

(No Model.)

S. PORTER.
GLOVE FASTENER.

No. 343,543.

Patented June 8, 1886.

Fig. 2.

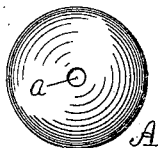


Fig. 3.

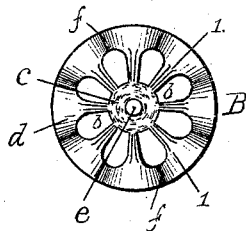


Fig. 4.



Fig. 1.

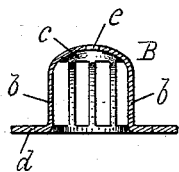
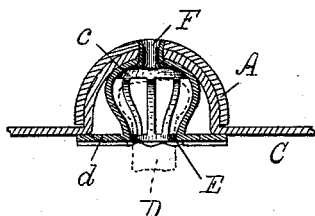


Fig. 5.

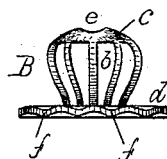


Fig. 6.



Fig. 7.

Witnesses.

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UNITED STATES PATENT OFFICE.

STEPHEN PORTER, OF BOSTON, MASSACHUSETTS, ASSIGNOR OF ONE-HALF
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GLOVE-FASTENER.

SPECIFICATION forming part of Letters Patent No. 343,543, dated June 8, 1886.

Application filed March 17, 1886. Serial No. 195,547. (No model.)

To all whom it may concern:

Be it known that I, STEPHEN PORTER, a citizen of the United States, residing at Boston, in the county of Suffolk and State of Massachusetts, have invented certain new and useful Improvements in Glove-Fasteners; and I do hereby declare the following to be a full, clear, and exact description of the invention, such as will enable others skilled in the art to which it appertains to make and use the same, reference being had to the accompanying drawings, and to letters or figures of reference marked thereon, which form a part of this specification.

This invention relates to metallic fasteners for gloves or other similar articles, especially that class of fasteners in which a socket member is adapted to receive a stud, either spring or otherwise constructed, the socket member being affixed to one part of the article on which it is to be used with its open part or mouth so disposed as to admit and close down upon the stud secured to and projecting from the other part of the article the parts of which are to be united.

My improvements relate particularly to the construction and arrangement of the component parts of a socket member of a fastening device by which the exteriorly-exposed part or periphery of such socket member shall be an integral disk rigid and unyielding, while within it is contained a series of spring-arms or yielding fingers. The latter are adapted to admit, within the space inclosed by them, the head of a stud, which is then firmly grasped. This stud may be a solid or split one, as is preferred, in the latter case being termed a "spring-stud," and forms the other part of the fastening device, whereby the two flaps or portions of the article are to be united.

The drawings accompanying this specification represent, in Figure 1, a central vertical section, and in Fig. 2 a plan of a socket member of a fastener containing my improvements. Fig. 3 represents a plan of a blank after being cut from some thin suitable metallic plate, while Fig. 4 represents the radial corrugations formed on the outer portion thereof, the arms being removed. Fig. 5 represents the blank in process after being struck up, and

Fig. 6 is an elevation of such blank in a completed form and adapted to form a component part of the socket member as an entirety. Fig. 7 is a transverse section of a spring-arm, showing the corrugation therein.

All these drawings are very much enlarged for convenience of showing the various individual features in detail.

In such drawings, A represents a hollow hemispherical or cup-shaped disk struck up from some suitable metallic plate and adapted to be secured to the upper surface of one portion of the article to be fastened or united together after the manner of gloves in general. This hemispherical disk or socket may be varied somewhat in form, and thereby be caused to approach more nearly a button in shape, and also ornamented, to give a more finished appearance to the article to which it is fastened, and is centrally perforated at *a*, as shown. The active component part of this socket member and that which embodies my invention is shown at B as interiorly disposed of and protected by the cup shaped disk A, before described. The object of this fastening and the device B is to provide a series of spring-fingers or yielding arms, *b b*, which are secured at both ends and formed integrally with two circular plates, *c d*. By this construction the spring-fingers are arranged in lines parallel with the movement of the stud, either during its introduction to or removal from the socket member. This is of material advantage, since the lateral play or yielding movement of said arms is more easily compensated for in the act of introducing said stud, and the latter can be grasped more firmly when in an active position by the spring fingers or arms. A further advantage is obtained by having the extremities of said spring-fingers united integrally with the annular plates *c d*, before mentioned; hence it will be seen that said arms are continuous, and thus there is no liability of their being crippled or bent from their proper shape, since the head of the stud cannot possibly engage with any one during the removal of the stud, in which case they would be drawn down, bent, and the fastening device destroyed. This component part or spring portion of this socket member of

