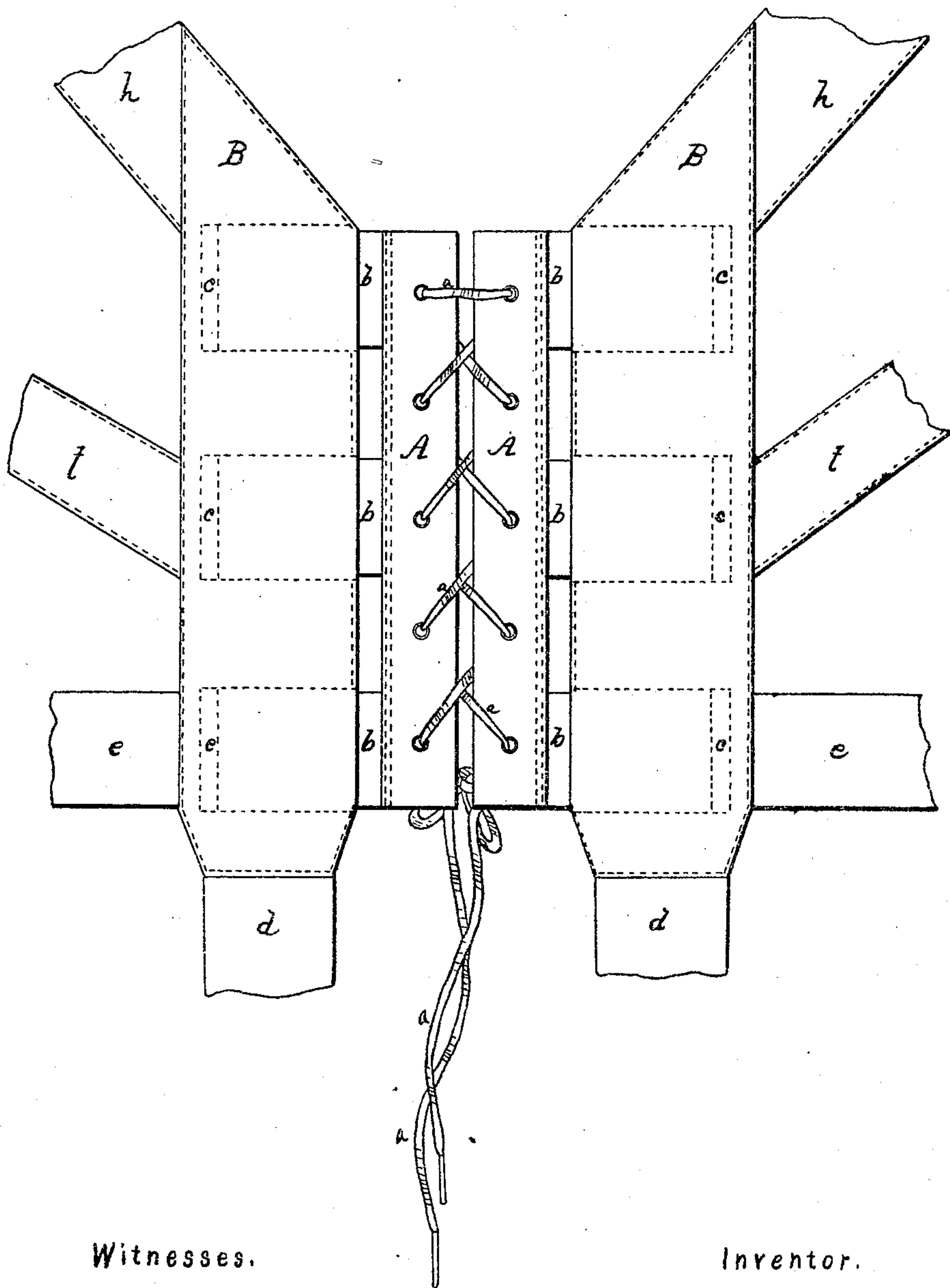


A. N. Smith.
Shoulder Brace.

N^o 60,582.

Patented Dec. 18. 1866.



Witnesses.

Inventor.

William H. Clifford
Henry C. Houston

Alonzo N. Smith

United States Patent Office.

IMPROVEMENT IN SHOULDER-BRACES.

ALONZO N. SMITH, OF HALLOWELL, MAINE.

Letters Patent No. 60,582, dated December 18, 1866.

The Schedule referred to in these Letters Patent and making part of the same.

TO ALL WHOM IT MAY CONCERN:

Be it known that I, ALONZO N. SMITH, of Hallowell, in the county of Kennebec, and State of Maine, have invented a new and useful Improvement in Shoulder-Braces; and I hereby declare the following to be a full, clear, and exact description thereof, which will enable others to make and use my invention, reference being made to the accompanying drawings, forming part of this specification, in which is illustrated, in a back view, the nature and character of my improvement.

The object of my invention is to produce a new and improved method of increasing or diminishing the strain of the shoulder-pieces of shoulder-braces upon the shoulders. Particular reference to the drawings will show in what my invention consists.

A A show two tags, in which are made holes for the reception of the lacings, *a*; to these tags are attached the elastic cross-pieces, *b*; the elastic cross-pieces are attached to the back-pieces, B B. These back-pieces are double, having spaces between the two thicknesses for the reception of the cross-pieces, *b*. The cross-pieces are sewed, or otherwise attached, at *c*, as indicated at the double-dotted lines, so as to allow them to stretch freely in the spaces between the thicknesses. This is indicated by the single-dotted lines. *d* shows the elastic straps, which are buttoned to the back side of the pants; *e*, the bands passing under the arms; *f*, the bands passing around, and *h* the bands passing over the shoulders; but the straps *d*, bands *e*, *f*, and *h*, are not the subjects of my claim, neither are the back-pieces B B, as usually made. When shoulder-braces are fitted to a person the buckles regulating the length of the shoulder-straps have to be set in their proper position. This is usually effected by having the buckles on the bands *e*. By this arrangement the arm-size is diminished, the shoulders are drawn downward and backward, and the strain or draught upon them is irksome, and even sometimes painful. In addition to this, the position of the buckles, when the straps are drawn tightly, renders them liable to press into or chafe the back; further, in thus fitting braces the strain, when the straps are tightened, is not equal, being more over the shoulders, in a downward direction, than directly and evenly backward. By means of my invention, the pull upon the shoulders is made quite equal at all points, as the brace is fitted by drawing nearer to each other the two tags, A A, or allowing them to be wider apart by means of the lacings *a*. The tightening of the braces is effected at and toward the centre of the back, the two back-pieces, B B, being moved toward each other with an equal increase of strain upon all the straps attached thereto, and when the brace is loosened the straps are all equally loosened. By this arrangement, also, the arm-size is kept uniform, the shoulders are drawn directly backward, so as to expand the chest as the wishes of the user demand, and not downward, which has a tendency to cause a slight, increasing stoop. Equal ease and elasticity are imparted to the brace, and equal freedom of motion to the shoulders, by the elastic cross-pieces, *b*, working or stretching and contracting in the spaces between the thicknesses of the back-pieces, B B; thus the buckles, also, on the bands *f*, and their consequent inconvenience, are dispensed with.

What I claim as my invention, and desire to secure by Letters Patent, is—

The combination of the back-pieces B B, made with the spaces, the elastic cross-pieces *b*, attached as specified, tags A A, and lacings *a*, arranged and operating as and for the purposes set forth.

ALONZO N. SMITH.

Witnesses:

WILLIAM H. CLIFFORD,
HENRY C. HOUSTON.