Jan. 17, 1933. E. C. HARTER 1,894,743

SUPPORTING STRUCTURE

Original Filed Aug. 22, 1929

Fig. 2.

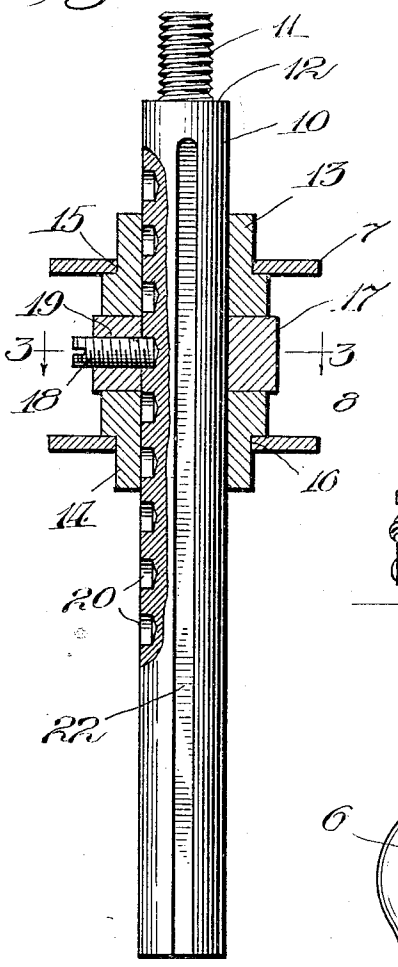


Fig. 1.

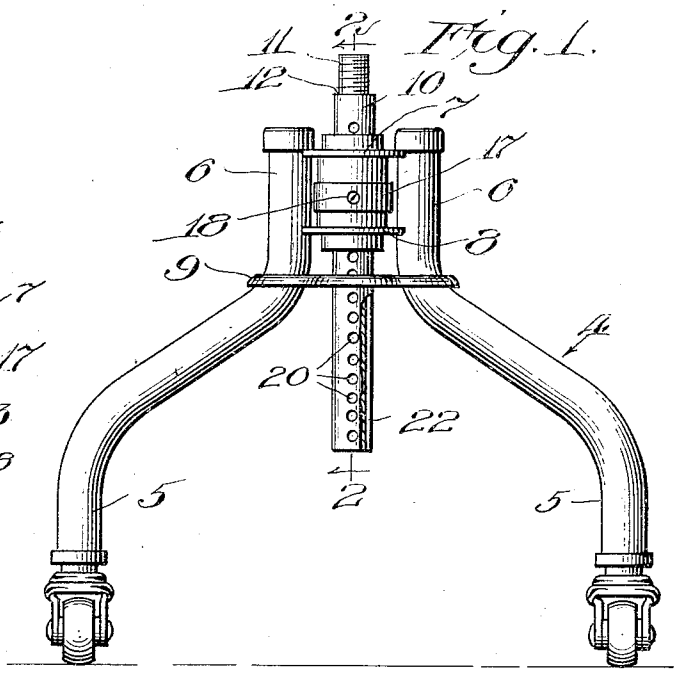
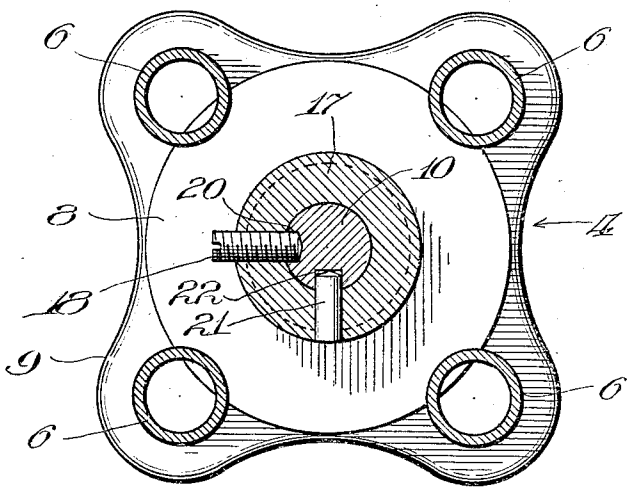


Fig. 3.



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UNITED STATES PATENT OFFICE

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SUPPORTING STRUCTURE

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My invention relates to supporting structures comprising a base portion and another portion adjustable up and down, and rotatable, thereon, such portion in the case of a stool or chair forming the seat portion of the article and in the case of a table the top thereof.

