

**No. 713,659.**

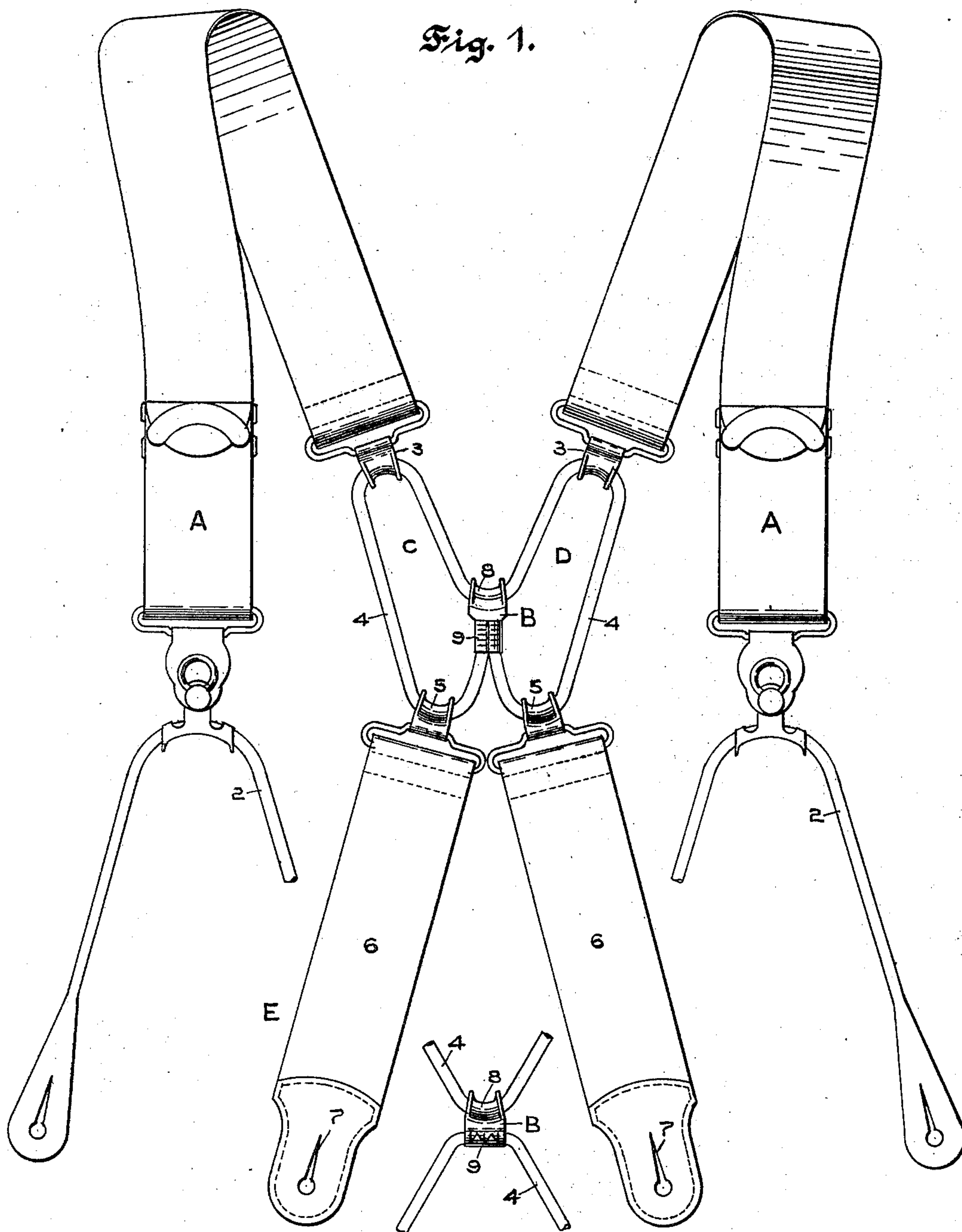
**Patented Nov. 18, 1902.**

**H. G. MACWILLIAM.**  
**SUSPENDERS.**

(Application filed Mar. 28, 1902.)

