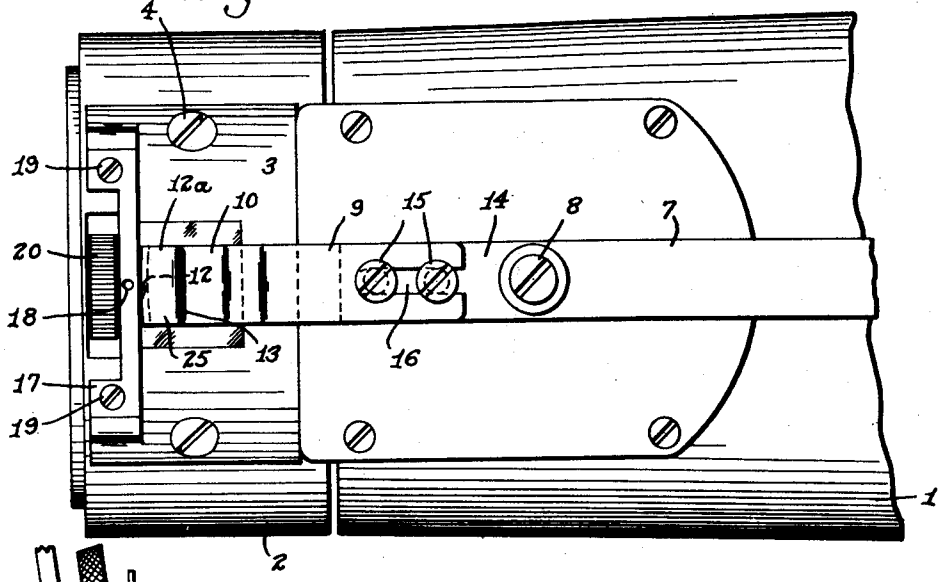
Oct. 17, 1933. V. CAPOLUPO 1,931,103

TRIMMING ATTACHMENT

Filed April 16, 1932

Fig. 1.



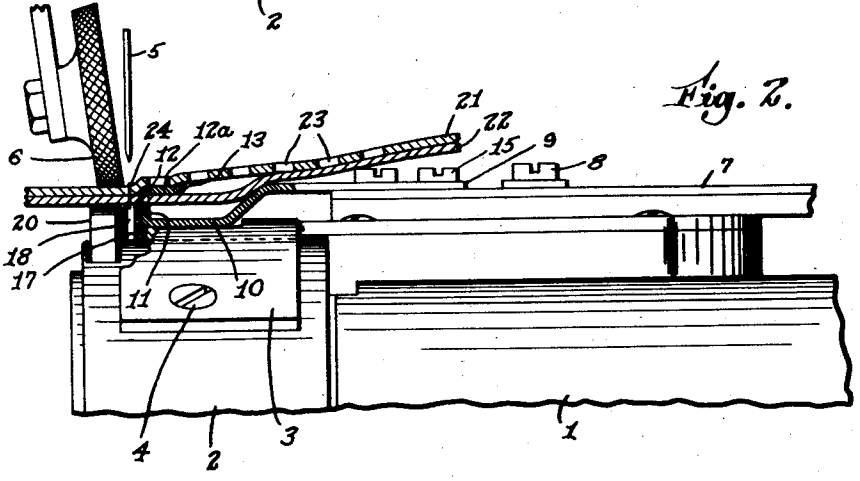
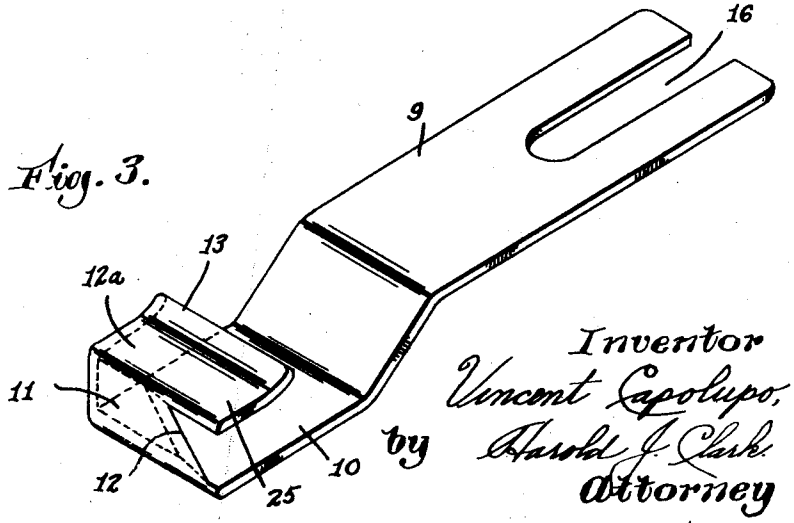


Fig. 2.

Fig. 3.



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TRIMMING ATTACHMENT

Vincent Capolupo, East Boston, Mass.

