Aug. 4, 1925. 1,548,392

R. H. STITES

FOLDING SHELF SUPPORT

Filed May 1, 1923

Fig. 1.

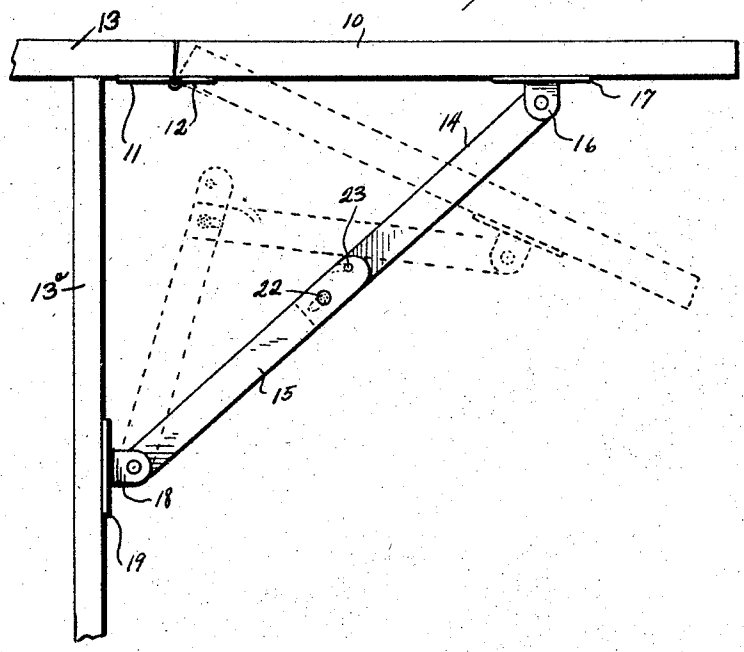


Fig. 2.

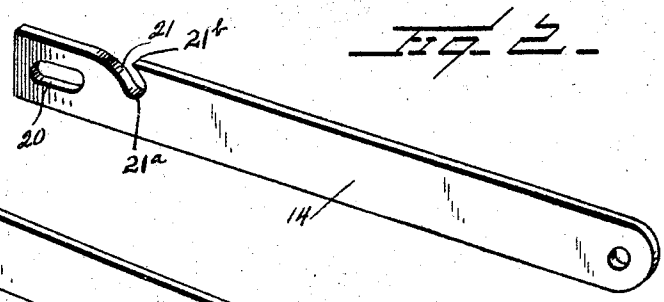


Fig. 3.

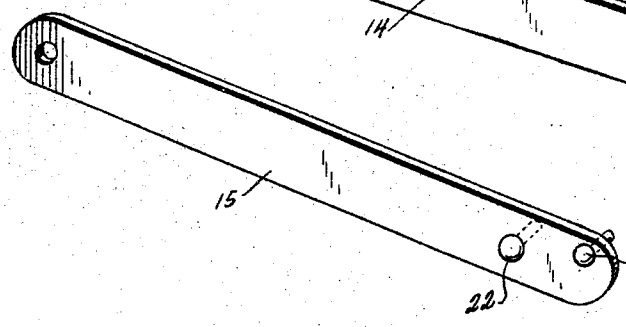
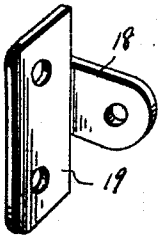


Fig. 4.



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UNITED STATES PATENT OFFICE.

RAYMOND H. STITES, OF ROCKFORD, ILLINOIS, ASSIGNOR TO TINY-TOTS FURNITURE COMPANY, OF ROCKFORD, ILLINOIS, A FIRM CONSISTING OF CARL E. SWENSON, RAYMOND H. STITES, WALTER W. WICKHAM, AND FRANK I. LARSON, ALL OF ROCKFORD, ILLINOIS.

FOLDING SHELF SUPPORT.

Application filed May 1, 1923. Serial No. 635,941.

To all whom it may concern:

Be it known that I, RAYMOND H. STITES, a citizen of the United States, residing at Rockford, in the county of Winnebago and State of Illinois, have invented certain new and useful Improvements in Folding Shelf Supports, of which the following is a specification, reference being had to the accompanying drawings.

This invention relates to hinged shelves such as are shown in connection with the bathing cabinet described and claimed in my co-pending application Serial No. 635,940 filed of even date herewith, and the invention particularly relates to means for supporting the shelf in a horizontal position, it being understood that while this shelf is particularly designed for use with the bathing cabinet illustrated in my co-pending application, it is not necessarily limited thereto.

The general object of the invention is to provided a folding shelf support so constructed that it will fold out of sight when the shelf is dropped and that when in place the sections of which the support is made will be locked against any movement tending to break the joint.

