Sept. 29, 1942. A. VANDERVELD 2,297,087

FURNITURE CONSTRUCTION

Filed Sept. 15, 1941

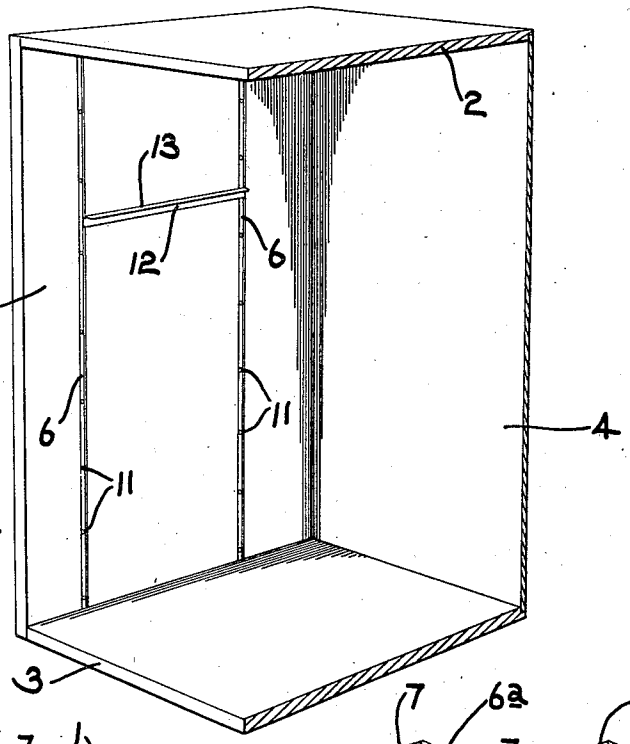


Fig. 1.

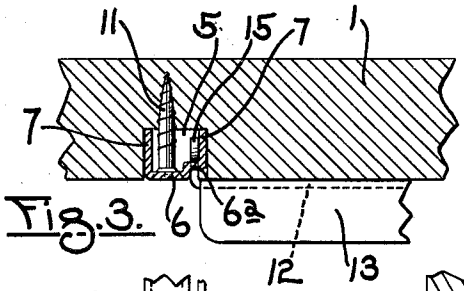


Fig. 3.

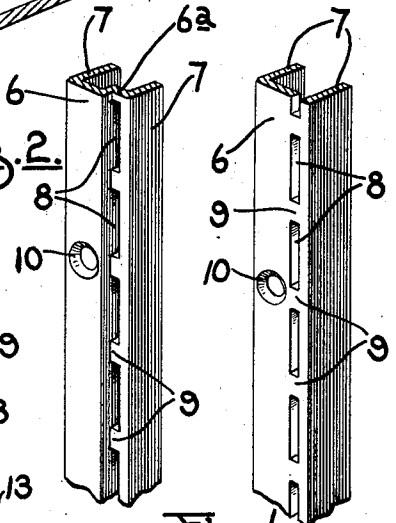


Fig. 2.

Fig. 6.

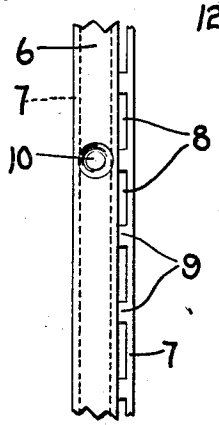


Fig. 4.

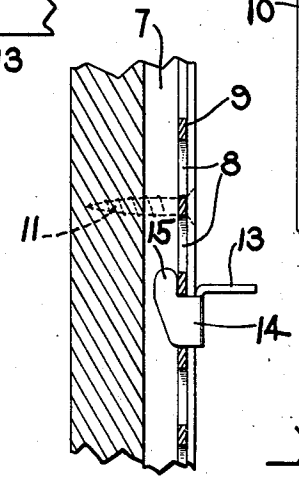


Fig. 5.

