

F. F. ROBY.
 BUTTONHOLE CUTTER.
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942,519.

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Fig. 1.

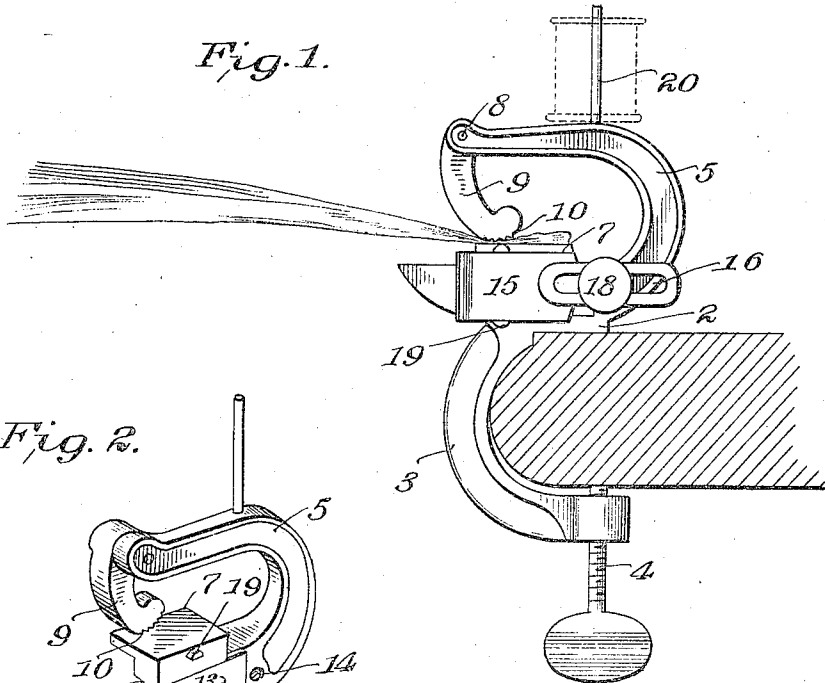


Fig. 2.

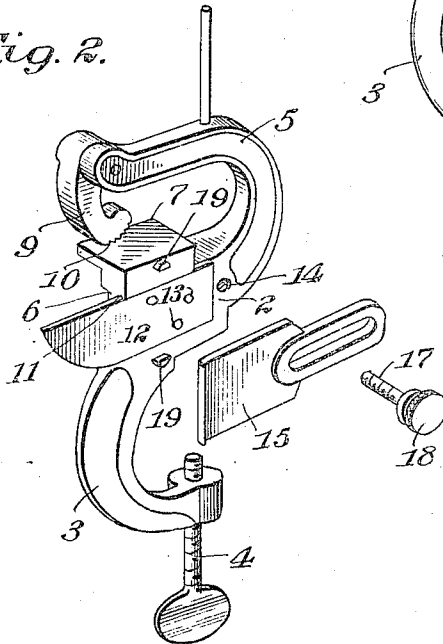
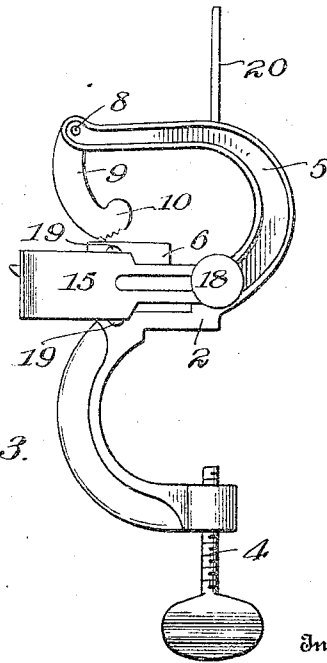


Fig. 3.



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UNITED STATES PATENT OFFICE.

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BUTTONHOLE-CUTTER.

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To all whom it may concern:

Be it known that I, FRED F. ROBY, a citizen of the United States, residing at Boston, in the county of Suffolk and State of Massachusetts, have invented certain new and useful Improvements in Buttonhole-Cutters, of which the following is a specification.

My invention relates to an appliance adapted to be attached to sewing machine tables, or in any other convenient position, so formed as to provide with a work clamp whereby a piece of cloth or other material may be securely held from movement, an adjustable buttonhole cutter for cutting buttonholes of different sizes, a thread cutter, and a spool holder.

For a full understanding of the invention and the merits thereof, and to acquire a knowledge of the details of construction, reference is to be had to the following description and accompanying drawing, in which:

Figure 1 is a side elevation of my improved attachment; Fig. 2 is a perspective view thereof, the knife guard being detached; and, Fig. 3 is a side elevation showing the knife guard moved outward to its full extent.

Corresponding and like parts are referred to in the following description and indicated in all the views of the drawing by the same reference characters.