(No Model.)

**2 Sheets—Sheet 1.**



Witnesses,  
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Emily Eastman

Inventor,  
Hugh S. Macmillan.  
by Lothrop & Johnson  
his Attorneys.

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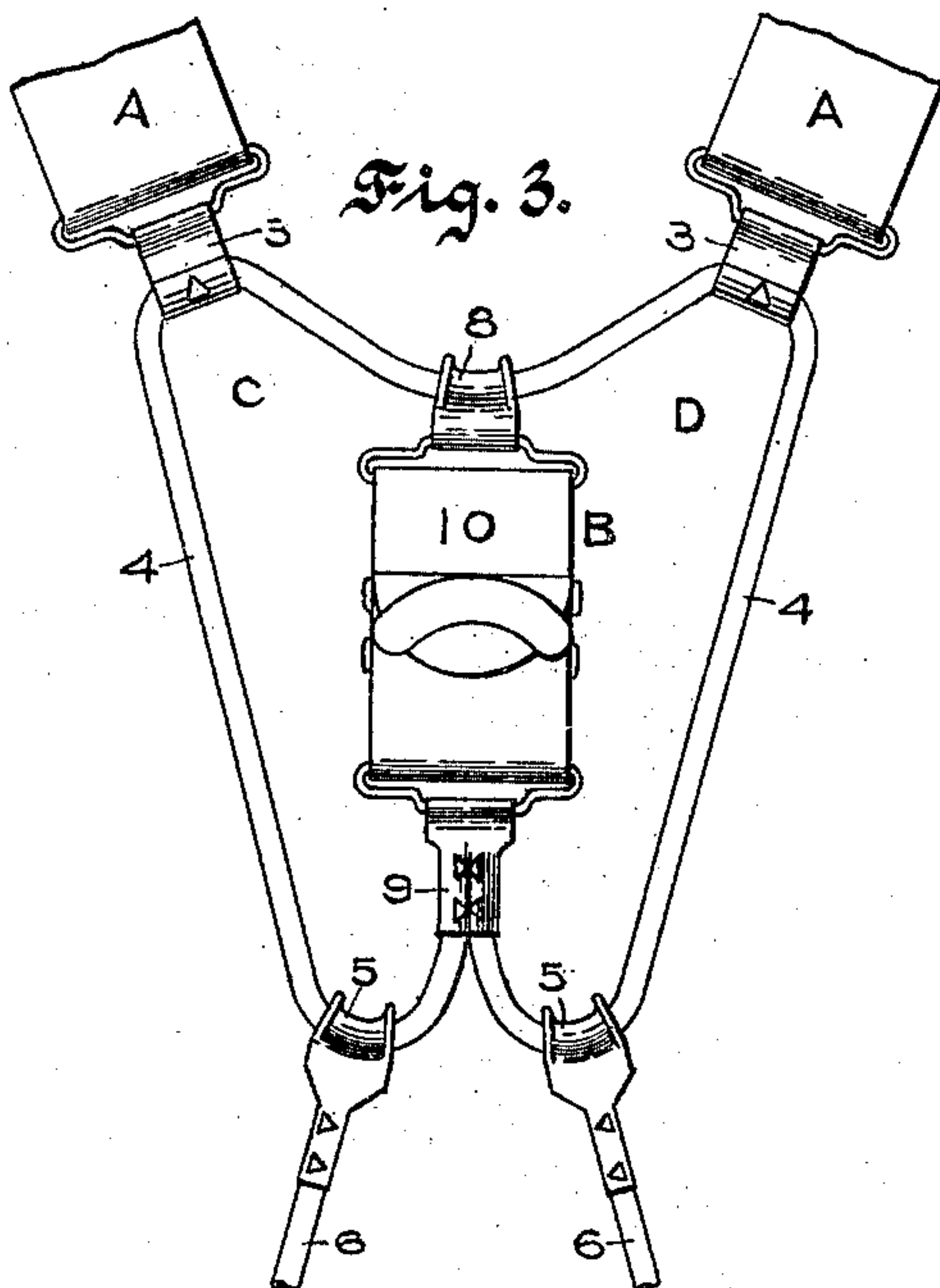
