Jan. 4, 1944. B. F. BROWN 2,338,092

SUPPORTING DEVICE

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FIG. 1

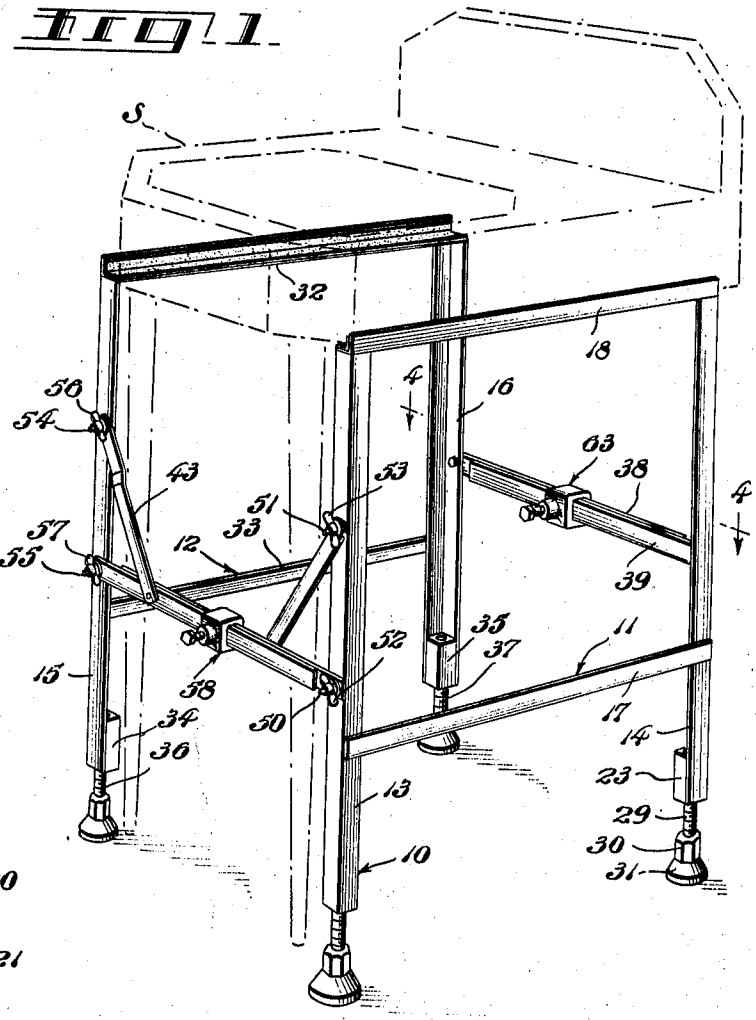


FIG. 5

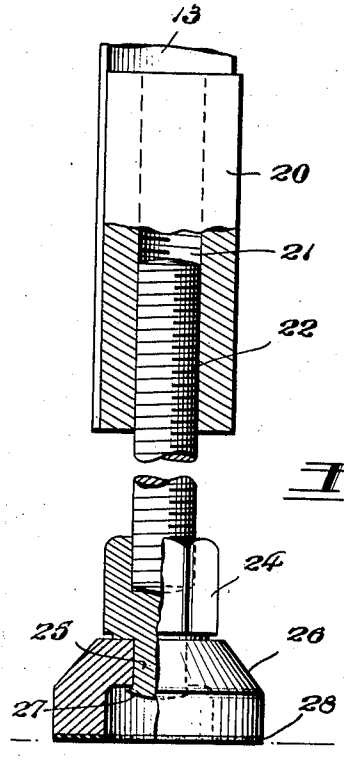
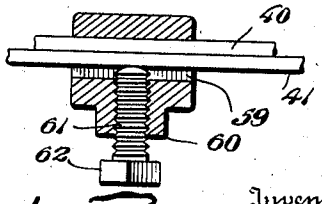


FIG. 7



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Fig. 3.

