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SHELF SUPPORT

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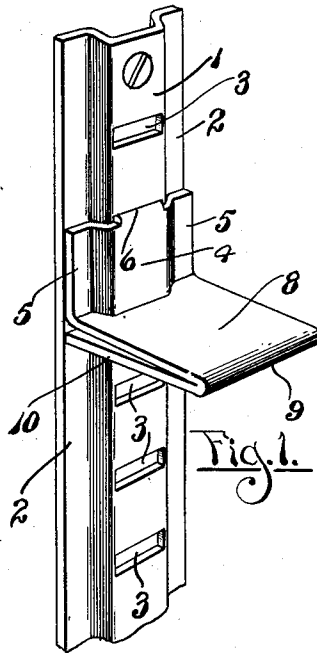


Fig. 1.

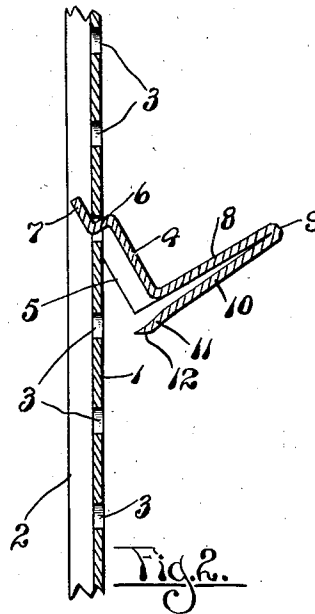


Fig. 2.

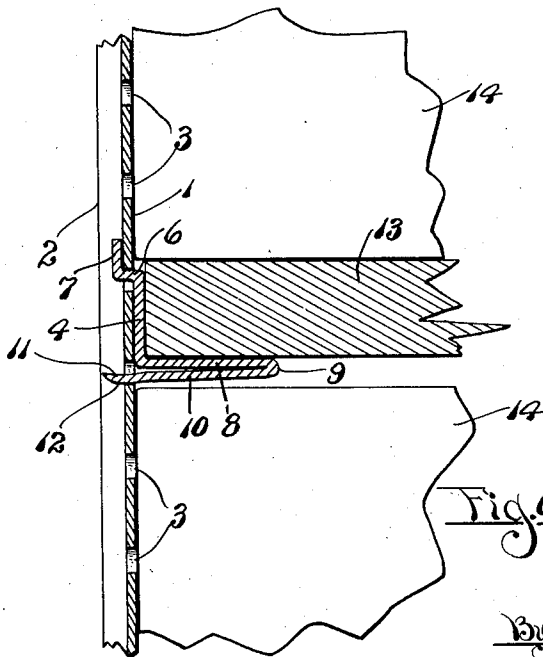


Fig. 4.

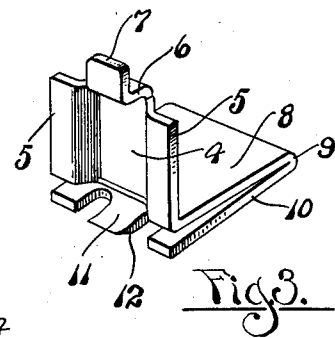


Fig. 3.

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# UNITED STATES PATENT OFFICE

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## SHELF SUPPORT

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This invention relates to a shelf support. It is an object and purpose of the present invention to provide a simple and effective shelf support which may be adjustably attached to a vertical post, in any one of a large number of different positions, on a plurality of which supports a shelf may be carried, the construction and an attachment of the shelf support being such that utilization of the maximum space between shelves for merchandise is had, a projecting part of the shelf support which has, in other forms of shelf supports, been in the way of the merchandise or its containers, being located directly at the edges of the shelf so that no projection extends into the merchandise receiving space; and said projecting portions in the form of shelf support of the present invention serving a useful function rather than being disadvantageous in that the length of the shelf may be shortened.

Further objects of the invention are to provide a shelf support of the character noted, made from a single piece of metal very economically, and form the support so that it may detachably connect with a vertical post on which it is carried in a very novel and practical manner wherein an inherent spring characteristic of the shelf support, will serve to retain the same on its post against accidental disengagement, yet it can be engaged with or disengaged from the post easily and without the use of tools.

An understanding of the invention may be had from the following description taken in connection with the accompanying drawings in which,

Fig. 1 is a perspective view showing a shelf support connected with a vertical post on which it is mounted.

Fig. 2 is a vertical section through the shelf support and post substantially on a plane coincident with the central longitudinal axis of the post and at right angles thereto, the shelf support being shown in a partially detached position.

Fig. 3 is a perspective view of the shelf support and,

Fig. 4 is a section similar to that shown in

Fig. 2 but with the shelf support attached and holding one end of a shelf thereon.

Like reference characteristics refer to like parts in figures of the drawings.