a fastening device is made as follows: A blank is first stamped out from some thin suitable material, as brass, in the shape shown in Fig. 3—that is, it consists of two annular rings or plates, *c d*, the central one being perforated at *c*, while the exterior one, *d*, is of considerable width, and is radially corrugated by a subsequent process, as shown at *ff* in Figs. 3, 4, and 6. Integrally uniting these rings are a series of radially-disposed arms, *b b*, before referred to.

The next step or process is shown in Fig. 5, wherein the blank above alluded to and shown in Fig. 3 is struck up and the radial arms are drawn out. This process somewhat reduces the thickness of the metal, at the same time compressing and hardening it, whereby the requisite tension is given to the arms, which are to be further curved or bent, as shown in Fig. 6, and further increased elasticity is imparted to them. This curving or bending of the arms may be accomplished by several different methods, one of which would be to put the blank struck up, as shown in Fig. 5, within a matrix, and then draw the series of radial arms *b b* together at their base or at the point of junction with the annular ring *d*. To impart a little more stiffness to the metal composing the arms, the latter may be corrugated longitudinally, as shown by heavy lines 1 1, &c., in Fig. 3 of the drawings, and also in Fig. 7, where the corrugation is represented by an upraised rib, *g*. The lower plate, *d*, is to extend out beneath or be about the same diameter as the inclosing-cup *A*, to form a support for the latter, and prevent the fabric *C* from being cut or injured when the parts *A* and *B* are united as an entirety. To strengthen this member of the fastener, and impart more elasticity to the spring-fingers *b b*, I have formed radial corrugations *ff* in the lower ring, *d*, such depressions occurring or alternating between the points from which the arms spring from said plate. Thus, in the act of inserting the stud *D*, (shown in dotted lines in Fig. 1,) the plate *d*, by means of these corrugations, permits the arms *b b* to yield more freely and easily; hence the latter may converge more closely at the point *E*, whereby the stud can be grasped and held more securely.

Having thus described the two principal component parts of the socket member of a

fastening device embodying my invention, the manner of securing them together as an entirety, and to the fabric, garment, or glove, is as follows: The spring portion *B* is placed beneath the fabric at the spot where it is desirable to have it affixed, with the mouth or opening *E* downward. The cup-shaped disk or button is now placed exteriorly of the fabric and pressed snugly down upon and over the device *B*, the base or lower edge of said disk or button *A* resting upon the plate *d*, with the fabric intervening, and the two are now secured and united as an entirety by means of an eyelet, *F*, which is inserted through the opening *a* in the disk *A* and *e* in the ring *c*, when it is upset. This brings the parts closely together, and the socket member is now completed and ready for use in connection with a stud.

I claim—

1. A spring-fastening device formed with a series of vertically-disposed curved spring-fingers integrally united above and below with two annular plates, the lower of which is radially corrugated, for purposes set forth.

2. In combination with the lower corrugated and the upper perforated metallic rings, the series of interconnecting curved spring-fingers adapted to yield and permit entrance within the space inclosed by them of a fastening-stud, substantially as described.

3. In a socket member of a metallic fastener, the combination, with the upper perforated plate, *c*, the lower corrugated plate, *d*, and the spring-arms *b b*, integrally united therewith and adapted to be placed beneath the fabric, of the cup *A*, placed above the fabric and inclosing the spring portion *B*, all united for purposes herein stated.

4. A spring-fastening-device comprising the series of vertically-disposed, ribbed, or corrugated spring-arms integrally united and forming part of two annular plates, the upper centrally perforated and the lower radially corrugated, substantially as described.

In testimony whereof I affix my signature in presence of two witnesses.

STEPHEN PORTER.

Witnesses:

H. E. LODGE,
H. LAMB.