Application April 16, 1932. Serial No. 605,575

10 Claims. (Cl. 112—127)

My present invention relates to trimming attachments particularly adapted for use in conjunction with sewing or stitching machines such as are well known.

The trimming attachment of the present invention is primarily adapted to be utilized as an attachment for sewing machines, enabling the performance of the dual functions of stitching together two or more layers of material, such as an upper and lining, while simultaneously trimming, cutting or removing one or more of said layers.

I am aware that there are many devices of this character at present in use, but none of these, so far as I am aware, is capable of operating upon such material as boot or shoe uppers wherein closed portions of the lining are to be removed beneath a predetermined portion of the outer upper. For example, in many types of present-day shoes, certain portions of the upper, such as the vamp, or sections of the quarter, are provided with openwork or cutout designs or portions, and it is desired to remove the lining from the shoe adjacent to such cutout portions. In shoes of this type, the lining is usually secured to the outer upper section by lines of stitching extending around the cutout or openwork portion or design. It has been necessary, heretofore, to accomplish this severance of the lining by a hand operation after the stitching has been completed, thus adding materially to the labor, cost and time involved in the manufacture of this type of boot or shoe.

An important object of the present invention, therefore, resides in the provision of a trimming attachment capable of performing the operation above briefly described simultaneously with the stitching around the openwork or cutout portion.

It will thus be appreciated by those skilled in this art that I have eliminated one complete operation, that is, the step of cutting away, by hand, the lining beneath the openwork portion or design, an advantage that will be readily understood, and one that results in a marked saving in time, labor and expense.

In most of the devices at present in use, the cutting knife of the trimming attachment has a depending blade to effect the cutting or trimming operation, with the result that if such a knife is utilized in an endeavor to trim linings from closed portions of boot or shoe uppers, for example, the knife can advance but a very short distance into the work before the remaining portion of said closed lining prevents the further passage of the knife therethrough. This is because of the fact that the lining is passing beneath the knife and is therefore jammed by the knife holder.

In those types of trimming devices heretofore in use that utilized an upwardly extending cutting blade, such blade has been constructed and arranged to trim two or more layers at the edge portions of each. No provision has been made for separating the layers to be trimmed, and such a knife or cutting blade is ineffective for the purpose for which I utilize my novel device.

Another object of my invention, therefore, resides in the provision of means, cooperating with the cutting blade, to separate the lining from the outer upper section, and to thus insure against damage of the outer upper layer during the trimming operation.

Another important object of the present invention resides in so constructing my novel knife that the severed lining will have a free passage from the cutting blade and thus will not interfere with the continuous cutting action of said blade.

I believe that the trimming attachment and knife illustrated and described in this application is novel, and have therefore claimed the same broadly herein.

Other objects and features of the invention reside in the particular construction and arrangement of my novel device, and all of the above and other objects and features of the invention, details of construction, combinations, and advantages, will be hereinafter more fully pointed out, described and claimed.

Referring to the drawing, illustrating a preferred embodiment of the invention,

Fig. 1 is a partial top plan view of a sewing machine of the cylinder type having my novel cutting knife embodied in the trimming attachment thereof;

Fig. 2 is a side elevation of the structure of Fig. 1, illustrating the cutting action of my novel device; and

Fig. 3 is a perspective view, on an enlarged scale, of my novel knife.

Referring now to the drawing, for a particular description of the invention, its construction and operation, 1 designates the work supporting arm of a sewing machine of the cylinder type, having an end member 2 which constitutes a housing for the usual stitch forming device. To the upper surface of the housing member 2 is fixed an arcuate plate 3 by means of the screws 4. The sewing machine needle is illustrated at 5 and the usual rotary disk presser foot is illustrated at 6.

On the arm 1 is supported a horizontally re-

ciprocating or oscillating lever 7, pivoted at 8 and operated by any suitable means (not shown) from any desired source of power. On the upper surface of the lever 7 is mounted a knife 9 having an offset and depending portion 10 slidable on the upper surface of the plate 3. Projecting upwardly from the forward edge of the offset portion 10 is a blade 11 having a cutting edge 12, and having an inwardly projecting lip 12*a* which may be curved or bent upwardly slightly at its inner end, as illustrated at 13, if desired. The end 14 of the lever 7 is provided with a pair of adjustable set screws 15 located in the slot 16 of the knife 9. It will thus be apparent that as the lever 7 is reciprocated or oscillated about its pivot 8, the knife 9 will likewise be oscillated in a predetermined arc. The plate 3 has upstanding brackets between which is mounted a member 17 having a needle receiving aperture 18, the member 17 being fixed to the plate 3 by screws 19 so that the said member can be removed and replaced at will.

Projecting upwardly through the members 2 and 17 is the usual work feed member 20 actuated in the usual manner to effect a feeding of the work past the needle in a step-by-step or intermittent movement.

