

J. F. NEWTON, JR.
HANGER STRAP OR HANDHOLD FOR CARS, &c.
APPLICATION FILED MAY 10, 1909.

947,022.

Patented Jan. 18, 1910.

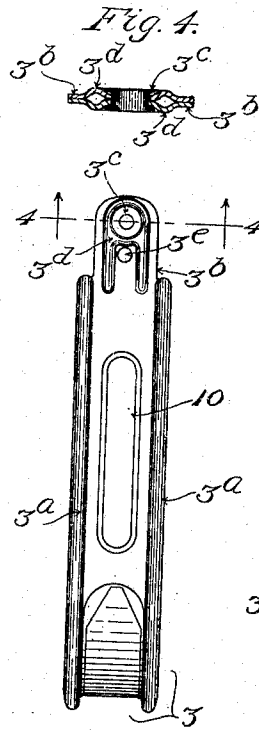
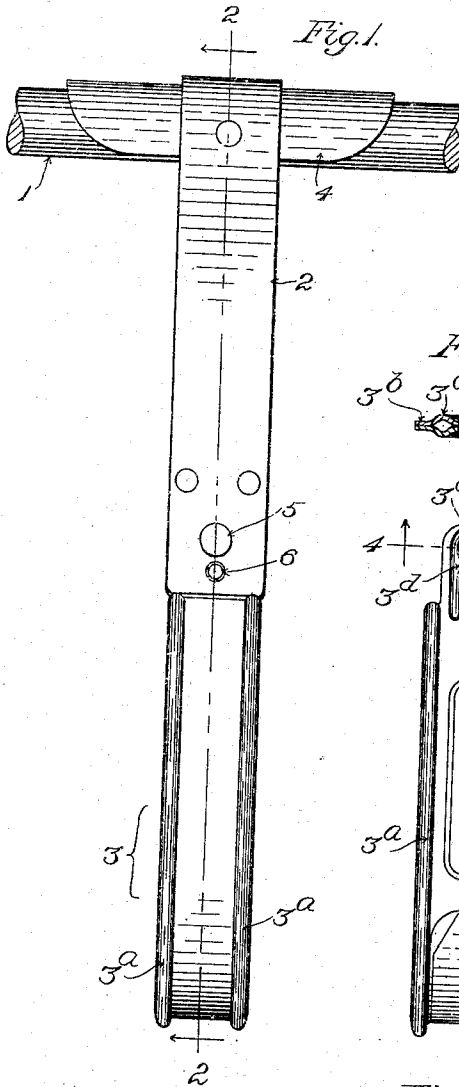


Fig. 3.

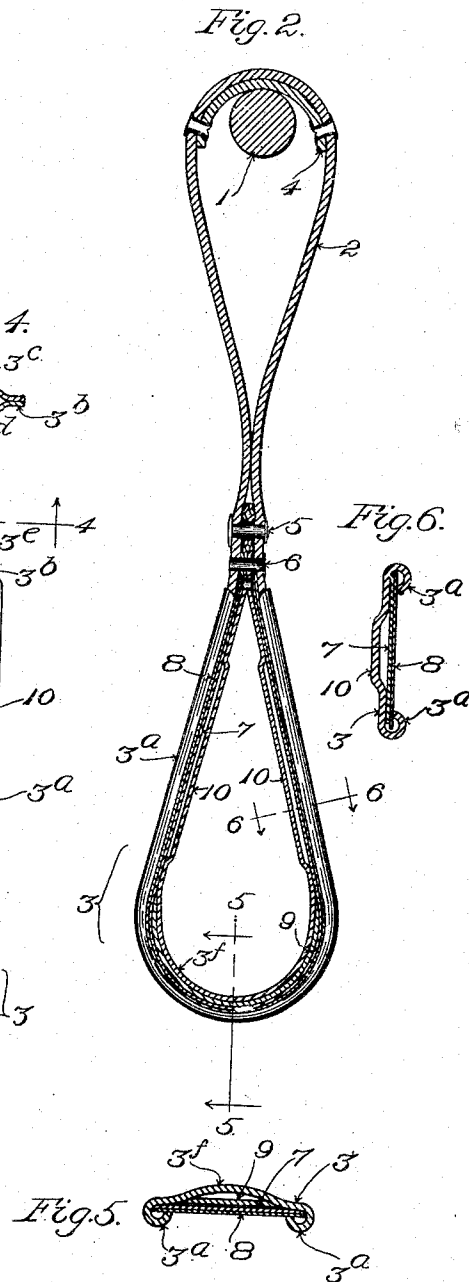


Fig. 5.

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UNITED STATES PATENT OFFICE.

