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2,966,322

COLLAPSIBLE STAND FOR BARRELS, DRUMS AND THE LIKE

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FIG. 1.

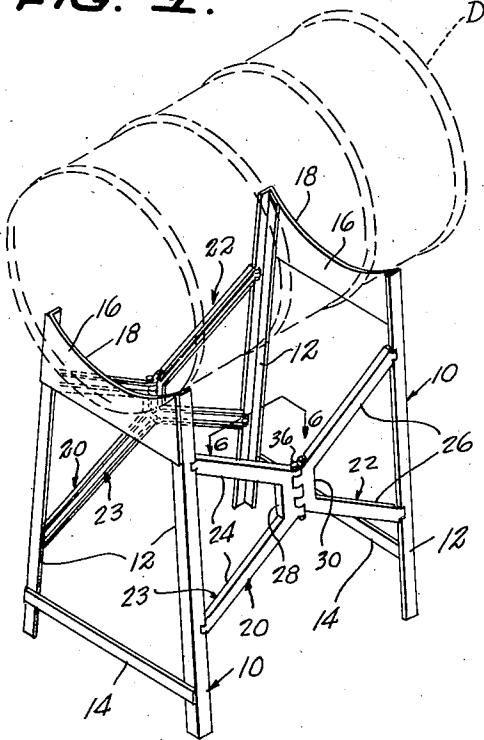


FIG. 6.

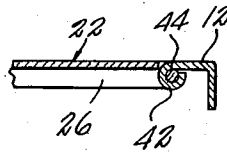


FIG. 4.

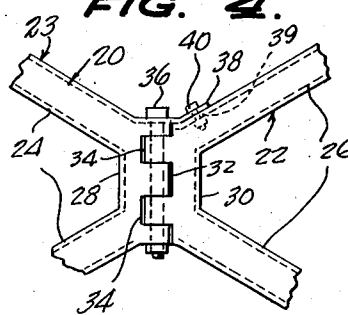


FIG. 5.

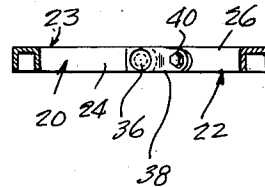


FIG. 2.

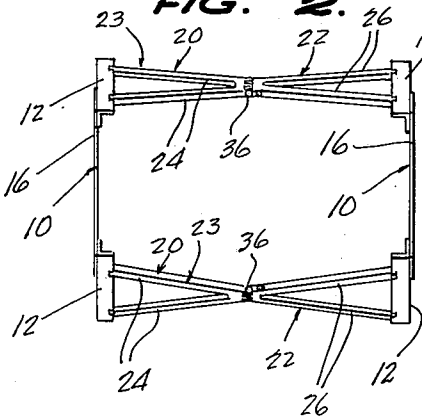
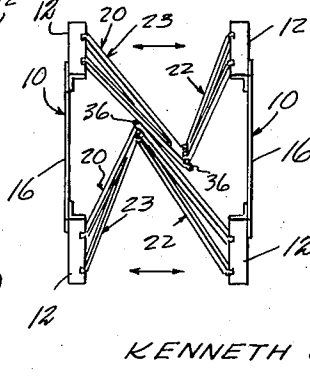


FIG. 3.



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COLLAPSIBLE STAND FOR BARRELS, DRUMS AND THE LIKE

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3 Claims. (Cl. 248—150)

This invention, summarized briefly, comprises a pair of identical but opposite, vertically extending, upwardly tapering end frames having arcuately indented top edges for supporting of a drum or barrel thereupon; foldable side or connecting frame assemblies, connected between the respective, corresponding, opposite sides of the end frames and foldable accordion fashion to bring the end frames in direct, face-to-face contact when the stand is collapsed; and locking means for rigidifying the connecting frames in their extended positions.

Among important objects of the invention are the following:

To provide a rack for a drum or barrel usable to particular advantage as a foldable rack for a drum or tank used as part of the equipment of a house trailer, for supporting fuel, etc.

To provide a rack which, despite the particularly advantageous use referred to above, will have general utility in supporting any object of drum or barrel-like characteristics;

To provide a rack which, despite its adaptability for supporting a drum of substantial size in an elevated position, will nevertheless be collapsible to a completely flat condition for storage in a very small space, thus further heightening the utility of the rack as part of the house trailer equipment, considering the necessity of storing said equipment in small areas during movement of the trailer;

To provide an improved, swiftly operable locking means for the collapsible side frame assemblies;

To provide a rack which will be of low cost considering the strength thereof;

To incorporate in the rack a collapsible construction that will be particularly characterized by the swiftness and ease with which the rack can be extended for use or collapsed;

To permit the extension or collapse of the rack without requiring special tools; and

To provide a collapsible rack construction which will be usable in any situation in which a readily foldable, compact stand or rack is needed in supporting objects in elevated positions.

Other objects will appear from the following description, the claims appended thereto, and from the annexed drawing, in which like reference characters designate like parts throughout the several views, and wherein:

Figure 1 is a perspective view of my stand for drums or barrels, extended for use, a supported drum being shown in dotted lines;

Figure 2 is a top plan view of the stand, in its extended or use position;

Figure 3 is a view like Figure 2 in which the stand has been partially collapsed;

Figure 4 is an enlarged, fragmentary elevational view of one of the side frame assemblies;

Figure 5 is a view on the same scale as Figure 4, looking downwardly upon the assembly shown in Figure 4; and

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Figure 6 is an enlarged, detail sectional view on line 6—6 of Figure 1, showing the connection of one of the side frame assemblies to one of the end frames.

