No. 645,624. Patented Mar. 20, 1900.

H. KERNGOOD.

BALL AND SOCKET FASTENER.

(Application filed Jan. 16, 1900.)

(No Model.)

Fig. 1.

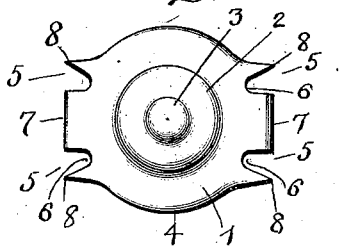


Fig. 2.

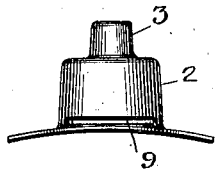


Fig. 3.

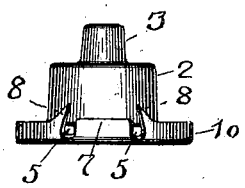


Fig. 4.

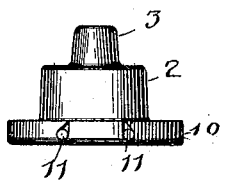


Fig. 5.

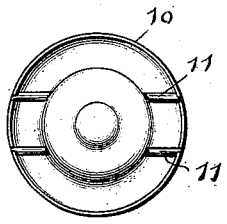


Fig. 6

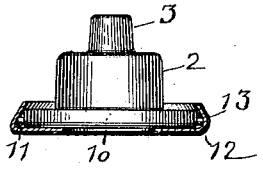
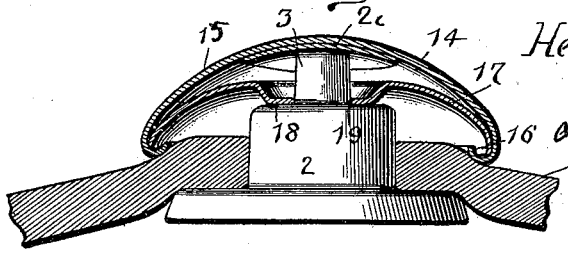


Fig. 7.



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UNITED STATES PATENT OFFICE.

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BALL-AND-SOCKET FASTENER.

SPECIFICATION forming part of Letters Patent No. 645,624, dated March 20, 1900.

Application filed January 16, 1900. Serial No. 1,612. (No model.)

To all whom it may concern:

Be it known that I, HERMAN KERNGOOD, a citizen of the United States of America, and a resident of 611 Monroe street, city of Baltimore, State of Maryland, have invented certain new and useful Improvements in Caps for Cap-and-Stud Fasteners, of which the following is a specification.

This invention relates to fasteners for gloves and other articles in which two parts or flaps of material are to be connected and disconnected.

The invention has for its object to provide an improvement in fasteners of this kind which will be efficient and durable.

The invention comprises that part of the fastener which involves the cap and socket and locking device forming that part of the fastener with which a suitable engaging stud secured to the other flap or separable portion of the material is secured to the aforesaid cap and locking parts on the other flap of the material.

Referring to the accompanying drawings, Figure 1 is a plan view of a blank forming the main body of the cap. Fig. 2 is a side view thereof in elevation. Fig. 3 is an elevation showing the condition of the cap in one of the steps of the process of construction. Fig. 4 is a view in elevation showing the next step in the process of construction. Fig. 5 is a plan view of the device shown in Fig. 4. Fig. 6 is an elevation showing the inclosure of the base in horizontal section, and Fig. 7 is an enlarged view of the complete device secured to the material and the covering of the cap in horizontal section.

