Nov. 27, 1951 C. F. VANDERVELD 2,576,865

BRACKET AND LOCK THEREFOR

Filed Oct. 18, 1948

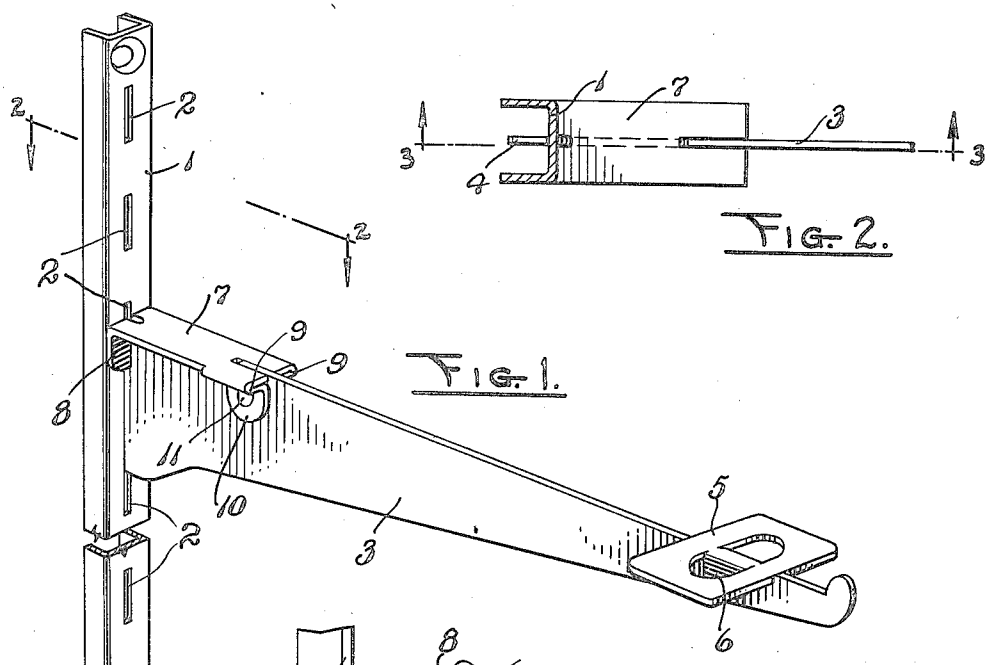

FIG. 1.



FIG. 2.

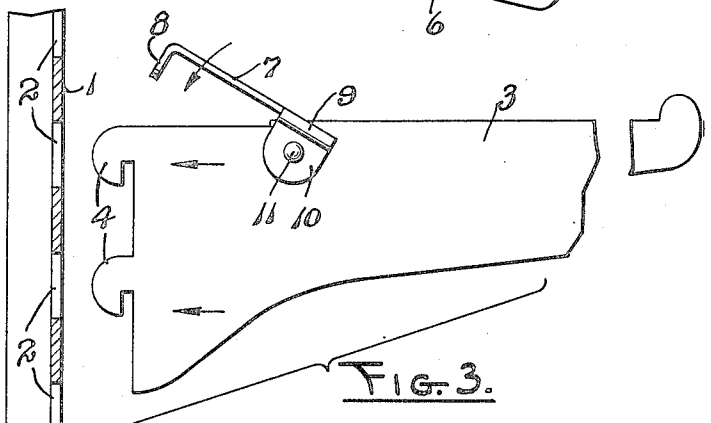

FIG. 3.

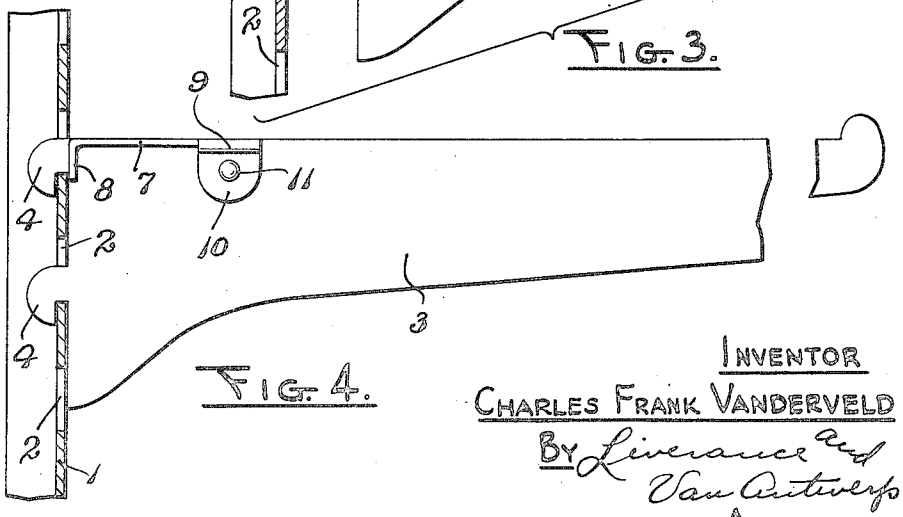

FIG. 4.

INVENTOR

CHARLES FRANK VANDERVELD

BY Livernois and Van Antwerp

ATTORNEYS

Patented Nov. 27, 1951

2,576,865

# UNITED STATES PATENT OFFICE

2,576,865

## BRACKET AND LOCK THEREFOR

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

Application October 18, 1948, Serial No. 55,041

3 Claims. (Cl. 248—243)

1

This invention relates to adjustable brackets and their supports and in particular to a very simple, novel and effective means for securely yet releasably locking a bracket to its vertical post support. Such brackets have large use in shelving structures used in show cases, wall cases and the like and may be used in conjunction with shelving and otherwise in many other relations.