The posts which are used to carry the shelf supports of the invention are formed from flat metal and provided with an offset channel portion 1, from which flanges 2 extend outwardly the full length of the post. In the web of the channel 1, a plurality of horizontal rectangular spaced apart openings 3 are made, equally spaced from each other. The shelf support, of which a number may be detachably connected with a post, is formed from a single piece of flat metal and includes a vertical channel section 4 with outwardly extending flanges 5 as shown, shaped to embrace the outer sides of the channel 1 and flanges 2. At the upper end of the web of the channel section 4, said web is bent at right angles for a short distance, as indicated at 6, and then turned upwardly at right angles to form the terminal lip 7.

At the lower end of the channel 4 and flanges 5 described, the metal is continued and turned horizontally outward, as at 8, for a distance, bent back upon itself in a return bend 9, and continued in a lower side 10 which normally is located at a slight acute angle to the plane of the section 8. The end of the lower side 10 is notched at spaced apart points as shown forming an intermediate lip 11 which is bent in a downward direction and the underside of which is of a curved form and tapers upwardly to an edge at the upper side and at the free end of the lip 11 as shown.

A shelf support of this character may be applied to the post by first inserting the lip 7 through any selected opening 3, tilting the support upwardly at an angle as shown in Fig. 2, and then by moving the support downwardly the lip 11 enters the opening next below that through which the lip 7 has been inserted, the under inclined and curved side 12 of the lip 11 riding against the lower edge of the opening 3 into which said lip 11 is forced and snapping into place in said opening with an accompanying springing of the under side 10 toward the upper section 8 of the shelf support, and a partial closing of the

angular space between the two parts 8 and 10.

With supporting posts spaced apart from each other and with shelf supports attached to the posts and extending toward each other, a horizontal shelf 13 may be carried on and  
 5 above the horizontal sections 8 of the shelf supports, the edges of the shelves coming against the webs of the projecting channels 4 of the shelf supports and covering the same, the thickness of a shelf being equal to or  
 10 greater than the height of said channel portion. This leaves all of the space above a shelf free and unobstructed for the reception of merchandise cartons, such as 14, and  
 15 the ends of the cartons may come directly against the outer sides of the channels 1 of the posts, as shown in Fig. 4; and there is no place in the structure where the projecting portions of the channels 4 of the shelf supports interfere in any way with positioning  
 20 the merchandise cartons or boxes 14 on or under the shelves. If the vertical portion 4 with its attached flanges 5 extended downwardly from the lower side 10 described, it  
 25 would not be covered by the ends of the shelf 13 and would project into the space shown as occupied by the lower carton 14 in Fig. 4, not only making such space useless but interfering with the proper and orderly arrangement  
 30 of the merchandise holding boxes or cartons.

This construction of shelf support is one which may be readily applied at different positions on the post therefor, the support being  
 35 readily removed from the post and reattached at a different position. The attachment and detachment are simply and easily performed and after the attachment has once been made the shelf support itself has an inherent capacity  
 40 for guarding against accidental detachment. The construction of shelf support described may be readily manufactured at low cost and it has proved very practical and serviceable in use. The invention is described  
 45 in the appended claims and is to be considered comprehensive of all forms of structure coming within their scope.

I claim:

1. An adjustable shelf support comprising,  
 50 a vertical post having spaced apart slots located one above the other, and a shelf supporting member having a horizontally extending portion, a vertical portion extending  
 55 upwardly from an end of the horizontal portion and lying against a side of the post, a lip at the upper end of said vertical portion received in one of said slots, a member attached to the horizontally extending portion and adapted to engage the bottom of a lower  
 60 slot in said post and means in the same plane as the said member adapted to abut the said post.

2. An adjustable shelf support comprising,  
 65 a vertical post having spaced apart slots located one above the other, and a shelf sup-

porting member having a horizontal extending portion, a vertical portion extending upwardly from the inner end of the horizontal portion, a lip bent horizontally and then upwardly from the upper end of said vertical  
 70 portion and received in one of said slots, said horizontal extending portion being bent back upon itself and having a second lip at its free end to enter a slot in said post below the slot in which the first lip is received, said second  
 75 lip bearing against the lower edge of the slot whereby the first lip is held against the upper edge of the first mentioned slot.

3. An adjustable shelf support comprising, a post having spaced apart slots located there-  
 80 along, and a shelf supporting member having a portion extending outwardly at right angles to the axis of the said post, a portion extending from the inner end of the said outwardly extending portion along the post in  
 85 one direction and parallel thereto, means at the end of said parallel portion passing through one of said slots, said outwardly extending portion being bent back upon itself, a lip integral with and extending from the  
 90 free end of the return bent portion to enter another slot in said post, said integral lip bearing against the far edge of the slot whereby the said means at the end of the said parallel portion is held against the far edge of  
 95 the slot in which it seats.

In testimony whereof I affix my signature  
 ENGELBERT J. VOGT.

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