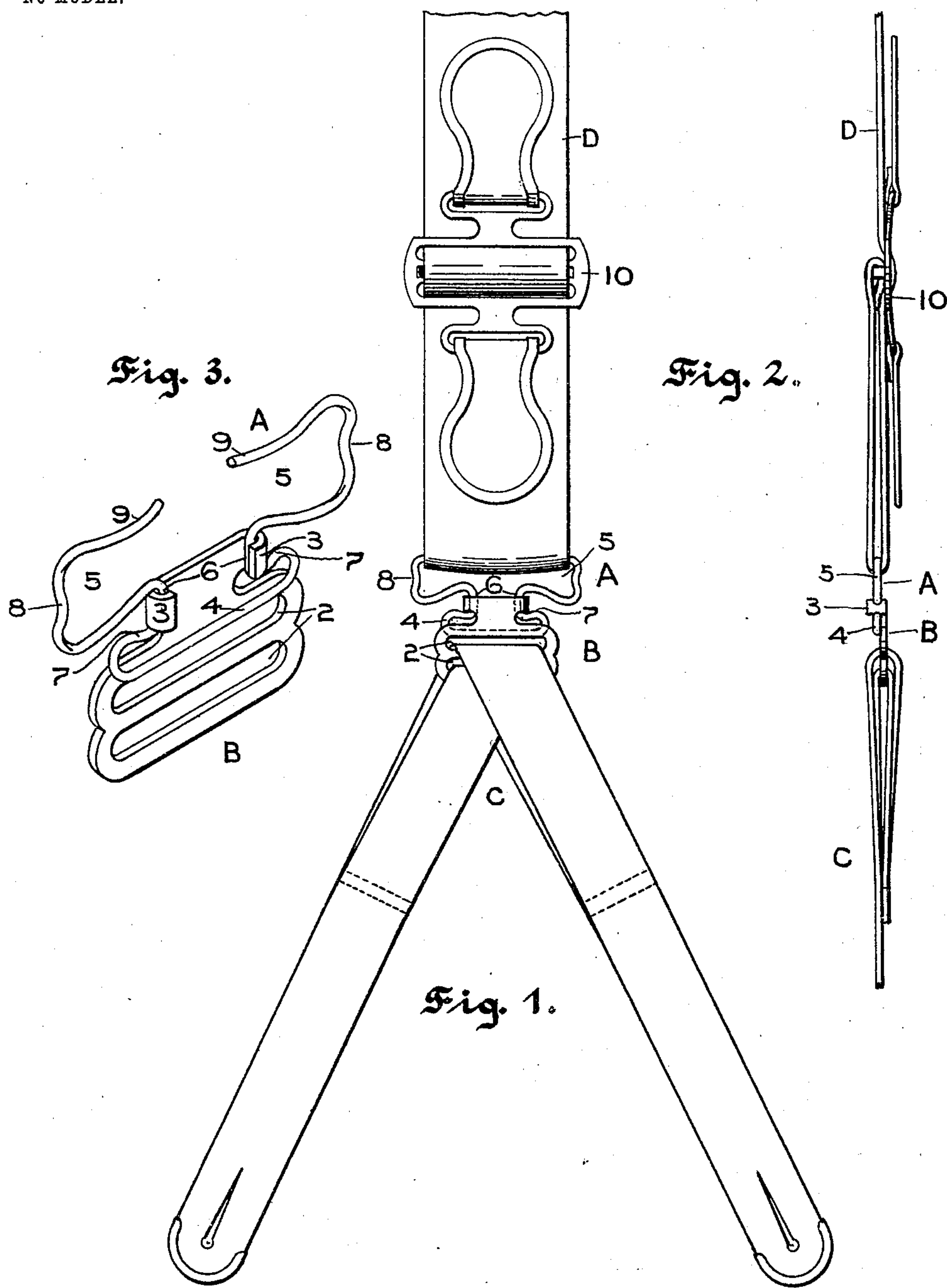


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H. G. MACWILLIAM.  
CAST-OFF FOR SUSPENDERS.  
APPLICATION FILED JUNE 29, 1903.

NO MODEL.



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# UNITED STATES PATENT OFFICE.

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## CAST-OFF FOR SUSPENDERS.

SPECIFICATION forming part of Letters Patent No. 773,759, dated November 1, 1904.

Application filed June 29, 1903. Serial No. 163,513. (No model.)

*To all whom it may concern:*

Be it known that I, HUGH GORDON MACWILLIAM, a subject of the King of Great Britain and Ireland, residing at New Rochelle, in the county of Westchester and State of New York, have invented certain new and useful Improvements in Cast-Offs for Suspenders, of which the following is a specification.

My invention relates to improvements in cast-offs for suspenders, and has for its object to provide a device for detachably connecting the suspender-ends with the shoulder-straps which will hold these parts securely together when in use without danger of their becoming accidentally disengaged and yet which may be easily, conveniently, and quickly manipulated by the wearer to connect the shoulder-strap with the suspender-end or to disconnect it therefrom and which will lie flat against the wearer's body.

To that end my invention consists in the construction, combination, and arrangement of parts hereinafter described and claimed.

In the accompanying drawings, forming part of this specification, Figure 1 is a front elevation of a suspender-end connected with the shoulder-strap by my improved cast-off. Fig. 2 is a side or edge view of the same, and Fig. 3 is an isometric view of the cast-off alone.

