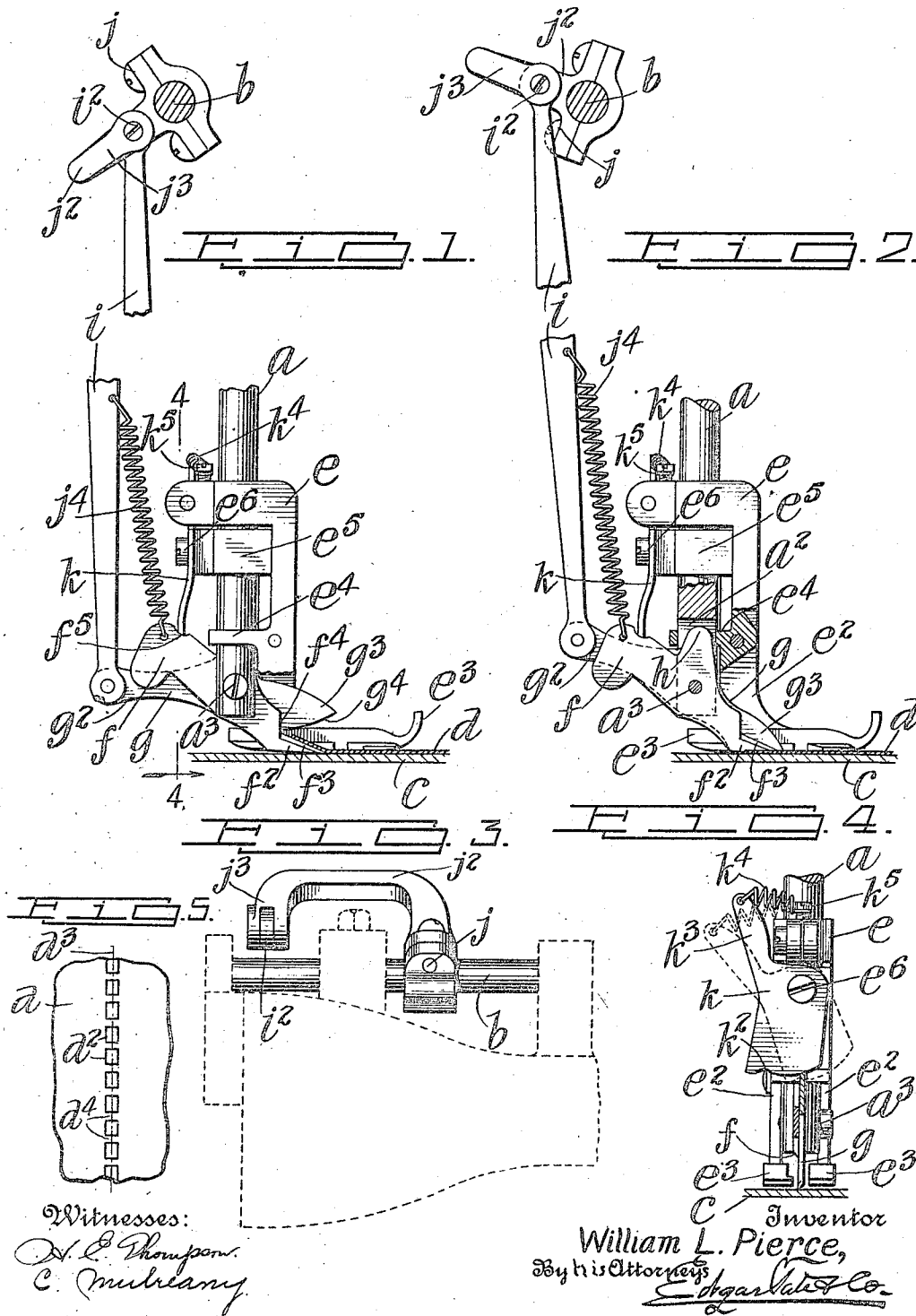


W. L. PIERCE.
PICOT CUTTING ATTACHMENT FOR SEWING MACHINES.
APPLICATION FILED SEPT. 22, 1914.

1,154,337.

Patented Sept. 21, 1915.



UNITED STATES PATENT OFFICE.

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To all whom it may concern:

Be it known that I, WILLIAM L. PIERCE, a citizen of the United States, and residing at New York, in the county of New York and State of New York, have invented certain new and useful Improvements in Picot-Cutting Attachments for Sewing-Machines, of which the following is a specification, such as will enable those skilled in the art to which it appertains to make and use the same.

This invention relates to attachments for sewing machines and particularly to devices of this class known as picot cutting attachments used in connection with sewing machines designed for making hemstitching and employing two needles which have the usual vertical and lateral movement; and the object thereof is to provide an improved attachment of this class which is simple in construction, and automatic and efficient in operation, and with this and other objects in view the invention consists in an attachment for sewing machines of the class specified, constructed and operating as hereinafter described and claimed.

Sewing machines of the class specified and the construction and operation thereof are well known, and in the accompanying drawing, I have shown or indicated only such parts of the machine as are necessary to illustrate my improved attachment and its method of operation, and the invention is fully disclosed in the following specification, of which the accompanying drawing forms a part, in which the separate parts of my improvement are designated by suitable reference characters in each of the views, and in which:—

Figure 1 is an outside view of my attachment as applied to the machine, and showing the part or parts with which it is connected, and showing also the throat plate of the machine and the workpiece in section, part of the construction being broken away; Fig. 2 a view similar to Fig. 1 but showing part of the construction in section, and showing the parts of the attachment in a different position; Fig. 3 a plan view showing the rock shaft of a hemstitch sewing machine and indicating the method of its connection with the machine, and showing the connection of my attachment therewith; Fig. 4 a section on the line 4—4 of Fig. 1; and, Fig. 5 a view showing a piece of

cloth provided with a hemstitch and indicating the method of cutting through the hemstitch by means of my improved attachment.

