

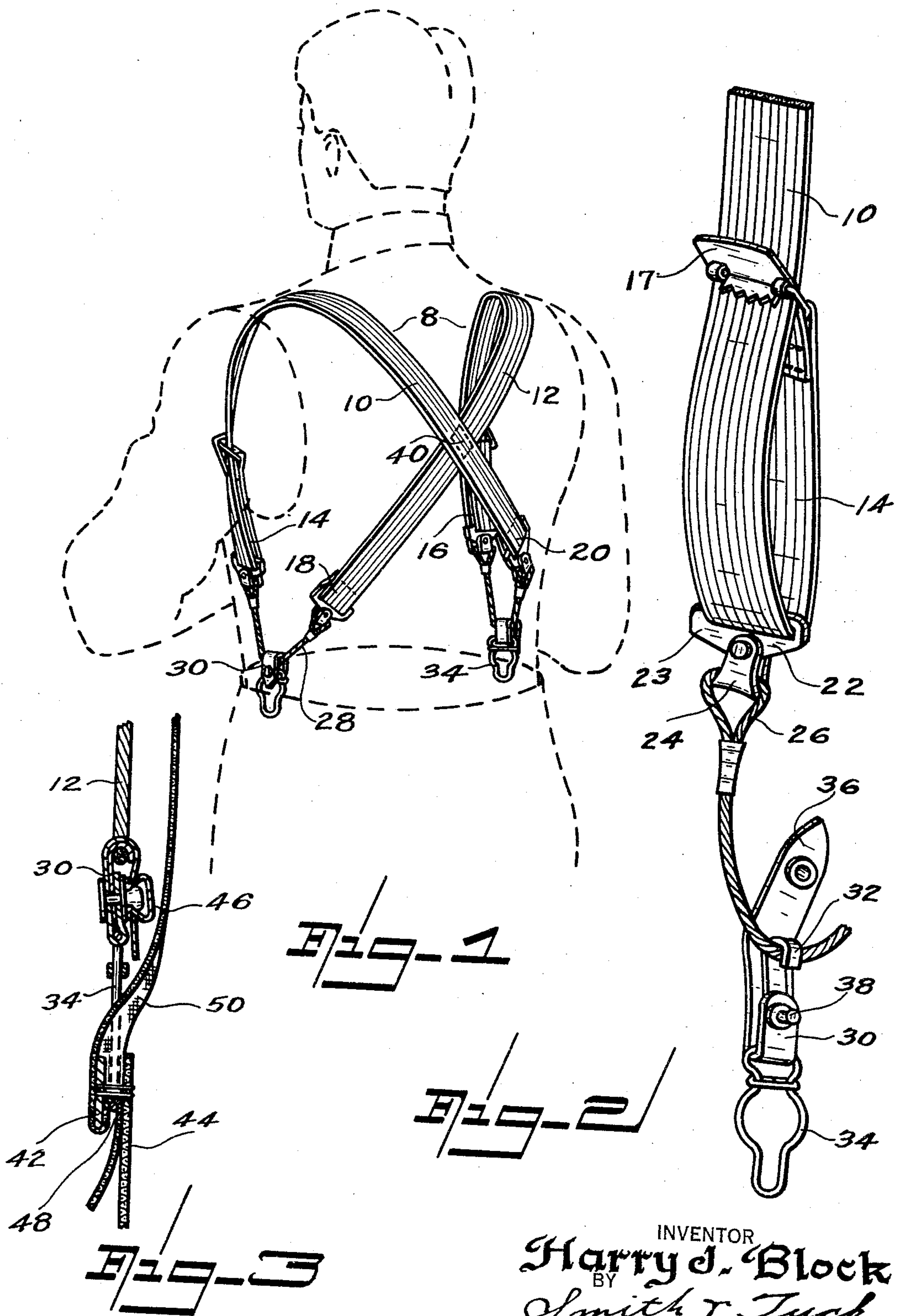
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H. J. BLOCK

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SELF ADJUSTING SUSPENDERS

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INVENTOR
Harry J. Block
BY
Smith & Tuck
ATTORNEYS

UNITED STATES PATENT OFFICE

HARRY J. BLOCK, OF ELLENSBURG, WASHINGTON

SELF-ADJUSTING SUSPENDERS

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My present invention relates to the art of clothing suspender making, and more particularly to a self adjusting suspender.

