

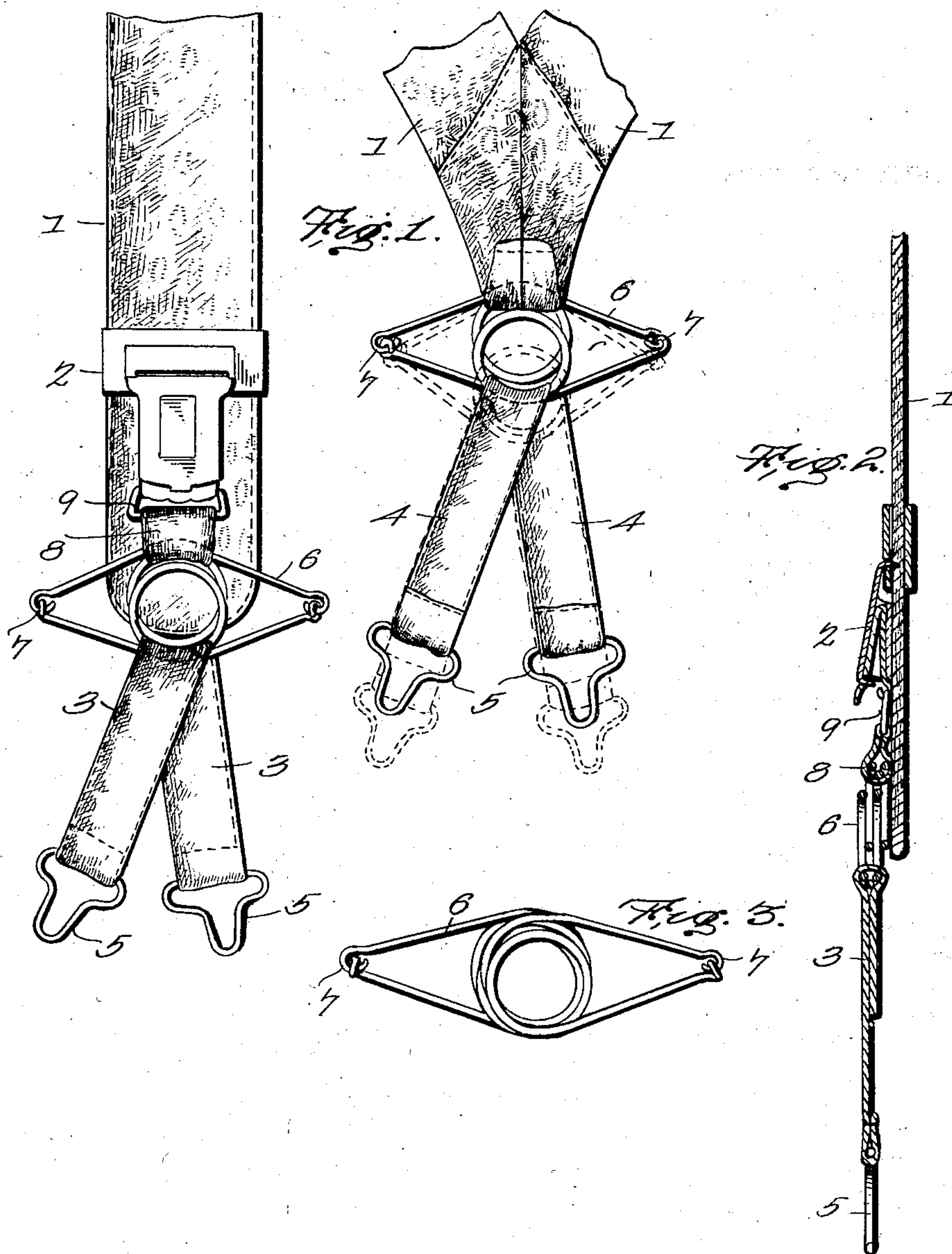
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C. O. LUCE.  
SUSPENDERS.

(Application filed Jan. 9, 1902.)

(No Model.)



Witnesses  
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# UNITED STATES PATENT OFFICE.

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## SUSPENDERS.

SPECIFICATION forming part of Letters Patent No. 708,154, dated September 2, 1902.

Application filed January 9, 1902. Serial No. 89,066. (No model.)

*To all whom it may concern:*

Be it known that I, CURTIS ORANGE LUCE, a citizen of the United States, residing at Brandon, in the county Rutland and State of Vermont, have invented new and useful Suspenders, of which the following is a specification.

This invention relates to suspenders.

The object of the invention is to present a simply-constructed, cheap, durable, and convenient self-adjusting suspender, which shall be capable of readily yielding and adapting itself to the changes of position of the body of the wearer without causing undue strain upon any portion thereof; furthermore, to present a novel form of draft-everener for connecting the button-straps and the shoulder-straps, said everener being adapted readily to yield to ordinary draft, but to present progressive resistance to yielding proportionate to the increase of draft transmitted thereto, thereby rendering unnecessary frequent adjustment of the shoulder-strap buckles to compensate for different weights in trousers or any added weight given to the garment, as by heavy articles being placed in the pockets thereof.

