

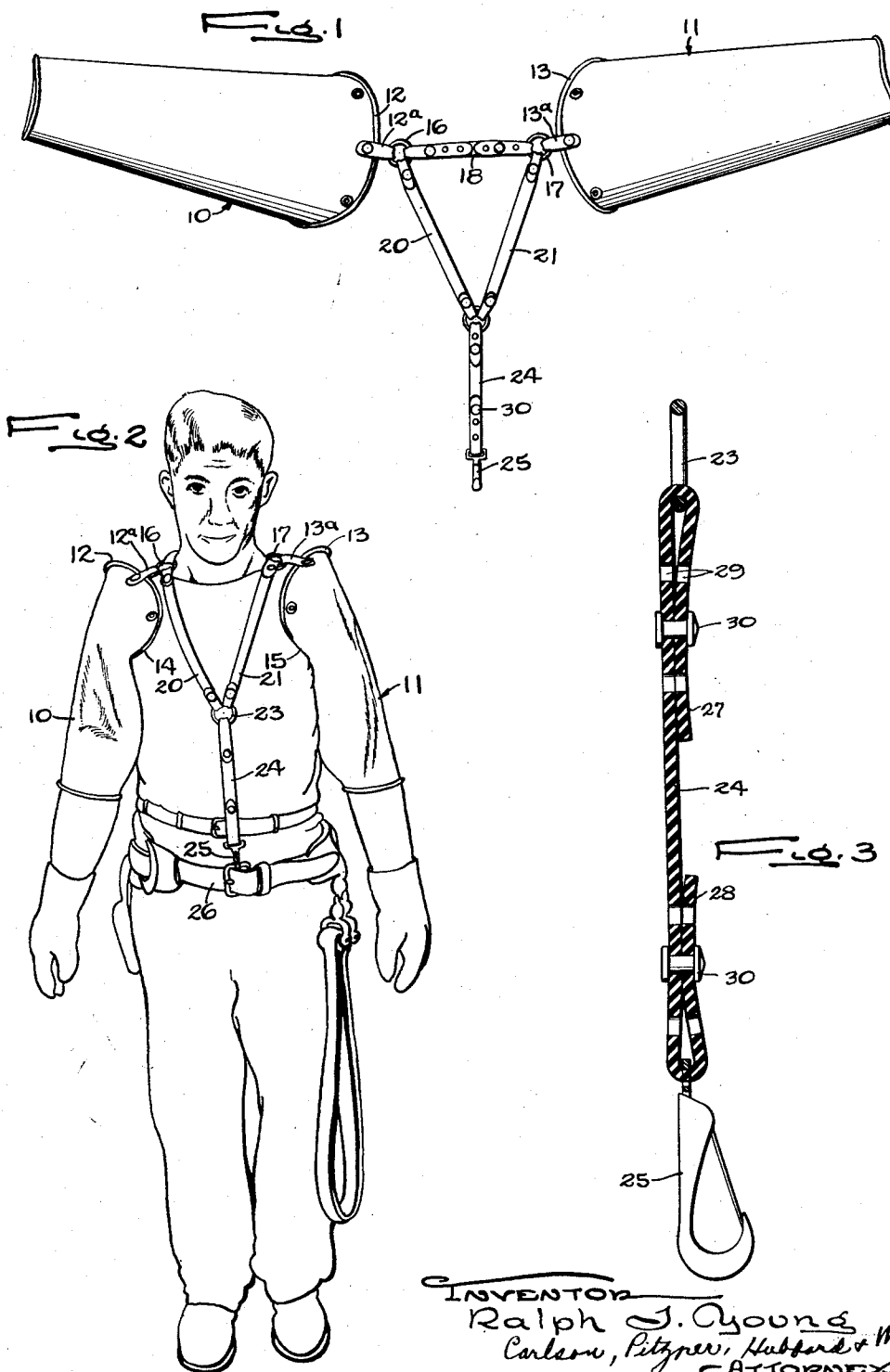
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R. J. YOUNG

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PROTECTIVE SLEEVE HARNESS

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PROTECTIVE SLEEVE HARNESS

Ralph J. Young, West Terre Haute, Ind., assignor to
Clark Orr, Louisville, Ky.

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1 Claim. (Cl. 2—16)

The present invention relates to safety clothing, and more particularly to protective sleeve harnesses.

It is an object of the present invention to provide a protective sleeve harness in which the sleeves are held in correct position to provide maximum protection for the wearer during all conditions of use, and which is fully effective with the arms upraised or in a position of rest. It is a related object to provide a protective sleeve harness which is more comfortable than harnesses using the conventional tie strap, a harness which eliminates binding, which elastically accommodates itself to unusual reaches, and which may be worn either over or under other clothing. It is a related object to provide a harness which is cool and light in weight.

It is a further object of the invention to provide a harness which is easy to put on and take off. Finally, it is an object to provide a sleeve harness which is universal in use, being initially adjustable to the size of the wearer, whether of large or small stature, which is fully applicable to different sleeve lengths, and which requires no further adjustment during subsequent use.

Other objects and advantages of the invention will be apparent upon reading the attached detailed description and upon reference to the drawing, in which

Figure 1 shows a sleeve harness constructed in accordance with the present invention.

Fig. 2 shows the sleeve harness of Fig. 1 in place on the wearer.

Fig. 3 shows the belt strap in partial cross section in order to bring out the provision for length adjustment.

While the invention has been described herein in connection with the preferred embodiment, it is understood that the invention is not limited to such preferred embodiment, but includes other modifications and alternative constructions falling within the spirit and scope of the appended claim.

