

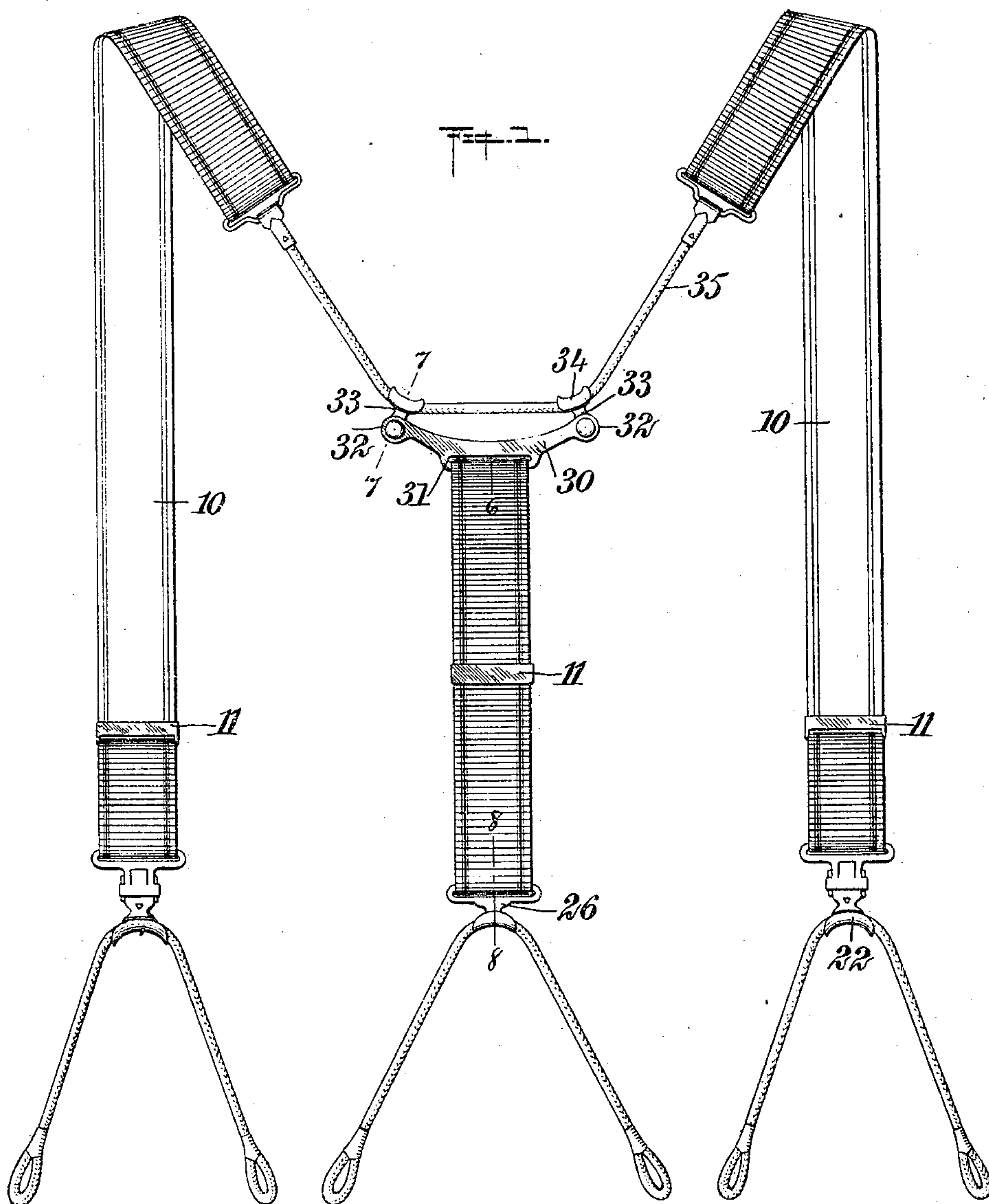
No. 807,989.

