

*A.C. Sweetland,
Button Die.*

No. 50,185.

Patented, Sept. 26, 1865.

Fig. 3.

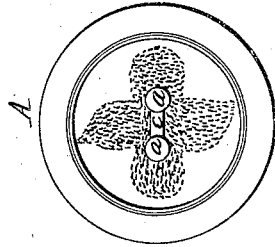


Fig. 4.

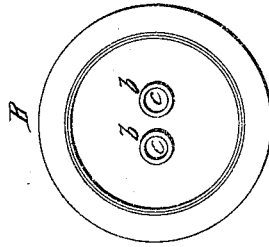


Fig. 2.

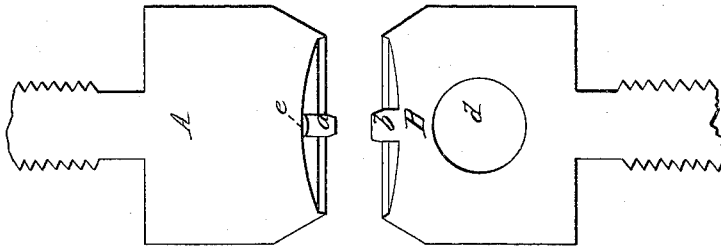
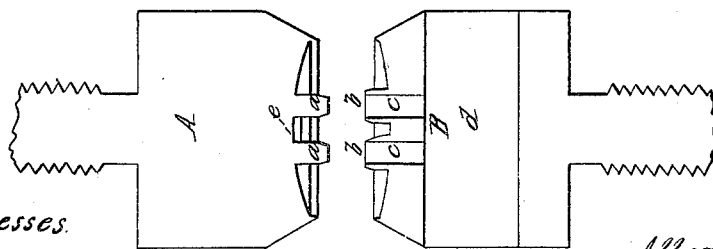


Fig. 1.



Witnesses.

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UNITED STATES PATENT OFFICE.

ALBERT C. SWEETLAND, OF NORTH ATTLEBOROUGH, MASSACHUSETTS.

DIE FOR MAKING BUTTONS.

Specification forming part of Letters Patent No. **50,185**, dated September 26, 1865.

To all whom it may concern:

Be it known that I, ALBERT C. SWEETLAND, of North Attleborough, in the county of Bristol and State of Massachusetts, have invented a new and useful improvement in molds or dies for making buttons from glass or other material capable of being shaped thereby; and I do hereby declare the same to be fully described in the following specification and represented in the accompanying drawings, of which—

Figures 1 and 2 are vertical sections of a pair of button-dies provided with my invention. Figs. 3 and 4 are separate views of such dies.

Instead of making the dies with the ordinary simple punches only for forming the eye-holes in the button, I combine with such punches and such dies tubular counter-punches, whereby the eye-holes are formed without burrs and are properly countersunk.

In the drawings, A and B are the upper and lower dies of a pair of button-forming dies, *a a* being the eye-hole punches projecting from the base of the upper die, and *b b* being the counter-punches extending from the face of the lower die. The punches *b b* are tapering externally, and each is provided with a passage, *c*, for reception of the fellow punch *a*, and also for discharge of the material separated from the mass by the punch *a*, such material being caused to drop into a cross-passage, *d*, made through the body of the die. There projects also from the face of the upper die and be-

tween the two punches *a a* thereof, and so as to extend from one to the other of them, a groove-former, *e*, shaped as shown in the drawings, its purpose being to form in the button a groove extending from one eye to the other and for the reception of the thread used in fastening the button to an article, the groove being for the protection of the thread.

By means of the main and tubular counter-punches combined with the button-dies, eye-holes formed in a button by such dies will not only be countersunk, but be made without any burrs or ragged edges calculated to cut or wear the fastening-thread when the button is fixed to a garment.

In using the dies, the glass, while in a semi-molten or soft state, is to be placed between and be compressed by them. On being removed from the dies the mass of glass will be in the form of a button.

I claim—

1. The combination of a counter-punch, *b*, and the discharging-passage *c* thereof with the dies A B and each of the main punches *a* thereof, the whole being arranged substantially as and to operate as specified.

2. The combination and arrangement of the groove-former *e* with the upper of the two dies A B and their punches *a a*, the whole being as explained.

ALBERT C. SWEETLAND.

Witnesses:

HENRY REIS,
W. C. DRAPER.