In the drawing which shows what I believe to be the preferable form of my device, 2 designates an S shaped casting having a clamp screw 4 such as is ordinarily used in clamps for tables and benches. The upper end of the casting 2 is upwardly extended and reversely bent to the curved clamping arm 3 so as to form a clamping arm 5. At the junction of the two arms 5 and 3, the casting is flattened and widened, as at 6, and supported upon this flattened portion and formed integral therewith, is a transversely extending horizontal flange 7, and forming a table pivoted to the upper end of the arm 5 by a pintle 8, is a curved clamping arm 9 having an arcuate end 10 formed with serrations. This member 9 forms a work clamp when it is turned down, so that its arcuate end engages with and jams against the upper face of the table 7, in the position shown in Fig. 1. It will be seen that when the work-clamping arm 9 is downwardly turned, any material upon the

table 7 will be clamped by the arm, and that an outward pull upon the work will jam the arm into close contact with the upper face of the table, and so securely hold the work from movement. This work clamp 9 will securely hold any fabric, either the sheerest silk or lace, or the heaviest canvas. It will be seen that this clamp is so arranged that the greater the outward pull upon the material, the more securely the material is held in place upon the table 7. When the material is clamped upon the table, the operator may proceed with the basting, sewing, fine stitching, embroidering, or whatever work is being done upon the goods. To release the work, it is only necessary to push back the clamp to its elevated position. The pivot 8 of the clamp is so connected to the arm 9 that the arm tightens against the end of the arm 5 when the clamp 9 is turned. The clamp 9 is however loosely supported when it is in its lowered position. The casting 2 beneath the table 7 is recessed, as at 11, for the reception of an outwardly projecting knife blade 12. The lower edge of this blade is upwardly curved, and the blade is riveted, as at 13, to the casting 2. Rearward of the blade, the casting is formed with a screw threaded opening 14.

A guard plate 15 fits over the face of the blade 12 and guards the same. The rear end of this guard plate is slotted, as at 16, and passing through the slot is a screw 17 adapted to engage with the opening 14, this screw having a knurled head 18. Lugs 19 project laterally from the edge of the table 7 and from that portion of the casting immediately beneath the recess 11. These lugs act as guides and supports for the guard plate 15, the edge of the guard plate resting against these lugs. The rear end of the guard plate is of course supported by the set screw 17. The slot 16 in the guard plate is of sufficient length to permit the plate to be slid forward to such position that it will nearly cover the blade 12, thereby guarding the edge of the blade, excepting immediately at the point thereof which, in my preferred construction, will project out slightly beyond the guard plate, even though the guard plate be in its extended position. The guard plate may be, however, pushed back to such an extent that the blade is uncovered rearward to the front edge of the casting 2.

The knife 12 is adapted by this construc-

tion to be used for two purposes: primarily as a buttonhole cutter, and secondarily as a thread cutter. When it is desired to cut buttonholes, the guard plate 16 is so adjusted that the widest part of that portion of the knife which is uncovered will be equal to the length of the buttonhole. The material is then taken between the hands and forced rearward against the knife, up to the guard. The knife, which will of course have a keen edge and sharp point, will cut a slit in the material of exactly the length of the buttonhole. It will be seen that by adjusting the guard plate backward or forward, buttonholes of any desired length may be cut. If a buttonhole is to be cut of greater length than the width of the knife, the guard plate is moved back to its most inner position, the material is forced upon the knife, as before described, and then given a slight upward pull, whereupon the knife will cut the material to the extent required. The guard plate, as before remarked, never entirely covers the knife, but the point of the knife always projects. When it is desired to cut a thread, it is only necessary to bring the thread up against the lower edge of the knife point thus protruding.

Projecting from the upper arm 5, at the rear thereof, is the spindle 20 which is adapted to receive a spool of thread and to hold the same so that it may be readily unwound therefrom.

My device is extremely simple, is convenient, quickly attached in place, and is thoroughly effective for the purpose of which it is designed. As the greater portion of the device is made in one casting, it may be very cheaply constructed. As the screw may be removed, the projecting edge of the blade may be easily sharpened.

While I have referred to the guard as even at the extreme limit of its movement never entirely covering the blade, yet it will be obvious that the guard might be so made as to entirely protect the blade, but be capable of being moved back to the extent required to permit the knife to be used as a thread cutter.

In many minor ways, the details of my invention as shown may be varied, without departing from the spirit thereof.

Having thus described the invention, what is claimed as new is:—

1. A buttonhole cutter comprising a base plate, means for clamping said plate to a support, a knife fixed on said plate and projecting out therefrom and in the same plane

therewith, a shield longitudinally adjustable along the face of said knife, and means for clamping the shield in any adjusted position.

2. A buttonhole cutter comprising a base plate, means for clamping said plate to a support, a knife carried by said plate parallel therewith and projecting out therefrom, said knife being formed with an angular edge, and a shield adjustable along the face of the knife and adjustably held thereto, said shield having an edge at right angles to the longitudinal axis of the knife.

3. A buttonhole cutter comprising a base, means attached thereto for clamping the base upon a support, a knife attached to the face of said base and projecting out therefrom, said knife having a sharpened edge extending from one side of the knife downward and inward to the other side thereof, an adjustable shield comprising a blade having its end at right angles to the longitudinal axis of the knife, said shield being longitudinally slotted, and a set screw passing from said slot into said base, whereby the shield may be adjusted longitudinally along the face of the knife.

4. A buttonhole cutter comprising a clamp, a vertically arranged base plate forming the upper portion of said clamp, a knife secured to the face of said base plate and projecting out therefrom, said knife being pointed at its outer end and having a cutting edge extending from one edge of the knife at an angle to the other edge of the knife, and a shield comprising a blade portion whose outer end is at right angles to the longitudinal axis of the knife, the rear of said blade being extended and slotted, and a set screw passing over said slot and into the base plate, whereby the shield may be adjusted in the knife.

5. In a buttonhole cutter, a base plate, a clamp, whereby the base plate may be fixed to a support, a knife projecting out from the base plate, the face of the knife and the face of the base plate being in alignment, a guide lug on the base plate below the knife, and a shield being longitudinally adjustable relative to the knife and resting at its forward end on said lug.

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

FRED F. ROBY. [L.S.]

Witnesses:

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