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2,990,152

PAINT CAN HOLDER MOUNTING DEVICE

Filed Feb. 24, 1959

2 Sheets-Sheet 1

FIG. 1

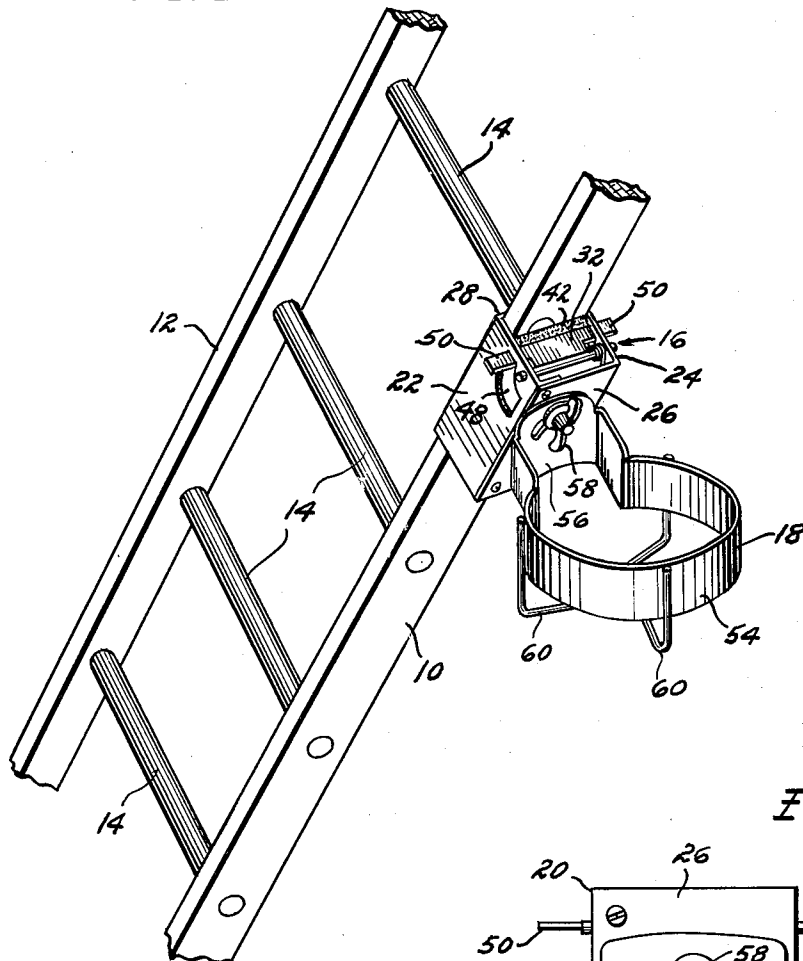
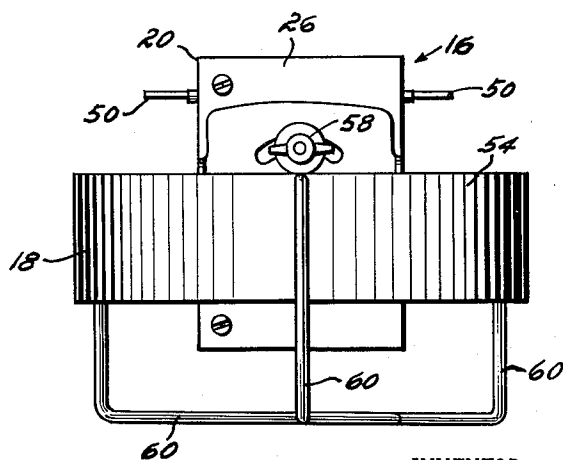


