

(No Model.)

J. M. SULLIVAN.  
BUTTONER.

No. 429,661.

Patented June 10, 1890.

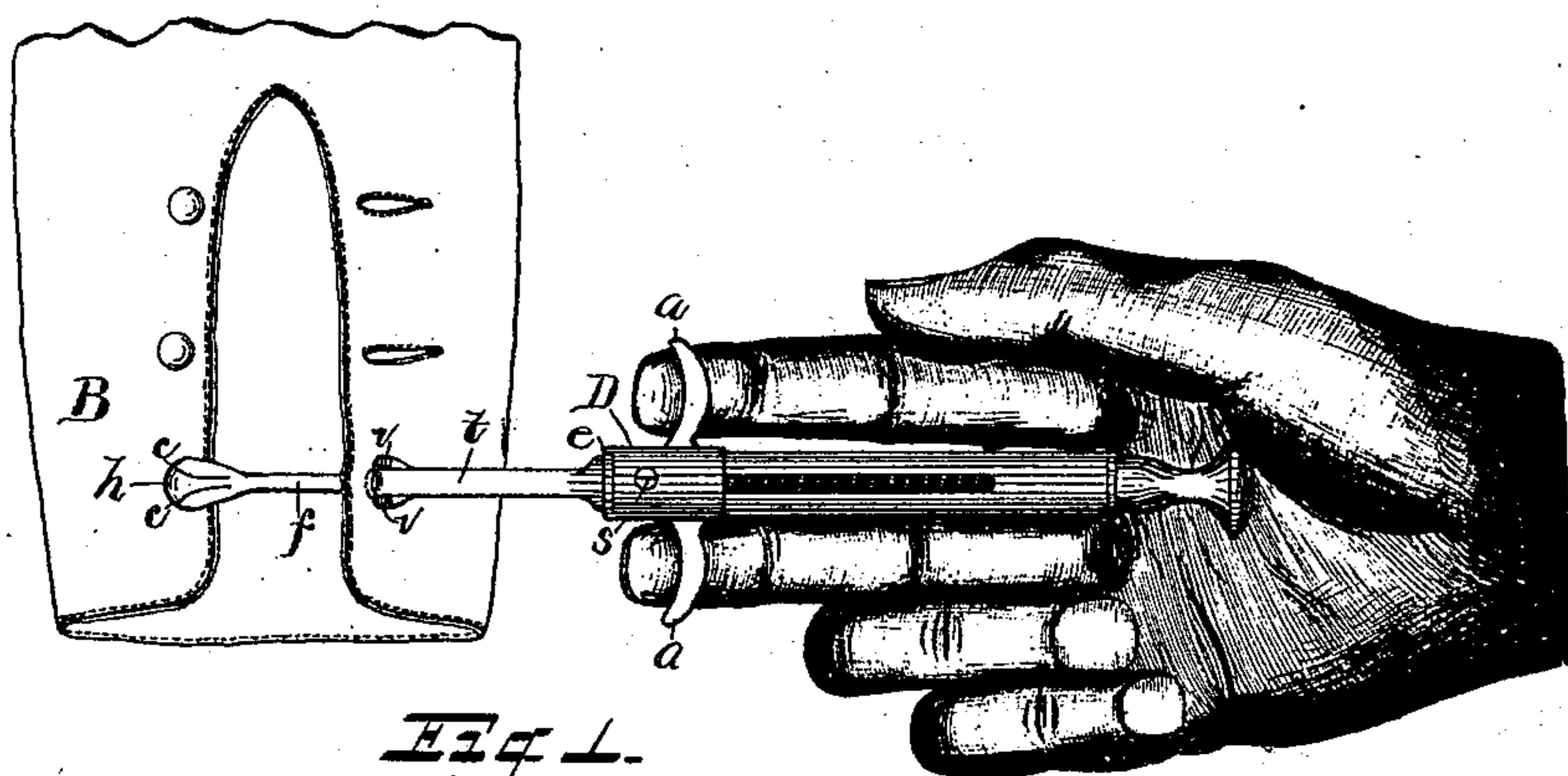


Fig 1.

