Sept. 7, 1954 J. E. ECHLIN 2,688,409

ADJUSTABLE PARTITION FOR SHELVES

Filed Sept. 29, 1948

Fig. 1.

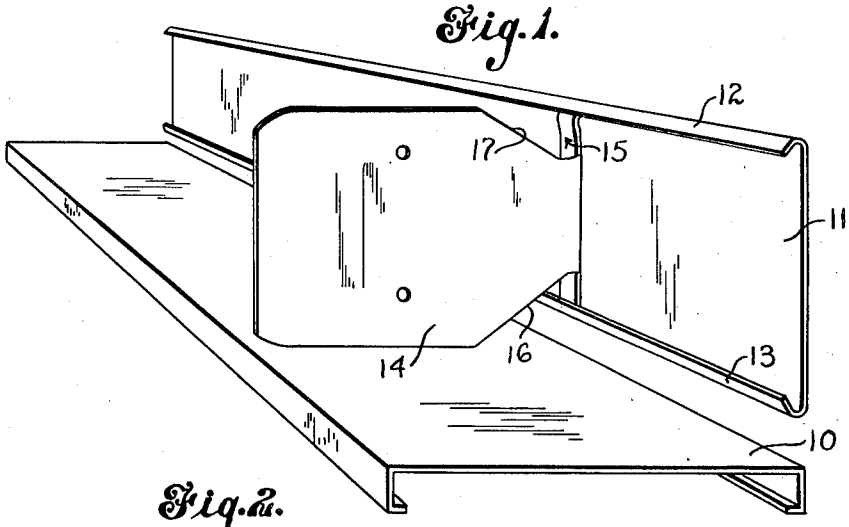


Fig. 2.

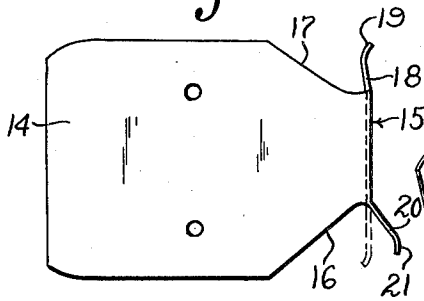


Fig. 3.

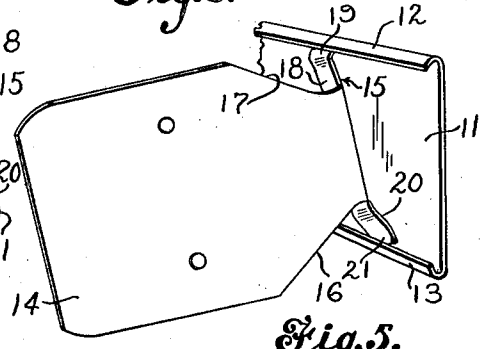


Fig. 4.

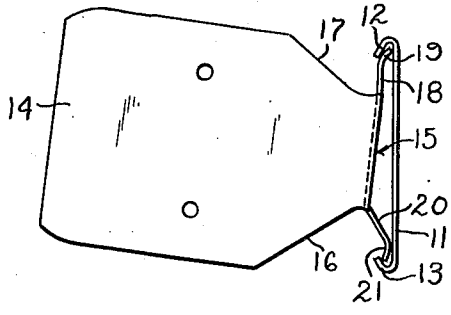
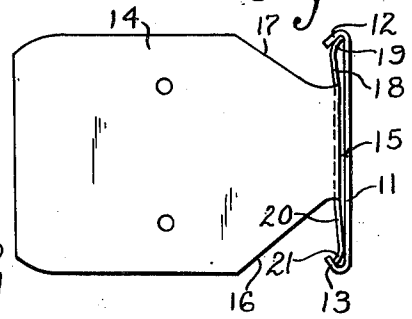


Fig. 5.