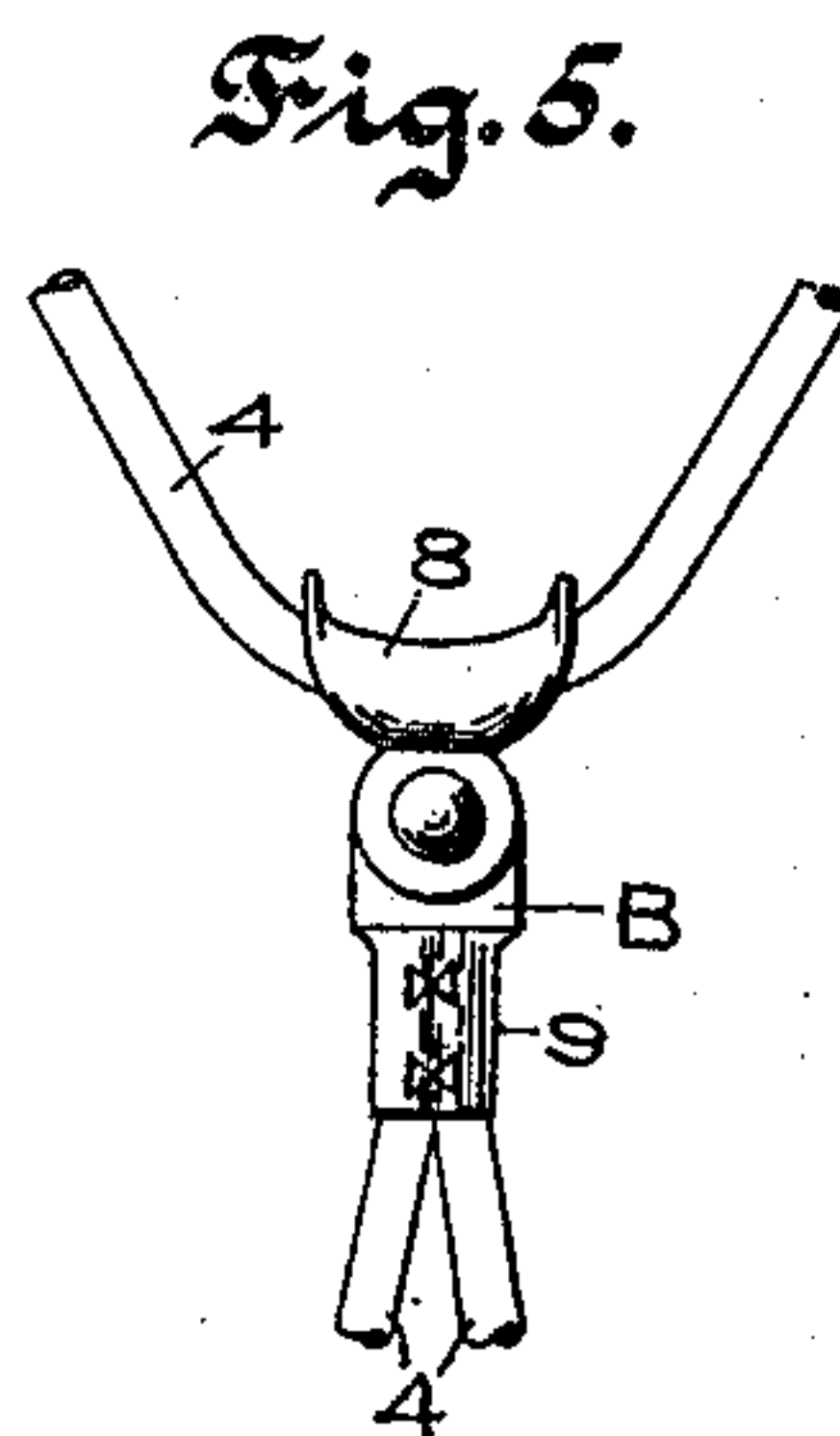
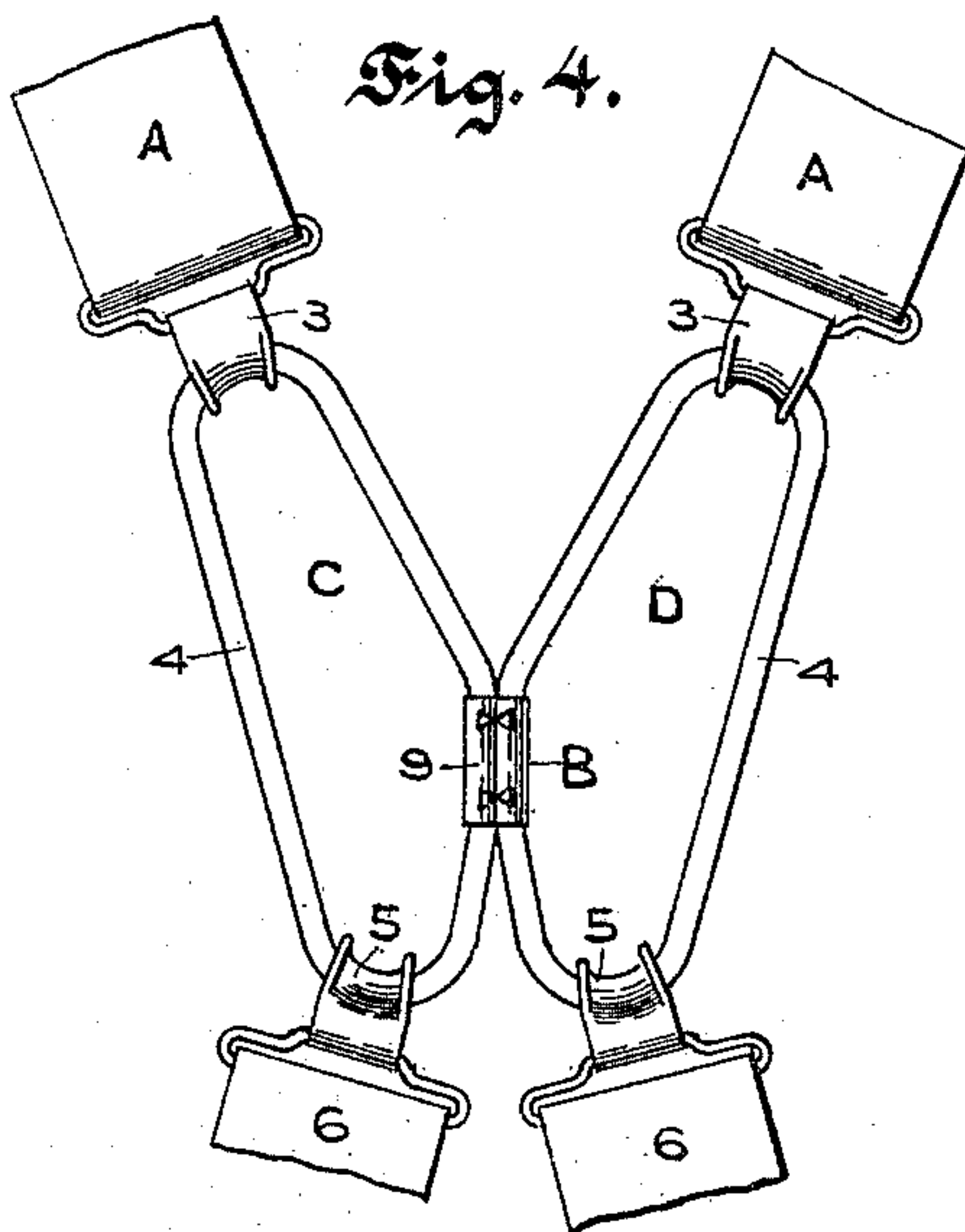
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# UNITED STATES PATENT OFFICE.