The cast-off consists of two separable and cooperating parts, a spring member A and a yoke member B. One of these members, preferably the yoke member B, as shown in the drawings, is adapted to be carried by the suspender-end C and the other member by the shoulder-strap D.

The yoke member B consists, preferably, of a metal stamping, provided at the bottom with suitable means, such as the loops or slots 2, for connection with the suspender-end and at the top with lateral spring-engaging means, such as the flanges or hooks 3, turned inwardly toward each other and adapted to embrace the neck 6 of the spring member A.

As this cast-off is particularly well adapted for use with a suspender-end of the so-called "cantab" type, I have illustrated a suspender-end of that type in the drawings; but it will be understood that the end may be of any desired form or style capable of suitable connection with the cast-off member.

As shown in the drawings, the cantab end is connected with the yoke member of the cast-off by being passed through the slots 2 therein.

The spring member A consists of a single wire or strip of spring metal bent always in the same plane to form a lower closed loop 4, an upper unclosed loop 5, and a narrower neck 6, connecting them. The portions of the wire constituting the neck are substantially vertical and parallel. At the bottom of the neck the wire portions are bent sharply outward away from each other to form shoulders 7 of sufficient length to support the hooks 3 of the yoke member B and to form an easy and elastic spring. They are then carried down and around to complete the loop 4. At the top of the neck the wire portions are turned first sharply outward away from each other and preferably slightly downward and then upwardly and toward each other to form the loop 5. The purpose of bending the wire slightly downward from the neck is to give the side portions of the loop sufficient length to be easily grasped between the thumb and finger. Further to facilitate the grasping and manipulation of the device the sides of the loop are bent or scalloped inwardly toward each other to form rests 8 for the fingers. In order to allow the side portions of the loop to be forced freely inward toward each other by the pressure of the fingers, considerable space is left between the free ends of the wire.

As shown in the drawings, the spring member A is connected with or suspended from the shoulder-strap D by inserting the wire portions 9, constituting the top of the loop 5, between the fold of the shoulder-strap, the shoulder-strap being doubled upon itself in the usual manner to be attached to the slide buckle 10.

When the suspenders are in use and it is desired to disconnect the shoulder-strap from the suspender-end, the sides of the loop 5 are grasped between the thumb and finger and pressed together sufficiently to spring the portions of the wire constituting the neck inwardly toward each other until they are carried out of the hooks 3, when the spring member can be separated from the yoke member.



Similarly in connecting the shoulder-strap with the suspender-end the sides of the loop 5 are pressed together sufficiently to enable the neck 6 to be inserted between the hooks

5 3. As soon as the pressure is removed and the sides of the loop released the wire portions forming the neck will spread or spring away from each other into and against the hooks and be held securely thereby—that is  
10 to say, the neck tends to spread laterally under spring-pressure in the plane of the device.

It is obvious that various modifications may be made in the details of the device without departing from the principle of the invention,  
15 the scope of which is defined in the claims.

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

1. A cast-off for suspenders comprising a  
20 spring member and a yoke member, the spring member consisting of a single piece of wire, bent, always in the same plane, to form a closed loop at the bottom having outwardly-extending shoulders, a narrower neck extend-  
25 ing upwardly therefrom and an unclosed loop at the top, the unclosed loop being of sufficient width to receive a suspender-strap, and the yoke member embracing the neck and having support upon the shoulders of the closed  
30 loop, said yoke member having means for connection with a suspender-end.

2. A cast-off for suspenders, comprising a spring member and a yoke member, the spring member consisting of a single piece of wire  
35 bent first to form a closed loop having outwardly-extending shoulders, and a narrower neck extending upwardly therefrom, the wire portions at the top of the neck being then turned outwardly and downwardly away from  
40 each other, then upwardly to form finger-rests, and then inwardly toward each other, a sufficient distance being left between the

free ends of the wire to allow the sides of the unclosed loop and neck to be sprung inwardly toward each other, the unclosed loop being of 45 sufficient width to receive a suspender-strap, and the yoke member being adapted to be connected with a suspender-end and having inwardly-turned hooks embracing the neck and having support upon the shoulders of the 50 closed loop.

3. A cast-off for suspenders comprising a spring member and a yoke member, the spring member consisting of a single piece of wire bent in the same plane to form a closed loop 55 at the bottom having outwardly-extending shoulders, a narrower neck extending upwardly therefrom, and an unclosed loop at the top, the unclosed loop being of sufficient width to receive a suspender-strap and being formed 60 at the sides with inwardly-bent finger-rests, and the yoke member having means for connection with a suspender-end, and being formed with inturned hooks embracing the neck and having support upon the shoulders 65 of the closed loops.

4. A cast-off for suspenders comprising a spring member consisting of a single piece of spring-wire bent to form a closed loop having outwardly-extending shoulders, a narrower 7 neck extending upwardly therefrom and an unclosed loop adapted to be connected with one of the suspender parts to be united, and a yoke member adapted to embrace said neck and rest upon the shoulders of the closed loop, 75 all parts of the spring member lying and working in the same vertical plane.

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

HUGH GORDON MACWILLIAM.

Witnesses:

HARRY E. COLWELL,  
NETTIE E. WARD.