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S. HAMMER

1,875,318

ADJUSTABLE SHELF SUPPORT

Filed April 26, 1930

Fig. 1.

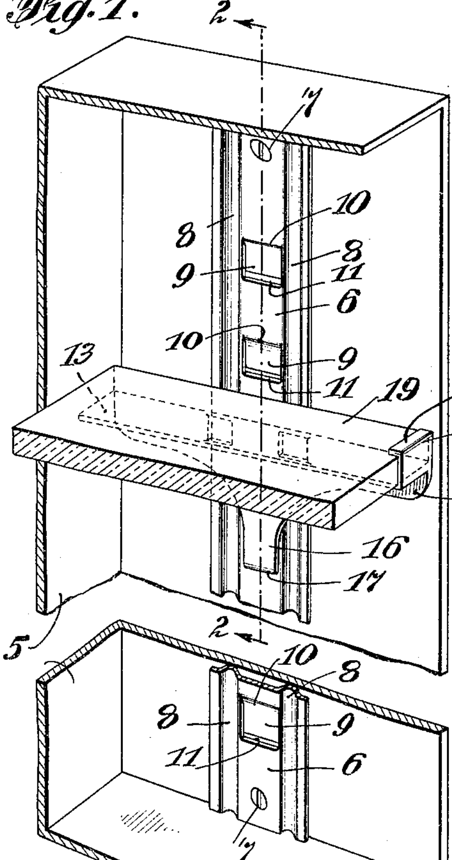


Fig. 2.

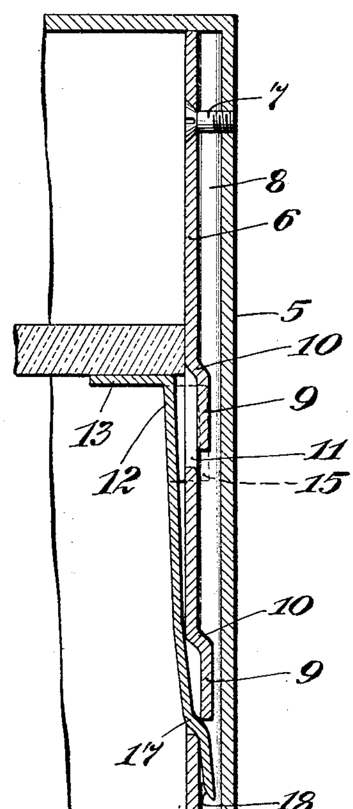


Fig. 3.

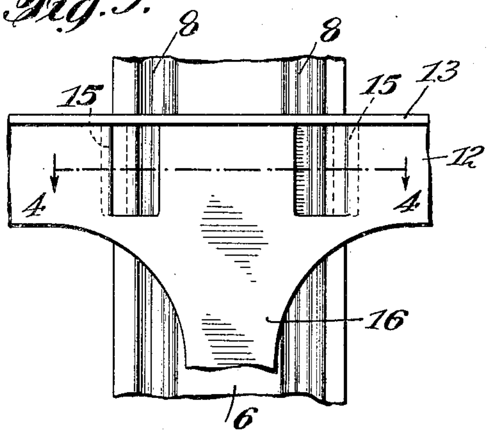
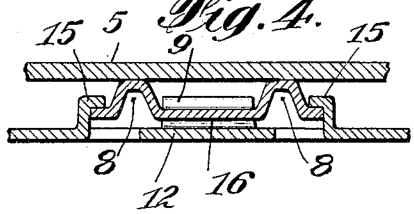


Fig. 4.



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UNITED STATES PATENT OFFICE

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ADJUSTABLE SHELF SUPPORT

Application filed April 26, 1930. Serial No. 447,525.

This invention relates to adjustable shelf supports and has for its general object and purpose to provide an improved mounting of the adjustable supports for the shelves of bath room cabinets or other structures which will provide means enabling the proper adjustment to be easily and quickly made and wherein the support will be rigidly and securely retained in its adjusted position against the possibility of accidental displacement.

It is another important object of the invention to provide means for adjustably mounting shelf supports whereby the use of separate adjustable pins, screws or other analogous elements may be entirely dispensed with.

It is also an important practical object of my invention to provide a shelf support and the means for adjustably mounting the same in position on the wall of the cabinet, which may be inexpensively fabricated in the form of comparatively simple sheet metal stampings and easily and quickly applied in its attached position to the wall of the cabinet.

With the above and other objects in view, the invention consists in the improved adjustable shelf support and in the form, construction, and relative arrangement of its several parts, as will be hereinafter more fully described, illustrated in the accompanying drawing, and subsequently incorporated in the subjoined claims.

In the drawing, wherein I have disclosed one simple and practical embodiment of my present invention, and in which similar reference characters designate corresponding parts throughout the several views,—

Figure 1 is a fragmentary perspective view of a cabinet showing my improved shelf supporting means applied thereto;

Fig. 2 is a vertical sectional view taken on the line 2—2 of Fig. 1;

Fig. 3 is an enlarged fragmentary elevation, and

Fig. 4 is a horizontal sectional view taken on the line 4—4 of Fig. 3.

