

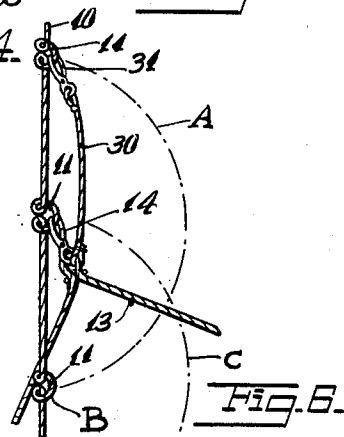
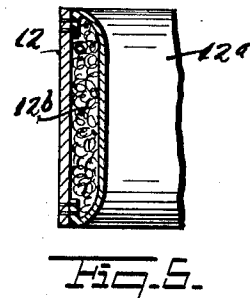
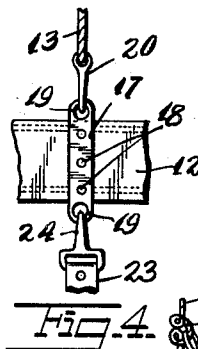
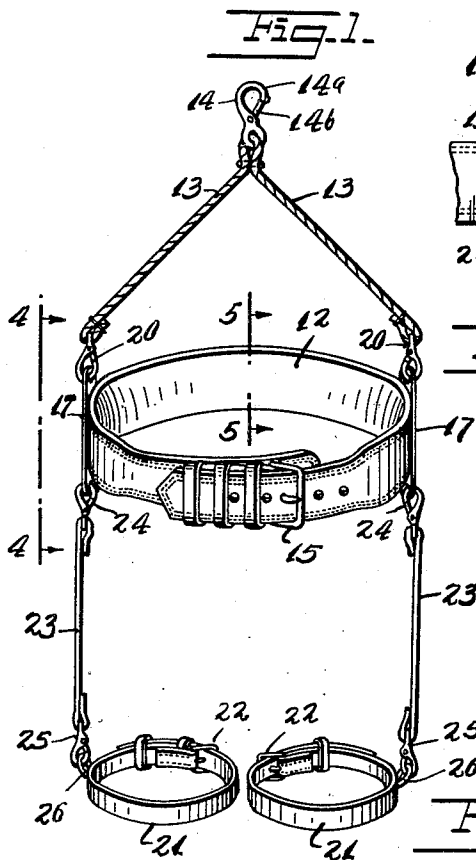
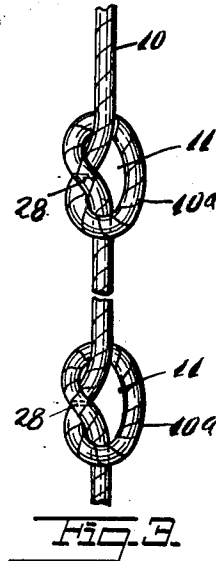
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LIFESAVING ROPE AND BELT

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LIFESAVING ROPE AND BELT

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2 Claims. (Cl. 227-49)

This invention relates to new and useful improvements in a life saving rope and belt.

The invention has for an object the provision of a depending rope formed with a plurality of ring elements along its length spaced from each other, and said ring elements to be selectively engageable by a hook element connected with a safety belt for attachment upon a person.

More specifically, it is contemplated to provide a belt for engaging about the body of a person to support him, to connect support straps with the belt, and to arrange a hook element upon the top ends of said support straps.

The life saving device is particularly adapted for persons working on a scaffold. It is proposed that the depending rope be supported at its top end from the roof or an upper story window. A person dons the safety belt and engages the hook upon one of the ring elements of the rope. He is then free to move along the scaffold and do his work. If for any reason the scaffold falls or swings loose serious injury is avoided by the safety belt and the depending rope.

Still further the invention proposes a novel arrangement whereby an auxiliary strap device is provided for supporting the belt and is also provided with a hook engageable with one of the ring elements which is adjacent to the ring element engaged by the first-mentioned hook. With this arrangement it is possible for the person to alternately disconnect the hook elements from the ring elements in a manner so that at any instant, at least one hook element engages one ring element, while travel progress may be made up or down the rope.

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 a perspective view of a person on a scaffold and equipped with a life saving device according to this invention.

Fig. 2 is a perspective view of the safety belt portion of the device.

Fig. 3 is a fragmentary enlarged detailed elevational view of a portion of the depending rope.

Fig. 4 is a fragmentary elevational view of a portion of the safety belt looking in the direction of the line 4-4 of Fig. 2.

Fig. 5 is a sectional view on the line 5-5 of Fig. 2.

Fig. 6 is a fragmentary perspective view of a portion of a life saving device which is constructed according to a modification of the invention.

The life saving device includes a depending rope 10 having a plurality of ring elements 11 along its length spaced from each other. A belt 12 is provided for engaging about the body of a person to support the person. Support straps 13 are attached to the belt. A hook element 14 is arranged on the top of the support straps and is adapted to hook on to any one of the ring elements 11.

