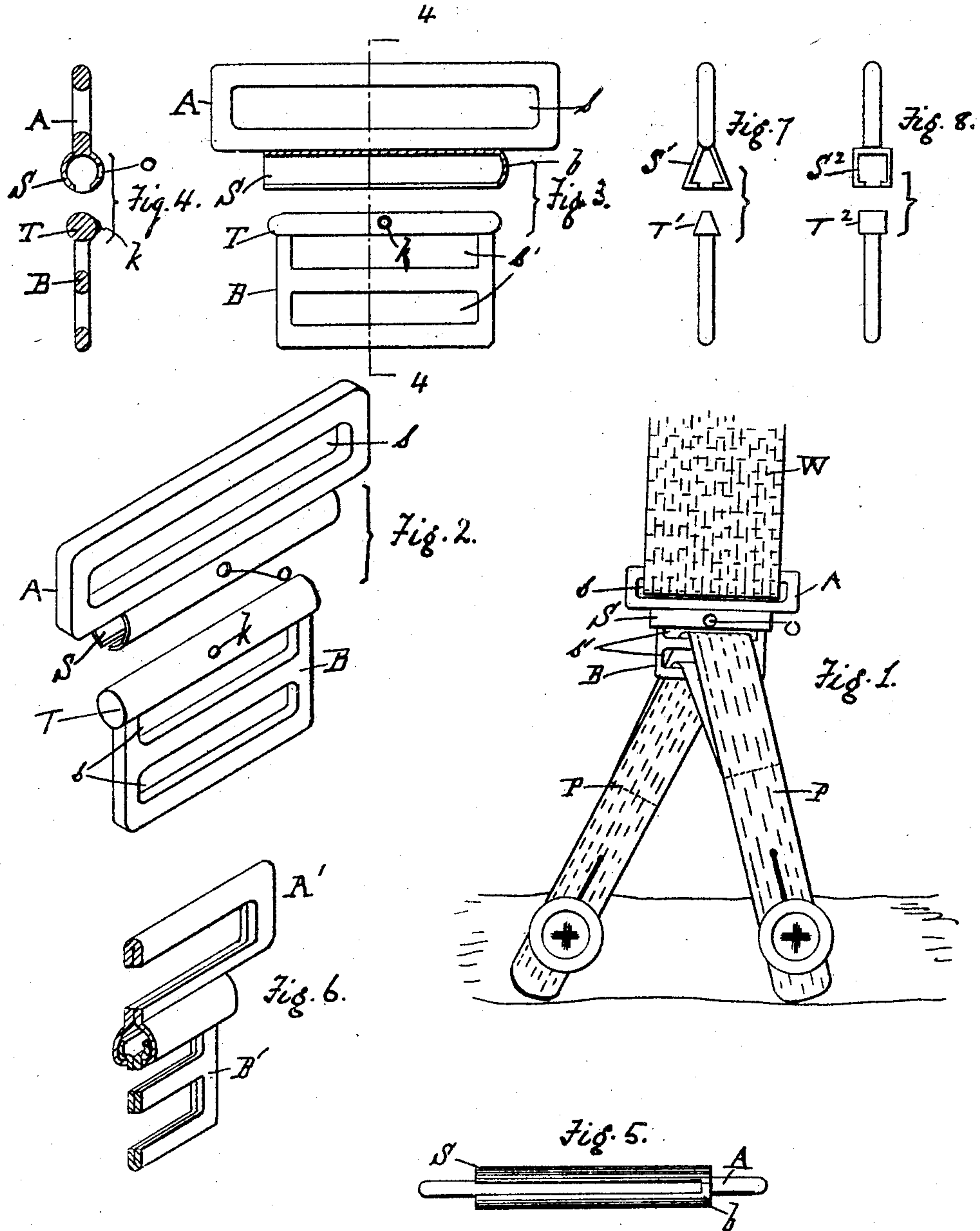


No. 796,414.

PATENTED AUG. 8, 1905.

H. E. S. CHAYES.  
SUSPENDERS.  
APPLICATION FILED JULY 12, 1904.



WITNESSES

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# UNITED STATES PATENT OFFICE.

HERMAN E. S. CHAYES, OF NEW YORK, N. Y.

