

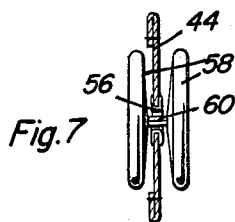
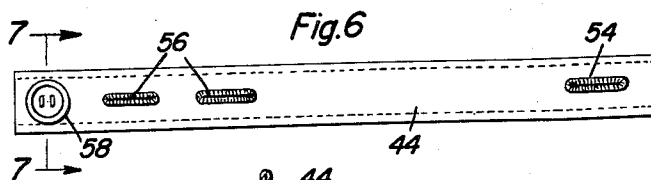
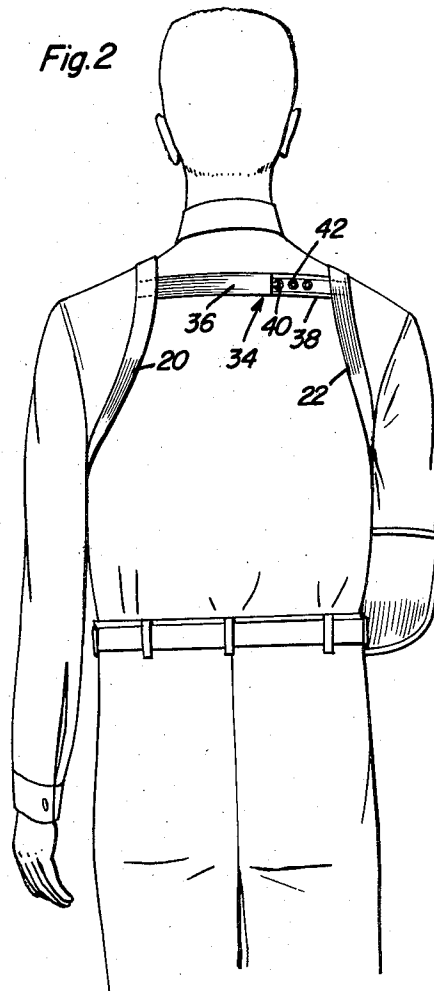
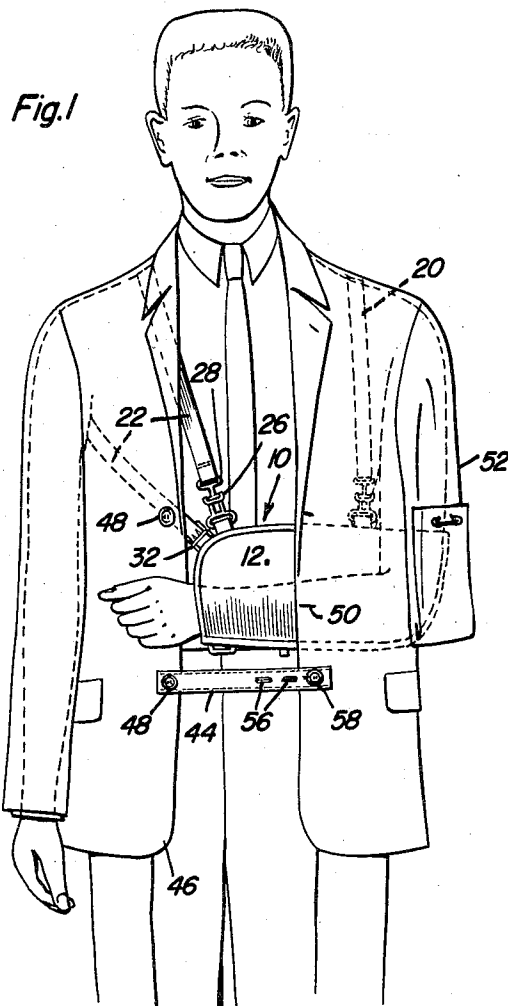
Sept. 10, 1963

