(Model.)

W. S. RICHARDSON.

GLOVE FASTENING, &c.

No. 260,050. Patented June 27, 1882.

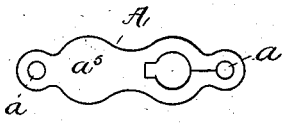

Fig. 1.

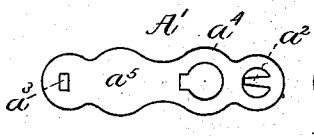

Fig. 2.

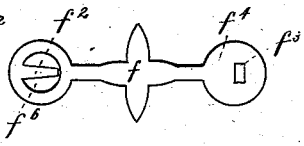

Fig. 3.

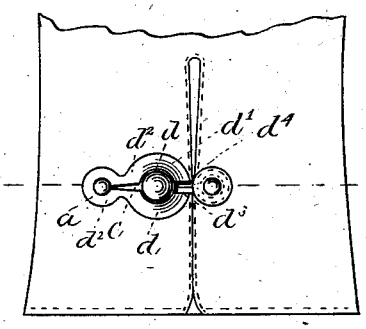

Fig. 4.

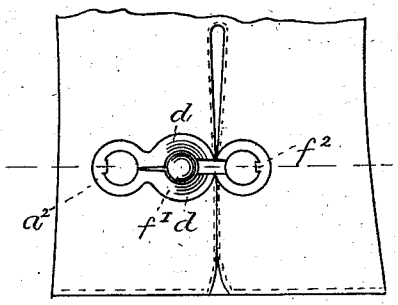

Fig. 5.

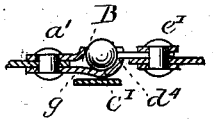

Fig. 6

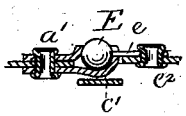

Fig. 7.

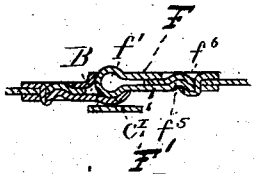

Fig. 8.

Fig. 10.

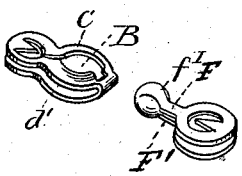

Fig. 9.

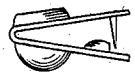

Fig. 12.

Fig 11.

WITNESSES.

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GLOVE-FASTENING, &c.

SPECIFICATION forming part of Letters Patent No. 260,050, dated June 27, 1882.

Application filed February 23, 1882. (Model.)

To all whom it may concern:

Be it known that I, WILLIAM S. RICHARDSON, of Newton, in the county of Middlesex and State of Massachusetts, a citizen of the United States, have invented a new and useful Improvement in Fastenings for Gloves and other Articles, of which the following is a full, clear, and exact description, reference being had to the accompanying drawings, forming a part of this specification in explaining its nature, in which—

Figure 1 is a plan view of a blank from which the member of the fastening device known as the "socket" part, and adapted to be fastened to the material by an independent or separate eyelet or rivet, is formed. Fig. 2 is a plan view of a blank for the socket part, which is adapted to be fastened in place by a prong integral therewith. Fig. 3 is a plan view of a blank from which is formed the member of the fastening called the "ball" part. Figs. 4 and 5 are plan views of a portion of a glove representing the two members of the fastening engaged. Figs. 6, 7, and 8 are views in vertical section further illustrating the construction and use of the fastening. Fig. 9 is a perspective view of the two members of the fastening detached from the material and from each other. Fig. 10 is a plan of a blank of modified form. Fig. 11 is a side elevation thereof. Fig. 12 is a side elevation of the complete fastening.

The socket part of the device or fastening preferably is formed from either of the blanks A A′, the only difference between the two being that the former has the holes *a*, which in the complete construction are adapted to receive the fastening rivet or eyelet *a′*, as represented in Figs. 6 and 7, while the latter has a portion, a^2, which in the complete part projects through the hole a^3, and serves as a prong by which the part is fastened in position. Aside from these distinctions, each blank has the section a^4, from which the center has been removed, leaving a section which is circular excepting at two points, and which is struck up to form the socket, and the section a^5, which forms the seat of the device. It is practically immaterial so far as the steps in the process of forming the metal into the complete socket part of the device are concerned whether the blank be thus prepared or whether it be first shaped as shown in Figs. 10 and 11, the sequence of the various manipulations necessary in forming the part from the metal plate from which the blank is punched being susceptible of a number of variations—such, for instance, as the forming up of the portion which afterward makes the socket and cup part before the blank is punched from the metal plate, and thus removing the cap of the portion that made the socket to form the entrance or the removal of this part first before striking up the remainder to form the wall of the socket. The blank having been submitted to the action of suitable forming and shaping devices, whereby the section a^4 is struck up to form the socket B, and a slit or opening, *c*, extending from the circular opening C of the socket to the hole *a*, cut as represented in Fig. 4, and the section a^5 provided, if desired, with the cup-shaped depression *c′*, as represented in Figs. 6, 7, and 8. The section a^5 is bent under the section a^4, as shown in said last-named figures and in Fig. 9, bringing the holes *a* or the prong a^2 and the hole a^3 in line and the cup-shaped depression beneath the socket. The complete device will therefore have the socket B, the opening to which is circular, and which has the spring or yielding sides *d*, which are adapted, on account of their being elevated above the lower edge, *d*, of the part, to have a limited amount of spring or movement in relation to said edge, the said edge being, as it were, the center or fulcrum of the movement, and also to have a further extent of spring because of the opening or slit *c* connecting the circular opening of the socket C with the hole *a*, and making each arm d^2 of the part serve as a spring-arm, permitting the sides or portions *d* to be opened. The front portion of the shell forming the socket is cut away, preferably in the blank, to form the recess d^3, into which the tongue of the other member of the fastening enters, as hereinafter explained.