## SUSPENDERS.

No. 796,414.

Specification of Letters Patent.

Patented Aug. 8, 1905.

Application filed July 12, 1904. Serial No. 216,264.

*To all whom it may concern:*

Be it known that I, HERMAN E. S. CHAYES, a citizen of the United States of America, residing in the borough of Manhattan, in the city, county, 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, and more particularly to that class of suspenders worn by men and adapted to hold up or retain their trousers in proper position.

It has many advantages, one of which is that it provides what may be called a "separable" suspender-connector, serving as a connection between the shoulder-straps and their suspender-ends, which is simple, strong, durable and efficient, and which is preferably inconspicuously separable, by which I mean that it will have substantially the same appearance as a solid connector, though, in fact, it is separable.

The accompanying drawings show some of the forms which my improvements may take, wherein—

Figure 1 is a front elevation of a construction embodying a preferred form of my invention; Fig. 2, a perspective view of the same, on an enlarged scale; Fig. 3, an enlarged front elevation, partially in section, showing the connector with its parts detached; Fig. 4, a sectional side elevation of Fig. 3 on the line 4 4 thereof; Fig. 5, an underneath plan view of one of the parts shown in the above figures; Fig. 6, a sectional side elevation of a modified form, and Figs. 7 and 8 views of additional modifications.

My invention may be embodied in a variety of constructions and may take a variety of forms, depending in many instances upon the construction and form and nature of the suspender in which it is embodied.

In the accompanying drawings are shown several forms of my invention each adapted for use in suspenders of the well-known type where the shoulder-strap W has its lower or front end doubled upon itself to form a loop, the extent of which loop is variable at will for the purpose of varying or adjusting the length of the suspender.

Referring to Figs. 1 to 5 of the drawings,

A and B designate the two members of a separable suspender-connector within my invention. The member A comprises a part in which is formed the slot *s*, constituting an elongated loop through which the shoulder-strap W may be looped and freely move when the strap is adjusted to shorten or lengthen the suspender. Attached to this slotted part of the member A is the sleeve S, which is shown slotted at its lower side, open at one end and closed at its other end to form a stop *b*, Figs. 3 and 5. An indentation or opening *o* in or through the side of this sleeve may be left for the purposes hereinafter described. The other member B of the connector is shown as comprising a cylindrical or other shaped tongue, which is adapted to be seated by endwise motion into the sleeve. Connected to this tongue is a part in which may be formed the elongated slots *s'* to make elongated loops adapted to receive the suspender-end P. The knob *k* is upset or otherwise formed in the metal of the tongue to correspond in position to the opening *o* in the sleeve when the tongue and sleeve are in engaged position, thereby cooperating resiliently and acting as locking means preventing accidental disengagement of the parts.

In use suspenders on account of the direction of strain between the buttons and over the wearer's shoulder, cause the suspender-connector to occupy a position off the horizontal, as shown in Fig. 1. Consequently I place the closed end of the sleeve S to that side of the connector which is to occupy the lower position, so as to act as a stop, preventing the withdrawal of the tongue from the sleeve. In detaching the device the wearer merely pulls the lower member B to the left of the position shown in Fig. 1, freeing the knob *k* readily from the opening *o*. In use the walls and closed end of the sleeve prevent detachment through material strain on the webbing or any movement except in a horizontal direction, while the knob *k*, engaging the opening *o*, prevents displacement in a horizontal direction from minor causes of detachment when the suspender is not under strain. Of course the locking means—in this instance the knob *k* and the opening *o*—may be made sufficiently strong so as to serve both functions without the use of a closed end or other stop on the



sleeve to prevent the withdrawal of the tongue therefrom.

In Fig. 6 I have shown the two members A' and B' as formed of folded sheet metal. The elasticity or resilient coöperation of these sheet-metal members causes them to fit so snugly one within the other that all tendency to work out is overcome, and therefore constitutes adequate locking means. If desired, a closed end or other stop may be provided on the sleeve, as in the foregoing.

In Fig. 7 I have shown the cylindrical tongue of Fig. 1 as replaced by a tongue T', triangular in cross-section, the sleeve S' being similarly shaped, while Fig. 8 shows the sleeve S<sup>2</sup> and tongue T<sup>2</sup> as rectangular.

