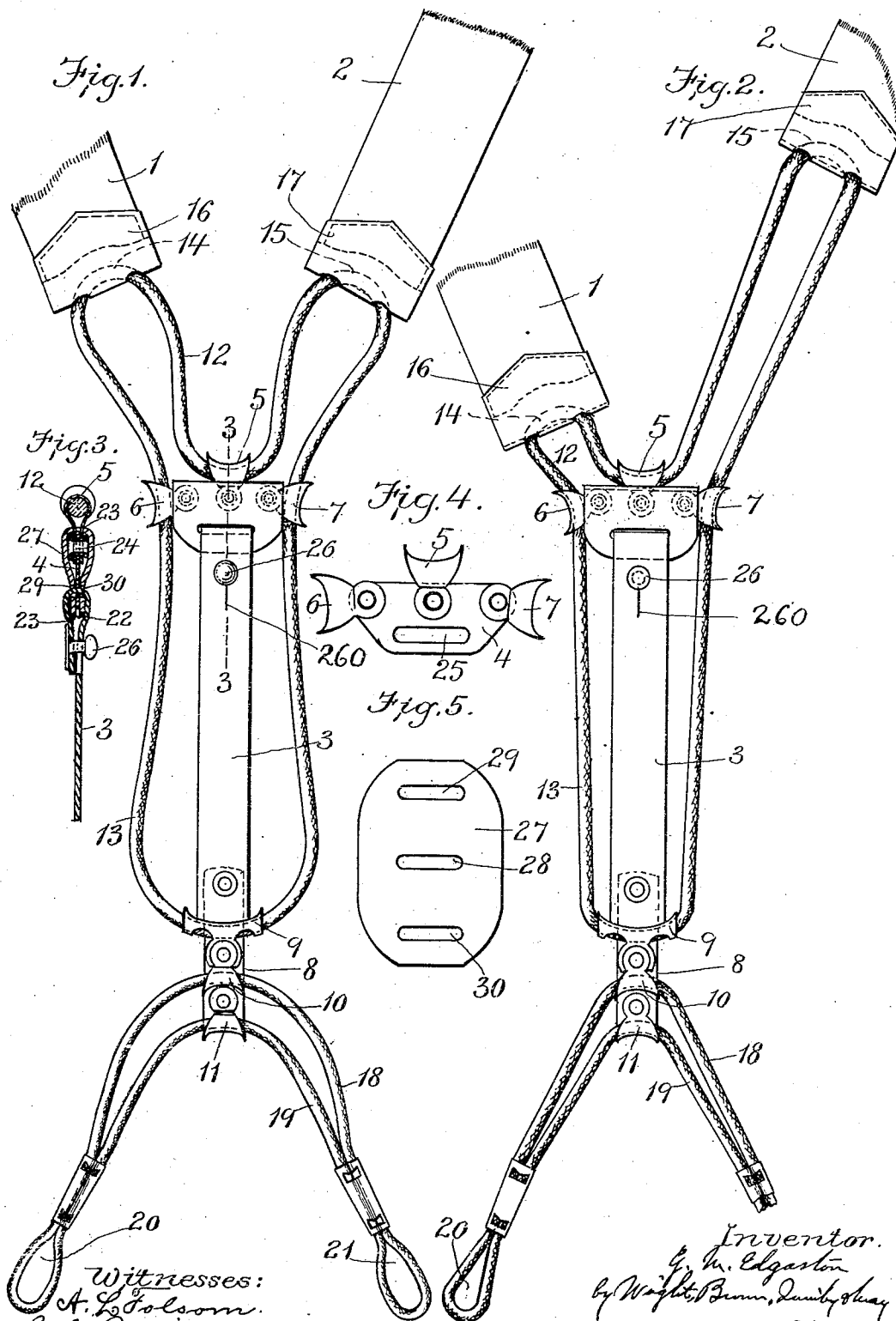


G. M. EDGARTON.
SUSPENDERS.

APPLICATION FILED OCT. 31, 1906. RENEWED MAR. 13, 1909.

939,898.

Patented Nov. 9, 1909.



Witnesses:
A. L. Folsom.
A. C. Ratigan

Inventor.
G. M. Edgerton
by Wright, Bunn, Dancy & May
Atty's.

UNITED STATES PATENT OFFICE.

GEORGE M. EDGARTON, OF BOSTON, MASSACHUSETTS, ASSIGNOR TO GEORGE M. EDGARTON CO., INC., OF BOSTON, MASSACHUSETTS, A CORPORATION OF MASSACHUSETTS.

SUSPENDERS.

939,898.

Specification of Letters Patent.

Patented Nov. 9, 1909.

Application filed October 31, 1906, Serial No. 341,423. Renewed March 13, 1909. Serial No. 483,296.

To all whom it may concern:

Be it known that I, GEORGE M. EDGARTON, of Boston, in the county of Suffolk and State of Massachusetts, have invented certain new and useful Improvements in Suspenders, of which the following is a specification.

This invention consists in an improvement on that type of suspenders in which the shoulder straps have an automatically-variable connection with the back portions by means of a sliding flexible band. Its object is to obtain greater range and freedom of movement of the shoulder straps relatively to the back strap without causing an increased strain on either of the back-supporting loops or displacing the back strap, and at the same time, to keep the ends of the shoulder straps in close proximity to each other at such a height on the back of the wearer as will obviate liability of their slipping over his shoulders.

