April 22, 1930. S. SMILEY, JR 1,755,338

SUSPENSION DEVICE

Filed May 23, 1928 2 Sheets-Sheet 1

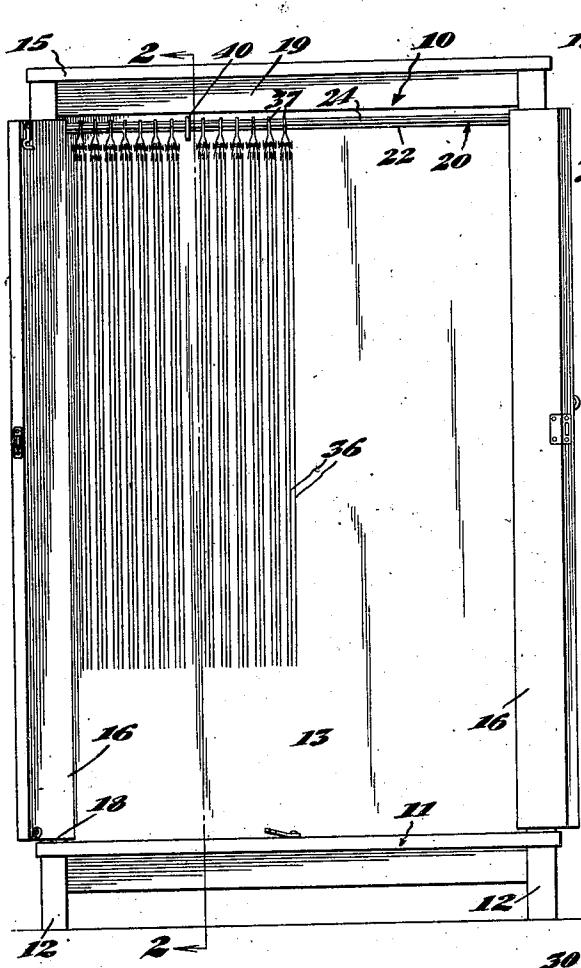


Fig. 1

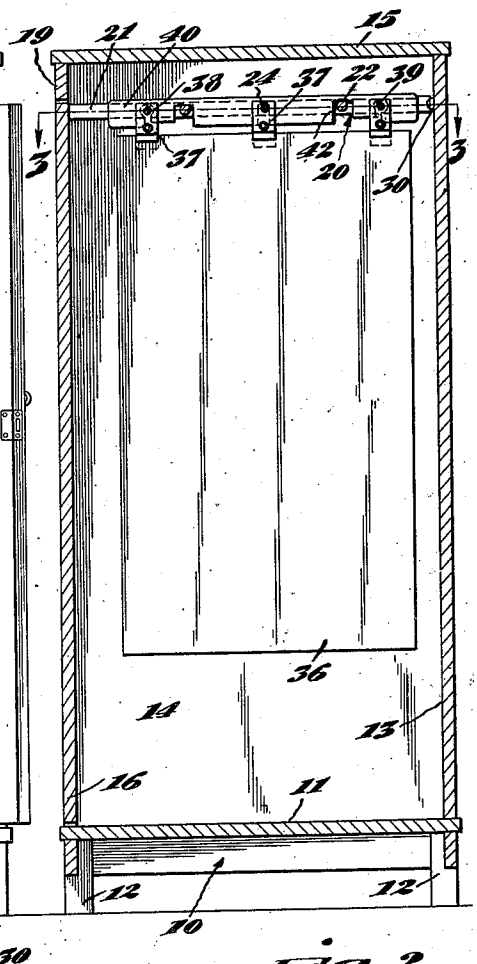


Fig. 2

