No. 757,196. PATENTED APR. 12, 1904.

T. R. HYDE, JR. & E. D. SIMONS.

SNAP FASTENER.

APPLICATION FILED JAN. 30, 1904.

NO MODEL.

Fig. 1.

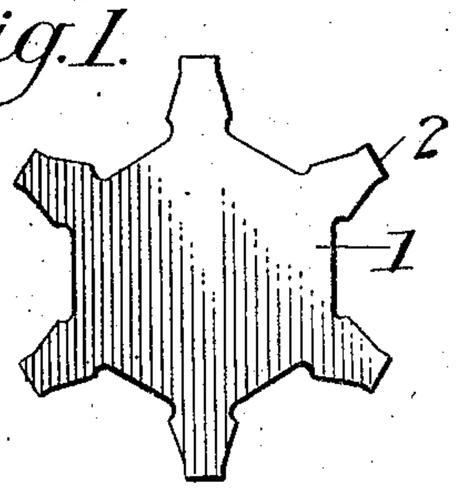


Fig. 2.

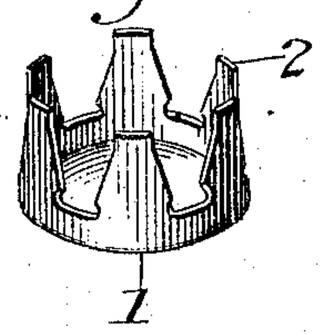


Fig. 3.

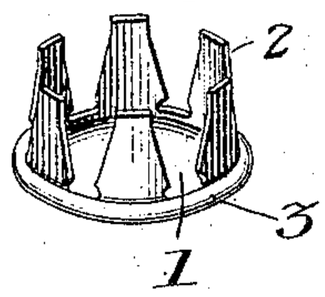


Fig. 4.

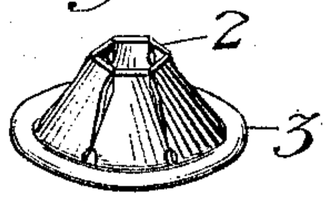
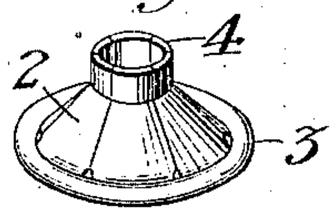


Fig. 5.



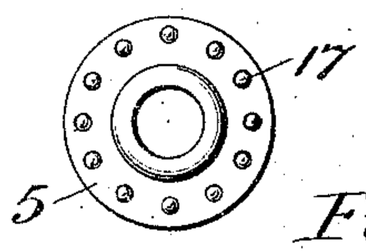


Fig. 6.

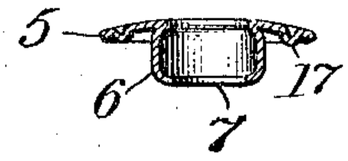


Fig. 7.

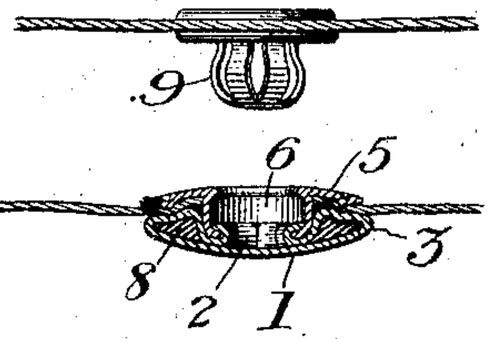


Fig. 8.

Fig. 9.

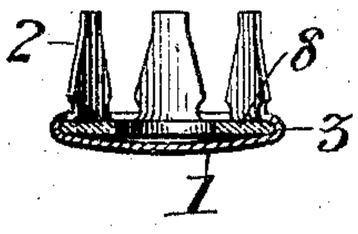


Fig. 12.