One of my objects is to provide a novel, simple, strong and inexpensive construction of supporting structure of the character above stated, embodying highly effective means permitting of the desired vertical adjustment of said portion and securely holding it in adjusted position, while permitting its rotation, against accidental lowering.

Another object is to provide in a supporting structure involving such a vertically adjustable and rotatable portion, the adjustment being effected by a pin carried by a stop member on such portion and adapted to engage in one of a number of holes arranged along such portion, for the maintaining of the pin in line with the series of holes, when the pin is withdrawn from operative position, to expedite the re-positioning of the pin in any one of the selected holes in readjusting the vertically movable portion of the structure; and other objects as will be manifest from the following description.

Referring to the accompanying drawing:

Figure 1 is a view in side elevation of the lower portion of a stool or chair embodying my invention.

Figure 2 is an enlarged view in vertical sectional elevation of a portion of the structure shown in Fig. 1, the section being taken at the line 2—2 on Fig. 1 and viewed in the direction of the arrow; and

Figure 3, a section taken at the line 3—3 on Fig. 2 and viewed in the direction of the arrow.

In the drawing, the base portion of a stool, chair, or the like, is represented at 4, this base portion being shown as comprising four equidistantly spaced supporting legs 5 rigidly held together at their inwardly deflected vertical leg portions 6 by any suitable means, those shown comprising vertically spaced plates 7, 8 and 9.

The seat portion of the structure comprises a vertically disposed post 10 of cylindrical form which, in practice, would be provided at its upper end with a seat portion (not shown) applied to the upper threaded reduced portion 11 of the post 10 and seat upon the shoulder 12 therebelow, the seat being held in position by a nut (not shown) screwed upon the portion 11 of the post.

The post 10 is adjustable up and down, and rotatable, in bushings 13 and 14 positioned in openings 15 and 16 in the plates 7 and 8 and projects downwardly through a central opening in the plate 9.

A stop member, in the form of a collar 17 provided on the post 10 is positioned between the bushings 13 and 14 and cooperates with the bushing 14 to hold the post 10 against descent, while permitting the post and collar to rotate as a unit.

The post 10 is adjustable up and down in the collar 17 to vary the height at which the seat portion above referred to extends, the collar 17 to this end being provided with a pin, in the form of a set screw 18 threaded in an opening 19 in the collar and adapted to enter any one of a vertical series of openings 20 provided in the post 10, the set screw 18 when adjusted to extend into any one of the openings 20 connecting the post 10 and collar 17 together for holding the post in the desired position of vertical adjustment, while permitting the latter, together with the collar 17, to rotate upon the base portion of the structure.

In order that relative rotary movement of the post 10 and collar 17 be prevented, upon withdrawal of the set screw 18 from operative position, and which, if occurring, would present considerable difficulty in readjusting the set screw 18 into engagement with the desired one of the holes 20, means are provided preventing such relative rotation, the means shown comprising a projection 21 extending inwardly from the inner surface of the collar 17 and into a groove 22 in the outer surface of the post 10 and extending lengthwise of the latter, the relative positions of the holes 20, set screw 18, projection 21, and groove 22, being such that the pin 18 is held at all times in alinement with the series of holes 20.

While I have illustrated and described a particular construction embodying my invention, I do not wish to be understood as intending to limit it thereto as the same may be variously modified and altered without departing from the spirit of my invention.

What I claim as new, and desire to secure by Letters Patent, is:

1. In a supporting structure, the combination of a base member, spaced plates on said base member, bushings extending through said plates, said bushings having portions located between and in contact with the plates preventing their displacement otherwise than through the space between the plates, a collar disposed intermediate said bushings and adapted for rotation, said collar maintaining said bushings in operative engagement with the plates, a post passing through the bushings and collar, said post having a longitudinal series of openings, an adjustable projection carried by the collar to selectively engage said openings so that the position of the post may be varied, and interengaging means between the collar and post preventing rotation of the collar relatively to the post and permitting longitudinal adjustment of the post relatively to the collar, when said projection is disengaged from said openings.

2. In a supporting structure, the combination of a base member having plates in spaced relation, said plates having openings therethrough, bushings extending through said openings and having shoulders abutting said plates and located in the space between them, a collar disposed between and in contact with said bushings for rotation, a post passing through the bushings and collar, said post having a longitudinal series of openings, a projection carried by the collar and radially adjustable thereon to engage and disengage said openings to vary the position in which the post is fastened, said post having a longitudinal slot, and a projection on said collar disposed in said slot, whereby the collar can not turn relatively to the post but the latter may slide relatively to the collar when the first mentioned projection is disengaged from the openings.

EVAN C. HARTER.