W. L. SCOTT
ARM SLING

3,103,216

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2 Sheets-Sheet 1



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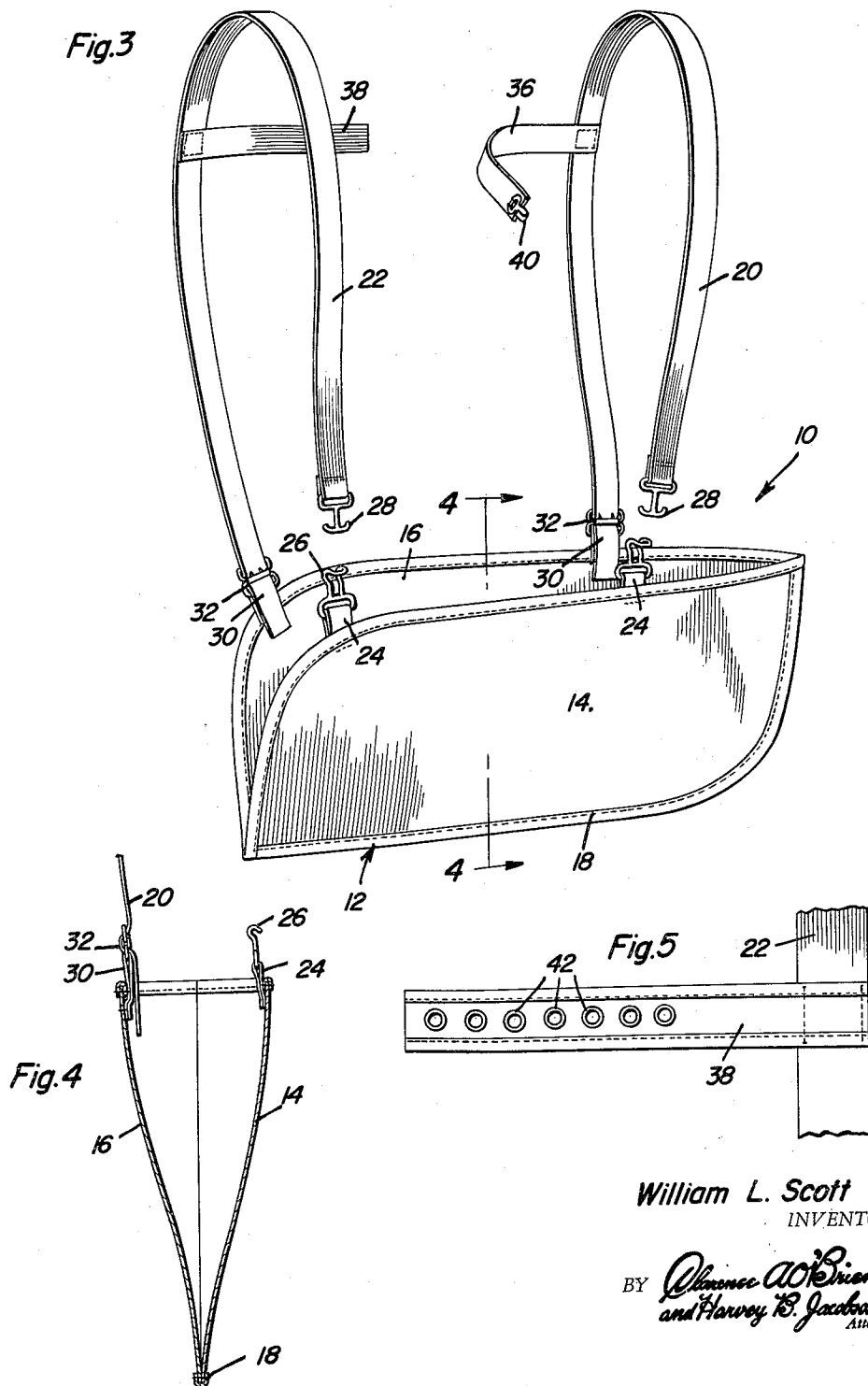
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1

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ARM SLING

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1 Claim. (Cl. 128—94)

This invention relates to new and useful improvements in arm slings, and the principal object of the invention is to facilitate convenient and comfortable supporting of an incapacitated arm of a person without straining muscles or chaffing skin at the back of the neck, such as frequently occurs when using arm slings of conventional types.

