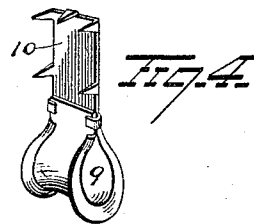
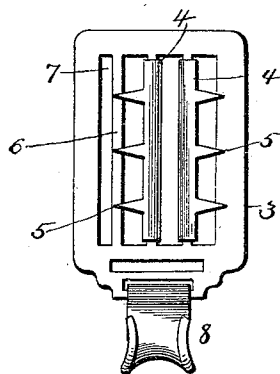
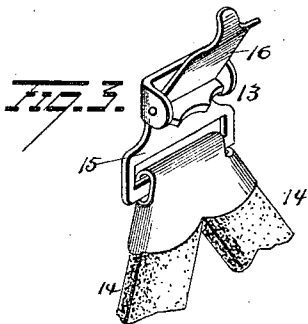
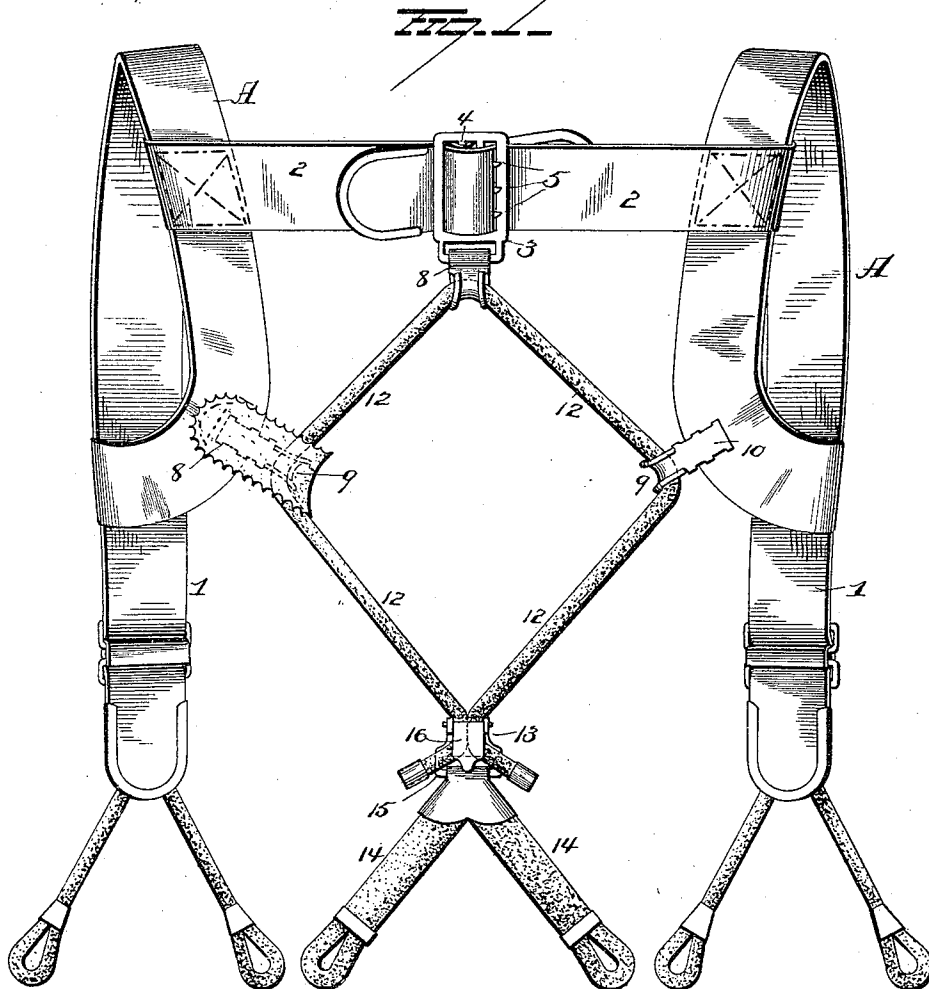


(No Model.)

C. R. HARRIS.
SHOULDER BRACE.

No. 467,251.

Patented Jan. 19, 1892.



Witnesses
E. Nottingham
G. F. Downing

FIG. 2 - Inventor
Charles R. Harris
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Attorney

UNITED STATES PATENT OFFICE.

CHARLES R. HARRIS, OF WILLIAMSPORT, PENNSYLVANIA.

SHOULDER-BRACE.

SPECIFICATION forming part of Letters Patent No. 467,251, dated January 19, 1892.

Application filed April 17, 1891. Serial No. 389,297. (No model.)

To all whom it may concern:

Be it known that I, CHARLES R. HARRIS, of Williamsport, in the county of Lycoming and State of Pennsylvania, have invented certain new and useful Improvements in Shoulder-Braces; and I do hereby declare the following to be a full, clear, and exact description of the invention, such as will enable others skilled in the art to which it appertains to make and use the same.

