United States Patent

[11] **3,630,387**

[72] Inventor **Norvin J. Wehner**
Kansas City, Mo.

[21] Appl. No. **11,700**
[22] Filed **Feb. 16, 1970**
[45] Patented **Dec. 28, 1971**
[73] Assignee **Cramer Industries, Inc.**
Kansas City, Mo.

[54] **FILE SUPPORT STRUCTURE**
1 Claim, 5 Drawing Figs.

[52] **U.S. Cl.** ..... **211/178 R,** 211/46
[51] **Int. Cl.** **A47f 5/10**
[50] **Field of Search** ..... 211/178 R, 85, 132, 151, 46, 177; 248/166, 167, 436, 136, 150; 312/258; 108/91, 131–132, 53, 115, 35; 220/97 R, 94 R

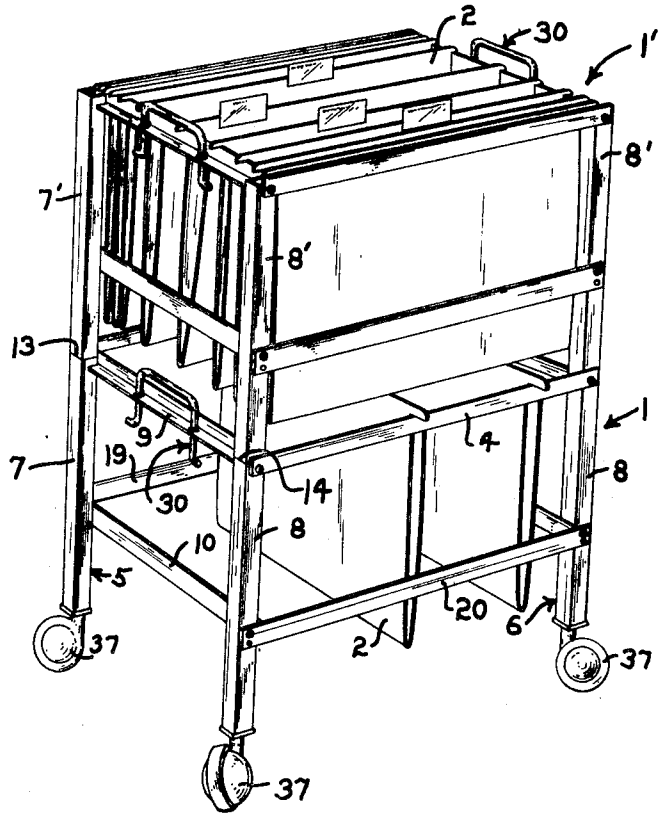
[56] **References Cited**

UNITED STATES PATENTS

1,435,738	11/1922	Reiman	248/166 X
2,042,110	5/1936	Leckey	248/166
3,121,497	2/1964	Brochstein	211/178 R
3,167,808	2/1965	Lindenberg et al.	220/94 R
3,197,035	7/1965	Wolf	211/178 R
3,347,412	10/1967	McKinney	220/97 R

Primary Examiner—Ramon S. Britts
Attorney—Fishburn, Gold and Litman

ABSTRACT: A collapsible file support structure for the vertical filing of file wrappers or similar objects wherein the collapsible file support structure has a pair of longitudinally spaced end frame members, each having a pair of upright members and rigid bracing members extending therebetween and a pair of laterally spaced longitudinal support bars extending between and having their ends pivotally secured to the upright members of each of the frames adjacent upper ends thereof. Locking bars extend parallel with the support bars and are pivotally secured at each end to the upright members of the frames spaced from the lower ends of the upright members, and fastening members secure the locking bars to the upright members whereby the file support structure may be selectively positioned in an upright position or a collapsed position. Roller means are mounted in lower ends of each of the upright members for movably supporting the file support structure.



PATENTED DEC 28 1971

3,630,387

SHEET 1 OF 2

Fig. 1.

