(No Model.)

E. S. SMITH.

SPRING CLASP.

No. 303,546. Patented Aug. 12, 1884.

Fig. 2.

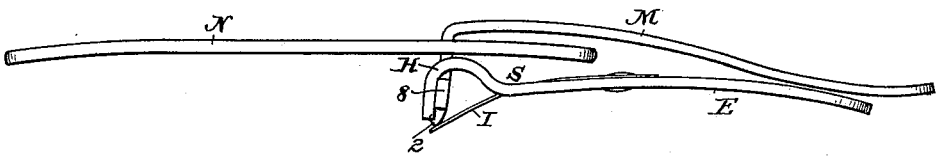


Fig. 4.

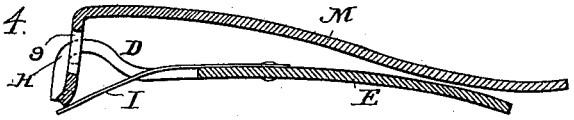


Fig. 5.

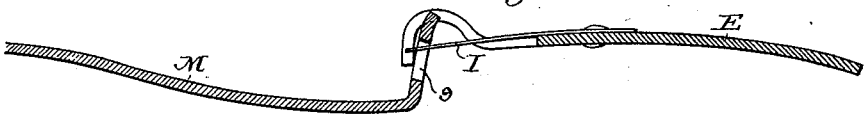


Fig. 1.

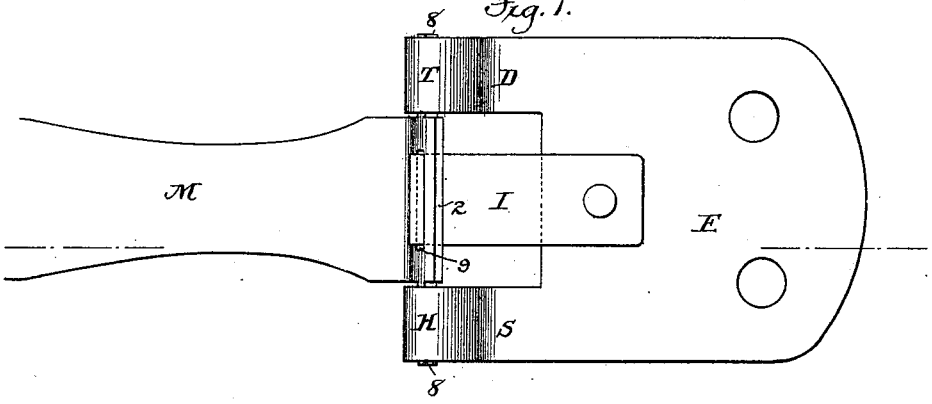


Fig. 3.

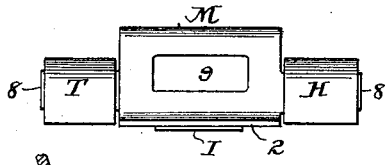
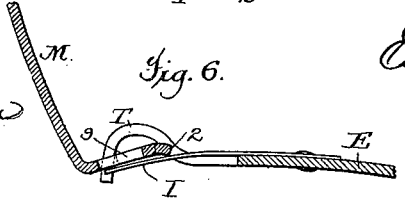


Fig. 6.



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UNITED STATES PATENT OFFICE.

EDWARD S. SMITH, OF WATERBURY, CONNECTICUT.

SPRING-CLASP.

SPECIFICATION forming part of Letters Patent No. 303,546, dated August 12, 1884.

Application filed April 25, 1884. (No model.)

To all whom it may concern:

Be it known that I, EDWARD S. SMITH, a citizen of the United States, residing in the city of Waterbury, county of New Haven, and State of Connecticut, have invented certain new and useful Improvements in Spring-Clasps, fully described and represented in the following specification and the accompanying drawings, forming a part of the same, in which drawings—

Figure 1 is a plan view, Fig. 2 a side elevation, and Fig. 3 an end elevation, of a spring-clasp embodying my improvements. Figs. 4 and 5 represent the same by longitudinal sectional elevations, the former representing the clasp closed and the latter the clasp opened; and Fig. 6 shows the clasp partially opened.

