G. F. MINNIS.

WINDOW WASHER'S HARNESS.

APPLICATION FILED SEPT. 15, 1918.

1,366,920. **Patented Feb. 1, 1921.**

Fig. 1.

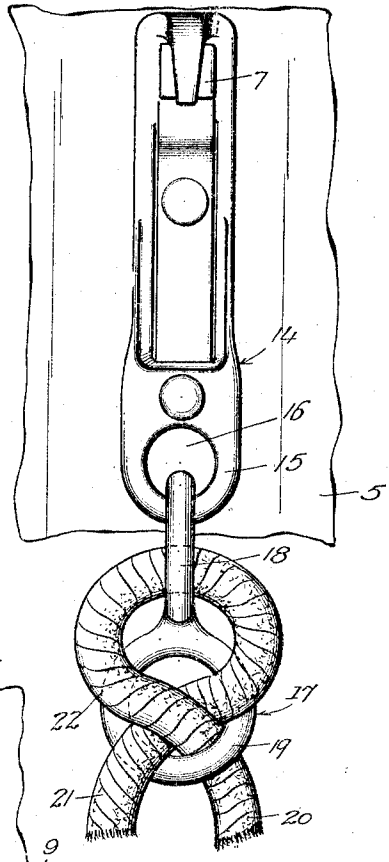


Fig. 2.

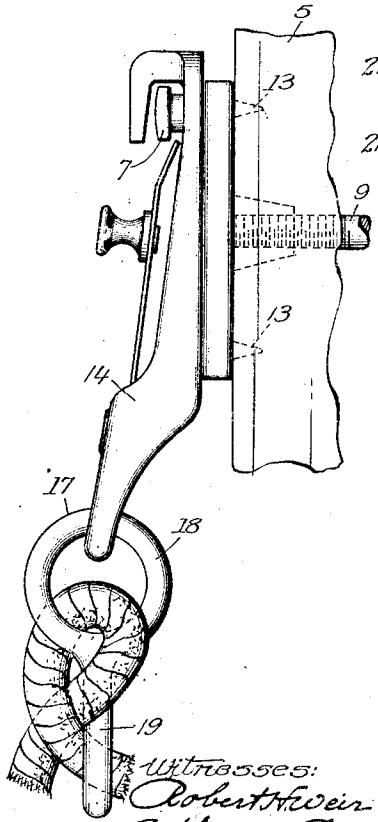
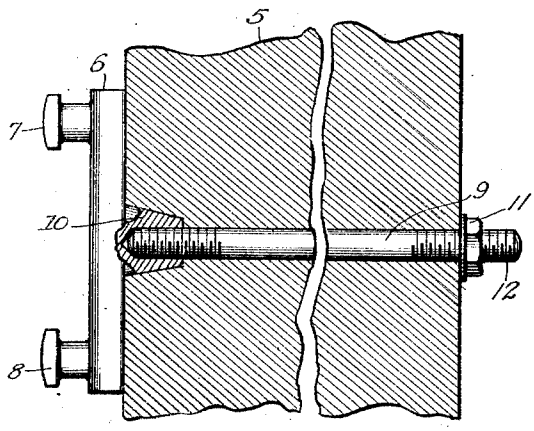


Fig. 3.



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UNITED STATES PATENT OFFICE.

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WINDOW-WASHER'S HARNESS.

1,366,920. Specification of Letters Patent. Patented Feb. 1, 1921.

Application filed September 16, 1918. Serial No. 254,374.

To all whom it may concern:

Be it known that I, GEORGE F. MINNIS, a citizen of the United States, residing at Chicago, in the county of Cook and State of Illinois, have invented certain new and useful Improvements in Window-Washers' Harness, of which the following is a specification.

My invention relates to improvements in window washers' harness, and has especial reference to means for holding supporting ropes that are adjustably attached to the clips of the harness.

One of the objects of my invention is to provide a simple, inexpensive fitting for a window washers' harness through which a rope passes in making a half-hitch connection with the clip, arranged so that when the rope is being lengthened or shortened the loop can not be made to disengage its connection with the fitting.

