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3,404,680

SHOULDER SLING

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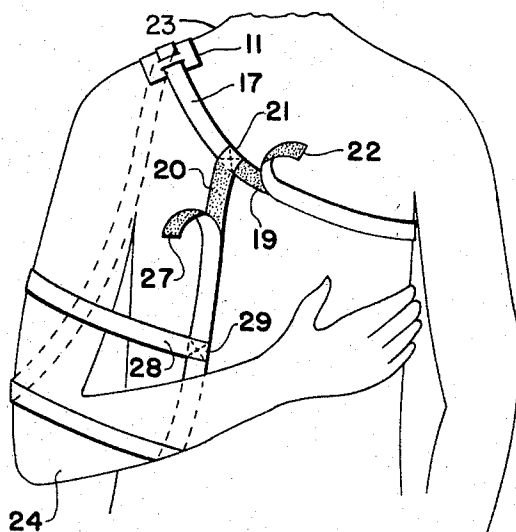


FIG. 1

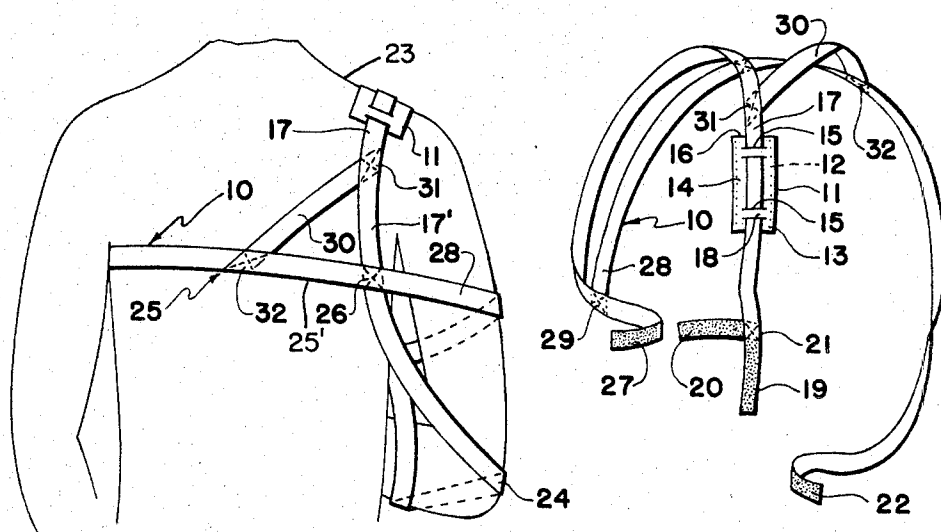


FIG. 2

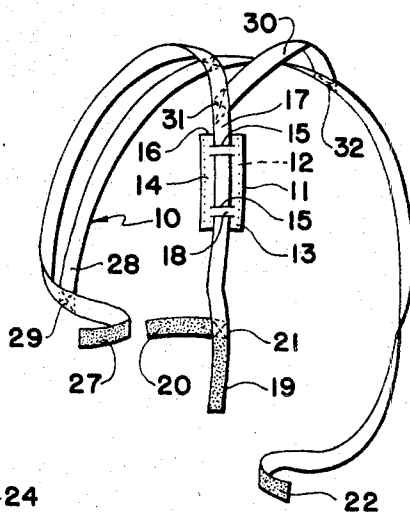


FIG. 3

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SHOULDER SLING

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4 Claims. (Cl. 128-94)

Our invention relates to new and useful improvements in surgical slings, particularly surgical slings adapted for use with injuries around the shoulder girdle. The conventional method of immobilizing the shoulder area is by means of surgical tape which is applied directly to the skin of the patient.

However, this surgical tape suffers from several disadvantages inasmuch as the skin of some people is sensitive to tape and in the majority of cases, the immobilization of the shoulder and the upper limb is complete so that remedial exercising of the other joints and muscles is difficult if not impossible without removing the tape. Such tape is painful to remove and furthermore has to be applied by another person.

Conventional surgical tape needs constant changing due to the fact that it will wrinkle and gets dirty and cannot be washed.

Such tape is uncomfortable in hot weather, and due to the fact that it is applied directly to the skin, clothing cannot be worn normally inasmuch as the arm cannot be placed through a sleeve.

Another disadvantage of the conventional treatment by means of surgical tape is the fact that the desired pressure cannot be applied to the collar bone which normally requires to be under downward pressure.

Our sling overcomes all of these disadvantages inasmuch as it applies pressure to the collar bone where desired, is adjustable, and can readily be removed and replaced by the patient so that normal washing or showering is possible, remedial exercising may be undertaken, and furthermore, the sling can be worn over pyjamas or shirt as desired.

The principal object and essence of our invention is therefore to provide a surgical shoulder sling which can be fitted to a patient thus eliminating the use of surgical tape.

Another object of the invention is to provide a device of the character herewithin described which can be removed and replaced by the patient himself as may be necessary.

A still further object of the invention is to provide a device of the character herewithin described in which the sling is adjustable within limits.

A still further object of the invention is to provide a device of the character herewithin described which can readily be manufactured for either left or right handed use.

Still another object of the invention is to provide a device of the character herewithin described which is simple in construction, economical in manufacture, and otherwise well suited to the purpose for which it is designed.

