

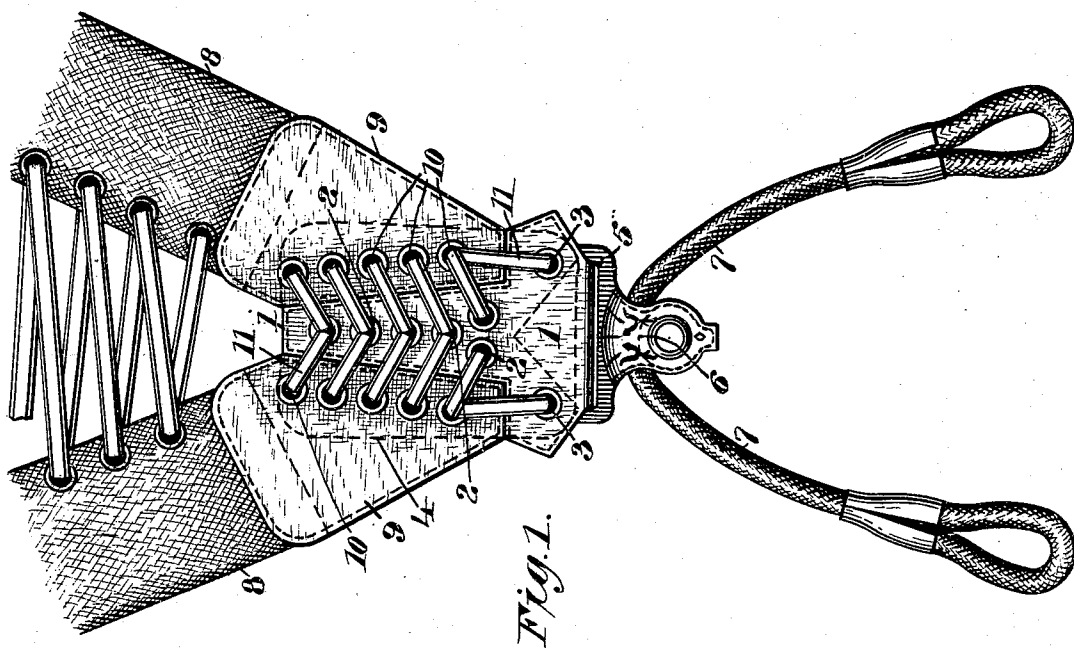
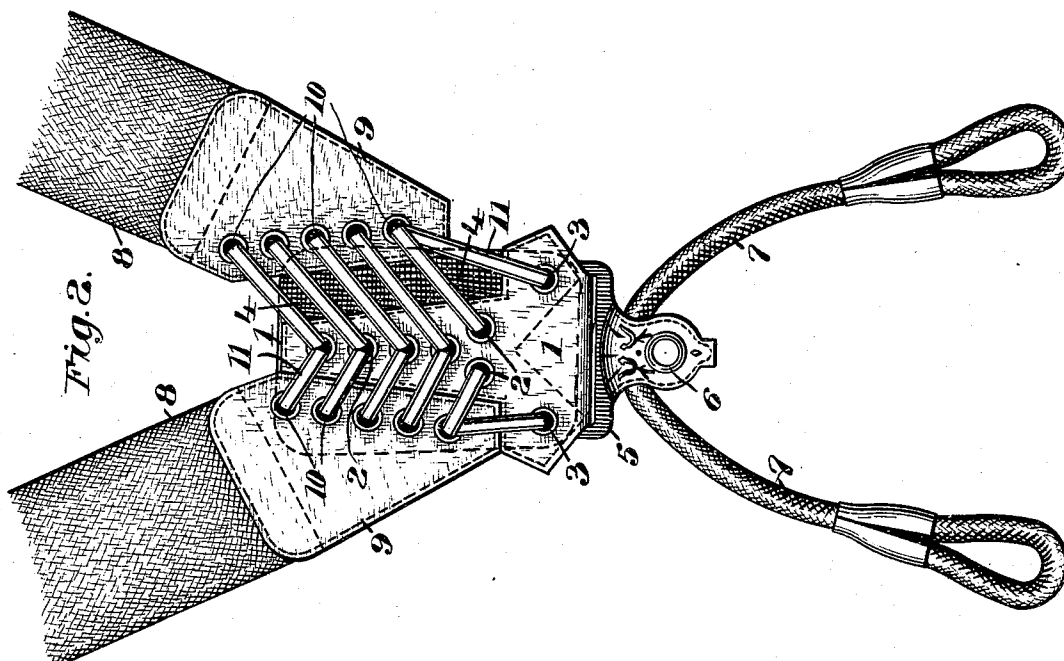
(No Model.)