These improvements relate to that character of clasps which consist of a base-plate to which a spring-seated holding-lever is so pivoted that it may be thrown open to receive an attaching-plate and closed to retain the same. In this class of devices as heretofore constructed the structure and mounting of the parts have been such as to limit the extent of the opening movement of the holding-lever, whereby it was made to stand at about a right angle with respect to the base-plate when opened to receive the attaching-plate, and therefore was inconveniently positioned for the reception of the attaching-plate, which in practical use is secured to one part of the garment or article to be fastened, while the clasp proper is secured to another part of the garment or article; and by reason of this relative position of the attaching plate and clasp it has been difficult to bring such a one of the slots in the attaching-plate over the holding-lever as will accomplish a close relation of the two parts of the garment or article designed to be fastened together when the clasp is closed.

The invention consists of an improved construction of the holding-lever, whereby its movement with relation to its spring is given such a range as to enable it to be open at a very obtuse angle with respect to the base-plate of the clasp, which construction is the provision of a slot through which said spring may protrude when the holding-lever is swung forward to open the clasp. It also comprehends combinations of various parts, all of which will be hereinafter particularly pointed out. The base-plate E is a plate of metal, slightly curved longitudinally, and bifurcated at its forward end to provide side arms, D S, between which the holding-lever M may be hung and the spring I accommodated. These arms are bent at their forward ends to form hook-like sockets T H. The holding-lever M has its forward end bent at about right angles to its body, and it is provided on each side with laterally-extending pivots 8, that are embraced by the sockets T H, within which they are confined by the spring I, which is attached to the base-plate E, and protrudes through the recess formed therein between the arms D S, and bears upon the right-angular portion of said holding-lever. The right-angular portion of this holding-lever M is centrally perforated with a slot, 9, having dimensions suited to admit the passage of the spring I when the lever is thrown forward, as in Fig. 5, said spring resting against the extremity 2 of the holding-lever M when the latter is closed, as in Fig. 2.

In the construction of its principal parts this clasp is like that described in a companion application filed of even date herewith, to which reference is made, and therefore no precise description of the mode of assembling its parts need here be given. It may be remarked, however, that the attaching-plate N is provided with a number of parallel slots, through any one of which the lever M may be passed, so as to suit the device for various adjustments. It may be further stated that the pivots 8 of the lever M are left flat, or in the form which results from a simple blanking out of the device, whereby the pivots are provided with flat front faces, which enable them to be seated snugly against similar faces which the forward members of the sockets T H provide, as in Fig. 2, whereby when the clasp is closed the holding-lever M will have a secure and extended bearing against the sockets, and thus provide the strongest form of bearing opposed to the draft of the plate N upon the lever M. Supposing the clasp to be closed, as in Fig. 2, it will be observed that when its lever M is released by upward pressure exerted upon its free extremity its angular forward end will readily move rearward, its extremity 2 slide over the spring I, which latter will continuously press the forward end of the lever up-

ward, and thus cause its pivots 8 to always bear on the sockets T H. When the lever M has moved so far forward as to enable the spring I to lie snugly in contact with the face of the right-angular bend of said lever M, the forward extremity of the spring will underlie the opening 9 in said lever M. By considering this position a moment, as shown in Fig. 6, it will be seen that while the spring still holds the pivots in contact with the sockets it offers no opposition to the further rocking movement of the lever M, which may therefore be further moved forward, as in Fig. 5, when the spring will protrude through the opening 9 and continue to bear upon and support the pivots in the sockets. These movements permit the extension of the lever M so far forward as to bring its free end into such position that the attaching-plate N, while secured to the under part of the article, can be readily passed over said lever M, and be secured thereto as said lever is returned to its closed position. In this latter movement its pivots H readily press the spring I downward until the extremity 2 is in contact with the spring, and thereafter said extremity continues the downward movement of the spring until the relation of the parts shown in Fig. 2 is reached. By this construction it will be apparent that where the two parts of the clasp are attached to two separate portions of an article to be secured a tighter binding or drawing together of the two separate parts of the article may be accomplished than by the old devices, for the reason that this construction enables one to insert the holding-lever into a slot of the attaching-plate at a point sufficiently near to that end by which the attaching-plate is secured to the article to accomplish such result.

What, therefore, is claimed is—

1. In a spring-clasp consisting of a spring-seated holding-lever pivoted to a base-plate, the combination, with said spring and base-plate, of a holding-lever having a slot or opening within which the end of the spring protrudes when the lever is thrown forward, substantially as described.

2. A spring-clasp consisting of a base-plate having sockets, as T H, and a holding-lever held in said sockets by a spring, as I, and provided with an opening, 9, through which said spring may protrude, whereby the said holding-lever may be extended forward when open, substantially as described.

In testimony whereof I have hereunto set my hand in the presence of two subscribing witnesses.

EDWARD S. SMITH.

Witnesses:
T. H. PALMER,
H. T. MUNSON.