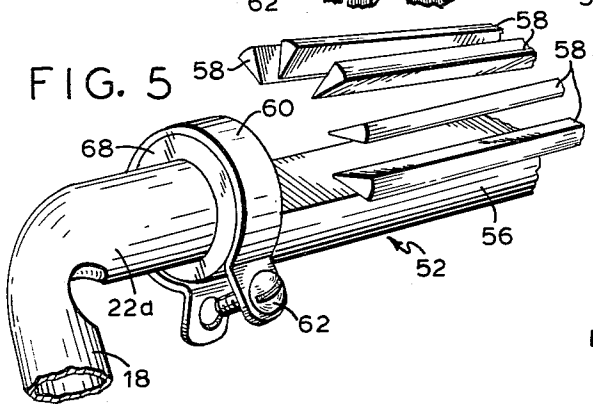

FIG. 5

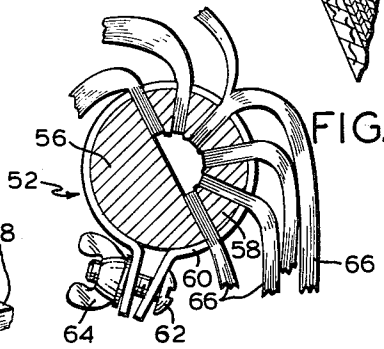

FIG. 6

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3,054,508
FOLDING DISPLAY RACKS

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2 Claims. (Cl. 211—45)

This invention relates to folding racks for displaying merchandise, placards, charts and the like and more particularly to collapsible folding racks for supporting and displaying books and bound or unbound serial collections of charts, wall paper samples, textile fabrics or like sheet materials.

Easels and display stands heretofore available have been bulky, cumbersome and inconvenient. Such devices have presented many difficulties in manufacture, shipping, storage, setting up and moving, and such devices have generally proved unsuitable for vertical or inclined display of collections of large sheet material such as books of charts or wallpaper samples, stacks of textile fabric samples, and the like.

Accordingly, the principal object of the invention is to provide display racks for sheet materials which are convenient and economical to manufacture, store and transport.

Another object of the invention is provide display racks of the above character which are conveniently foldable and easily set up for use.

A further object of the invention is to provide display racks of the above character capable of supporting and displaying heavy collections of sheet materials, charts, diagrams, textiles, wallpaper samples, or the like.

Another object of the present invention is to provide display racks of the above character for convenient removal of certain sheets or groups of sheets in such a collection, and the substitution of new sheets therefor in serial relationship without disturbing the remaining collection of sheets.

A further object of the invention is to provide display racks of the above character affording revolving support for such collections of sheets of material, for convenient display of each sheet in such collection.

Other objects of the invention will in part be obvious and will in part appear hereinafter.

The invention accordingly comprises the features of construction, combinations of elements, and arrangement of parts which will be exemplified in the constructions hereinafter set forth, and the scope of the invention will be indicated in the claims.

For a fuller understanding of the nature and objects of the invention, reference should be had to the following detailed description taken in connection with the accompanying drawings, in which:

FIGURE 1 is a perspective view of a display rack demonstrating one embodiment of this invention;

FIGURE 2 is a perspective view of such a display rack bearing a bound collection of sheet material in display relationship thereon;

FIGURE 3 is a fragmentary vertical sectional view of a portion of the embodiment of the invention illustrated in FIGURES 1 and 2 showing the clamping mechanism;

FIGURE 4 is a fragmentary perspective view of a revolving clamping mechanism employed in another embodiment of the invention;

FIGURE 5 is a fragmentary exploded perspective view of the mechanism shown in FIGURE 4 in its unclamped position; and

FIGURE 6 is a vertical sectional view of the mechanism shown in FIGURE 4 in its clamped position.

Similar reference characters refer to similar parts throughout the several views of the drawing.

In the form of the invention shown in FIGURE 1 it will be seen that the device includes a main frame generally indicated at **10** and a rear frame generally indicated at **12** pivotally connected to the main frame by such means as the bolts **14** and maintained in spaced angular relationship thereto by the braces **16**. In this form of the invention the main frame **10** includes side members **18**, a base member **20** and a top member **22** joined in a rectangular configuration, with cross bars **24** at spaced intervals joining the two side members **18** to each other and contributing structural rigidity to the device. The rear frame **12**, which is generally U-shaped in configuration, includes side members **26** joined by a transverse lower member **28** and also by a transverse cross bar **30** spaced therefrom.

Braces **16** are pivotally joined to the side members **18** of the main frame **10** by bolts **32**, allowing these side braces to fold flat within the main frame, and to be lowered into engagement with rear frame **12** to support the structure in a sturdy and rigid set up condition. The free ends of braces **16** are preferably provided with notches **34** for engagement with cross bar **30** of rear frame **12**.

In FIGURE 3 there is shown a preferred arrangement for joining a collection of large individual sheets to top member **22** for display purposes. The segments **18**, **20** and **22** of the main frame **10** are preferably made from continuous tubular stock, such as aluminum tubing, and the tubular member **22** has apertures **36** extending therethrough accommodating bolts **38**. Bolts **38** extend through apertures **40** formed in a series of individual sheets indicated at **42**. The bolts **38** also pass through a backboard **44**, washers **46**, the apertures **36** in tubular member **22**, and washers **48**, to be held in position by wing nuts **50**. Accordingly, the sheets forming the collection **42** may be maps, charts, wallpaper samples, textile samples, or the like, held in position and joined to the frame member **22** by bolts **38**. Successive sheets may be folded back to display each sheet in turn, as shown in FIGURE 2.