The manner in which the principles of the invention are applied so as to accomplish the object above named is illustrated in the accompanying drawings, in which—

Figure 1 represents an elevation of the rear portion of a pair of suspenders containing the improvements in which this invention consists. Fig. 2 represents a similar view, showing the positions occupied by the several parts when one shoulder strap is raised higher than another. Fig. 3 represents a detail sectional view on line 3—3 of Fig. 1. Fig. 4 represents an elevation of the plate to which the back strap and the flexible band-guiding eyes are attached. Fig. 5 represents a view showing extended the protector used to cover the plate shown in Fig. 4.

The same reference characters indicate the same parts in all the figures.

Referring to the drawings, 1 and 2 represent the shoulder straps, and 3 represents the back strap of a pair of suspenders. The latter is adapted to extend vertically when the suspenders are in place on the wearer, and is connected at its upper end with a plate 4 having metallic loops or eyes 5 6 and 7. To the lower end of the back strap is secured a second plate 8 having similar guiding loops or eyes 9 10 and 11.

Connecting the shoulder straps with the back strap are two flexible band members 12 and 13, each of which is connected at its ends to the shoulder straps, the former pass-

ing through the eye 5, and the latter lying outside of the member 12 and passing through the side eyes 6 and 7 and the lower eye 9. These band members may be separate from each other and securely fastened at their ends to the ends of the shoulder straps, but in order to obtain greater strength and security of fastening, I prefer to form them from a single band which is preferably, though not necessarily, a cord of circular cross section. When a single cord is used, it is doubled upon itself at two points 14 and 15, and secured to the shoulder straps at these points by passing through openings in doubled bindings 16 and 17, respectively. The intermediate portions of the cord are depressed in loops or bights which form the members 12 and 13 above referred to.

Passing through the eyes 10 and 11 are cords 18 and 19 which form the garment-supporting member of the suspenders, and have loops 20 and 21 made in the usual way to slip over the suspender buttons at the rear. The cords 18 and 19 can slide freely from the eyes 10 and 11 so as to equalize the strain on the two loops.

Whenever the wearer for any purpose raises one shoulder higher than the other, or if the wearer is abnormally formed with shoulders of unequal height, the suspenders will automatically adjust themselves to such distortion, as shown in Fig. 2, where the shoulder strap 2 is raised higher than strap 1. This causes the right-hand end of each of the loops 12 and 13 to be raised, and the lower ends to be depressed, the loops sliding freely through the several eyes but not where connected to the shoulder straps. No greater strain, however, is put on either of the button loops 20 or 21, and therefore the latter remain unchanged in position, and the back strap 3 also is not displaced. Accordingly, there is nothing to hinder the free movement of the members 12 and 13, and therefore the automatic adjustment of the shoulder straps may take place more easily and completely than with the previously-used suspenders. As the doubled portions 14 and 15 are held by the shoulder straps so as not to be easily moved relatively to them, the movement of both the loops 12 and 13 is the same, and neither has a greater amount of travel than the movement of the shoulder straps. Thus

the wear on each is the same, and is reduced to the minimum.

The loops or guide eyes 6 and 7 at the sides of the upper end of the back strap embrace the vertical portions of the cord or band members which extend from the bindings 16 and 17 of the shoulder straps down to the loop or eye 9 carried by the lower end of the back strap, and said guide eyes 6 and 7 therefore prevent such spreading of the cord at the back as might render the shoulder straps liable to slip off from the shoulders of the wearer. The cord or band members run freely through these guide eyes 6 and 7 as well as through the loop 5 and the lower loop 9, but are held from movement where connected to the shoulder straps.

The loops 5, 6 and 7 are made of pieces of metal doubled upon themselves and having ears 22 23 embracing the plate 4 and secured thereto by rivets 24. The plate also has a slot 25 through which an end of the back strap 3 is passed, such end being doubled over and secured by a button 26, as shown in Fig. 3, the button hole for said button being indicated at 260.

In order to protect the wearer from abrasion by the eyes and rivets, and also to protect the metal parts from moisture, I cover the plate with a piece of soft leather or cloth 27 which has a central slot 28 through which the guiding loop or eye 5 is adapted to be passed. The piece 27, when in place, is doubled so as to extend on both sides of the plate 24, and has slots 29 and 30 near its ends which register with the slot 25 and receive the back strap 3.

The lower plate 8 is securely fastened to the lower end of the back strap, and the eyes 9, 10 and 11 are formed similarly to those designated by 5, 6 and 7 and are riveted to plate 8.

I claim:—

1. A pair of suspenders comprising shoulder straps; a back strap; and band members each held by the ends of the shoulder straps against sliding movements relatively thereto, said band members forming two loops, one of said loops having a sliding connection with the upper end of the back strap, and the other passing on opposite sides of the back strap and held slidably by the lower portion thereof, the upper end of the back strap having guide eyes for the vertical portions of the band members which extend from the shoulder straps to the lower portion of the back strap.

2. A pair of suspenders comprising shoulder straps; a back strap; and a cord doubled upon itself at two points and held immovably at such points by the shoulder straps, the intermediate portions of the cord forming two bights or loops, one of which extends across the upper end of the back strap and is confined slidably thereby, while the other passes beside the edges of the back strap and across the lower portion thereof, being also confined slidably.

3. In a pair of suspenders, in connection with the shoulder straps, the back strap, and the flexible band connecting them; the plate, having top and side band-guiding eyes, connected to the upper end of the back strap; and a second plate secured to the lower end of the back strap, having a plurality of separate guides or eyes for the above-named band, and for a garment-supporting band.

In testimony whereof I have affixed my signature, in presence of two witnesses.

GEORGE M. EDGARTON.

Witnesses:

C. F. BROWN,
A. C. RATIGAN.