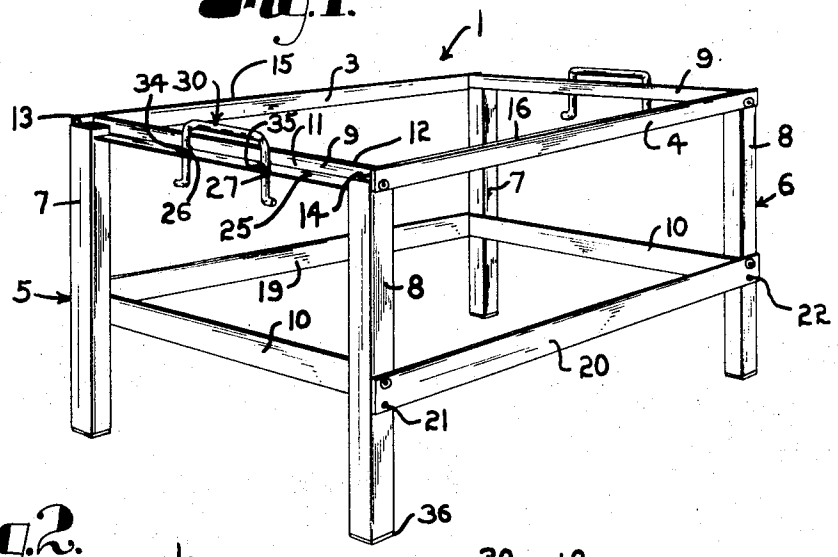


Fig. 2.

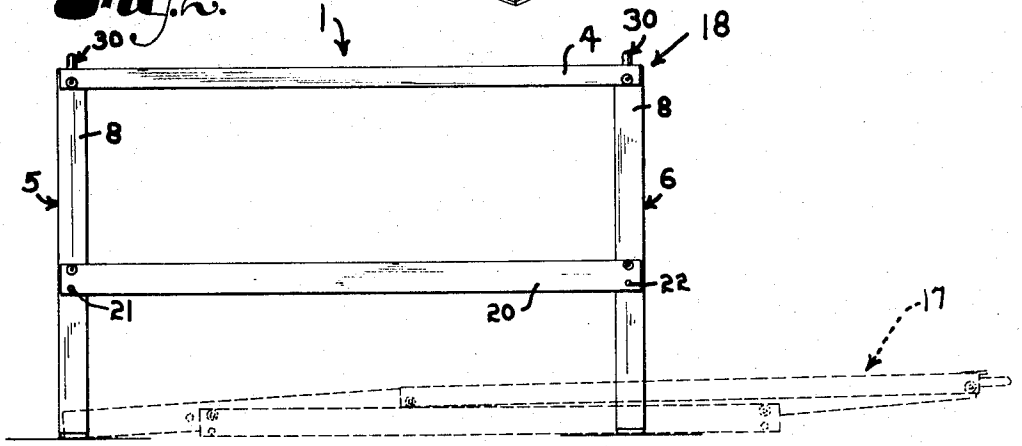
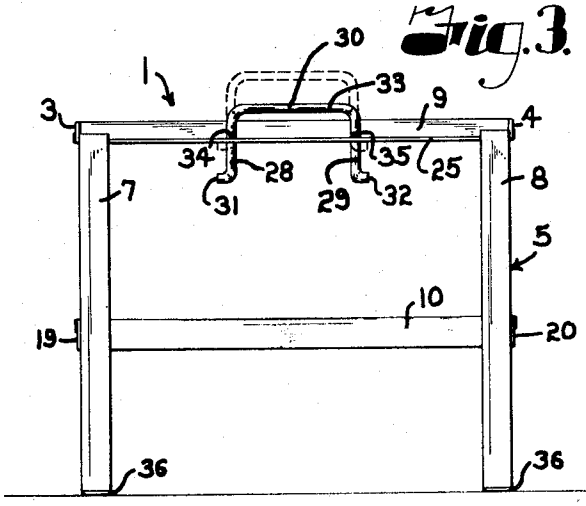


Fig. 3.



INVENTOR.
Norvin J. Wehner
BY
Fishburn, Gold & Litman
ATTORNEYS

Fig. 4.

