Dec. 14, 1965 J. A. BENNINGER, JR 3,223,369

LADDER ATTACHMENTS

Filed April 30, 1964

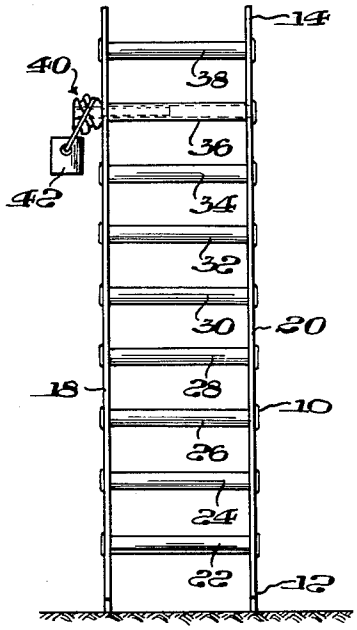


Fig. 1.

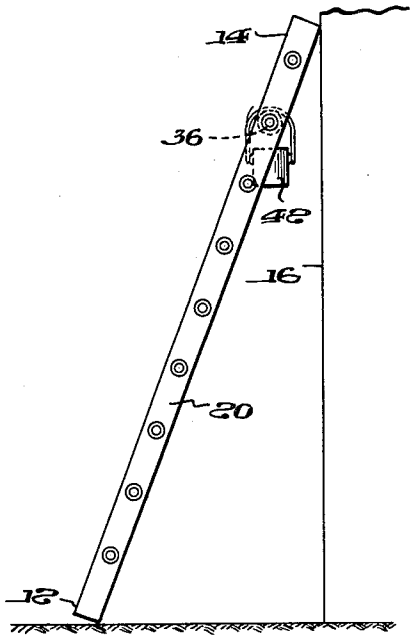


Fig. 2.

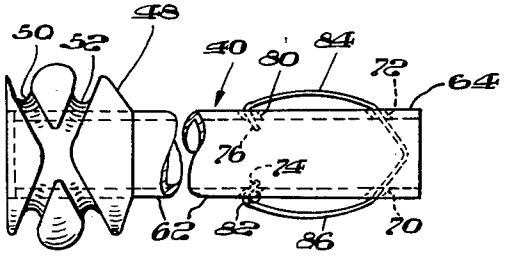


Fig. 3.

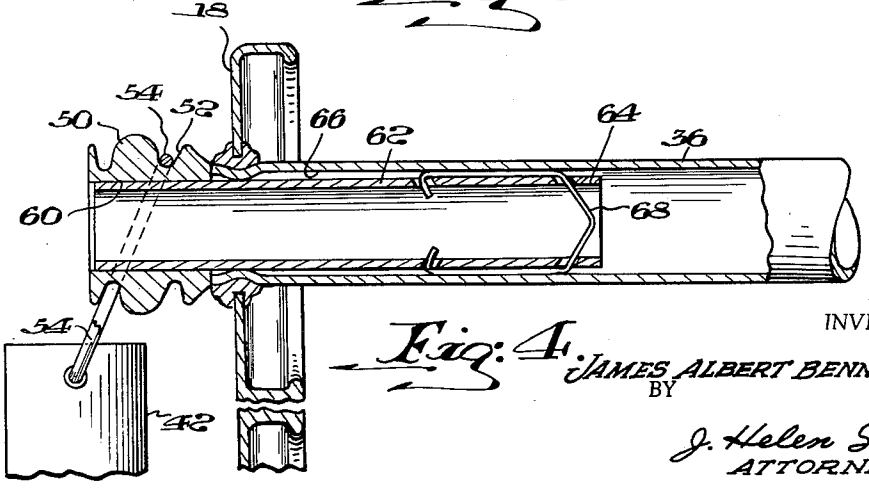


Fig. 4.

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LADDER ATTACHMENTS

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This invention relates to an adjustable attachment which can be selectively placed at any desired elevation on a ladder or the like. More particularly, the present invention relates to a mounting which is located at the side of the ladder and can be removably secured at various points of the ladder for convenience and accessibility.

