

(No Model.)

S. COTTLE.
BUTTON.

No. 378,923.

Patented Mar. 6, 1888.

Fig. 1.

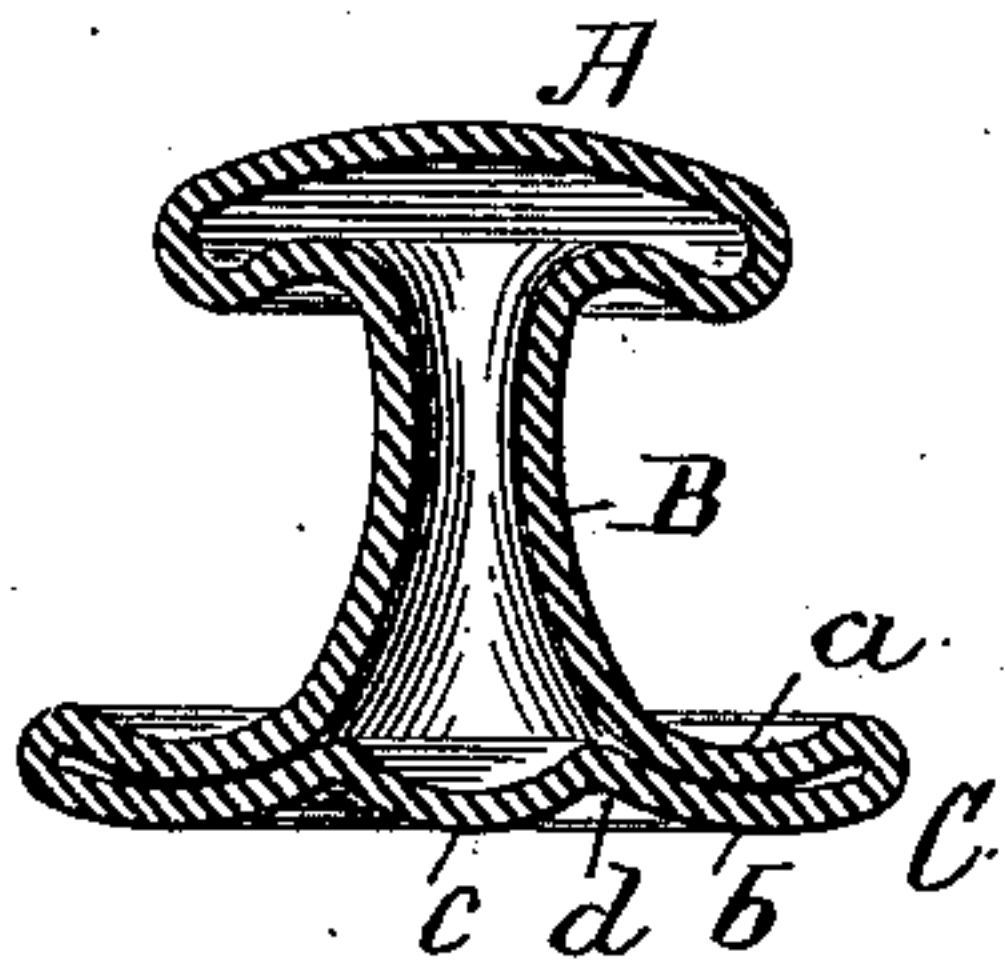


Fig. 3.

