Dec. 4, 1934. J. J. KNAPE 1,983,470

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Filed Nov. 15, 1933

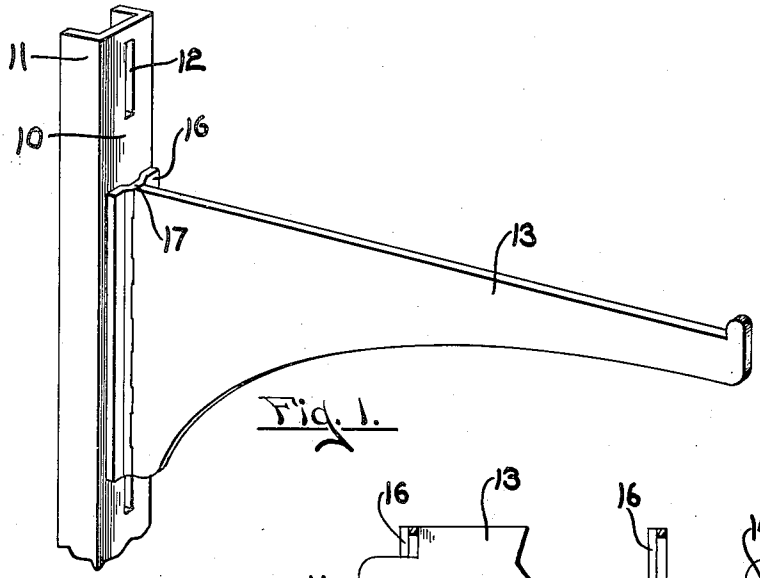


Fig. 1.

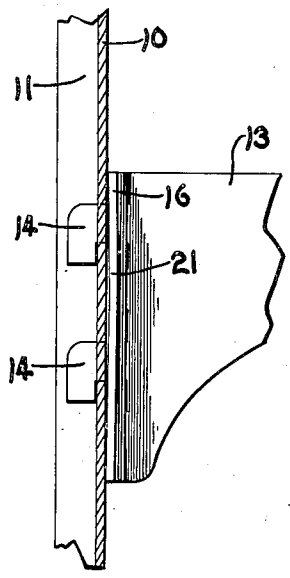


Fig. 2.

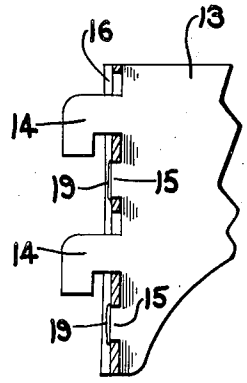


Fig. 3.

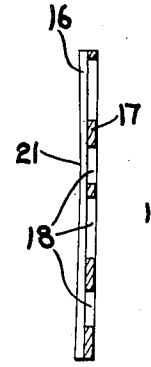


Fig. 4.

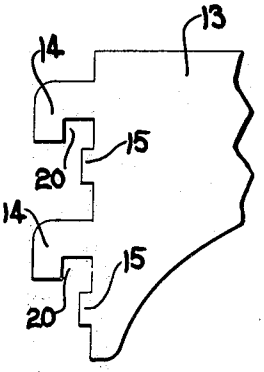


Fig. 5.

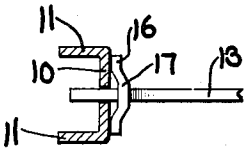


Fig. 6.

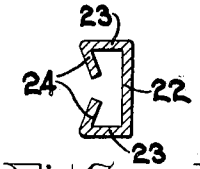


Fig. 7.

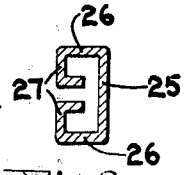


Fig. 8.

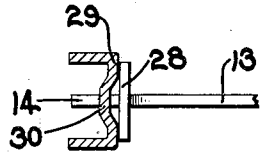


Fig. 9.

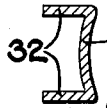


Fig. 10.

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UNITED STATES PATENT OFFICE

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Application November 15, 1933, Serial No. 698,035

3 Claims. (Cl. 248—19)

This invention relates generally to a supporting device and more particularly to an adjustable bracket which is adapted to hold shelves in show cases or in any other relation.

Briefly described, the bracket consists of a bracket arm of flat construction having two integrally formed hooks extending from one edge thereof, these hooks being inserted into slots in a vertical supporting member whereby sliding motion between these two members will cause a locking of the bracket in place. Also, a plate member is fastened to the flat bracket arm so as to frictionally engage against the outer side of the supporting member.

One of the primary objects of my invention is to provide a construction wherein the bracket arm may be attached or detached with a simple sliding movement and yet in which the two members will be securely and firmly attached together and accidental detachment prevented.