FIG. 2



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FIG. 3

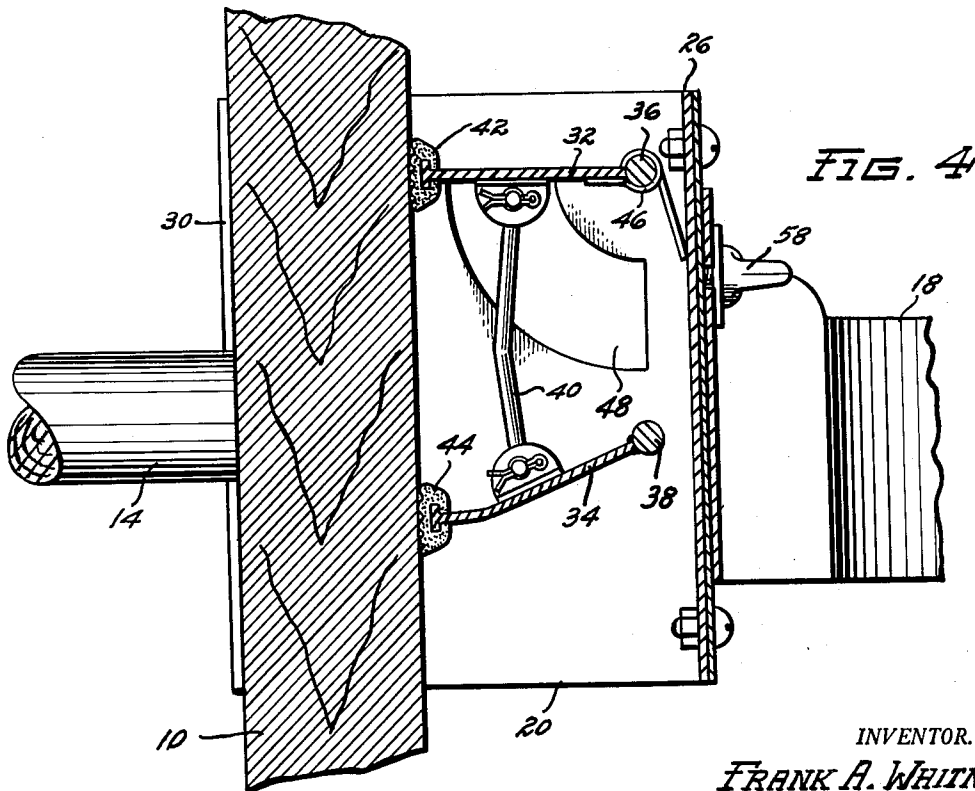
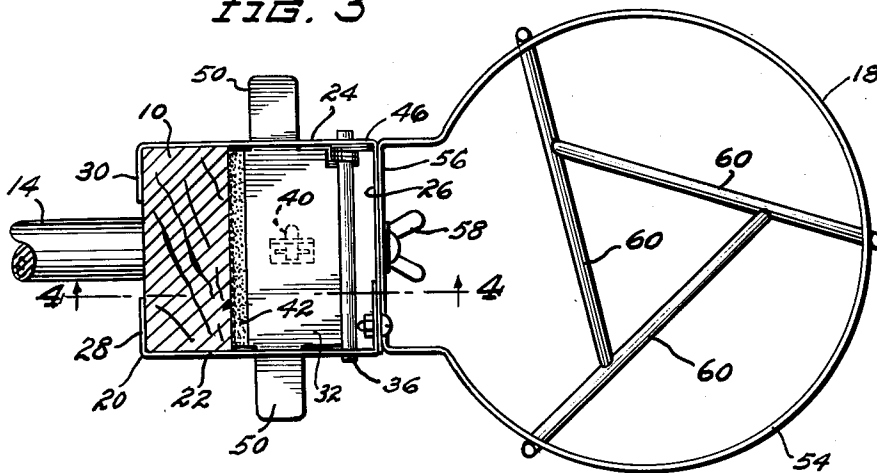


FIG. 4

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PAINT CAN HOLDER MOUNTING DEVICE

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This invention relates generally to mounting devices and particularly to quick release, readily positionable mounting devices.

It is the principal object of my invention to provide for mounting, in any desired position along a support, an improved mounting or anchoring device of a structural character as to automatically hold against the action of a weight or other force acting thereon in one direction.