It will be noted that the sleeve in the suspender-connector herein is disposed transversely to the shoulder-strap and that the tongue is insertible endwise into said sleeve, and, moreover, that when the parts of the connector are separated one part remains attached to the shoulder-strap and the other part to the suspender-end.

When the tongued and sleeved parts are engaged, it will be seen in the device illustrated that the part attached to the tongue extends through the slot in the sleeve, and since this is the part on the tongue member to which the suspender fabric is connected it is apparent that this means prevents such fabric from coming in contact with the interior of the sleeve or with the slot therein, and thereby saves it from abrasion and wear when the connector parts are operated.

Note should be made of the exceedingly neat and compact form which my connector is adapted to assume. Thus the whole device as illustrated appears like a solid connection between the shoulder-strap and the suspender-end, whereas as a matter of fact it is separable, although inconspicuously so. From this point of view the suspender-connector illustrated may be described as consisting of a plurality or series of elongated loops arranged parallel to each other and separated by bars, one of the intermediate bars being separable and consisting of a sleeve with a tongue telescoped therein, and the sleeve being slotted so as to allow the portion attached to the tongue to extend therethrough, and in addition serving to hold the two parts of the connector more or less rigid against rotary movement on each other.

In Fig. 6 it will be noted that the locking means against endwise movement is not released by rotary movement of the parts of the connector on each other. Again, in the construction illustrated in Figs. 1 and 2, &c., the locking means should be made proof against such rotary movement as the slot in the sleeve may permit, although it will be preferable to avoid substantially all rotary movement of the connector parts on each other by having the

slot snugly confine the part on the tongue extending therethrough. Also in the devices illustrated it will be noted that the parts are so constructed and adapted to each other that the tongue and sleeve are engageable by an endwise non-rotary movement on each other, which at the same time puts into effect and operation the locking means; moreover, that this same endwise non-rotary movement suffices to attach the suspender-end to the shoulder-strap and to locate these parts directly under each other in the very positions which they occupy when the suspender is in use. Finally, it should be observed that whereas a rotary movement to engage and disengage the ends from the suspender is awkward the aforesaid non-rotary and merely endwise movement required to operate and completely engage the devices illustrated is extremely natural and easy for the wearer to employ.

What I claim is—

1. In a separable connector between a shoulder-strap and a suspender-end, the combination of an elongated loop; a slotted sleeve arranged lengthwise on said loop; another elongated loop, one side thereof forming a tongue, which is insertible endwise into said sleeve, the rest of said loop extending through the slot when the tongue is seated in the sleeve.

2. In a separable connector between a shoulder-strap and a suspender-end, the combination of a part to which the shoulder-strap is connected; a part to which the suspender-end is connected; a sleeve transversely disposed to the shoulder-strap and secured to one of said parts; a tongue insertible endwise into said sleeve and rigidly secured to the other of said parts, the said sleeve being provided with a slot, the sides of which confine the part rigidly connected with the tongue against rotary movement when the tongue is seated in the sleeve.

3. In combination, a suspender shoulder-strap and a suspender-end; a sleeve; a tongue adapted to be inserted endwise into said sleeve and to coöperate resiliently therewith to prevent accidental endwise removal of the tongue from the sleeve, said tongue and sleeve being transversely disposed to the shoulder-strap and being respectively connected with one of the above-named suspender members; said sleeve having a longitudinal slot which permits complete engagement and disengagement of the tongued suspender member and the sleeved suspender member, by a longitudinal non-rotary movement of the tongue through the end of the sleeve.

4. In combination, a suspender shoulder-strap and a suspender-end; a tongue and a sleeve transversely disposed to the shoulder-strap and respectively connected with one of the above-named suspender members; the said sleeve being provided with a longitudi-

nal slot which permits complete engagement and disengagement of the tongued suspender member and the sleeved suspender member by a longitudinal non-rotary movement of the tongue through one end of the sleeve; and a stop adapted to prevent accidental withdrawal of the tongue from the other end of the sleeve.

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

HERMAN E. S. CHAYES.

Witnesses:

F. WARREN WRIGHT,  
EDNA W. COLLINS.