Another advantage resides in the process of manufacturing the bracket arm whereby the hook members may be readily formed inasmuch as the portions which are cut out during the formation of these hook members is of sufficient size to prevent any difficulty from being had during this punching operation.

Other advantages will become apparent as the description proceeds.

In the drawing:—

Fig. 1 is a perspective view of the single bracket arm attached to its supporting post.

Fig. 2 is a fragmentary view of the bracket arm in attached position, the vertical post being shown in cross section.

Fig. 3, partly shown in section, illustrates the connection between the bracket arm and the plate member.

Fig. 4 is a sectional view through the plate member.

Fig. 5 is a side view of the rear end of the bracket arm.

Fig. 6 is a plan view illustrating the connection between the bracket arm and its supporting post.

Fig. 7 shows a modified form of post having reinforcing flanges.

Fig. 8 likewise shows a modified form of post.

Fig. 9 shows yet another form of post, this view also disclosing a plate member of different construction.

Fig. 10 is a type of post somewhat similar to that shown in Fig. 9.

Similar numerals refer to similar parts throughout the several views.

Referring particularly to Figs. 1 and 2, 10 indicates the web of a vertical supporting member, 11 its flanges and 12 the slots or openings which are formed in the web 10.

A bracket arm 13, see particularly Fig. 5, is formed with hook members 14 which extend outwardly and downwardly, these hook members passing through the slots 12 as will later be described. Also, the bracket arm 13 has small projections 15.

Referring now to Fig. 4, 16 indicates the plate member generally, such having a raised portion 17 in which a plurality of slots 18 are formed, these slots receiving the hook members 14 and the small projections 15. The propjections 15 are headed over as clearly shown at 19 in Fig. 3 and thus the plate member and the bracket arm are securely attached together.

From an inspection of Fig. 5, it will be seen that considerable space exists between the downward extension of the hook members 14 and the body 13 of the bracket arm, as indicated at 20 and thus the manufacture of this piece of metal is easily attained by a punching operation. This space 20 is permissible as well as desirable due to the offset construction of the plate member 16 whereby the outer edge portions of this plate member contact with the outer surface of the web 10 and the inner vertical edges of the downward extensions of the hook members 14 contact against the inner side of the web 10, the distance between the planes of these surfaces being substantially equal to the thickness of the metal in the web 10. See Fig. 3.

The plate member 16, see Figs. 1, 2 and 4, is slightly bowed or bent as indicated at 21 and this bowed portion causes the upper hook member to become tightly engaged with the flange 10 upon downward movement of the bracket arm to its operative position. Also, the lower hook member 14 also tends to tighten somewhat during this downward attaching movement.

Referring now to Fig. 7, such showing a cross sectional view of a supporting post or strip, 22 indicates its flange and 23 its rearwardly extending webs, these webs each having an inwardly extending lip 24 whereby the supporting strip is strengthened.

Fig. 8 discloses another type of supporting strip in which 25 indicates the web, 26 the flanges and 27 an L-shaped reinforcing construction.

Fig. 9 shows a modified form in which the bracket arm 13 is provided with a plate member 28, this plate member being of flat construction but being attached to the bracket arm 13 similarly to the attachment between the plate mem-

ber 16 and the bracket arm 13. In this modification, a supporting strip 29 is provided, the web of this strip being offset rearwardly as indicated at 30 whereby the hooks 14 will properly engage the same. That is, the space between the front edge of the hook members and the outer edges of the plate member 28 is of sufficient size as to provide easy manufacture as previously described in connection with the showing of Fig. 5.

Fig. 10 illustrates a cross sectional view of a supporting strip having a curved web 31 and flanges 32, the curved web 31 being utilized similarly to the web of the vertical supporting strip as shown in Fig. 9.

Having thus revealed this invention, I claim as new and desire to secure the following combinations and elements, or equivalents thereof, by Letters Patent of the United States.

I claim:

1. A bracket comprising, a bracket arm of flat metal adapted to be positioned in a vertical plane, hook members extending horizontally from one end of said bracket arm, a plate member having openings through which the hook members pass, said plate member having a curved cross section, and means for fastening the plate member onto the said bracket arm.

2. A bracket comprising, a bracket arm of flat metal adapted to be positioned in a vertical plane, integrally formed means extending horizontally and then downwardly from said bracket arm, and plate means fastened to the bracket arm interiorly of the downward extensions, said plate member having a curved cross section for the purpose described.

3. In combination, a support provided with spaced slots, a bracket consisting of a flat arm adapted to be located in the plane of said slots, said flat arm having hooks extending from one end thereof, said hooks being of such size as to extend through said slots and then being adapted to be slid longitudinally of the said support and a plate means rigidly fastened to the bracket arm, said plate means having a portion located at an angle to the support so as to cause increased frictional engagement of the upper hook member as the bracket arm is slid longitudinally along the support to its operative position.

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