The belt 12 is adapted to engage about the waist of a wearer. This belt is provided with padding material 12^a upon its inner side so as to prevent undue wear upon one's clothes, and to add comfort to the wearing of the belt. Furthermore, this padding is of particular value in preventing injury to the person should his weight suddenly be thrown on the belt. Specifically, the belt 12 includes an outer layer of strong leather material 12^b, and the padding material 12^a is secured to the inner face of this outer belt.

The belt 12 is provided with a buckle 15 mounted upon one end and cooperative with openings 16 formed in the other end portion of the belt by which the belt may be engaged upon different waist sizes. At the sides of the belt 12 there are strong metallic strips 17 which are secured to the belt by several rivets 18. These metallic strips are formed with openings 19 in the top and bottom ends. The straps 13 are provided with fastening elements 20 at their bottom ends which engage the openings 19 at the top ends of the metallic strips 17. Thus the support straps 13 are secured to the belt. The hook element 14 is of a type which has a metallic hook portion 14^a and a spring closure element 14^b for closing the mouth opening of the hook. This spring element serves to prevent accidental disengagement of the hook element from one of the ring elements 11.

The safety strap is also provided with leg strap portions. Specifically, there is a pair of leg straps 21 which are adapted to engage about the legs immediately below the crotch. Each of these straps 21 is provided with a buckle construction so that they may be adjusted to properly fit the legs. These leg straps 21 are connected by straps 23 to the belt 12. Fastening elements 24 are connected with the upper ends of the straps 23 and with the openings 19 in the bottom of the metallic strips 17. Other fastening elements 25 are connected with the lower ends of the straps 23 and

with metallic strips 26 attached to the sides of the leg straps 21.

The ring elements 11 are formed by forming simple overhand knot portions 10^a in the rope 10, leaving these knot portions loose, and in the loose condition sewing portions of the knot closed with wire stitching 28. These stitches 28 preferably are formed through those portions of the knot which cross. The loop portion of the knot is used as a ring element. These elements are formed along the entire length of the depending rope.

The operation of the device is as follows:

The safety belt is donned by a person working on a scaffold or at some other hazardous elevated point. The depending rope 10 is arranged in the vicinity in which the person is to work. The hook 14 of the safety belt is engaged with one of the ring elements 11 of the depending rope. The person is then free to work around and at the same time will be safe in the event of a fall. Should the person fall, or should the support upon which the person is standing fall from under him, he will be supported by the depending rope and safety belt.

In Fig. 6 a modification of the invention has been disclosed which distinguishes from the prior form in an arrangement whereby more than one safety hook is provided for the safety belt, and in an arrangement whereby at least one of these safety hooks may be engaged on a ring element of the depending rope at any instant that the life saving device is being worn.

More specifically, the construction of the device is identical to that of the previous form, except for the addition of an auxiliary strap which is secured to the upper ends of the straps 13. This auxiliary strap 30 is provided with a safety hook element 31. The hook element 31 is capable of engaging one of the ring elements 11 simultaneously with the engagement of another ring element 11 by the safety hook 14. With this arrangement it is possible to move along the depending rope, either upwards or downwards, and at any instant have at least one hook element engage one of the ring elements.

For example, one may work his way progressively down the rope by unhooking the hook element 31, moving it around in the path indicated by the dot and dash lines "A" in Fig. 6 and then engaging the hook element 31 upon a lower one of

the ring elements 11, indicated by "B". Then the hook element 14 may be disengaged from the ring element 11 to which it is connected, and moved downwards along the path indicated by the dot and dash lines "C". In this manner it is possible to move along the depending rope and always have at least one hook element connected therewith.

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 belt for engagement upon one's body, a hook attached to said belt, a depending rope extendable along a vertical surface upon which one desires to work, and a plurality of ring elements formed at spaced positions along the length of said depending rope and upon which said hook is adapted to be selectively engaged for connecting said belt to said rope to prevent one from falling while working on said vertical surface, said ring elements comprising simple overhand knots loosely formed at spaced positions along the length of said rope, and means for preventing said knots from being drawn tight under the pull of weights applied thereto.

2. In a device of the class described, a belt for engagement upon one's body, a hook attached to said belt, a depending rope extendable along a vertical surface upon which one desires to work, and a plurality of ring elements formed at spaced positions along the length of said depending rope and upon which said hook is adapted to be selectively engaged for connecting said belt to said rope to prevent one from falling while working on said vertical surface, said ring elements comprising simple overhand knots loosely formed at spaced positions along the length of said rope, and means for preventing said knots from being drawn tight under the pull of weights applied thereto, comprising wire stitches engaged through said rope at the crossing point of said knots.

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