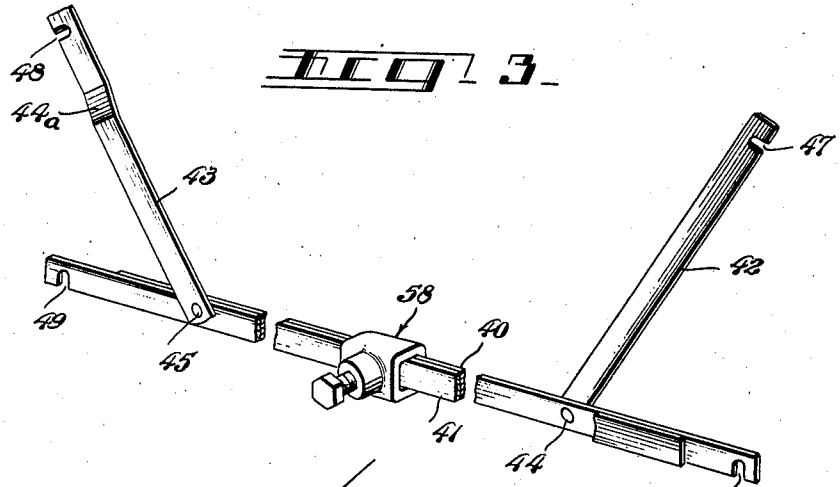
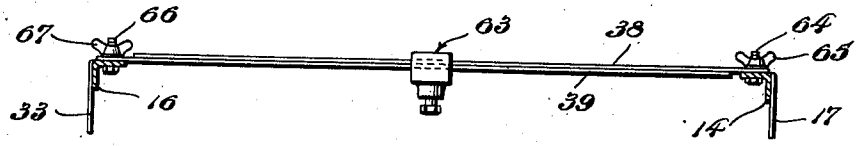


Fig. 4.



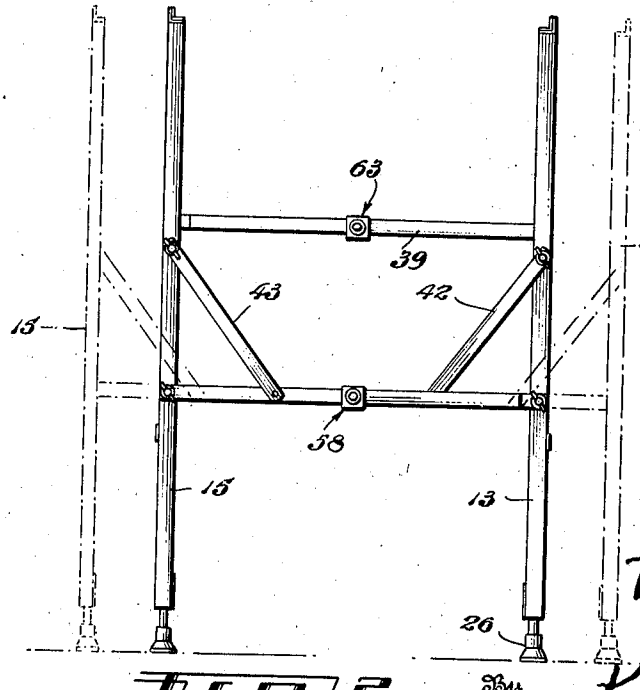
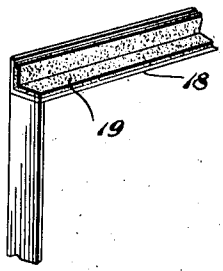


Fig. 2.

Fig. 6.



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SUPPORTING DEVICE

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2 Claims. (Cl. 248—172)

The present invention relates to an adjustable support. More particularly, the present invention relates to a supporting structure that is particularly adapted to support an article such as a sink, commode, flush tank, and so forth, while the same is being bolted or otherwise secured in permanent position.

In modern building practice, it is conventional to retain a sink, for example, by bolting the rearward end into a prepared position in a wall, the sink being normally supported at its forward end by legs or the like. In some instances the bolt holes are not drilled into the wall until the sink has been placed in position against the same.

