

No. 737,497.

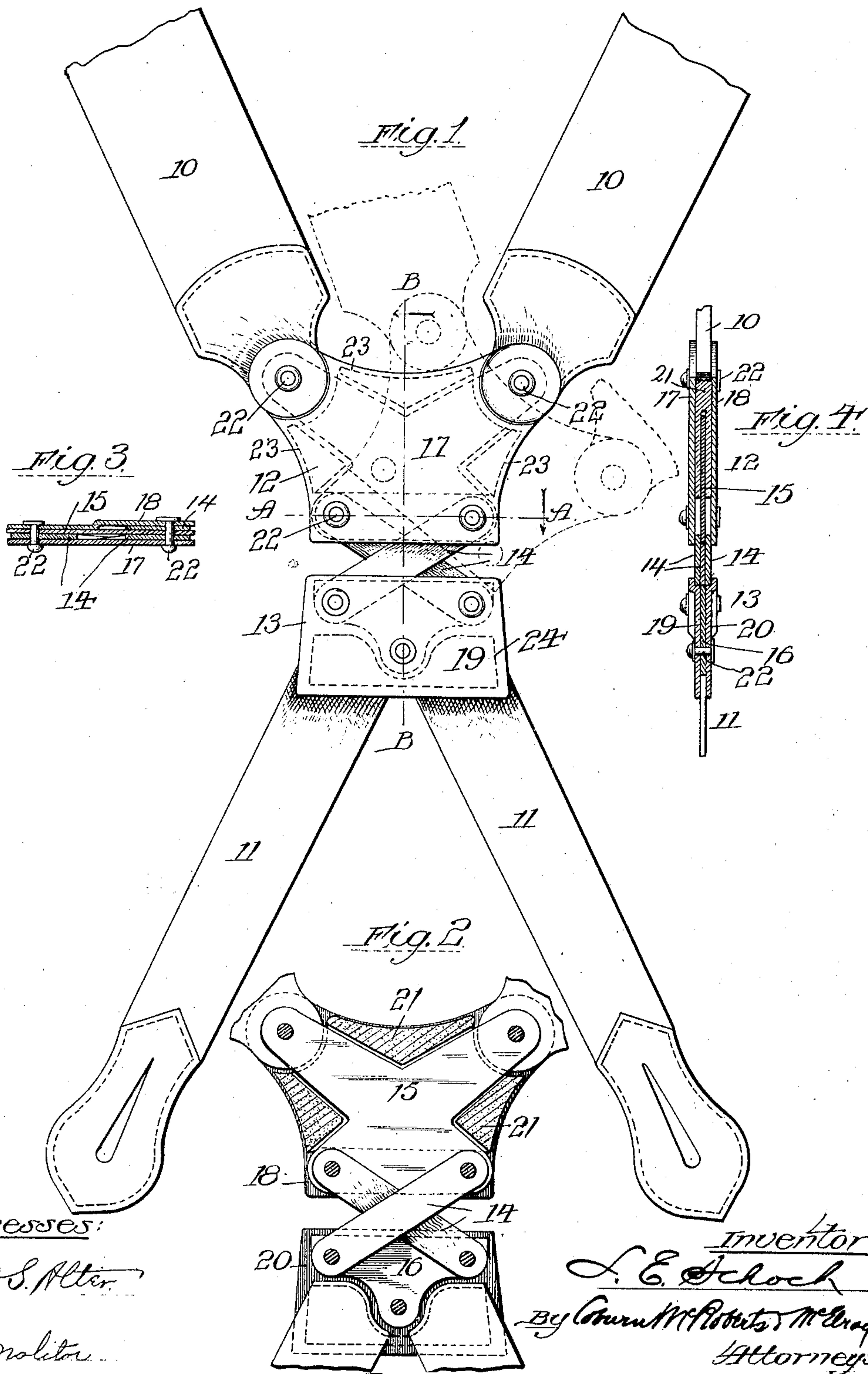
PATENTED AUG. 25, 1903.

L. E. SCHOCH.  
SUSPENDERS.

APPLICATION FILED NOV. 14, 1902.

NO MODEL.

2 SHEETS—SHEET 1.



Witnesses:

*L. S. Altier*

*E. Molitor*

Inventor:

*L. E. Schoch*

*By Carroll M. Roberts & M. Gray*  
*Attorneys.*

No. 737,497.

PATENTED AUG. 25, 1903.