Inventor

John E. Echlin

By Cochrell & Bartholomew

Attorneys

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ADJUSTABLE PARTITION FOR SHELVES

John E. Echlin, New Haven, Conn., assignor, by mesne assignments, to Echlin Manufacturing Company, New Haven, Conn., a corporation of California

Application September 29, 1948, Serial No. 51,667

2 Claims. (Cl. 211—184)

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This invention relates to improvements for shelving for cabinets of the character described in my copending application for United States Letters Patent Serial No. 778,339, filed October 7, 1947, and relates particularly to a construction whereby the shelves of a cabinet may be conveniently and readily adapted to receive articles of various sizes without waste of space, and, particularly, involves partition members so constructed that they may be supported above the base of a shelf for universal adjustment along the shelf, and frictionally retained in any desired position. Also, the partition members may be readily attached to, and detached from, the means by which they are supported and held tightly in any adjusted position without looseness or play.

If fixed partitions are divided upon shelves, or even partitions which may be secured only in predetermined positions, there is often considerable waste space owing to the fact that it is often desired to support articles of different width or size upon the shelf. Therefore, it is advantageous if the partitions or dividers are capable of universal adjustment, that is, may be arranged for sliding adjustment along the shelf to any desired position. It is also advantageous that the dividers be frictionally held in place and be readily inserted and removed and, as provision must be made for tolerances in manufacture, the construction must be such that the partition members will be firmly held in place even though there may be some variation in their dimensions, or in the dimensions of the supporting members.

One object of the present invention is to provide a shelf construction employing partition members or dividers and a supporting member for the dividers, the parts being so constructed that they may be readily assembled and disassembled and, at the same time, the dividers may be firmly held in place.

A further object of the invention is to provide a shelf structure for display of merchandise or other articles with universally adjustable partition members having flanges with upper and lower projecting end portions designed to be received in channel-like elements, the parts being so constructed that they may be readily assembled, regardless of reasonable variations in their dimensions, and the dividers firmly held in position.

Still another object of the invention is to provide a shelf structure of the character described which may be economically manufactured, in that both the partition members or dividers and the structure for supporting them may be of simple form, while, at the same time, the parts may be easily assembled and disassembled and the dividers firmly held in any adjusted position along the channel members.

To these and other ends the invention consists

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in the novel features and combinations of parts to be hereinafter described and claimed.

In the accompanying drawing:

Fig. 1 is a perspective view of a shelf structure embodying my invention;

Fig. 2 is a side elevational view of one of the dividers shown apart from the supporting structure;

Fig. 3 is a perspective view showing the manner in which the divider and the supporting member are assembled;

Fig. 4 is a side elevational view showing a second step in the operation of mounting the divider or the supporting member; and

Fig. 5 is a side elevational view showing the divider and supporting member in their final assembled positions.

To illustrate a preferred embodiment of my invention, I have shown a shelf 10 supported in any suitable way. Above and at the rear of the shelf is a back plate 11 which serves as the support for the dividers or partition members to be described hereinafter. The back plate 11 is provided with channel-like members extending longitudinally thereof at its upper and lower edges, these channel members being formed by a forwardly and downwardly inclined lip 12 at the upper edge thereof, and a forwardly and upwardly inclined lip 13 at the lower edge, the channels being formed between these lips and the body portions of the support. These members 11 may be conveniently made of sheet metal and the lips 12 and 13 formed integrally therewith.

Each of the dividers, one which is shown in side view in Fig. 2, comprises a body portion 14 which may be conveniently formed of sheet metal, and the rear edge of this body portion is turned laterally to provide a transversely directed flange 15 extending at substantially right angles to the body portion. As shown, the body portion of the divider is cut away adjacent its rear edge as at 16 and 17, thus, providing freely projecting upper and lower edge or end portions on the flange 15. It will be understood that as the divider and flange are made of sheet metal, they will possess a certain amount of resilience and, moreover, as hereinafter described, the projecting ends of the flange, and particularly the lower end, are bendable or flexible to provide for its easy attachment to the supporting member 11.

The upper projecting end of the flange 15 consists of a portion 18 lying substantially in the plane of the central or body portion of the flange, and an upper edge portion 19 inclining rearwardly to a slight extent and disposed at the upper part of a rearward bow formation in said flange end so that, as shown in Fig. 5, for example, it will fit against the lip 12 of the supporting member 11 with a camming action. That is, the lip 12 and the rearwardly inclined

end 19 are complementally formed so that the flange of the divider, when bearing against the lip, will be urged downwardly and rearwardly.