HUGH GORDON MACWILLIAM, OF NEW ROCHELLE, NEW YORK.

## SUSPENDERS.

SPECIFICATION forming part of Letters Patent No. 713,659, dated November 18, 1902.

Application filed March 28, 1902. Serial No. 100,372. (No model.)

*To all whom it may concern:*

Be it known that I, HUGH GORDON MACWILLIAM, residing at New Rochelle, in the county of Westchester and State of New York, have invented certain new and useful Improvements in Suspenders, of which the following is a specification.

My invention relates to improvements in suspenders of the class wherein the shoulder-straps are connected with the rear of the trousers by a back member, comprising a running cord or cords and an inner central connecting device.

The object of my invention is to free the cord, the central device, and rear trousers-connectors, as far as possible, from all restrictions upon their free movement, so that the parts may respond more readily to the varying strains upon the shoulder-straps, not only by the sliding of the cord, but also by the change in shape of the loops of the cord and by the change in the relative position of the parts.

A further object is while allowing the central device great freedom of play, yet to keep its play automatically or elastically, as it were, within the limits of effective action and to prevent its becoming displaced or interlocked with the shoulder-straps or the rear trousers-connectors.

To this end my invention consists in the construction, combination, and arrangement of parts hereinafter described, and specifically pointed out in the claims.

In the accompanying drawings, forming part of this specification, Figure 1 is a front elevation of a pair of suspenders embodying my invention. Figs. 2 and 5 are details showing modified forms of the central connecting device, and Figs. 3 and 4 are modified forms of the back member and its connections.

In the drawings, A represents a pair of shoulder-straps of ordinary construction, provided at their front ends with suitable means of attachment, such as the button-cords 2, to the front of the trousers, and at their rear ends with means of connection 3 with the cord of the back member. This means of connection is preferably an eye or guide of sufficient size to receive runningly

the cord of the back member; but it may be a clamp or other device, as illustrated in Fig. 3, securing the cord fixedly.

The back member consists of a cord or cords 4, connected at top and bottom only by the central connecting device B to form two, and only two, closed loops C and D, arranged side by side. The cord of each loop passes from the central device B first to the adjacent shoulder-strap, with which it is connected runningly or fixedly by the device 3, as stated, next through the eye or guide 5 at the upper end of the adjacent rear trousers-connector E, and then back to the central device.

Each rear trousers-connector consists of a band or cord 6, preferably a band of webbing, as shown in Fig. 1, adapted at its lower end by means of the buttonhole 7 or otherwise to be attached to the rear of the trousers and having at the top an eye or guide 5 to receive loosely the cord 4 of the adjacent loop of the back member, so that the cord may slide or run freely through the eye.

The central connecting device B consists, preferably, as shown in Fig. 1 of the drawings, of an eye or guide 8 to receive runningly the upper part of the cord 4 between the means of connection 3 with the shoulder-straps and of a clasp or clamp 9, in which are made fast the ends of the cord 4 between the eyes 5 upon the rear trousers-connectors. The clamp may be made integral with the eye or secured rigidly to it, as shown in Fig. 1, or it may be pivoted to the eye, as shown in Fig. 5, or connected with it in any other suitable manner, such as by a cord or band 10 of any desired length, as shown in Fig. 3; but it is desirable to position the clamp as close to the eye as possible in order to give the cord 4 the greatest freedom of action.

In order to secure the freest and most effective action of the central device, the ends of the cord 4 are preferably clamped together side by side in a position perpendicular to the top portion of the cord passing through the eye 8, as shown in Fig. 1; but they may be clamped end to end, as shown in Fig. 2, in a position substantially parallel with the top portion of the cord passing through the eye 8. It is also desirable to have running connec-



tion between the loops C and D, as shown in Figs. 1 and 3, so that the loops may be interacting and the central device may ride upon the top portion of the cord, but the eye of the central device may be dispensed with, the device consisting merely of a clasp or clamp binding together fixedly the upper and lower portions of the cord, as shown in Fig. 4, and it is obvious that wherever clamps are used the cord 4 may be divided into two or more cords, the ends being held fast in the clamps.