JOHN F. NEWTON, JR., OF BOSTON, MASSACHUSETTS.

HANGER-STRAP OR HANDHOLD FOR CARS, &c.

947,022.

Specification of Letters Patent.

Patented Jan. 18, 1910.

Application filed May 10, 1909. Serial No. 495,013.

To all whom it may concern:

Be it known that I, JOHN F. NEWTON, Jr., a citizen of the United States, residing at Boston, in the county of Suffolk, State of Massachusetts, have invented a certain new and useful Improvement in Hanger-Straps or Handholds for Cars, &c., of which the following is a specification, reference being had therein to the accompanying drawings.

The invention is an improvement upon the hanger-straps or handholds of my prior United States Letters Patent No. 863,935, granted August 20, 1907; No. 879,575, granted February 18, 1908; and No. 901,119, granted October 13, 1908.

Among the objects of the present invention are to simplify the construction of a hanger-strap or hand-hold embodying certain important principles of my patented inventions, reinforce the sheet-metal portion of the lower loop or hand-grasp and render the same more comfortable and easy to grasp, and enable the weight of the hanger-strap or handhold to be lessened and the cost of production to be reduced.

An embodiment of the invention is shown in the drawings, in which latter,—

Figure 1 shows in front elevation a hanger-strap or handhold containing the said embodiment, and a portion of the supporting-rod therefor. Fig. 2 is a view in vertical section in the plane of the line 2, 2, of Fig. 1. Fig. 3 is a front elevation of the lower loop or hand-grasp. Fig. 4 is a view in horizontal section on line 4, 4, of Fig. 3, on an enlarged scale. Fig. 5 is a view in section on line 5, 5, of Fig. 2, also on an enlarged scale. Fig. 6 is a view in section on line 6, 6, of Fig. 2, on an enlarged scale.

Having reference to the drawings,—At 1, Figs. 1 and 2, is represented a portion of the length of a supporting rod. The hanger-strap or handhold shown applied to the said supporting-rod comprises essentially in its construction an upper or suspending loop 2, and a lower loop or hand-grasp, the body-portion of the latter being marked 3. Suspending loop 2 is shown provided with a saddle 4 like that of my patent of October 13, 1908 to reduce the tendency of the hanger-strap or handhold to sway or swing in the direction of the length of the supporting-rod. The said body-portion 3 is made of a strip of appropriate sheet-material, usually sheet-metal, its extremities being brought together

and its side marginal portions 3^a, 3^a, being in the form of inwardly-turned rolls.

Having reference to the features of the present invention, each extremity of the body-portion 3 is formed with an extension 3^b projecting beyond the ends of the marginal rolls 3^a, 3^a, from between the latter. The extensions of the two extremities are fastened together, a tubular rivet 3^c being shown as the fastening in Figs. 3 and 4. The barrel of such rivet occupies registering holes in the respective extensions. The extensions are stiffened and strengthened by being ribbed, as at 3^d, the raised ribbing being continuous around the holes for the said rivet so as to form seats for the flange and upset portion of the latter. Holes 3^e registering with each other are made through the extensions just below the holes for rivet 3^c. As thus fastened securely together, the extensions constitute a lug which serves for the attachment of the suspending loop 2 and the lower loop or hand-grasp to each other. For this attachment, the lug fits between the lower ends of the suspending loop 2, and a solid rivet 5 passes through holes in said ends and through the eye of the tubular rivet 3^c. A second rivet, 6, passes through holes in the said ends below rivet 5, and through the holes 3^e in the lug. This second rivet, 6, adds to the security of the attachment of the suspending loop and lower loop or hand-grasp to each other, and holds them in line with each other. The rivet 6 may be extracted, and the two loops may then be turned with relation to each other upon rivet 5 as a pivot. Tubular rivet 3^c serves as a bushing surrounding the said rivet 5.

The lug with its ribbing takes the place of the keys of my prior patents as respects both the attachment of the loops to each other, and the tying together and reinforcing of the sides of the lower loop.

The extreme lower ends of suspending loop 2 abut against the upper ends of the marginal rolls 3^a, 3^a, of the lower loop or hand-hold, and cover the upper ends of the strip or strips fitting under the said rolls. In this instance two strips are shown, namely, an inner strip 7, and an outer strip 8. Inner strip 7 may be of ornamental character or bear advertising matter, in which case outer strip 8 is of transparent material; such as celluloid, or inner strip 7 may be a padding or backing strip and outer

strip 8 a facing strip and consist of opaque material. When tubular rivet 6 is removed, and the loops turned edgewise with relation to each other around pivotal rivet 5, in a manner which will be understood from reference to my Patent No. 901,119, so as to uncover the upper ends of the strips 7 and 8, the strips 7 and 8, or either of them, may be removed and replaced. Then, by turning the loops back into the position with relation to each other which is shown in Figs. 1 and 2 of the drawings hereof, the ends of the strips will be covered by the lower ends of loop 2, and another rivet 6 may be applied to lock the loops in their normal relative position.

