(No Model.)

F. E. HALL.

GLOVE OR CLOTHING FASTENER.

No. 490,435. Patented Jan. 24, 1893.

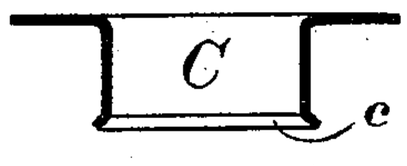

Fig. 4.

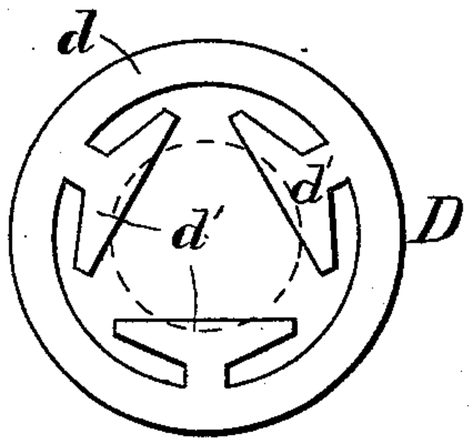

Fig. 6.

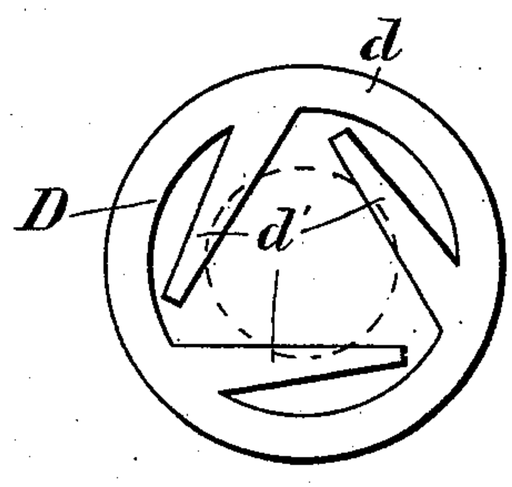

Fig. 7.

Fig. 3.

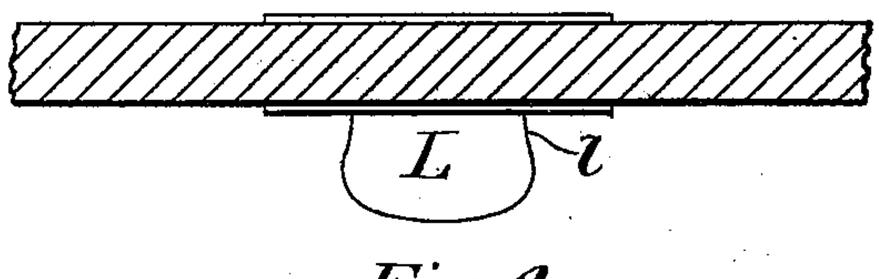

Fig. 2.

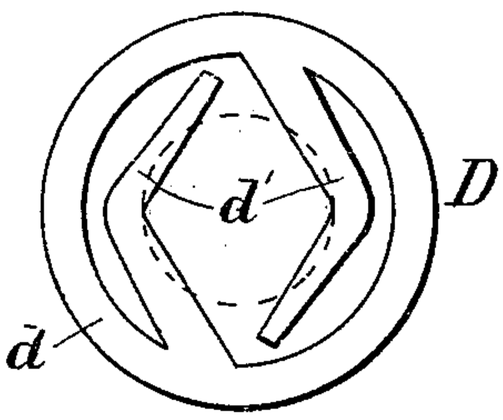

Fig. 5.

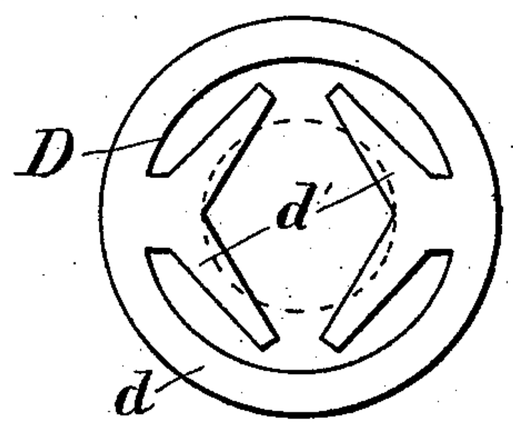

Fig. 8.

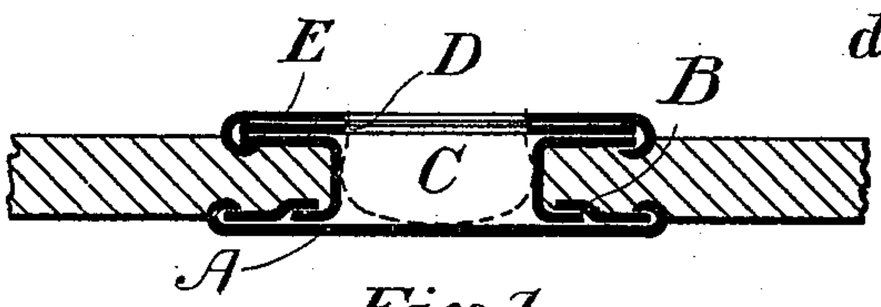

Fig. 1.

Witnesses
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UNITED STATES PATENT OFFICE.

FRANK E. HALL, OF NEWTON, MASSACHUSETTS, ASSIGNOR TO THE CONSOLIDATED FASTENER COMPANY, OF PORTLAND, MAINE.

GLOVE OR CLOTHING FASTENER.

SPECIFICATION forming part of Letters Patent No. 490,435, dated January 24, 1893.

Application filed December 26, 1891. Serial No. 416,110. (No model.)