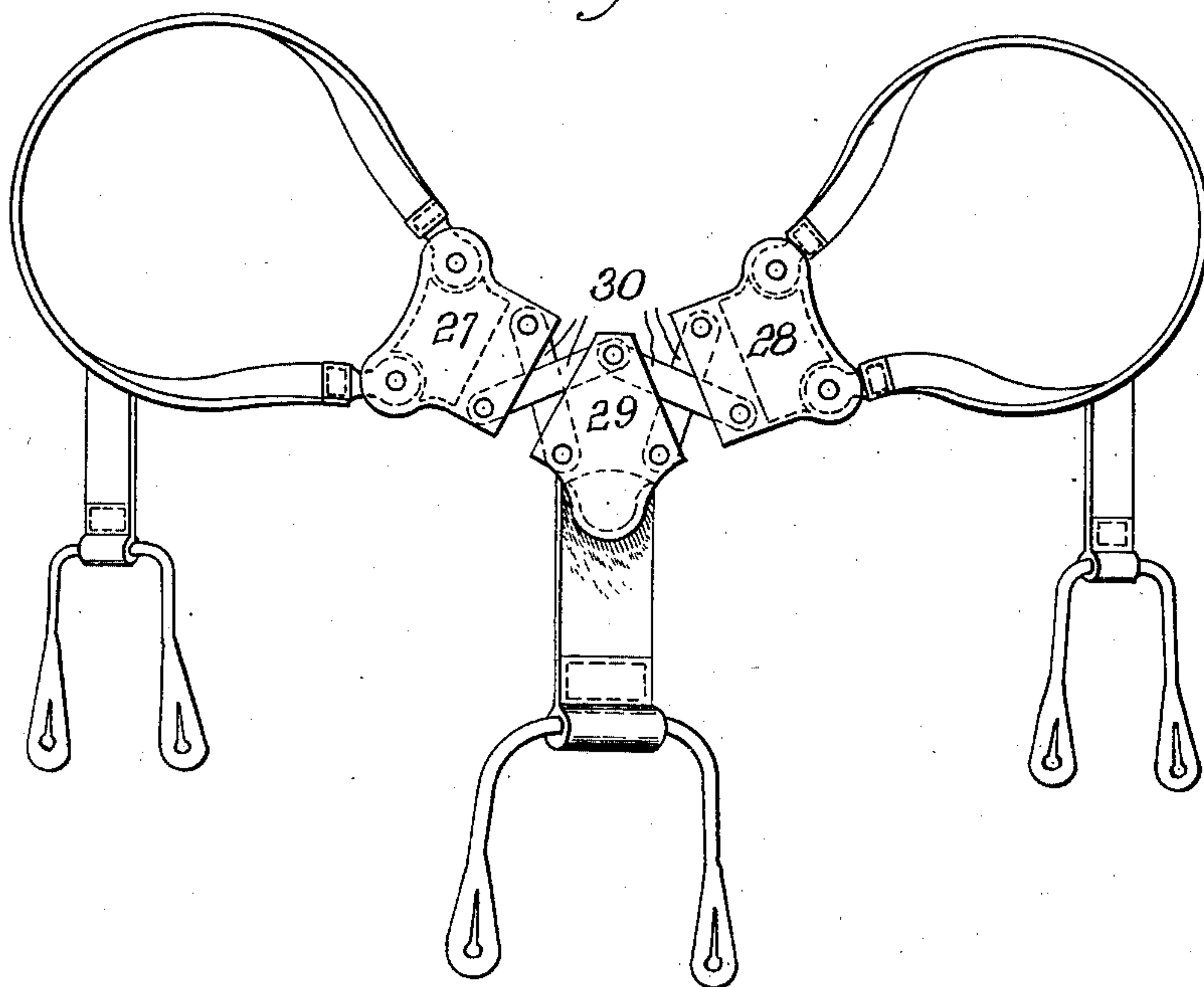
L. E. SCHOCH.  
SUSPENDERS.

APPLICATION FILED NOV. 14, 1902.

NO MODEL.

2 SHEETS—SHEET 2.

Fig. 5.



Witnesses:

Lute S. Alter,

E Molitor

Inventor:

L. E. Schoch

By Coburn M Roberts & M Elroy

Attorneys



# UNITED STATES PATENT OFFICE.

LEONARD E. SCHOCH, OF CHICAGO, ILLINOIS, ASSIGNOR OF SEVENTWELFTHS TO EDWARD J. SCHAFER AND JOHN M. SPILLER, OF CHICAGO, ILLINOIS.

## SUSPENDERS.

SPECIFICATION forming part of Letters Patent No. 737,497, dated August 25, 1903.

Application filed November 14, 1902. Serial No. 131,308. (No model.)

*To all whom it may concern:*

Be it known that I, LEONARD E. SCHOCH, a citizen of the United States, residing at Chicago, in the county of Cook and State of Illinois, have invented certain new and useful Improvements in Suspenders, of which the following is a specification.