To stiffen and strengthen the lower portion or bend of the handhold or hand-grasp, as well as render it more comfortable to the hand having hold thereof, I form the concavity thereof transversely curved in cross-section, as shown in Fig. 5, the sheet-metal being upwardly bulged or crowned, as at 3^f. This holds the said lower portion or bend in proper form, giving it increased capacity to resist strain tending to change its shape. The transversely rounded form fits the curvature of the fingers which are hooked over it during use. The bulged or crowned portion is further reinforced by a trussing strip 9, Figs. 2 and 5, which is made fast in place. This strip backs up the strips 7 and 8 and keeps them flat.

To strengthen and stiffen the side-portions of the lower loops, and decrease the extent of surface with which the hand makes contact when grasping either of such portions, the latter are longitudinally ribbed as at 10, the ribs projecting inwardly.

To avoid injury to one's hand when slipped downward along the suspending loop and the upper portion of the lower loop, the corners of the strip of which the body-portion 3 is formed are downwardly rounded, as shown in Fig. 2. Thereby, such corners are overhung and shielded by other portions of the rolled flanges 3^a, 3^a, at the upper end of the said lower loop.

The keys heretofore employed by me have been soldered to the faces of the side-portions of the lower loop, between the rolled side-flanges. This soldering has been more or less difficult to perform satisfactorily, and cannot be performed expeditiously in the manufacture. By providing the side-portions with extensions projecting beyond such side-portions, from between the side-flanges, and securing the said extensions together to constitute an attaching lug, I obviate the necessity for soldering between the side-flanges, and expedite the manufacture.

The transverse crowning of the lower portion or bend of the lower loop, and the longitudinal ribbing of the side-portions, are important in that they give increased

strength to resist lateral pressure and tendency to crushing.

What is claimed as the invention is:—

1. In a hanger-strap or handhold, in combination, the lower loop of sheet-material having the rolled side-flanges and also having each end of its body-portion provided with an extension projecting from between the said flanges, the two extensions fastened together and constituting a lug for connection with the suspending loop, and the suspending loop having its lower portion attached to the said lug.

2. In a hanger-strap or handhold, in combination, the lower loop having the rolled side-flanges and also having each end of its body-portion provided with an extension projecting from between the said flanges, means for fastening the two extensions together to constitute a connecting lug, the suspending loop having its end-portions applied to opposite sides of said lug, and means for fastening said end-portions to said lug.

3. In a hanger-strap or handhold, in combination, the lower loop having the rolled side-flanges and also having each end of its body-portion provided with an extension projecting from between the said flanges, a tubular rivet fastening the two extensions together, a suspending loop, and a fastening passing through the said tubular rivet and attaching the lower portion of the suspending loop to the lug constituted by the said extensions.

4. In a hanger-strap or handhold, in combination, the lower loop having the rolled side-flanges and also having each end of its body-portion provided with an extension projecting from between the said flanges, said extensions ribbed and thereby stiffened, means securing said extensions together in the form of a connecting lug, and a suspending loop having its lower portion attached to the said lug.

5. In a hanger-strap or handhold, in combination, the lower loop having the rolled side-flanges and also having each end of its body-portion provided with an extension projecting from between the said flanges, a rivet securing the extensions together to form a connecting lug, the said extensions being ribbed to stiffen the same and also form seats at the ends of the said rivet, and a suspending loop having its lower portion attached to the said lug.

6. In a hanger-strap or handhold, the lower loop composed of sheet-material bent to shape, and having rolled side-flanges, and also having the concavity of the lower portion thereof upwardly curved in cross-section, and the trussing strip bridging the hollow between the said flanges.

7. In a hanger-strap or handhold, the lower loop composed of sheet-material bent to shape and having rolled side-flanges, and

having the longitudinally ribbed side-
tions.

8. In a hanger-strap or handhold, the
lower loop composed of sheet-material bent
5 to shape and having rolled side-flanges, hav-
ing longitudinally ribbed side-portions, the
said loop also having the concave lower por-
tion thereof upwardly bulged or crowned

transversely and reinforced by a trussing
strip between the flanges. 10

In testimony whereof I affix my signature
in presence of two witnesses.

JOHN F. NEWTON, Jr.

Witnesses:

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