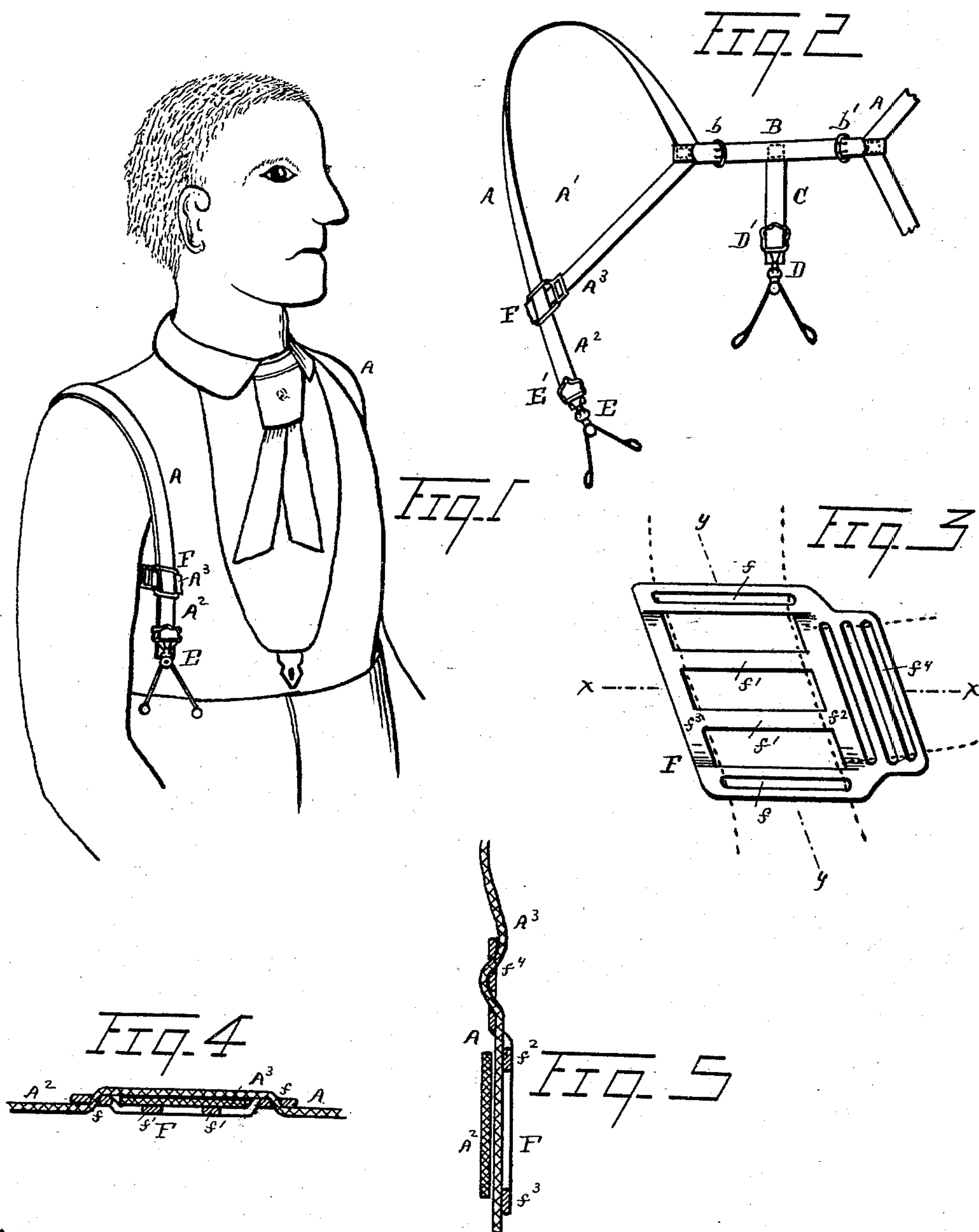


(No Model.)

D. CARPENTER.
SHOULDER BRACE AND SLIDE THEREFOR.

No. 426,523.

Patented Apr. 29, 1890.



Witnesses
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UNITED STATES PATENT OFFICE.

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SHOULDER-BRACE AND SLIDE THEREFOR.

SPECIFICATION forming part of Letters Patent No. 426,523, dated April 29, 1890.

Application filed November 15, 1889. Serial No. 330,411. (No model.)

To all whom it may concern:

Be it known that I, DELOS CARPENTER, a citizen of the United States, residing at Orion, in the county of Oakland, State of Michigan, have invented a certain new and useful Improvement in Shoulder-Braces and Slides Therefor; and I do 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, reference being had to the accompanying drawings, which form a part of this specification.

My invention relates to a new and useful improvement in shoulder-braces and an adjusting device therefor, all as more fully hereinafter specified and claimed, and more particularly illustrated in the accompanying drawings, in which—

Figure 1 illustrates the position of the brace upon the person. Fig. 2 is a separate view of parts of the brace. Fig. 3 is a separate view of the slide. Fig. 4 is a section on the line *y y*, Fig. 3; and Fig. 5 is a sectional view on the line *x x*, Fig. 3.