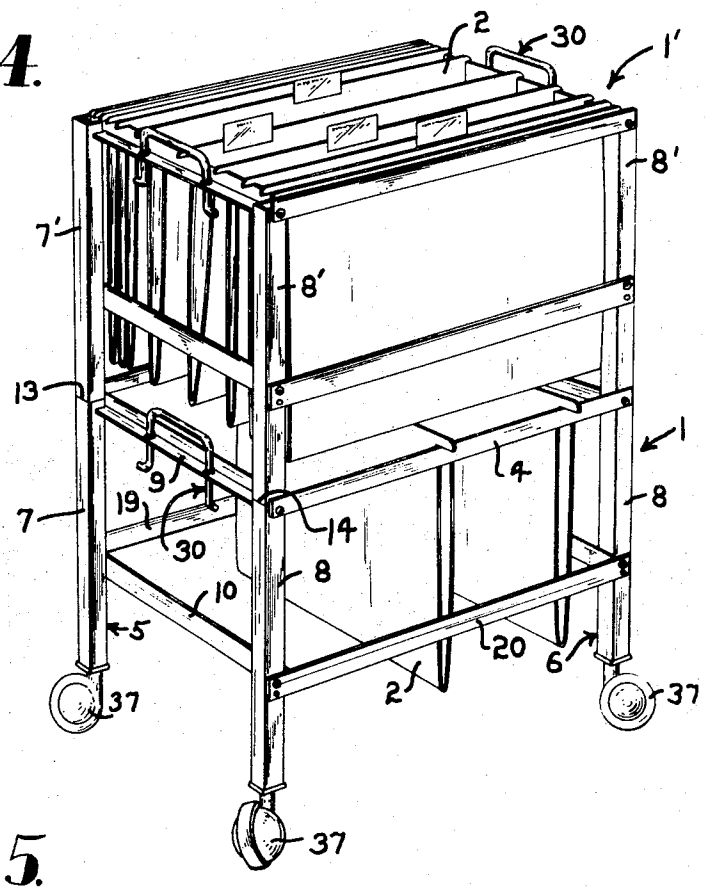
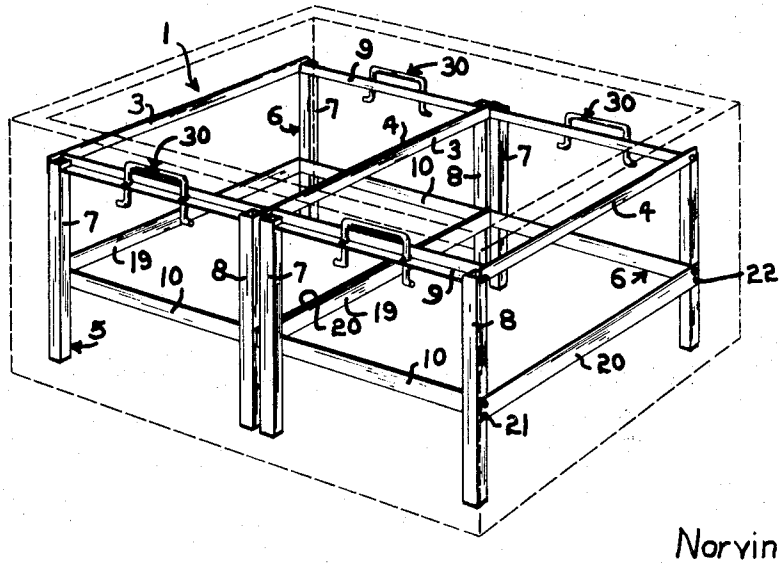


Fig. 5.



INVENTOR.
Norvin J. Wehner
BY
Fishburn, Kolodny & Litman
ATTORNEYS

FILE SUPPORT STRUCTURE

The present invention relates to apparatus for the vertical filing of file wrappers or similar objects and more particularly to a file support structure which is collapsible and which is stackable vertically.