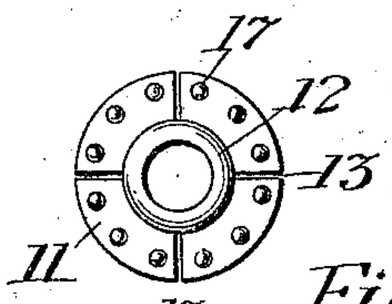
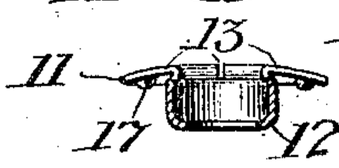


Fig. 10



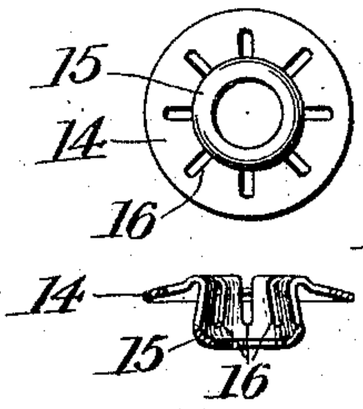


Fig. 11.

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Atty

No. 757,196. Patented April 12, 1904.

UNITED STATES PATENT OFFICE.

THEOPHILUS R. HYDE, JR., AND ERNEST D. SIMONS, OF WATERBURY, CONNECTICUT, ASSIGNORS TO SCOVILL MANUFACTURING COMPANY, OF WATERBURY, CONNECTICUT, A CORPORATION OF CONNECTICUT.

SNAP-FASTENER.

SPECIFICATION forming part of Letters Patent No. 757,196, dated April 12, 1904.

Application filed January 30, 1904. Serial No. 191,288. (No model.)

To all whom it may concern:

Be it known that we, THEOPHILUS R. HYDE, Jr., and ERNEST D. SIMONS, citizens of the United States, residing at Waterbury, in the county of New Haven and State of Connecticut, have invented a certain new and useful Improvement in Snap-Fasteners, of which the following is a full, clear, and exact description.

The object of this invention is to provide a covered snap-fastener for use, in connection with a suitable stud, on gloves and other wearing-apparel and other objects.

The invention comprises a snap-fastener socket consisting of a combined cap and rivet and a socket-piece arranged upon opposite sides of the glove or other object and permanently united and adapted for engagement with a suitable head or stud, all as we will proceed now more particularly to set forth and finally claim.

In the accompanying drawings, illustrating the invention, in the several figures of which like parts are similarly designated, Figure 1 is a plan view of the blank from which the combined cap and rivet is formed. Fig. 2 is a perspective view illustrating the first operation on the blank. Fig. 3 is a perspective view illustrating the second operation, wherein the edge of the cap is beaded. Fig. 4 is a perspective view illustrating the third operation, in which the arms are converged. Fig. 5 is a perspective view illustrating the finished combined cap and rivet. Fig. 6 is a plan view and cross-section of a non-resilient socket-piece. Fig. 7 shows a resilient stud in elevation and beneath it a socket-piece in cross-section, as they appear when applied to an object. Figs. 8 and 9 are cross-sections showing the application to the combined cap and rivet of a washer for preventing the undue deformation of the combined cap and rivet in setting. Fig. 10 is a plan view and cross-section of one form of resilient socket-piece. Fig. 11 is a plan view and cross-section of another form of resilient socket-piece. Fig. 12 is an elevation of a solid stud.

The blank 1 is made of relatively soft metal—that is to say, metal that is not necessarily resilient—and with a series of radial arms 2. This blank is then cupped, as shown in Fig. 2, so that its arms stand at right angles to the central solid portion, which becomes the cap. The blank thus formed is then provided with a bead 3, as shown in Fig. 3, and then the various arms 2 are bent inwardly and convergently, as in Fig. 4, and then the outer ends of these arms are brought into cylindrical form, as shown at 4, Fig. 5, to form a hollow rivet. In order to conserve the strength of the arms 2, they are convexed transversely, and this convexing of the arms serves also to prevent undue deformation of the device in setting it. The device as thus constructed provides a closed outer end for the socket, which is adapted to receive any kind of ornamentation.

The device, Fig. 5, is used in connection with a socket-piece which may be non-resilient for use in connection with a resilient stud member or may be resilient to be used in connection with a non-resilient stud. A non-resilient socket-piece is shown in Figs. 6 and 7 and comprises a flange 5, from which projects a hollow open-ended head 6, and the opening 7 in this head is adapted to receive the cylindrical portion 4 of the combined cap and rivet, which portion 4 is then upset within the hollow head 6 by pressure, which serves to break down more or less the conical formation of the arms 2, as shown in the cross-section, Fig. 7. Thus a socket is formed having an attached closed cap or cover member on one side of the garment or other object and a socket member proper on the opposite side.