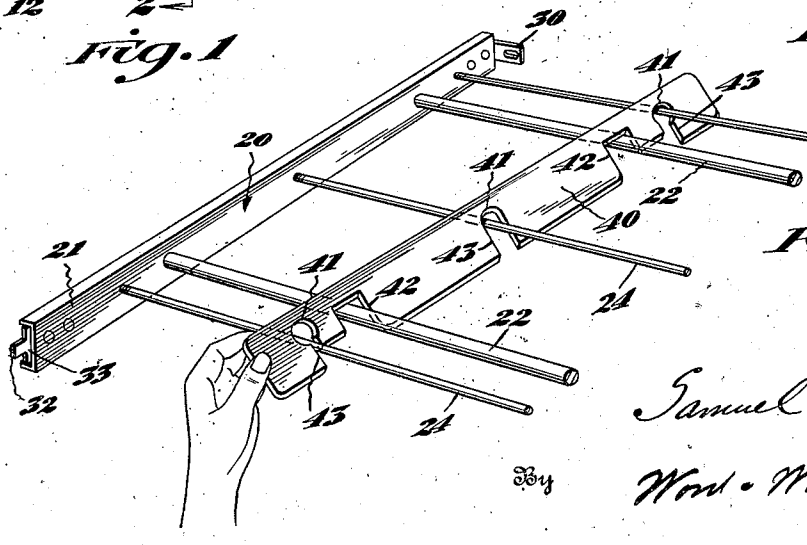


Fig. 5

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SUSPENSION DEVICE

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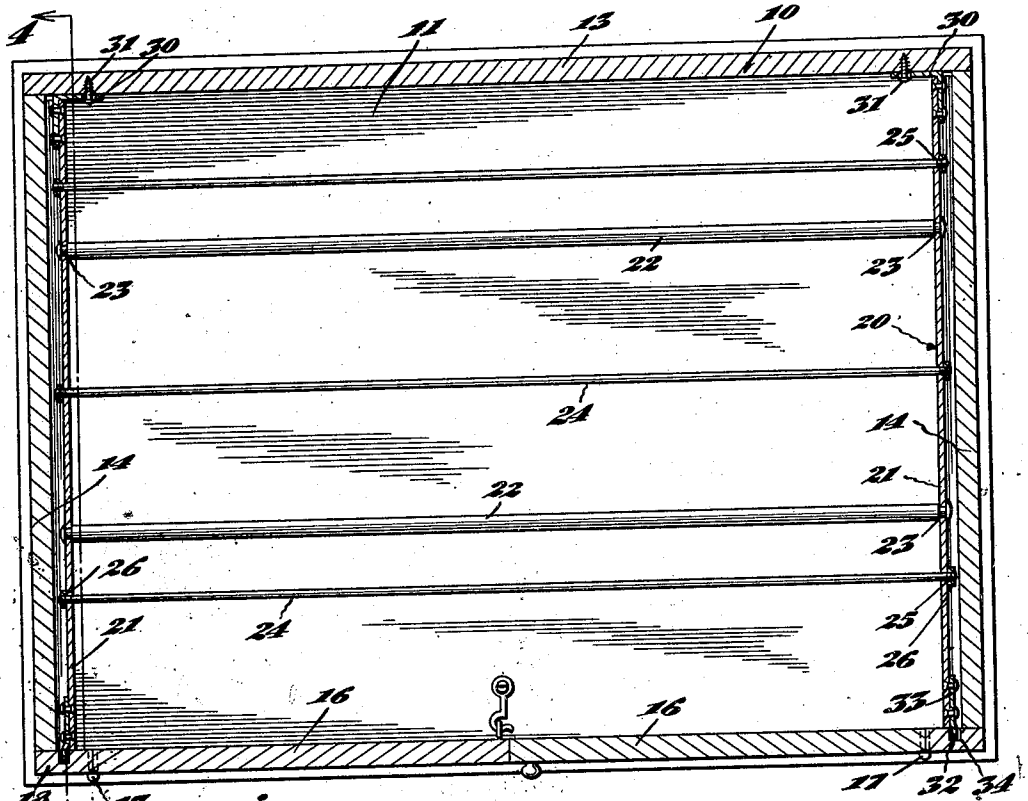


