G. S. WEINERTH.

FLOATING THREAD CUTTER.

APPLICATION FILED FEB. 5, 1912.

1,038,695. Patented Sept. 17, 1912.

Fig. 1.

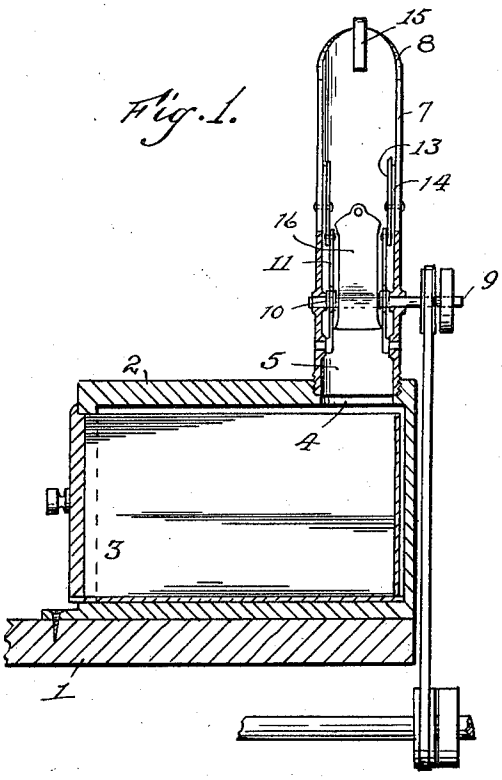


Fig. 2.

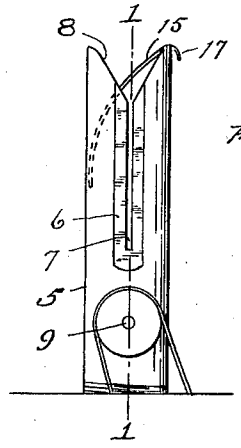


Fig. 3.

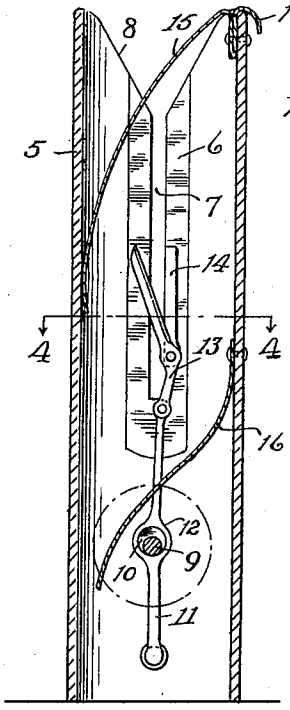
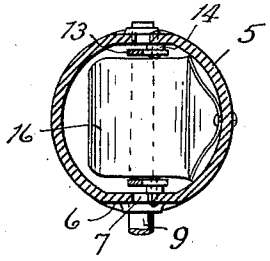


Fig. 4.



GEORGE S. WEINERTH, Inventor

Witnesses
J. O. Kelly.
M. M. Kline

By E. A. Kelly.
Attorney

COLUMBIA PLANOGRAPH CO., WASHINGTON, D. C.

UNITED STATES PATENT OFFICE.

GEORGE S. WEINERTH, OF READING, PENNSYLVANIA.

FLOATING-THREAD CUTTER.

1,038,695. Specification of Letters Patent. Patented Sept. 17, 1912.

Application filed February 5, 1912. Serial No. 675,665.

To all whom it may concern:

Be it known that I, GEORGE S. WEINERTH, a citizen of the United States, residing at Reading, in the county of Berks and State of Pennsylvania, have invented certain new and useful Improvements in Floating-Thread Cutters, of which the following is a specification.

This invention relates to an improved cutter for cutting floating threads from hosiery.

In the manufacture of stockings, it is often desirable to make them with a double sole, and in doing this, the machine will carry the thread across the machine while the upper half of the foot portion is being made, thus producing a series of threads, called floating threads, which extend across the foot from side to side, on the inside. It has been the custom to turn the stocking inside out and remove these threads by hand, with a pair of shears, but this method, while producing uneven ends in the stocking, is also objectionable for the reason that the body of the stocking is often cut accidentally. I have devised the present invention with a view of cutting these threads uniformly, quickly and without the least possible danger of cutting the stocking.

My invention consists of a tubular member, slotted at two opposite points to receive the floating threads as the stocking is placed over the tube, and a shearing or cutting device located inside the tube along the edge of the slots, these cutters being operated from a source of power, so that the mere act of passing the stocking over the tube will remove these threads.

A further object is to provide means on this device for turning the stocking while it is being removed from the tube, so that it will be in proper position for the next operation on the stocking.