Obviously it is rather difficult to hold the sink in position while the holes are being drilled, or while the bolts are being threaded into the holes or into prepared sockets. If a position is prepared for the bolts prior to the movement of the sink against the wall, it is of course difficult to place the holes in the correct position so that the sink when finally bolted will be absolutely level and flush with the wall. Similar difficulties are of course met with in the positioning of cabinets, commodes, flush tanks, and the like, as well as other articles which must be accurately positioned relative to a stationary object or to a wall.

It is one of the objects of this invention, therefore, to provide a supporting structure for a sink or the like which is capable of being easily adjusted upwardly or downwardly to correspondingly support the sink and adjust the position thereof.

Another object of the present invention is to provide a supporting structure which is capable of securely supporting a sink or similar member while the same is being positioned, and which may be easily removed after the sink or other member has been bolted into place.

A third object of the present invention is to provide a supporting structure which is adapted to support a sink or similar article, said supporting structure being provided with a plurality of lifting devices for adjusting position of a supported article to a substantial degree relative to the horizontal or vertical.

A fourth object of the present invention is to provide a supporting structure for an article having two separable halves securely fastened together for retaining the article in position, or which may be separated one from the other to facilitate the removal of the supporting structure from the article.

A fifth object of the present invention is to provide a supporting frame having a plurality of legs, each capable of being adjusted vertically so as to raise or lower the article supported thereby, or any portion thereof.

A sixth object of the present invention is to provide a supporting structure for sinks and the like, consisting of a pair of complementary end frames, each having a cushioned angular seat at its upper end for opposed sides of a sink or the like, a pair of legs and a jack screw on each of the legs for vertical adjustment, said complementary frames being capable of easy adjustment toward or away from one another for various width sinks, and removal from the sink after the same has been bolted to a wall or the like.

Other objects and advantages of the present invention will become apparent from the subsequent description and figures of the drawings wherein:

Fig. 1 is a perspective view of the supporting device.

Fig. 2 is a front elevation thereof.

Fig. 3 is a perspective view of the front cross bar.

Fig. 4 is a section taken along the line 4—4 of Fig. 1.

Fig. 5 is a detail partly in section of the adjustable feet.

Fig. 6 is a perspective detail of the upper portion of the frame showing the seat for the sink or other structure.

Fig. 7 is a detail, partly in section, of a clamp and cross bars held thereby.

Referring to Fig. 1 of the drawings, there is here illustrated as a preferred embodiment of the present invention, a supporting structure particularly adapted to adjustably support a lavatory or sink. The supporting structure is indicated in general at 10, and includes a pair of complementary frames 11 and 12. Each of the frames consists of a pair of legs, the legs of the frame 11 being indicated at 13 and 14; and the legs of the frame 12, at 15 and 16. The legs 13 and 14 are securely held together by a cross brace 17 welded at each of its ends to the legs 13 and 14, and an upper angle bar 18, also welded at each of its ends to the legs 13 and 14.

As shown particularly in Fig. 6, the inner surface of the angle bar 18 is provided with a cushioning surface formed by a sheet of rubber indicated at 19 which is cemented thereto. Each of the legs 13 and 14 is also preferably formed from angle stock, and has welded thereto at its lower end an elongated nut, as for example the nut 20 shown in Fig. 5 which is welded at the lower end of the leg 13. The nut 20 is provided with

a threaded bore 21 adapted to receive a threaded spindle 22. A similar nut 23 is also provided, as shown in Fig. 1, suitably welded to the lower end of the leg 14.

The spindle 22 is threaded into a hexagonal nut 24 at its lower end so that movement of the nut 24 will rotate the spindle 22 relative to the nut 26. The nut 24 has a lower portion 25 projecting downwardly therefrom which passes through a central bore within a foot 26. The projecting porton 25 as shown in Fig. 5 is peened over at its lower end as indicated at 27 to prevent removal thereof from the central bore of the central bore of the foot 26, so that the nut 24 and consequently the spindle 22 are rotatably assembled with the foot 26. The base of the foot 26 is provided with a rubber facing suitably joined thereto as indicated at 28.

