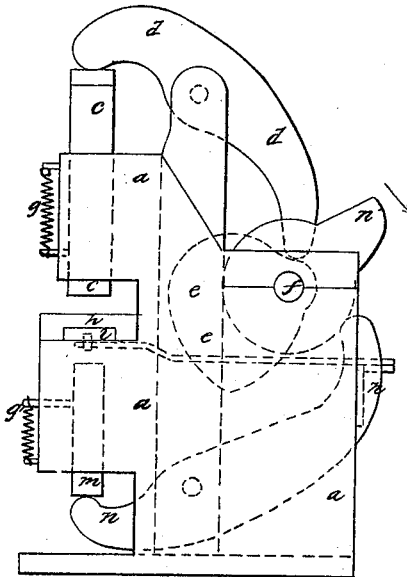


*C. Volpert,*

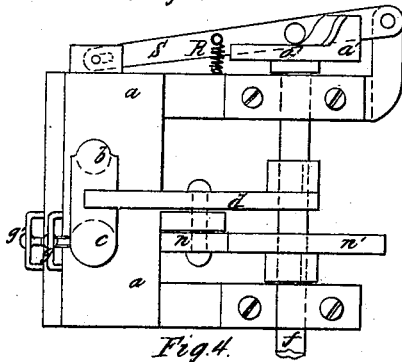
*Button.*

*No. 107,570.*  
*Fig. 1.*

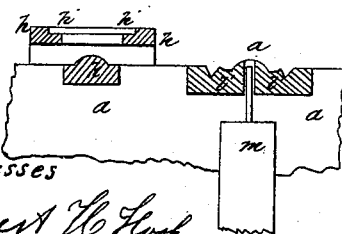
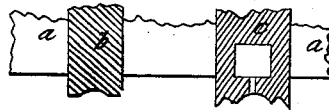
*Patented Sept. 20, 1870.*



*Fig. 3.*

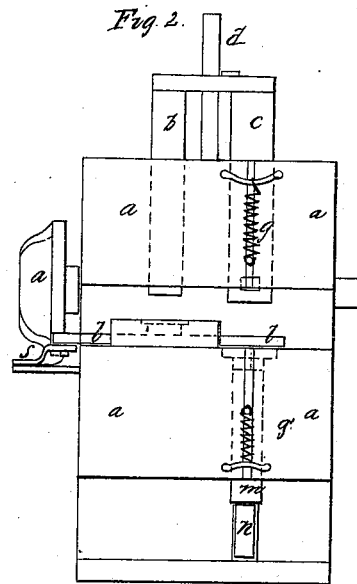


*Fig. 4.*



*Witnesses*

*Albert C. Hook*  
*J. Conamiller*



*Fig. 2.*



*Fig. 8.*



*Fig. 10.*



*Fig. 9.*

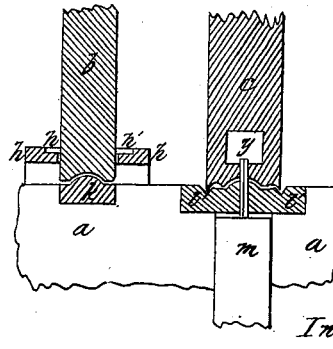
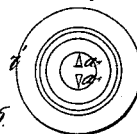


*Fig. 7.*

*Fig. 6.*



*Fig. 5.*



*Inventor.*

*Christoph Volpert*

CHRISTOPH VOLKERT, OF NEW YORK, N. Y.

Letters Patent No. 107,570, dated September 20, 1870.

## IMPROVEMENT IN BUTTON-MACHINES.

The Schedule referred to in these Letters Patent and making part of the same.

I, CHRISTOPH VOLKERT, of the city, county, and State of New York, have invented certain Improvements in Button-Machines, of which the following is a specification.

### *Nature and Objects of the Invention.*

My invention relates to a machine designed for the manufacture of metallic buttons, which can be attached to garments without the aid of sewing.

The buttons are made from blanks, which are cut from sheet metal, the edge of the blanks being first turned over and swaged down, after which two points or angular prongs are cut or punched from the body of the button, being severed therefrom at their points only; and connected therewith vertically to the plane of the button.