Many attempts have been made in the past to provide suspenders for use of supporting clothing, particular trousers, which will not bind the wearer and restrict his movements. This fault of suspenders in general has been largely responsible for the present popularity of the waist belt. This is occasioned by the fact that suspenders which have been previously designated for the purpose of making the movement of the wearer less restricted, have been so complicated in their construction that they become difficult to use, and further the complications were such that excessive wear often resulted, not only with respect to the suspenders themselves, but the garments with which they were worn.

In my present invention I provide a suspender which is constructed along the lines of extreme simplicity. To the end that they can easily be improperly hooked up, and further that excessive wear will not result.

It has been found that if extreme freedom from restriction is desired, the suspenders must be arranged to engage the trousers only at two points, namely, over each hip bone. These are the points which normally have the minimum of movement and when this type of suspenders is worn with trousers or skirts, which are fitted over the hips, they adequately support the garment, therefore,

The principal object of my invention is to provide suspenders or more properly a pair of suspenders which are so simple in their construction as to be economical in first cost, and to be devoid of the usual wearing part which accounts for the unpopularity of the usual self adjusting suspenders.

A further object is the provision of a pair of suspenders which are so arranged that they will very readily adapt themselves to the different strains placed upon them by the wearer as he assumes various positions.

A further object is the provision of a pair of suspenders of the self adjusting type whose construction, particularly adapt them for use as invisible or concealed suspenders.

Other and more specific objects will be ap-

parent from the following description taken in connection with the accompanying drawing, wherein

Figure 1 is a perspective view showing my suspenders when in use as concealed suspenders and showing in dashed lines the outline of a male wearer.

Figure 2 is a perspective view showing the details of construction of one of my connecting cord members and the slider which is disposed upon the same.

Figure 3 is a typical vertical sectional view through an inside garment button to which my suspenders are attached, and showing the shirt fabric also in section.

Referring to the drawing, throughout which like reference characters indicate like parts, 8 designates in general a pair of suspenders consisting of two like members 10 and 12, which may be, and preferably are, made of elastic web. Each web terminates in a return portion as 14 and 16, respectively, which are secured to the main body of the web by the buckles 17, whereby the effective length of web members 10 and 12 may be adjusted. The opposite ends of members 10 and 12, I prefer to provide with a short loop which secure in position, the end swivelling members 18 and 20. Probably the most preferred form of this fitting is shown in Figure 2 at 22, in which a preferably metal member 23 is provided through which the webbing passes, and pivotally secured to member 23 is the cord securing member 24. It will be apparent, I believe, that the cord could be secured directly to member 23 but I have found that in order to have a suspender which will give very readily to any changes to the wearers positions, that it is much better to provide for the minimum of resistance in all moving portions, and the form shown has proven very satisfactory. This same fitting I prefer to provide at each end of members 10 and 12.

Passing through the pivoted members 24 and secured thereto by short loops as indicated at 26, I provide preferably a round coupling or connecting member 28. The most satisfactory material for this is probably a braided cord-like structure. I believe it will be apparent that leather, rubber compo-

sition or other materials might be used, in fact, anything which will be substantially round in cross section, and will slide without undue friction will be satisfactory. The general proportion of this connecting member is probably best illustrated in Figure 1, in which member 28 is shown of sufficient length to place both of the metal members 23 well up from the wearer's waist line.

Slidably disposed upon the connecting member 28 is a button engaging member 30. This may take various forms, of course. One essential element is that, preferably, a metal cord engaging member 32 be provided to the end that maximum strength and security and minimum friction will result. This member is arranged to support a button engaging member as 34. In the drawing illustrated I have shown my device as it would be arranged for use with inside garment buttons, and when used as concealed or invisible suspenders. In this form a metal loop 34 is most acceptable. If the suspenders were to be used on the outside of the wearers shirt, however, probably a more preferable arrangement would be the usual leather tab with its slit opening to engage the garment button. As a matter of finish and security I further provide usually a leather tab as 36 which is adapted to cover the metal hook member 32 and be secured as by the snap fastener 38.