G. D. ASHELMAN.  
SUSPENDERS.

APPLICATION FILED MAR. 1, 1905.

PATENTED DEC. 19, 1905.

2 SHEETS—SHEET 1.



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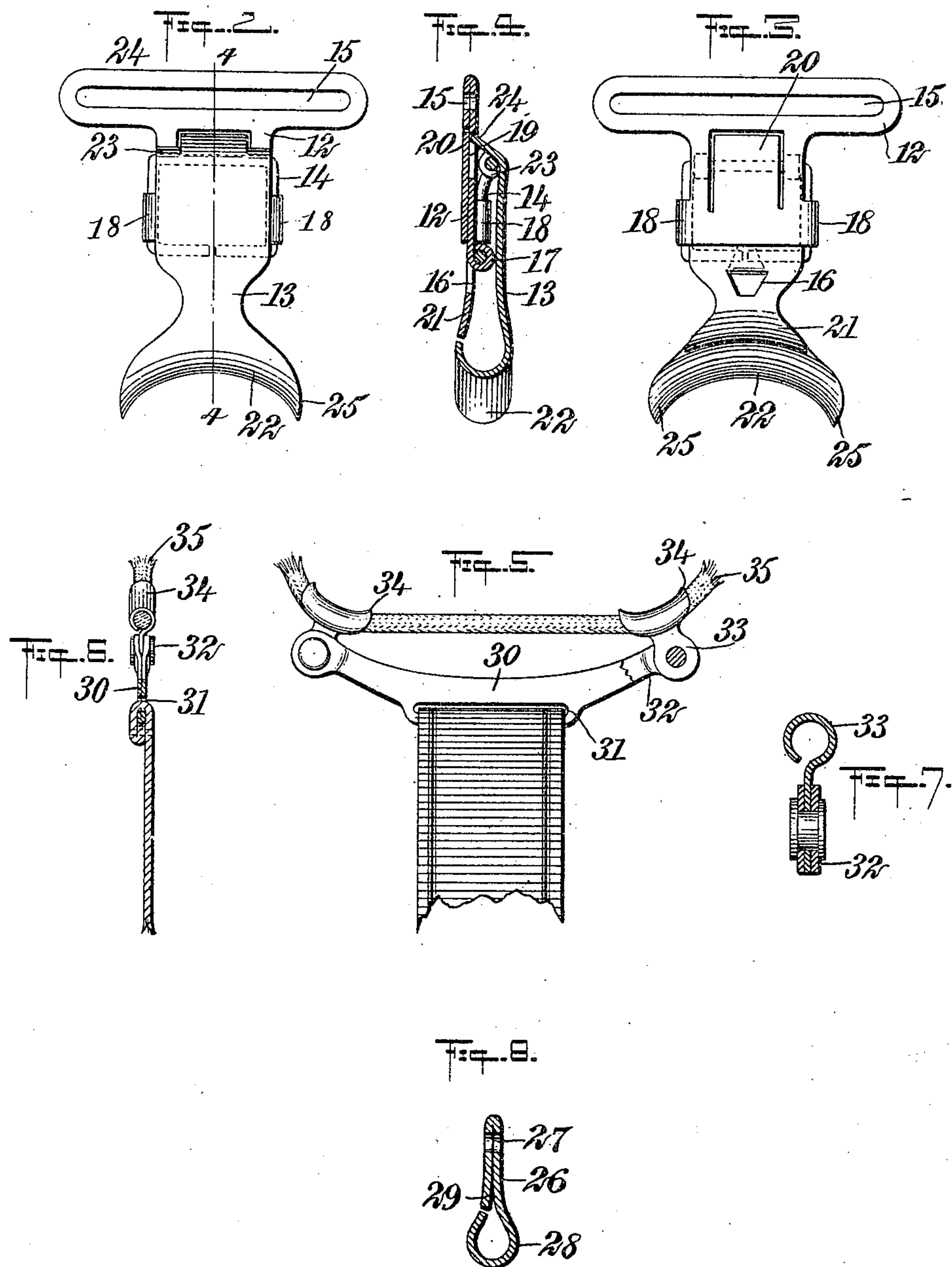
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2 SHEETS—SHEET 2.



