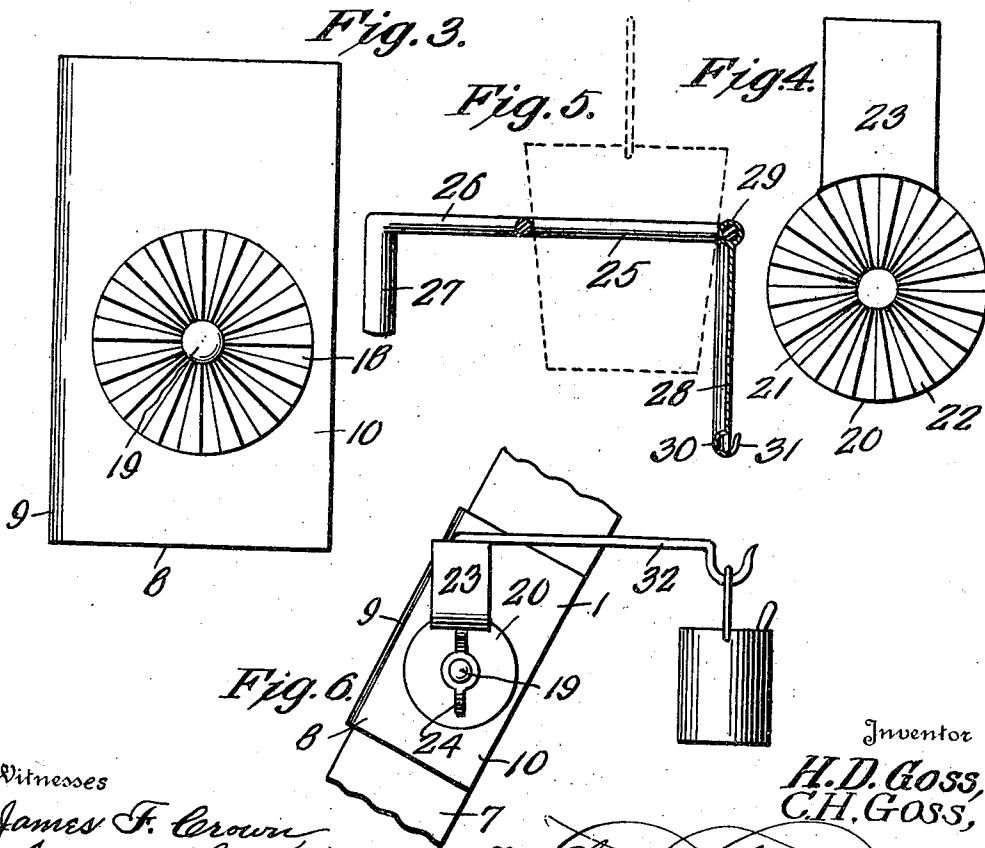
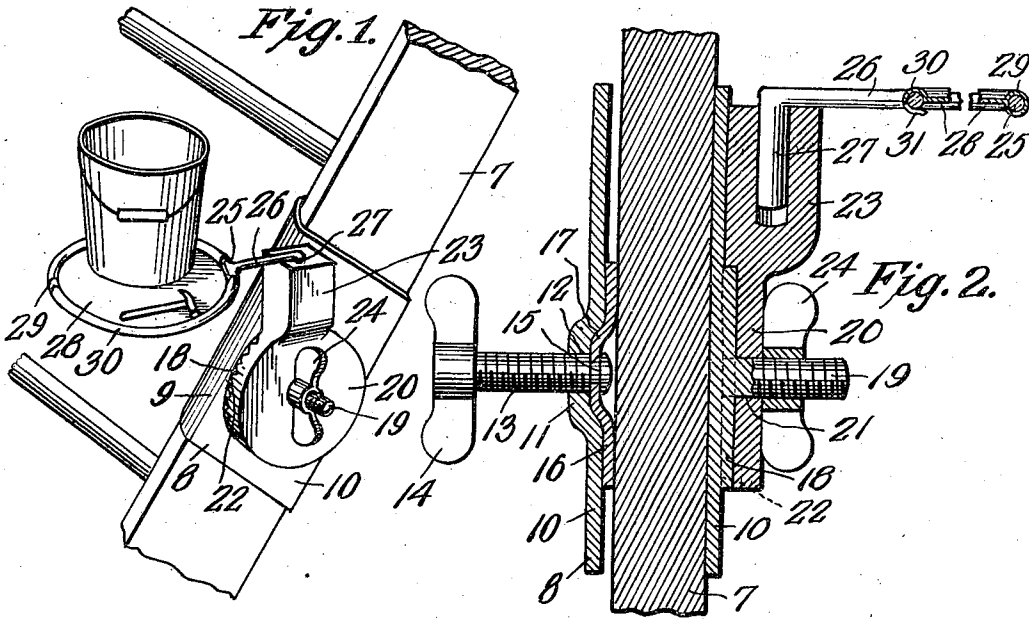


