

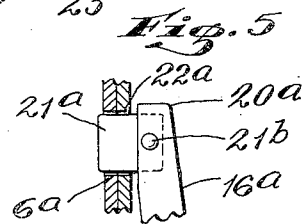
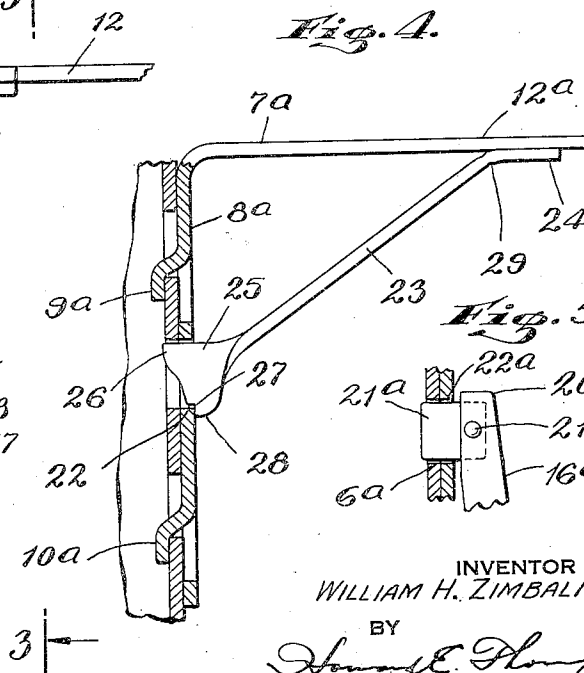
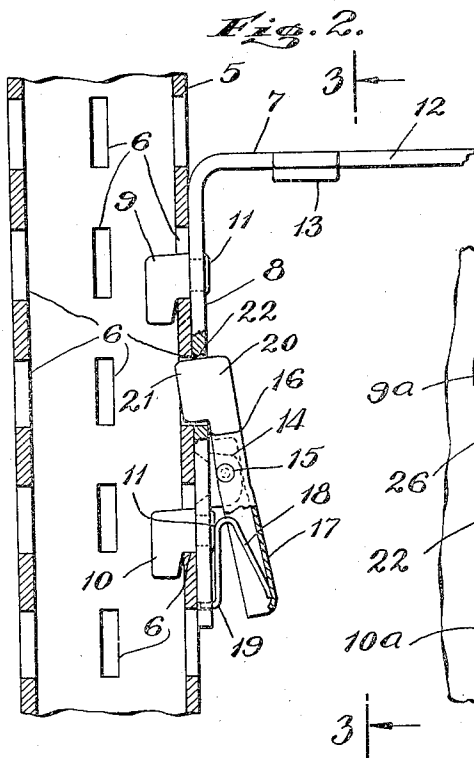
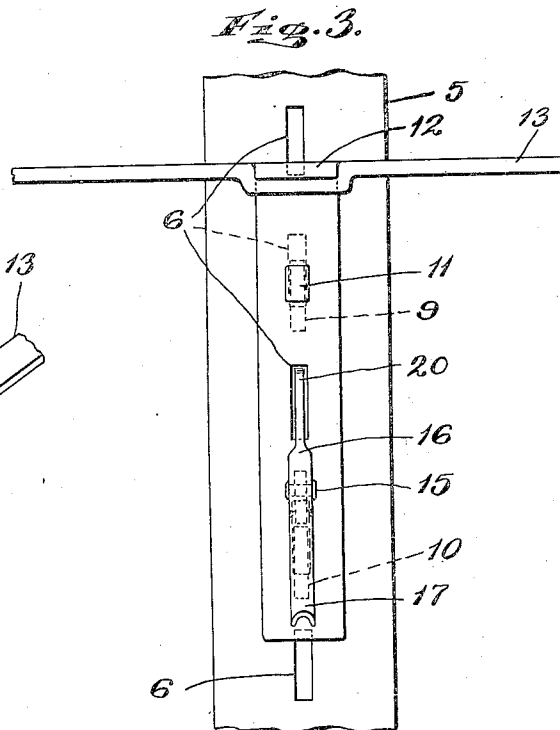
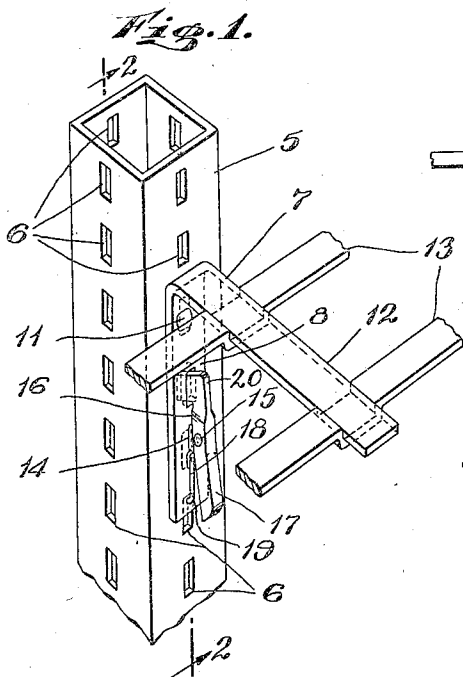
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LOCK BRACKET