J. P. GALVIN.  
SUSPENDERS.

2 Sheets—Sheet 1.

No. 478,958.

Patented July 12, 1892.



WITNESSES

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*J. J. Farmer*

INVENTOR

JAMES P. GALVIN

*by his attorney*

*J. H. Hubbard*

(No Model.)

J. P. GALVIN.  
SUSPENDERS.

2 Sheets—Sheet 2.

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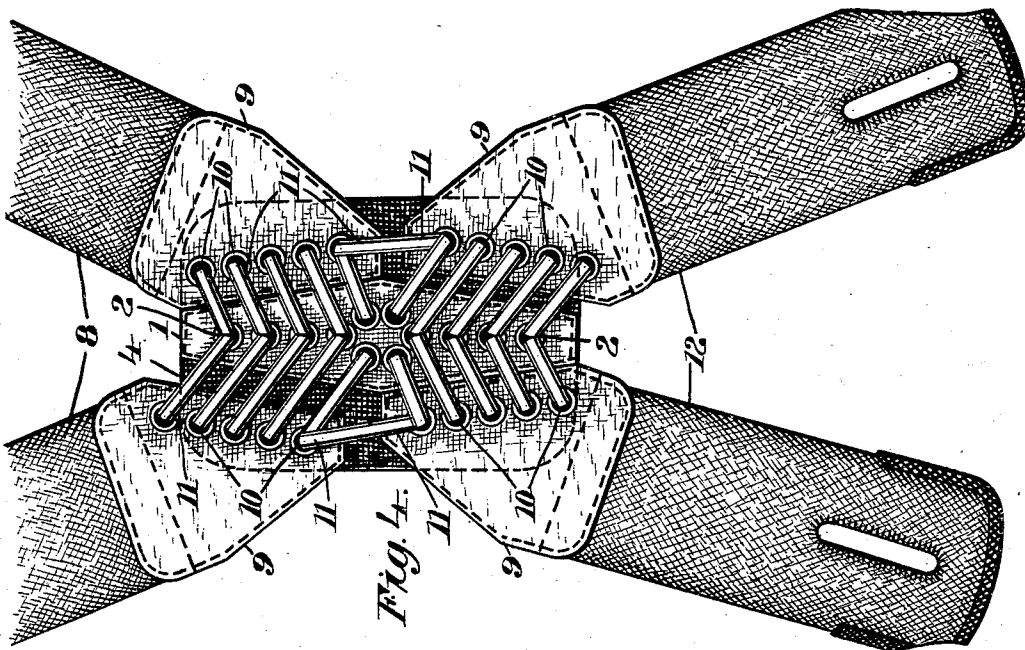


Fig. 4.

