Sept. 22, 1964 R. J. McNEIL 3,149,728

DISPLAY DEVICE

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FIG.1.

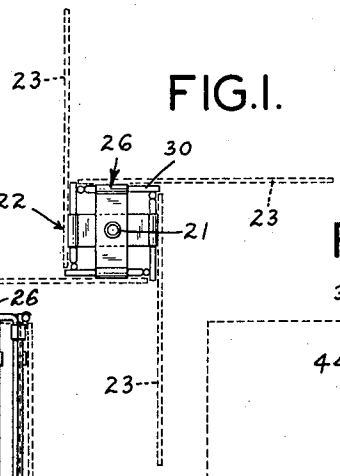


FIG.2.

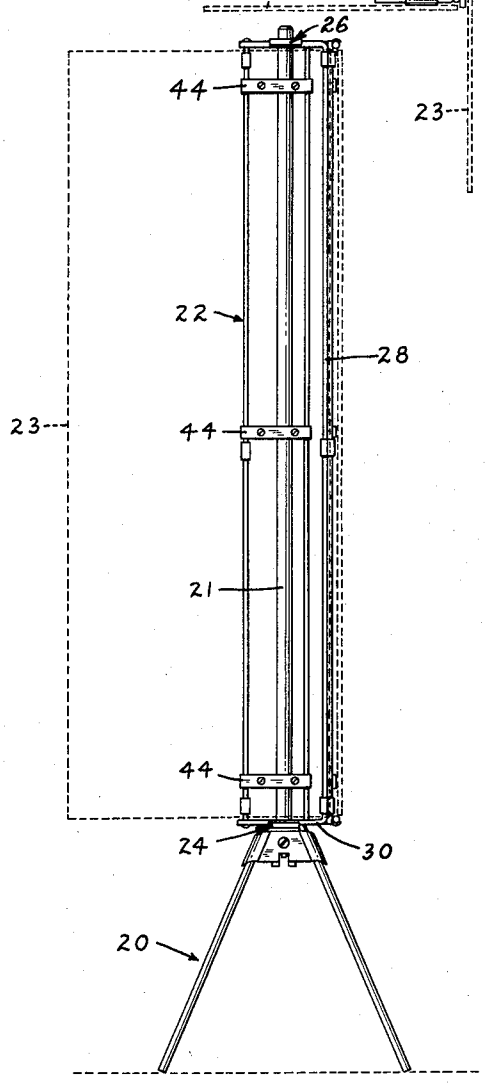
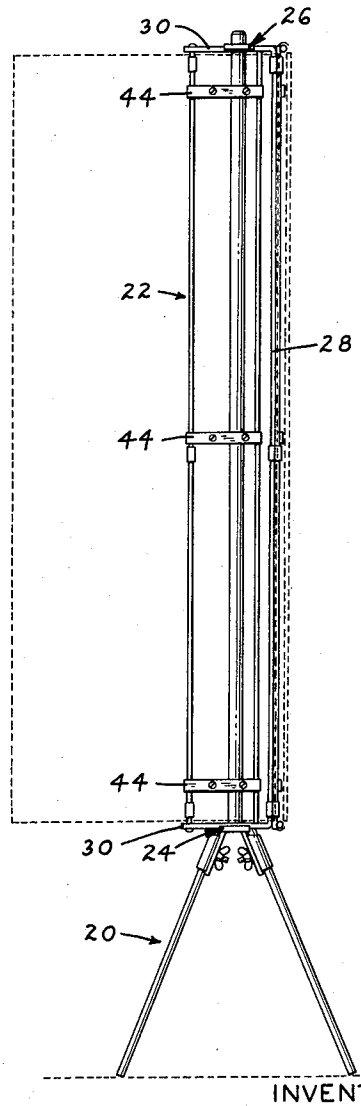


FIG.3.



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FIG.4.

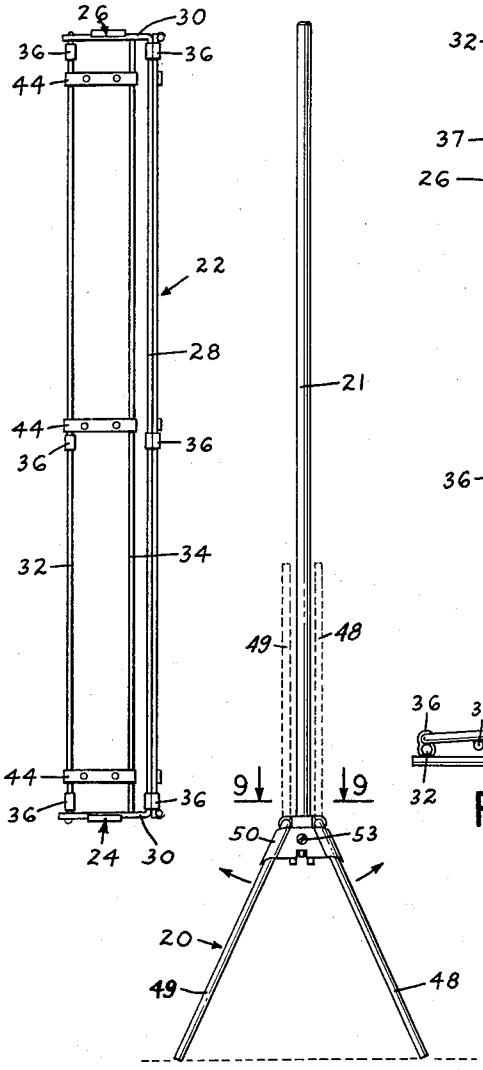
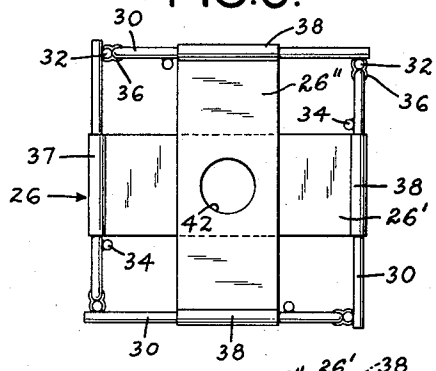


