E. J. AND D. SMITH.

SNAP FASTENER.

APPLICATION FILED JAN. 14, 1914.

1,352,153. Patented Sept. 7, 1920.

Fig. 1.

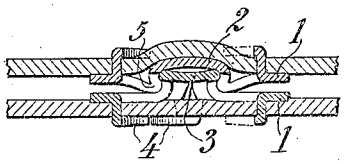


Fig. 2.

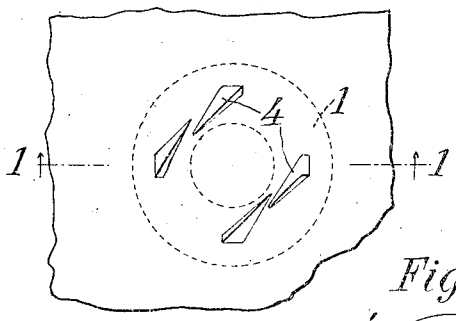


Fig. 3.

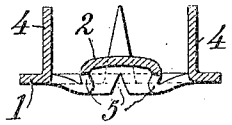


Fig. 4.

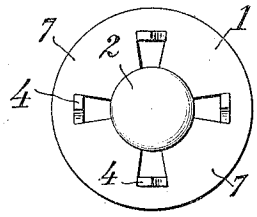


Fig. 5.

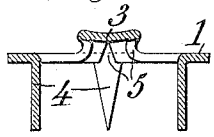


Fig. 6.

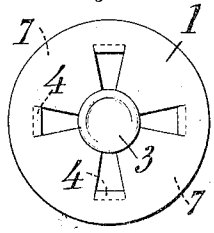


Fig. 9.

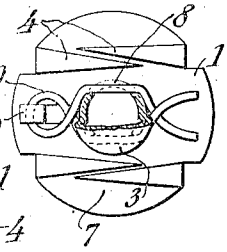


Fig. 7.

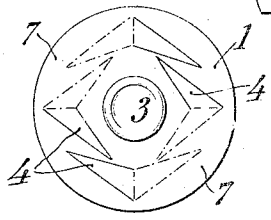
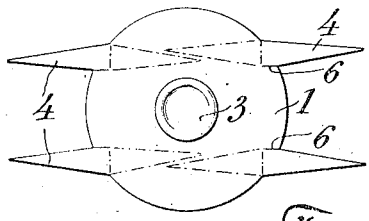


Fig. 8.



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UNITED STATES PATENT OFFICE.

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SNAP-FASTENER.

1,352,153. Specification of Letters Patent. Patented Sept. 7, 1920.

Application filed January 14, 1914. Serial No. 811,971.

To all whom it may concern:

Be it known that we, ELIZABETH J. SMITH and DOUGLAS SMITH, both citizens of the United States of America, residing in Larchmont, in the county of Westchester and State of New York, have invented certain new and useful Improvements in Snap-Fasteners, of which the following is a specification.

This invention relates to separable fasteners, more particularly snap fasteners, and aims to provide improvements therein. The present invention provides a pronged device which may be cheaply and simply manufactured, which is capable of being applied to fabrics, and particularly to light fabrics such as are used for ladies dresses or the like, in such manner as to be securely attached thereto without mutilation of or damage to the goods. The fastener is also one which is capable of being applied to goods with great rapidity, and either by hand or by use of a machine.

Other features of improvement will be hereinafter set forth. Several embodiments of the invention have been illustrated in the accompanying drawing. The invention will be described in further detail with reference to the drawings.

In said drawings:—

Figure 1 illustrates a sectional view with the parts in united position.

Fig. 2 is a bottom plan view of the parts shown in Fig. 1.

Fig. 3 is a sectional view of the socket member illustrated in Fig. 1.

Fig. 4 is a top plan view of the said socket member.

Fig. 5 is a sectional view of the ball member illustrated in Fig. 1.

Fig. 6 is a top plan view of said ball member.

Fig. 7 illustrates further an embodiment of the invention, a top plan view of one member being shown.

Fig. 8 is a view similar to Fig. 7, illustrating a still further embodiment of the invention.

Fig. 9 is a top plan view of a socket member, with parts shown in section, illustrating a further embodiment.

