Jan. 3, 1956 J. G. DORAN 2,729,314

SHELF BRACKET

Filed June 15, 1950 2 Sheets-Sheet 1

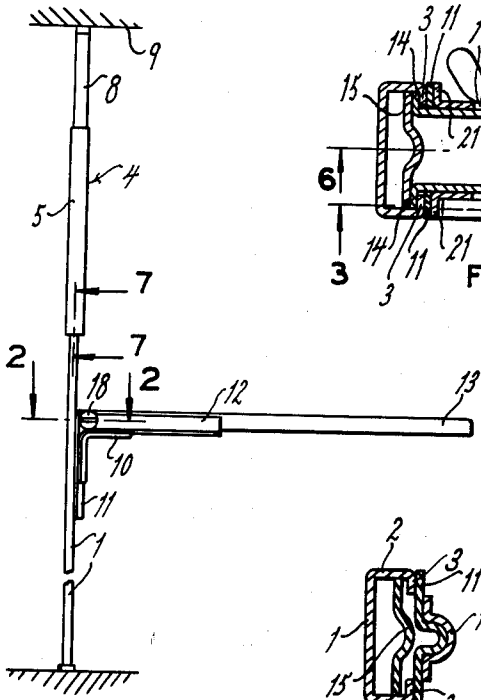


FIG. 1.

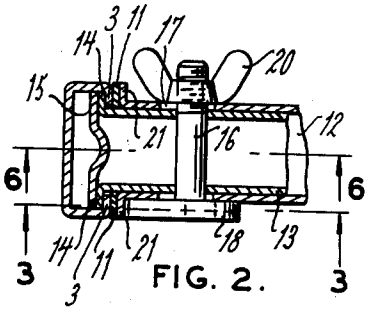


FIG. 2.

FIG. 5.

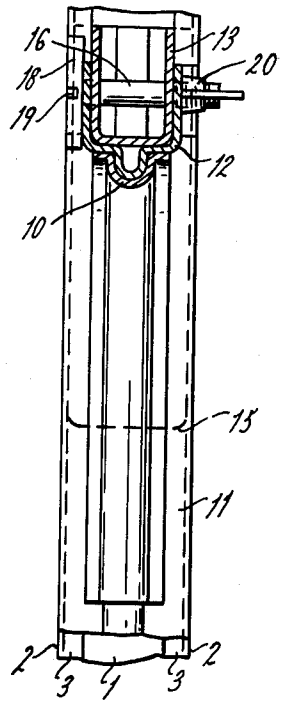


FIG. 4.

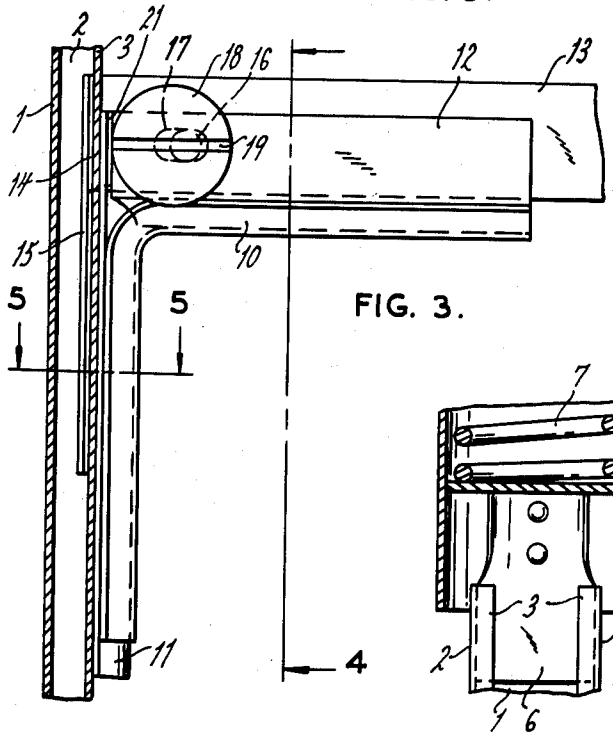


FIG. 3.

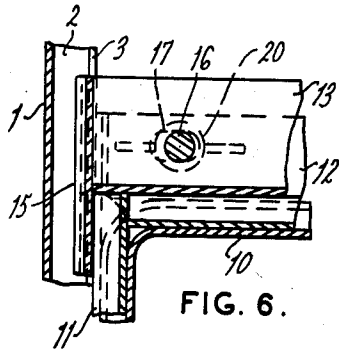


FIG. 6.

FIG. 7.