The purpose of my invention more especially consists in providing a novel adjustable shoulder-brace of novel construction and arrangement, and means for accomplishing the adjustment thereof to adapt the shoulder-brace to any given peculiarity of form.

My invention also allows and provides for the adjustment of a brace of any given size to conform to any other required size, so that the same brace may be adjusted either for a smaller or for a larger person than that for which the normal size of the brace is intended.

Moreover, my invention provides for the proper taking up of the brace after it has been stretched by wear.

The adjustment, furthermore, is contemplated and arranged at a point or points where there cannot only be no inconvenience to the wearer, but a decided advantage in the ease and efficiency of the brace upon the wearer, while also the means employed are simple and operate without unduly bunching the parts of the brace at the point of adjustment and without producing undue heat to the person thereat.

I carry out my invention as follows:

In the drawings, A represents the webbing forming a loop A' to engage the shoulder of the wearer. Two loops so formed—one for each shoulder—are connected on the back of the wearer by a cross-strap B, having an adjustable connection with the loops, respectively, as by means of buckles *b b'*, whereby the strap can be taken up or lengthened out as circumstances may require, for the proper adjustment of the loops upon the shoulders. A pendent strap C connects the cross-strap B to the button-strap D, engaged upon the rear of the pants of the wearer, with which it may have any suitable adjustable connection, as shown at D'.

One end of the webbing constituting the loop A, as shown at A², is carried downward to connect with the button-strap E, upon the front of the pants, with which it may have an adjustable connection, as shown at E', in the usual manner. The end A³ of the webbing A is brought under the shoulder of the wearer and is engaged with the opposite portion of the webbing constituting the loop at a point beneath and to the front of the armpit, at which point the adjustment of the one with the other is provided, and as will be seen at a point to give absolute ease to the muscles, avoiding friction, compression, and all undue or unpleasant restraint. It will be obvious that these loops will need to be of various sizes for different persons, and that one and the same brace, if made adjustable at this point, can thus be made to fit any one of various persons. It is evident that if the end A³ were stitched to the part A², the adjustment could only be effected by ripping the stitches and resewing the one to the other. Beside, should the webbing of which the loop is constructed be stretched by wear, it could only be taken up in the same manner.

My invention is particularly designed and adapted to accomplish this adjustment in a ready, simple, and efficient manner. To this end I employ a slide F of novel construction. I prefer to make this slide open in the center, the same being provided with one or more loops *f* at the top and bottom, through which the end A² of the webbing may be passed, and in which the webbing may be adjusted and held in any given position. The slide may be provided with one or more rear cross-

bars f' to strengthen the slide, and also to hold the webbing in place. The side bars $f^2 f^3$ of the slide, instead of being at right angles to the cross-bars, are constructed in a slanting direction to conform to the desired direction of the webbing at this point.

To receive the end A^3 of the webbing, the slide is also provided with one or more marginal loops f^4 , through which said end may be adjusted, and in which it may be firmly held. These loops extend in a slanting direction, vertically, while the loops f are extended in a horizontal direction. In this manner the end A^2 of the webbing extends through the loops f and the end A^3 through the loops f^4 , the one end of the webbing lapping over the other in a diagonal direction. To prevent undue bunching, however, in consequence of this overlapping of the ends of the webbing, I prefer to bend the side bars $f^2 f^3$ inward, as shown, thereby overcoming as far as possible the bunching of the parts mentioned at this point.

The construction of the slide, which constitutes one feature of my invention, is believed in itself to be novel; but I do not wish to limit myself in the construction of the shoulder-braces and in the adjustability of the loop at the point mentioned to this particular slide alone, as my invention contemplates, broadly, the adjustment of the braces at the point of the loop above referred to, whether by this particular slide or otherwise. With this particular device, however, the slide can be moved to or fro upon the end A^2 of the webbing, and at the same time it can be moved to or fro on the end A^3 , and so in

the one way and the other any desired adjustment can be secured. Either end of the webbing forming the loop can be independently adjusted, or both, as may be required to make a proper fit. All liability of chafing the wearer is prevented, the adjustment being provided at a point entirely out of the way, leaving no overlapping of the webbing at any point where the brace comes into tight contact with the person. The provision for adjustment also allows the brace at all times to bring the pressure upon the point of the shoulder-blade and of the shoulder. This adjustment can always be secured in various forms of shoulders and at any stage of wear or stretching of the brace, and so keep the blade on a line with the back, and prevent the shoulder effectually from cramping the chest, leaving the lungs free to do their work.

What I claim as my invention is—

The combination, with webbing $A^3 A$, forming loops A' , of slides each having two series of loops, one series located diagonal to the other series, one end of the loop forming the shoulder-brace leading through the loops of the slide in one direction and the other end leading through the loops of the slide in a different direction and impinging with frictional contact upon the first-named end, and straps B, C, D, and E, substantially as set forth.

In testimony whereof I sign this specification in the presence of two witnesses.

DELOS CARPENTER.

Witnesses:

N. S. WRIGHT,
LOUIS W. KLEI.