Turning now to the drawing, the protective sleeves to which the present invention is applicable are indicated at 10, 11 and are generally tubular in shape, slightly tapering from shoulder to wrist. Each of the sleeves has an upper edge portion 12, 13, respectively, designed to extend slightly over the shoulder of the wearer, and each is scalloped out as indicated at 14, 15, respectively, in order to provide underarm clearance. The sleeves are preferably molded of rubber or of rubber-like plastic material having a high degree of flexibility and providing high electrical resistance. In the embodiment shown in the drawing the sleeves are intended specifically for use by electrical linemen in order to prevent the possibility of shock when working on high voltage lines. Connected at the center of the upper edge portions 12, 13 are loops 12a, 13a, providing points of attachment 16, 17, respectively. These points of attachment are preferably in the form of plastic rings, as shown.

In accordance with the present invention, means are provided for maintaining the points of attachment 16, 17 centered over the shoulders of the wearer under all conditions. This is accomplished by providing a generally triangular harness arrangement which rests flatly across the shoulders at the base of the neck, and which includes a novel arrangement of breast straps centrally anchored at their lower ends to the belt of the wearer. As shown in the drawing, a shoulder strap 18 is provided which extends directly between the points of attachment 16, 17, and which is adjustable so that the points 16, 17 may be centered over the shoulders of the wearer. Also connected to the points of attachment 16, 17 are

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breast straps 20, 21. The lower ends of the breast straps are connected together at a plastic ring forming a junction point 23 so that they lie in V formation. Preferably, the lower point of the V falls at the center of the wearer's chest. Connected to the junction point 23 is a belt strap 24 which terminates at its lower end in a harness snap 25 of the spring-latch type. This snap is fastened to the center of a tool belt 26 normally worn by a lineman.

The belt strap 24 is adjustable and is preferably constructed as shown in Fig. 3. Here it will be noted that the strap 24 has overlapping portions 27, 28, respectively. Each of these portions includes a series of holes arranged in alinement, for example, as shown at 29. With two of the holes 29 in register, a plastic button 30 is inserted. Because of the double-headed construction of the plastic button 30, the button remains securely in place and, once adjusted, the nominal length of the strap is maintained constant. The same general construction is used for the shoulder strap 18.

In accordance with one of the aspects of the invention, all of the straps 18, 20, 21 and 24 are made of rubber or similar resilient material, so that they may stretch to accommodate unusual reaches.

The arrangement discussed above overcomes substantially all of the disadvantages which have been associated with sleeve harnesses and tie straps. It is one of the most important features of the present arrangement that the points of attachment 16, 17 are centered over the shoulders of the wearer under all conditions. Such centering is provided by the adjustable shoulder strap 18 which permits the length to be adjusted in accordance with the width of the wearer's shoulders. The back strap 18 is prevented from sliding down the back of the wearer by the breast straps 20, 21. These straps, being arranged in V formation, have a centering, hold-down effect and are securely anchored by the belt strap 24 and snap 25. The degree of hold-down may be adjusted simply by changing the length of the strap 24, the adjustment of course depending upon the size of the wearer.

All of the belts lie flatly against the body, providing a large area of contact. This factor, combined with the light, open construction, eliminates any localized pressures and assures maximum comfort.

Since the points of attachment 16, 17 in the preferred form of the invention are positively positioned over the shoulders and because of the provision for swiveling movement, the wearer may swing his arms through a maximum arc either from side to side, or up and down, without any possibility of binding. Thus, the harness may be worn with ease and comfort over long periods of time.

When conventional tie strap arrangements are used it is necessary to provide a certain amount of friction to keep the sleeves in place, and to obtain such friction the sleeves are purposely made rather tight-fitting. Such type of construction necessarily results in almost no ventilation, making the sleeves hot and uncomfortable during the summer months. By contrast, the present harness holds the sleeves in correct position even when they are loosely fitted, permitting circulation of air and causing the sleeves to be cool and relatively comfortable. In fact, the sleeves may be substantially "oversize" for maximum coolness, but without causing the lineman to feel any sense of insecurity.

It will be apparent from the drawing that the sleeve harness may be put on simply by slipping the triangle of straps 18, 20, 21 over the head and then locking the entire arrangement in place by clipping the snap 25 onto the belt buckle. Since the arrangement does not depend upon frictional forces to hold it in place it may be worn either on top of or below other clothing. The device is universal since all requirements may be met by a single size, it being sufficient to adjust the straps 18, 24, for maximum comfort and security.

While the protective sleeve harness has been described in connection with "voltage" sleeves, it will be understood that it is not limited thereto but is also applicable to other types of protective sleeves.

I claim as my invention:

A protective sleeve harness for use with a pair of

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tubular sleeves of insulating material dimensioned to fit loosely over the arms of the wearer and having upper edge portions providing points of attachment adapted to overlie the shoulders of the wearer, said harness comprising, in combination, a shoulder strap connected adjacent the points of attachment for passing at the base of and behind the neck of the wearer, a pair of breast straps having their upper ends respectively connected to the shoulder strap adjacent to said points of attachment and having their lower ends interconnected so that the straps assume a V-formation with the point of interconnection spaced substantially below the throat of the wearer, and a belt strap attached to the lower ends of the breast straps and having means at its lower end for connection to the belt of the wearer, said shoulder strap and said belt strap having means for length adjustment so that the two points of attachment may be centered over the shoulders of the wearer regardless of stature, said belt

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strap and said breast straps when so adjusted serving to maintain the centered relation with respect to the wearer's shoulders of the points of attachment and the disposition of said shoulder strap at the base of the wearer's neck.

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