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SHELF BRACKET

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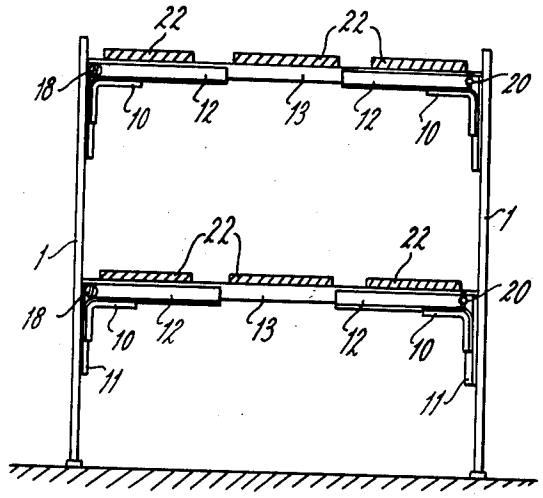


FIG. 8.

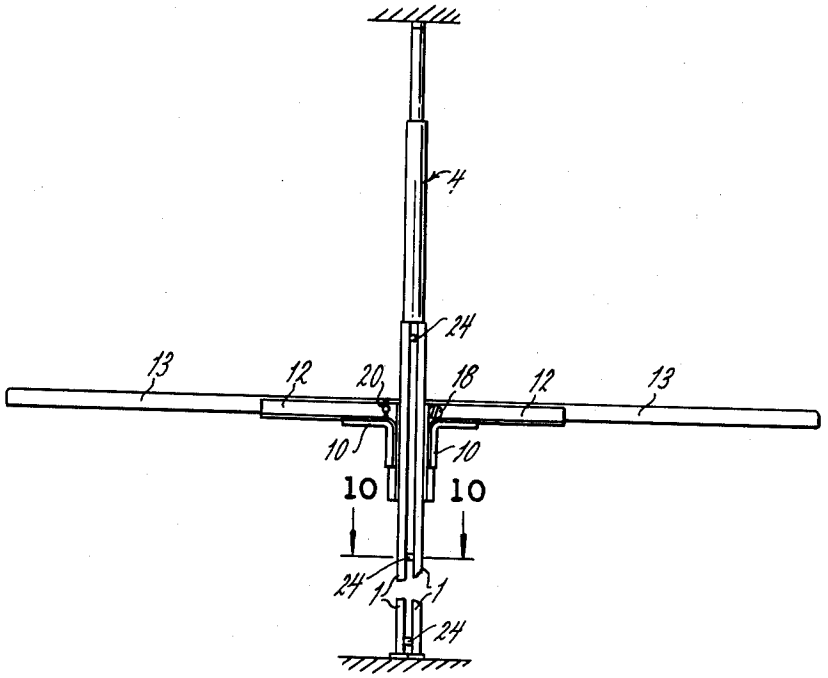


FIG. 9.

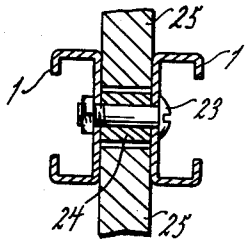


FIG. 10.

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SHELF BRACKET

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9 Claims. (Cl. 189—34)

This invention pertains to a fixture support such as may be used in arranging show window displays and for like purposes, in which it is desirable to provide a support which may be adjusted to different locations in the display and to different heights above the floor.

Generally stated, the device of this invention provides a supporting upright provided with a spring biased upper section, so that it may be set up between any base and cap, such as a floor and ceiling, by springing it in place. The upright proper is of channel form. One or more fixture supporting brackets are arranged to slide up and down in the channel of said upright and each has clamping means whereby it may be clamped in any adjusted position. The upper member of this bracket is also of channel form with the flanges turned up so that an extended arm adapted to support a shelf or other device may rest in said channel. The clamping device may engage this arm to secure it at the same time that the bracket is clamped. Such a support may be used singularly or a pair of them arranged at a suitable distance apart, with a cross bar in the position described above for the extended arm, said cross bar spanning the distance between the uprights and engaging a bracket on each.

In a modified form of the device, the upright is formed of two such channels secured together back to back with spacers therebetween so as to provide a slot between the channels into which a partition member, such as a sheet of wall board, may be inserted. Similar brackets and supporting arms may be assembled on this upright to provide supports for shelves, or the like.

