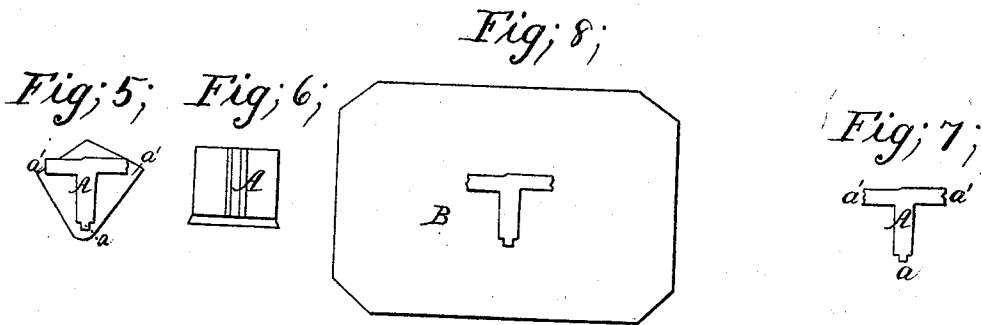
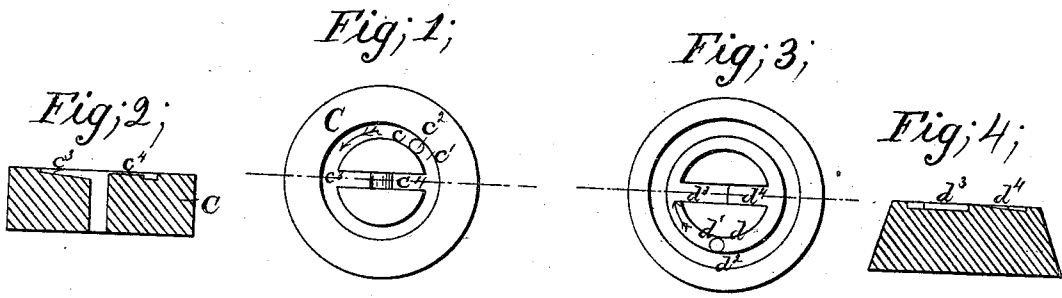
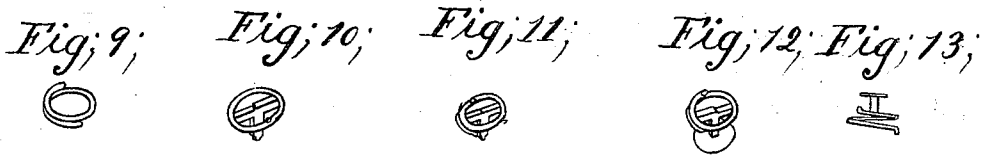


*H. Ansley.  
Sleeve Button Die.*

*N<sup>o</sup> 10,565. Patented Apr. 5, 1870.*



*Witnesses;  
H. L. ...  
E. Quinn*

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# United States Patent Office.

HENRY ANSLEY, OF WASHINGTON, DISTRICT OF COLUMBIA.

Letters Patent No. 101,565, dated April 5, 1870.

## IMPROVED DIE FOR FORMING SLEEVE-BUTTONS.

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

To all whom it may concern:

Be it known that I, HENRY ANSLEY, of Washington, in the District of Columbia, have invented Dies for Forming Sleeve-Buttons or Studs; and I do hereby declare that the following is a full, clear, and exact description thereof, reference being had to the annexed drawing making part of this specification, in which—

Figure 1 is a plan or top view of the lower or stationary die.

Figure 2 is a central vertical section thereof.

Figure 3 is a bottom view of the upper or movable die.

Figure 4 is a central vertical section thereof.

Figures 5, 6, and 7 are views of the punch.

Figure 8 is a plan view of the plate upon which the metal is placed from which blanks are to be punched.

Figures 9 to 13 represent views of a sleeve-button at different stages of its manufacture.

