

March 19, 1929.

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1,706,023

BELT TERMINAL

Filed March 24, 1926

2 Sheets-Sheet 1

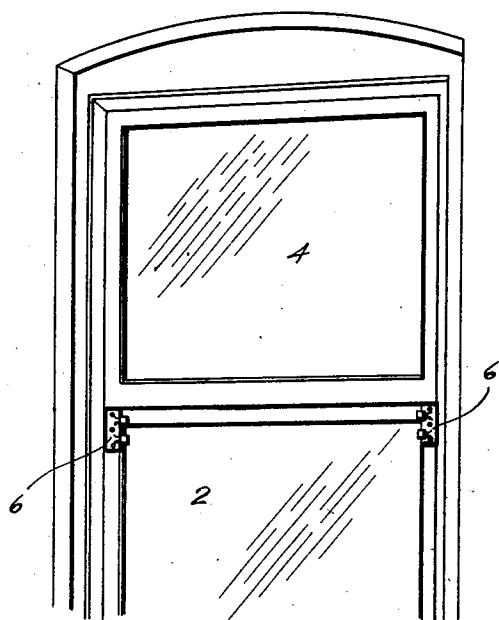


Fig. 1

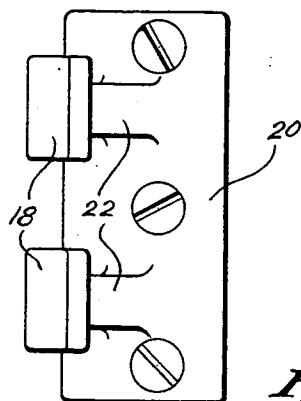


Fig. 2

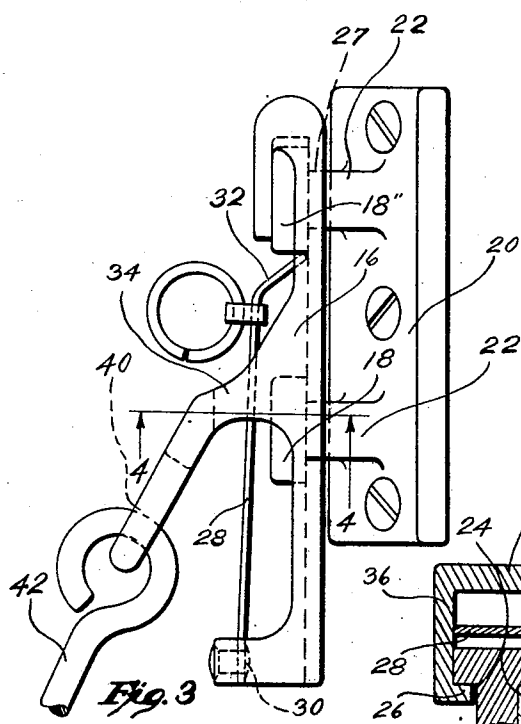


Fig. 3

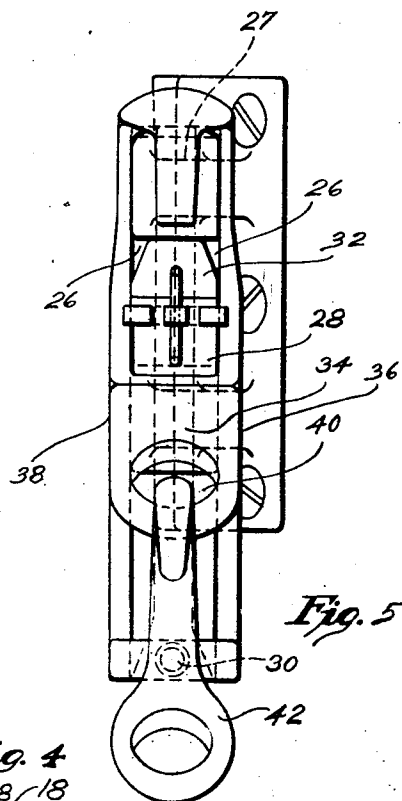


Fig. 4

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2 Sheets-Sheet 2

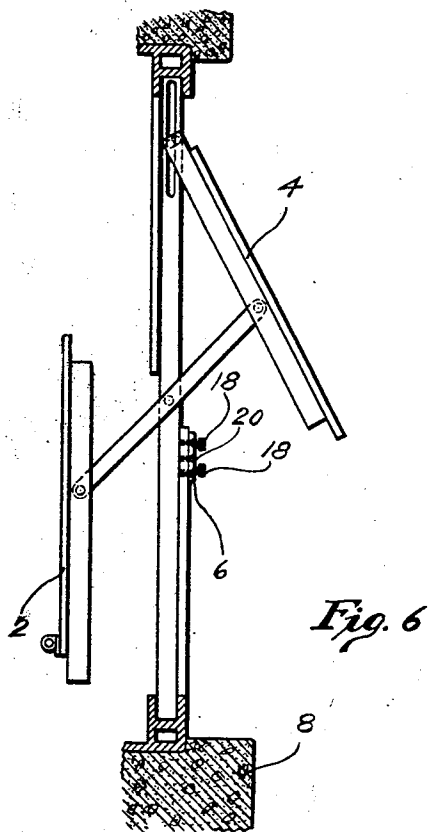


Fig. 6

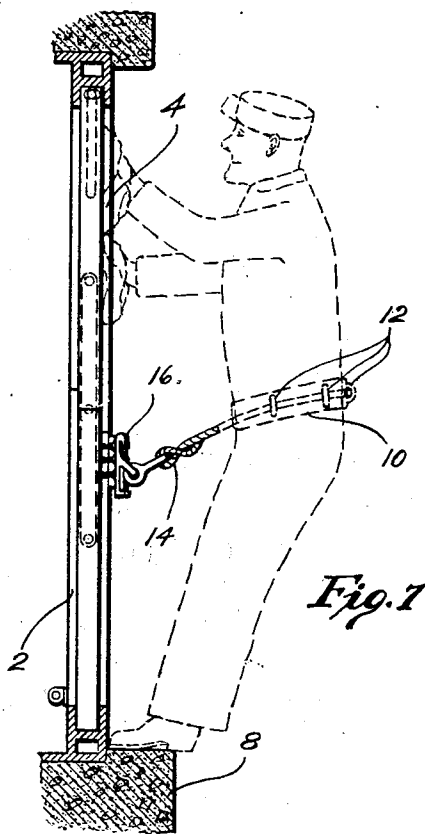


Fig. 7

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UNITED STATES PATENT OFFICE.

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BELT TERMINAL.

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The present invention, though having other and more general fields of usefulness, is more particularly related to belt terminals to which the safety belts of window washers are connected.

Belts of the above-described character are provided with a terminal at each end, the terminals being adapted to be releasably secured to anchor bolts. The anchor bolts are anchored in the building walls on each side of the window that is to be washed, usually at a height a little above the window-washer's waist. Each terminal is provided with a depending eye, by means of which connection is made to the belt around the window-washer's waist. In case the window washer should accidentally lose his footing, he is prevented from falling to the ground by the safety belt, his weight being carried by the anchor bolts. The position of the depending eyes is quite satisfactory for ordinary windows, but introduces a source of danger in connection with windows of a type such that the anchor bolts must be positioned below the window-washer's waist, such as in those cases where the windows pivot outward towards the window washer. This is largely because the strains produced by the belt upon the belt terminals are in an upward direction, tending, frequently, to dislodge the terminals from their anchor bolts.

It is therefore an object of the present invention to improve upon belt terminals of the above-described character. Other and further objects will be explained hereinafter and will be pointed out in the appended claims.