Numerous attachments for suspending containers or the like on ladders have been proposed and some are in current use, particularly ones which are attached between the rails of the ladder. The present invention proposes a new and improved ladder attachment which mounts the pail or other receptacle at the side of the ladder, i.e., beyond one or the other rail and is therefore less prone to be in the user's way, and is less likely to be accidentally spilled.

The principal object of the present invention is to provide a new and improved attachment for supporting pails or other containers on ladders so that the suspended container can be held either at the right hand side or the left hand side of the ladder, but in either case, beyond the rails of the ladder so as to provide free unimpeded climbing on the rungs of the ladder. In this way, it is intended that the ladder will be more safely used and with less interference to the climber.

Another object of the present invention is to provide an attachment which is readily inserted and removed from the open end of the rungs of the ladder in order that the receptacle can be quickly and reliably mounted at a preferred vertical location on the ladder. Thus, the container is moved from one location to the next by withdrawing the attachement and then reinserting it at a new location depending upon the convenience requirements of the user.

It forms an important part of the present invention that the attachment once assembled to the ladder, will form a reliable grip and will not be readily dislodged and will therefore hold the container at the appropriate vertical level.

A still further object of the present invention is to provide an attachment for securing to the rungs of the ladder at either side of the ladder to take care of left-handedness and right-handedness of the user and which can be secured to the rung either by telescoping within the rung or by securing to an extension of the rung projecting beyond the ladder rail. It is proposed that the attachment will include a resilient, yieldable lock which resists accidental removal of the attachment means once it is secured in place but can nevertheless be manually removed and relocated when desired.

A further object of the invention is to provide means to maintain the handle of a paint pail or other container at an angle relative to the side rails of a ladder so that it is free of the side rails.

Another object of my invention is to provide means for suspending a pail or other container so that the handle is at angle to the horizontal top of the pail or other container to permit free access of a brush to the contents of the pail or other container.

Other objects and features of the present invention will become apparent from a consideration of the following description, which proceeds with reference to the accompanying drawings, wherein:

FIGURE 1 is a front elevation view of a ladder having the attachment mounted therein;

FIGURE 2 is a side elevation view looking from the right hand side of FIGURE 1;

FIGURE 3 is an enlarged detail view of the attachment shown removed from the ladder in FIGURES 1 and 2; and,

FIGURE 4 is an enlarged sectional view taken through the center of the attachment.

Referring now to the drawings, a ladder, designated generally by reference numeral **10**, is supported at its end **12** on the ground and at the upper end **14** leans against a wall or other support structure **16** in its upright position. The ladder is comprised of two side rails **18** and **20** and a number of spaced rungs **22–38**. The rungs are secured at their opposite ends to rails **18** and **20**, respectively, either by a conventional type of rung joint or by means of the rung joint disclosed and claimed in U.S. Patent No. 3,039,186, issued June 19, 1962 and titled "Method of Forming a Joint Between the Rail and Rung of a Ladder."

An attachment, designated generally by reference numeral **40** in FIGURE 3, is adapted for supporting a pail **42** or other container at a suitable vertical height of the ladder, either at the right hand side or left hand side (FIGURE 1) of the ladder. The attachment disposes the container **42** beyond the rails and in this location, the container **42** leaves a free climbing area on all portions of the rungs between the rails, thus reducing the incidence of spillage and making it more convenient for the climber to use the ladder.

The attachment consists of an enlarged boss **48**, having two diagonal grooves **50** and **52** which are formed at conjugate angles to each other and which are of such a depth that the handle **54** of the pail or other container **42** fits within one or the other of the diagonal grooves **50** or **52** and prevents the handle **54** from accidental dislodgment. When the boss **48** is located on the left hand side of the ladder the groove **52** would be utilized, and when the boss is located on the right hand side of the ladder, the groove **52** would contain the handle **54** of the pail **42** thus positioning the pail away from the side rail **18** or **20**. It will be readily seen the handle **54** will be maintained at an angle to the upper horizontal surface of the pail permitting free access of a brush to the paint as well as positioning the pail or other container **42** away from the side rail **18** or **20**. Because of the continuous character of the grooves, the tube **62** and the associated boss **48** can be turned to any position and still have available a diagonal groove portion for retaining the handle **54** of the pail or other container.