With the foregoing in view, and all those objects, purposes or advantages which may become apparent from consideration of this disclosure and specification, the present invention consists of the inventive concept embodied in the method, process, construction, arrangement of parts, or new use of the same, as herein particularly exemplified in one or more specific embodiments of such concept, reference being had to the accompanying figures in which:

FIGURE 1 is a front view of a patient showing the sling in use upon the right shoulder.

FIGURE 2 is a rear view of FIGURE 1.

FIGURE 3 is a front view of the sling per se.

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In the drawings like characters of reference indicate corresponding parts in the different figures.

This sling is primarily for use with injuries about the shoulder girdle.

These injuries include:

- (1) Fractures of the clavicle.
- (2) Injuries of the acromio-clavicular joint which may include (a) subluxation (b) complete dislocation and (c) strain of the ligaments of the acromio-clavicular joint.
- (3) Fractures of the scapula.
- (4) Dislocations of the scapula.
- (5) Dislocations of the gleno-humeral (shoulder) joint.
- (6) Fractures of the proximal end of the humerus, including anatomical neck, surgical neck, tuberosities and proximal shaft.

Furthermore the sling may be employed in either the conservative treatment or for post operative immobilization of the above injuries which require open reduction for correction.

The sling collectively designated 10 is made of webbing or strapping and includes a shoulder pad or collar bone engaging pad 11 which is preferably made of sponge rubber or the like indicated in phantom at 12, enclosed within a soft leather covering 13.

Upon the outer face 14 of the pad 11 we have provided two pairs of transverse slits 15, each pair being adjacent an end 16 of the pad.

An arm supporting sling collectively designated 17 passes over the rear surface 14 of the pad and is engaged under the portion of the covering material 18 between the pairs of slits 15 as clearly shown in FIGURE 3 thus mounting the pad adjustably along the length of the arm supporting sling 17.

Situated adjacent the front end 19 of the arm supporting sling is a relatively short attaching portion 20, being secured to the arm supporting sling 17 by means of stitching 21. This attaching portion extends at an angle from adjacent the end 19 as clearly shown in FIGURE 1.

This attaching portion together with the other end 22 of the arm supporting sling are provided with a pressure sensitive engaging material manufactured under the trade name "Velcro" and the arm supporting sling is adapted to pass over the collar bone area 23 of the wearer and then be engaged by the elbow area 24 as clearly shown. The end 22 is then adjustably secured to the attaching portion 20 thus adjusting this portion of the device to the anatomy of the user.

An upper body engaging loop collectively designated 25 is secured by stitching 26 by one end thereof, to the rear portion 17' of the arm supporting sling and this upper body engaging portion passes around the body of the user and under the arm opposite to the shoulder being treated to be adjustably securable to the end 19 of the arm supporting sling, a similar pressure sensitive material such as "Velcro" being provided on the end 19 and also on the end 27 of the upper body engaging loop.

In order to maintain the upper arm of the user in close proximity to the body, an upper arm embracing loop 28 extends from the stitching 26, around the upper arm and is secured as by stitching 29 to the arm supporting sling distal from the end 27 thereof.

A diagonally situated bracing web 30 is secured by stitching 31 and 32, between the rear portion 25' of the body engaging loop 25 and the rear portion 17' of the arm supporting sling as clearly shown in FIGURE 2.

In operation, the pad is placed upon the collar bone area 23 of the user and the arm supporting sling 17 passes down behind the shoulder, around the elbow area 24 of the arm extending from the injured shoulder, and then upwardly to be secured by the "Velcro" attachment as hereinbefore described. The upper arm embracing loop 28 holds the upper arm close to the body in conjunction

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with the upper body engaging loop which passes around the back of the user and then diagonally upwardly across the chest to be secured to the end 19 of the arm supporting sling. This holds the arm and shoulder in the desired position and the pressure of the forearm within the arm supporting sling 17 pulls the pad 11 downwardly onto the collar bone.

Since various modifications can be made to the invention herein described within the scope of the inventive concept disclosed, it is not intended that protection of the said invention should be interpreted as restricted to the modification or modifications or known parts of such concept as have been particularly described, defined, or exemplified, since this disclosure is intended to explain the construction and operation of such concept, and not for the purpose of limiting protection to any specific embodiment or details thereof.

What we claim as our invention is:

1. A shoulder sling for surgical use comprising in combination an arm supporting sling, a collar bone engaging pad on said arm supporting sling intermediate the ends thereof, said ends being adjustably securable together, and an upper body engaging loop secured by one end to said arm supporting sling intermediate the ends of said arm supporting sling, the other end of said upper body engaging loop being detachably securable to one end of said arm supporting sling and a diagonally situated bracing web extending between adjacent one end of said upper body engaging loop and said arm supporting sling.

2. The device according to claim 1 which includes an upper arm embracing loop secured by the ends thereof to spaced apart locations on said arm supporting sling.

3. The device according to claim 1 in which said collar bone engaging pad is adjustably positionable along the length of said arm supporting sling, an attaching portion secured to and extending at an angle from adjacent one end of said arm supporting sling, the other end of said arm supporting sling being detachably engageable to said attaching portion.

4. The device according to claim 2 in which said collar bone engaging pad is adjustably positionable along the length of said arm supporting sling, an attaching portion secured to and extending at an angle from adjacent one end of said arm supporting sling, the other end of said arm supporting sling being detachably engageable to said attaching portion.

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