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# UNITED STATES PATENT OFFICE

GEORGE D. ASHELMAN, OF FARGO, NORTH DAKOTA.

## SUSPENDERS.

No. 807,989.

Specification of Letters Patent.

Patented Dec. 19, 1905.

Application filed March 1, 1905. Serial No. 247,949.

*To all whom it may concern:*

Be it known that I, GEORGE D. ASHELMAN, a citizen of the United States, and a resident of Fargo, in the county of Cass and State of North Dakota, have invented new and useful Improvements in Suspenders, of which the following is a full, clear, and exact description.

Suspenders as heretofore constructed have been open to numerous objections. For example, the front and back straps have usually been so located as to come into contact with the protruding parts of the shoulder-blades and the large working muscles of the back, thus causing friction and compression at these points and rendering the articles uncomfortable to the wearer. Most forms heretofore made have also been of such a nature that a draft on either of the shoulder-straps would not meet with a quick response on the part of the suspenders, and strains and friction were thus set up. The different parts would not adjust themselves, so as to compensate for the more extreme movements of the shoulders without disturbing the poise of the back strap or the normal draft on any of the button-tabs.

The principal objects of the present invention are to overcome these and other objections to existing forms of suspenders by constructing a device in which the different parts conform to the natural curves of the body and the protruding parts are located largely in depressions instead of being located over large muscles and other projections of the body.

Reference is to be had to the accompanying drawings, forming a part of this specification, in which similar characters of reference indicate corresponding parts in all the figures.

Figure 1 is a rear elevation of a pair of suspenders with my improvements applied thereto. Fig. 2 is an enlarged front elevation of a loop for the front part of the suspenders. Fig. 3 is a rear elevation of the same. Fig. 4 is a sectional view on the line 4 4 of Fig. 2. Fig. 5 is an enlarged view of a connection for the upper part of the back strap. Fig. 6 is a sectional view on the line 6 6 of Fig. 1. Fig. 7 is a sectional view on the line 7 7 of Fig. 1, and Fig. 8 is a sectional view on the line 8 8 of Fig. 1.

The shoulder-straps 10 may be of the usual or any desired construction and may be formed of any material, but are preferably

made of elastic webbing. At their front ends they are provided with slides 11 of any desired construction and are connected with the front button-tabs by means of cast-offs, consisting of three members 12, 13, and 14. The member 14 is preferably bent into a substantially rectangular form and is designed for holding the elements 12 and 13 together and pivoting the latter to the former. The member 12 is formed of a single piece of sheet metal or other similar material doubled upon itself at the top, so as to provide an eye 15, and having a slit 16 cut out to form a tongue 17, which is bent around a portion of the member 14, which in the present case is in the form of a wire. The back of the member 12 is also provided with a pair of extensions 18 at its sides adapted to be bent around the wire, so that the latter is securely held to the section 12. The back portion of this piece is also provided with an opening 19, and the front portion is provided with a resilient tongue 20 opposite this opening. This resilient tongue is cut down on three sides, as indicated in Fig. 3, so that it forms a spring for a purpose to be described.

The lower end 21 of the section 12 is resilient and extends in such a direction as to form a practical continuation of a hook 22, which is formed on the bottom of the member 13, there being a space between the edges of the parts 21 and 22. The member 13 is provided with projections 23, adapted to be bent around the wire 14, so as to constitute a hinge for the member 13. This member is also provided with an upwardly-extending projection 24, adapted to pass through the opening 19 and engage the resilient tongue 20. It will be seen, therefore, that the member 13 is hinged to the wire 14 and that the projection 24, engaging the resilient tongue 20, provides a resilient means for normally forcing the hook into the position shown at Fig. 4, where it will hold a front button-tab in an obvious manner. The hook 22 is concave, and its ends 25 project downwardly in such a manner as to provide an easy path for the button-tab.

