(No Model.)

W. S. RICHARDSON.

FASTENER FOR ARCTICS, OVERSHOES, &c.

No. 566,339. Patented Aug. 25, 1896.

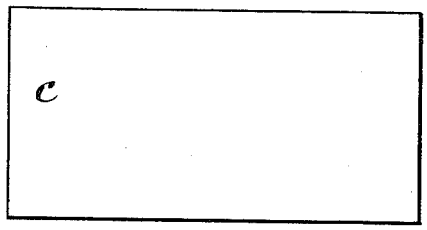


Fig. 1.

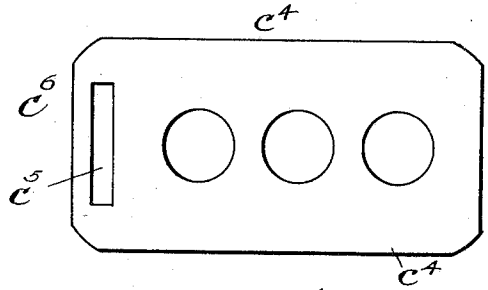


Fig. 2.

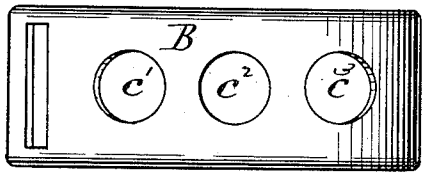


Fig. 3.

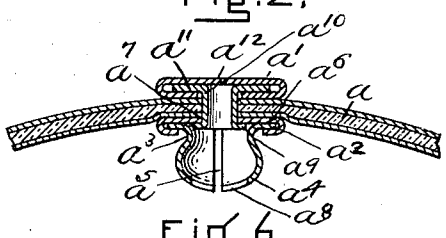


Fig. 6.

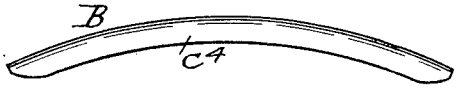


Fig. 4.

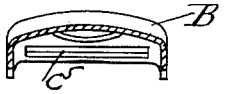


Fig. 5.

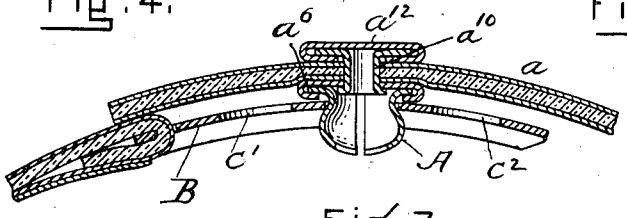


Fig. 7.

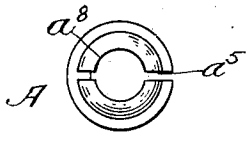


Fig. 9.

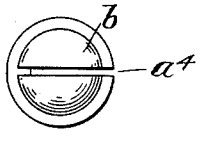


Fig. 10



Fig. 8.



Fig. 11

WITNESSES

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UNITED STATES PATENT OFFICE.

WILLIAM S. RICHARDSON, OF BOSTON, MASSACHUSETTS, ASSIGNOR TO THE BALL AND SOCKET FASTENER COMPANY, OF SAME PLACE AND NASHUA, NEW HAMPSHIRE.

FASTENER FOR ARCTICS, OVERSHOES, &c.

SPECIFICATION forming part of Letters Patent No. 566,339, dated August 25, 1896.

Application filed November 17, 1893. Serial No. 491,236. (No model.)

To all whom it may concern:

Be it known that I, WILLIAM S. RICHARDSON, a citizen of the United States, residing at Boston, in the county of Suffolk and State of Massachusetts, have invented a new and useful Improvement in Fasteners for Arctics, Overshoes, and for Similar Purposes, 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.

The invention relates to a fastener for arctics, overshoes, &c., comprising a single yielding ball or engaging member secured upon or attached to one side or flap of the shoe, and a ball-receiving member made from a flat plate or blank, having a line or series of holes for receiving and holding the ball arranged, preferably, upon a curve, the edges of which are bent or folded to stiffen it, and the end of which has an ear or integral means by which it is secured to the other flap or side of the shoe.

The invention also relates to the improved form of yielding ball member herein described.

In the drawings, Figure 1 is a view in plan of the blank from which the ball-receiving member is made. Fig. 2 is a view representing the same as subjected to an operation whereby the series of holes is formed therein and a slot formed in the section which becomes the ear. Fig. 3 shows in plan, Fig. 4 in elevation, and Fig. 5 in cross-section, the blank as finally shaped. Fig. 6 represents a vertical section of a yielding ball member attached to one of the holding flaps or sides of the shoe. Fig. 7 shows it engaged with the other member of the fastener. Fig. 8 shows in section the ball member secured to the flap by a somewhat different type of fastening-eyelet from that represented in Fig. 6. Fig. 9 is a view in plan inverted of the ball member shown in Fig. 6. Fig. 10 is a view in plan inverted of the ball member shown in Fig. 8. Fig. 11 is a vertical section of the ball member.

The yielding ball member of the fastening may be of any of the well-known types of such devices. It is lettered A in the drawings and is represented as attached to the flap a, to project from the under surface thereof, and there may or may not be over it, upon the upper surface of the flap, a cap a'.