For purposes of illustration, in the accompanying drawing, I have shown my invention as applied to a bath room cabinet of sheet metal, a part of the cabinet body being shown at 5. To each side wall of the cabinet on the inner face thereof and in suitably spaced relation to the rear wall of the cabinet at its front open side, the vertically extending guides 6 for the shelf supporting members are suitably attached, as for instance by means of the screws indicated at 7. Each of these guides consists of a sheet metal strip of suitable width extending substantially for the entire distance between the top and bottom walls of the cabinet body. This strip is suitably stamped or pressed to provide therein in spaced parallel relation to each of its longitudinal edges, a single longitudinal corrugation 8. Between these corrugations and at vertically spaced points, tongues 9 are struck from the metal strip, said tongues projecting from the plane of the strip in the same direction as the ribs or beads formed by the corrugations 8 but being offset for a distance only substantially equivalent to the thickness of the metal. These tongues remain integrally connected at their upper ends with the body of the metal strip by the angular offsets 10, while their lower end edges are spaced above the edges of the openings formed in the plate by said offset tongues to provide the slots indicated at 11.

It will be evident from the above description that when the metal strips 6 are attached to the walls of the cabinet as seen in Figs. 1 and 4 of the drawing, with the convex sides of the beads formed by the corrugations 8 in contact with the cabinet wall, the opposite vertical edges of said strip as well as the intermediate portion thereof between the corrugations 8 are spaced from the wall of the cabinet. The tongues 9 are likewise slightly spaced from the inner face of the cabinet wall. Upon these attached metal strips, the shelf supporting members are slidably and adjustably mounted.

Each shelf supporting member is also formed from a sheet metal stamping having the angularly related flanges 12 and 13 respectively, the flange 13 at one of its ends having an upwardly projecting stop lug 14. The flange 12 of the supporting member has

spaced angularly bent lips 15 struck therefrom and the opposite edges of the plate 6 are engaged between one side of the flange 12 and the ends of the lips 15 which are positioned in spaced parallel relation to said flange. Thus, it will be understood that the cooperative engagement of the angular lips 15 with the opposite vertical edges of the metal strips 6 serves to slidably guide the movement of the shelf supporting member relative to said strip and also to prevent any angular movement of the supporting member relative to said strip.

The flange 13 projects laterally and inwardly from the upper edge of the flange 12 and the lower edge of the latter flange is centrally provided with a downwardly extending arm 16, the lower part of which is of such width that it will readily pass through one of the slots 11. The lower extremity of said arm is laterally offset as shown at 17 towards the strip 16 and the end edge of said offset portion of the arm is preferably beveled as at 18.

The distance between the ends of the lips 15 and the face of the plate 12 sufficiently exceeds the thickness of the metal plate 6 so that when the offset end of the arm 16 is not engaged through one of the slots 11, there is sufficient play between the flange 12 and the strip 6 to permit the offset end of arm 16 to slide freely on said strip without excessive friction. Thus, the shelf supporting member may be freely moved vertically upon the strip 6 and when disposed in the desired adjusted position with the offset end of the arm 16 opposed to one of the offset tongues 9 of the strip 6, said lower end of the arm will move laterally against the face of the tongue 9. By then forcing the supporting member downwardly so as to cause the beveled lower edge 18 of the arm 16 to engage the edge of the slot 11, said end of the arm will be sprung laterally, the tongue 9 yielding to a sufficient extent to permit the end of the arm to be moved downwardly through said slot. The upper part of the arm, and the flanges 12 and 13 of the supporting member will thereby be sprung inwardly away from the metal strip 6 and the ends of the lips 15 will be brought into close frictional contact against the edges of the metal strip. Since the lower end of the tongue 9 is in bearing engagement against the offset 17 of the arm 16, the shelf support is thus very rigidly held and retained in its adjusted position with respect to the metal strip 6.

After both of the supporting members have been adjusted in the manner explained, to the same vertical positions as the respective strips 6, the ends of the shelf 19 which may be of glass or other material are then positioned upon the flanges 13, the stops 14 on the front end of said flanges, prevent outward sliding movement of the shelf through the open side of the cabinet. If desired, the stop 14 may be provided at its upper end with a narrow in-turned flange 14′. In placing the shelf on the supports, it is disposed in an upwardly inclined position with its front edge under the flanges 14′. These flanges effectually prevent lifting or upward movement of the front edge of the shelf.

From the foregoing description, it will be seen that I have provided a very simply constructed, reliable and serviceable device for the intended purpose. The shelf supporting members and the metal strips whereby they are attached in applied relation to the opposite side walls of the cabinet, at all times remain assembled so that there is no possibility of the shelf supporting members being completely removed and misplaced or lost. Nevertheless, the proper adjustment of these shelf supports can be very easily and quickly made, and without requiring the manipulation of pins, screws or other connecting or fastening elements. It will further be appreciated that since the several parts are in the form of very simple sheet metal stampings, my invention may be produced on a quantity production basis at very low cost and applied as an accessory to bath room cabinets and similar structures, without materially increasing the selling cost thereof.