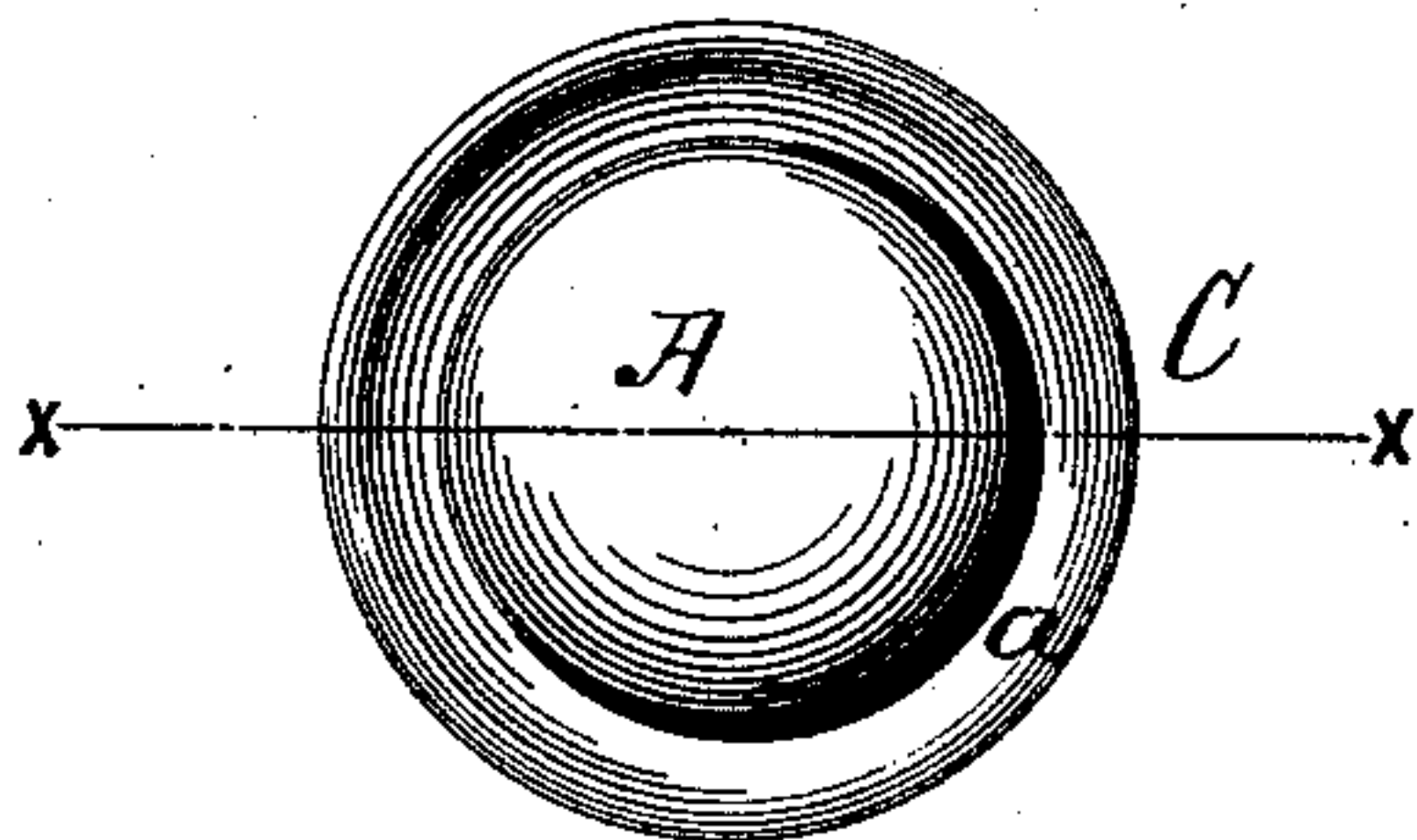


Fig. 4.