In order to prevent undue deformation of the cap and its arms, a washer 8, of paperboard or other material, may be inserted in the blank of Fig. 2, as shown in Fig. 8, and held therein in and by the formation of the bead 3, as shown in Fig. 9, and the operation and effect of this washer is indicated in the cross-section, Fig. 7.

When the socket-piece is non-resilient, as in Figs. 6 and 7, then a stud 9, such as shown in the side elevation of Fig. 7, may be used; but, as already indicated, a resilient socket-

piece may be used, and in that case a solid stud, such as shown at 10, Fig. 12, may be used.

Referring to Fig. 10, the socket-piece has a flange 11 and an open-ended head 12, and the flange has a number of slits 13, four being shown, which extend through the flange and into the head, or, as shown in Fig. 11, the socket-piece may have a flange 14 and an open-ended tubular head 15, with a number of radial slits 16 intersecting the joint of the flange and head.

In all of the various forms of socket-piece the flange is provided with a series of projections or points 17, which serve to grip the material to which they are applied, and thus assist in holding it in place.

It will be observed that the combined cap and rivet has no function as a socket itself; but it is a device primarily and solely used for securing a separate or individual socket-piece in place, and therefore the said combined cap and rivet is not made of spring metal and its parts are not resilient; but, on the contrary, it is made of metal that may be readily upset or clenched after the manner of a rivet or eyelet and is used as such in affixing the socket-piece, whether resilient or non-resilient, to the object to which it is applied.

It is to be further noticed that when the combined cap and rivet and the socket-piece are united as in the sectional view, Fig. 7, the arms 2 are bent backward and away from the material, so as to form a sort of pocket into which the open-ended head of the socket-piece is introduced, and it is understood that in the preferred construction the material of the glove or other article is perforated for the reception of these two members.

What we claim is—

1. A snap-fastener, comprising a socket-piece to receive the stud, having a tubular hollow head and a base-flange, and a combined cap and rivet therefor, the latter composed of a cap proper and arms terminating in a cylindrical portion, the arms being bent directly over the head externally and the cylindrical portion upset within the head and clenching the head directly between the arms and cylindrical portion to fasten the members upon opposite sides of an article.

2. A snap-fastener socket-piece, to engage a stud, having a tubular open-ended head and a base-flange, and a combined cap and rivet therefor composed of a cap proper and arms terminating in a cylindrical portion, the socket-piece and the cap being applied upon opposite sides of an article, the arms being bent backward by and forming a pocket for the head and the cylindrical portion upset within the head, thereby clenching the head directly between the arms and cylindrical portion.

3. A snap-fastener, comprising a socket-piece to engage a stud, having a head open at both ends and a base-flange, and a combined cap and rivet having connecting-arms, said cap provided with an internal washer, and the rivet portion adapted to enter the head of the socket-piece and be upset therein and the arms bent backward against the washer and about the head to clench the head directly between the upset rivet and bent arms.

4. A snap-fastener, comprising a socket-piece having an open-ended head passed through an opening in the goods, and a flange to embrace the back of the goods, a combined cap and rivet having a cap proper with arms to embrace the head externally and a cylindrical portion entering the head of the socket-piece and upset therein, the socket-head being engaged directly by and clenched between the arms and cylindrical portion, and a complemental stud adapted to be engaged by the socket-piece.

5. A snap-fastener, comprising a socket-piece to engage a stud member, having a flange provided with projections to grip the object to which it is applied, and also having an open-ended hollow head, in combination with a combined cap and rivet applied to the opposite side of the goods from the socket-piece and having arms bent backward over the head externally and a cylindrical portion upset within the head and serving to clench the head directly between the arms and cylindrical portion.

In testimony whereof we have hereunto set our hands this 29th day of January, A. D. 1904.

THEOPHILUS R. HYDE, Jr.
ERNEST D. SIMONS.

Witnesses:
J. H. Pilling,
G. F. Hodges.