FIG.5.

FIG.6.



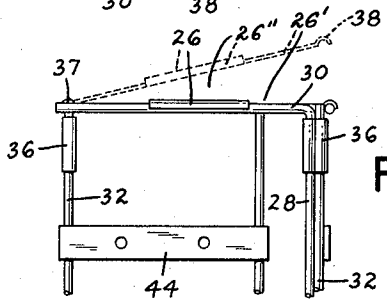


FIG.7.

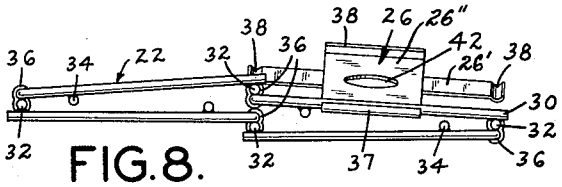


FIG.8.

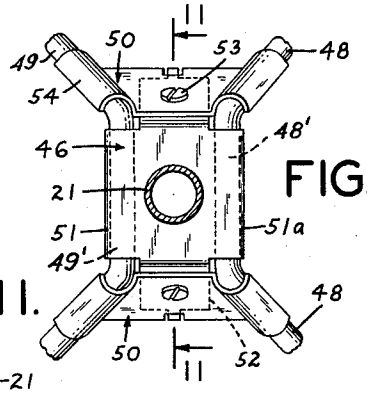


FIG.9.

FIG.10.

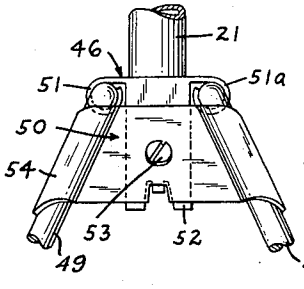
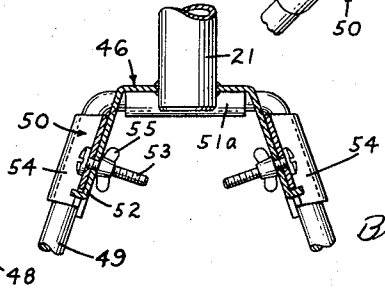


FIG.11.



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3,149,728

DISPLAY DEVICE

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4 Claims. (Cl. 211—169)

This invention relates to a display device and, more particularly, to a display device which is readily disassembled and collapsed into a compact and portable form.

Display racks for cards, small articles, such as optical goods, hardware, samples, and the like usually include a box-like display member to the surfaces of which the articles are attached and a support enabling the display member to be rotated for examination and selection of the articles thereon. Such racks are of necessity quite bulky and are difficult, if not impossible, to disassemble for transportation and storage. For that reason, the prior racks are not conveniently used by salesmen and for travelling displays where they might otherwise be used to great advantage for the display of a salesman's or manufacturer's merchandise.

In accordance with the present invention, a display device of the rotating display panel type is provided which can be unfolded readily and conveniently to secure and display articles and can be folded equally readily into compact and readily transportable form.

More particularly, the new display device includes a standard, having foldable legs thereon, and a supporting unit mounted for rotation on the standard and comprised of hingedly connected skeletonized panels for securing display boards. The hinged relation of the panels enables the supporting unit to be collapsed into flattened form occupying little space, thereby rendering the display device readily portable and enabling its storage in a small amount of space.

The invention as described in more detail may be better understood by reference to the accompanying drawings, in which:

FIGURE 1 is a top view of a typical display device with the legs omitted;

FIGURE 2 is a front elevational view of a completely assembled display stand;

FIGURE 3 is a right side elevational view;

FIGURE 4 is an elevational view of the frame assembly alone;

FIGURE 5 is a front elevational view of the stand and shaft;

FIGURE 6 is a top view in enlarged scale of the frame assembly;

FIGURE 7 is a partial front view in enlarged scale showing the top of the frame assembly and the upper bracket;

FIGURE 8 is a top view of the frame assembly as it appears when collapsed;

FIGURE 9 is a sectional view taken along the line 9—9 of FIGURE 5 showing details of the stand;

FIGURE 10 is a partial front view showing in detail the arrangement for retaining the legs of the stand; and

FIGURE 11 is a sectional view taken along the line 11—11 of FIGURE 9.