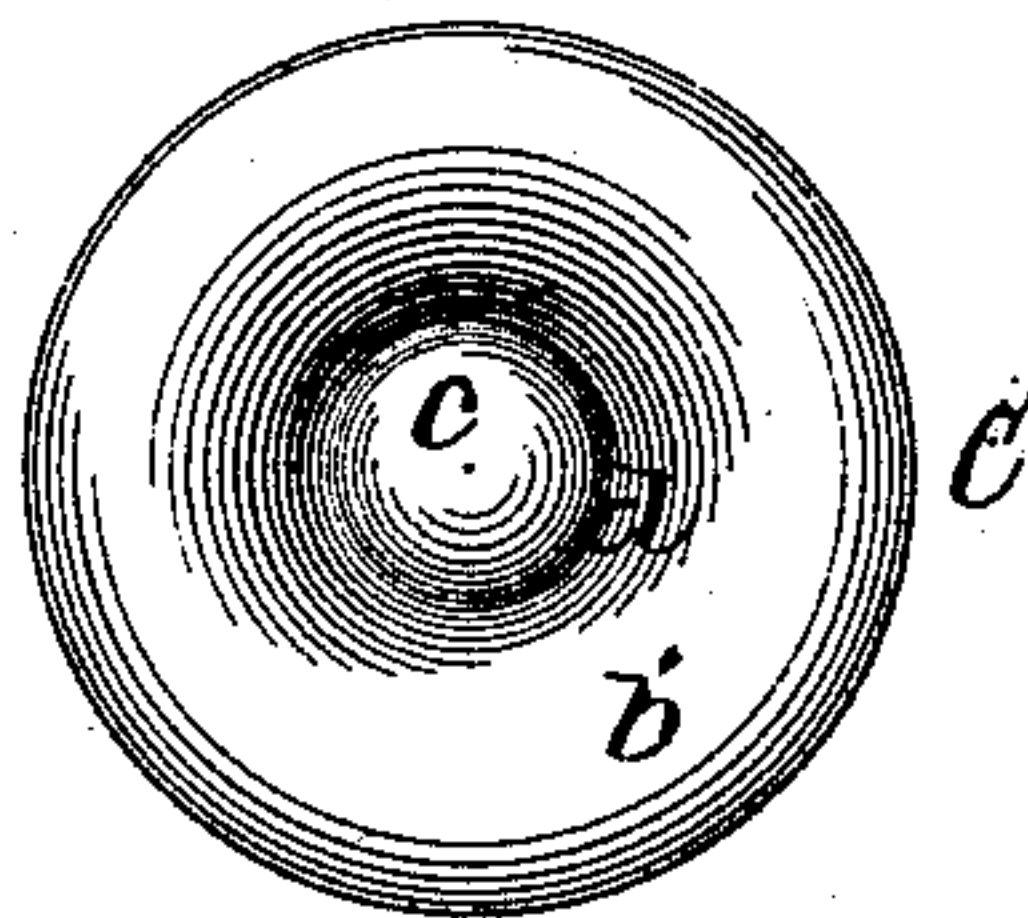
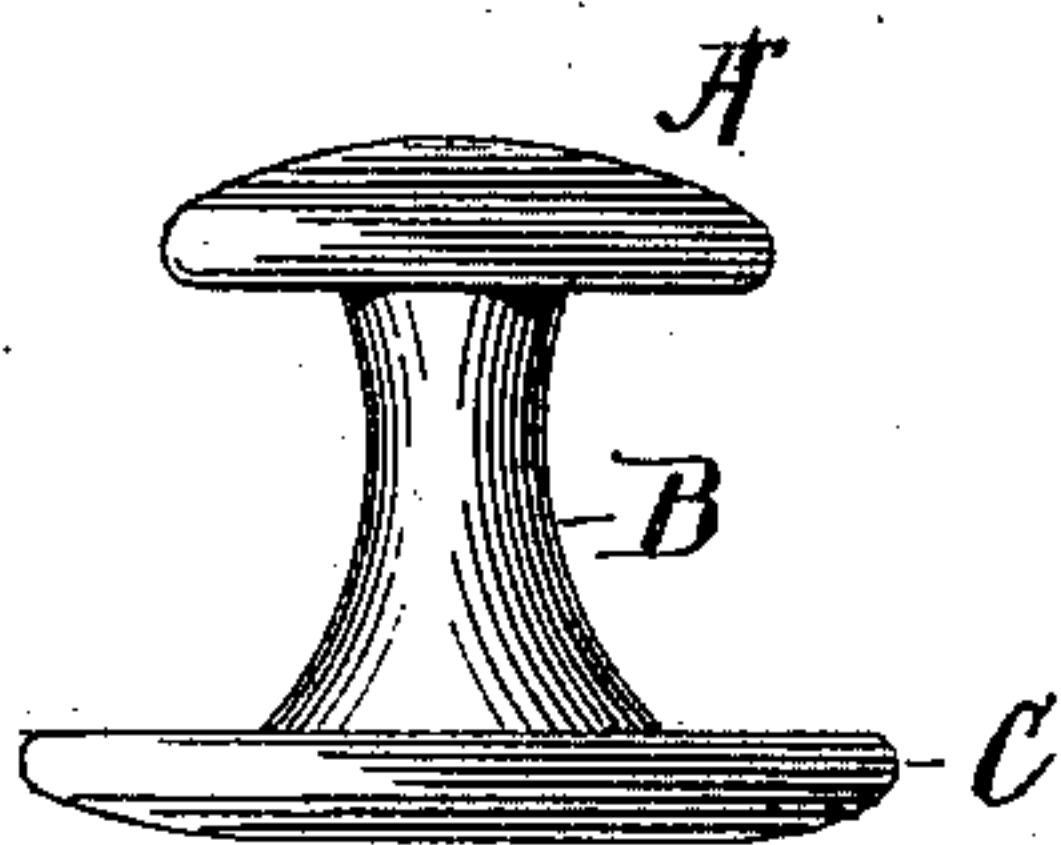


Fig. 2.



WITNESSES:

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SHUBAEL COTTLE, OF NEW YORK, N. Y.

BUTTON.

SPECIFICATION forming part of Letters Patent No. 378,923, dated March 6, 1888.

Application filed October 28, 1887. Serial No. 253,582. (No model.)

To all whom it may concern:

Be it known that I, SHUBAEL COTTLE, of the city, county, and State of New York, have invented a new and useful Improvement in Stud, Collar, or Sleeve Buttons, of which the following is a specification.