Another object of my invention is to provide an improved anchor for the clip of the window washers' harness, arranged to extend through the wall near the window casing, and having a rearwardly extending stem, or shank, made preferably of rolled metal, such as a brass rod, threaded and sweat to the anchor plate to afford maximum strength and minimum dimension.

Other, further and more specific objects of my invention will become readily apparent, to those skilled in the art, from a consideration of the following description when taken in conjunction with the drawing, wherein;

Figure 1 is a front elevation of the clip, which is a part of the window washer's harness, showing the new rope-holding fitting attached thereto, within which the rope, which supports the window washer in pursuance of his occupation, is shown to make a half-hitch as a means for conveniently and quickly varying the length of the rope.

Fig. 2 is a side elevation of the same, and;

Fig. 3 is a broken away section through a wall, showing the anchor in place, and the means for holding the anchor extending through the wall.

In all of the views the same reference characters are employed to indicate similar parts.

5 represents the wall of a building, and 6 shows the plate, or body part of the anchor with the projecting clip engaging heads 7 and 8, having a rearwardly extending shank 9 threaded into a hub 10 of the body part 6, and sweat therein with solder, or the like, so that it can not be removed, and 11 is a nut over the outer threaded end 12 of the shank. To prevent the body part 6 from turning, inwardly directed points 13—13 may be used to enter the face of the wall. A clip 14, of the usual form for engaging the heads 7 and 8 of the anchor 6 is provided with a ring shaped terminal 15 having a perforation 16. The rope-engaging fitting 17 is substantially two connected rings having their axes at right angles to each other, comprising a ring 18 and the ring 19. The ring 18 enters the opening 16 of the clip. A rope 20 has its short end 21 passed through the ring 19 and then through the ring 18, after which the end 21 is passed under the turn 22 between the rings 18 and 19. Any strain upon the elongated end 20 of the rope tends to hold the rope in immovable relation with the fitting 17, thereby making a hitch that firmly and unalterably holds the rope and clip in adjusted relation. The object of using the ring 18 is to prevent the part 20 of the rope from enlarging and passing over the end of the clip 14, which sometimes happens, and in which event the man who uses the harness may be puzzled to properly replace it.

To lengthen or shorten the rope it is only necessary to pull the long end 20 or the short end 21 through the rings 18 and 19 and then pull the two ends tight, as shown in Fig. 1, whereupon the rope may not be further moved when strain or stress is again applied to the long end 20. This is a very convenient, quick and efficient means for holding the rope in adjusted position, and the ring 18, being used for the purpose of attaching the clip and also for receiving the threaded loop of the hitch, makes a very convenient and efficient means of adjustment.

I am aware of the fact that the terminal of the clip 14 has been constructed heretofore with two openings at right angles to each other, but that arrangement has been an integral part of the clip, and there being no joints in said construction, between the clip and the further opening for inclusion of the rope, causes too great a strain to be applied to the clip, which has a tendency to bend the clip out of proper form, or to break it. By making the fitting 17 of a sep-

arate part from the clip and thereby providing a hinge between the fitting and the clip, considerable less strain is exerted on the clip when weight is supported by the rope, and by making the parts in two pieces adds considerable more flexibility to the device in its handling and operation.

Having described my invention what I claim and desire to secure by Letters Patent is;

1. A window cleaner's harness including in combination a clip adapted to be detachably secured to a building, having an aperture at its lower end, a rope engaging fitting comprising a pair of connected ring members with their axes at right angles to each other, one of said ring members passing through said aperture whereby the fitting has a pivotal or hinge connection with said clip, and a rope having its short end passed through the lower ring member, thence through the upper ring member, and then under the turn of the rope between the two ring members to form a half hitch.

2. A window cleaner's harness including in combination a clip 14 adapted to be detachably secured to a building having an aperture 16 near its lower end, a rope engaging fitting 17 comprising a pair of connected ring members 18, 19, with their axes at right angles to each other, ring member 18 passing through aperture 16 whereby said fitting has a pivotal or hinge connection with said clip, and a rope 20, having its short end passed through ring member 19 and thence through ring member 18 and then under the turn 22 of the rope between the two ring members so as to form a half hitch and make a secure connection.

In testimony whereof I hereunto subscribe my name.

GEORGE F. MINNIS.