The same letters are used in the designation of identical parts in the several figures.

The nature of my invention consists in providing dies for forming sleeve-buttons or studs, one set of which is used to punch blanks to form the shank and cross-bar which are to unite the outer disk and coil of the button, and the other set for pressing the coil and cross-bar into the requisite form.

To enable those skilled in the art to make and use my invention, I will proceed to describe its construction and operation.

In the drawing—

A represents a T-shaped punch, the perpendicular bar of which has a tenon, *a*, formed on its end, as shown in figs. 5 and 7.

The ends of the cross-bar are provided with angular grooves, *a'*, and its outer face has a slight rise running from near its center to one end.

The punch is to be made so as to preserve its T-shaped form, say from one-fourth to one-half inch, and may then terminate in a plate or shank by which it can be attached to a suitable device for operating it.

B represents a plate of metal, provided with a perforation of the precise shape of the punch A, which the latter enters in punching the blank.

C represents the lower and stationary die, which may be made round, or of any other suitable form. It is to have a central perforation, of the form of the shank, which recedes into it while the coil and cross-bar are being pressed.

In its upper plane surface a circular groove, of such diameter and width as it is intended to give the coil, is to be formed, which gradually deepens in the direction of the arrow from the point *c* to the point *c'*, where it terminates in a circular recess, *c''*.

A straight groove is also formed in the upper surface of this die, running across its center, and uniting with the circular groove, its position with reference to the recess *c''* being such as is clearly shown in fig. 1. It is of the depth of the circular groove where it unites therewith at the point *c'*; thence it gradually deepens to the central perforation; the opposite portion, *c'*, is very shallow, and of about uniform depth.

D represents the movable or upper die, which is to be of similar form as the lower one.

Grooves are to be formed in its under plane surface, the outlines of which are like those in the die C, but the relative positions of the straight groove and the recess *d''* are such that, when the dies come together, the straight grooves cover each other; but the recesses *c''* and *d''* are about one-third of the periphery of the circular grooves apart from each other.

The circular groove in this die deepens from the point *d'* to the point *d*, that is, in the opposite direction from the one in the stationary die, which thus together form a spiral groove, in which the coil is to be pressed.

Its straight groove is formed like *c'' c'*, its position being such, however, that, on bringing the dies together, the deeper portion *d''* in the upper, covers the shallow portion *c'* in the lower, so that, in pressing the coil and blank, one arm of the cross-bar of the latter is raised slightly above the other.

The operation of forming a sleeve-button or stud by these dies may be described as follows:

The dies having been attached to suitable devices for operating them, a blank is punched by the punch A, which blank is then, by its cross-bar, attached to the coil of wire, (which has been previously prepared,) as shown in fig. 10, by slipping its grooved ends on the wire, and soldering it thereto at the proper points. The blank and coil thus united are now placed upon the stationary pressing-die, the shank receding into its perforation, the cross-bar laying in the transverse groove, and the coil in the spiral groove, its inner end just covering the recess *e''* in said die, and its outer end overlapping far enough to cover the recess *e''* in the movable die, which is now pressed down, giving the form shown in fig. 11 to the coil, its end being rounded and provided with slight knobs thereby. The outer disk of the button is then to be riveted to the shank.

It will be seen that, by the operation of pressing, the overlapping ends of the coil are made to adhere to each other, necessitating their separation in finishing the button.

Having thus described my invention,

What I claim, and desire to secure by Letters Patent, is—

1. The combination of the punch A and die-plate B, constructed substantially as shown and described, and made to operate so as to punch a blank, in the manner and for the purpose specified.

2. The combination of the dies C and D, constructed substantially as shown and described, and made to operate as and for the purpose set forth.

In testimony whereof I have signed my name to this specification in the presence of two subscribing witnesses.

HENRY ANSLEY.

Witnesses:

F. U. STITT,

T. C. CONNOLLY