I have found it most satisfactory to secure the cross members 10 and 12 at their point at crossing as at 40 by stitching the two members together. In articles of this nature it is necessary to have a certain definite or fixed relationship between the end of the two members.

Method of use

My suspenders may be used either, over the shirt as is customary for suspenders, or under the shirt in the manner such as is normally known as concealed or invisible suspenders. It has been found very desirable to have suspenders of this construction for use with sports garments of all kinds for men and women. In these instances the web materials are usually made of rather pronounced colored material and are worn over the shirt or blouse. When so worn, sufficient support is given to the garment and an unusual degree of freedom is experienced by the wearer.

Probably the greatest use for my suspender, however, is for use underneath the wearers first outer garment, be this a shirt, blouse, or sweater as the case may be. When so used, it is then necessary to use some such loop as is shown in Figure 2 at 34, and the button 42 is engaged after the fashion shown in Figure 3, in which 44 represents the upper edge of the supported garment and the button is disposed on the inside of the garment. When so disposed, it is necessary to take the shirt as 46, for instance, gather a little fullness and

then secure the loop 34 in place about the button. This will necessitate gathering the shirt around the lower half circumference of the button securing means, as is indicated at 48. When so worn, particularly if sufficient fullness is provided in the shirt as at 50, the suspender arrangement is not visible and will not be suggested if properly applied.

There has always been some objection to the two point support in trousers or skirt. This, however, is not a serious matter as ordinarily any person who would object to any appearance of unequal support would normally have their garments fitted to them in a manner so that the garment itself will sustain most of its weight. Under these conditions the suspenders need only support, the upper margin of the waist band in reality, requiring but little strain, and when so used produce a very neat and dressed appearance.

It is believed that the operation of this device should be sufficiently clear from Figure 1, particularly. It is well known that the hip support portions of the garment do not move appreciably as the wearer twists his or her body. However, there is considerable movement of the two shoulders, even though the cross sectional area of a person's body actually does not change while the body is being twisted about. It is merely that one side of the body will be moved in one direction, and the other side of the body follow with it. It then follows, that if we will say, the left hand side of the shoulder goes forward there will be a corresponding retracting movement of the right shoulder. It is desirable under such conditions as this that the forward ends of strap 10 be permitted to move forward drawing with it, down toward the button, the lower end or as shown in Figure 1, end 18 of strap 12. This can easily be accomplished in my present design, due to the sliding of the cord member 28 through member 30. A certain amount of slackness will occur in the forward portion of strap 12. Consequently, the back end of strap 10, designated at 20, is then capable of moving toward the left shoulder, taking up this slack, due to the ease with which cord 28 can slide upon the right hand member 30. This ease of action coupled with the simplicity of construction in this suspender gives an ease of movement not possible with the more complicated cord adjusting suspenders available in the past.

The foregoing description and the accompanying drawings are believed to clearly disclose a preferred embodiment of my invention but it will be understood that this disclosure is merely illustrative and that such changes in the invention may be made are fairly within the scope and spirit of the following claims:

Having thus fully described my inven-

tion, what I claim as new and desire to secure by Letters Patent is:

1. The combination with a pair of crossed and joined elastic shoulder straps each having a front looped end, an adjusting buckle for each looped end, and a slotted suspending plate supported from each of the four strap ends, of a pair of cords having looped ends, means for suspending the looped ends of the cords from said slotted plates, a slidable member supported on each cord, an openable loop having one end secured to the slidable member and adapted to fold over said slidable member, securing means on the ends of said openable loop, and a button-engaging member supported by each said slidable member.

2. The combination with a pair of crossed and joined elastic shoulder straps having looped ends, adjusting buckles mounted on the front looped ends of the straps, and slotted plates suspended from the four looped ends, of a swivel-loop suspended from each slotted plate, a pair of cords having looped ends supported from the swivel loops, a slide hook suspended on each cord, an openable loop having one end secured to each hook and adapted to fold over the hook, snap fasteners on the ends of said openable loops, and a button-engaging member suspended from each openable loop.

In witness whereof, he hereunto subscribes his name this 16th day of March, A. D. 1932.

HARRY J. BLOCK.

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