May 5, 1942. H. L. BLICKHAN 2,281,740

RECEPTACLE SUPPORT

Filed Aug. 5, 1940

Fig. 1.

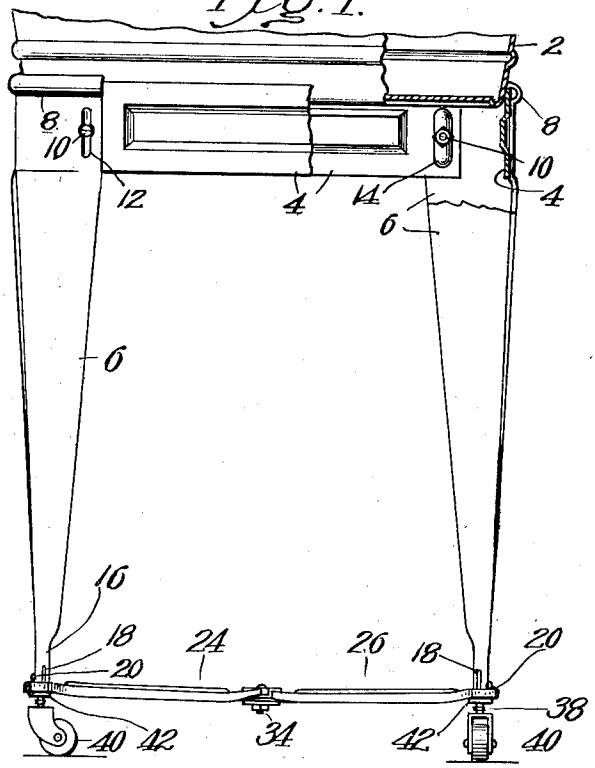


Fig. 4.

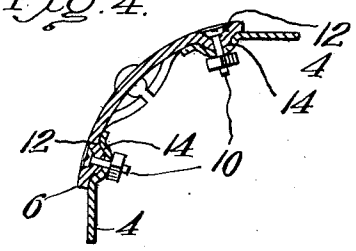


Fig. 5.

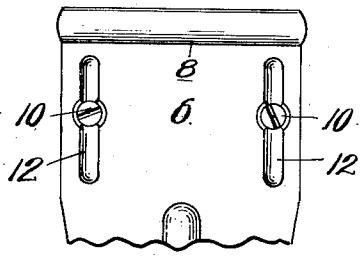
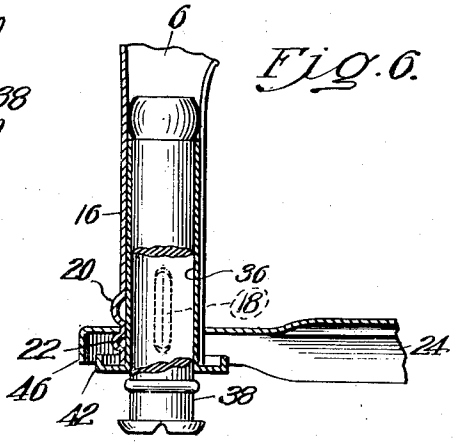


Fig. 6.



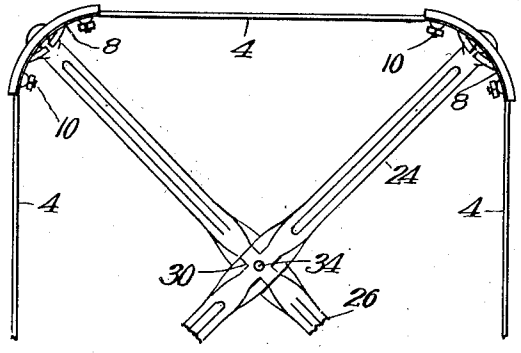
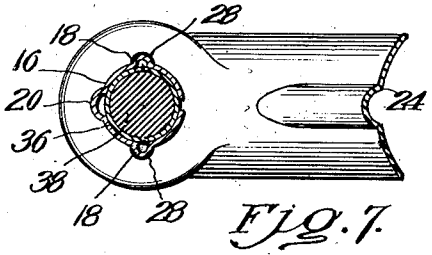


Fig. 2.

Fig. 7.



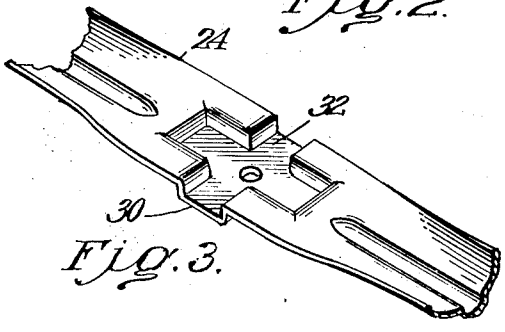


Fig. 3.

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RECEPTACLE SUPPORT

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Application August 5, 1940, Serial No. 351,484

6 Claims. (Cl. 248—150)

This invention relates to supporting structures for such receptacles as wash tubs and the like, to hold them at a suitable elevation for use and which, if desired, may be wheeled for the convenient portability of the tub. The general object of the invention is to provide an improved structure of this general class in which the supporting legs are mounted firmly and rigidly against wobble or looseness in service.