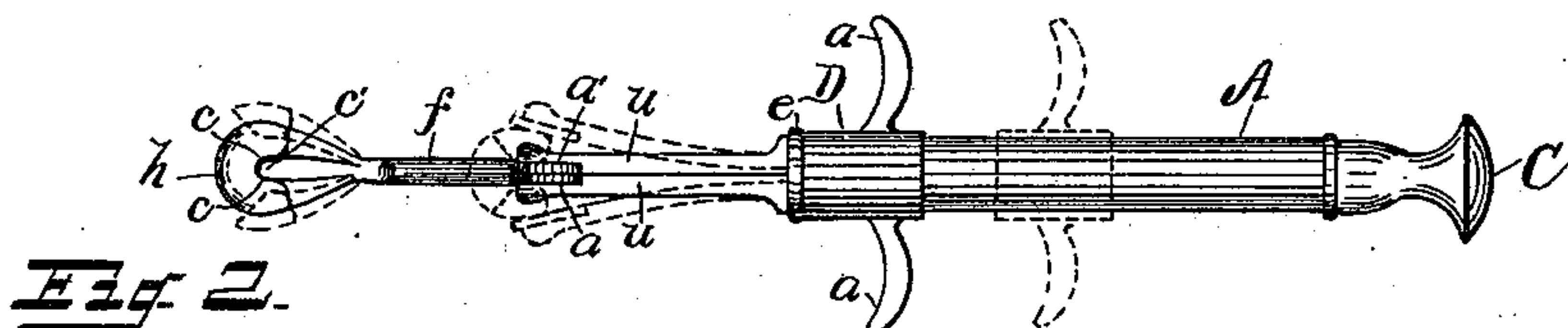


Fig 2.

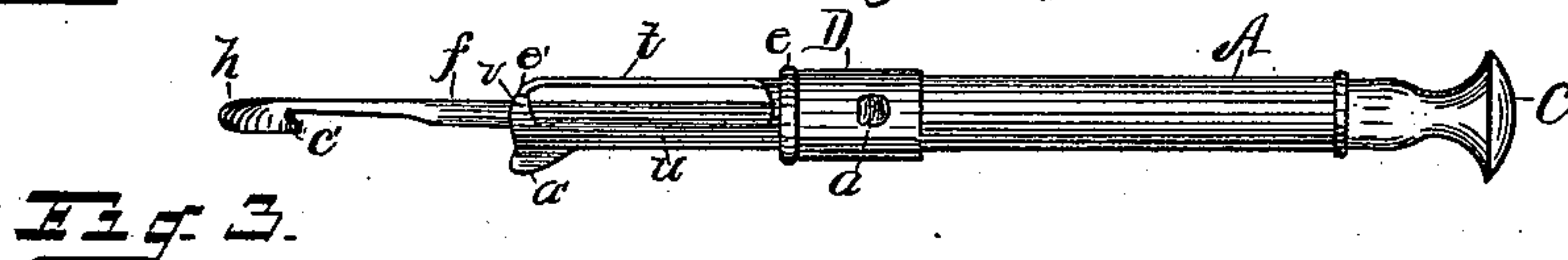


Fig 3.

