

J. W. SMITH.

SUSPENDERS.

No. 390,265.

Patented Oct. 2, 1888.

Fig. 1.

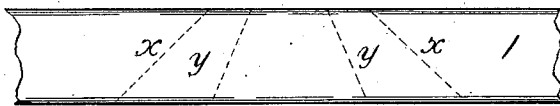


Fig. 2.

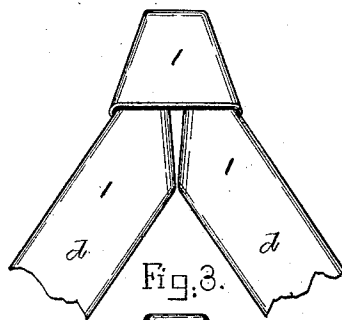


Fig. 4.

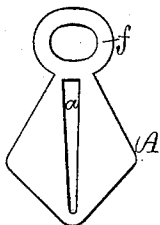


Fig. 5.

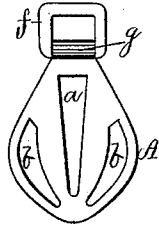


Fig. 3.

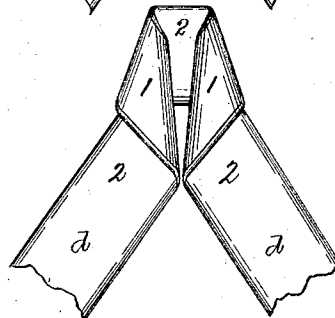


Fig. 6.

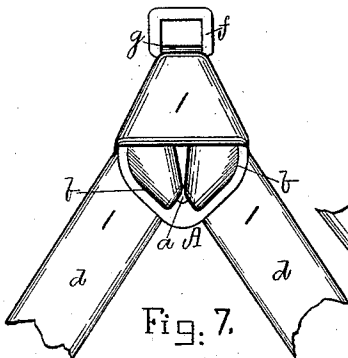


Fig. 7.

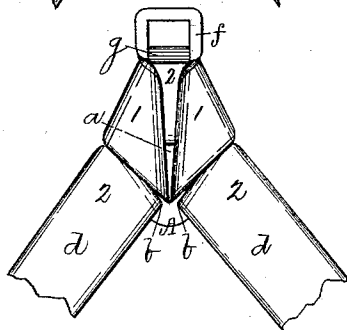
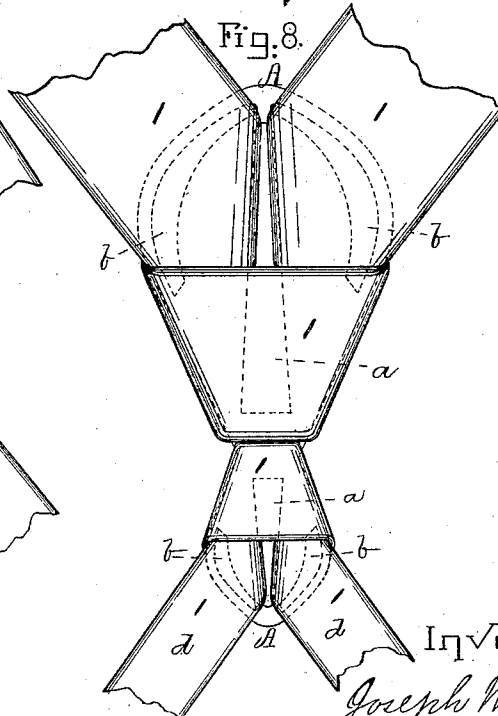


Fig. 8.



Witnesses.

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Fig. 9.

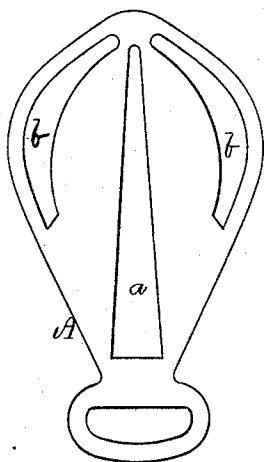


Fig. 11.

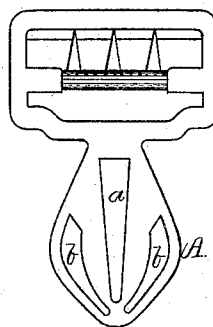


Fig. 12.

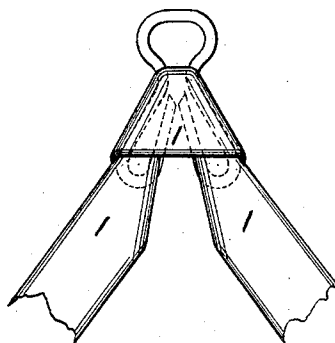


Fig. 10.

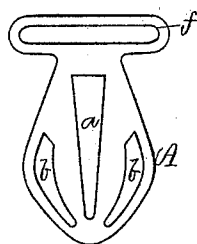


Fig. 14.

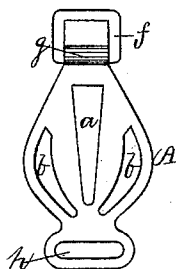
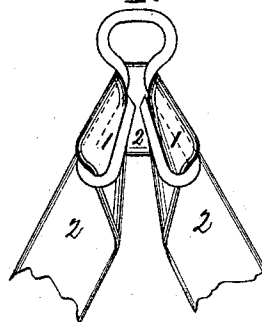


Fig. 13.



esses.

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UNITED STATES PATENT OFFICE.

JOSEPH WM. SMITH, OF NEWTON, MASSACHUSETTS.