A preferred embodiment of the invention is shown in the accompanying drawings, in which

Fig. 1 is a side view of a shelf support embodying this invention;

Fig. 2 is an enlarged detail section on line 2—2 of Fig. 1;

Fig. 3 is an enlarged view of the mounting of the fixture supporting arm upon an upright showing parts in section on line 3—3 of Fig. 2;

Fig. 4 is a section on line 4—4 of Fig. 3;

Fig. 5 is a section on line 5—5 of Fig. 3;

Fig. 6 is a section on line 6—6 of Fig. 2;

Fig. 7 is an enlarged detail section on line 7—7 of Fig. 1;

Fig. 8 is a view similar to Fig. 1 showing a pair of fixture supports such as shown in Fig. 1 connected by cross arms to support shelving;

Fig. 9 is a side view of a modified form of the invention in which a pair of channels are secured back to back; and

Fig. 10 is an enlarged section on line 10—10 of Fig. 9.

In the accompanying drawings, 1 designates an upright of channel form having side flanges 2 terminating in inturned flanges 3. Secured to the upper end of the channel 1 is a yielding section indicated generally at 4. This may comprise a tubular member 5 in the bottom of which one or more blades 6 are secured, said blade being arranged to slip into the upper end of the channel 1, as shown

in Fig. 7. A coil spring 7, housed in the tubular member 5, supports a movable member 8 and urges it against any overhead cap, such as a ceiling 9, so as to secure the member 1 in upright position.

A fixture supporting bracket is provided comprising an angle member 10 which may consist of a beaded or channeled strip bent at right angles, as shown. One arm of this angle member has secured thereto, by welding or otherwise, a shoe 11 arranged to engage the outer faces of the inturned flanges 3. The other arm of the member 10 has similarly secured thereto a channel 12 arranged with the flanges turned up. Arranged to rest in the channel 12 is a fixture supporting arm 13 also of channel form and arranged with its flanges turned up. As shown in Fig. 2, the arm 13 extends through a notch in the upper end of the shoe 11, passes between the inner edges of the flanges 3 and has its own side flanges turned outward as shown at 14 so as to engage the inner faces of the flanges 3. An inner shoe 15 is secured by welding, or otherwise, to the inner faces of the outturned flanges 14. This shoe 15 extends downward within the flanges 3 for a substantial distance below the arm 13, as shown in Fig. 3.

A clamping stud 16 passes through aligned perforations in the flanges of the arm 13 and through slots 17 in the flanges of the member 12. This stud is provided with an eccentric head 18 having a slot 19 similar to a screw driver slot into which a suitable implement may be inserted for turning the head 18. The other end of the stud 16 may be threaded to receive a wing nut 20 for securing the stud in adjusted position.

It will be seen that this structure provides an angle bracket which may be adjusted up or down along the channel 1. During such sliding movement, with the stud 16 and its head 18 loose or in non-clamping position, the bracket is guided by the inturned flanges 3, the shoe 11 engaging the outer faces of said flanges and the outturned flanges 14 and the shoe 15 engaging the inner faces of said flanges. During such adjustment, the arm 13 is loose in the channel 12. When the bracket is to be secured in adjusted position the head 18 is rotated so as to bring the portion thereof of greater radius against the outturned flanges 21 of the channel 12. This action exerts pressure on said flanges and upon the shoe 11 and at the same time retracts the arm 13 so as to force the flanges 14 against the inner faces of the flanges 3. This clamps the bracket securely to the upright 1 and the stud 16 may be secured in clamping position by turning up the wing nut 20. When so clamped the arm 13 is rigidly secured to the upright 1 so that shelving or other fixtures may be supported thereon.

In the arrangement shown in Fig. 8, two uprights 1 are used with their angle brackets turned toward each other. In this case, the arm 13 extends from one bracket to the other and is provided at both its ends with perforations to receive the studs 16. When so arranged, the upright 1 and the cross members 13 form a rigid structure which needs no other support in the lateral direction of Fig. 8. A number of such frames may, therefore, be used to support shelving, suitable bracing means being provided in the direction along the shelves. In Fig. 8 such shelving is represented by boards 22 resting on the members 13 and extending from frame to frame.

In the embodiment shown in Figs. 9 and 10, two channels 1 are shown secured together by a series of studs or rivets 23 but spaced apart by spacer bushings 24 surrounding the studs 23. This forms a compound upright which may be provided with a top section 4 similar to that shown in Fig. 1, but adapted to be secured to the two channels. The angle brackets supporting the arms 13 may be secured as desired to either one or both of the channels 1 and adjusted to any desired height above

the floor. This compound upright may, in addition, be used as a support for a partition. A partition member **25**, such as a sheet of plywood or other form of wall board, may be inserted in the slot between the channels **1** provided by the spacers **24**. With this arrangement, partitions may be placed as desired and shelving supported therealong or other fixtures mounted in desired positions with respect thereto.