With these and other objects in view, as will appear as the nature of the invention is better understood, the same consists in the novel construction and combination of parts of a draft-everener for suspenders, as will be hereinafter fully described and claimed.

In the accompanying drawings, forming a part of this specification, and in which like numerals of reference indicate corresponding parts, there is illustrated a form of embodiment of the invention, together with a slightly-modified construction thereof, each capable of carrying the same into practical operation, it being understood that the elements therein exhibited may be varied or changed as to shape, proportion, and exact manner of assemblage without departing from the spirit thereof, and in these drawings—

Figure 1 is a view in elevation exhibiting the front portion of one of the shoulder-straps with the everener of this invention applied thereto and also the rear portion of the suspenders with the everener associated therewith. Fig. 2 is a view in vertical transverse section through the front portion of the shoulder-

strap, the everener, and the button-straps. Fig. 3 is a detached detail view of the everener.

Referring to the drawings, 1 designates a shoulder-strap, 2 the buckle, and 3 and 4, respectively, the front and rear button-straps. These parts may be of the usual or any preferred construction, the button-straps being shown as provided with metallic eyes 5 in lieu of the ordinary button-hole; but it is to be understood that, if preferred, the ordinary button-holed button-strap may be employed in lieu of that shown, and as this will be readily understood detailed illustration thereof is deemed unnecessary.

The draft-everener 6, which constitutes the gist of the present invention, is composed of two coiled springs the terminals of which project laterally beyond the whirls of the springs and are suitably interlocked or interlinked at their extremities, as at 7, thus to secure the parts together, the eyes formed by the bends of the terminals at their point of juncture with each other being disposed approximately at right angles to each other, whereby ease of movement of the eyes with relation to each other against any tendency to bind will be obviated. The whirls of the springs of the two members constituting the everener are oppositely disposed—that is to say, the point of divergence of each pair of arms from the springs is on opposite sides of the everener—and by this arrangement when draft is applied to the everener the two members will exert resistance in opposite directions to yield, thus insuring proper supporting of the garment irrespective of its weight. As will be apparent by reference to Fig. 3, the whirls of the springs of the everener will present increased resistance to flexure in direct proportion to the angle of divergence, so that when the suspenders are once adjusted to the garment any added weight thereto will not result in sagging, which would permit the bottom of the trousers-legs to drag upon the ground. The whirls of the springs are disposed intercurrent and being thus practically interlocked will operate as guides to cause the members after distention to resume their normal position and lie flat against the body of the wearer, thus obviating discomfort in use. The button-straps are secured within the whirls of the lower member, as by



being stitched or riveted to position therein, and the upper member of the evener is connected with the buckle through the medium of a piece of flexible material 8, such as webbing or the like, secured in the whirl and in an eye or loop 9, connected in any suitable way with the buckle. Both the button-strap and the flexible connection 8 are of a width approximating that of the whirls of the spring, and by this arrangement any tendency of rocking of the evener will be prevented, causing it always to occupy a position approximately at right angles to the suspender-strap.

By constructing the evener in the manner described it will readily yield to strain or draft, and the suspenders will be as comfortable and easy in use as where the shoulder-straps are provided with elastic, it being intended that the straps should be devoid of any inherent yielding means, although, if preferred, they may be made in the usual manner—that is to say, provided with elastic.

Having thus fully described my invention, what I claim as new, and desire to secure by Letters Patent, is—

1. In a pair of suspenders, a draft-evener for connecting the shoulder and button straps, comprising two separate coiled springs, having their terminals projected beyond their coils and the ends of the terminals interlinked.

2. In a pair of suspenders, a draft-evener for

connecting the shoulder and button straps, comprising two separate coiled springs, the terminals of which are oppositely disposed and projected beyond the coils, and interlinked at their extremities.

3. In a pair of suspenders, a draft-evener for connecting the shoulder and button straps, comprising two separate springs having the extremities of their terminals connected and their intermediate portions provided with whirls disposed intercurrent.

4. In a pair of suspenders, a draft-evener comprising two separate coiled springs having their terminals projected beyond the coils and the ends of the terminals interlinked, button-straps secured to the coils of the lower member, and a flexible band secured to the coils of the upper member and to the shoulder-strap buckle.

5. In a pair of suspenders, a draft-evener for connecting the shoulder and button straps comprising two oppositely-operable coiled springs having their terminals projecting beyond their coils and connected at their extremities.

In testimony that I claim the foregoing as my own I have hereto affixed my signature in the presence of two witnesses.

CURTIS ORANGE LUCE.

Witnesses:

F. P. COOKE,  
F. W. BRIGGS.