Inventor
Anthony Vanderveld
By Livernace and
Van Antwerp
Attorneys

Patented Sept. 29, 1942

2,297,087

UNITED STATES PATENT OFFICE

2,297,087

FURNITURE CONSTRUCTION

Anthony Vanderveld, Grand Rapids, Mich., assignor to Grand Rapids Store Equipment Company, Grand Rapids, Mich., a corporation of Michigan

Application September 15, 1941, Serial No. 410,806

3 Claims. (Cl. 248—243)

This invention relates to an adjustable fixture supporting means, particularly applicable to cabinet structures in which merchandise may be held in stores for sale and display.

In reissue patent, No. 21,825, granted upon the application of Williams and Welch and having reissue date of June 10, 1941, vertical metallic supporting members are mounted in the opposite ends of a display chassis, and there is disclosed therein numerous utilizations of said supporting members for adjustably carrying shelf supports, door supports and other fixtures which may be releasably connected in place, whereby a cabinet chassis equipped with the vertical supporting members at its ends may be equipped with many and different types of fixtures to make a complete display cabinet, capable of being rearranged if desired so as to carry other merchandise than that for which it is first arranged. It is easy to rearrange the store furniture at different seasons of the year when different seasonable goods are sold, or such rearrangement may be entered into when the furniture is added to in the store. The invention disclosed in said Williams and Welch reissue patent has proven to be of exceptional merit and is being produced and sold in very large quantities.

The present invention is concerned with a novel, economical and very practical metallic end supporting member, a number of which may be located vertically in parallel relation at the inner side of each end of the cabinet chassis. Economy is provided by use of a simple channel form, which may be readily provided from strips of flat metal, and at the same time the exposure of metal in the cabinet chassis is reduced, the supporting end members are readily secured and held in place and the shelf brackets or other fixtures applied thereto are strengthened and reinforced so as to better withstand the service to which they are subjected.

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

Fig. 1 is a partial perspective end and vertical section showing one end of a cabinet chassis equipped with my invention.

Fig. 2 is a fragmentary perspective view of the vertical metal supporting strip embodying the preferred form of my invention.

Fig. 3 is a fragmentary horizontal section through an end of a cabinet which may be equipped with a plurality of said vertical supporting members.

Fig. 4 is a fragmentary front elevation of the supporting member.

Fig. 5 is a fragmentary vertical section through an end of the cabinet chassis, the section being taken through the supporting member, and

Fig. 6 is a view similar to Fig. 2 showing a slightly modified form of supporting strip.

Like reference characters refer to like parts throughout the different figures of the drawing.

The cabinet chassis has two spaced apart vertical ends 1, one only of which appears in Fig. 1, and may have a top 2 and a bottom 3 and a vertical back 4 providing a cabinet structure open at its front side. It is in connection with the ends 1 of the cabinet chassis that my invention is to be utilized. With my invention vertical spaced apart grooves 5 are cut at the inner sides of the ends 1. Two are shown but the number may be increased as in the Welch and Williams disclosure to which reference has been made. Of course, one only of said grooves might be made in an end of the cabinet chassis located adjacent the front open side thereof if door carrying fixtures only were to be utilized. But in practice at least two of the grooves 5, each to receive the vertical metal supporting member will generally be used.

In each of the grooves 5 an elongated metal support is located and secured. Said supporting member is of channel form having an outer face or web 6 with flanges 7 turned therefrom at right angles. One side of the web 6 is offset inwardly as at 6a and when the supporting member is inserted in a groove 5 with the flanges 7 bearing snugly against the side of the groove and with the exposed face of the web 6 substantially flush with the inner side of the end 1 in which the groove 5 is cut, the offset portion 6a cannot be seen from the front of the cabinet when viewed angularly.

