Dec. 16, 1941. H. L. SCHROEDER 2,266,274

ADJUSTABLE SHELF

Filed Jan. 19, 1939

Fig. 1.

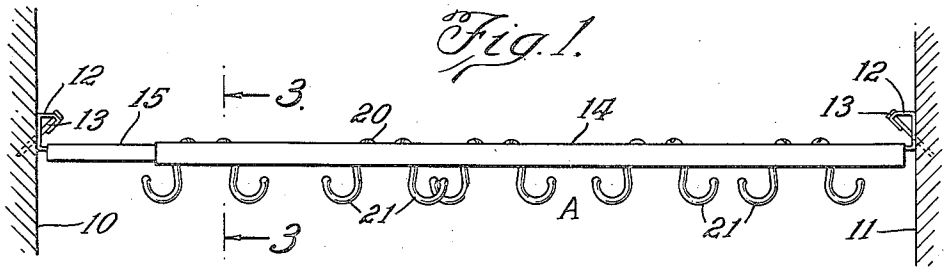


Fig. 2.

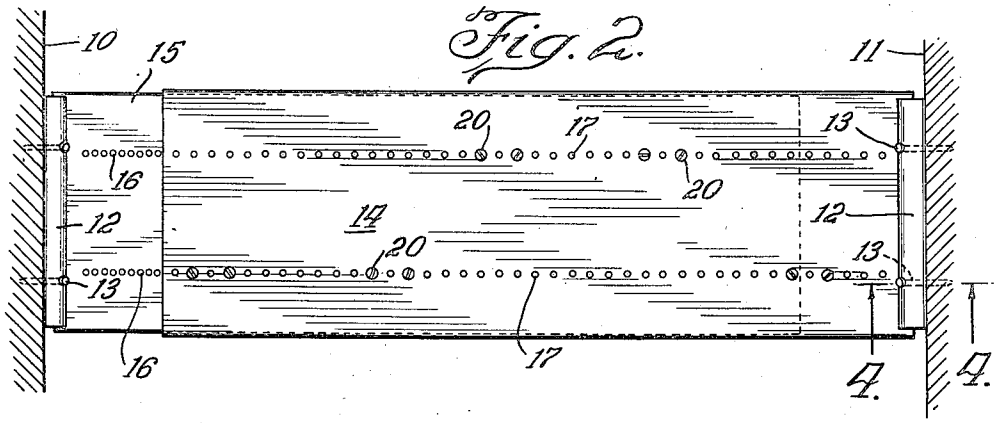


Fig. 3.

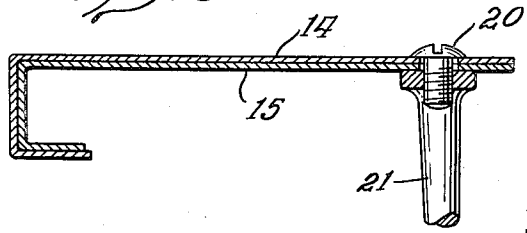


Fig. 4.

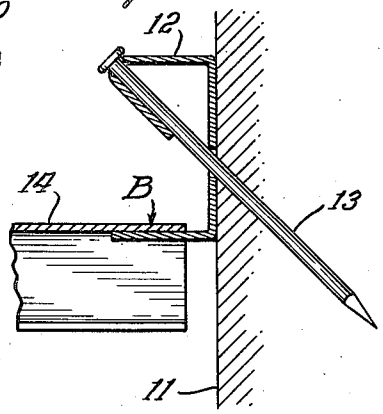
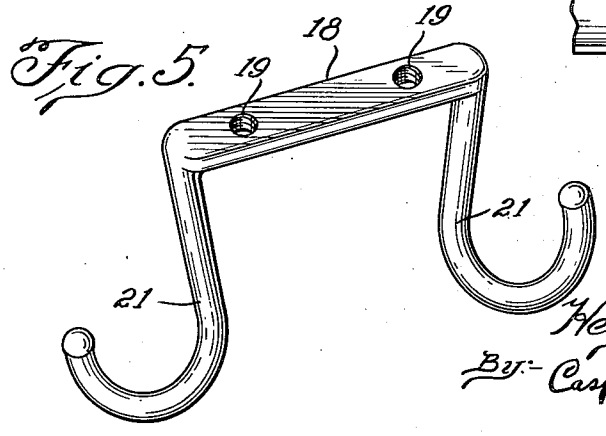


Fig. 5.



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2,266,274

ADJUSTABLE SHELF

Henry L. Schroeder, Chicago, Ill.