Referring to FIGURES 1 through 3, the display device comprises a stand **20**, a vertical shaft **21** mounted on the stand and a display supporting frame member **22** rotatably mounted on the vertical shaft by means of a lower bracket **24** and an upper bracket **26**. A plurality of display boards or racks **23** may be mounted on the frame member as described hereinafter.

As best shown in FIGURES 4, 7 and 8, the frame member **22** includes a plurality of skeletonized panels, each vertically disposed, including a rod **28** having laterally extending arms **30** at either end and a second rod **32** fastened to each of the rods **28** near the ends of the arms

30. Between and substantially parallel to the rods **28** and **32** is a third stiffening rod **34**, also attached to the arms **30** and forming therewith one side panel of the frame member **22**. Four of such panels are attached together by means of hinge-like clips **36** securing the rod **32** of one panel to the rod **28** of an adjacent panel. As shown in FIGURE 1, the clips enable the frame member **22** to be collapsed into a substantially flat condition by pushing the diagonally opposite corners together after disengaging the upper and lower brackets **24** and **26**.

Referring to FIGURE 6, the upper and lower brackets **24** and **26** consist of two plates **24'**, **24''** and **26'**, **26''**, respectively, crossing and connected to each other at approximately right angles and having curved portions **37** and **38** at opposite ends. One of the curved portions **37** is tubular and receives one of the arms **30** on one of the panels to hinge the bracket. The other three curved portions **38** are arranged to engage over the upper or lower arm **30** of the other panels to retain them against folding. The upper and lower brackets **24** and **26** may be identical, the lower bracket being inverted. The brackets are provided with holes **42** in which the shaft **21** fits loosely to permit the frame member **22** to be removed by withdrawing it from the shaft and to render the frame member rotatable.

Extending between and secured to the adjacent rods **32** and **34** of each panel are a plurality of mounting plates **44** to which the display boards or racks **23** may be fastened by means of screws, bolts or the like.

As shown in FIGURES 9, 10 and 11, the supporting stand **20** includes a base member **46**, two leg members **48** and **49** of generally inverted U-shape and two mounting clips **50**. The base member **46** is a plate welded to the lower end of the shaft **21** and has lateral portions bent into generally tubular portions **51**, **51***a* rotatably securing the mid-portions **48'** and **49'** of the legs **48** and **49**, respectively. The other sides of the base member **46** have downwardly diverging flanges **52** which are provided with holes for receiving bolts for securing the clips **50** to the base member **46**. The clips **50** are plates having upwardly converging C-shaped portions **54** which engage the legs of leg members **48** and **49** and clamp them against the flange **52**. Wing nuts **55** on the bolts **53** secure the clips **50** to the base member **46**. When the bolts **53** are loosened, and the clips **50** are removed, the leg members **48** and **49** can be rotated and folded upwardly, as shown in FIGURE 5.

The frame assembly can be fabricated from steel, aluminum or any other suitable material, the weight of the display device may be reduced by fabricating the brackets, legs, and shaft from aluminum.

It should be understood that the invention as described is capable of being varied in many details of construction and fabrication, materials used, sizes and shapes. Accordingly, the description should be interpreted as illustrative, and not as limiting the following claims.

I claim:

1. A display device comprising a supporting stand, a shaft mounted vertically on the stand, a lower bracket, an upper bracket, said brackets being rotatably mounted on the vertical shaft, a plurality of elongated skeletonized panels, hinge means connecting the longitudinal edges of each panel to the edges of other panels to form a hollow frame member, means connecting each of said brackets hingedly to a panel, means on said brackets for releasably engaging and holding the other panels in angular relation, and mounting means on each of said panels for receiving and supporting display boards.

2. The display device set forth in claim 1 in which the supporting stand comprises leg members hingedly connected to said shaft, and means for locking the leg members in an extended position.

3. The display device set forth in claim 1 in which the supporting stand comprises two leg members, a bracket member, hinge means at opposite sides of said bracket for receiving each of said leg memers for movement between folded and unfolded positions relative to said shaft, downwardly extending tabs at the other opposing sides of said bracket, clip members detachably connected to said tabs and having curved flanges for engaging and retaining said leg members in unfolded position.

4. A display device comprising a shaft, collapsible leg members mounted on one end of said shaft, and a collapsible hollow frame member rotatably mounted on said shaft, said frame member including a plurality of hingedly connected skeletonized panels and means on said panels for securing a display member thereto.

References Cited in the file of this patent

UNITED STATES PATENTS

885,462	LaMay	June 4, 1907
1,049,886	Manson	Jan. 7, 1913
1,527,024	Brookbank	Feb. 17, 1925
2,874,003	Humphries	Feb. 17, 1959
2,985,332	Fredrick	May 23, 1961