In Fig. 6 of the drawings the yielding ball member is represented as having the flange a^2, the neck a^3, and the enlargement of the head a^4, and a slit or recess a^5 is formed in the head and neck lengthwise them and through one side of the flange. This split head has attached to its flange a^2 the plate a^6, which is in the nature of a collet and which has the central hole a^7 of a bore less than that of the hole a^8 in the outer end of the head. This plate receives and holds the turned-in edge a^9 of a fastening-eyelet a^{10}, which passes through a hole in the material, and has attached to its flange a^{11} a cap a^{12}. The cap rests upon the upper or outer surface of the shoe flap or side, and forms an ornamental covering to the ball-fastening device.

The hole a^8 is formed in the end of the ball or head for the purpose of allowing a setting instrument to be introduced into its cavity during the upsetting of the end of the eyelet a^{10} upon the collet or plate a^6, as it is necessary to have at that point an anvil, against which the end of the eyelet may be forced and spread. The ball or head is held by a cup concentric with the setting instrument during this setting operation. The flange a^2 of the ball is not held by the turned-over edge of the plate a^6 in the sense that its resiliency is impaired.

In Fig. 8 the head, ball, or enlargement a^4 is like that of Figs. 6 and 7, with the exception that a hole a^8 is not formed in its end, the end being continuous with the exception of the slit a^5, which is formed in the head and flange for the purpose of giving it resiliency. This type of ball or head is provided with a plate a^6 and is attached to the flap or side a by a capped eyelet or fastening of a somewhat different type from that above described, the eyelet having a closed end and being like that described in my Patent No. 446,139, and having indentations in its barrel which cause the barrel to expand in the neck of the ball upon the inner surface of the plate a^6, and this action of the eyelet taking place upon the contact of the end b' with the end of the ball or head a^4. The ball or head when thus attached is held in a cup, together

with the attached plate a^6. The eyelet capped or otherwise is introduced through a hole in the strap or the material and is forced against the inner surface of the head. This produces an expansion of the eyelet-tube upon the inner surface of the ball-plate a^6 and rigidly fastens it to the flap; but this does not effect the resiliency of the ball after the removal of this holding-cup, because there has been no strain upon the turned-over edge b' of the plate a^6, which is never turned upon the flange a^2 of the ball sufficiently to clamp the flange in place or prevent the resiliency of the ball.

While the construction of the ball member herein described represents a novel type, I would say that I do not confine myself to the particular form of yielding ball herein described so far as its use in connection with the other members of the fastener is concerned.

The other member, B, of the fastener is made from a flat blank *c*, which has formed in it and lengthwise of it a line of holes which are lettered c' c^2 c^3, having unyielding edges and of a size as to slightly contract the resilient member of the fastener as it is pressed through it and to engage it by its expansibility after it has been pressed through the hole and by the neck of the member which engages the edge of the hole. This ball-receiving member is further formed by having its edges c^4 bent downward parallel with each other to stiffen the fastening and also to raise the section of the plate in which the holes are formed from the surface of the material or article with which it is used sufficiently to form a space or cavity for the reception of the ball.

Both the top plate and side flanges or edges of the ball-engaging member are also preferably curved from end to end, and it has at one end means by which it may be attached to the flap or side of the overshoe or article opposite that carrying the resilient ball or head. I have represented this as accomplished by means of a slot c^5, formed in the end c^6 of the fastener, and which is adapted to receive a strap or other section of the flap or side to which it is secured, and which is passed through it, turned back upon itself in the form of a loop, and fastened to itself. I do not, however, confine myself to this especial way of securing this part of the fastener to the flap or side. The advantage of the invention arises from its simplicity and cheapness and its effectiveness as an adjustable fastener.

It will be seen that the blank from which the socket member of the fastener is made is substantially rectangular in shape and that sections of the blank are bent at an angle to the blank for the purpose of forming sides to the member of the fastener, which act to stiffen the structure and allow thinner metal to be used and which also act to lift or elevate the socket-openings from the material to which the member is secured. It will also be observed that the plate member, together with the sides, is curved from end to end.

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

1. An adjustable fastener for overshoes, arctics and similar purposes comprising a member B, formed from a flat plate having a line of unyielding holes extended lengthwise thereof, and its edges bent inward to strengthen the plate and raise the holes, and having means for attachment to the shoe flap or side at one end, and a resilient ball member adapted to be secured to the other flap or side of the shoe or article with which it is used, and arranged to enter one of the holes of the said member B, and by its contraction and subsequent expansion to make engagement with said member of the fastener, as and for the purposes described.

2. A member of a fastening comprising a ball or head, having a flange and a plate a^6, attached to the said flange, and having a hole with a flanged fastening eyelet or rivet, a section of which is upset upon the inner surface of said plate a^6, to fasten the ball in place, or to the strap or article with which it is used, substantially as described.

3. The combination of the head a^4, having a hole a^8, in its end, and the slit a^5, and flange a^2, the plate a^6, having a central hole and secured to the flange a^2, as specified, with the flanged eyelet a^{10}, the end of which is upset upon the plate a^6, by an instrument introduced through the hole a^8 substantially as described.

4. A member of an adjustable fastener for overshoes, arctics and similar purposes, formed from a single blank having socket-entrances and sections of the plate bent downward at an angle to form sides of the socket-cavity, and having its central portion raised so as to elevate the socket-opening above the material with which the fastener is used.

5. The combination of an adjustable fastener for overshoes, arctics and similar purposes, of a ball member attached to one side of the shoe, arctic, or other article, and a socket member attached to the other side of the shoe, arctic, or other article, and formed from a single metal blank having at one end means for attachment to the strap, a line of socket-entrances, and integral parallel inwardly-bent sides which form walls to the socket-chamber, and which ball and sockets are adapted to engage each other by resiliency, substantially as described.

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Witnesses:
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