No. 832,579. PATENTED OCT. 2, 1906.

H. KERNGOOD.

SNAP FASTENER STUD.

APPLICATION FILED MAY 7, 1906.

Fig. 1.

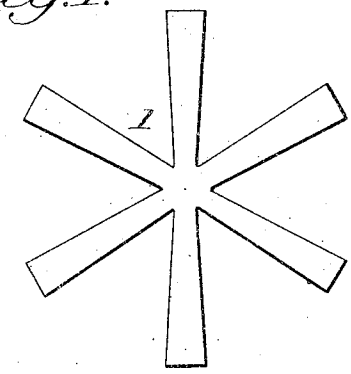


Fig. 2.

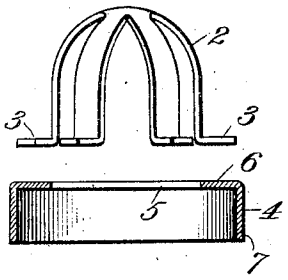


Fig. 3.

Fig. 5.

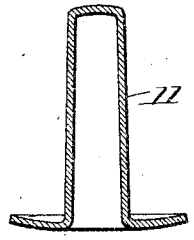


Fig. 4.

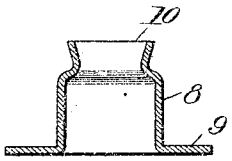


Fig. 6.

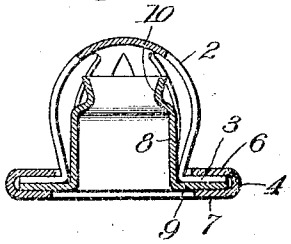
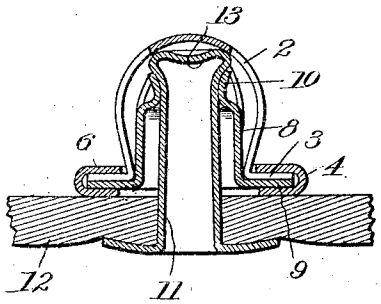


Fig. 7.



Witnesses

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UNITED STATES PATENT OFFICE.

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SNAP-FASTENER STUD.

No. 832,579. Specification of Letters Patent. Patented Oct. 2, 1906.

Application filed May 7, 1906. Serial No. 315,560.

To all whom it may concern:

Be it known that I, HERMAN KERNGOOD, a citizen of the United States, residing at Baltimore city, State of Maryland, have invented a certain new and useful Improvement in Snap-Fastener Studs, of which the following is a full, clear, and exact description.

This invention relates to snap-fastener studs which are themselves springs and are thereby adapted to be sprung into and out of engagement with the complemental socket member of the fastener.

The special object of the invention is to provide means for fastening the spring to the fabric without liability of deformation, and thereby producing a spring-stud which will not be crushed or otherwise deformed by ordinary or any rough usage.

The invention consists of a spring-stud having an internal spring-supporting open-end eyelet, preferably a stepped eyelet, through which a closed-end eyelet or hollow rivet is inserted from the side of the fabric opposite to that on which the spring is arranged and its end spread out or upset in the outer end of the stepped eyelet, all as I will proceed now more particularly to set forth and finally claim.

In the accompanying drawings, illustrating my invention, in the several figures of which like parts are similarly designated, Figure 1 is a plan view of the spring-blank. Fig. 2 is an elevation of the blank drawn up into the desired form of spring and ready to receive the binder. Fig. 3 is a cross-section of the binder. Fig. 4 is a vertical section of the stepped eyelet. Fig. 5 is a vertical section of the closed-end eyelet or hollow rivet. Fig. 6 is a vertical cross-section of the spring, the stepped eyelet, and the binder assembled. Fig. 7 is a vertical section of the stud applied.

The spring may be made from a blank 1 having a number of legs radiating from a central solid portion which forms the dome of the spring, and this blank is then bent up into the form shown at 2, Fig. 2, with the outer ends of the legs bent out laterally to form the feet 3. A binder 4 is slipped down over these legs when bent up, as in Fig. 2, said binder having an opening 5, which opening is surrounded by a flange 6, which rests upon the feet 3. The legs are contracted, as shown in Figs. 6 and 7, so as to make a bulb-shaped spring, and the legs have a slight play within the opening 5 of the binder. The binder 4 also has a flange 7.

The stepped eyelet 8, having a base-flange 9 and a flared open end 10, is inserted within the spring, and then the flange 7 of the binder is bent up under the flange 9 of the eyelet, and thus the spring, the eyelet, and the binder are firmly united.

The parts thus far described constitute a spring-stud.

The preferred fastening device for fastening the spring-stud upon a garment is shown in Figs. 5 and 7 and consists of a closed-end eyelet or hollow rivet 11, which is inserted through the fabric 12 from the side opposite to that upon which the spring is arranged, and then its closed end is upset, clenched, or spread out within the flared end 10 of the stepped eyelet, so as to lock the spring securely to the fabric, as shown at 13, Fig. 7.

It will be observed that the clenched end of the fastening device 11 is either in contact with or very close to the under side of the spring, and thus it affords a support for the spring and prevents its deformation by pressure in the setting of the stud and also prevents the deformation of the spring by blows to which it is subject in ordinary and in rough usage, and thus the usefulness of the stud is in no wise impaired.

The stepped eyelet is employed because its larger diameter affords an internal support for the spring at and near its feet, and its smaller diameter admits of the use of a relatively small fastening device 11. Further, one size of fastening device may be used in a wide range of thickness of the fabric, because that portion of the internal eyelet 8 having the larger diameter provides room to accommodate the lateral enlargement of the fastening device incident to its being broken down or upset in the act of setting when that fastening device is too long. It is a matter of considerable economy to the user to be able to fasten these studs to fabrics of various thickness with one size of fastening device, and the construction herein described permits this use of a single-size fastening device.

What I claim is—

1. A snap-fastener stud, having an outer spring element, and an open-end stepped eyelet whose upper end is inclosed within the

spring element and its lower end united to the base of the spring element.

2. A snap-fastener stud, having an outer spring element, an open-end stepped eyelet whose upper end is inclosed within the spring element, and a binder for uniting these two parts by their respective bases.

3. A snap-fastener stud, having an outer spring element, and an open-end stepped eyelet whose upper end is inclosed within the spring element and having its open end flared, the spring element and eyelet united only at their bases.

4. A snap-fastener stud, having an outer spring element, an internal open-end stepped eyelet, and a binder uniting them, combined with a fastening device adapted to be passed through the fabric and into the stepped eyelet and its end clenched between the spring element and the eyelet and within the open end of said eyelet.

5. A snap-fastener stud, having an outer spring element, an internal open-end stepped eyelet, and a binder for uniting them, combined with a hollow rivet adapted to be passed through the fabric and into the stepped eyelet and its end upset within the open end of the stepped eyelet and between said open end and the spring element and thereby secure the device to an article.

6. A snap-fastener stud, having an outer spring element, an internal open-end eyelet, means to unite them, and a fastening device for attaching the stud to an article, said fastening device projecting through the internal eyelet and supporting the spring element against being crushed or deformed in use.

7. A snap-fastener stud, comprising an outside spring element, an inside stepped supporting-eyelet connected with the base only of the spring element, and a fastening-rivet inserted from beneath the fabric into and through the eyelet and upset within said eyelet and directly beneath the dome of the spring element and thereby supporting the dome while the stud is being set.

In testimony whereof I have hereunto set my hand this 5th day of May, A. D. 1906.

HERMAN KERNGOOD.

Witnesses:

GEORGE D. DEAN,

GEORGE F. MAASCH.