In the accompanying drawings, Fig. 1 is an elevation of a window of a type particularly adapted for the present invention, though it will be understood that the invention is not limited to use with windows of such type; Fig. 2 is a view of one of the anchor bolts shown in Fig. 1, upon a larger scale; Fig. 3 is a side view, upon the same scale as Fig. 2, showing a terminal constructed according to a preferred embodiment of the present invention, secured to the anchor bolt of Fig. 2; Fig. 4 is a section taken upon the line 4—4 of Fig. 3, looking in the direction of the arrows; Fig. 5 is a front elevation corresponding to Fig. 3; Fig. 6 is a side elevation of the window of Fig. 1, shown open; and Fig. 7 is a similar view of the window closed, illustrating, in dash lines, the position occupied by the window washer.

The window shown in Figs. 1 and 6 comprises two parts 2 and 4, the former adapted to pivot inward into a room of the building, and the latter adapted to pivot outward away from the building. Owing to the outward-pivoting movement of the window part 4, and as no other place is available for such purpose than the position occupied by the edge of the window, the anchor bolts 6 must be positioned below the lower-most part of the window part 4, and considerably below the window-washer's waist, when the latter is standing on the window sill 8. The window washer is shown wearing a belt 10 having metal eyes 12 through which is run a rope 14 the ends of which are provided with belt terminals 16 that are secured to the anchor bolts 6.

Each anchor bolt 6 is shown provided with two vertically spaced-apart heads 18 connected with the body 20 by necks 22. Each belt terminal 16 is provided with a longitudinally disposed slot 24 of narrower width than the dimensions of the heads 18 and within which the necks 22 are adapted to be received. The terminal is provided with side portions 26 on each side of the slot 24 against which the heads 18 are adapted to engage. The terminal is provided also with a third side 27 bounding a third side of the slot 24. A spring clip 28 is secured at one end 30 to one end of the terminal, and the other end 32 is adapted to snap in under the upper head 18. The upper neck is thus confined between and engaged by the sides 26, the side 27 and the spring clip, the upper head 18 being thus locked in position in the slot 24.

The terminal is provided with an intermediately disposed portion 34 connecting opposite sides of the slot at 36 and 38 at a point between the positions adapted to be occupied by the bolt heads 18. The portion 34 carries an eye 40 within which is hooked one end of a belt-attaching link 42. The other end of the link 42 is secured directly to the rope 14. The upward strains imposed upon the terminal 16 by the rope 14 are thus transmitted to a point between the two bolt heads 22, without danger of the terminal becoming accidentally unhooked. Such danger would exist if the eye 40 were disposed below the terminal, as shown in dash lines, Fig. 7, at 44, or if the eye 40 were disposed at the opposite end of the belt terminal. In such cases, the spring clip 28 would easily become released from the upper bolt head. The portion 34, by straddling

dling the slot, confines the range of movement of the spring clip 28.

It will be understood that the invention is not limited to the exact embodiment thereof that is illustrated and described herein, but that modifications may be made therein by persons skilled in the art without departing from its spirit and scope as defined in the appended claims.

10 What is claimed is:

1. A terminal having a longitudinally disposed slot adapted to receive the neck of an anchor bolt and having portions on each side of the slot against which the head of the bolt is adapted to engage, the head of the bolt being of greater dimension than the width of the slot, the terminal having movable means for locking the bolt in position in the slot and the terminal having an attaching portion disposed at an intermediate point of the slot, the attaching portion having means for

confining the range of movement of the locking means.

2. A belt terminal having a longitudinally disposed slot adapted to receive the necks of a plurality of spaced-apart anchor bolts and having portions on each side of the slot against which the heads of the bolts are adapted to engage, the heads of the bolts being of greater dimension than the width of the slot, the terminal having movable means for locking one of the bolts in position in the slot and having a belt-attaching portion disposed at an intermediate point of the slot between the positions adapted to be occupied by the locked bolt and the position adapted to be occupied by another bolt, the belt-attaching portion straddling the slot to confine the range of movement of the locking means.

In testimony whereof, I have hereunto subscribed my name.

CHARLES A. CUNNINGHAM.