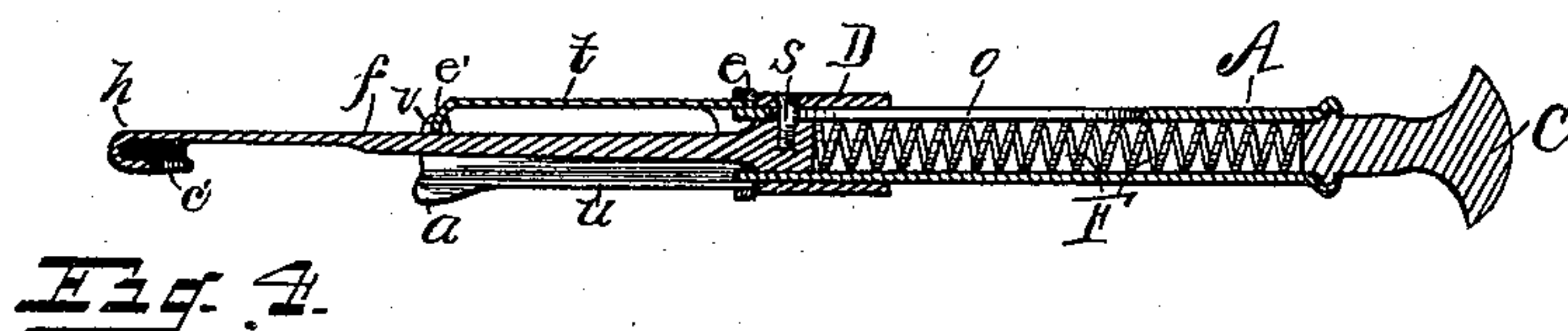
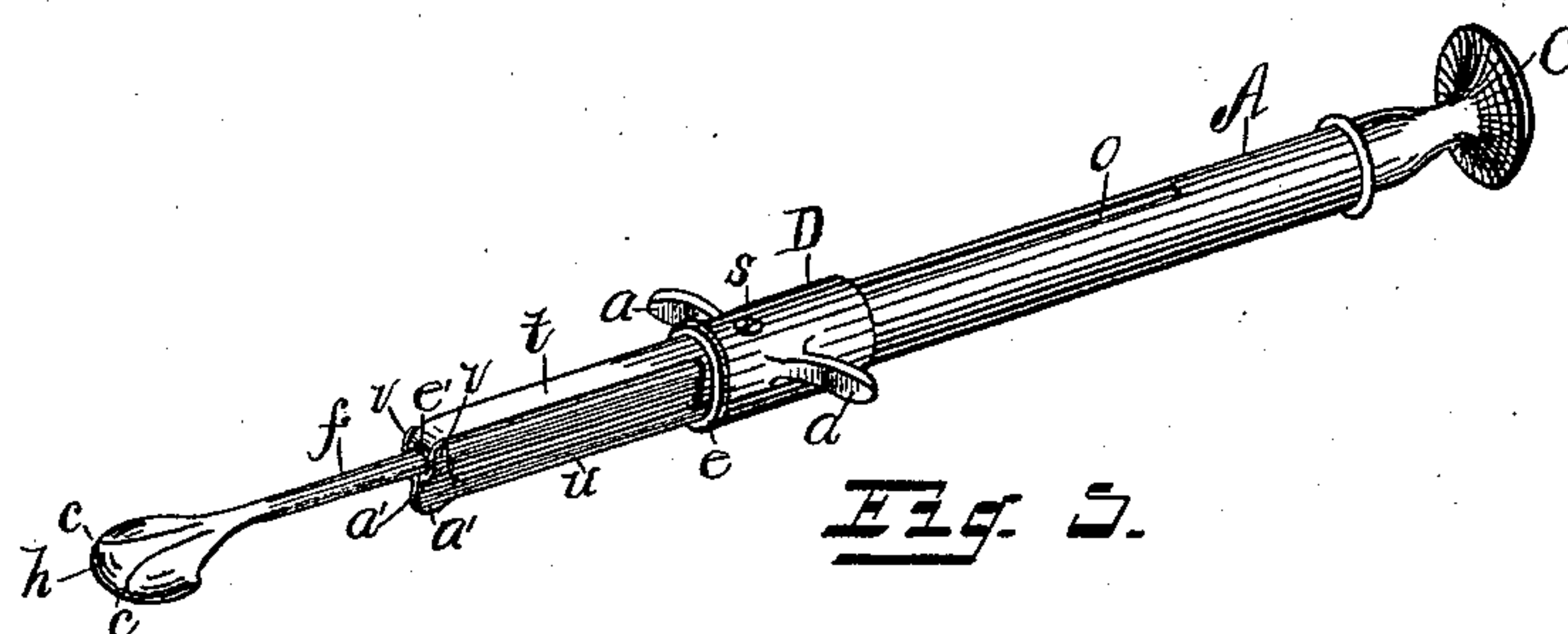


Fig. 4.



**Fig. 5.**

**WITNESSES**

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*INVENTOR*

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By  
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# UNITED STATES PATENT OFFICE.

JAMES M. SULLIVAN, OF DETROIT, MICHIGAN.

## BUTTONER.

SPECIFICATION forming part of Letters Patent No. 429,661, dated June 10, 1890.

Application filed December 9, 1889. Serial No. 333,136. (No model.)

*To all whom it may concern:*

Be it known that I, JAMES M. SULLIVAN, a citizen of the United States, residing at Detroit, in the county of Wayne and State of Michigan, have invented certain new and useful Improvements in Button-Hooks; and I do declare the following to be a full, clear, and exact description of the invention, such as will enable others skilled in the art to which it appertains to make and use the same, reference being had to the accompanying drawings, and to the letters of reference marked thereon, which form a part of this specification.

This invention relates to a buttoning device adapted to be used as a glove or shoe buttoner; and it consists in a certain construction and arrangement of parts, whereby a glove or shoe may be quickly and easily buttoned, accomplishing the buttoning operation without tearing the button from the glove or injury to the button-hole, as is incident in the employment of buttoning devices or button-hooks in common use, all of which will be hereinafter more fully set forth, and the essential features of the device pointed out particularly in the claims.

In the accompanying drawings, forming a part of the specification, Figure 1 is a view showing the application of the device as in buttoning a glove. Fig. 2 is an elevation of the under side of the buttoner. Fig. 3 is a side elevation of same. Fig. 4 is a central longitudinal section through Fig. 3. Fig. 5 is an isometrical view of the buttoner.

Like letters refer to similar parts throughout the several views.

The body of the buttoner is formed of a hollow tube A, provided at its rear end with the knob or head C and having the longitudinal slot *o* through the periphery thereof.