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DETACHABLE LADDER-SHELF.
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UNITED STATES PATENT OFFICE.

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DETACHABLE LADDER-SHELF.

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To all whom it may concern:

Be it known that we, HAROLD D. Goss and CHARLES H. Goss, citizens of the United States, residing at Union City, in the county of Erie, State of Pennsylvania, have invented certain new and useful Improvements in Detachable Ladder-Shelves; and we do hereby declare the following to be a full, clear, and exact description of the invention, such as will enable others skilled in the art to which it appertains to make and use the same.

This invention relates to detachable shelves or supports, and is adapted particularly for use in connection with ladders, scaffolds and the like.

The primary object of the invention is to provide means whereby a support for a bucket, basket, or other receptacle may be readily attached to or detached from a base, such as a ladder rail, or scaffold post, and which, when in use, may be adjusted to support the receptacle at any desired degree of angularity relative to the base, and which will enable the receptacle to be supported in proper position irrespective of the degree of inclination of the base.

A further object of the invention is to provide a device of this character characterized by improved means for enabling the support to be secured to or adjusted upon bases of various configurations or sizes.

A still further object of the invention is to provide a device or base of the character described which is equipped with a receptacle supporting tray or platform of improved construction.

A still further object of the invention is to provide a device for the purposes above outlined which is of simple and inexpensive construction, which is composed of but few readily assembled parts, all so constructed and arranged in such manner as to preclude the possibility of wear, breakage, or derangement of the same, which may be readily taken apart and packed in but small amount of space, and which will prove thoroughly efficient in the attainment of the ends for which it is designed.

With these objects in view, together with others which will appear as the description proceeds, the invention resides in the novel combination and arrangement of parts, all to be hereinafter more fully described, illustrated in the drawings and particularly pointed out in the claims.

The invention will be best understood by reference to the accompanying drawings, wherein:

Figure 1, is a perspective view of a portion of a conventional form of ladder and illustrating the application of a shelf and support embodying our invention,

Fig. 2, is a vertical sectional view taken through the ladder rail, support and shelf,

Fig. 3, is an elevation of one side of the base or support with the shelf and its supporting bracket removed therefrom,

Fig. 4, is an elevation of the inside of the socket carrying plate,

Fig. 5 is a detail sectional view showing the tray swung down to permit a bucket to be supported in the ring, and

Fig. 6, is an elevation illustrating the application of a modified form of receptacle supporting device.

Referring now more particularly to the drawings, 7 indicates the side rail of a ladder, over which is engaged a shoe 8. This shoe is, in cross section, U-shaped, the bight portion 9 of the said shoe having the spaced parallel plates 10 extending therefrom to lie one upon each side of the ladder rail. The innermost of these plates is raised at its central portion as at 11, the said raised portion forming an outwardly projecting boss, and the said boss is provided with a threaded aperture 12 through which a screw bolt 13 projects. The outer end of the bolt is winged as at 14 to enable the same to be readily rotated by the fingers, and the inner end of the said bolt is provided with a reduced portion 15 for rotatably supporting a plate 16 of rectangular shape. The connection of the bolt with the plate 16 is at the intermediate portion of the latter, the said plate being recessed to provide an outwardly projecting raised portion 17 having angular shoulders for engagement within the correspondingly formed shoulders of the recess upon the inner surface of the side plate 10. The plate 16 is adapted to be forced inwardly or outwardly to engage with the inner face of the ladder rung, and it is apparent that the interlocking of the shoulders of the raised portion 17 with those of the depression in the plate 10 will prevent rotation of the clamping plate 16. From this construction, it is apparent that the shoe is capable of being quickly and easily applied to ladder rails or other similar bases varying in thickness and shape, and when once

the screw 13 is tightly adjusted in the shoe accidental disengagement of the latter from the base is prevented.

