

J. H. GOSS.
 STAPLE FOR ATTACHING BAR BUTTONS.
 APPLICATION FILED SEPT. 3, 1908.

977,615.

Patented Dec. 6, 1910.

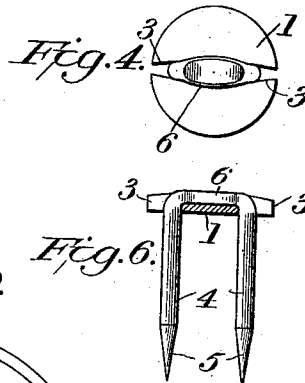
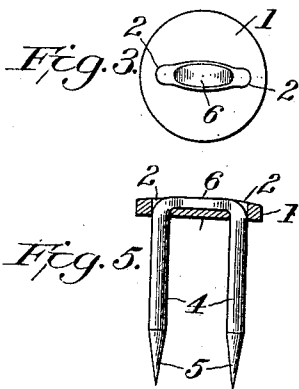
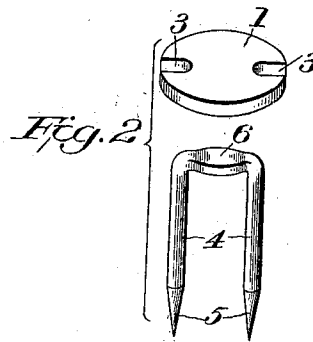
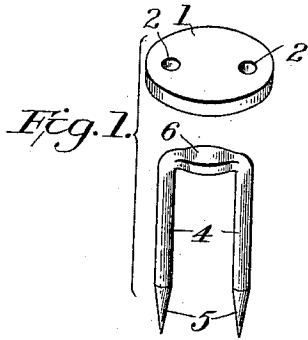
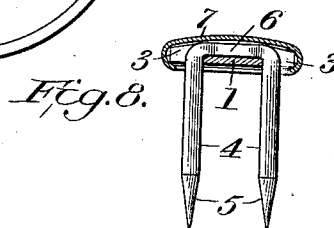
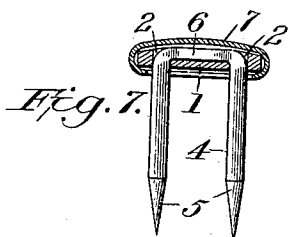
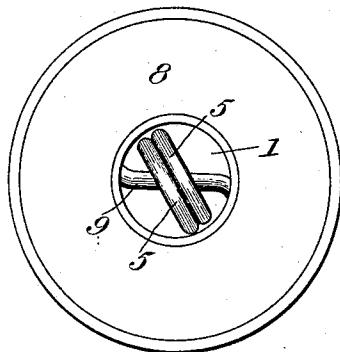


Fig. 9.



Witnesses

C. Walker
E. A. Finckel

Inventor

John H. Goss
 by *W. M. Finckel*

Attorney

UNITED STATES PATENT OFFICE.

JOHN H. GOSS, OF WATERBURY, CONNECTICUT, ASSIGNOR TO SCOVILL MANUFACTURING COMPANY, OF WATERBURY, CONNECTICUT, A CORPORATION OF CONNECTICUT.

STAPLE FOR ATTACHING BAR-BUTTONS.

977,615.

Specification of Letters Patent.

Patented Dec. 6, 1910.

Application filed September 3, 1908. Serial No. 451,481.

To all whom it may concern:

Be it known that I, JOHN H. GOSS, a citizen 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 Staples for Attaching Bar-Buttons, of which the following is a full, clear, and exact description.

Various forms of staples, or double-pointed tacks, have been used for fastening on garments buttons having wire bars in their backs. Some have used such staples where the head has been formed by bending the wire into the form of an S, or approximate C, or 8; but it is found that these staples having heads of irregular periphery do not feed properly and uniformly from the hopper in the automatic or partly automatic machines used in setting them; and, moreover, they require rather expensive machinery to manufacture them, and their heads are not always regularly formed. The difficulty in feeding is overcome by inclosing the heads in a metallic cap of regular and symmetrical outline, but this is an element of expense.

The object of this invention is to provide a staple having an applied head of symmetrical periphery which is free from all of the above-noted objections to those in common use.

The invention consists of a staple or double-pointed tack, with its cross-bar flattened and swaged in a disk which is apertured for the passage through it of the prongs of the staple, so that said disk forms a symmetrical head for the staple.

The invention also consists in such a staple as that just last described, combined with a hollow shank button, containing a cross-bar about which the staple's prongs are bent in opposite directions, by means of suitable tools, to fasten the button to a garment or other article.