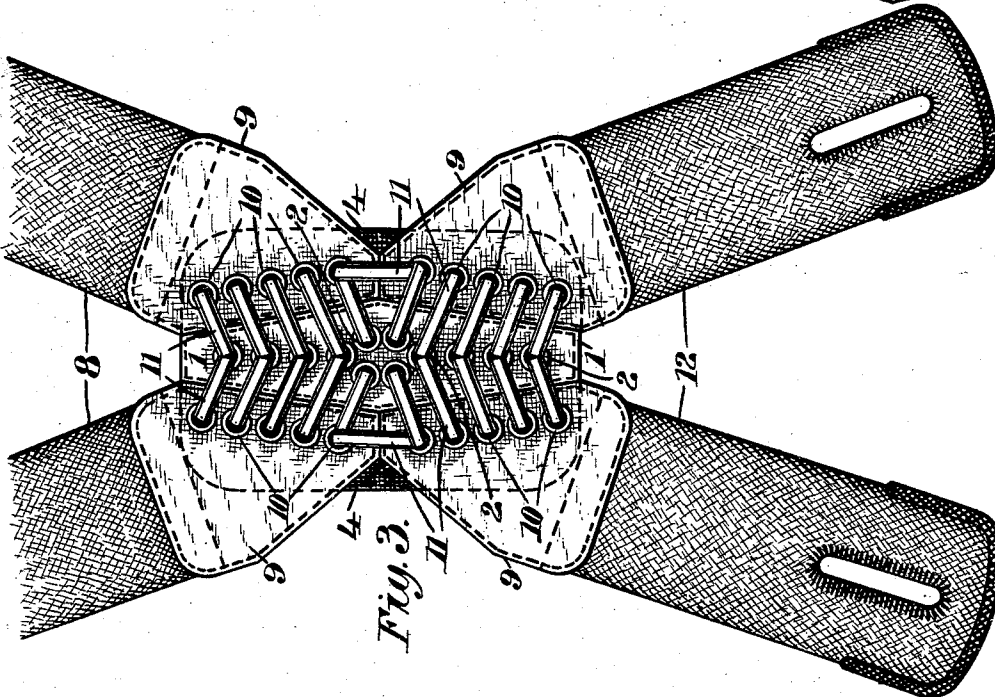


Fig. 3.

WITNESSES

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# UNITED STATES PATENT OFFICE.

JAMES P. GALVIN, OF BRIDGEPORT, CONNECTICUT.

## SUSPENDERS.

SPECIFICATION forming part of Letters Patent No. 478,958, dated July 12, 1892.

Application filed December 9, 1890. Serial No. 374,033. (No model.)

*To all whom it may concern:*

Be it known that I, JAMES P. GALVIN, a citizen of the United States, residing at Bridgeport, in the county of Fairfield and State of Connecticut, have invented certain new and useful Improvements in Suspenders; and I do hereby declare the following to be a full, clear, and exact description of the invention, such as will enable others skilled in the art to which it appertains to make and use the same.

This invention relates to certain novel and useful improvements in suspenders, shoulder-braces, and the like, and has for its object to provide a means for the efficient connection of the several straps, which, while of ample strength, shall provide for and permit to the parts a limited elastic movement, whereby the suspender shall yield with the movements of the wearer; and with these ends in view my invention consists in the construction and combination of elements hereinafter fully and in detail explained, and then recited in the claims.

In order that those skilled in the art to which my invention appertains may fully understand its construction and method of operation, I will describe the same in detail, reference being had to the accompanying drawings, and to the numerals marked thereon, which form a part of this specification.

Figure 1 is an elevation showing the rear ends of the shoulder-straps of a pair of suspenders connected in accordance with my invention, means for fastening the suspender to the trousers being provided in the form of a cord and pulley. Fig. 2 is a similar view, but showing the position of the parts when strain is applied to one of the straps. Fig. 3 shows a construction by which four independent straps are connected in accordance with my invention, so that each of said straps may have an independent movement. Fig. 4 is a view similar to Fig. 3, but showing two of the straps as drawn slightly away from the base piece or plate.

Referring now to Figs. 1 and 2, 1 represents a base-piece, which may be made of leather or of fabric, but which I prefer for purposes of economy and durability to make of a plate of thin sheet metal. This plate is provided with eye-

lets, arranged substantially as shown—that is to say, with a single or double row numbered 2 in its central portion and one or more eyelets numbered 3 in the outward projections of its lower portion. At the back of this plate is secured in any desired manner a guard 4, of fabric or leather, which prevents wear upon the clothing from the base-plate, eyelets, or lacings. A suitable end clasp 5 is connected with the base-piece and carries a pulley 6, over which runs a cord 7, provided with means for attachment to the buttons of the trousers.

