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J. FRANKEL

2,195,299

SUSPENDING DEVICE FOR A LIFESAVING ROPE AND BELT

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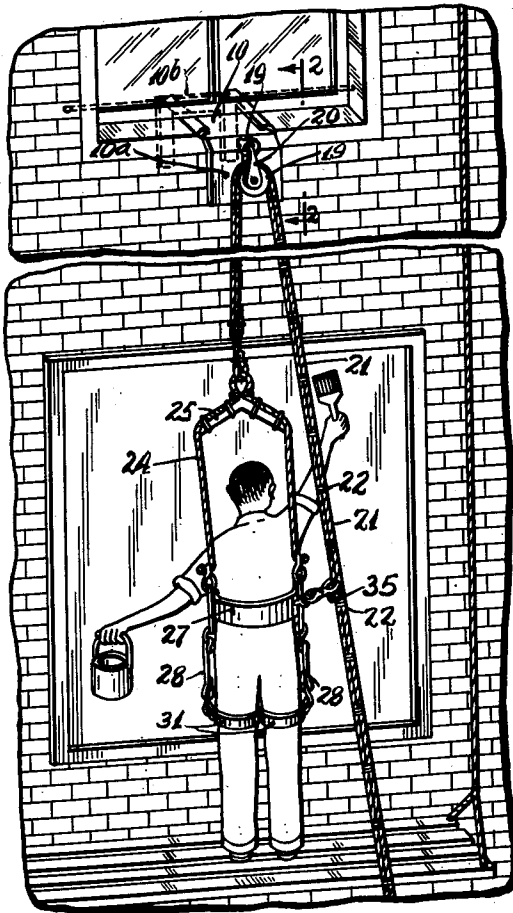


Fig. 1.

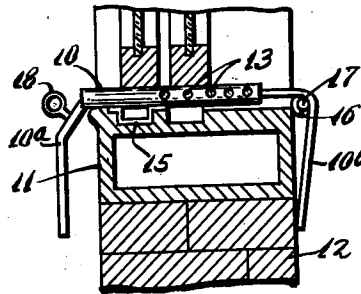


Fig. 2.

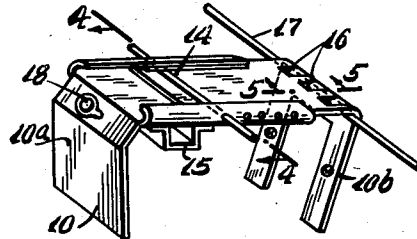


Fig. 3.

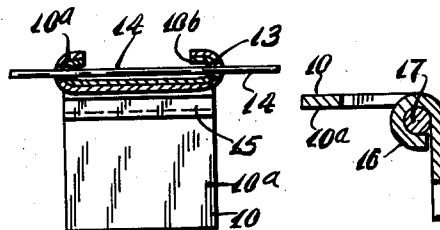


Fig. 4.

Fig. 5.

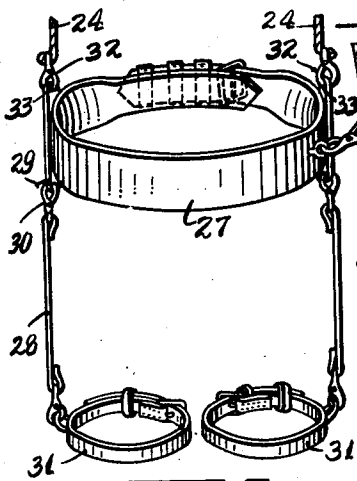


Fig. 6.

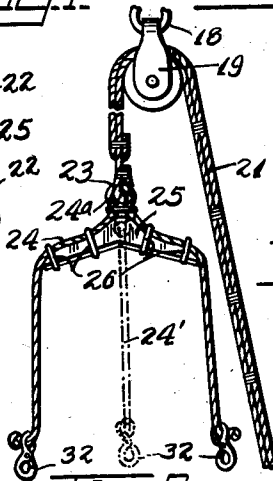


Fig. 7.