This object is attained by the provision of an arm sling which utilizes a pair of supporting straps adapted to pass upwardly, rearwardly and downwardly over the respective shoulders and forwardly under the respective armpits of the user, so that the weight of the arm in the sling is borne without effort and discomfort by the shoulders rather than by the neck.

An important feature of the invention therefore resides in the particular shoulder strap arrangement of the sling as above outlined, while another important feature lies in the provision of means for adjusting the effective length of the shoulder straps in accordance with the user's requirements, and means for quickly and easily separating the straps from the sling, when so desired.

Inasmuch as a person with an incapacitated arm in a sling has to wear a coat with one empty sleeve, and inasmuch as the position of the arm in the sling is such as to make normal buttoning of the coat virtually impossible, difficulty is usually experienced in sustaining the empty sleeve side of the coat on the wearer's body, the empty sleeve side having a tendency to slip off the shoulder. Accordingly, in conjunction with the improved arm sling, the invention also provides means in the form of an adjustable and removable tie strap, for bridging the open front of the coat and connecting together portions of the coat at opposite sides of the open front, whereby to sustain the empty sleeve side of the coat in position.

Some of the advantages of the invention reside in its simplicity of construction, efficient and dependable operation, and in its adaptability to economical manufacture.

These together with other objects and advantages which will subsequently become apparent reside in the details of construction and operation as more fully hereinafter described and claimed, reference being had to the accompanying drawings forming a part hereof, wherein like numerals refer to like parts throughout, and in which:

FIGURE 1 is a front elevational view of the arm sling in use by a person wearing a coat and also showing the coat tie strap;

FIGURE 2 is a rear elevational view showing the shoulder strap arrangement of the arm sling with the user's coat removed;

FIGURE 3 is a perspective view of the arm sling per se;

FIGURE 4 is a sectional detail, taken substantially in the plane of the line 4—4 in FIGURE 3;

FIGURE 5 is a fragmentary rear elevational view of one of the shoulder straps with an associated section of a cross strap;

FIGURE 6 is an elevational view of the coat tie strap; and

FIGURE 7 is a sectional detail, taken substantially in the plane of the line 7—7 in FIGURE 6.

Referring now to the accompanying drawings in detail, the arm sling in accordance with the invention is designated by the general reference numeral 10 and embodies in its construction a horizontally elongated arm sling member 12 formed from cloth, plastic, or other suitable flexible material, the member 12 including front and rear walls 14, 16, respectively, which are connected together by

2

stitching, or the like, 18 along the bottom and at one end of the member 12, so that the other end and the top of the member are open, as will be clearly apparent.

A pair of shoulder straps 20, 22 are provided for supporting the sling member 12, these being adapted to pass upwardly, rearwardly and downwardly over the respective shoulders and forwardly under the respective armpits of the user, as will be apparent from FIGURES 1 and 2. The ends of the two straps in the pair are spaced longitudinally of the sling member and the upper edge of the sling member front wall 14 is provided with a pair of loops 24 equipped with separable fastener members 26 which are engageable with coacting fastener members 28 provided at one end of the straps 20, 22, whereby the shoulder straps are separably attached to the front wall 14.

Similarly, the rear wall 16 of the sling member is provided at its upper edge with loops 30 which are adjustably connected by suitable buckles 32 to the other end of the straps 20, 22, so that the effective length of the shoulder straps may be varied to suit the user's requirements. It is to be noted in this connection that when the sling is worn, both end portions of the straps 20, 22 and the associated fasteners 26, 28 and buckles 32 are disposed at the front of the user's body, so that they are readily accessible for manipulation, when necessary.