SUSPENDERS.

SPECIFICATION forming part of Letters Patent No. 390,265, dated October 2, 1888.

Application filed June 8, 1885. Serial No. 168,069. (No model.)

To all whom it may concern:

Be it known that I, JOSEPH WILLIAM SMITH, of Newton, in the county of Middlesex and State of Massachusetts, have invented a new and useful Improvement in Suspenders, of which the following is a specification.

My invention is in a novel fold in a suspender-strap, and also in a device for holding the folds of the strap in place.

In the drawings, Figure 1 shows a strap unfolded with dotted lines to indicate the places of folding. Figs. 2 and 3 are two views of the strap as folded, but without the holding device. Fig. 4 is a plan of the simplest form of my holding device having a single longitudinal slot. Fig. 5 is a plan of a device showing the longitudinal and two side slots. Fig. 6 shows the device of Fig. 5 with the suspender-ends attached. Fig. 7 is a rear view of Fig. 6.

The strap-holding device is made of a plate, A, preferably of sheet metal, shaped substantially as shown. The longitudinal slot *a* is preferably a little wider at one end than at the other, as I have found this to give suspender-straps the desired angle better than if the sides of the slot are parallel. The side slots or guides, *b b*, are inclined to the longitudinal slot *a* at an angle to correspond with the proper spread of the suspender ends *d*. If made, as in Fig. 4, without the guide slots *b b*, the fold will not be retained so securely in place, although the tapering form of slot *a* will give the proper angle. At the narrower end of the plate A is a loop, *f*, for connecting it with the buckle by a spring-hook or otherwise, and which may be of the same piece with the plate, as shown in Fig. 4, or it may be a wire loop held to the plate by turning over the end *g* of plate A, as in Fig. 5.

To attach the device, the strip of fabric forming the suspender-ends is doubled in the middle, wrong side out, the doubled end passed through slot *a* and looped over the top, and the ends *d* are drawn out to pull the web tight to the neck of the plate, (see Figs. 6 and 7)—that is, the strap is folded, say, on lines *x x*, so that portions of its surface 2 are opposed to each other and again folded, say, on lines *y y*, so that portions of its surface 1 are opposed to portions of its surface 2, as will be readily understood from Figs. 1, 2, and 3. Portions

d of the folded strap then extend away from an intermediate portion of the strap at an angle to each other, as shown in the drawings. The strap folded in this way is the main novelty of my invention, and where one of the surfaces of the strap is figured and the other plain, or whenever there is a right and a wrong side to the strap, this manner of folding is highly advantageous, as the finished article when in use presents to the eye the finished surface only, as will be readily understood by reference to Fig. 2, in which the surface 1 of the folded strap alone is visible. Where the guide-slots *b* are used, the ends *d* are then tucked through these slots.

Fig. 8 illustrates a double plate for use at the back, the upper part being for the shoulder-straps and the lower for the suspender-ends.

Figs. 9, 10, and 11 show modified forms of the device, Fig. 9 illustrating a form by which the shoulder-straps may be attached according to my new method with a loop at the bottom for the attachment of the ends in the old way. Fig. 10 shows a style where the suspender-ends for the back buttons are attached to the device with a loop, *f*, adapted to receive the shoulder-straps; and Fig. 11 shows the device in one piece with the buckle.

It is obvious that a hook, slide, clasp, or the like may be used with my device in place of the loop *f*, and that where the device is made double either one is the equivalent of the loop *f*.

While I prefer to use the device above described, my new fold may be employed with some other holding device—as, for example, a wire bent in the shape shown in Figs. 12 and 13; or the fold may be used without a metal holder, the fold being secured by stitches or any other suitable means.

Another feature of my invention consists in forming a cross-slot, *h*, near the bottom of the plate A, as shown in Fig. 14, by which a strap may be connected for supporting the drawers.

I am aware of Smith's patent, No. 108,841, of November 1, 1880; Palmer's patent, No. 179,724, of July 11, 1876; Potter's patent, No. 212,400, of February 18, 1879, and Freeman's patent, No. 287,818, of November 6, 1883, and disclaim all that is shown in them.

In Patent No. 108,841, above mentioned, is shown a strap-holding device which is incapable of being used for holding in proper relation to each other portions of a strap which is folded in the manner the folded strap described herein is folded, because the middle opening in that device is not adapted to bring two sides of a strap passed through it into or nearly into contact with each other; and it is obvious from what I have said above that the sides of the folded strap should approach each other very nearly in order to direct the ends *d d* of my strap away from the intermediate portion of the strap at the required angle. I therefore limit myself herein, as respects the strap-holding device shown in the drawings, to the special form of device shown in the drawings, in which the longitudinal slot *a* is seen to be a narrow slot. It is desirable that this narrow slot should be wider at one end than at the other, as shown, in order to give portions of the strap the proper direction away from the intermediate portion of the strap.

What I claim as my invention is—

1. The strap for suspenders, folded as above described—that is, folded at *x x* to bring parts of the surface 2 opposed to each other, and folded at *y y* to bring parts of surface 1 opposed to parts of surface 2, whereby the portions *d* of the strap are directed away from an intermediate portion of the strap at an angle to each other, substantially as and for the purpose set forth.

2. In suspenders, &c., the combination of a strap-holding device, A, substantially such as described, with a strap folded substantially as above described—that is, folded at *x x* to bring parts of the surface 2 opposed to each other, and folded at *y y* to bring parts of surface 1 opposed to parts of surface 2, whereby portions *d* of the strap are directed away from an intermediate portion of the strap, all substantially as set forth.

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Witnesses:

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