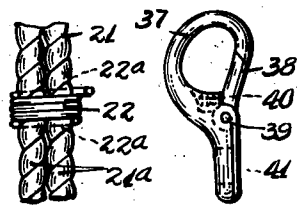


Fig. 8.

Fig. 9.

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2,195,299

SUSPENDING DEVICE FOR A LIFESAVING
ROPE AND BELT

Jack Frankel, Brooklyn, N. Y.

Application January 30, 1939, Serial No. 253,504

4 Claims. (Cl. 227-49)

This invention relates to new and useful improvements in a suspending device for a lifesaving rope and belt. This application is similar in subject matter to my Patent No. 2,166,809, dated July 18, 1939.

More specifically, the invention proposes the construction of a suspending device for a lifesaving rope and belt characterized by the provision of a bracket formed of telescopic sections adjustable in a manner to be engaged over a window sill of different widths.

Still further the invention proposes the provision of a pulley mounted upon said bracket and over which a double rope extends in a manner to permit the length of the ends of the rope to be adjusted if desired.

A further object of this invention is the provision of downwardly extending arms formed on the free ends of the sections and engageable on opposite sides of the sill in a manner to hold the suspending device in position thereon.

Still further it is proposed to provide one of the sections with a shaft having its intermediate portion engaging through the section and its ends bearing against the interior of the building at the sides of the window in a manner to assist the downwardly extending arms in holding the suspending device in position on the sill.

Another object of this invention is the formation of curled overlapping edges formed on said sections and provided with a plurality of alignable openings through which a rod may be selectively engaged in a manner to hold the section in various extended positions and form the adjustment thereof.

For further comprehension of the invention, and of the objects and advantages thereof, reference will be had to the following description and accompanying drawing, and to the appended claims in which the various novel features of the invention are more particularly set forth.

In the accompanying drawing forming a material part of this disclosure:

Fig. 1 is an elevational view of a portion of a building showing a suspending device with its lifesaving rope and belt and being used by a window washer.

Fig. 2 is a sectional view taken on the line 2-2 of Fig. 1.

Fig. 3 is a perspective view of the bracket per se.

Fig. 4 is a sectional view on the line 4-4 of Fig. 3.

Fig. 5 is a sectional view on the line 5-5 of Fig. 3.

Fig. 6 is an elevational view of the double rope and belt engaging rope per se.

Fig. 7 is an enlarged detailed view of a portion of the double rope per se.

Fig. 8 is an elevational view of one of the clips per se.

Fig. 9 is an enlarged detailed view of the safety belt.

The suspending device for a lifesaving rope and belt, according to this invention, includes a bracket 10 for attachment upon a window sill 11 of a building 12. If the device is being used for washing windows the bracket 10 is engaged upon the window sill 11 immediately above the window that is to be washed, as shown in Fig. 1. The bracket 10 is constructed of separate sections, consisting of an outer section 10^a and an inner section 10^b.

The sides of the sections 10^a and 10^b have their ends turned upwards forming rolled edges which engage one in the other for telescopically connecting these sections together. The edges of the sections 10^a and 10^b are provided with a plurality of alignable openings 13 through which a rod 14 is adapted to be passed for holding the sections in various adjusted positions to permit the bracket to be adjusted to window sills of different widths.

The bottom face of the section 10^a is formed with a sill engaging member 15 in the form of a channel shaped strip of material securely attached thereto and which is adapted to engage into the groove of the bottom face of the window sill 11 for assisting in holding the bracket 10 in position upon the sill 11. The inner end of the section 10^b is turned downwards to extend along the inner face of the sill 11, as shown in Fig. 2 and is provided with threaded openings 10^c. A plurality of prongs 16 are stamped from the section 10^b and are turned under as shown in Fig. 5 to form passageways for a long shaft 17 which is adapted to be engaged therethrough for abutting the interior of the building at the sides of the window as shown by the dotted lines in Fig. 1 for further assisting holding the bracket 10 in position upon the window sill 11.