A further object is to provide a device of this character in which the shelf is raised to a position slightly above the horizontal and then lowered to a horizontal position, this action acting to lock the two sections of the brace.

Other objects will appear in the course of the following description.

My invention is illustrated in the accompanying drawings, wherein:—

Figure 1 is a side elevation of a shelf and my improved supporting means therefor, showing in dotted lines the shelf collapsed;

Figure 2 is a perspective view of the section 14 of the brace;

Figure 3 is a perspective view of the section 15;

Figure 4 is a perspective view of the lower supporting bracket.

Referring to these drawings, 10 designates a shelf of any suitable character which is hinged by means of the hinge leaves 11 and 12 to a horizontal member 13, which is supported by means of a vertical panel 13ª. These parts 13 and 13ª are shown in my co-pending application for bathing cabinets.

For the purpose of supporting the shelf 10, I provide a brace or support consisting of the sections 14 and 15. The section 14 at its upper end is pivotally connected to an ear 16 depending from a plate 17 which is apertured for the passage of screws whereby the plate may be attached to the shelf 10. The member 15 at its lower end is pivoted to an ear 18 projecting from a plate 19 which is adapted to be attached by screws to the member 13ª. The two strips or sections 14 and 15 are of such length that they will overlap each other. The section 14 is formed at its extremity with a longitudinally extending slot 20 and the upper edge of this section inward of the slot 20 is formed with a downwardly and outwardly inclined slit 21. The section 15 at that end which overlaps the section 14 carries the two pins 22 and 23. The pin 22 constitutes a pivot pin and operates in the slot 20. The pin 23 engages in the slit 21 so that these two sections 14 and 15 may be turned into an aligning relation and when in the aligning relation the pin 23 will fit within the slit 21 and the two sections will be locked in this aligning relation. This is due to the fact that the inner end 21ª of the slit 21 is spaced longitudinally of the section in which it is formed from the outer end 21ᵇ thereof, so that it is necessary before the sections can be swung out of alignment that they first be shifted longitudinally. Attention is directed to the fact that this longitudinal movement, in addition to moving the pin through the mouth of the slot, must necessarily be accompanied by a break-joint motion between the sections 14 and 15, and this pin must move transversely of the member 14 and in order for this to be effected the pivoted ends of the members 14 and 15 must swing toward the pivoted connection of the shelf. While in this position, if the shelf be lowered the result will be collapsing of the brace. When the brace is moved from the collapsed to the bracing position and the shelf moved into operative position, it is first shifted slightly above such operative position and the pivoted ends of the braces then have a motion away from the shelf and

tend to continue such motion when they are brought to a stop by the engagement of the pin 23 against the side of the member 14, so that if the shelf be dropped quickly after being moved above the horizontal line to permit the pin 23 to engage in the slot 21, these links will naturally move into alignment with one another as the shelf drops to horizontal position.

When the shelf 10 is turned from its depending position to its horizontal position, it is shifted slightly above this horizontal position which draws the link or section 14 upward on the pin 22 and then it is allowed to lower into its horizontal position, which causes the section 14 to travel downward longitudinally on the pin 22 and the pin 23 to pass into the locking slit 21, thus locking the two sections in their aligned relation. When the shelf is to be dropped out of the way, it is lifted out of its horizontal position and the slot on either of the sections 14 or 15 will shift the sections inward and bring the locking pin 23 out of the safety lock slot and allow the support to collapse.

While I have illustrated only one lug 16 and one lug 18 at the upper and lower ends of the sections 14 and 15 respectively, it will be obvious that a bifurcated member might be used at each end within which the sections would pivotally engage. It is obvious that this support can be fitted to any desired angle by properly proportioning the sections 14 and 15 which may be of equal or unequal length as desired to permit these members to fold together without striking the surface to which they are attached. It will also be noted that these sections 14 and 15 are made of flat iron and not of angle iron and that when the sections are fully engaged with each other by means of the two pins 22 and 23 there will be no tendency of the parts to turn upon each other or bend or otherwise get out of shape.

I claim:—

1. A brace for shelves or the like formed in two sections having their adjacent ends overlapped, one of the sections being formed with a longitudinally extending slot and with a slit extending diagonally inward from the upper edge of the section and having its inner end further spaced from the adjacent end of the slot than its outer end, the other section being provided with a pivot pin passing through the slot and with a locking pin disposed at the inner end of said slit when the members are in aligned relation.

2. A brace for shelves or the like comprising a pair of members pivoted to one another by a pivot permitting longitudinal movement of the members with relation to one another, one of the members having a slit and the other of the members having a pin, said slit extending diagonally into the member through the edge thereof, the inner end of the slit receiving the pin when the members are in aligned relation and so arranged upon the shifting pivot thereof that their combined length is at its minimum.

In testimony whereof I hereunto affix my signature.

RAYMOND H. STITES.