It will be seen, therefore, that this invention provides a simple structure for mounting fixtures for shelving in a variety of positions. A flexible system is provided whereby many combinations are positioned to set up displays of various arrangement. Such arrangements may include either single uprights such as in Fig. 1, supporting fixtures or the arm **13** for multiple arrangement as in Fig. 8. In this arrangement where the spacing between the uprights **1** is considerable, arms **13** of normal length may be used and additional cross bars laid in the channels thereof so as to span greater distances. In this arrangement of Fig. 9, not only shelving and other fixtures can be arranged but partitions may be supported by the same uprights.

Various changes may be made in the details of construction, within the scope of the appended claims, without departing from the spirit of this invention. Parts of the invention may be used without the whole and improvements may be added while retaining some or all of the advantages of the invention.

I claim:

1. A fixture support of the character described comprising, an upright channel having opposite, inturned lateral flanges, a horizontal fixture supporting arm, a shoe on said arm engageable with the inside faces of said flanges, an angle bracket supporting said arm having a shoe extending downward therefrom along the outside faces of said flanges, and a clamp operable independently to force said shoes toward each other to clamp said flanges, said arm having a channel form adapted to receive an extension arm.

2. A fixture support of the character described comprising, an upright channel having opposite, inturned lateral flanges, a horizontal fixture supporting arm, a shoe on said arm engageable with the inside faces of said flanges, an angle bracket supporting said arm having a horizontal channel member in which said arm is slidably received and a shoe extending downward therefrom along the outside faces of said flanges, and a clamping stud having a shank traversing said channel member and said arm and an eccentric head rotatable independently of said arm and said bracket to force said shoes toward each other to clamp said flanges.

3. A fixture support of the character described comprising, an upright channel having opposite, inturned lateral flanges, a horizontal fixture supporting arm, a shoe on said arm engageable with the inside faces of said flanges, an angle bracket supporting said arm having a horizontal channel member in which said arm is slidably received and a shoe extending downward therefrom along the outside faces of said flanges, and a clamping stud having a shank traversing said channel member and having a bearing against said arm and having an eccentric head arranged to bear against said shoe of said channel member, said head being operable independently of said arm and said bracket to clamp said shoes against said flanges.

4. A fixture support of the character described comprising, an upright comprising a pair of channels secured back-to-back with spacers therebetween, said channels each having opposite, inturned lateral flanges on the outer face thereof, an angle bracket having a shoe extending downward therefrom, a fixture supporting arm supported in horizontal position by said bracket and having flanges engaging said inturned flanges of said upright, and means for clamping said arm flanges and said shoe against said upright flanges.

5. A support of the character described comprising, an upright channel having a rectangular cross section including opposite inturned lateral flanges, a supporting angle-bracket having a horizontal channel member with upturned flanges and an outer shoe extending downward along said upright outside of said lateral flanges thereof, a horizontal fixture-supporting arm supported in said channel member extending between said lateral flanges and having an inner shoe extending downward within said upright and engaging the inner faces of said lateral flanges thereof, and clamping means operating to force said inner and outer shoes toward each other to clamp said lateral flanges of said upright therebetween.

6. A support of the character described comprising, a pair of supports such as claimed in claim 5, means securing said supports together back-to-back with spacers therebetween, and a panel inserted between the backs of said supports providing a partition.

7. A fixture support of the character described comprising, an upright channel having a flat rear web with side flanges extending forward from said web and inturned lips at the edges of said flanges, a supporting angle bracket having a horizontal member of channel form with its side flanges turned up and a vertical shoe extending along the outside of said lips, a fixture-supporting arm slidably supported in the channel of said horizontal member and having out-turned shoe members engaging the inside faces of said lips, and a clamp engaging said horizontal member and said arm and operable to force said vertical shoe and said out-turned shoe members against said lips to fix said arm on said upright.

8. A supporting structure of the character described, in which two fixture supports according to claim 7 are arranged back-to-back with spacers therebetween and secured together in spaced relation, and a panel is mounted between the spaced backs of said uprights to provide a partition.

9. A fixture support of the character described comprising, an upright comprising a pair of channels secured back-to-back with spacers therebetween, said channels each having opposite, inturned lateral flanges on the outer face thereof, an angle bracket having a shoe extending downward therefrom, a fixture supporting arm supported in horizontal position by said bracket and having flanges engaging said inturned flanges of said upright, a partition member supported in upright position by insertion between said upright channels, and means for clamping said arm flanges and said shoe against said upright flanges.

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