A ring 18 is mounted upon the outer end of the outer section 10^a. A pulley 19 having a spring clip 20 is adapted to be engaged upon the ring 18 for holding the pulley 19 in position upon the outer section 10^a. A double rope 21 engages over the pulley 19 and at spaced points along the length thereof the individual ropes are secured together by means of wire binding material 22.

The rope may also be made of wire or cable material.

The double rope is formed of separate strands of rope 21^a as clearly shown in Fig. 7. The wire binding material 22 has its intermediate portion wound around the strands of rope forming the double rope and the ends 22^a thereof are passed through the ropes for rigidly connecting these strands of rope together to form a single unit.

The ends 22^a of the wire binding material which is passed through the strands of rope 21^a are indicated by dotted lines in Fig. 7.

The double rope 21 on one side of the pulley 19 is provided with a spring clip 23 mounted upon the end thereof. A belt engaging rope 24 normally has its intermediate portion 24^a engaged on the spring clip 23 as shown in Fig. 6. A reinforcement and separator 25 is engaged between the ends of the belt engaging rope 24 for separating the ends to permit them to extend along the sides of a person. The reinforcement and separator is held in position by means of a plurality of clamping irons 26 which engage around the circumference of the reinforcement and separator 25 and the rope 24. A third rope 24' may also be provided for engaging the back of belt 27.

A safety belt for engagement upon a person is adapted to be connected with the ends of the belt engaging rope 24. The safety belt comprises a waist engaging belt 27 which is adjustable in diameter for engaging around waists of different thicknesses. Straps 28 have their upper ends attached to the bottom edge of the waist engaging belt 27. On diametrically opposite sides the waist engaging belt 27 is provided at its bottom edge with rings 29. The upper ends of the straps 28 are provided with spring clips 30 for engaging the rings 29. The straps 28 are adapted to extend along the outer faces of one's legs and at their bottom ends are provided with leg engaging straps 31 which are adapted to be engaged around one's legs immediately above the knees.

The ends of the belt engaging rope 24 are provided with spring clips 32 which are adapted to be engaged with rings 33 mounted upon the upper edge of the waist engaging belt 27 for connecting the safety belt with the belt engaging rope 24.

The double rope 21 may be attached to the waist engaging belt 27 of the safety belt by a spring clip 35 secured to the side of the waist engaging belt 27 which may be connected with various points along the double rope above the wire binding material 22. The wire binding material 22 provides enlarged areas against which the spring clip 35 is adapted to strike for preventing the fastening element from slipping downwards thereon and provides a continuous circle of rope for supporting a person in the event he loses his balance and slips.

The spring clips referred to in this specification are all the same in construction and comprise a partial loop portion 37 which is adapted to be releasably engaged upon its respective portion of the lifesaving rope or belt. A portion 38 for completing the partial loop portion has one of its ends pivotally supported upon a pin 39 mounted on the partial loop portion.

The other end of the portion 38 is normally aligned with the end of the partial loop portion 37 for completing the loop. A spring 40 is provided for urging the portion 38 into a position in which it will complete the loop. A second loop

41 extends from one end of the partial loop 37 and is adapted to be securely attached upon its respective portion of the lifesaving rope or belt.

The operation of this device is as follows:

The waist engaging belt 27 is engaged around one's waist and the leg engaging straps 31 are securely engaged around one's legs above the knees. The bracket 10 is then engaged upon the window sill above the window which is to be washed and the pulley 19 is engaged upon the ring 18. The double rope 21 is then passed through the pulley 19 and the belt engaging rope 24 is mounted upon the spring clip 23 mounted on one end of the double rope 21. The spring clip 32 mounted upon the ends of the belt engaging rope 24 are then engaged upon the rings 23 mounted upon the top edge of the waist engaging belt 27. The double rope above one of the wire binding elements 22 is then engaged upon the spring clip 35 on the waist engaging belt 27 for completing the circle to prevent the person from fall in the event he slips.