The invention is more fully described in the following specification and clearly illustrated in the accompanying drawing, in which:—

Figure 1 is a central sectional view in vertical line. Fig. 2 is a side elevation of the tubular portion. Fig. 3 is an enlarged view of the tube, taken at right angles to that in Fig. 1. Fig. 4 is a sectional view on line 4—4 of Fig. 3.

The numeral 1 designates a table on which the machine is placed; 2 is the base or support, being a box like body with a drawer 3 for catching the severed threads. In the top of this box 2 I form an opening and into this opening 4 I insert the tubular member 5, the end of which is screw-threaded for engagement with the box. This tube 5 is mainly cylindrical in form, though for a portion of its length at the upper end, it is flattened, as at 6, at two diametrically opposite points and these flattened portions are each formed with a central vertical slot 7. The upper end of the tube is formed with two oppositely disposed V-shaped depressions 8, at the base of which the slots 7 begin.

The numeral 9 designates the power shaft which passes through the tube and which is provided with two eccentrics 10 located inside the tube.

Numeral 11 designates a pair of arms each of which is pivoted to the tube at a point below the shaft and which are formed with enlargements 12 which engage the eccentrics on the shaft, so that the revolving of the shaft will give to these arms a rocking movement on their pivotal points. The upper ends of these arms are loosely pivoted to the lower ends of a pair of shear blades 13 each of which is pivoted to the inside of the tube in close proximity to the slots. These movable shear blades are adapted to act in conjunction with a pair of shearing strips 14, located inside the tube and along the edge of the slots 7. The shearing motion is given to the movable blades 13 through the medium of the arms 11 and their eccentric connection to the power shaft. When the shaft revolves, the arms will be moved on their pivotal points and cause the shear blades to move across the shearing strips.

The stocking to be operated upon, is placed over the tube, with the floating threads in the slots, and it is then pulled down over the tube, the threads being placed in the path of the cutting blades, and the threads are cut off evenly and without danger of cutting the stocking.

15 designates a tension spring, secured at the top of the tube, and extending down into the tube and bearing against the inside thereof at the opposite side. This spring tends to draw taut the floating threads and at the same time to draw the body of the stocking tightly against the outside of the tube, so that the threads may be cut off as short as possible.

The numeral 16 designates a plate adapted to shed the clippings over the shaft, so that they will not clog it. The clippings will then pass down through the tube and enter the drawer 3, which may be emptied at will.

At the top of the tube, I form a downwardly bent hook 17, adapted to engage the stocking when it is removed from the tube, and cause it to turn inside out.

The form or contour of the tubular member may be changed if desired, as for instance it may be oblong in cross-section, so that the stocking will be stretched more thoroughly in the preferred direction, that is, in the line of the floating threads.

It is evident that to cut the floating threads from the inside of the stocking, it is merely necessary to place the stocking over the tube, toe end first (before the toe has been closed) and pull it down until the other end of the stocking is engaged by the hook 17, at which time the threads will be cut from the inside and the stocking will be ready for removal. When the lower end of the stocking is grasped and it is removed from the tube, the hook will cause it to be turned.

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

1. In a device for the purpose described, a tubular member having oppositely disposed flattened surfaces at the upper end, slots in said flattened portions and V-shaped depressions in the upper edges; a movable cutter blade pivoted to the inside of the tubular member in close proximity to each of the slots; a shearing strip along the edge of each slot adapted to coöperate with the blades; a pair of arms operatively connected at their upper ends with the blades and pivoted at their lower ends to the inner surface of the tubular member, said arms each being formed with an enlargement about midway of its length; a power shaft; an eccentric on the shaft adapted to be engaged by the enlarged portions of the arms, whereby the movement of the shaft will rock the arms and move the cutter blades across the slots, in combination with a receptacle support for the tubular member.

2. In a device for the purpose described, a vertical tubular member, screw-threaded at its lower end and removably secured to a receptacle, said tube having oppositely disposed flattened surfaces at its upper end, each of which is formed with a slot; a power shaft passing through the tube; two eccentrics on the shaft; a pair of rocking arms, each of which is pivoted to the inside of the tube below the shaft; enlargements on the arms engaging the eccentrics so that the movement of the shaft will give a rocking motion to the arms; a pair of shearing blades connected to the upper ends of the arms and pivoted, at a point approximately their center, to the inside of the tube in close proximity to the slots; a pair of shearing strips extending along the one edge of each slot and adapted to coöperate with the blades; a tension spring secured to the tube at its top and bearing against the inner wall at a point opposite; a hook at the top of the tube adapted to engage and turn the stocking as it is being removed from the tube and a shedding plate secured to the inside of the tube and lying across the power shaft.

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

GEORGE S. WEINERTH.

Witnesses:
ED. A. KELLY,
WALTER G. STEININGER.

Copies of this patent may be obtained for five cents each, by addressing the "Commissioner of Patents, Washington, D. C."