

E. W. AVERELL.
Shirt-Stud.

No. 160,865.

Patented March 16, 1875.

Fig. 1.



Fig. 2.



Fig. 3.



Fig. 4.



Attest:

H. A. Munn
J. C. Smith

Inventor.

Edward W. Averell
by C. M. Parks
Attorney -

UNITED STATES PATENT OFFICE.

EDWARD W. AVERELL, OF NEW YORK, N. Y., ASSIGNOR OF ONE-FOURTH HIS RIGHT TO HORACE BARNARD, OF SAME PLACE.

IMPROVEMENT IN SHIRT-STUDS.

Specification forming part of Letters Patent No. **160,865**, dated March 16, 1875; application filed February 1, 1875.

To all whom it may concern:

Be it known that I, EDWARD WOODRUFF AVERELL, of the city, county, and State of New York, have invented an Improvement in Shirt-Studs; and I do hereby declare the following to be a full and correct description of the same, reference being had to the accompanying drawings, in which—

Figure 1 is a front view. Fig. 2 is a side view; Fig. 3, a rear view, and Fig. 4 a perspective view and a sectional view.

The object of my invention is to fasten securely buttons or studs to dresses, shirts, shoes, or other garments by means of a fastening formed by a complete oval or circular spring, having the end at the point of contact with the oval or circle a little deflected and sharpened, so as to facilitate its entry into the material of the garment to which it is applied, either through holes prepared or through the body of the material, and with a slight groove or depression in the heel of the spring, to keep the end in contact with the heel, forming a complete oval or circle. My invention consists in forming this spring in three sections—namely, a part perpendicular to the back of the stud or button, forming a shank; a part bent at right angles, or nearly so, to said shank; and a circular part, with the end coming in contact with the heel, (with or without a depression to keep it in place,) forming a complete circle, surrounding said perpendicular part as a center, and said part bent at right angles as a radius.

In the drawings, A represents the button or stud; B, the shank, and C the circular spring. The shank B is secured to the back of the button A in the usual manner, and is of sufficient length to allow the goods to

which the button or stud is to be fastened to pass between the back of the button and the circular spring C. Projecting at right angles to the shank B is the part *a*, of sufficient length to form a radius to the circular spring C. From the end of said radius *a* projects the circular spring C, and continues until the end comes in contact with the place of beginning, or heel *e*, as seen in Fig. 3. At the junction of the end of the spring C and the heel *e* there may be a groove in the heel *e*, for the admission of the end of the spring; or, if the spring be sufficiently stiff and rigid, the groove may be omitted. The end of the spring C, near the place of contact with the heel *e*, is deflected outside of the circular spring, and may be pointed to facilitate the insertion of the spring into the fabric. The circular spring may be flattened, so as to increase its elasticity without increasing its weight.

Having thus fully described my invention, what I claim, and desire to secure by Letters Patent, is—

1. The circular spring-fastening of a stud or button, provided with a groove or depression in the heel, to keep the end of the spring in place, substantially as described.
2. In a spring-fastening for a stud or button, the combination of a shank, a circular spring flattened in the plane of its circle, a deflected point, and a groove or depression, substantially as and for the purpose described.

The above specification of my said invention signed and witnessed, at New York city, this 28th day of January, A. D. 1875.

EDWARD WOODRUFF AVERELL.

Witnesses:

HORACE BARNARD,
CHARLES NETTLETON.