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This invention relates to brackets for adjustably supporting shelves, hangers and other types of display or article supports in connection with a support having longitudinally spaced apertures therein; and the object of the invention is to provide a bracket of the type defined having means for coupling and uncoupling the bracket with a perforated or apertured support, and still further to means for mounting or retaining the bracket against accidental displacement from the support, said last named means being manually movable into inoperative position to permit detachment of the bracket whenever desired; a further object being to provide a lock or latching means for brackets of the class described in the form of a spring-operated pawl or finger adapted to enter one of the apertures in the apertured support in keying and retaining the bracket against displacement therefrom; and with these and other objects in view the invention consists in a device of the class and for the purpose specified which is simple in construction, efficient in use and which is constructed as hereinafter described and claimed.

The invention is fully disclosed in the following specification of which the accompanying drawing forms a part, in which the separate parts of my improvement are designated by suitable reference characters in each of the views, and in which:

Fig. 1 is a perspective view of a tubular support illustrating one of my improved brackets mounted thereon with part of the construction broken away.

Fig. 2 is a partial section on the line 2—2 of Fig. 1 on an enlarged scale.

Fig. 3 is a face view looking in the direction of the arrow 3 of Fig. 2.

Fig. 4 is a view similar to Fig. 2 showing only a part of the construction and showing a modification; and,

Fig. 5 is a view similar to Fig. 2 showing only a part of the construction and showing a modification.

To illustrate one use of my invention or one type of support which may be employed, I have shown in the accompanying drawing, a tubular column or standard 5, preferably composed of sheet metal, and which is also preferably rectangular in cross sectional form, and the side walls of said tubular column or standard are provided with vertically spaced elongated apertures 6. With this type of support, a number of my improved brackets may be coupled with the several side surfaces of the tubular column at different points thereon, to provide what might be termed a four-way display and any type of support may be provided for the tubular standard or column 5 on a supporting surface. At this time, it will also be understood that my improved bracket 7,

as seen in Figs. 1 to 3 inclusive, and the bracket 7a shown in Fig. 4 is adaptable for use on any type or kind of perforated support, provided sufficient room is left on the inner surface of the support to receive the coupling elements employed.

The bracket 7 consists of a supporting end portion 8 adapted to be arranged upon one surface of the standard 5 with two hook-shaped coupling elements or lugs 9 and 10 arranged in engagement with two of the spaced apertures 6 with at least one or more of said apertures between those engaged by or through which the lugs 9 and 10 pass.

In the construction shown in Figs. 1 to 3 inclusive, the lugs 9 and 10 are independently formed and are riveted or otherwise secured, as indicated at 11, to the supporting end portion 8 of the bracket, whereas in the construction shown in Fig. 4 of the drawing, hook-shaped lugs 9a and 10a are stamped from the material of the end portion 8a so as to form an integral part thereof. At 12, I have shown the projecting supporting part of the bracket which may be of any desired form and construction and in any desired angular arrangement with respect to the end portion 8. If the support 12 is to be used as a shelf support, one or more transverse supporting strips 13 may be employed thereon.

In Figs. 1 and 3 of the drawing, the strips 13 have been broken away, but it will be understood that said length will suit the particular type of shelving employed. It will also be understood that suitable means will be provided for supporting a shelf against displacement from the parts 12 and 13 but no showing is made thereof, as it forms no part of the present invention.

In the construction shown in Figs. 1 to 3 inclusive, I secure to the mounting end portion 8, preferably above the hook-shaped lug 10, an outwardly projecting ear or bearing portion 14 which is apertured to receive a pivot pin 15 for pivotally mounting a lever 16 in connection therewith. The handle end portion 17 of the lever 16 as well as the central portion thereof is of channeled cross sectional form to receive the bearing 14 as well as one end 18 of a spring, the other end 19 being secured to the support 8, whereas the end portion 20 of the lever is flattened and is provided with a projecting pawl 21 which passes through an aperture 22 in the mounting end portion 8 and in registering alinement with one of the apertures 6, as clearly seen in Fig. 2 of the drawing.

It will be understood that the spring end 18 serves to normally urge the pawl 21 into operative position as seen in Fig. 2 of the drawing. However, by pressing upon the end portion 17 of the lever, the pawl may be moved out of engagement with the aperture 6 to permit detachment of the bracket, it being understood that

when the pawl 21 is in the position shown in Fig. 2, the bracket 7 cannot be moved vertically on the column or standard 5 to detach the hook-shaped lugs 9 and 10 therefrom. It will thus be seen that the bracket is retained against accidental displacement from the support at all times.