In the drawing forming part of this specification, I have shown at *a* the presser foot bar of a hemstitch sewing machine, and at *b* the rock shaft, and I have also shown at *c* the throat plate of the machine and at *d* a workpiece placed thereon. I have also shown at *e* the usual presser foot bracket which is connected with the bar *a* in the usual manner, and which is composed of two similar side pieces *e*² with the lower ends of which are connected oppositely arranged presser feet *e*³, and the presser feet *e*³ are pivoted to the side members *e*² of the bracket *e* in the usual manner, but as all these parts are of the usual construction and form no part of my invention this pivotal attachment is not shown.

In the practice of my invention, I form in the lower end of the presser foot bar *a* a vertical slot *a*² and pivoted therein, as shown at *a*³, are blade members *f* and *g*.

The bracket *e* is provided with a backwardly directed arm *e*⁴ through which the bar *a* passes and the blades *f* and *g* are provided with upwardly directed lugs or projections *h* which limit the movements of said blades, and the arm *e*⁴ of the bracket *e* forms stops in connection with which said lugs or projections operate.

The blade *g* extends backwardly beyond the blade *f* as shown at *g*², and connected therewith is a crank rod *i*, and secured to the rock shaft *b* as shown at *j* is a yoke *j*² having a short arm *j*³ with which the rod *i* is connected, as shown at *i*², and a spiral spring *j*⁴ is connected with the rear end of the blade *f* and with the rod *i* at a predetermined point above the connection of said rod with the rear end *g*² of the blade *g*.

The blade *f* is provided at its front end with a forwardly directed nose piece *f*² having a downwardly and forwardly tapered top cutting edge *f*³ at the rear end of which is a vertical shoulder *f*⁴, and the blade *g* is provided with a forwardly directed nose piece *g*³ having a bottom cutting edge *g*⁴ which is tapered forwardly and upwardly.

In the top edge of the rear end of the arm *f* is a notch or recess *f*⁵, and pivoted to a part *e*⁵ of the bracket *e* as shown at *e*⁵ is an arm *k*, the lower end of which is provided with

a notch or recess k^2 and the upper end of said arm is provided at one side edge thereof with an extension k^3 with which is connected a spiral spring k^4 which is also connected with the bracket e at k^2 , and the object of the arm k is to lock the blade f in inoperative position when it is desired to make hemstitching and not desired to cut said hemstitching to form picot edges, and in order to do this the arm k is thrown into the position shown in dotted lines in Fig. 4, in which position the rear end of said blade is forced downwardly and the nose piece f^2 raised above the workpiece or fabric in which the hemstitching is being formed, and in this position of the parts the cutting attachment is not in use or in operation.

It will be understood that the machine to which this attachment is applied is provided with two vertically movable needles in the usual manner, and the blades f and g operate immediately behind said needles and between the same, and the nose piece f^2 of the blade f passes beneath the workpiece or fabric and the nose piece g^3 of the blade g passes over said workpiece or fabric and the rock shaft b operates the said blade g , as will be readily understood, and the spring j^4 operates normally to hold the nose piece f^2 of the blade f on the throat plate c , and in the operation of the machine the fabric or workpiece d is cut centrally and longitudinally of the hemstitch d^2 as indicated by the line d^3 to form what is known as picot edges as indicated at d^4 in Fig. 5.

My invention is not limited to the connection of the spring j^4 with the rod i , as said spring may be connected with some other part of the machine, and other changes in and modifications of the construction herein described may be made, within the scope of the appended claims, without departing from the spirit of my invention or sacrificing its advantages.

Having fully described my invention, what I claim as new and desire to secure by Letters Patent, is:—

1. The combination with the presser foot bar of a hemstitch sewing machine of the usual rock shaft and presser foot bracket attachment having two presser feet, the lower end of said bar being also provided with a vertical slot, and two blades pivoted in said

slot and operating between said feet, one of said blades being in operative connection with the rock shaft and the other being provided with a tensional connection rearwardly of the presser foot bar, and means for throwing the last named blade in a raised position.

2. The combination with the presser foot bar of a hemstitch sewing machine having the usual rock shaft and presser foot bracket attachment provided with two presser feet, of two blades pivoted to said bar and operating between said feet one of said blades being in operative connection with the rock shaft and the other being provided with a tensional connection rearwardly of the presser foot bar, and a tensionally operated part pivotally supported rearwardly of the presser foot bar and adapted to hold the last named blade in a raised position above the bottom surface of the presser feet.

3. The combination with the presser foot bar of a hemstitch sewing machine having the usual rock shaft and two presser feet, of two blades pivotally supported and operating between said feet one of said blades being in operative connection with the rock shaft and the other being provided with a tensional connection rearwardly of the presser foot bar, and a tensionally operated lock device pivoted rearwardly of said bar and adapted to be turned into position to hold the last named blade above the operative surface of the presser feet.

4. The combination with the presser foot bar of a hemstitch sewing machine having the usual rock shaft and two presser feet, of two blades pivotally supported and operating between said feet, one of said blades being in operative connection with the rock shaft and the other being provided with a tensional connection rearwardly of the presser foot bar, and means for raising the front end of the last named blade and holding the bottom edge thereof above the bottom surface of the presser feet.

In testimony that I claim the foregoing as my invention I have signed my name in presence of the subscribing witnesses this 18th day of September 1914.

WILLIAM L. PIERCE.

Witnesses:

C. MULREANY,
H. E. THOMPSON.