Fig. 3

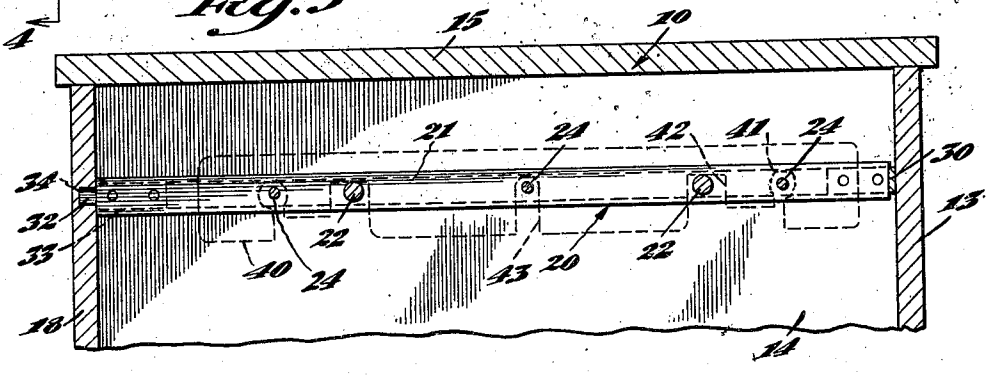


Fig. 4

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UNITED STATES PATENT OFFICE

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SUSPENSION DEVICE

Application filed May 23, 1928. Serial No. 279,999.

This invention relates to supporting or suspension devices and is particularly directed to a rack construction for supporting reference sheets, such as maps, drawings, etc., as well as to a means for shifting the supported sheets in their suspended position on the rack. The support device may be utilized within a cabinet or in any environment where it is desired to suspend or file a plurality of sheets for reference purposes.

The invention makes use of parallel rods to which the sheets are attached by means of clips or the like, and along which rods the sheets are adapted to be shifted. A rider is mounted on the rack, for lateral sliding movement thereon, and is disposed at right-angles to the support rods as the means for shifting the sheets on the rods.

It is an object of this invention to provide a support device of this nature in which the frame or rack thereof does not function as the direct attachment support for the sheets to be suspended, but in which independent support rods are provided, mounted in the frame, for directly supporting the reference sheets.

Another object is to provide a device for shifting the suspended sheets on the support elements which device is mounted for actuation directly on the frame, and which is non-bearing on the support elements while being suitably disposed relative to the points of sheet attachment so as to surround or encompass the support elements and to thus provide that a wide area of the shifting device is laterally engageable with the adjacent sheets.

Another object of this invention is the provision of a rack of the foregoing nature, the frame of which is of extremely rigid construction and in which frame construction it is possible to tighten up support rods or true suspension means to an extreme degree without distorting the frame.

Further objects and advantages will be more fully set forth in a description of the accompanying drawings, forming a part of this specification, in which:

Figure 1 is a front elevation of a cabinet, showing the support device constituting the present invention utilized for suspending reference sheets within a cabinet.

Figure 2 is a sectional view taken on line 2—2, Fig. 1.

Figure 3 is a sectional view taken on line 3—3, Fig. 2, showing the manner of mounting the rack in the upper part of the cabinet, and also showing in detail the fabrication of the rack, the rack being illustrated in plan section in this view.

Figure 4 is a sectional view taken on line 4—4, Fig. 3, further detailing the rack and the manner of mounting the same in the cabinet walls.

Figure 5 is a perspective view of the rack removed from its environment, and showing the rider or shifting element in the process of being placed in its operative position.

Referring to the drawings, the present improvement is shown mounted within the upper region of a cabinet. The cabinet is indicated generally at 10 and comprises a base 11 as a floor for the cabinet and legs 12, one at each corner of the rectangular base, rear wall 13, end walls 14 and a top 15. The front of the cabinet is provided with a pair of doors 16 hinged to the front corners of the cabinet construction as at 17, these forward corners being in the nature of a pair of uprights 18. The upper portion of the front of the cabinet is filled out by a wall 19.

The rack or supporting device 20 as shown in Figure 3 is of rectangular outline corresponding to the shape of the cabinet in plan section and is secured therein slightly below the edge of the wall portion 19 so that there is easy access to the rack through the doors of the cabinet.

