H. CRAWFORD.

STORE SHELVING.

APPLICATION FILED APR. 9, 1915.

1,176,347. Patented Mar. 21, 1916.

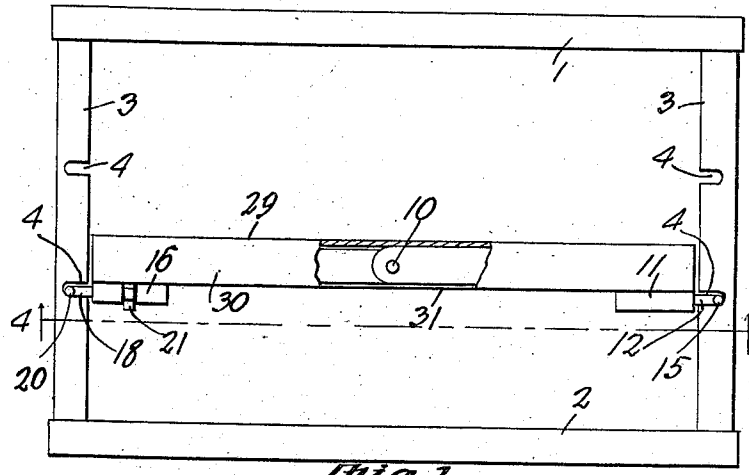


Fig. 1.

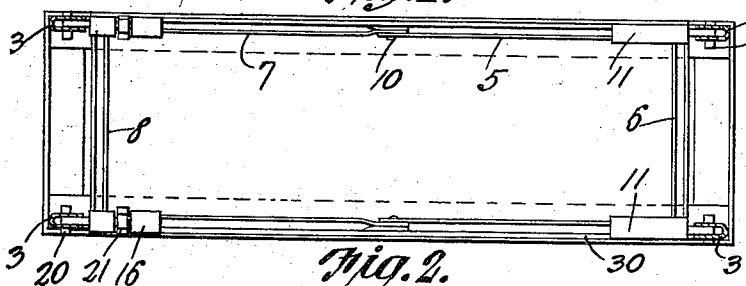


Fig. 2.

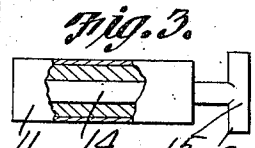


Fig. 3.

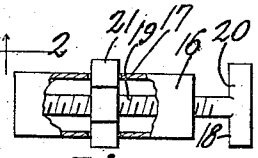


Fig. 4.

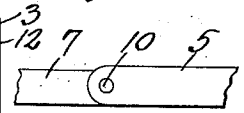


Fig. 5.

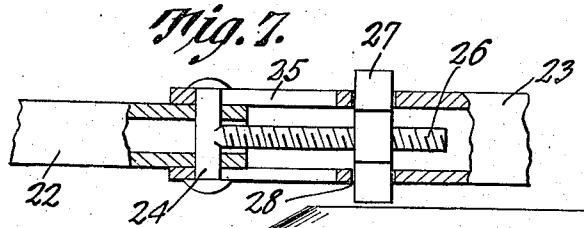


Fig. 7.

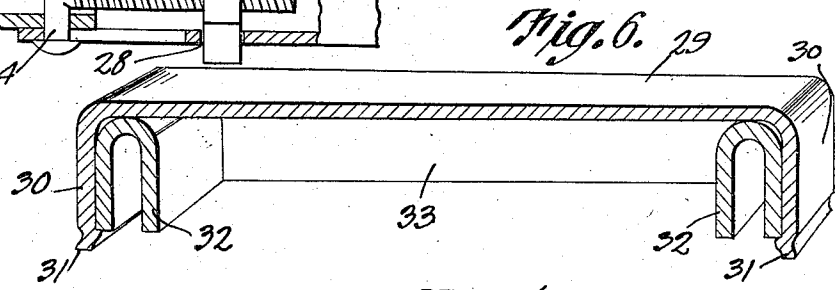


Fig. 6.

Witnesses

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STORE-SHELVING.

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To all whom it may concern:

Be it known that I, HARRY CRAWFORD, a citizen of the United States, residing at Toledo, in the county of Lucas and State of Ohio, have invented a new and useful Store-Shelving, of which the following is a specification.

The device forming the subject matter of this application is a means for supporting shelving in a store, and one object of the present invention is to provide a novel form of a shelf supporting frame which may be moved vertically for adjustment.

Another object of the invention is to provide a shelf supporting frame comprising hingedly connected parts, it being possible to vary the effective length of the frame, so that the same will coöperate with the supporting structure which upholds the frame.

Another object of the invention is to provide a shelf supporting frame so constructed as to produce a truss, thereby rendering the frame unduly rigid, in operation, even though the frame may consist of hingedly connected parts.

It is within the province of the disclosure to improve generally and to enhance the utility of devices of that type to which the present invention appertains.

With the above and other objects in view which will appear as the description proceeds, the invention resides in the combination and arrangement of parts and in the details of construction hereinafter described and claimed, it being understood that changes in the precise embodiment of the invention herein disclosed can be made within the scope of what is claimed, without departing from the spirit of the invention.