It is an object and purpose of the present invention to provide a lock for such brackets which is very simply and economically made and applied to the bracket, which is easily locked and unlocked and which is certain and sure in its operation and of a sturdy and durable character.

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 perspective view showing a bracket and the support therefor with the lock in its operative locking position.

Fig. 2 is a partial horizontal section and plan, the section being taken substantially on the plane of line 2—2 of Fig. 1, looking downwardly.

Fig. 3 is a side elevation partly in vertical section showing the bracket detached from its support and the lock in released position, and,

Fig. 4 is a view similar to Fig. 3 with the bracket attached to its support and the lock in operative position.

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

The vertical post support 1 which may be used to adjustably carry the bracket is, preferably, of a channel form, in the web of which a plurality of spaced vertical rectangular slots 2 are cut.

The bracket comprises an arm 3 of flat metal adapted in use to be located in a vertical plane and is progressively widened from its free end to the end thereof which is connected to the post support. A pair of hooks 4, integral with and at the wider end of the bracket arm extend therefrom and are spaced proper distances apart so that they may enter any two consecutive slots 2 and connect with the post with the upper edge of the arm 3 generally in a horizontal plane. Said bracket may be equipped adjacent its outer free end with a clip 5 made from a single piece of flat metal, from the body of which two spaced tongues 6 are struck in a downward direction to frictionally embrace opposite sides of the bracket arm. The bracket arm is preferably recessed for a length equal to the width of the plate 5 and a depth equal to the thickness thereof so that the upper side of the clip is flush with the upper edge of the arm.

2

The lock which is used is, preferably, permanently pivotally connected to the bracket arm 3. It comprises a horizontal bar 7 of flat metal which, at its free end where it is to engage with the face of the post 1, is slotted and terminates in a downwardly turned flange 8 divided by the slot to make two spaced apart tongues. The bar 7 which extends outwardly a distance, at its outer end portion, at each side edge, has lateral extensions which are each bent back underneath as at 9 and then turned downwardly in spaced vertical ears 10 one adapted to lie at each side of the bracket arm 3. The lock is connected to the arm in practice by a pivot pin 11 passing through the ears 10 and arm 3. In practice the outer end of the bar 7 is slotted for a distance and the upper edge of the arm 3 at its widened end is recessed for a depth equal to the thickness of the metal from which the lock is made, and lengthwise to the slot in the pivoted end thereof.

The lock may be turned in a clockwise direction to a position, for example, as shown in Fig. 3. In such position the hooks 4 are inserted through selected slots 2 and the bracket as a whole moved downwardly to connect the bracket arm with the post. The lock is then forced to a horizontal position, the tongues 8 pressing against the face of the web of the cannel post 1 and bearing frictionally thereagainst with considerable pressure. When forced to its horizontal position its upper side is flush with the upper edge of the arm 3 and with the upper side of the plate 5 so that one end portion of a shelf or the like may be supported by resting upon the upper sides of the bar 7 of the lock and the upper plate 5 of the clip, and against the upper edge of the arm 3.

To release, the locking member is turned in a clockwise direction to disengage the tongues 8 from the post against which they frictionally bear, the bracket arm thereupon being readily removed.

The structure described is of a simple, very practical and economical construction. It is easily manufactured and readily operated. It is also of a sturdy construction and has a durability as long as the life of the bracket arm. While the pivotal connection is preferably made by means of the pivot pin 10, other forms of connection as an equivalent thereof may be readily used.

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. In a bracket, an arm comprising, a flat plate

of metal adapted to be located in a vertical plane, having spaced hooks extending from an end thereof adapting the arm to connect to a vertical post support, and a locking member movably mounted on and connected at one end with said bracket arm adjacent said end of the arm and at the upper edge portion thereof, said locking member at its opposite end having means adapted to bear and press against a supporting post to which the arm is connected when moved to one position with the locking member lying in substantially the same plane as the upper edge of said bracket arm, and disengaging with said post when moved upwardly from such position.

2. A bracket comprising, an elongated flat plate of metal adapted to be located in a vertical plane providing an arm, said arm having spaced hooks extending from one end thereof, said hooks having downturned end portions, and a locking member comprising a bar of flat metal having a free end portion extending downwardly at right angles from the bar, and means pivotally connecting said locking member to the bracket arm for turning to a position alined with the upper edge of the bracket arm or upwardly away from said position, said terminal downwardly extending portion at the free end of said bar having its outer



side substantially in the same vertical plane with the adjacent end of the bracket arm when located in the first described position of said locking member.

3. The structure as defined in claim 2, said locking bar comprising, a flat bar of metal slotted at its free end portion between opposite side edges thereof and at said free end portion having a flange at right angles to the length of the bar in which flange said slot is located, said locking bar at its opposite end having integral ears paralleling and spaced from each other embracing the upper edge portion of the bracket arm at opposite sides, and a pivot pin passing through said ears and bracket arm, the upper sides of said locking bar and the bracket arm being flush with each other in the first position of said bar.

CHARLES FRANK VANDERVELD.

## REFERENCES CITED

The following references are of record in the file of this patent:

UNITED STATES PATENTS


| Number | Name | Date |
|---|---|---|
| 1,831,550 | Vanderveld | Nov. 10, 1931 |
| 2,127,280 | Zimbalist | Aug. 16, 1938 |