The lower end of the flange 15 is bent rearwardly, as shown at 20, so that it extends downwardly and rearwardly from the central or body portion of the flange. At its extreme end, it is provided with an edge portion 21 directed at a slight angle forwardly of the body 20.

It will be obvious, that when the lower projecting portion 20 of the flange is bent rearwardly, as shown in full lines in Fig. 2, that the distance between the extreme upper and lower edges of this flange will be less than when the lower portion of the flange extends downwardly in the plane of the body portion, as shown in dotted lines in Fig. 2. Therefore, the initial bending of this flange rearwardly is of great assistance in enabling the upper and lower projecting portions to be assembled in the channels of the member 11, as will be explained.

As stated, the dividers are originally made as shown in Fig. 2, and when it is desired to assemble them with the back plate 11, the divider is turned so that it is inclined from the vertical with the upper edge toward the left, as shown in Fig. 3. The portions 19 and 21 of the projecting ends of the flanges may then be readily inserted in the channels on the plate 11, as shown in Fig. 3. The divider is then turned to a vertical position, as shown in Fig. 4, and, if necessary, moved along the channel members to the desired adjusted position. It will be noted that in this position the bottom portion of the divider stands outwardly from the supporting plate 11, due to the lower rearwardly bent end of the flange.

The divider is then pushed inwardly or toward the plate 11. This serves to bend the lower portion 20 of the flange into substantial alignment with the remainder of the flange and firmly secures the divider in position, as shown in Fig. 5, the lower end portion of the flange being in a forwardly bowed formation. The divider is pushed inwardly as far as is permitted by the overall length of the flange and the distance between the channel elements on the member 11. If the flange is slightly longer than the distance between the channels, it may bow outwardly to a certain extent from the plate 11, while, if shorter, the upper rearwardly directed end 19 will be frictionally engaged by the lip 12, and the lower end of the flange will be urged downwardly into the lower channel so that the divider will be firmly held in place. In any event, the rearwardly directed end 19 will be engaged by the forwardly directed lip 12 of the upper channel and be held against upward movement and urged rearwardly, while the lower edge 21 will engage the lower lip 13 and will be urged rearwardly against the plate 11.

While I have shown and described a preferred embodiment of my invention, it will be understood that it is not to be limited to all of the details shown, but is capable of modification and variation within the spirit of the invention and within the scope of the claims.

What I claim is:

1. A construction of the character described comprising an upright plate member elongated in a horizontal plane having forwardly directed upper and lower edge portions, said edge portions being curved and providing opposing channels, and a partition member having a body portion extending forwardly from said plate member and at right angles thereto, said partition member having a mounting flange at the rear edge of the body portion thereof and at substantially right angles with respect to said body portion, the body of the partition member having a narrowed portion adjacent said flange, the height of the flange approximating that of the principal part of the partition body, said flange having a body portion adjacent said narrowed portion and having upper and lower end portions projecting respectively above and below said narrowed portion, one of said end portions being inclined forwardly from the flange body and then rearwardly, the other of said end portions being bendable and directed rearwardly from the body of the flange and having a forwardly inclined outer edge, said end portions of the flange extending into the respective channels provided by the plate member and being slidable therein so that the partition member may be located in any desired position along the length of the plate member, said end portions of the mounting flange being resilient and being frictionally engageable with said channels to secure the partition member in position upon a rearward push on the latter.

2. In a construction of the character described having a plate member providing substantially horizontal opposing channels in spaced parallel relation, a partition member having a body portion extending forwardly from the plate member and at right angles thereto, said partition member having a mounting flange at the rear edge of the body portion thereof and at substantially right angles with respect to said body portion, the body of the partition member having a narrowed portion adjacent said flange, the height of the flange approximating that of the principal part of the partition body, said flange having a body portion adjacent said narrowed portion and having upper and lower end portions projecting respectively above and below said narrowed portion, one of said end portions being inclined forwardly from the flange body and then rearwardly, the other of said end portions being bendable and directed rearwardly from the body of the flange and having a forwardly inclined outer edge, said end portions of the flange extending into the respective channels provided by the plate member and being slidable therein so that the partition member may be located in any desired position along the length of the plate member, said end portions being resilient and being frictionally engageable with said channels to secure the partition member in position upon a rearward push on the latter.

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