In the accompanying drawings:—Figure 1 is a side elevation; Fig. 2 is a horizontal section on the line 2—2 of Fig. 1, looking upwardly; Fig. 3 is a plan of one bracket, parts being broken away; Fig. 4 is a plan of another bracket employed, parts being broken away; Fig. 5 is an elevation of the frame hinge; Fig. 6 is a sectional perspective showing a modification in the shelf frame; Fig. 7 is a sectional detail showing a modified means for elongating the shelf-supporting frame.

In carrying out the present invention there is provided a supporting structure which may be variously fashioned. In the present instance the supporting structure is shown as comprising a top frame 1 and a bottom frame 2, these frames ordinarily being made of angle members, although this detail is not insisted upon. Connecting the frames 1 and 2 are corner posts 3. The corner posts 3 are shown in the form of channels, but changes in the corner posts may be made without jeopardizing the utility of the invention. In their inner edges, the posts 3 are provided with notches or seats 4.

The invention contemplates the use of a shelf supporting frame adapted to coact with the seats 4 in the posts 3. More than one shelf supporting frame, of course, may be employed, the seats 4 constituting a means whereby the shelf supporting frame may be adjusted vertically, or whereby a plurality of shelf supporting frames may be used. The shelf supporting frame comprises sides 5 connected by an end 6 and sides 7 connected by an end 8. In a convenient, but not mandatory form, the sides 5 and 7 are in the form of channel members, the inner ends of the sides 7 passing inside of the inner ends of the sides 5, the inner ends of the sides 5 and 7 being connected by pivot elements 10.

Secured to the lower edges of the sides 5 adjacent their outer ends are sockets 11 in which are mounted fixed brackets 12, each bracket 12 comprising a shank 14 received in one of the sockets 11 and a transverse head 15 adapted to be received in the seats 4 at one end of the supporting structure. The specific form of bracket above described may be departed from, possibly, without jeopardizing the utility of the invention.

Secured to the lower edges of the sides 7 adjacent the outer ends are sockets 16 provided with transverse slots 17. Mounted to move in the sockets 16 are adjustable brackets 18, each comprising a shank 19 and a head 20. A nut 21 is threaded onto each of the shanks 19 and is held against transverse movement in the slot 17 of each of the sockets 16.

Resting upon the supporting frame above described is a shelf 29 having depending side flanges 30 which coact with the sides 5 and 7 of the shelf supporting frame, the flanges 30 being provided, preferably, with beads 31 which interlock beneath the sides of the supporting frame, the flanges 30 being slightly resilient so that the beads 31 may be detached from the sides of the shelf sup-

porting frame, to permit a removal of the shelf.

If desired, the side portions of the shelf supporting frame may be fashioned as indicated at 32 in Fig. 6, the sides 32 being reinforced at intervals by transverse braces 33. This construction is resorted to only when an extremely heavy load is to be supported.

It is to be observed that the brackets 12 and 18 lie below the pivot elements 10. Consequently, a truss-like effect is produced, strengthening the shelf supporting frame materially.

By rotating the nuts 21, the movable brackets 18 may be adjusted, thereby to regulate the effective length of the shelf supporting frame and so position the brackets 18 and 12 with respect to each other and with respect to the pivot elements 10 that the hereinbefore mentioned, truss-like effect may be produced. Further, owing to the fact that the brackets 18 are adjustable, the shelf supporting frame may be made to coact properly with supporting structures of slightly different sizes.

It is not mandatory that the brackets 18 shall be movable. As shown in Fig. 7, the side members of the shelf supporting frame are denoted by the numerals 22 and 23, and the pivot element which connects these parts is indicated by the reference character 24, the same being adapted to move in longitudinal slots 25 formed in the side member 23, and including a threaded stem 26 receiving a nut 27 rotatable in slots 28 formed in the side member 23 but held against transverse movement therein. In this form of the invention, the adjustment takes place adjacent the hinged connection between the side members 22—23, and not at one end of the shelf supporting frame, as is the case when the movable brackets are employed, it being understood that when the structure shown in Fig. 7 is resorted to, the brackets at both ends of the shelf supporting frame may be fixed.

As will be understood readily by those skilled in the art, the shelf 29 may be removed from the shelf supporting frame, the latter being knuckled upwardly, so that the brackets 18 and 12 no longer engage with the seats 4 at the respective ends of the supporting structure. The shelf supporting frame may then be adjusted vertically, or be removed.

Having thus described the invention, what is claimed is:—

1. In a device of the class described, a supporting structure having seats; a shelf frame comprising relatively movable parts; coöperating elements comprising a pivot pin connecting the said parts of the frame, and a bracket engaged in one of the seats, one of said coöperating parts including a threaded stem; and a nut on the stem, one of the relatively movable parts of the shelf frame being provided with a transverse slot in which the nut is held for rotation.

2. In a device of the class described, a supporting structure having seats; a foldable frame comprising parts provided at their outer ends with means for engaging in the seats; a pivot pin held in the inner end of one of said parts, the inner end of the other of said parts being provided with an elongated slot through which the pin is slidable, the pin being provided with a threaded stem; and a nut threaded onto the stem, one of said parts of the frame being provided with a transverse opening in which the nut is held for rotation.

In testimony that I claim the foregoing as my own, I have hereto affixed my signature in the presence of two witnesses.

HARRY CRAWFORD.

Witnesses:
FRANK H. FOSTER,
STUART S. WALL.

Copies of this patent may be obtained for five cents each, by addressing the "Commissioner of Patents, Washington, D. C."