Referring to the Figures 3 and 5 of the drawing, the construction of the rack is as follows: A pair of end rails 21 are provided, these end rails being formed of channel iron with the flanges thereof outwardly disposed and the rails joined in parallel spaced relation by means of a pair of frame rods 22. The rods are riveted to the rails 21 as shown at 23, there being a reduced portion formed at the ends of each rod providing a shoulder abutting the inner face of the rail and the end of the reduced portion being battered

down on the outside of the rail. This attachment of the frame rods to the end rails provides a staunch frame.

A plurality of support rods 24 are mounted in the frame in parallelism with the frame rods. The support rods loosely traverse the end rails and have screw-threaded ends indicated at 25. Nuts 26 are provided, these nuts being screwed onto the respective ends of the rods for drawing the same taut between the end rails. The frame rods function as spacer rods and are of heavy construction compared to the support rods so that it is possible to draw up the support rods without distorting the frame of the rack.

It will be seen from this description that the support rods form no part of the true frame but are provided for the sole purpose of supporting the elements to be suspended from the rack. The frame is secured to the cabinet wall at the rear end by means of an angle piece 30 riveted to each rear end of the respective end rails, one flange of the angle piece abutting the rear wall and being secured thereto by means of a screw 31.

The mounting of the frame at the front end is accomplished by means of forwardly extending ears 32 formed on the ends of metal strips 33 secured to the end rails. Slots 34 are formed in the uprights 18. The rack is placed in its position by inserting the ears in these slots and then moving the rear end of the rack upwardly to a horizontal plane and then securing by means of the before-mentioned screws 31 at the rear.

The sheets to be suspended are indicated at 36 and are secured or suspended from the support rods by means of a series of clips 37 there being the same number of clips on each sheet as there are number of support rods provided. The construction of the clips may be of any sort, the clips shown in this particular instance being of a flexible type providing an aperture 38 and an incision 39 in the bridge portion above the aperture on the clip enabling the clip to be forced onto the rod by spreading the incision in the clip head against the rod and forcing the aperture of the clip into engagement with the rod. These clips are not disclosed in detail in the drawing since they form no part of this invention. As shown in Figure 1, the sheets may be suspended in groups, in group holding clips, or as not disclosed, they may be hung individually.

For ease and convenience in shifting a group of these sheets on the support rods a rider 40 is provided. This rider may be of any material, being preferably formed in this instance of a strip of wood. The rider is mounted at right-angles to the rods and rests upon the frame rods.

Openings 41 are formed in the rider registering with each support rod and adapted, when the rider is mounted on the frame rods, to be concentric with the support rods, these apertures being of considerably greater diameter than the rod and embracing or encompassing the same. In order to properly register the apertures with the support rods the rider is slotted as at 42 to provide points of engagement of the rider on the frame rods permitting the rider to fit around the support frame rods 22 and suitably aligning the apertures clear of engagement with the support rods.

Slots 43 extend downwardly from each aperture for the purpose of allowing an insertion of the rider into its proper position, the rider being brought down from above into its position. The rider length extends sufficiently forward from the front support rod to enable the operator to grasp the same as indicated in Figure 5. In operation, as shown in Figure 1, the rider is inserted at the particular point desired and due to the width and arrangement engages the clips over substantially their entire area through which engagement the clips are easily moved without damaging the clips or twisting the rods.

Having described my invention, I claim:

1. A device of the class described, comprising, a rack structure, a series of parallel support rods mounted in said rack for receiving a series of sheet-supporting clips, and a rider having sliding engagement with said rack and embracing but not bearing on said rods at right-angles thereto for sliding the sheet clips on the rods.

2. A device of the class described, comprising, a rack structure, a series of parallel support rods mounted in said rack for receiving a series of sheet-supporting clips, and a rider having sliding engagement with said rack and embracing but not bearing on said rod at right-angles thereto for sliding the sheet clips on the rods, said rider cut away downwardly adjacent the rods for removal of the rider upwardly from the rack.

In witness whereof, I hereunto subscribe my name.

SAMUEL SMILEY, JR.