The principle objects of the present invention are: to provide a portable file support structure for the vertical filing of letter size and legal size file hangers; to provide such a file support structure adapted to fit within file cabinets and to be easily placed therein and removed therefrom; to provide such a file support structure which is collapsible whereby a minimum shipping and storage space is required; to provide such a file support structure wherein a plurality of like file support structures will stack vertically one on top of the other; to provide such file support structures adapted to receive glides in the lower ends of vertical support members, thereby avoiding damage to desk tops, tabletops and the like; to provide such a file support structure wherein the lower ends of the vertical support members receive casters, or the like, for easy mobility; and to provide such a file support structure which is economical to manufacture, simple in operation, versatile in use, and particularly well adapted for the proposed use.

Other objects and advantages of this invention will become apparent from the following description taken in connection with the accompanying drawings wherein are set forth by way of illustration and example certain embodiments of their invention.

FIG. 1 is a perspective view of a rack file structure embodying features of the present invention.

FIG. 2 is a side elevational view of the file support structure with a collapsed position thereof shown in broken lines.

FIG. 3 is an end elevational view of the file support structure with a raised position of a handle shown in broken lines.

FIG. 4 is a perspective view of a plurality of like file support structures stacked vertically and showing casters mounted in the lower ends of vertical support members of the lower file rack.

FIG. 5 is a perspective view showing the file support structure received in a file cabinet.

Referring more in detail to the drawings:

The reference numeral 1 generally designates a file support structure for the vertical filing of file wrappers 2 for receiving sheets of paper therein. The file support structure 1 has a pair of laterally spaced longitudinal support bars 3 and 4 positioned to receive and support opposite ends of the file wrappers 2. The support bars 3 and 4 extend between and are secured to longitudinally spaced end frames 5 and 6.

The end frames 5 and 6 each have a pair of upright members 7 and 8 with bracing members 9 and 10 extending therebetween. In the illustrated end frames 5 and 6, the upper and lower bracing members 9 and 10 respectively are normal to the upright members 7 and 8 and are suitably secured thereto, as by welding. The upper bracing member 9 is illustrated as an angle iron having an upstanding planar portion or leg 11 with an upper edge 12 thereof extending between and above upper ends 13 and 14 of the upright members 7 and 8 respectively.

The support bars 3 and 4 are each planar members having an upper edge 15 and 16 respectively, extending between and above the upper ends 13 and 14 of the upright members 7 and 8 a distance substantially equal to the distance of the upper edges 12 of the upstanding leg 11 of the upper bracing members 9, whereby the upper edges 12, 15 and 16 are in registry and provide surfaces to be engaged by upright members 7' and 8' of a like file support structure 1', thereby cooperating to engage and position lower ends of the upright members 7' and 8' in engagement with the upper ends 13 and 14 of the upright members 7 and 8 to stack like file support structures vertically, as best shown in FIG. 4.

It is desirable to collapse the file support structure 1, particularly for shipping and storage, therefore, the support bars 3 and 4 are pivotally secured to the upright members of the end frames 5 and 6 by rivets or the like. When the file support structure 1 is in the collapsed position 17, as shown in broken lines in FIG. 2, a minimum of storage or shipping space is required for the file support structure 1.

While the support bars 3 and 4 may be secured to the upright members 7 and 8 respectively of the end frames 5 and 6 to provide frictional engagement between the respective support bars and upright members to thereby resist movement to the collapsed position 17, it is desirable to provide positive means engageable with the frames 5 and 6 for holding same in an upright position 18, therefore, a pair of longitudinally extending locking bars 19 and 20 have opposite ends thereof pivotally secured to the upright member 7 and 8 respectively by rivets or the like. The locking bars 19 and 20 are spaced from the lower ends of the upright members 7 and 8 respectively and preferably in the same plane as the lower bracing members 10. The locking bars 19 and 20 each have apertures 21 and 22 in opposite ends thereof spaced from the rivets and the upright members 7 and 8 each have an aperture intermediate the ends thereof and positioned to have the apertures 21 and 22 in the locking bars 19 and 20 alignable therewith. When the file support structure 1 is positioned in the upright position 18, a suitable fastening member is removably mounted in each pair of aligned apertures in the upright members and locking bars to secure the file support structure in the upright position 18.