Another object is to provide a device of the above mentioned character which will hold against movement by and because of the action of a force acting thereagainst in one direction and yet may be readily moved in the opposite direction.

Another object of the invention is to provide a mounting device of a character such that it may be readily affixed to an upright support at any point therealong without need of screws, bolts, clamps or similar fasteners.

Another object of the invention is to provide a mounting device of such structural character that the weight of the device acts to hold the device in any desired position along a support in opposition to and by reason of a force acting thereagainst in one direction.

Another and more specific object of the invention is to provide an improved mounting device for supporting a paint can holder on the stile of a ladder in such manner that a painter may very readily have the paint at all times conveniently accessible.

A further objection of the invention is to provide a mounting device of the above mentioned character which is efficient reliable and inexpensive.

Other objects of the invention will become apparent from the following detail description taken in connection with the accompanying drawings which form a part of this application and in which:

FIG. 1 is a perspective view of a ladder and my improved mounting device for paint can holder;

FIG. 2 is an elevation view of the mounting device;

FIG. 3 is a plan view partly in section, and

FIG. 4 is a vertical sectional view, partly in elevation and taken along line 4-4 of FIG. 3.

Referring to the drawings by characters of reference, there is shown by way of illustration of the invention a conventional type of ladder which comprises the usual spaced apart supports or stiles 10 and 12 connected together in the usual manner by rungs 14. On the stile 10 is shown my improved mounting device, designated generally by the numeral 16 to illustrate, among other uses, its utility for mounting a paint can holder 18 on the ladder.

The mounting device 16 includes a bracket in the form of a sleeve 20 of preferably C-shape in cross section having opposite parallel sides 22 and 24, a joining web 26, and spaced interned flange portions 28 and 30. The space between the opposed edges of the flange portions 28 and 30 is made such that the sleeve 20 may be slipped onto stile 10 edgewise thereof following which the sleeve may be turned ninety degrees to position the sleeve as shown. Also, the space between the opposed edges of the flange portions 28 and 30 allows for clearance of the rungs 14 so that the sleeve 20 may have an infinite number of positions to which it may be adjusted along the stile 10 without need of removing the mounting device from the stile. In mounted position on the stile 10, the flange portions 28 and 30 abut the inner face of the stile

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10 as shown and the web 26 of the sleeve is spaced outwardly from the outer face of the stile.

In order to provide a mounting device that by its own weight will be held in any position along the stile 10 thus achieving ease of repositioning of the device, I provide a readily retractible holding means on sleeve 20 which normally acts against stile 10 to oppose downward movement of the sleeve. The holding means preferably comprises an upper holding member or arm 32 and a lower holding member or arm 34 pivoted respectively on parallel shafts 36 and 38 that extend between and are rotatably mounted on the sides 22 and 24 of sleeve 20. A connecting member or rod 40 connects the arms 32 and 34 for movement together, the arms having an effective holding position with the outer face of stile 10, as shown in FIG. 4. The arms 32 and 34 may be made of plate stock and be welded each along one edge thereof respectively to the shafts 36 and 38. The edges of the arms 32 and 34, opposite those edges that are welded to the shafts 36 and 38, are normally disposed toward the outer face of stile 10 and secured to and covering each is an abutment member 42 and 44 respectively.

Preferably, the abutment members 42 and 44 are made of some suitably displaceable and resilient material having a high frictional coefficient, such as rubber, so that displacement of the rubber by the weight of the device will enhance gripping of the stile by the abutment members. The arms 32, 34 are urged by a coil spring 46 clockwise, as seen in FIG. 4, to position the rubber abutment members 42 and 44 against the outer face of the stile 10. Arcuate openings 48 in opposite sides 22 and 24 of the sleeve 20 provide clearance for extensions 50 of the upper arm 32, the extensions projecting through openings 48 to serve as handles by means of which the arms 32 and 34 may be depressed to release the mounting device from the stile of the ladder. The upper end edges of the openings function as stops to limit clockwise movement of the arms 32 and 34 when the mounting device is removed from the ladder.