Although the spindle has been described as threaded into the nut 24, it is to be understood that the spindle 22 and the nut may be made of a single piece of metal, and that preferably when the nut 24 and the spindle 22 are assembled, they are relatively immovable toward one another so that the nut 24 may be turned in either direction and the spindle 22 moved as a unit therewith.

It is evident from the foregoing that when the nut 24 is moved in either a clockwise or a counterclockwise direction by means of a suitable wrench, that the rotation of the spindle 22 within the nut 20 will raise and lower the nut 20 relative to the foot 26 so that the entire leg 13 will be raised or lowered relatively thereto. The nut 23 at the lower end of the leg 14 performs a similar function to the nut 20, and cooperates with a spindle 29 and hexagonal nut 30, similarly mounted on a foot 31.

The frame member 12 is complementary and similar to the frame member 11 just described, being similarly provided with a rubber lined angular support 32 at its upper end, a cross bar 33 similar to the bar 17, and a pair of nuts 34 and 35 respectively welded to the lower end of the legs 15 and 16. Each of the nuts 34 and 35 also has cooperating therewith spindles 36 and 37 which are movalbe relative to the nuts 34 and 35 and when rotated serve to raise or lower the legs 15 and 16 in a manner similar to leg 13 as described above in detail.

It may be therefore seen from the foregoing that each of the legs 13, 14, 15 and 16 may be independently raised or lowered relative to each other, and that the supporting angles at the upper end of the frame members 11 and 12 will be correspondingly tilted, raised, or lowered.

A lavatory or sink S is indicated in dotted lines in Fig. 1 as supported by the members 18 and 32. It is evident that when the members 18 and 32 are raised and lowered and tilted, the sink or lavatory will be correspondingly moved.

Means are also provided to detachably and adjustably join the two complementary frames 11 and 12 together. This means includes a pair of horizontally disposed bars 38 and 39 at the rearward portion of the structure and a second pair of horizontally disposed bars 40 and 41 at the forward end of the support structure. Each of the bars 40 and 41 is also provided, as shown in Fig. 3, with an upwardly extending angularly disposed bar 42, 43, respectively, the bar 42 being riveted as at 44 to the bar 40, and the bar 43 being riveted as at 45 to bar 41.

In order to permit the slidable movement of the bar 40 relative to the bar 41, it is to be understood that the inward portion of the rivets, or heads of the rivets at 44 and 45 are countersunk so that they are flush with the bar surface in a manner conventional in the art.

The bar 40 is provided at one end with a slot 46 and similar slots 47, 48 and 49 are also provided on the ends of the bars 42, 43 and 41 respectively. The slot 46 is adapted to receive a bolt 50 extending perpendicularly outwardly from the leg 13, and the slot 47 is similarly adapted to be fitted around a bolt 51 also extending outwardly from the leg 13. Each of the bolts 50 and 51 is provided with wing nuts 52 and 53, which when tightened will firmly secure the bars 40 and 42 to the leg 13. The slots 48 and 49 are similarly adapted to extend about bolts 54 and 55 also provided with wing nuts 56 and 57 respectively.

It will be noted that the bar 43 is provided with an offset portion 44a so that the slots 48 and 49 may be positioned in approximately the same plane. It is not necessary that the bar 42 be provided with such an offset, since the offset 55 may be made sufficiently large to allow for the thickness of the bars 40, 41, 42 and 43, and the bar 40 instead of extending perpendicularly from the leg 13 will then extend at a slight angle thereto. The bars 40 and 41 are adjustably held together by a clamp indicated in general at 58, and shown in detail in Fig. 7.