Each of the upper bracing angle members 9 has a leg portion 25 extending outwardly from the upstanding leg 11. The leg portion 25 of the angle member 9 has spaced openings 26 and 27 for slidably receiving the legs 28 and 29 of a U-shaped handle 30 for lifting the file structure 1 into and out of a file drawer, cabinet or the like. The free ends of the handle 30 are turned laterally as shown at 31 and 32 for retaining the handle 30 on the member 25.

The U-shaped handle 30 has a portion 33 extending between and preferably integral with the legs 28 and 29. It is desirable to position the portion 33 of the handle 30 slightly above the leg 25, therefore, the legs 28 and 29 have abutment members 34 and 35 respectively, mounted thereon intermediate the ends thereof and positioned above the respective outstanding portion 25 to engage an upper surface thereof to position the connecting portion 33 thereabove a distance sufficient for the entrance of fingers of a hand used in lifting the file support structure 1.

When the file support structure 1 is placed on a suitable work surface, such as a desk top, tabletop or the like, it is desirable to prevent damage thereto by the engagement of the lower ends of the upright members 7 and 8 with the upper surface of the desk or table, therefore, suitable glides 36 may be mounted in lower ends of the upright members 7 and 8 for engagement with the respective supporting surface.

It may be desirable to provide roller means for movably supporting the file support structure 1 for easy mobility between a plurality of work areas, therefore, casters 37 may be mounted in or adjacent the lower ends of each of the upright members 7 and 8 of the end frames 5 and 6 for movably supporting the file support structure 1 and any like file support structures 1' stacked vertically thereon, as shown in FIG. 4.

The file support structure 1 constructed as shown and described is moved from the collapsed position 17 to the upright position 18 and the fastening member is secured in the aligned apertures in the locking bars 19 and 20 and the upright members 7 and 8. The file wrappers 2 have extensions thereon and; are positioned within the file support structure 1 with the said extension of the file wrapper 2 slidably engaging the support bars 3 and 4 or the upstanding leg 11 of the upper bracing members 9. The lateral spacing between the support bars 3 and 4 is designed to support file wrappers for holding letter size material and the longitudinal spacing between the upstanding legs 11 is designed to support file wrappers containing legal size material.

It may be desirable to have the file support structure 1 permanently fixed in the upright position 18, therefore, the locking bars 19 and 20 may be suitable secured to the upright members 7 and 8, as by screws or the like in opposite ends of each panel.

It is to be understood that while I have illustrated and described certain forms of my invention, it is not to be limited to these specific forms or arrangement of parts herein described and shown.

I claim:

1. A support structure for a plurality of files comprising:

a. a pair of spaced frames each having a pair of upright members and upper and lower bracing members extending therebetween;

b. a pair of laterally spaced longitudinal support bars having upper planar edges extending between and pivotally secured to said frames adjacent upper ends thereof, said upper edges of said support bars adapted to be engaged by extensions on each end of the files;

c. a longitudinal locking bar extending between and pivotally secured to said frames on each side thereof, said locking bars being positioned intermediate the ends of said upright members of said frames;

d. an aperture in each of said upright members intermediate the ends of said upright members of said frames;

e. an aperture in each end of each of said locking bars, each aperture in said locking bars being alignable with a respective aperture in the upright members of said frames;

f. a fastening member mounted in each pair of aligned apertures; said upper bracing members being angle shaped with a horizontal flange portion of the angle extending between and normal to pairs of upright members, said flange portions having spaced apertures therein and a handle mounted within said aperture in each of said flange portions for lifting the file support structure, said handles each being U-shaped members having parallel arm portions and a connecting portion extending therebetween, said arm portions being spaced and extending through the apertures in said flange portions and having their ends turned to engage underneath the flange portions whereby said handle may be raised and lowered in said respective flange portion; and

g. roller means mounted on the lower ends of said upright members of said frames for engaging a supporting surface for movement of said structure over said supporting surface.

* * * * *