The lower end of the back strap is connected with the rear button-tab by means of a hook 26, formed, as shown in Fig. 8, of a piece of metal doubled upon itself to produce an eye 27 and a loop 28 for receiving the button-tab. The opposite end of the piece of metal is brought to a position near the end of the loop, as shown at 29, and the loop is made



in hook form similar to that of the hooks 22. The top of the back strap is provided with a connecting-piece 30, having an eye 31, through which the back strap is adapted to be passed, and provided with extensions 32, located at a distance from its center and on which are pivotally mounted a pair of guides 33. These guides are provided with rounded ends 34 in order to receive a cord 35, by means of which the upper ends of the two shoulder-straps are connected together. It will be seen that the pivoted guides 33, being located quite a distance apart and affording free passage of the cord 35, provide for a flexible and yielding connection of the shoulder-straps with the back strap and allow movements from side to side without restricting the movements of the wearer in any way.

It will be readily understood that suspenders constructed in accordance with the principle of my invention, whether in the form illustrated or in any other form within the scope of my claims, will have many advantages. The extra long back strap of elastic webbing, the swinging or sliding connection which it has with the cord or other flexible connection joining the shoulder-straps, and the freedom from contact with protruding parts of the shoulder-blades and the large working muscles of the back afford great elasticity and freedom of action to these parts of the suspender. The unusual length of the back strap admits of its passing up the center of the back and meeting the connecting-cord at a point so high that the latter crosses the back without coming into contact with the protruding portions of the shoulder-blades or large working muscles, thus relieving these parts of the body of friction and compression. The connecting-cord passing through the swiveled guides with so slight a bend, resistance at these points of contact is reduced almost to a minimum and a draft on either of the shoulder-straps necessarily meets with an instantaneous response without causing any friction or added draft below the line of the cord. This cord is amply long and will automatically adjust itself to compensate for the most extreme movements of the shoulders without disturbing the poise of the back strap or the normal draft on any of the button-tabs. It will be seen that the line described by the suspender from right to left, beginning at the right front button-tab, passing over the shoulder across the back, and ending at the left front button-tab, is in the form of a circle, and the connection between the right and left front button-tabs is as direct as it is possible to establish. Owing to this state of affairs, the suspenders will more readily adjust and adapt themselves to the right and left swaying of the body and alter-

nating movements of the shoulders. Leaving the connection with the back strap at so high a point, the straps are forced to cross the shoulders diagonally and pass down the sides instead of over the chest, as is the case with ordinary suspenders. This fact is also responsible for relieving a protruding part of the body from friction and compression and assists in affording greater freedom of action. The various parts of the suspender cannot shift from position, except longitudinally, when the straps are adjusting themselves in conformity with the movements of the body, and when properly adjusted on the wearer it is a physical impossibility to shake or throw them off the shoulders.

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

1. As a new article of manufacture, a garment-supporting device comprising a shoulder-strap and a cast-off therefor, said cast-off comprising a member having an eye for the strap, another member pivotally connected with the first-named member and having a hook, and means for resiliently holding the second member in fixed position with respect to the first member.

2. As a new article of manufacture, a cast-off for a garment-supporting device, comprising a member having a projecting end, and a second member movably connected with the first member and having a hook, the end of the hook being adapted to register with said projecting end and to form practically a continuation thereof.

3. As a new article of manufacture, a cast-off for a garment-supporting device comprising a member having a projecting end, a second member movably connected with the first member and having a hook, and means for causing the hook to register with said projecting end.

4. A cast-off comprising a member having a resilient tongue, a second member movably connected with the first member and having a projection engaging said tongue, and being provided with a hook.

5. A cast-off comprising a member having a resilient tongue, a second member having a projection engaging said tongue and being provided with a hook, and a third member secured to the first member, the second member being pivotally connected with the third member.

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

GEORGE D. ASHELMAN.

Witnesses:

JNO. P. FARRAND,  
JOHN P. MARTIN.