A plurality of spaced apart vertical slots 8, the vertical length of which is much greater than the width thereof, are cut through the offset portion 6a preferably so that the inner side of one flange 7 and the outer vertical edges of the slots 8 are in substantially the same vertical plane. The slots 8 are separated by cross sections 9 integral with the offset 6a as shown. A number of spaced apart openings 10 for the passage of screws 11 are made in the web 6 between said slots and the other flange 7 as shown in Figs. 2 and 4. When such vertical members of channel form are inserted in their respective grooves 5 they are securely held in place by the

screws 11 driven into the ends 1 of the cabinet chassis.

I have shown a shelf support as one of the fixtures which may be adjustably mounted and carried on the vertical supporting members described. Such shelf includes a horizontal bar of angular form having a vertical flange 12, and a horizontal flange 13 bent therefrom while at each end of the vertical flange 12 an integral extension 14 thereof is bent at right angles in a direction opposite to the horizontal leg or flange 13. Each of the extensions 14 at its upper terminal corner portion is provided with a vertical ear 15 best shown in Fig. 5. The height of the extension 14 is slightly less than the vertical height of a slot 8, thus the fingers 15 may be first inserted through selected slots 8 followed by the extensions 14 entering and substantially filling said slots. The lower edges of said extensions rest upon cross connecting portions 9 at the lower ends of the selected slots and the fingers 15 lie back of said parts 9 at the upper ends of the selected slots.

It will be noted that the extensions 14 and fingers 15 back of the offsets 6a of the vertical supports to which they are attached at one side lie against the adjacent flanges 7 of the vertical supports as shown in Fig. 3. Such flanges 7 provide a backing against which the extensions 14 and ears 15 may bear reinforcing and guiding and holding them securely in position. The vertical dimension of the extensions 14 and with said extensions engaged at each side by the sides of the slots 8 through which they are passed, make an exceptionally strong structure.

With this construction the width of the channel required and therefore the amount of the metal required to provide a vertical supporting member is reduced very appreciably over a channel of similar structure which has the slots 8 cut through the web 6 midway between the flanges 7. Also ample space is left for the passage of the screws 11 which if the slots 8 were centrally located would require substantially twice the width of the web 6 as disclosed in my invention to provide the necessary space for the passage of the securing screws. And at the same time the extensions 14 and fingers 15 passing through centrally located slots 8 would not be engaged at either side by a flange 7 of the vertical supporting member.

In Fig. 6 I have shown a slightly modified form of supporting strip wherein the offset portion 6a is dispensed with, the web 6 extending in a continuous vertical plane between the flanges 7. This is a simpler form of the invention, but it does not have the advantage of having the slots 8 invisible when the supporting strip is viewed angularly from the front of the cabinet, as is true in the preferred form. The operation of the form shown in Fig. 6 is identical with that shown in Fig. 2, but from the standpoint of appearance the latter device is better because the slots 8 are set inwardly a sufficient distance so that they cannot be seen from the front of the cabinet.

The construction of either form is simple and economical to produce and likewise to secure in place.

The invention is defined in the appended claims and is to be considered comprehensive of all forms of structure coming within their scope.

I claim:

1. A vertical support having a vertical groove in a side thereof, a channel located in said groove with its flanges at the sides of the groove and with the web of the channel connecting said flanges disposed away from the bottom of the groove, said web having an inwardly offset portion at one side thereof, a plurality of narrow vertical slots located in said offset portion, and said web having openings therethrough between said slots and the opposite side flange of the channel for the passage of securing devices into said support.

2. A vertical support having a vertical groove in a side thereof, a channel located in said groove with its flanges at the sides of the groove, a web connecting said flanges having an offset portion at one side thereof and a plurality of elongated vertical slots in said offset portion, said offset with the slots therein being located a distance inwardly from the side of the support where the groove is located, whereby said slots are invisible when the groove is viewed angularly.

3. The combination of elements defined in claim 2, wherein one of the sides of said slots are substantially flush with the inner side of the adjacent flange of the channel.

ANTHONY VANDERVELD.