In use the trousers-connectors being connected directly and independently of each other with the respective loops C and D exert a downward and lateral pull upon the lower portion of the loops, keeping them well below the central device, and being arranged to slide upon the cord of the loops they tend to spread the loops, so as to allow the cord to take the easiest course through the eyes.

An important feature of the invention, it will be noticed, is that the shoulder-straps and rear trousers-connectors on each side of the central device are both connected directly with the same loop of the cord and that the outer sides of the loops have no intermediate engagement between the shoulder-strap and connector. Being thus unconfined at the outer sides, the loops have great freedom of action.

It is obvious that various modifications may be made without departing from the principle of my invention, 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. In a pair of suspenders, the combination, with the shoulder-straps, of a back member consisting of a cord centrally connected at top and bottom only to form two closed loops, each loop being unconfined at the outer side, and a pair of mutually-independent rear trousers-connectors, the cord of each loop having suitable connection with the end of the adjacent shoulder-strap and running connection with the adjacent trousers-connector.

2. In a pair of suspenders, the combination, with the shoulder-straps, of a back member comprising a cord centrally connected at top and bottom only to form two closed loops, each loop being unconfined at the outer side and having running engagement with the adjacent shoulder-strap, and means for independently connecting each of the loops with the rear of the trousers.

3. In a pair of suspenders, the combination, with the shoulder-straps, of a cord centrally connected at top and bottom only to form two closed loops arranged side by side, the side portions of the cord being unconnected and unconfined, and a pair of mutually-independent rear trousers-connectors, the cord of each loop having running engagement with the end of the adjacent shoulder-strap and with the adjacent trousers-connector.

4. In a pair of suspenders, in combination, a pair of shoulder-straps, a pair of mutually-independent trousers-connectors adapted at one end to be attached to the rear of the trousers and having an eye at the other end, a central device consisting of an eye and a clamp suitably connected, the eye being positioned above the clamp, and a cord running loosely through the eye of the central device and having its ends held fast in the clamp to form two closed loops, each loop having suitable connection with the adjacent shoulder-strap, and running connection with the eye of the adjacent rear trousers-connector, the outer side of each loop between said connections being unconfined and unengaged.

5. In a pair of suspenders, the combination, with a pair of shoulder-straps, of a central device provided with a clamp, a pair of trousers-connectors independent of each other and of the central device and adapted at one end to be attached to the rear of the trousers and having an eye at the other end, and a cord having its ends held fast in said clamp and being also engaged intermediately of its ends at one point only by the central device to form two closed loops, each loop having running engagement with the eye upon the adjacent shoulder-strap and the eye upon the adjacent trousers-connector and being unconfined at the outer side.

6. In a pair of suspenders, in combination, a pair of shoulder-straps provided each with a terminal eye, a pair of mutually-independent trousers-connectors adapted at one end to be attached to the rear of the trousers and having an eye at the other end, a central device consisting of an eye and a clamp suitably connected, and a cord running loosely through the eye of the central device and having its ends held fast in the clamp, but not otherwise engaged by the central device, and running loosely on either side of the central device through the eye upon the adjacent shoulder-strap and then, without intermediate engagement, through the eye upon the adjacent rear trousers-connector, substantially as described.

7. In a pair of suspenders, in combination, a pair of shoulder-straps, a pair of rear trousers-connectors adapted at one end to be attached to the trousers and having an eye at the other end, a central device, and a cord which has both a running engagement and a fast engagement with the central device and also, intermediately, suitable connection with each of the shoulder-straps and running connection with the adjacent rear trousers-connector, substantially as described.

8. In a pair of suspenders, in combination, a pair of shoulder-straps, a pair of trousers-connectors adapted at one end to be attached to the trousers and having an eye at the other end, a central device consisting of an eye and a clamp, and a cord passing through the eye of the central device and having its ends

clamped side by side in the clamp in a position perpendicular to the axis of the eye and having intermediately on either side of the central device suitable connection with the  
5 adjacent shoulder-strap and running connection with the eye of the adjacent trousers-connector.

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

HUGH GORDON MACWILLIAM.

Witnesses:

WALTER E. STEVES,  
WILLIAM HETTINGER.