The clamp 58 is provided with a body portion having a bore 59 of a size to loosely fit about the bars 40 and 41, and a transversely extending cylindrical portion 60 provided with a threaded bore adapted to receive a set screw 61 having a hexagonal head 62. As shown in Fig. 7, when the set screw 61 is rotated to move the screw inwardly, the point thereof bears against the bar 41 and clamps the bar 41 and 40 together so that they are incapable of movement relative to one another. A similar clamp indicated in general at 63 is provided for the bars 38 and 39.

Although, as stated, the clamps 58 and 65 fit rather loosely about the bars with which they cooperate, it is desired to point out that the longitudinal bore of the clamps is of generally rectangular shape, and fits the bars closely enough so that when the set screws of the clamps are tightened, there is no tendency for the bars to move or to shift relative to one another. Preferably also the clamps are of sufficient length to cover a substantial portion of the bars so as to prevent rotational movement of the bars relative to one another.

Referring to Fig. 4, it will be noted that the bar 38 is fastened to the leg 14 as by a bolt 64 and wing nut 65. It is to be understood that the bolt 64 passes through a slot which is entirely similar to the slot 46 of the bar 40. The bar 39 is similarly fastened to the leg 16 by a bolt 66 and nut 67.

It is clear from the foregoing that there is therefore here provided a supporting and positioning device which is adapted to support an article or body such as a sink or the like and which is provided with a pair of opposed seats adapted to fit over the upper generally horizontal portion of the sink.

As shown in Fig. 2 in dotted lines, the supporting and positioning device may be easily expanded to fit any width of sink or other device, and also to facilitate the removal of the support after the sink or other device has been securely fastened. The use of two clamps such as the clamps 58 and 63 provides for the adjustment of

the spacing between the front legs 13 and 15 and the rear legs 14 and 16 and enables the same to be independently varied.

It is evident therefore that the opposed seats at the upper portion of the support may not only be positioned in parallelism with one another, but also at various angles to one another in the event the sink or other body is not provided with parallel sides.

The provision of four independent jack screws each at the lower end of one of the legs also enables the seats or angle bars 18 and 32 to be given any desired or different inclination from the horizontal, and also enables the height of the angle bars from the floor to be modified at will.

The use of slot and bolt connections at each end of the bars 40, 41, 42, 43, 38 and 39 enables the two frames 11 and 12 to be easily assembled with one another and disassembled after the sink or other device has been fastened in position. The angularly extending bars 42 and 43 which connect the legs 13 and 15, and the bars 40 and 41 assist in maintaining the alignment of the legs with the vertical.

What is claimed is:

1. An apparatus for facilitating the mounting of plumbing fixtures, to be used for temporarily holding a fixture in place during the mounting operation, comprising a pair of complemental support members, each member including a laterally elongated angular seat provided with a horizontally extending, elongated portion for supporting the fixture and a vertically extending, elongated portion for restricting horizontal movement of said fixture, a vertically extending frame being provided for each of said support members, said frame including a front leg and a rear leg extending downwardly from said seat, each leg being provided with means for independently adjusting the height thereof, means to spacedly link said front legs together, means to spacedly link said rear legs together, means for adjusting the length of said first link means, means for adjusting the length of said second link means and means for readily attaching and detaching said link means and said frame.

2. An apparatus for facilitating the mounting of plumbing fixtures, to be used for temporarily holding a fixture in place during mounting operations, comprising a pair of complemental support members, each member including a laterally elongated angular seat provided with a horizontally extending, elongated portion for supporting the fixture and a vertically extending, elongated portion for restricting horizontal movement of said fixture, a vertically extending frame being provided for each of said support members, said frame including a front leg and a rear leg extending downwardly from said seat, each leg being provided with a nut at the foot thereof, a threaded spindle threaded through said nut and adapted upon rotation to raise and lower said nut and said leg, means to spacedly link said front legs together, means to spacedly link said rear legs together, means for adjusting the length of said first link means, means for adjusting the length of said second link means and means for readily attaching and detaching said link means and said frame.

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