

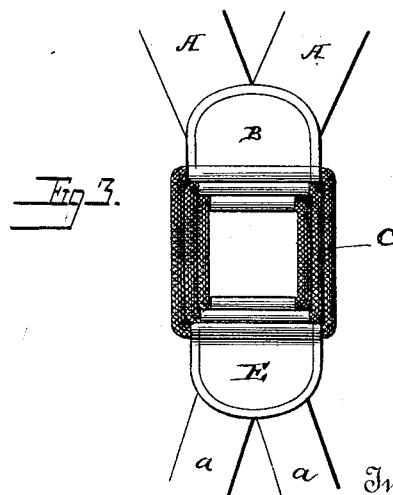
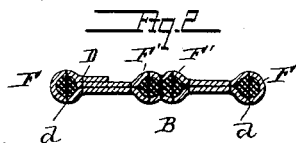
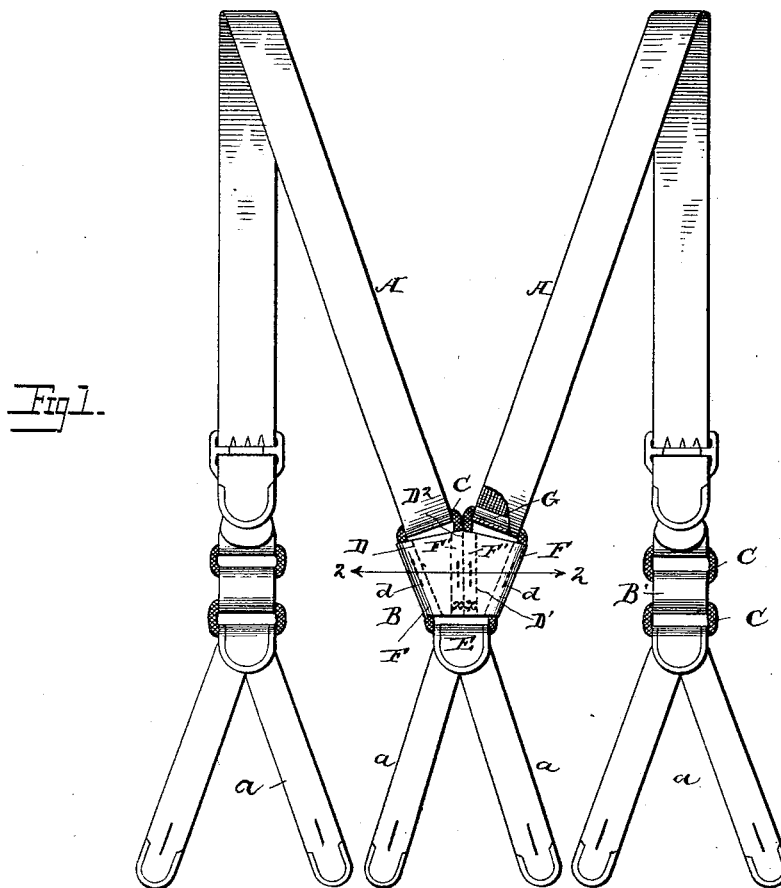
(No Model.)

A. A. MANDELL.

SUSPENDERS.

No. 386,483.

Patented July 24, 1888.



Witnesses,
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UNITED STATES PATENT OFFICE.

ALBERT ALLEN MANDELL, OF HYDE PARK, MASSACHUSETTS.

SUSPENDERS.

SPECIFICATION forming part of Letters Patent No. 386,483, dated July 24, 1888.

Application filed October 29, 1887. Serial No. 253,773. (No model.)

To all whom it may concern:

Be it known that I, ALBERT ALLEN MANDELL, a citizen of the United States, and a resident of Hyde Park, in the county of Norfolk and State of Massachusetts, have invented certain new and useful Improvements in Suspenders, of which the following is a specification.

This invention relates to suspenders; and it consists of a novel elastic section adapted, particularly, to be interposed between the shoulder and pantaloons straps at the back, as will be hereinafter fully described.

In the drawings, Figure 1 is a view of a pair of suspenders, illustrating my invention. Fig. 2 is a sectional view on the line 2 2, Fig. 1. Fig. 3 shows a different embodiment of the invention.