The outer face of the outermost of the side plates 10 of the shoe is provided with a plurality of radially disposed serrations or teeth 18. These teeth radiate from a bolt 19 arranged centrally of the plate and projecting outwardly therefrom, the said bolt being threaded as shown. These teeth or serrations terminate at their outer ends in a circular line with the bolt as a center, and project laterally beyond the face of the plate 10. An annular member or plate 20 is provided with a central aperture 21 for engagement over the outwardly protruding bolt 19, the inner face of the said member being provided with serrations or teeth 22 adapted for engagement with those upon the plate 10 to hold the said annular member against rotation upon the bolt. A socket member 23 projects outwardly from the edge of the annular member to support the shelf or tray to be hereafter detailed. A wing nut 24 is adapted for engagement upon the protruding bolt or stem 19, and it is apparent that upon tightening the said nut against the annular member the latter will be bound firmly against the plate 10, and will be held thereon firmly against rotary movement. Upon loosening the nut, the annular member may be rotated to dispose the socket member at the desired degree as will be readily understood.

The receptacle supporting member in the preferred embodiment of the invention comprises a bar or wire of relatively heavy metal bent to form a ring 25, from the edge of which projects a straight portion 26, the latter terminating in a downwardly projecting stem 27 for engagement within the socket member 23. This arrangement enables the ring to be quickly and easily attached to the supporting socket, and the said ring is capable of being swung relative thereto with the stem 27 as a pivot. If desired, a bucket or pail may be set in the ring to be supported thereby. A tray member 28 formed of a sheet of relatively thin metal may be hingedly connected as at 29 to the ring at a point preferably diametrically opposite the straight portion 26, the said tray being adapted to swing within and to be seated at its annular edges upon the ring. The edges of this tray may be bent as shown at 30 in the drawing to enable the tray to be firmly seated at its edges upon the said ring. The outermost edge of the tray may be bent as shown at 31 to provide a snap clasp to engage with the ring and to prevent the tray from becoming disengaged

therefrom accidentally. It is thus seen that the tray may be swung outwardly away from the ring when it is desired that a pail or bucket be set down in the ring to be supported thereby, and the said tray when required may be swung inwardly to provide a suitable shelf for supporting pails, boxes, baskets, tools or the like.

Instead of the ring and shelf device above described for supporting the receptacle or tools, a hook member 32 may be employed. This hook has its shank bent at one end as shown for engagement within the socket member 23, while the outer extremity of the same is adapted to support the bail or handle of a bucket or other container.

From this description, it is apparent that the device may be readily applied to a ladder rail or other base and the shelf or article supporting portion of the device adjusted to swing in horizontal position, irrespective of the degree of inclination of the ladder rail. It is also apparent that the shoe is capable of application to either rail of a ladder. The simplified construction of clamping means for the shoe enables the latter to be quickly and easily adjusted to the desired position upon the ladder rail.

While we have herein shown and described a particular or preferred embodiment of the invention, we wish it to be understood that we need not confine ourselves to all the precise details of construction herein set forth by way of illustration as modification and variation may be made without departing from the spirit of the invention or exceeding the scope of the claims.

What is claimed is:

1. In a device of the class described, the combination with a socket member, of a ring, a stem carried by said ring and adapted for engagement in said socket member, and a tray hingedly connected to said ring and adapted to close the opening therein, substantially as described.

2. In a device of the class described, a ring, a tray hinged at one end to said ring, flanges projecting from the edge of said tray for engagement with said ring, a snap clasp upon the edge of said tray for engagement with said ring, and means for supporting said ring upon a fixed member, substantially as described.

In testimony whereof, we affix our signatures, in the presence of two witnesses.

HAROLD D. GOSS.
CHARLES H. GOSS.

Witnesses:

WM. B. BLACK,
ARTHUR AUSTIN.