In such cabinets, means is provided for hingedly mounting the door at the right hand side of the cabinet. It sometimes occurs however, that owing to the architectural features of the building structure, it is necessary to mount the cabinet so that the door will be hingedly supported at the left hand side thereof. With my shelf supporting device as above described, the cabinet may be readily reversed for this purpose, it being only necessary to reverse the guide plates 6 so that the slots or openings 11 will be at the lower ends of the tongues 9. It will of course, be apparent that in stamping these guide plates, if desired, the tongues 9 may remain integrally connected with the plate at their opposite side edges as well as at their upper ends.

In the foregoing description, and the accompanying drawing, I have disclosed one simple and practical embodiment of my present improvements. Nevertheless, it is to be understood that the essential features thereof might also be incorporated in various other alternative structural forms, and I therefore, reserve the privilege of resorting to all such legitimate changes therein as may be fairly embodied within the spirit and scope of the invention as claimed.

I claim:

1. Shelf supporting means comprising a guide adapted to be rigidly fixed in a vertical position to the side wall of a cabinet, said guide having vertically spaced transverse slots therein and a yieldable tongue above each of said slots, a shelf supporting member,

said member and the guide having cooperating parts inseparably retaining the same in connected relation and permitting of vertical sliding movement of said member along the guide, and said shelf supporting member also including a part extending in vertical parallel relation to the guide for downward insertion through a selected slot in the latter, said part having a lateral offset and the yieldable tongue cooperating therewith to hold the same in bearing engagement upon the lower edge of the slot in the guide to thereby releasably retain the supporting member in its adjusted position on the guide.

2. Shelf supporting means comprising a metal guide strip adapted to be rigidly secured in vertical position to one side wall of a cabinet, an angular shelf supporting member extending across one side of said guide having a flange disposed in a plane substantially parallel to the plane of the guide and provided with spaced angular lips struck therefrom embracing the longitudinal edges of the guide to inseparably connect the supporting member therewith for vertical adjustment, said flange of the supporting member being further provided with a downwardly extending arm having a laterally offset end, and said guide having vertically spaced transverse slots therein through which the offset end of the arm is adapted to be downwardly inserted, and resiliently yieldable tongues on the guide each having a free end forming one edge of the respective slots and frictionally cooperating with said offset end of the arm on the shelf supporting member to resist displacement of said member from its adjusted position on the guide.

3. In combination with a cabinet, self supporting means therefor comprising a metal guide strip having spaced parts for contact with a side wall of said cabinet to vertically position said guide strip in spaced relation to the cabinet wall, means for rigidly securing said guide strip to the wall, a shelf supporting member extending across one side of the guide strip and having spaced angular lips loosely embracing the opposite vertical edges of the guide strip to inseparably retain said member in connected relation therewith and for vertical adjustment relative thereto, the intermediate portion of said guide strip having a plurality of vertically spaced tongues struck from the plane of said strip and providing vertically spaced slots therein, said supporting member having a downwardly extending arm provided with an offset and adapted to be inserted downwardly through a selected slot in the guide, and the offset tongue yieldably cooperating with said end of the arm to cause said lips to frictionally bind against the edges of the guide and yieldingly resist displacement of the supporting member from its adjusted position.

4. Shelf supporting means comprising a sheet metal guide strip adapted to be secured in vertical position to the side wall of a cabinet, a sheet metal shelf supporting member extending at right angles to said guide strip across one side thereof and having means intermediate of its ends coacting with the guide strip to retain said member in assembled relation with the strip for vertical adjustment relative thereto, said guide strip having spaced portions offset from the plane of said strip, and said shelf supporting member in vertically spaced relation to said means having an integrally formed part adapted to be selectively engaged with said offset portions of the guide strip to releasably hold said member against accidental displacement from its adjusted position on the guide strip.

5. Shelf supporting means comprising a sheet metal guide strip having spaced longitudinally extending corrugations for contact with the wall of a cabinet to position the intermediate and edge portions of the strip in spaced relation to said wall, a sheet metal shelf supporting member extending at right angles to said guide strip across one side thereof and having spaced parts struck from its intermediate portion engaged with opposite edges of the guide strip to slidably retain said member in assembled relation on the guide strip, and said member including an arm extending from said intermediate portion thereof longitudinally over the intermediate portion of the guide strip and having an angularly offset free end providing a shoulder thereon, and said intermediate portion of the guide strip at longitudinally spaced points having portions offset from the plane of said strip with which said shoulder is adapted to be selectively engaged to releasably hold said shelf supporting member against accidental displacement from its adjusted position on the guide strip.

In testimony that I claim the foregoing as my invention, I have signed my name hereto.

SAMUEL HAMMER.