In Letters Patent No. 311,107, granted to me on the 20th day of January, 1885, I have fully described and broadly claimed a collar-button having a back and post formed of the same piece of sheet metal, in which the back is double. In the embodiment of my said invention, illustrated in said Letters Patent, I show a button having a cylindrical closed post and double base with an opening in the center of the base; and in a modification thereof I show a button having a double base without an aperture and a cylindrical post open at its upper end.

My present invention relates to a stud, collar, or sleeve button of the same general type as that disclosed in my aforesaid Letters Patent, but of a different construction. It is integrally made in all its parts from a hollow continuous closed shell of metal—that is, a shell in which there are no openings. The base or back is formed of a double thickness of metal, and in the center of the bottom plate is a convex portion which serves as a brace or stay to prevent deformation of base or post.

In the accompanying drawings, Figure 1 is a longitudinal section of my new stud, collar, or sleeve button on the line *x x* of Fig. 3. Fig. 2 is a side elevation. Fig. 3 is a top view, and Fig. 4 is a bottom view, of the same.

Similar letters of reference indicate like parts.

My button is composed of a head, A, a shank or post, B, and a base or back, C. I produce it integrally from a hollow continuous closed shell of metal, so that in the completed button, as shown in Fig. 1, there is no opening whatever. This I may do by any suitable method—such, for example, as follows: I first produce a blank in the form of a short tube of sheet metal closed at one end. I then produce, by compressing said tube in suitable dies, a depression about midway the length of the tube. The part so depressed forms the shank B of the finished button. I then place the button in a lathe, and by means of suitable spinning-

tools flatten the closed extremity thereof, so as to form the flat back or base C. The tube on the opposite side of the shank B still being open, the button is reset in the lathe, and by means of a spinning-tool the circumferential edge of metal around the opening is bent inwardly until said opening is gradually reduced in diameter and finally closed altogether. The head A of the button is thus completed.

The aforesaid process of manufacture I have fully described and claimed in another application for Letters Patent filed on December 9, 1887, Serial No. 257,384, and now pending. The said process is therefore herein disclaimed. The flange of the base C of the button is here shown of double thickness of metal, and is formed by bringing the annular upper plate, *a*, and the disk-shaped lower plate, *b*, both being parts of the same shell, into close proximity. In the center of lower plate, *b*, of the base is formed a convex portion, *c*, which comes directly opposite the hollow in the post. Around this convex portion *c* is a depression, *d*. By this means the portion of plate *b* outside the convex portion *c* is made to conform to the shape of plate *a*, and close contact between the plates *a* and *b* is secured at the circumference of said convex portion. Said convex portion *c* thus acts as a bridge, stay, or support at about the point of meeting of the hollow post B and annular plate *a* of the base C, and serves to prevent peripheral deformation of the post and any tendency of distortion of the base from its proper plane when strain is applied to said base or post. The lower disk-shaped plate, *b*, of the base being in a single piece, also acts as a stay to resist any tendency of the hollow post B to open or spread when the button is longitudinally compressed. By making my button thus integrally of a hollow continuous closed metallic shell without opening into its interior I secure great strength. Applied strain is distributed over the whole structure. The base, which in buttons of this type is most commonly subject to deformation, is made of double thickness, and at or about its point of junction with the post, the convex portion *c* acts as an efficient re-enforcement. There are no acute re-entering angles nor openings or deep hollows wherein dirt may collect. No soldered joints are employed, and the but-

ton has everywhere a uniformly smooth exterior.

I claim—

1. A hollow stud, collar, or sleeve button
5 formed of a single piece of thin metal and without an opening into its interior, substantially as described.

2. A stud, collar, or sleeve button having a head, a shank or post, and a base, and integrally
10 formed of a hollow continuous closed metallic shell, substantially as described.

3. A stud, collar, or sleeve button having a head, a shank or post, and a double back or base, and integrally formed of a hollow continuous closed metallic shell, substantially as
15 described.

4. A stud, collar, or sleeve button integrally formed of a hollow continuous closed metallic shell having a head, a shank or post, and a
20 double back, the said double back comprising

an annular upper plate and a disk-shaped lower plate, substantially as described.

5. A stud, collar, or sleeve button integrally formed of a hollow continuous closed metallic shell having a head, a shank or post, and a
25 double back, the said back comprising an annular upper plate and a disk-shaped lower plate, and at the center of said lower plate a convex brace or stay, substantially as described.

6. A stud, collar, or sleeve button integrally
30 formed of a hollow continuous closed metallic shell and having a head, A, shank B, and base C, the said base being composed of the parts *a* and *b*, and in the part *b* the convex brace or stay *c* and surrounding depression *d*, substan-
35 tially as described.

SHUBAEL COTTLE.

Witnesses:

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EDGAR GOODWIN.