D is sleeve provided on opposite sides with the finger-pieces or wings *a*. Said sleeve encircles the tube A and is adapted to slide thereon.

*f* indicates the stem of the button-hook, carrying on its outer end the head *h*, which is made of spring metal, and is flanged over on its under face, forming the clutch or hook *c'* to engage the button, said head *h* being split at *c c*, allowing it to expand to receive a large button, as shown by dotted lines in Fig. 2. The inner end of the stem *f* lies within the hol-

low of the tube A and receives the screw *s*, that passes through the sleeve D and the slot *o* in the tube, thereby securing the stem *f* to the sleeve D.

The coiled spring F is located within the tube A and is confined between the rear end of said tube and the inner end of the stem *f*, as clearly shown in Fig. 4. The tension of the spring holds the stem *f* extended when the device is not being employed in the operation of buttoning.

The arms *t* and *u u* are made of spring metal and formed integral with a cylindrical terminal or base common to all. Said base receives the forward end of the tube A and is secured thereto by means of the collar *e*. (See Fig. 4.) Said arms extend parallel with and surround the stem *f*, their free ends closing thereon, the stem passing some distance beyond the end of said arms and terminating in the head *h*, as clearly shown in Fig. 5. The upper arm *t* is bent down at its forward end, forming the nose *e'*, which bears upon the upper face of the stem *f*. The under edges of the arms *u u* meet and are provided at their forward end with the downwardly-extending flanges *a' a'* and the upwardly-projecting ears or lugs *v v*, as clearly shown in Fig. 5.

The operation of the device is as follows: The buttoner is held with the head C resting in the palm of the hand, the fingers on the wings *a a*. The head *h* of the stem *f* is passed through the button-hole and hooked over the corresponding button. As the stem *f* is inserted in the button-hole, the ears *v v* of the spring-arms *u u* strike the edge of the button-hole and prevent said arms from passing therethrough, as clearly shown in Fig. 1, in which B indicates the sleeve of a glove, and in which position the flanges *a' a'* of the arms *u u* lie within the button-hole. By a pressure with the fingers on the wings *a a* the sleeve D slides back, drawing the stem *f* and compressing the spring F, the screw *s* traveling in the slot *o* of the tube A. As the head *h* is drawn into contact with the free ends of the arms *u u*, the swell of said head causes the arms to spring apart, as shown by dotted lines in Fig. 2. As said arms spread, the flanges *a' a'* thereof open the button-hole, permitting the head *h* to pass freely therethrough. The nose *e'* of the arm *t* carries the goods over the end



of the head *h*, so that when the wings *a a* are released the spring *F* forces the stem *f* forward, causing the head *h* to free itself from the button, leaving said button in the button-hole.

The above-described buttoning operation may be performed quickly and easily and without danger of tearing the button from the glove or injury to the button-hole.

In a shoe-buttoner the head *h* will be made concavo-convex in form to receive the round button of the shoe.

Having thus fully set forth my invention, what I claim as new, and desire to secure by Letters Patent, is—

1. A button-hook comprising the following elements: the hollow tube having the head at one end, the coiled spring in said tube, the sleeve having wings thereon, the stem carrying the head *h*, coupled to said sleeve, and the spring-arms encircling the stem *f*, said arms being coupled to the tube, for the purposes specified.

2. In a device for the purposes set forth, the combination of the hollow slotted tube having a head at one end, a spring in said tube, the stem *f*, carrying the hooked head at one end, the opposite end fitting loosely in said tube, the sleeve mounted slidingly on said tube, and set-screw coupling same to the stem in said tube, the spring-metal arms *t* and *u u*,

said arms being made fast to one end of said tube, substantially as set forth.

3. In combination with the hollow body *A*, having a head at one end, the coiled spring therein, the sleeve having wings *a* loosely mounted thereon, the stem *f*, loosely fitted within the hollow body and being coupled to the sleeve *D*, the head *h*, split at *c c*, the arm *t*, having the nose *e'*, and the arms *u u*, having the downwardly-projecting flanges and upwardly-projecting ears, said arms being coupled to the end of the hollow body by means of the collar *e*, as and for the purposes specified.

4. A button-hook comprising a hollow body, a coiled spring in said body, a sleeve slidingly mounted on said body, wings projecting from said sleeve, a stem slidingly located in said hollow body, said stem being coupled to the sliding sleeve and having at its free end a hooked and expansible head, and a series of spring-metal arms having projections at their outer ends, said arms being coupled to one end of the hollow body, substantially as and for the purposes specified.

In testimony whereof I affix my signature in presence of two witnesses.

JAMES M. SULLIVAN.

Witnesses:

R. B. WHEELER,  
E. S. WHEELER.