As shown in FIG. 4, the upper arm 32 and the lower arm 34 are angularly disposed relative to each other to effect the desired holding action. The upper arm 32 may be arranged such that in normal position it is substantially at right angles to web 26 and preferably the lower arm 34 is normally disposed at an acute angle with respect to the upper arm 32. As a result, the weight of the sleeve 20 and holder 18 plus the added weight of a can of paint in said holder act together with the arms 32 and 34 as a lever, the weight or force being distributed as components acting at vertically spaced points to oppose the slipping downwardly of the mounting device.

As seen facing FIG. 4, the center points of shafts 36, 38 and points on the resilient abutment members 42, 44 constitute the apices of a quadrilateral and that the force or weight of the device acting downwardly is in effect tending to overcome the opposing forces represented by the arms 32 and 34. As a consequence, the device cannot slip down except by breakage of arms 32, 34 or by manually swinging them down, whereas to move the device in the opposite direction it is only necessary to lift or push the device to overcome the opposing force or weight.

Any suitable type of paint can holder may be used such as the inexpensive holder 18 which comprises a generally circular flange 54 having an extended portion 56 that abuts web 26 and may be adjustably secured thereto by a wing nut 58. Three rods 60 have their outer ends secured in and to the flange 54 such as by welding and their inner ends welded together in such arrangement, as shown in FIG. 3, to provide a three-point support for a paint can (not shown).

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It should now be apparent from the above description that my mounting device 16 may be readily slipped onto a ladder stile or other upright while holding the arms 32 and 34 depressed or retracted and with flange portions 30 against the inner face of the stile, attach the device to the stile merely by releasing the arms. Upon releasing the handle 50, the spring 46 swings the arms 32 and 34 clockwise bringing the rubber abutment members into holding relation to the outer face of the stile 10 whereupon said arms distribute the weight of the sleeve 20, holder 18, and can of paint, opposing movement of the mounting device. When it is desirable to relocate the paint can higher on the ladder, it is only necessary to lift the mounting and load thereon upwardly to and release it at the desired position whereupon the arms 32 and 34 automatically grip the stile and hold the mounting against downward movement. If it is desired to lower the mounting and load thereon, it is only necessary to push down slightly on the nearest handle 50 whereby to render the arms 32 and 34 ineffective.

While I have shown and described my invention in considerable detail it is to be understood that the invention is not limited to any particular use but instead is to be limited only by the spirit and scope of the invention.

I claim:

1. A mounting device for attachment to a support comprising, a sleeve member to receive the support, an arm pivoted on and within said sleeve member and having a free end to engage and hold said sleeve member to the support, a second arm pivoted on and within said sleeve member having its axis of rotation spaced from and parallel to the axis of rotation of said arm, said second arm having a free end to engage the support, means pivotally connecting said arms together, and spring means urging said arms into engagement with the support.

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2. A mounting device for attachment to an upright support comprising, a sleeve member to receive the support, an upper holding member pivoted to and within said sleeve member, a lower holding member pivoted to and within said sleeve member, a connecting member connecting said holding members together, said members positionable to extend transversely of said sleeve member having vertically spaced apart free ends to engage the support, and resilient means on the free ends of said members to engage the support.

3. A mounting device to mount a paint can holder on a ladder stile comprising, a sleeve member to receive the stile having oppositely disposed sides joined by a web and the sides having inturned flanges opposite the web to lie flat against the inner surface of the stile, an upper plate-like arm member disposed between and pivoted on the sides of said sleeve adjacent the web, a lower plate-like arm member disposed between and pivoted on the sides of said sleeve adjacent the web, said arm members respectively having corresponding edges thereof disposed toward said flanges in position to engage the outer surface of the stile to counteract the weight of said sleeve, said lower arm member disposed at an acute angle with respect to the upper arm member and forming therewith opposite sides of a quadrilateral, and spring means urging both said arm members in a direction to engage the edges thereof with the outer face of the stile.

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