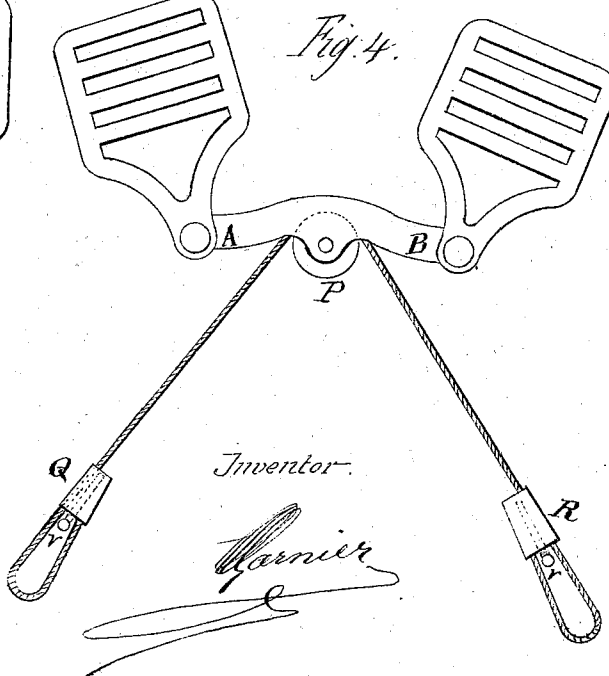
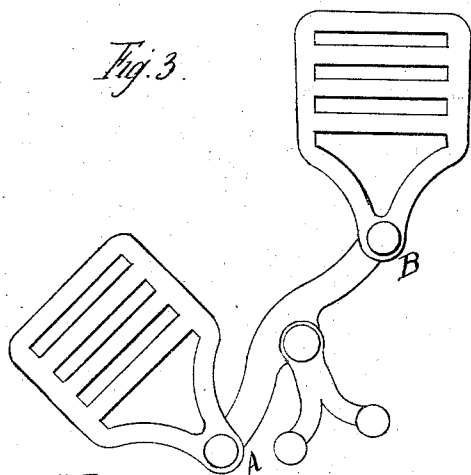
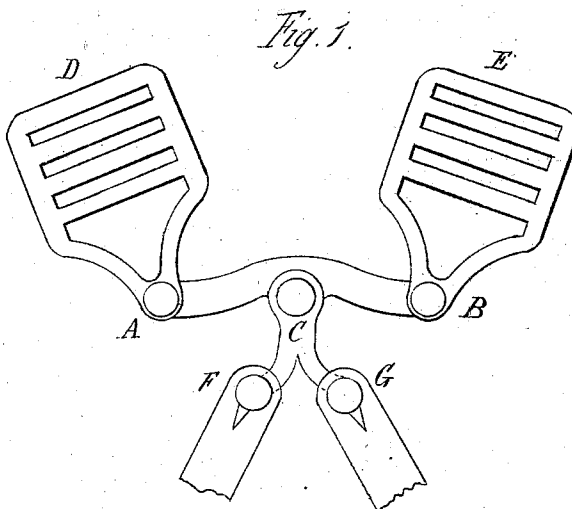
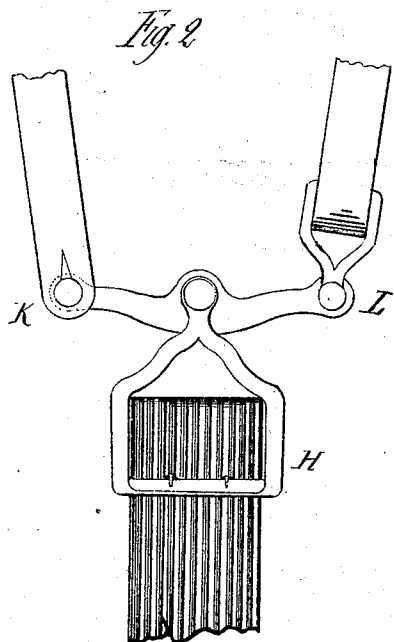


F. A. GARNIER.
Suspenders.

No. 151,216.

Patented May 26, 1874.



Witnesses.

Furman

Dr. S. Sullivan

U. S. Consular Clerk

Inventor.

Garnier

UNITED STATES PATENT OFFICE.

FRANÇOIS AUGUSTE GARNIER, OF LYONS, FRANCE.

IMPROVEMENT IN SUSPENDERS.

Specification forming part of Letters Patent No. 151,216, dated May 26, 1874; application filed November 12, 1873.

To all whom it may concern:

Be it known that I, FRANÇOIS AUGUSTE GARNIER, of Lyons, Department of the Rhone, in the Republic of France, have invented Improvements in the Construction of Braces, of which the following is a specification:

My invention consists in the construction of braces without sewing of any part, so that the portions subject to wear may be at any time renewed without the aid of needle or any other instrument; also, in the application of levers in such a manner that, when one of the shoulders of the wearer of the braces is raised, the brace corresponding with that shoulder shall lengthen, the opposite brace shortening to an equal extent, whereby the strain upon the shoulders is at all times equalized.

Figure 1 is an elevation, showing the arrangement of the lower portion of the back part of a pair of braces embodying my invention. Fig. 2 is an elevation, showing the front arrangement. Fig. 3 shows the arrangement, Fig. 1, as it would appear when one of the shoulders of the wearer is raised. Fig. 4 is a modification of the arrangement shown in Fig. 1.

The two braces are bound together at the back by being fixed upon an apparatus common to both. Each brace is fixed to one of the buckles D E, Fig. 1, to which it is united without sewing, by the passing of its end in the four slits presented by each buckle. The buckles D E are hinged at the points A and B, which indicate the two ends of a lever, A B. At the center C of this lever there is also hinged a piece, C F G, carrying at each of the points F and G a stud, to which are fixed straps of leather or other material intended to button onto the back buttons of the trousers.

It will be readily understood that during the elevation of the right shoulder, the lever A B will take the position shown in Fig. 3, and that there will be a lengthening of the right brace, and a corresponding shortening of the left one.

The essential features of this invention are embodied in the above-described arrangement; but it will be evident that the same effect may be obtained by interverting the functions of the lever A B—for example, by fixing the braces to its center, and the straps to its ends. Each of the braces is united in front to a buckle, H, Fig. 2, having two tongues, and intended to regulate the length of the brace. To this buckle there is also applied a lever, K L, analogous to the lever A B, above described, and fulfilling the same functions as regards the straps, which button onto the two buttons fixed in front at one of the sides of the trousers. Thus the body can make no movement without bringing into play the levers A B and K L.

If it is desired to replace the flat straps by rounded cords, leather drawn into a cord, silk cord, cat or other gut, or other rounded material, the following process is adopted: The lever is always preserved, but in its middle (see Fig. 4) is placed a pulley, P, in the groove of which slides the cord, each end of which forms a loop representing the button-hole. This loop is fastened by a small apparatus, Q R. This apparatus is pierced with three holes or passages in the direction of its length. The cord passes through one of these outer holes, then, its end having given the length required to form the loop, passes in an inverse direction through the opposite hole. A screw, V, screwed into the central hole, presses on the two lateral cords, and fixes them in this position. A similar apparatus is applied to each of the front buckles.

I claim as my invention—

The combination of the lever A B with the pieces C D E F G, when constructed and arranged substantially as and for the purposes hereinbefore set forth.

F. A. GARNIER.

Witnesses:

FURNION,

H. H. TITTMANN,

U. S. Consular Clerk.