The other member of the fastening device consists of a ball, E, fastened to the end of a tongue or bar, *e*, which is adapted to be secured to the material by a rivet, *e′*, as shown in Fig. 7; or the device may be struck up from the blank shown in Fig. 3, in which event

the central portion, *f*, of the blank is formed into the ball *f'*, (shown in Figs. 8 and 9,) and the blank is bent to bring the arms F F' parallel, and so that the projection f^2 may be used as a prong in fastening the part to the material by being bent down and passed through the material and hole f^3, and turned, bent, or clinched upon the under side, as shown in Fig. 8. In securing a member of a fastening device having this construction to the material the arm F is placed over the material at or near its edge, and the other arm, F', below it, so that the edge or portion of the material is between the two arms, and the prong or projection is pushed down through the material and clinched upon the under surface of the arm beneath. When this construction is employed I prefer to form upon the section f^4 of the blank a projection, f^5, (shown in Fig. 8,) which shall come beneath the opening f^6, and which serves two purposes: first, to lift the material to which the device is fastened to a level or very nearly to a level with its upper surface, as shown in Fig. 2; and, second, to provide a recess upon the under side, in which the end of the fastening-prong f^2 may be bent or clinched.

Of course it is immaterial for the principal purpose of the invention how the ball and tongue are fastened in place; but for purposes of economy in construction and application it may be desirable to use the construction shown in Figs. 3, 8, and 9, or at any rate to use that method of fastening the tongue and ball to the material, in which event the ball may be formed upon the tongue in the ordinary manner. The socket part may also have a projection like the projection f^5 and for the same purposes.

I prefer to fasten the socket part of the fastening to the material, substantially as shown in Figs. 6, 7, and 8.

A hole or slit, *g*, is formed in the material for the reception of the lower section of the device, which is slipped through the slit, as shown in Fig. 6, and the material is thus embraced between the outer ends of the lower and upper sections, while the socket is entirely upon the outside of the material. The tongue may be fastened, as shown in Figs. 6 and 7, upon the outside, or when formed as shown in Fig. 8 the two sections embrace the material.

It is desirable that the tongue and the center of the socket be as nearly on a line as possible, in order that the principal line of draft of the tongue, which is substantially a straight line, may be against the front portion of the socket, and for that reason, principally, I form the recess *d* for the reception of the tongue, to bring it to the desired level in relation to the center of the socket. This ball-and-socket construction of fastening is of very great advantage, because in the first instance the two parts of the fastening can readily be engaged with each other by touch. The under surface of the ball of course being smaller than the circular opening, it acts in connection with the edge thereof as a guide in locating and directing the bringing together of the parts. The parts being thus brought together, the ball is pressed into the socket against the edge of the opening, separating the sides thereof sufficiently to allow the larger part of the ball to pass below the edge of the opening, and the sides, automatically closing, then grasp the ball above the line of its greatest diameter and have an almost continuous bearing upon its surface, in effect forming a ball-and-socket joint and securely holding the ball in whatever position the tongue may stand in relation to the socket.

To remove the ball from the socket, the front portion, d^4, of the socket part, forming the under side of the recess d^3 in which the tongue rests when in its normal position, is used as a fulcrum, and by pressing the outer ends of each portion of the fastening downwardly and causing the tongue to bear on the fulcrum the ball is pried from its holding-socket.

It is obvious that this invention can be compared to a ball-and-socket joint, the distinction being that the socket has spring or yielding sides which allow the ball to be inserted and removed at will, and which hold the ball when in place; also, to a button-hole and button, the distinction in this comparison being that the button-hole or socket is metal and has spring or yielding sides, being in substance a metallic button-hole, while the ball is used very much like the ordinary button. Of course the position of these parts of the fastening in relation to each other may be reversed in relation to the glove or other article with which they may be used without departing from the spirit of this invention, and the spring or yielding part of the device, instead of being in the sides of the socket, may be in the ball, the ball being constructed to have sides which yield automatically in relation to each other to diminish its diameter upon being inserted into the socket, and springing out again to the original shape when the pressure upon the sides is released.

It will be observed that the projection f^5, acting in connection with the aperture above it, nips or pinches the material, so that the fastening is held more firmly in place.

Having thus fully described my invention, I claim and desire to secure by Letters Patent of the United States—

1. The improved fastening for gloves and other articles, consisting of two members, one of which is provided with a socket, B, having the spring yielding sides *d* about the circular opening to the socket and adapted to be fastened to the material, and the other of which consists of a ball and tongue, also adapted to be fastened to the material, and the ball of which is adapted to enter the socket of the other member of the fastening device and be held therein, as described, all as set forth.

2. A member of a fastening device containing a socket, B, having an opening, C, and the

yielding sides *d*, adapted to receive a suitable ball or other device, all substantially as and for the purposes described.

3. A member of a fastening device having the ball E, the straight tongue *e*, adapted to be used in connection with the other member of the fastening device described, and means for fastening the same to the material, substantially as specified, all struck up or formed from a sheet-metal blank, substantially as set forth.

4. As a means of fastening a member of a fastening device in place, a prong or projection, f^2, integral with the device and at or near the end of one arm thereof, and a hole, f^3, at or near the end of the other arm thereof, and a recess in the under surface of said arm adjacent thereto, the prong or projection being adapted to be passed through the hole and upset or clinched in the recess, all substantially as described.

5. In a member of a fastening device having two arms by which it is fastened to the material, the combination of the arm F, having the hole or aperture f^6, and the arm F′, having the projection f^5, all substantially as described, and for the purposes set forth.

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Witnesses:
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W. C. FOGG.