To all whom it may concern:

Be it known that I, FRANK E. HALL, a citizen of the United States, residing at Newton, in the county of Middlesex and Commonwealth of Massachusetts, have invented certain new and useful Improvements in Glove or Clothing Fasteners, of which the following is a full specification.

My invention relates to two part spring fasteners for gloves or clothing, and has special reference to the construction of the button hole or socket member of the fastener which is made resilient so as to clasp and hold an unresilient stud or button member.

Ordinarily in spring fasteners having a resilient socket the spring portion of the socket not only serves to keep the stud in place within the socket, but also bears the entire lateral strain of the glove or garment in the plane of the material when the two flaps thereof are fastened together. The result of this is that the spring, under the lateral strain to which it is subjected loses its resiliency in time, and fails in its purpose to hold the stud from dropping out of the socket. The only function of the spring proper should be to furnish resistance to be overcome in separating the two parts of the fastener, or in other words to hold the parts together against any vertical strain or pull, tending to separate them. The spring should not, however, be obliged to exert any holding power whatever laterally.

My improved socket is so constructed that all lateral strain caused by the constant pull in the plane of the material of the two glove or clothing flaps when fastened together is entirely borne by a firm and inflexible flange, the spring itself being called into use only on the putting together and separating of the two parts. The spring thus retains its resiliency indefinitely.

The construction of the spring constitutes an essential feature of my invention, the spring being flat and provided with a polygonal opening for the stud. My socket member is moreover perfectly flat on the material of the glove or clothing, being but little thicker than said material, so as to be particularly adapted for pants and vests, and so that the covering to the socket opening may be worn next the body without inconvenience. The parts are, furthermore, preferably so proportioned with relation to each other that the stud when in place bears against the inner walls of the socket so that all tendency of the stud to cant over or be pulled out of perpendicular within the socket by the pull of the material, is avoided.

Referring to the accompanying drawings:— Figure 1 shows in section the socket member of my improved fastener in place of the material. Fig. 2 shows a stud adapted to engage with said socket. Fig. 3 shows in section the covering plate of the socket opening with the eyelet retaining washer clinched thereto. Fig. 4 is a sectional view of the socket eyelet, and Figs. 5, 6, 7, and 8 are plan views of various modifications of socket spring.

A is the covering plate consisting preferably of a flat plate having its outer edges clinched in around the retaining washer B.

C is the socket eyelet which is flanged and has the flaring edge *c* on the outer end of the shank.

D is the spring which is stamped out of a perfectly flat plate, and is placed against the flange of the eyelet C.

E is a flanged collet the edges of which are clinched around the flange of the eyelet C so as to hold the spring D between said eyelet and the collet.

A suitable hole being made through the material of the glove or clothing the shank of the eyelet C (with the parts D and E secured to the eyelet flange in the manner described) is passed through said hole in the material and placed against the flat surface *a* of the cover A. Pressure being then applied between suitably shaped dies, the flaring end *c* of the eyelet C is forced out and retained in the recess *b* around the inner opening of the washer, thus securely mounting the socket member in the material which is held between two wide flat surfaces at top and bottom as clearly shown in Fig. 1.

L is an unresilient stud suitably mounted on the opposite flap of the glove or clothing, adapted to engage with the socket and provided with a rolled in neck *l*.

The spring D which is stamped out of a flat plate has preferably a continuous outer ring

d from which project inward a number of spring wings *d'* in such a manner that the opening in the center through which the stud L passes is not circular, but polygonal, so as to bear against the rolled in neck of the stud at points only, the arrangement being such as to allow the spring arms to snap over the head of the stud when inserted in the socket, but to allow the stud to bear against the rigid flange of the collet E which flange, and not the spring, bears all the lateral strain, or that of the glove material. The polygonal shape of the spring opening tends to keep the stud in an upright position when the stud is under a lateral strain.

The spring D is held between the flange of the collet and the flange of the socket eyelet in such a manner that it may move laterally to a slight extent, but has no up and down play.

Various forms of spring ring may be used to embody my idea of an outer continuous ring having inwardly projecting spring wings to form a polygonal opening.

In Fig. 5 I have shown a four sided opening formed by two wings *d'* projecting inward from opposite sides of the continuous ring *d*.

In Figs. 6 and 7, a triangular opening is formed by the springs *d'* which springs in Fig. 6 are centrally connected with said ring, and in Fig. 7 are connected at the ends.

In Fig. 8 the opening is four-sided but the wings are centrally connected to the ring.

The socket is preferably of a size such that the stud L as indicated by dotted lines in Fig. 1 when inserted therein will have bearing against the interior of the socket walls and thus be steadied by the socket in an upright position.

I do not limit myself to the specific form of socket herein shown containing my improved spring ring.

I claim:—

1. A socket member of a two-part spring glove and clothing fastener provided with an internal flat continuous ring having inwardly projecting spring wings forming a polygonal opening for the fastener stud, substantially as described.

2. A socket member of a two-part spring glove and clothing fastener consisting of a flat cover in combination with a recessed retaining washer, a flanged socket-eyelet, provided with a flaring portion *c*, a collet and a flat spring ring held between said collet, and the eyelet flange, said ring being provided with two arms extending in opposite directions, substantially as described.

3. A two part spring glove and garment fastener comprising a stud member and a socket member said socket member being provided with a ring consisting of a flat continuous rigid outer ring having two resilient wings or arms in substantially the plane of the ring whose sides come in contact with said stud substantially as shown and described.

4. In combination, a stud and a socket member of a two part spring glove and clothing fastener, provided with a ring, consisting of a continuous outer ring having two arms extending in the plane of the ring in opposite directions from its interior edge, substantially as described.

In witness whereof I have hereunto set my hand.

FRANK E. HALL.

Witnesses:
W. B. H. DOWSE,
ALBERT E. LEACH.