Designated generally at 10 are identical but opposite end frames. Since they are formed identically, the description of one will suffice for both.

Each end frame includes upwardly convergent angle iron support legs 12, and extending between the lower end portions of the support legs are lower cross braces 14, welded or otherwise fixedly secured to the support legs. Extending between the convergent ends of the legs, and welded to the legs or otherwise fixedly secured thereto, are support plates 16, disposed in vertical planes, and having arcuately indented top edges 18 curved correspondingly to the transverse curvature of a supported drum D.

Identical but opposite side frame assemblies, generally designated 20, are used to connect the end frames. Each side assembly is disposed at one side of the device, being connected between corresponding legs 12 of the respective end frames.

As will be noted, each of the assemblies 20 is appropriately described as being approximately X-shaped or cruciform, with each assembly comprising a pair of approximately V-shaped side frames generally designated 22, 23 hingedly connected at their abutting apex portions. Thus, the respective frames 23, 22 include frame members 24, 26. The members 24 of frame 23 extend in converging relation away from the end frame adjacent thereto. The members 26 extend in converging relation away from the other end frame.

At their convergent ends, members 24 are integrally joined by a short, vertical bight portion 28, and a similar bight portion 30 is integrally connected between the convergent ends of members 26. In this connection, referring to Figure 4, bight portion 28 has coaxial, vertically spaced hinge sleeves 32, alternating with correspondingly arranged hinge sleeves 34 of bight portion 30. A connecting or hinge pin 36 extends through the several sleeves 32, 34, thus connecting the respective side frames 23, 22 for relative swinging movement about vertical axes.

In the extended positions of the side frames 23, 22, they are disposed in a common plane, as clearly shown in Figure 5. In this position of the components, they may be locked against relative movement about the axis of the hinge pin 36. To this end, on the upper one of the members 24 there is formed an ear 38 which is inclined oppositely to said upper member 24 and which extends in overlying relation to the adjacent ends of the upper member 26. Ear 38 has an opening, registering with an opening 39 in the extended positions of the side frames, to receive a connecting bolt 40. Bolt 40 is extended through the registering openings of the ear 38 and upper member 26, and a nut is then applied thereto. As a result, the side frames are rigidly connected by means of the bolt 40 cooperating with pin 36.

Each frame assembly 20, when its extended position shown in Figure 2, is in a plane inclined slightly from the vertical and common to the plane of the corresponding legs 12 between which it is connected. As a result, a highly stable device is provided, usable to advantage in supporting heavy drums.

Referring to Figure 6, the divergent ends of the members 24, 26 are hingedly connected to their associated legs 12, through the provision of hinge sleeves 42 provided upon the legs 12, receiving hinge pins 44 extending through the members 24 or 26, as the case may be. The hinge axes defined by the pins 44 are parallel to the hinge axes defined by pins 36.

In use, when it is desired to collapse the rack, bolt 40 is removed. The respective side frame assemblies

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are then collapsible inwardly as shown in Figure 3, accordion fashion, and when fully collapsed are so arranged that the frames 23, 22 of each assembly 20 are in face-to-face contact, with the respective end frames also being in face-to-face contact. The entire device is thus capable of storage in a very small area.

It will be understood that whenever the terms "horizontal plane" or "vertical plane" are used herein, they are not intended to mean that the components so designated are in perfectly horizontal or vertical planes, as the case may be. Rather, the terms are intended to mean that they are substantially horizontal or vertical.

It is believed apparent that the invention is not necessarily confined to the specific use or uses thereof described above, since it may be utilized for any purpose to which it may be suited. Nor is the invention to be necessarily limited to the specific construction illustrated and described, since such construction is only intended to be illustrative of the principles of operation and the means presently devised to carry out said principles, it being considered that the invention comprehends any minor change in construction that may be permitted within the scope of the appended claims.

What is claimed is:

1. A collapsible stand for barrels and like objects comprising a pair of spaced end frames each of which includes a pair of upstanding support legs and cross bracing means connected between the legs and lying in a vertical plane, portions of the legs of each end frame projecting laterally from the plane of the cross bracing means thereof in the space between the end frames, a pair of identical but opposite side frame assemblies disposed at the respective sides of the stand, each assembly including a pair of side frames hingedly joined at one end and pivotally connected at their other ends to the projecting portions of the legs located at the same side of the stand, the pivot axes of the last-named connections

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being spaced by projecting portions inwardly from the respective planes, for collapsing of each assembly with the side frames folded in superposed relation and extending into the last-named spaces, said side frame assemblies being overlapped in said collapsed positions thereof, the side frames of each assembly being approximately V-shaped with their apex portions being directed toward each other and constituting the hingedly joined ends of the side frames, said apex portions being formed with interfitted hinge sleeves, the hinge connection of the apex portions comprising a hinge pin extending through the interfitted sleeves thereof.

2. A collapsible stand as in claim 1, wherein the respective side frames of each side frame assembly include top members, one side frame of each assembly including an extension of the top member thereof projecting beyond the hinge pin to define an ear, said ear being disposed in overlapping relation to the top member of the other side frame of the same assembly on swinging of the side frames from the superposed positions thereof to a use position, said ears and the top members adjacent the same being formed with registering openings, the stand including a locking pin extending through the registering openings whereby to lock the side frames of each assembly against movement from their use positions.

3. A stand as in claim 2, wherein the lock pins extend obliquely to said hinge pins.

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