While I have illustrated and described the preferred embodiments of my invention, it is to be understood that I do not limit myself to the precise constructions herein disclosed and the right is reserved to all changes and modifications coming within the scope of the invention as defined in the appended claims.

Having thus described my invention, what I claim as new, and desire to secure by United States Letters Patent is:

1. In a device of the class described, a bracket for engagement upon a window sill for suspending a safety belt along the outside wall of a building, comprising an L-shaped outer section having one of its arms extending downwards along the outside wall of said building and the other of its arms extending across said sill, an L-shaped inner section having one of its arms extending downwards along the inside wall of said building and the other of its arms extending across said sill and overlapping the arm of said outer section which extends across said sill, means on said inner section for assisting said downwardly extending arms to hold said bracket in position upon said sill, a ring mounted on said outer section for permitting said safety belt to be connected to said bracket, and means for telescopically connecting the overlapping arms of said sections together to permit said bracket to be applied to window sills of different thicknesses, said first-mentioned means comprising a plurality of prongs stamped from said inner section at the junction of its arms and rolled to form a passageway, and a shaft having its intermediate portion extended through said passageway and its ends bearing against the interior of the building at the sides of the window.

2. In a device of the class described, a bracket for engagement upon a window sill for suspending a safety belt along the outside wall of a building, comprising an L-shaped outer section having one of its arms extending downwards along the outside wall of said building and the other of its arms extending across said sill, an L-shaped inner section having one of its arms extending downwards along the inside wall of said building and the other of its arms extending across said sill and overlapping the arm of said outer section which extends across said sill, means on said inner section for assisting said downwardly extending arms to hold said bracket in position upon said sill, a ring mounted on said outer section for permitting said safety belt to

be connected to said bracket, and means for telescopically connecting the overlapping arms of said sections together to permit said bracket to be applied to window sills of different thicknesses, said overlapping arms having their side edges curled upwards and engaged one into the other for telescopically connecting said sections.

3. In a device of the class described, a bracket for engagement upon a window sill for suspending a safety belt along the outside wall of a building, comprising an L-shaped outer section having one of its arms extending downwards along the outside wall of said building and the other of its arms extending across said sill, an L-shaped inner section having one of its arms extending downwards along the inside wall of said building and the other of its arms extending across said sill and overlapping the arm of said outer section which extends across said sill, means on said inner section for assisting said downwardly extending arms to hold said bracket in position upon said sill, a ring mounted on said outer section for permitting said safety belt to be connected to said bracket, and means for telescopically connecting the overlapping arms of said sections together to permit said bracket to be applied to window sills of different thicknesses, said overlapping arms having their side edges curled upwards and engaged one into the other for telescopically connecting said sections, said latter-mentioned means, comprising a rod extendable through aligned openings

formed in the upwardly curled side edges of the overlapping arms of said sections for holding them in various extended positions.

4. In a device of the class described, a bracket for engagement upon a window sill for suspending a safety belt along the outside wall of a building, comprising an L-shaped outer section having one of its arms extending downwards along the outside wall of said building and the other of its arms extending across said sill, an L-shaped inner section having one of its arms extending downwards along the inside wall of said building and the other of its arms extending across said sill and overlapping the arm of said outer section which extends across said sill, means on said inner section for assisting said downwardly extending arms to hold said bracket in position upon said sill, a ring mounted on said outer section for permitting said safety belt to be connected to said bracket, and means for telescopically connecting the overlapping arms of said sections together to permit said bracket to be applied to window sills of different thicknesses, and a strip of material attached to the bottom face of the arm of said outer section which extends across said sill and engageable into a groove formed in said sill for assisting said downwardly extending arms and said latter-mentioned means to hold said bracket in position on said sill.

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