My invention is concerned with certain new and useful improvements in the construction of suspenders, shoulder-braces, and like devices, and is designed to produce a device of the class described in which the suspenders or braces will be closely adjusted to the body in any position or action thereof and which shall prevent them from becoming relaxed, and thereby slipping down on or off of the shoulder. To attain these results, I have devised a novel construction for the back portion of these devices by which the desired freedom of movement of the body is permitted without straining the suspenders.

To illustrate my invention, I annex hereto two sheets of drawings, in which the same figures of reference are used to designate identical parts in all the figures, of which—

Figure 1 is an elevation of a suspender-back containing my invention. Fig. 2 is a similar view, but with a portion thereof removed to more clearly disclose the construction thereof. Fig. 3 is a section on the line A A of Fig. 1. Fig. 4 is a section on the line B B of the same figure. Fig. 5 is a view showing my invention applied to shoulder-braces.

Referring first to Fig. 1, it will be seen that the main webs 10 and the rear tabs 11 are connected to the upper and lower pads or plates 12 and 13, respectively, which in turn are connected by the diagonally-crossed straps or strands 14. In the form shown in this figure I employ three such connecting straps or strands, for the reason that by arranging them so that two of them are symmetrically disposed or extend in a pair in the same direction and cross respectively above and below the third strap or strand, as clearly shown in Fig. 4, the strands are less liable to turn or twist than when only two are used, as the twisting or turning movement of the

middle strand is thereby limited in each direction, and they are pivotally connected at their ends to said pads or plates, as clearly shown in Figs. 1 and 2. The main webs 10 are preferably also pivotally connected to the pad so as to give them a certain amount of freedom of movement as the upper pad swings relative to the lower pad as one shoulder is raised or as the body is bent from one side to another.

The mode of operation of my invention will be apparent from Fig. 1, where the normal position of the parts is shown in full lines and where the abnormal position caused by raising one of the shoulders or bending to one side is shown in dotted lines. The action of raising one shoulder is to cause the upper pad 12 to swing to one side, practically increasing the effective length of the main web 10 on that side while shortening the corresponding web on the other side. This construction, especially when the main webs are pivoted to the pad 12, permits the utmost freedom of movement of the body, while not displacing the parts of the suspender relative thereto, inasmuch as they are free and yield in every direction that is necessary to accommodate them to the movements of the body. It is obvious that when the pad 12 swings to either side neither of the strands 14 is slackened, the end of each web moving approximately in the arc of a circle the center of which is the opposite end of its corresponding strap or strand 14. The straps or strands move together, but in opposite directions when the pad swings, the upper end of one strand being drawn or extended upwardly and the upper end of the other strand being drawn or retracted downwardly toward the companion lower pad 13, but not moving inwardly or toward its point of attachment to the pad 13 by reason of the fact that the extended strand is always taut under the strain upon it and that the pull is always exerted in a direction tending to separate the pads. By reason of these facts all the parts are taut in all positions of the body of the wearer, and the strain is at all times equally divided between the two tabs 11, so that the



pull on both buttons for these tabs remains constant.

In Figs. 1 to 4 I have shown one method by which a back-piece of the necessary strength 5 may be built up and in which the basis of the two pads are metallic plates 15 and 16, which may be of the shape shown. These plates are covered by the outer and inner leather pieces or faces 17 and 18 and 19 and 10 20, respectively, which are of the shapes shown. The upper portion 12 of the back-piece is preferably provided with the padding material 21, which may be of soft leather, and is provided mainly to make the pad 15 more comfortable to the back. The main webs 10 and the cross-straps 14 are secured to the back-piece by the rivets 22, while the leather parts of the upper portion 12 of the back-piece are secured together by the stitching 20 23, while the tabs 11 are secured to the lower back-piece 13 by the stitching 24.

In Fig. 5 I have shown my invention as applied to a shoulder-brace in which the back-piece is divided into three parts 27, 28, and 25 29, connected by the two sets of cross-straps 30 and having secured thereto the customary

webs and tabs used to make up the ordinary type of shoulder-brace.

While I have shown my invention as embodied in the forms which I at present consider best adapted to carry out its purposes, 30 it will be understood that it is capable of modifications and that I do not desire to be limited in the interpretation of the following claim except as may be necessitated by the 35 state of the prior art.

What I claim as new, and desire to secure by Letters Patent of the United States, is—

In a device of the class described, the combination with a back-piece composed of a pair 40 of plates having webs and tabs respectively, of a plurality of cross-strands diagonally connecting said plates and arranged with a pair of said strands extending from the same points on said plates and an intermediate 45 strand crossing said other strands.

In testimony whereof I affix my signature in presence of two witnesses.

LEONARD E. SCHUCH.

Witnesses:

JOHN H. MCELROY,  
E. MOLITOR.