At this time, it will also be understood that in the operation of attaching the bracket 7 to the standard, the pawl 21 will be automatically moved outwardly by engagement with the outer surface of the standard 5 and the bracket may be thus automatically latched in position, it being understood that when the lugs 9 and 10 are in proper position the pawl or bolt 21 will automatically move into its operative position.

In Fig. 4 of the drawing, I have shown an additional modification which consists in substituting for the locking or latching means shown in Figs. 1 to 3, a spring arm 23, one end portion 24 of which is riveted or spot welded to the angularly extending supporting portion 12a of the bracket, whereas the end portion 25 is twisted at right angles to the part 23 and fashioned to form a projecting pawl or bolt portion 26 and a V-shaped notch 27 adapted to cooperate with the lower wall portion of the aperture 22a formed in the supporting end portion 8a. The downwardly directed part 28 engages the outer surface of the strip or plate 8a to limit inward movement of the pawl 26. The part 23 will be preferably provided with a weakened portion as at 29 sufficient to provide free flexure or spring movement of the arm so as to permit the same to normally assume the position shown in Fig. 4 of the drawing under tension, and yet permit the outward movement of said arm and the pawl 26 sufficiently to disengage the standard 5 to permit detachment of the bracket 7a.

In Fig. 5 of the drawing, I have shown a slight modification of the construction shown in Figs. 1 to 3 inclusive, wherein the lever 16a or the end portion 20a thereof is of channeled cross sectional form, and an independent pawl member 21a is supported within the channeled end 20a upon a pivot pin or rivet 21b so as to provide a rocking or swivel movement of the pawl 21a, thereby producing better alignment of said pawl within the apertures 6a and 22a similar to the apertures 6 and 22 shown in Fig. 2 of the drawing.

With the construction shown in Fig. 4, it will be understood that the arm 23 will also act as a bracing member, especially if the supporting portion 12a is subjected to excessive loads, the brace arm 23 seating in the notch or recess 27. The hook-shaped coupling elements or lugs 9a, 10a may be incorporated with the construction shown in Figs. 2 and 5, and in like manner, lugs similar to those shown at 9 and 10 in Fig. 2 are applicable for use with the structure shown in Fig. 4.

Having fully described my invention, what I claim as new and desire to secure by Letters Patent, is:

1. A supporting bracket of the class described, comprising a mounting end portion and a supporting part, said mounting end portion having spaced hook-shaped lugs for attachment to a suitable support, resilient means on the mounting end portion and engaging the support to retain the bracket against detachment from said

support, said means comprising a lever pivoted to the mounting end portion, and a pawl on one end portion of said lever.

2. A supporting bracket of the class described comprising a mounting end portion and a supporting part, said mounting end portion having spaced hook-shaped lugs for attachment to a suitable support, resilient means on the mounting end portion and engaging the support to retain the bracket against detachment from said support, said means comprising a lever pivoted to the mounting end portion and a pawl on one end portion of said lever, said pawl having a swivel mounting in the lever.

3. A supporting bracket of the class described, comprising a mounting end portion and a supporting part, said mounting end portion having spaced hook-shaped lugs for attachment to a suitable support, resilient means on the mounting end portion and engaging the support to retain the bracket against detachment from said support, said means comprising a lever pivoted to the mounting end portion and a pawl on one end portion of said lever, said lever being of channeled cross sectional form, and a spring seating in the channel of said lever at one end thereof and engaging said mounting end portion of the bracket for normally supporting the pawl of said lever in operative position.

4. A supporting bracket of the class described, comprising a mounting end portion and a supporting part, said mounting end portion having spaced hook-shaped lugs for attachment to a suitable support, resilient means on the mounting end portion and engaging the support to retain the bracket against detachment from said support, said means comprising a lever pivoted to the mounting end portion and a pawl on one end portion of said lever, said lever being of channeled cross sectional form, a spring seating in the channel of said lever at one end thereof and engaging said mounting end portion of the bracket for normally supporting the pawl of said lever in operative position, and the pawl of said lever being movably supported thereon.

5. A supporting bracket of the class described comprising an elongated mounting portion having spaced hook-shaped coupling members projecting from one side surface thereof, said mounting portion being provided intermediate said hook-shaped members with an aperture, a lever pivotally supported on the other surface of said mounting portion, one end of said lever having a part adapted to pass through the aperture in said mounting portion, and tensional means engaging the other end of the lever for normally supporting said part in said aperture.

6. A supporting bracket of the class described comprising an elongated mounting portion having spaced hook-shaped coupling members projecting from one side surface thereof, said mounting portion being provided intermediate said hook-shaped members with an aperture, a lever pivotally supported on the other surface of said mounting portion, one end of said lever having a part adapted to pass through the aperture in said mounting portion, tensional means engaging the other end of the lever for normally supporting said part in said aperture, and said part being movably supported on said lever.

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