Application January 19, 1939, Serial No. 251,764

11 Claims. (Cl. 211—153)

My invention relates to adjustable shelves adapted for use in closets and other closed places. It is also adapted to be used as a temporary shelf which may be closed up and stored when not wanted.

One object is to provide an adjustable metal shelf which may be purchased in hardware or department stores, and which the purchaser may himself put in place.

A second object is to make part of the adjusting means serve as clothes hooks located under and supported by the shelf.

A third object is to provide metal brackets which may be conveniently attached to opposite walls of a closet and will serve to support the shelf.

Other objects will appear from the description to follow.

In the accompanying drawing

Fig. 1 is a front elevation of the shelf supported on brackets secured to the walls;

Fig. 2 is a plan;

Fig. 3 is an enlarged partial section on line 3—3 of Fig. 1;

Fig. 4 is a similar enlarged section on line 4—4 of Fig. 2; and

Fig. 5 is an enlarged perspective view of one of the clothes hanger units.

On the walls 10 and 11 are secured metal brackets which are in the form of sheet metal channels 12, each having the outer part of the upper flange bent downward and inward at an angle of about 45 degrees. At two or more places in the acute angle formed by each bend are holes thru which, and other holes in the webs of channels, may be driven nails 13 to secure the brackets to walls 10 and 11.

The shelf consists of flat metal plates 14 and 15 having their longitudinal parallel edges turned downwardly and inwardly as shown at the left in Fig. 3. As thus made, the plates 14 and 15 are telescopically adjustable with respect to each other.

In the lower plate are two parallel rows of holes 16, which may be spaced conveniently at one-quarter of an inch from each other. In the upper plate are superimposed rows of holes 17 in which the spacing between holes is two or three times the spacing in the lower plate.

With the plates constructed as described, the smaller one is telescopiccally fitted into the larger one, and they are pushed together until the length over all is a few inches shorter than the distance between walls 10 and 11. Then the end of one of the plates is mounted upon the lower flange of the adjacent bracket 12, and the other plate is moved with respect to the first plate until it is similarly mounted on the other bracket.

With the plates in this position, any pin which will pass thru a hole in the upper plate and one in the lower plate will act to prevent the shelf from displacement, provided that the pin has a head which will prevent it from falling out. A common nail will serve the purpose.

I prefer, however, to utilize the securing means to accomplish a second result. In doing this I provide a bar 18 (Fig. 5), which has in it two screw threaded holes 19 which are spaced from each other some multiple of the spacing of the holes 17, and then use screws 20 to clamp the bar 18 against the lower face of the lower plate 15. On the ends of the bar 18 are hooks 21 which serve as clothes hooks.

As there are numerous holes adjacent to both front and rear sides of the shelf, I may use as many of these pairs of clothes hooks as may be desired. Also, they may be placed near the front edge of the shelf, or near the rear wall of the shelf as may serve convenience.

When making one plate adjustable with respect to another, it is common practice to cut a long slot in one or both of the plates, and then clamp them together by a screw which passes thru both plates. Unless the plates are of heavy stock, such slots materially weaken the plates. As it is desirable to have a shelf of this kind of light material, and also capable of carrying heavy loads, I use a series of holes in each plate because such holes weaken a plate much less than does a long slot. As it is desirable to have small adjustments in the over-all length of the shelf, I make closely spaced holes in the inner and protected element 15 of the telescopic arrangement, and wider spacing in the outer and protecting element. Then, instead of making each hook 21 as a nut for each screw 20, I connect two hooks together by a bar 18 which serves as a brace under those parts of the shelf which carry the greatest load.

Figs. 1 and 2 illustrate the clothes hooks 21 distributed irregularly. This is simply for the purpose of illustrating the fact that they may be put at any convenient places where holes 16 and 17 are available. Assume that four bars 18 should be placed in a rectangle at about the middle of the shelf 14—15, and a distance apart equal to about one-fourth of one-third of the distance between walls 10 and 11. The relationship of those hooks to each other would be that shown at A in Fig. 1, but with a greater distance between. Assume a second adjustable shelf of a width shown in Fig. 2, but of one-fourth or one-third of its length, and with larger holes near the ends and in line with the holes 16 and 17. The location of these larger holes would be at about the point B of Fig. 4. This shorter adjustable shelf may be hung on the hooks 21, which have the relationship shown at A, but more widely separated.