A modified embodiment of the invention is shown in FIGURES 4, 5 and 6. In this embodiment, a revolving sheet supporting assembly generally indicated at **52** is employed to clamp the individual sheets or groups of sheets **66** forming the collection **42** in display position on the racks of the present invention. The revolving sheet supporting assembly **52** performs the important function of minimizing the size of the upwardly projecting roll of back-folded sheets **54** shown in FIGURE 2. As seen in FIGURE 5, revolving assembly **52** includes a generally semi-cylindrical base portion **56** and a series of wedge-shaped clamping members **58**. In their clamped position, as shown in FIGURES 4 and 6, the clamping members **58** are held in an arcuate configuration in cooperation with the semi-cylindrical base portion **56**, completing the cylinndrical form of rotating assembly **52**. Clamping members **58** are clamped in this position by a clamping ring **60**, secured in position around them by a bolt **62** and wing nut **64**. Thus the members **58** clamp between themselves groups of sheets **66** which together form the sheet collection **42**.

The semi-cylindrical member **56** is provided with cylindrical end shoulders **68** provided with a projecting stud **70** dimensioned for insertion within the open end of a short hollow supporting member or socket **22***a*. In this embodiment of the invention the cross member **22** shown in FIGURE 1 is replaced by these two short hollow supporting members or sockets **22***a* at each side of the upper end of main frame **10**, as shown in FIGURE 5, between which clamping member **52** is pivotally positioned as shown in FIGURE 4.

When wing nut **64** is removed, releasing the clamping

ring **60**, this ring may be moved axially to shoulder **68** as shown in FIGURE 5 and the wedge-shaped clamping members **58** may then be radially displaced to the positions shown in FIGURE 5 for removal of the groups of sheets **66** and the substitution of one or more new groups of sheets. When the desired collection of sheets is in position between the radially converged clamping members **58**, the clamping rings **60** may be returned to the position shown in FIGURE 4 to hold the sheets in position as shown.

With the clamping mechanism shown in FIGURE 3, partial removal of portions of collections **42** is conveniently accomplished by leaving one bolt **38** temporarily in position while removing and substituting the desired sheets with apertures **40** in registration for loose engagement with another bolt **38**, and then completing the substitution for the first bolt **38**.

The frames **10** and **12** may be fabricated of lightweight metal members, such as a length of aluminum tubing, and the display racks of the present invention thus offer the important advantages of extremely light weight, combined with great convenience in folding, storing, unfolding and setting up in a desired location for display purposes. The different securing mechanisms shown in FIGURES 3 through 6 afford convenient means for mounting and removing collections of sheet material for display as shown in FIGURE 2, and for the partial removal and substitution of parts of such collections of sheet material when the entire collection need not be changed. The revolving clamping mechanism shown in FIGURES 4 through 6 provides the additional advantages of convenient display of multi-sheet collections of display items while avoiding a bulky upwardly projecting roll **54** of folded back sheets as shown in FIGURE 2.

It will thus be seen that the objects set forth above, among those made apparent from the preceding description, are efficiently attained and, since certain changes may be made in the above constructions without departing from the scope of the invention, it is intended that all matter contained in the above description or shown in the accompanying drawings shall be interpreted as illustrative and not in a limiting sense.

It is also to be understood that the following claims are intended to cover all of the generic and specific features of the invention herein described, and all statements of the scope of the invention which, as a matter of language, might be said to fall therebetween.

I claim:

1. A folding display rack for a collection of sheet material comprising in combination a main frame including two substantially upright side members; a rear frame having two upwardly projecting members pivotally joined to said main frame side members; positioning braces pivotally joined to said main frame side members and adapted for engagement with said rear frame, and a sheet supporting means for sheet material rotatably supported by the upper ends of said main frame side members.

2. A folding display rack for a collection of sheet material comprising in combination a main frame including two side members and a plurality of transverse members joining said side members and holding them in spaced relationship; a rear frame having two upwardly projecting members pivotally joined to said main frame side members; positioning braces pivotally joined to said main frame side members and adapted for removable engagement with said rear frame; a sheet supporting assembly including a plurality of radially withdrawable wedge-shaped members adapted to be clamped in radially converged relationship gripping said sheet material, clamping means around said wedge-shaped members, and a pair of socket members mounted at the upper ends of said main frame side members and disposed in facing relationship rotatably supporting said sheet supporting assembly therebetween.

References Cited in the file of this patent

UNITED STATES PATENTS

674,069	Snively	May 14, 1901
770,589	Koll	Sept. 20, 1904
1,021,976	Ferry	Apr. 2, 1912
1,086,746	Babbitt	Feb. 10, 1914
1,276,161	Beard	Aug. 20, 1918
1,850,647	Whitcomb	Mar. 22, 1932
2,334,785	Mitchell	Nov. 23, 1943
2,526,376	London	Oct. 17, 1950
2,764,381	Anderson	Sept. 25, 1956
2,880,879	Best	Apr. 7, 1959