In order to prevent the shoulder straps from spreading apart and possibly slipping off the shoulders, a cross strap 34 is provided, which extends between intermediate portions of the straps 20, 22 at the back of the user. The strap 34 comprises a pair of strap sections 36, 38 which are secured at one end thereof to the respective straps 20, 22 while the other end portions of the strap sections 36, 38 are overlapped and separably and adjustably connected together by a hook member 40 which is provided on the section 36 and is selectively engageable with suitable eyelets 42 arranged in a row on the section 38, so that the effective span or length of the cross strap 34 may be varied, as required.

It will be observed that when the arm sling is placed in use, the weight of the arm in the sling member 12 will be borne by the user's shoulders through the medium of the shoulder straps, thus avoiding straining of muscles and chaffing of skin at the back of the neck such as is experienced with conventional slings having a supporting strap passed around the back of the neck.

In conjunction with the arm sling 10, the invention also provides a tie strap 44 which is adapted to bridge or span the open front of a coat 46 when the latter is worn by the user of the arm sling. Under such circumstances the arm sling, of course, is worn under the coat, and since the position of the incapacitated arm in the sling is such as to make almost impossible the normal fastening of the front of the coat by the usual buttons 48 and buttonholes 50, and since the presence of the incapacitated arm in the sling renders one sleeve 52 of the coat empty, there is a tendency for the empty sleeve side of the coat to slip off the shoulder. The provision of the tie strap 44 eliminates this disadvantage inasmuch as the tie strap spans the open front of the coat and connects together portions of the coat at opposite sides of the open front, as will be presently explained.

One end portion of the strap 44 is provided with a buttonhole 54 while the other end portion thereof is provided with a row of buttonholes 56 which selectively receive a double button unit 58 consisting of a pair of buttons placed back to back and connected together by the thread 60. One of the coat buttons 48 is simply passed through the buttonhole 54 in the strap 44, while the button unit 58 is engaged with one of the coat buttonholes 50, so as to separably attach the strap 44 to the coat in the manner above described. The effective span or length

3

of the strap 44 may be easily varied by simply placing the double button unit 58 in a selected one of the buttonholes 56 in the strap, as will be readily understood.

The foregoing is considered as illustrative only of the principles of the invention. Further, since numerous modifications and changes will readily occur to those skilled in the art, it is not desired to limit the invention to the exact construction and operation as shown and described, and accordingly, all suitable modifications and equivalents may be resorted to, falling within the scope of the invention as claimed.

What is claimed as new is:

In an arm sling, the combination of a horizontally elongated sling member having front and rear walls connected together at the bottom and at one end of the sling member whereby the top and the other end of the latter is open, a pair of shoulder straps adapted to pass upwardly, rearwardly and downwardly over the respective shoulders and forwardly under and juxtaposed the respective armpits of a user, one of said shoulder straps being secured adjacent the open end of said sling member, separable fastening means secured to the top of said front wall and connecting one end of said one shoulder strap to the front wall at a point spaced slightly from the open end, said separable fastening means extending upwardly from the top of said front wall and angled toward the vertical plane of the open end and away from the vertical plane of the closed end, adjustable fastening means secured to the rear wall and connecting the other end of said one strap to the rear wall at approximately the point of interconnection between the open end and the open top, said adjustable fastening means extending upwardly from the rear wall and away from the vertical plane of

4

the closed end in the same general direction as but at a greater angle to the closed end vertical plane than said separable fastening means, the other shoulder strap being secured at a point spaced inwardly of the closed end of the sling member a sufficient distance so as to allow a generally perpendicular orientation of the upwardly extending portion of the strap with the closed end of the sling being positioned beyond the body of a user a sufficient distance so as to allow for a substantial right angular orientation of the arm with the upper portion of the arm depending vertically from the shoulder, fastener means on the front and rear walls adjustably and releasably securing said other strap to the front and rear wall, said fastening means spaced inwardly approximately the same distance from said closed end and extending in a substantially vertical direction, and a cross strap extending between and connecting together intermediate portions of the shoulder straps at a point between the upper and lower limits of the shoulder blades so as to insure a transfer of the weight of a suspended arm to the shoulders.

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