Another object of the invention is to produce a support of the general character outlined in which the legs are fulcrumed in rocking relation to leg connecting elements to form a supporting frame so that when the leg braces are positioned, each leg becomes a lever for tightening the grip of the structure on the lower portion of the washtub or the like.

A further object of the invention is to produce an improved leg brace structure in which the braces are interlocked with a tongue and groove relation so that shock or jar imposed on one leg will be resisted by all of the legs, and the tendency of the braces to rotate in relation to each other at their centers or cross-over point will be entirely overcome.

A still further object of the invention is to produce a connection between the ends of the braces and the legs, of such nature that the braces are held in determined horizontal planes without chance of working upwardly or downwardly on the legs, said braces at the same time reinforcing and holding the legs against torsional strain around their vertical axes.

With the general objects named in view and others as will hereinafter appear, the invention consists in certain novel and useful features of construction and combinations of parts as hereinafter described and claimed; and in order that it may be fully understood, reference is to be had to the accompanying drawing, in which:

Figure 1 is a side view of a support or stand, with the upper part of one corner in vertical section and also showing part of a wash tub.

Figure 2 is a fragmentary plan view of the support.

Figure 3 is an enlarged fragmental perspective of a brace.

Figure 4 is an enlarged horizontal section showing the connection between the legs and horizontal top plates forming the sides of the stand.

Figure 5 is an external side view of the upper end of one of the legs.

Figure 6 is an enlarged vertical section of the lower end of one of the legs and the connected end of one of the cross braces, the section being in the plane of the axis of the brace and the caster stem being broken away at an intermediate point to disclose more clearly a feature of the sleeve for receiving the caster stem.

Figure 7 is a section on the line VII—VII of Figure 6.

In the said drawing, where like reference characters identify corresponding parts in all of the figures, it being understood that a four-legged stand is shown for convenience of illustration, 2 is the customary square type of wash tub or similar receptacle, as it is usually formed with upwardly flaring side walls. The lower beaded edge of the tub is received within a rectangular frame comprising side members 4 having their opposite ends connected to the upper ends of metal legs 6.

Each leg 6 is angular in cross-section at its upper end to overlap the ends of a pair of side members 4, said legs, by preference, extending slightly above the top edges of the members 4 and terminating in inwardly curved clamping portions 8. The ends of the side members 4 are secured in clamped relation to the legs 6 by means of a single bolt 10 engaging the leg below its upper extremity so that if outward movement is imparted to the lower ends of said legs they will, in effect, rock or fulcrum on the bolts 10 to move their upper ends inwardly into tight clamping engagement with the side members 4, and with the tub 2 if it has been positioned on the support. With this arrangement it is possible to tightly clamp the frame or side members 4 so that, in conjunction with the legs 6, a self-sustaining horizontal support is provided. However, by preference, before the upper ends of the legs are clamped to the frame members 4, a wash tub or the like 2 is positioned so its lower end shall be engaged by the clamping portions 8, as illustrated. It is to be understood that the proportions of the various parts are such as to receive a tub 2 of predetermined bottom dimensions and configuration so that on outward movement of the lower ends of the legs 6 as above mentioned, effected by placing certain cross braces 24 and 26 (hereinafter particularly described), the lower ends of diagonally opposite pairs of legs 6, are forced outwardly to secure the clamping pressure at their upper ends as above described.

Since wash tubs, when filled with water, are quite heavy, it is desirable to provide the frame plates 4 and the legs 6 with a tongue and groove interlock, thus insuring that the frame plates and legs will not have relative rotation around the

clamping bolts 10 which would permit a shifting of the center of the load in relation to the legs. One convenient means of overcoming such tendency of the parts to weave, is to extrude vertically-elongated tongues 12 from the upper ends of each of the legs 6, said tongues 12 fitting in companion grooves 14 extruded in the adjacent ends of the side plates 4, as shown. With this arrangement, relative movement between the legs 6 and the frame members 4 will be confined to rocking in vertical planes passing through the longitudinal axes of the clamping bolts 10.

The lower end of each leg terminates in a split socket portion 16, the metal of the socket being extruded at one or more points to form vertically extending ribs 18, a pair of such ribs being shown in diametrically opposite arrangement in the drawing. In addition to the ribs 18, the sockets are extruded to form a pair of vertically spaced bosses 20 and 22, the upper boss 20 preferably being somewhat larger in diameter than the lower boss 22, the space between the bosses being such as to snugly receive the end of a leg brace hereinafter described, to hold said brace against movement longitudinally of the leg.

