

T. B. DOOLITTLE.

Improvement in Button-Hole Cutters.

No. 131,085.

Patented Sep. 3, 1872.

Fig. 1.

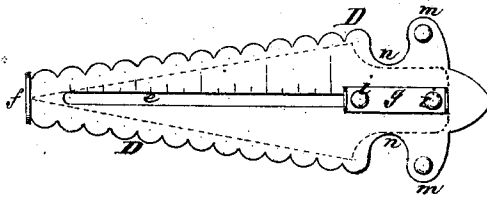


Fig. 2.

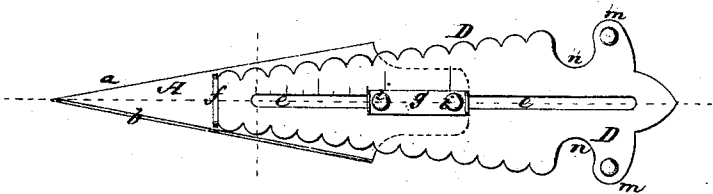


Fig. 3.

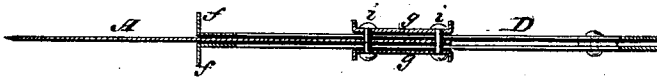


Fig. 4.



Witnesses:
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J. F. Helbel.

Inventor:
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By attorney.
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UNITED STATES PATENT OFFICE

THOMAS B. DOOLITTLE, OF BRIDGEPORT, CONNECTICUT, ASSIGNOR TO
"DOOLITTLE MANUFACTURING COMPANY," OF SAME PLACE.

IMPROVEMENT IN BUTTON-HOLE CUTTERS.

Specification forming part of Letters Patent No. 131,085, dated September 3, 1872.

SPECIFICATION.

To all whom it may concern:

Be it known that I, THOMAS B. DOOLITTLE, of Bridgeport, of the county of Fairfield, in the State of Connecticut, have invented certain new and useful Improvements in Button-Hole Cutters; and I do hereby declare that the following is a full and exact description thereof, reference being had to the accompanying drawing making part of this application.

My invention has for its object the production of a shielded or covered wedge-shaped button-hole cutter, provided with a novel means of securing the covering-plates together and forming at the same time suitable thumb and finger plates for moving the knife or cutter, and having the shield so shaped at the "grasp" end as to facilitate the handling of the instrument and prevent liability of cutting the fingers; and to these ends my invention consists in the use, in connection with a sliding wedge-shaped knife and correspondingly-shaped and slotted shield or cover, of thumb and finger-plates, which retain and by which is moved the cutter; and my invention further consists in forming the shield or handle of the instrument with depressions and projecting portions at one end to facilitate the handling of the instrument and prevent liability of cutting the fingers, as will be herein after more fully explained.

To enable those skilled in the art to make and use my improved "button-hole cutter," I will proceed to more particularly describe its construction and operation, referring by letters to the accompanying drawing forming part of this application, and in which—

Figure 1 is an elevation of the instrument with its cutter inclosed. Fig. 2 is a similar view, with the cutter protruding as it would be for use in cutting the material. Fig. 3 is a longitudinal section at the line *x x* of Fig. 1, and Fig. 4 is a cross-section at the line *y y*, Fig. 1.

In the several figures the same part is designated by the same letter of reference.

A is the cutter, which I propose to make of sheet steel, in the shape shown, and perfectly sharp (to cut) on one edge and square or dull on the opposite edge, as seen at *b* and *c*, Fig. 4. D is a shield or cover formed of two pieces

of sheet metal united at or near one end only and slotted at *e*, between which the cutter A is arranged to slide longitudinally, as will be presently explained. One end of each of the sides of shield D is turned up at *f*, and these turned-up portions constitute a stop to prevent the entrance of the shield D into the cut made by the knife A. The cutter is held in place laterally between the sides of shield D by means of clasp *g*, through which and said cutter pass rivets *i*, as illustrated. These plates *g* are bent up slightly at each end, so that when held between the thumb and finger (of the operator) for the manipulation of the sliding cutter the person's fingers will not slip off easily. Upon one side (or both sides) of the cover or shield D and along the slot therein is formed a graduated scale, to which one of the clasp-plates *g* may be set to determine or gage the extent of protrusion of the cutter-point beyond the stop *f*, and this scale is so graduated as to indicate the width of the cutter at that part which protrudes beyond the stops *f*, and thus determines the length of the cut made. The cover or shield D serves also as a handle in using the instrument, and it is so shaped with projections at *m* and recesses at *n* as to afford a ready opportunity to the user to grasp and hold the handle or shield between the thumb and finger of one hand, while, with the thumb and finger of the other hand, the sliding cutter is drawn out or pushed in. This shape of the butt or hand end of shield D is important to avoid accident by grasping the edges of the shield too low down and cutting the fingers in sliding out the knife A. The shield D is made tapering in its contour to correspond with the outline of the knife, and so that no unnecessary amount of material will be used in its manufacture. This tapering shape, it will be understood, could not be given to the shield were it not formed, as shown, with open edges, to permit the protrusion of the base (or widest part) of the knife A. The edges of shield D may be corrugated, as shown, or made in any other pattern or design, it being essential, however, that that portion beyond or back of the base of the knife (when the latter is pushed in) be shaped substantially as shown and described, to afford a ready means of holding on without

danger of placing the thumb and finger too low down on the edges of the shield, (where the edge of the knife, near its base, can come out and cut the fingers.) I have shown the stops *f* formed on both sides, and by simply bending up the stock of which the sheet-metal cover *D* is formed; but it will be understood that a stop may be otherwise formed, so as to prevent the (thin) body of the shield *D* from entering the cut made by the knife, and so as to determine the extent which the knife shall enter the material.

By the combination of a shield formed of sheet metal, slotted, and a knife embraced between the sides of said shield, as shown and described, a simple, efficient, and convenient instrument is made; and by the combination, with the shield, of stops and a scale, as shown and described, the entrance of the cutter is determined and regulated at the pleasure of the user, and so that the slits may be cut to any desired precise length.

In the use of my improved instrument, the knife *A*, having been pushed (or pulled) out by taking hold at *m m* with the thumb and finger of one hand and applying the thumb and finger of the other hand to the clasps *g*, the point of the knife *A* is inserted at the point on the material where the slit is to start, and with the sharpened edge *b* of said knife toward the part which is to be cut; then, by pressing the instrument toward the material, a slit will be cut of the desired length, as ex-

plained. The length of the cut will be determined by the stop *f* coming against the surface of the material and the width of that part of the knife which happens to be close to the stop *f*, and consequently the width of the slit cut will be indicated by the scale marked on the shield *D*. The sides of the shield *D* should have a slight tendency to spring together at their unfastened ends, and the shield, knife and clasp-plates *g* should be so united as to insure a proper amount of friction to keep the knife in when the instrument is closed up.

Having so explained my improved "button-hole cutter" that skilled persons can make them and the public use them, what I claim as new, and desire to secure by Letters Patent, is—

1. In combination with the knife and shield, clasp-plates *g*, which confine the parts to each other, as shown and described, formed with projecting ends, as specified.

2. The peculiar shape of the grasp end of the shield with depressions and projections, as shown, so that all danger of grasping it at a dangerous locality will be avoided, as hereinbefore explained.

In testimony whereof I have hereunto set my hand this 7th day of March, 1872.

T. B. DOOLITTLE.

In presence of—

CHAS. E. WARREN,
J. FELBEL.