The boss **48** is comprised of any suitable heat hardenable resin such as an alkyd resin, a phenol-formaldehyde resin or any one of a number of other resins, the general requirement being that the material should have some degree of shock resistance, and be sufficiently hard so as not to be marred or worn by the handle **54** when it is in place.

At the center of the boss **48** is an opening **60** which is adapted to receive an extension of the rung which projects beyond the rail; or, the opening **60** receives a separate tubular member **62** which in the illustration, is press fitted within the opening **60** and forms a rigid connection therewith. The tubular member **62** then extends at its opposite end **64**, telescopically within the open end **66** of the rung **36** and is locked therein by a wire locking member **68** which passes through openings **70**, **72** and ends **74**, **76** are then passed into other openings **80**, **82** and then bent to be locked within the tubular member **36**.

The wire spring provides two bow shaped sections **84**, **86** (FIGURE 3) which are larger than the inner diameter of the rung **36** and are squeezed downwardly to the position shown in FIGURE 4 when the tubular member **62** is thrust endwise into the rung **36** and bears against the

inner surface of the rung to form a lock resisting endwise movement of the attachment **40** in an outward direction (leftwardly in FIGURE 4). The resistance offered by the bow sections **84**, **86** is such that the attachment **40** can be withdrawn manually when it is desired to relocate it either vertically from one rung to the next or from one side of the ladder to the other.

The user or climber on the ladder thus has a convenient means for locating the container **42** at whatever location is best suited for operation, whether it be painting, caulking, cleaning or any other operation to be performed on the surface of the support wall **16**.

In operation, the attachment **40** is hand carried to a particular point on the ladder where the work is to be performed and then the end of the attachment is forced telescopically into the open end of the rung against the resistance of the wire spring bar sections **84** and **86**. The attachment is then withdrawn and relocated at the next point of use while it is desired to do so.

At all times, the container is suspended in an out-of-the-way location, that is, laterally of the rails and therefore leaves the entire portion of the ladder between the rails available for climbing. This reduces spillage, and provides a better location for the user at all times, i.e., the container is disposed more within the area of movement of the hands. For example, if the container **42** were located between the rails, it would be far more awkward to obtain access to the contents of the pail or other container. The invention thus has an added advantage in locating the container for greater accessibility to the contents.

Although the present invention has been illustrated and described in connection with selected example embodiments, it will be understood that these are illustrative of the invention and are by no means restrictive thereof. It is reasonably to be expected that those skilled in the art can make numerous revisions and adaptations of the invention to suit individual design requirements and it is intended that such revisions and changes which incorporate the herein disclosed principles will be included within the scope of the following claims as equivalents of the invention.

What is claimed is:

1. A removable attachment for mounting items having a handle onto the rungs of a ladder and the like, comprising a boss having elliptical grooves formed at conjugate angles therein and of a depth for receiving a handle of an item, tubular means extending into a socket opening at the center of said boss and forming a connection with said boss, and the opposite end of said tubular means being proportioned to extend into one of the various open-

ended rungs at a preselected elevational location of a ladder to provide a support mounting at the side of a ladder.

2. In combination with a ladder having spaced rungs, a removable attachment for supporting containers through a handle therefor, at different vertical locations on the ladder, comprising an enlarged member having at least two grooves formed in the surface of the said member and disposed at angles to each other and having a depth providing that a handle of said container can be fitted therein, an elongated support means interfitted at one end to said enlarged member and extending at the opposite end into telescoping relation with a preselected ladder rung at the desired elevation of said ladder.

3. A removable support for pails or the like in combination with a ladder having spaced open-ended rungs, comprising an enlarged support means having at least one groove formed in the surface thereof and porportioned to receive the handle of a pail or the like therein, an elongated tubular means forming a connection at one end with said support means and extending at its opposite end within a preselected one of said rungs for ready insertion and removal from a preselected and open-ended rung at the desired vertical location of said ladder, said surface groove of said support means being diagonally disposed wherefor a pail or the like may be suspended laterally in spaced relation to the said ladder.

4. The removable attachment of claim **2** in which the pair of grooves disposed at angles to each other are diagonally disposed in the attachment and can be placed at either end of a ladder rung to dispose a container supported thereby in spaced relation and outwardly of the said ladder.

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