Numeral 1 designates the base piece of the fastener member; 2, the socket part; 3, the ball part; and 4, the prongs.

The fastener members are preferably formed of sheet metal, and the ball and socket formed by appropriate metal-working operations.

The ball and socket are preferably formed somewhat flat in order that the parts to which they are attached, as for instance the placket of a woman's dress, may lie close together. Furthermore, in order that the goods may lie as flat as possible over the ball and socket members, the base part of the fastener may be bent backwardly or upwardly, toward the back of the socket, as shown in Figs. 1 and 3. From Fig. 1 it will be seen that the goods are brought relatively close together by the fastener, it being understood that the proportions are considerably exaggerated in the drawing.

In order to obtain a resiliency in the ball or socket, or both, the ball or socket, or both, may be made with portions cut out therefrom as indicated at 5.

The prongs 4 are preferably formed by cutting them out of the metal of the fastener, and preferably of the metal of the base piece. The cut out portion of the metal which is left after cutting out the prongs 4 may constitute the cut out portions 5, which are provided in the ball or socket, or both.

In order that the pronged fastener may be attached to fabrics, and especially to light fabrics, in such manner as to be firmly and securely attached thereto, and without localizing the strains transmitted by the fastener to the goods at the bends of the prongs, it is desirable that the prongs should clasp the goods between themselves and the firm part of the fastener member or base piece. It is also desirable that the prongs shall overlap close together upon the face of the goods.

The prongs 4, are, for the foregoing considerations, preferably formed somewhat long, narrow and tapering, and with a flat side adapted to be pressed against the goods. A fastener member or base piece is also provided with firm portions 7 against which the prongs are adapted to be pressed when turned over against a piece of fabric to which the fastener is attached. As shown in Figs. 1 to 5 inclusive, the portions 7 lie between the cut out portions left after cutting out the prongs 4, and the prongs are pressed against the portions 7 by turning them to one side in bending so that they will lie to one side of the base piece, as shown in Fig. 2. This may be accomplished by hand or by a suitable machine, as above stated.

In Fig. 7, prongs are shown as cut out of the marginal portions of the base piece. In this construction the prongs are turned back upon themselves upon the portion 7 of the base piece, which portion 7 lies opposite the portions of the base piece from which the prongs are cut. By this construction the prongs may be made to overlap, without being superimposed, upon the face of the goods.

In Fig. 8, a member is shown wherein the prongs are cut out of the metal beyond the edges of the base piece. As shown, the prongs on opposite sides of the fastener member are preferably slightly staggered, in order that the prongs when bent over on the base piece may lie side by side without being superimposed upon one another. The base piece may be slit at points 6 in order that the prongs may have a straight bend.

A socket member having resilient means for retaining a ball member therein may be formed as shown in Fig. 9. The socket piece 3 may be cut out at the sides, as indicated at 8, and a spring attached to the member in such manner as to project through said cut out portions 8 and embrace the head of a ball-member when inserted in the socket. The spring is preferably formed in such manner as not to interfere with the prongs 4, when turned over, pressing the goods against the solid portion 7 of the base piece. Such a spring is shown in Fig. 9 at 9. The spring may be held in place by a bent-over lug 10 struck up from the metal of the base-piece.

The invention is capable of receiving other embodiments than those illustrated.

What is claimed is:—

1. A member of a separable fastener having prongs thereon, a projecting socket-piece, a spring attached to said fastener and having parts adapted to project through said socket-piece to engage a ball-member when inserted in said socket-piece, said fastener member having a base-portion against that face of said base portion from which said socket-piece projects.

2. A member of a separable fastener having prongs thereon, a projecting socket-piece, a spring attached to said fastener and having parts adapted to project through said socket-piece to engage a ball member when inserted in said socket-piece, said fastener member having a solid base-portion against which said prongs are adapted to be pressed, said spring being out of the way of said prongs when said prongs are pressed against the solid-portion of said base-piece.

In witness whereof we have hereunto signed our names in the presence of two subscribing witnesses.

ELIZABETH JANE SMITH.
DOUGLAS SMITH.

Witnesses:
GUSTAVE R. THOMPSON,
FRED WHITE.