My invention relates to an improvement in shoulder-braces, the object being to provide means for returning the shoulders to an erect position immediately upon their being bent or inclined forward. A further object is to provide means for preventing the brace from chafing the arms or shoulders or other parts of the wearer's body, or for otherwise giving discomfort to the wearer.

With these ends in view my invention consists in certain novel features of construction and combinations of parts, as will be herein-after described, and pointed out in the claims.

In the accompanying drawings, Figure 1 is a view in rear elevation of my improved shoulder-brace. Fig. 2 is a detached view of the double buckle at the rear. Fig. 3 is a detached view of the rear clasp, and Fig. 4 is a detached view of one of the metallic loops.

A A represent the usual shoulder-straps of the brace. These are adapted to fit nicely over the shoulders and to receive the arms. At their lower ends they terminate in pendent straps 1 1, and the latter have attached to them the adjustable buckles for holding the trousers-straps. A connecting-strap 2 reaches across from one shoulder to the other. This connecting-strap passes directly over the shoulders, and it is composed of two pieces adjustably connected at their inner ends, preferably by a double buckle 3 or similar means. This buckle consists of a flat rectangular plate, in which a pair of sleeves 4 4 are pivotally supported. These sleeves are provided with teeth 5 5, adapted to penetrate and fasten the straps. The end of one section of the connecting-strap is passed between one of the toothed sleeves and the bar 6 and then between the two sleeves, and the end of the other section is passed between the other toothed sleeve and the plate and thence into the slot 7, formed between the bar 6 and the

edge of the plate. By drawing the ends of the straps through this buckle the required distances its length may be suited to the wearer's back. Depending from the lower end of the buckle is a loop 8. This loop is formed from a narrow strip of metal, the ends of which are passed through and bent around the lower end of the plate. The edges of the loop are bent back to form rounded edges to prevent abrasion of the part of the brace or wearing-apparel coming in contact with them. Similar loops 9 9 to loop 8, excepting that they have a toothed shank 10, are secured to the inner edges of the shoulder-straps. Through these several loops 8 and 9 a cord 12, preferably round, is passed loosely. The ends of this cord are adjustably connected by a clasp 13 or other equivalent means with the back trousers-straps 14. This clasp consists of a plate 15 and a toothed jaw 16, pivoted thereto in position to receive the cord between it and the plate. By means of this device the length of this cord is regulated to the size and shape of the wearer's back and shoulders.

In the operation of the brace it will be seen that the moment the shoulders of the wearer are moved forward they will be checked by the attachment at the back of the trousers; and not only this, but it keeps the brace in place on the shoulders, and by connection with the shoulder-straps it holds them in position and prevents their binding on the arms and shoulders and also from chafing the parts by rubbing them; also, by the loose sliding connection of these parts a perfectly free movement is possible.

Around the loops 8 and 9 a chamois-skin strip or other soft and flexible material may be placed to prevent abrasion from rubbing contact.

The side and back straps may be made of rubber or other material, and many slight changes might be resorted to in the form and arrangement of the several parts described without departing from the spirit and scope of my invention, and hence I do not wish to limit myself to the exact construction herein set forth; but,

Having fully described my invention, what I claim as new, and desire to secure by Letters Patent, is—

1. In a shoulder-brace, the combination,

with a pair of shoulder-straps adapted to extend around the shoulders and connect with the wearer's trousers at their free ends and a connecting-strap extending across from one
5 shoulder-strap to the other, of a flexible device connected with the shoulder-strap and to the connecting-strap between the ends of the latter and constituting the back attachment of the shoulder-brace, substantially as
10 set forth.

2. The combination, with a pair of shoulder-straps and a connecting-strap composed of sections, the outer ends of said sections connected with the shoulder-straps and the
15 inner ends adjustably connected together, of a cord and means for connecting the cord loosely with the shoulder-straps and connecting-strap, substantially as set forth.

3. The combination, with a pair of shoulder-straps, a connecting-strap composed of

sections, and a buckle joining these sections, said buckle having a loop pivoted thereto, of loops secured to the shoulder-straps below the connecting-strap and a cord connected with the shoulder-straps, said cord passed loosely
25 through the loops on the shoulder-straps and the buckle, substantially as set forth.

4. The combination, with a pair of shoulder-straps and connecting-strap, of a cord connected loosely with the said straps, trousers-
30 straps, and a clasp for adjustably connecting said trousers-straps with the cord, substantially as set forth.

In testimony whereof I have signed this specification in the presence of two subscrib-
35 ing witnesses.

CHARLES R. HARRIS.

Witnesses:

V. E. HODGES,

G. F. DOWNING.