8 are the shoulder-straps, each having an end tab 9. This tab upon one side is obliquely cut away, so that its edge may rest against the edge of the base-piece, and each of said tabs is provided with eyelets 10, substantially corresponding to the eyelets in said base-piece.

11 is an elastic lacing-cord, or, if desired, there may be two cords, and these, as shown in the drawings, are passed through the several eyelets in such manner as to connect and firmly hold the ends of the shoulder-straps to the base-piece.

While I prefer that the lacing shall be effected in substantially the manner shown, the precise method is not material.

While the abutment of the straps against the base-piece will ordinarily be sufficient to prevent them from dropping from the shoulders of the wearer, I find it convenient as against such a contingency to provide a supplemental lacing-cord 12 between the straps above the base-piece. By means of this the straps may be retained at any desired angle of divergence from the base-piece.

By the use of the connection herein shown and described it is readily apparent that each strap may have a free elastic movement away from the base-piece whenever strain is applied to the strap—as, for instance, by a stooping movement or raising of the shoulder of the wearer, as shown at Fig. 2. The lacing-cord may, when worn or frayed, be readily replaced without difficulty by the wearer, thereby renewing that portion of the suspender which is subjected to the greatest strain in proportion to its strength; or if for any reason the wearer desires a suspender entirely in-

elastic he may, without difficulty, remove the elastic lacing-cord and substitute therefor a lacing of the ordinary sort.

In Figs. 3 and 4 I have shown a suspender whose means of attachment at the rear consists of straps 12, substantially like the shoulder-straps. In this construction the base-piece is double-ended and provided with a double number of lacing-holes, by means of which latter the tabs of the straps 12 may be connected thereto. In this, as in the construction described heretofore and shown in the preceding figures, I consider the precise method of lacing to be immaterial, and said lacing may be effected either by a single lacing-cord, or more, or by a separate cord for each strap. The construction of Figs. 3 and 4 imparts to the suspender a high degree of elasticity, which is required by some persons, and where, as is frequently the case, some portion of the lacing-cord has become worn that portion may be independently removed and a new section inserted without sewing or any great amount of skill.

I claim—

1. The combination, with the shoulder-straps having lacing-eyelets in their extremities, of a base-piece provided with eyelets along its edges, and a lacing-cord whereby the straps are held in abutment with the edges of the base-piece, substantially as described.

2. The combination, in a suspender, with a perforated base-piece common to all the straps and provided with lacing-eyelets, of the shoulder-straps whose ends are provided with eyelets and are adapted to said base-piece, and an elastic lacing connection passing through

the eyelets on the base-piece, and the eyelets carried by the straps, substantially as described.

3. In a suspender, the combination, with a base-piece common to all the straps, of the shoulder-straps whose ends are eyeleted and fit closely against the edges of the base-piece, an elastic lacing-cord whereby said straps are connected to the base-piece, and a guard or shield arranged behind the base-piece, whereby the clothing of the wearer is protected from abrasion.

4. In a suspender, the combination, with a base-piece common to the shoulder-straps and the straps independently secured to said base-piece by elastic lacing-cords, of a supplemental lacing-cord extended across between the straps above the base-piece, substantially as described.

5. The combination, with the base-piece 1, having eyelets 2, of the straps 8, provided with eyelets 10, and having their ends conformed to the outline of the base-piece and the lacing-cord 11, all arranged substantially as described.

6. The combination, with the base-piece 1, having eyelets 2, of the straps 8, provided with eyelets 10, the lacing-cord 11, and the guard or shield 4, arranged behind the base-piece, substantially as and for the purpose set forth.

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

JAMES P. GALVIN.

Witnesses:

S. H. HUBBARD,  
M. C. HINCHCLIFFE.