In order to hold the legs 6 securely in proper position to carry a heavy load, they are provided with diagonal brace members 24 and 26 adjacent their lower ends, the ends of each brace being relatively horizontally flattened and having a notched opening through which one of the legs projects, the parts being so proportioned that the notches 28 in the braces snugly receive and accommodate the ribs 18 of the sockets 16, and thus lock the legs 6 against torsional strains tending to rotate them on their longitudinal axes. In placing the braces 24—26, they are forced up over the lower and smaller bosses 22, but the upper bosses 20 are of such size that the braces cannot pass over the same, the action of positioning the braces forcing the upper ends of the legs 6 to rock on their bolts 10 to bring their upper ends 8 into clamping relation to the tub 2 and side plates 4.

In service, the braces 24—26 are subjected to considerable strains tending to rotate them at their centers or intersection point, and in order to prevent this and at the same time to provide a unitary structure for the distribution of shock to all of the legs, the middle portion of each brace is extruded upwardly in cross-shape, to provide a cross-shaped tongue 30 and a corresponding recess 32, the tongue of one brace fitting snugly into the recess of the other brace. This interlock between the midpoints of the braces is reinforced by means of a clamping nut and bolt connection 34.

If the device is to be portable, the socketed lower ends 16 of the legs 6 receive caster sleeves 36, which are frictionally locked into position with enough force to slightly expand the sockets 16. Frictionally fitted within the sleeves 36 are caster stems 38 forming a swivelling carrier for the ground engaging rollers or wheels 40. In this connection, it is to be noted that the caster sleeves 36 are flanged as at 42 at their lower ends, said flanges 42 forming load transmitting members between the shoulders 44 on the caster stems 38 and the lower ends of the legs 6. In service, water frequently runs down the legs 6 and rusts the caster stems 38 and sleeves 36 so that the casters will no longer swivel. To prevent this undesirable result, it will be noted that the ends of the leg braces 24—26 are greater in diameter than the flanges 42, and are formed with downturned flanges 46 which provide hoods or water drip caps protecting the caster stems and sleeves from water contact.

From the above description it will be apparent that I have produced a construction embodying all of the features of advantage set forth as desirable, and while I have described and illustrated the preferred construction, it is to be understood that I reserve the right to all changes within the spirit of the invention and without the ambit of the prior art.

I claim:

1. In a supporting structure including a plurality of horizontal supporting frame members, a plurality of legs, each connected at its upper end to one end of a pair of frame members, said legs and frame members conjointly providing a continuous frame support, the lower ends of said legs having a pair of vertically spaced bosses and being also formed with a vertically extending rib, and a bracing structure comprising metal strips having notched openings in their ends accommodating the lower ends of the legs with their ribs fitted in said notches thereof, each brace and leg conjointly resilient to permit the brace to be forced up over the lower boss, said boss then being moved to its original position to confine the brace to a horizontal plane between the bosses and intermediate the length of the rib.

2. In a supporting structure including a plurality of legs, each leg formed with a socket at its lower end, a caster sleeve adapted to be mounted in said socket, said caster sleeve being adapted to receive a caster stem and formed with a flange of greater diameter than and abutting the lower end of the leg, and a leg brace having an opening receiving the leg, said brace having a depending peripheral edge flange forming a drip cap overlying said caster sleeve flange.

3. In a supporting structure including a plurality of legs having tubular lower ends, a pair of vertically spaced bosses externally extruded from the lower ends of said legs, a bracing structure comprising metal strips having openings in their ends receiving the ends of the legs, the ends of the braces and legs being conjointly resilient to allow the brace to be pushed up over the lower boss, caster sleeve fitted within the tubular legs and expanding said legs after the braces have been positioned, and casters removably carried by said sleeves.

4. In a supporting structure including a plurality of legs, each leg being formed at its lower end with a longitudinally extending rib and a pair of vertically spaced bosses intermediate the length of the rib, and a leg brace for each leg having an opening notched to slidingly receive the lower end of a leg and accommodate its rib, said brace and leg being conjointly resilient so that the brace can be forced up over the lower boss, said boss being moved to its original position to prevent downward gravitation of the brace to confine the brace to a horizontal plane between the bosses and interlocked with the rib of the leg.

5. A tub stand comprising sheet metal legs having tops and intermediate members joined together forming a receptacle for a tub, said legs having supporting ends at the bottoms, a projection at the bottom of each leg formed of the sheet metal extending radially outward from the supporting end and cross braces extending inwardly toward the center of the stand, each brace

having a portion engaging said supporting end and a slot receiving said projection for bracing it against a tendency to twist when the stand is moved about.

6. A tub stand comprising sheet metal legs having wide flanges at the upper ends of single thickness spread outward on opposite sides, one facing toward each adjacent leg and narrow bottoms, and spanners connected between the leg flanges to form an open semi-rigid box for receiving the lower end of a tub, said legs having lower supporting ends with apertures to receive the shank of a caster and a web extending outwardly of the supporting end and for a distance upward from the bottom of the supporting end, bracing for the legs comprising substantially flat metallic strips extending between diagonally opposite legs, said strips having apertures therein for the supporting ends of the legs and slots extending inwardly of the apertures receiving the webs to prevent twisting movement of individual legs as the stand is shifted in one direction or another across a supporting surface and anchoring means on the webs to retain said webs in said slots.

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