Thus, a single pair of brackets on opposite

walls may be made to support two shelves and many clothes hooks, some of which may be under the lower shelf. By making the hooks 21 which are used to support the second shelf longer than their companion hooks on the same bars 18, the lower shelf may be at any desired distance below the upper one. By turning the lower shelf up side down, and having its telescopic connection wide enough to come adjacent to the similar connection shown in Fig. 3, the lower shelf will have the outside appearance of being a box, but will really be a shelf open at its ends. Such a shelf will be a convenient cubby-hole for storing articles of more use than beauty.

What I claim is:

1. In a metallic shelf construction, a pair of extensible overlapping plates, each having longitudinally extending marginal flanges contacting for the overlapped portions of the plates, supports for the outer ends of the plates and means for clampingly connecting the plates together at a plurality of longitudinally spaced points to restrain the plates from relative sliding movements when under load.

2. In a metallic shelf construction, a pair of extensible overlapping plates, each having longitudinally extending marginal flanges contacting for the overlapped portions of the plates, supports for the outer ends of the plates and means for clampingly connecting the plates together at a plurality of longitudinally spaced points to restrain the plates from relative sliding movements when under load, said plates having longitudinally extending rows of aligned vertical openings therein with the openings in the overlapped portions of the respective plates in registry and said clamping means extending through said openings.

3. In a metallic shelf construction, a pair of extensible overlapping channel plates interfitting with each other at opposite side edges, supports for said shelf plates and a plurality of longitudinally spaced clamping devices connecting the plates together and operative for restraining relative sliding movements of the plates when under load.

4. In a metallic shelf construction, a pair of extensible overlapping channel plates interfitting with each other at opposite side edges, supports for said shelf plates and a plurality of longitudinally spaced clamping devices connecting the plates together and operative for restraining relative sliding movements of the plates when under load, said plates having longitudinally extending rows of aligned vertical openings therein with the openings in the overlapped portions in the respective plates in registry and said clamping devices extending through said openings.

5. In a metallic shelf construction, a pair of extensible overlapping plates, each having longitudinally extending marginal flanges contacting for the overlapped portions of the plates, supports for the outer ends of the plates and means for clampingly connecting the plates together at a plurality of longitudinally spaced points to restrain the plates from relative sliding movements when under load, said plates having longitudinally extending rows of aligned vertical openings therein with the openings in the overlapped portions of the respective plates in registry, said clamping means extending through said openings and article supporting hooks associated with said clamping means and depending from said plates.

6. In a metallic shelf construction, a pair of extensible overlapping channel plates interfitting with each other at opposite side edges, supports for said shelf plates and a plurality of longitudinally spaced clamping devices connecting the plates together and operative for restraining relative sliding movements of the plates when under load, said plates having longitudinally extending rows of aligned vertical openings therein with the openings in the overlapped portions in the respective plates in registry, said clamping devices extending through said openings and article supporting hooks associated with said clamping devices and depending from said plates.

7. In a metallic shelf construction, a pair of extensible overlapping plates, each plate having a depending marginal side wall with an inturned flange at the lower edge of the side wall, the plates, side walls and flanges contacting over their overlapping areas, supports for said shelf plates and means for clampingly connecting the plates together at a plurality of longitudinally spaced points to restrain the plates from relatively sliding movements when under load.

8. In a metallic shelf construction, a pair of extensible overlapping plates, each plate having a depending marginal side wall with an inturned flange at the lower edge of the side wall, the plates, side walls and flanges contacting over their overlapping areas, supports for said shelf plates, means for clampingly connecting the plates together at a plurality of longitudinally spaced points to restrain the plates from relative sliding movements when under load, and article supporting hooks associated with said clamping means and depending from said plates.

9. In a metallic shelf construction, two plates having upper and lower surfaces, the lower surface of one plate being adapted to engage the upper surface of the other plate over the major portion of its length, said plates being adjustable longitudinally with respect to each other, releasable vertically operating means for clamping the inner end portion of each plate to an intermediate portion of the other plate to restrain the plates from relatively sliding movements when under load, and supports for the outer ends of said plates.

10. In a shelf construction, two supports secured to opposite walls, two plates each of a length less than the distance between said supports and materially more than one-half of that distance, said plates overlapping each other at the central portion of that distance and being in contact with each other at such overlap, and releasable vertically operating means serving to clamp the plates together at parts near the ends of the overlap to restrain the plates from relatively sliding movements when under load.

11. In a metallic shelf construction, supports secured to opposite walls, two plates each having one end resting on a support and having its other end extending toward the other support and terminating in spaced relation thereto, said plates overlapping and in contact with each other at the central portion of said distance, releasable vertically operating means serving to clamp the terminal parts of the overlap and being operative to restrain the plates from relatively sliding movements when under load, and article supporting hooks carried by the clamping means.

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