In the accompanying drawings illustrating the invention, in the several figures of which like parts are similarly designated, Figure 1 is a perspective view of one form of disk and staple before their union. Fig. 2 is a perspective view of another form of disk and the same form of staple before their union. Fig. 3 is a top plan view of the disk and staple of Fig. 1 united to form a finished headed staple. Fig. 4 is a top plan view of the disk and staple of Fig. 2 simi-

larly united. Fig. 5 is a sectional elevation of the headed staple of Fig. 3. Fig. 6 is a sectional elevation of the headed staple of Fig. 4. Fig. 7 is a sectional elevation of the headed staple of Fig. 5 with a cap applied. Fig. 8 is a sectional elevation of the headed staple of Fig. 6 with a cap applied. Fig. 9 is a top plan view of a button showing the manner of using the staples.

The disk 1 may be of any suitable material and of a great variety of sizes, but preferably it is made of zinc or other non-corrodible metal. As shown in Figs. 1, 3, 5 and 7, the disk is provided with a pair of holes 2, or as shown in Figs. 2, 4, 6 and 8, instead of these holes, the disk may be cleft or notched at 3. In either or any case, the disk is suitably apertured to receive the prongs of the staple.

The staple 4 is of wire, bent into U-shape, and having parallel legs or prongs 5 adapted to penetrate the article to which the staple is applied and the integral prong-connecting cross-bar 6, which last is more or less flattened. The staple has its prongs inserted in the apertured disk until its cross-bar rests upon the disk with its flattened portion central, and then the two are swaged together so as to unite them intimately and so firmly as to prevent accidental separation and dislocation in use. By this operation the cross-bar is embedded in the disk. In the case of the notched disk, the swaging operation serves to more or less close the notches so as to avoid openings or corners, as indicated in Fig. 4. As shown in Figs. 7 and 8, these staples may be capped, as by shells 7 flanged over their disks. As shown in Fig. 9, these staples are used with a button 8 having a wire cross-bar 9 over which the prongs are bent by suitable setting tools or machines, all of well-known construction and operation.

With or without the caps, the disks provide symmetrical heads for the staples, which offer no openings, corners, recesses or the like, as common in the S, C and 8, and other like integral heads, to catch on the feed blades of the hopper from which the staples are delivered to the setting tools in automatic or partly automatic setting machines, and hence there is no bunching of the staples in the hopper nor any clogging of the feed. In my invention, the cap is, to all intents and purposes, merely a finish, in-

stead of being a necessary part to prevent clogging and bunching in the case of the all-wire staples referred to.

In the all-wire staples, the size of the head is practically limited to the spread of the prongs, but with the use of the applied disk, the head may be of any desired size without reference to the spread of the prongs.

In the all-wire staples where the head has an irregular contour, the prongs interlock with these heads when the staples are massed in the hopper and hence the machine fails to feed. This difficulty is wholly overcome by the present construction, and hence the feeding mechanism may be simplified very materially.

Again, a staple constructed in accordance with this invention, is a more secure fastener than the all-wire staple for the reason that it happens frequently when a staple of the all-wire type is attached to a garment, one of its prongs takes a better hold on the button bar than the other, and consequently when severe strain is applied to the button it tends to pull one prong away from the other, or, in other words, to distort the head. Obviously, such distortion cannot occur in my construction, since the disk and staple proper are practically riveted together.

While the invention is herein shown and described as for use in attaching bar buttons, it is plain that it may be used for other purposes.

The disk may be flat or convex or of other contour.

While the staples are shown as having their cross-bars flattened before union with the disks, it is within my invention to flatten them simultaneously with the swaging operation employed in uniting the staples and disks, and in practice this last-mentioned course is usually followed.

When the staple and disk are united the cross-bar of the staple lies in a groove in

the top of the disk, and thus a flat smooth finish is imparted to the head.

What I claim is:—

1. A staple for attaching bar buttons and for other purposes, consisting of a disk of metal having a pair of apertures, and a staple proper having prongs and a prong-connecting cross-bar, said prongs passed through the apertures in said disk and its cross-bar embedded in said disk between its apertures by swaging.

2. A staple for attaching bar buttons and for other purposes, comprising a U-shaped staple proper having prongs and a prong-connecting cross-bar, and a metallic disk having a pair of apertures through which the prongs of the staple are passed, said disk being swaged about the prongs and the prong-connecting cross-bar and forming therewith and thereon a symmetrical head in which the cross-bar is flattened and embedded.

3. A button fastener, comprising a flat prongless head formed with a groove in one face and holes extending through the head within the groove, and a U shaped wire sharpened at its ends and forming parallel legs projecting through the holes in the head and a portion connecting the leg portions flattened and expanded and frictionally held within the groove in the head to fill said groove and form a smooth surface at that side of the head, combined with a button having a hollow shank and a cross bar extending across within said shank and about which the legs of said staple are adapted to be bent in opposite directions.

In testimony whereof I have hereunto set my hand this 2d day of September A. D. 1908.

JOHN H. GOSS.

Witnesses:

HENRY FEHL,
G. F. HODGES.