The shoulder-straps are designated by the letter A and the pantaloons-straps by the letter *a*, these being of any desired material, and preferably inelastic. Between these two sets of straps is interposed an elastic section containing my invention. This consists, in general terms, of an elastic cord or cords secured to the said straps and confined in a binder, which may be of any desired material, leather being preferred for the back piece, as that possesses an amount of stiffness best suited for said binder.

The back binder is represented by the letter B and those in front by the letter B'. The binder B consists of two thicknesses of more or less stiff material united together by several rows of stitches, D D' D' D', forming a series of pockets of substantially cylindrical form, as seen in Fig. 2, two along the outer edges of the binder and two in the center thereof. Passing through these pockets, and also through loops in the ends of the inelastic straps, or a loop, E, carried thereby, is an elastic cord, C.

I have shown in Fig. 1 a single cord, C, so arranged as to form the elastic connections between the two shoulder-straps and the binder B, and also between the binder and the loop E, carried by the pantaloons-straps. The ends of the cord lie in the central pockets, F' F', of the binder, terminating at about the points *x*. Thence the cord passes through the loops at the lower ends of the shoulder-straps, and thence downward through the cylindrical pockets F' along the outer edges of the binder to the loop

E, carried by straps *a*; but I do not wish to be limited to the use of a single cord, as two or three—that is, one for each strap—might be employed without departing from the spirit of my invention; or the construction shown in Fig. 3 might be employed, in which three separate cords, C, connect the binders B and E, in which they are confined, each cord occupying a separate pocket in each binder.

The cord is held within the pockets by lines of stitching *d* passing through the two thicknesses of material forming the binder, and also through the cord, as seen in Fig. 1. When an elastic cord is interposed between both the straps A and the binder and the straps *a* and the binder, these lines of stitching are arranged about centrally between the upper and lower edges of the binder B; but it will be understood that the elastic cord might be interposed between the binder and but one set of straps, either A or *a*, in which event the stitches *d*, uniting the cord to the binder, would by preference be arranged near the edge of the binder opposite the straps to which the elastic cords are secured.

G are metallic tubes surrounding the cords C, which they serve to stiffen where they are confined by the turned-over ends of straps A or the binders B' or E.

It will be observed that the cord is throughout the greater portion of its length incased by the binder, which is preferably constructed of some material impervious to moisture, and that thereby the rubber in the cord is protected from the injurious effects of perspiration.

While I have described the application of this invention to the rear portion of suspenders, uniting the shoulder-straps with the back pantaloons-straps, *a*, it will be understood that it might be used to unite the straps A with the front pantaloons-straps, as illustrated in Fig. 1, and as will be understood without specific description.

I am aware that it is not new to provide non-elastic shoulder-straps at their ends with binders or tabs in which are secured the ends of elastic straps, and hence lay no claim to such construction; but my invention differs from such older forms of suspenders in that I employ round elastic cords and form the binders with elongated cylindrical pockets in which

the cords are laid for a considerable portion of their length, and wherein they are retained, being bound at or near each end either by stitches passing directly through the binder and through the cord or by the metallic tubes G, the difference between my invention and the older constructions being that in the latter the ends merely are secured by the binder, whereas in my construction a considerable portion of the length of the cord is laid in the pocket of the binder and then confined, this being necessary from the form of the cord, which, were its end merely inserted for a short distance between the two parts of a binder, would draw out and thus become detached.

I claim—

1. Suspenders having a round elastic cord interposed between non-elastic straps thereof, and non-elastic binders carried by said non-elastic straps, provided with elongated cylindrical pockets wherein said round elastic cord is laid and retained for a corresponding portion of its length and bound at or near both ends, substantially as described.

2. In suspenders, the combination of the

straps, a binder consisting of two thicknesses of more or less stiff material, having lines of stitching uniting them and forming elongated cylindrical pockets therein, and a rounded elastic cord secured to the straps and seated in the pockets in the binder, to which they are united by stitching passing through them, substantially as set forth.

3. In suspenders, the combination of the straps, a binder consisting of two thicknesses of material stitched to form elongated cylindrical pockets F F', round elastic cords uniting the shoulder-straps with the binder and the pantaloons straps to the binder, and stitchings d, substantially midway between the top and bottom edges of the binder, passing through the same and through the elastic cords, substantially as set forth.

In testimony whereof I have signed my name to this specification in the presence of two subscribing witnesses.

ALBERT ALLEN MANDELL.

Witnesses:

JOHN B. BABCOCK,

SAMUEL H. BABCOCK.