It will be noted, from a glance at Fig. 1, that the forward end of the knife 9, that is, the upstanding wall or blade 11, is formed with a slight radius, to permit oscillation of the knife while the member 17 acts as a guide or spacing element to determine the limit of trimming relative to the stitching performed by the needle 5.

In Fig. 2 I have illustrated my novel device operating upon a section of boot or shoe upper, comprising the outer upper 21 and the lining 22. In the outer upper 21 is provided an openwork or cutout design portion designated generally at 23, and it is desired to remove the lining beneath this design portion, and to also stitch the lining 22 to the upper 21 around said design portion. The assembled upper and lining is therefore introduced into the machine with the lip 12*a* between the lining and upper. Simultaneously with the application of the stitching 24 by the needle 5, the knife 9 will be oscillated in the manner above described, with a relatively short length of stroke. During this cutting action the free end 25 of the lip 12*a* will be constantly located in advance of the cutting edge 12 and between the upper and lining, and will serve as a guide therefor. Also the inclination of the cutting edge 12 constitutes a guide for the lining, to introduce the same in a proper manner to the cutting point. The upturned edge 13 of the lip 12*a* will separate the upper still further from the lining, and facilitate the discharge of the trimmed or severed lining.

It will be noted from a glance at Fig. 2, that as the cutting operation progresses, the lining passes over the main portion of the knife 9, a feature which has not been possible of achievement with prior devices of which I am aware. The trimming operation thus performed severs the lining with a neat line of cut, and eliminates entirely the previous tedious and time-consuming hand operations necessary to remove the lining by prior methods.

The advantages, efficiency, economy and speed of operation of my novel device will be instantly apparent to those skilled in this art.

While I have necessarily described my present invention somewhat in detail, it will be appreciated that I may vary the size, shape and arrangement of parts within reasonably wide limits without departing from the spirit of the invention.

My invention is further described and defined in the form of claims as follows:

1. In a machine of the kind described, a trimming knife having an upstanding cutting blade oscillating in substantially the plane of the work being operated upon, and an inturned lip at the upper end of said cutting blade adapted to be positioned between layers of material being operated upon.

2. In a machine of the kind described, a trimming knife located below the material being operated upon, said knife having an upstanding cutting blade oscillating in substantially the plane of the work, and an inturned lip at the upper end of said blade adapted to be positioned between said layers of material being operated upon.

3. In a machine of the kind described, a trimming knife located below the material being operated upon, said knife having an upstanding cutting blade oscillating in substantially the plane of the work, and an inturned lip at the upper end of said blade adapted to be positioned between said layers of material being operated upon, said lip having an upturned inner end to still further separate the layers of said material.

4. In a machine of the kind described, a trimming knife located below the material being operated upon, said knife having an upstanding cutting blade oscillating in substantially the plane of the work, and an inturned lip at the upper end of said blade adapted to be positioned between said layers of material being operated upon, said lip having a free end located between said layers in advance of said cutting edge.

5. In a machine of the kind described, a trimming knife comprising a plate having a depending offset portion, an upstanding cutting blade projecting vertically from said offset portion and oscillating in substantially the plane of the work being operated upon, and an inturned lip at the upper end of said cutting blade adapted to be positioned between layers of material being operated upon.

6. In a machine of the kind described, a trimming knife comprising a plate having a depending offset portion, an upstanding cutting blade projecting vertically from said offset portion and oscillating in substantially the plane of the work being operated upon, and an inturned lip at the upper end of said cutting blade adapted to be positioned between layers of material being operated upon, said lip being on substantially the same plane as said plate.

7. In a machine of the kind described, a trimming knife comprising a plate having an offset depending portion, an upstanding cutting blade projecting vertically from said offset portion and oscillating in substantially the plane of the work being operated upon, and an inturned lip at the upper end of said cutting blade adapted to be positioned between layers of material being operated upon, said lip being on substantially the same plane as said plate and having a free end located between said layers in advance of said cutting edge.

8. In a machine of the kind described, a trimming knife located below the material being operated upon, said knife having an upstanding arcuate cutting blade oscillating in substantially the plane of the work, and an inturned lip at the upper end of said blade adapted to be posi-

tioned between said layers of material being operated upon.

9. In a machine of the kind described, a trimming knife comprising a plate having a depending offset portion, an upstanding cutting blade projecting vertically from said offset portion and oscillating in substantially the plane of the work being operated upon, and an inturned lip at the upper end of said cutting blade adapted to be positioned between layers of material being operated upon, said lip having a free end located between said layers in advance of said cutting blade.

10. In a machine of the kind described, a trimming knife comprising a plate having a depending offset portion, an upstanding cutting blade projecting vertically from said offset portion and oscillating in substantially the plane of the work being operated upon, and an inturned lip at the upper end of said cutting blade adapted to be positioned between layers of material being operated upon, said lip having a free end constantly located between said layers in advance of said cutting blade.

VINCENT CAPOLUPO.