The points thus provided are designed to fasten the button to the cloth, and are first passed through it, and then clinched or pressed outwardly against the same.

### *Description of the Accompanying Drawing.*

Figure 1 is a side elevation of the machine.

Figure 2 is a front view of my invention.

Figure 3 is a plan view of the same.

Figure 4 is a sectional view of the stamps and dies, the stamps being shown in an elevated position.

Figure 5 is also a sectional view of the stamps and dies, the stamps being shown at the end of their down stroke.

Figure 6 is a plan view of the die *l*.

Figure 7 is a section of a blank, after having passed through the first operation.

Figures 8, 9, and 10 are, respectively, a sectional plan and top view of the button when completed.

*a* is a frame, wherein is provided bearings for the shaft *f*, and having located therein three vertical apertures, which guide the plungers *b*, *c*, and *m*, in their ascent and descent.

The plungers *b* and *c* receive their downward motion from a lever, *d*, and a cam, *e*, which cam is fastened upon a revolving shaft, *f*, and a spring, *g*, causes them to return.

The lower end of the plunger *b* is made into a concave stamp, and, in its downward stroke, passes through a hole in a horizontal die, *h*, which die is furnished on top with a circular recess, *h'*, concentric with the stamp into which the button-blank is placed, either by hand, or any suitable self-feeding apparatus.

The stamp carries this blank through the die *h*, and, in doing so, turns up the edge of the blank, and at the end of the down stroke the blank is pressed between the stamp and a convex bottom die, *k*, and is now formed into the shape as shown in fig. 7.

When the plunger *b* ascends, the blank, shaped as

aforsaid, is left by the plunger, and a slide, *l*, which is fitted between the dies *h* and *k*, transfers the blank to another bottom die, *l*, which is situated immediately under and on a line with the second plunger *c*.

This die *l* and the end of the plunger *c* are so shaped as to turn the rim of the blank over and swage it down flat.

Below the die *l*, and on the same center line, there is a third plunger, *m*, which plays up and down vertically, being guided in the frame *a*, and receiving its motion from a lever, *n*, and a cam, *n'*, on the shaft *f*.

The cam *n'* is so shaped and timed as to elevate the plunger *m* after the plunger *c* has arrived at its lowest position, where it remains until the lower plunger *m* has finished its up stroke, when it is caused to descend by the action of the spring *g'*.

The plunger *m* is provided with a pair of punches, *y*, of a triangular shape, which pass through corresponding holes *a* in die *l*, and also through corresponding holes in the bottom end of plunger *c*.

When there is a button-blank between the plungers *c* and the die *l*, these punches *y*, while ascending, will cut out of the button a pair of points, and leave them connected with the button in a vertical position, as shown in fig. 10, the edges of said punches next to the center of the button not being made to cut; and when the points are finished, as aforsaid, the button is then completed.

The slide *l*, which transfers the blank from the first die *h* to the finishing die *l*, receives its motion from a lever, *s*, and a side-cam, *a'*, (figs. 2 and 3,) which cam is also fastened to the shaft *f*, and so shaped as to enable the slide *l* to carry the blank from one die to the other when the upper plungers ascend, and, by the aid of the spring *R*, to return to its original position before the said plungers have arrived back at the dies.

### *Claims.*

1. The combination and arrangement of the plungers *b* and *c*, dies *h* *k* *l*, plunger *m*, with punches *y*, slide *l*, and frame *a*, substantially as shown and described.
2. The combination and arrangement of the plungers *b* and *c* with the lever *d*, cam *e*, shaft *f*, and spring *g*, substantially as and for the purpose described.
3. The combination and arrangement of the shaft *f*, cam *n'*, lever *n*, plunger *m*, and spring *g'*, substantially as shown and described.
4. The combination and arrangement of cam *a'*, lever *s*, slide *l*, spring *R*, shaft *f*, and die *h*, substantially as shown, and for the purpose specified.

CHRISTOPH VOLKERT.

Witnesses:

ALBERT H. HUNT,  
I. CONSMILLER.