In carrying out this invention a cap-blank is first formed, as shown in Figs. 1 and 2, having a flanged base 1, a vertical tubular socket 2, projecting upward therefrom, and a teat or nipple 3 on the top of the tubular socket 2. The flange-base 1 is formed with the oval sides 4, the recesses 5 in its ends having curved inner ends 6, the recesses 5 forming the end projection 7 and the pointed corner projection 8. The tubular socket 2 is provided on opposite sides, adjacent to the oval sides 4, with slits or recesses 9. The several parts just described of the cap-blank may be formed by punching and stamping out the configuration set forth. The next step in the construction of the device, as shown in Fig. 3, consists in the bending up by a suitable tool of the flange 1, forming a rim 10, and bringing the openings 5 into a vertical position and in alinement with the side slits 9. It will be noticed in this connection that by bending up of the flange, as described, the points 8 will extend up some little distance above the ends 7. The object of the formation of the slits 9 and the openings 5 is to provide for the employment of the resilient wires 11, which are now inserted through the openings 5 and slits 9 and are secured in place with a suitable tool by bending the points 8 thereon to the adjacent corners of the projection 7. The object of making the points 8 somewhat longer than the distance across the upper end of the recesses 5 is because when the points 8 are bent across the openings 5 onto the projections 7 there is a depression of the projections 8 into the recesses 5, and allowance must be made therefor in order to have the projections 8 bridge the space across the recess 5 when the projection 8 is depressed by the tool. In this way, as just described, the ends of the wires 11 are secured in the rim 10 of the flange 1, as shown in Fig. 4.

In the next step of the process of construction of the device the flange 4 is inclosed by a suitable casing 12, as shown in Fig. 6, having an open top and diagonal sides 13, which rest upon the top of the rim 10 and form a space between the sides 13 and the rim 10. This space permits of the free play of the ends of the wires 11, the wires 11, inclosed in the recesses 5 by the bending over of the projections 8, being permitted to have free play in said recesses, so that when the wires 11 are bent, particularly at the central portion, their ends will be drawn inward from the position shown in Fig. 6 and play in the recesses 5 and when retracted back to their normal position, as shown in Fig. 6, will be limited in their outward movement by the inclined walls 13 of the casing 12. To complete the structure, a covering or cap 14 (shown on a large scale in Fig. 7) is employed, which preferably consists of an oval cover 15, having an inwardly-curved edge 16, in which rests the edge of an oval plate 17, having a central dished portion

18, with a central aperture 19, through which projects the nipple 3, resting, preferably, against the plate 20 on the under side of the outer plate 15. In Fig. 7 a tubular socket is shown as projecting through the material 21, the lower portion, comprising the covering 12 and base of the tubular socket 2, bearing against the under side of the material 21 and the inwardly-curved edge of the upper plate 15 bearing against the upper side of the material 21, the latter being compressed by suitable means between the parts mentioned. The device as hereinbefore set forth is now in position to be engaged with a suitable stud constructed to project into the tubular socket 2 and press apart the wires 11 and then be engaged by the wires springing back through the slits 9 in said tubular socket and securing the two flaps or the separable pieces of material together.

Having described my invention, what I claim is—

1. A cap-and-socket portion for gloves and other articles, consisting of a tubular socket and cap secured to the material, said tubular socket having lateral alining slits, a rim with alining apertures on opposite sides thereof in alinement with said lateral slits, said apertures in said rim being formed by means of a recess having a curved end and a projection bent over said recess to inclose the open end thereof, locking-wires extending through said lateral apertures and through said recesses, and a casing inclosing the base of said tubular socket, and having a recess between its sides and the base of the tubular socket, in which are locked the ends of said wires, as and for the purpose set forth.

2. As an article of manufacture, a cap-blank for the socket part of a glove or other fastener, consisting of a tubular socket having lateral slits, and a flange formed with recesses at its ends having curved inner ends and outer corner projections longer than the width of said recesses, as and for the purpose set forth.

3. A cap-and-socket fastener for gloves and other articles, consisting of a tubular socket having lateral alining slits, a flange-base consisting of a turned-up flange forming a rim and having end recesses in alinement with said lateral slits, formed with curved lower ends and their upper ends closed by projections longer than the distance across the said recesses, locking resilient wires extending through said lateral slits and said end recesses, and a covering, or casing, with inclined sides inclosing said rim or turned-up flange, and having a space between said inclined sides and said rim, in which are located the projecting ends of said resilient locking-wires, and a cap secured to said tubular casing, said cap and said base clamping material to be fastened between them, as and for the purpose set forth.

4. A cap-blank for stud-and-cap fasteners consisting of a cap, provided with a lateral flange, said flange having in its edge two pairs of round-bottomed notches on each side of the cap, substantially as described.

Signed by me at Baltimore city, State of Maryland, this 6th day of January, 1900.

HERMAN KERNGOOD.

Witnesses:
W. W. POWELL,
GEORGE KENT.