Our invention is an improvement in thread cutters or thread snippers, for use in connection with sewing machines and similar devices.

An important object of our invention is to provide a thread cutter or snipper which can be conveniently mounted on the framework or body of a sewing machine adjacent to the needle and presser foot; so as to be ready for use at all times, and thus obviate the necessity of the operator to take up a shears or knife for severing the sewing thread. Such implements can easily be misplaced or be temporarily out of reach and thus require extra time and effort to get hold of them.

Another object of this invention is to provide for a thread-cutter or thread-snipper which is simple and inexpensive to produce, and can easily be mounted in operative position on a sewing machine, without re-arrangement of parts and virtually at no cost.

The invention is fully explained in the specification and some embodiments are illustrated on the accompanying drawings. The novel characteristics of our device are defined in the appended claim; but of course variations can be made in various respects without departing from the general design in which the invention resides.

On the drawings:

FIGURE 1 is a view of a part of an ordinary sewing machine, for example, with our attachment thereon.

FIGURE 2 is a side view of the thread-sniper.

FIGURE 3 is an end view.

FIGURES 4 and 5 are respectively top and side views of the member which carries the knife or cutting blade of the snipper.

FIGURE 6 is a sectional view of line 6—6 of FIGURE 5.

FIGURE 7 is an end view of a portion of this snipper.

FIGURE 8 is a view similar to FIGURE 2 of another form of our snipper.

FIGURE 9 is a diagrammatic view showing parts of the snipper of FIGURE 8 separated to expose the cutting blade which these parts carry; and

FIGURE 10 is an end elevation of one of the parts shown in FIGURES 8 and 9.

The numeral 1 on FIGURE 1 indicates a part of the head or casting of an ordinary sewing machine having the usual pressure foot on the lower end of a rod 2, and a rod 3 bearing the reciprocable needle 4. The thread snipper is indicated as a whole by the numeral 5, secured to the rod 2 which carries the presser foot; but this attachment can be affixed to any other part of the machine in convenient position for use as desired.

The snipper is attached to the presser foot rod 2 by a support or strip of bent metal 6, one end of which has a recess 7 for the binding screw by which it is mounted on to the rod 2; and the other end of this strip 6 carries a rod 8, one end of which fits into an opening in the bent strip 6 and is riveted at its extremity 10 so as to secure it firmly in place on the strip 6.

This rod 9 projects outward from the strip and carries a pair of cone-shaped round elements 11 and 12, one element 11 of which is fixed to the rod 9, and the other 12 is mounted to slide thereon a short distance towards and from the element 11. On the outer end of the rod 9 is a cap screw 13 engaging threads on the rod and between this nut and the element 12 is a spring 14, which seats against the element 12 so that the elements 11 and 12 are normally held in contact with each other. These elements are shown as cone-shaped and engage at their smaller ends.

Midway of the rod 8 is a flat surface 15 which is overlapped by both the elements 11 and 12 and against this flat surface a blade 16 is secured by an ordinary binding screw to hold it fast. This blade fits into keyways 17 in both elements 11 and 12 and should be fixed to one or the other of the elements 11 and 12; preferably the element 11 so that when the element 12 is separated from the element 11 the blade is exposed between these two elements.

This thread-snipper 5 is affixed to the rod 2, which bears the presser foot of the machine, by a binding screw 18 engaging the rod 2 and having a head which is turned up tight against the edges of the recess 7, as indicated in FIGURE 1.

The thread 19 through the eye of the needle, as the needle makes its stroke, cooperates with the thread in the shuttle below the top plate of the mechanism of the machine to produce a line of stitches; and as soon as the line of stitches is completed this thread is usually cut with a knife or scissors. With our attachment however the end 20 of the thread 19 is pulled slack and laid between the elements 11 and 12 the surfaces of which slope towards each other; and then the element 12 can be pulled back to separate it from the element 11 so that the thread can be drawn against the blade 16 and cut. The other thread indicated at 20a coming from the shuttle which cooperates with the thread drawn by the needle 4, is pulled slack and severed in the same way. The snipper 5 is always at hand on the machine and all need for anything else like a knife blade or pair of scissors is obviated. Thus time and effort are both saved.

On FIGURES 8, 9, and 10, the modification shown has the same elements 11 and 12, one of which is mounted on a bent strip 21 and is fixed thereto, and the other element 12 is fixed to a shorter bent strip 27 which is secured to the strip 21 by a screw 22. These strips afford a support for the elements 11 and 12. This screw passes through an opening in the strip 27 below the element 12 and engages the strip 27 with the threads thereon at one end while the other end of this screw 22 carries a milled head 23. The screw 22 passes freely through a large unobstructed aperture in the strip 21, and between the head 23 and this strip the screw 22 is surrounded by a spiral spring 24. The element 11 is immovably fixed to the strip 21, and the element 12 is immovably fixed to the strip 27. These two elements have keyways or recesses 25 in which is disposed a cutter blade 26. Hence if a fixed part of the machine, the elements 11 and 12 can be separated as before to expose the edge of the blade 26 so that cutting of the thread can then be performed. The device of FIGURES 8, 9 and 10 can of course be attached to the rod 2 or any other convenient part of the machine in the same way as the device of FIGURE 2, as the strip 21 has a recess 7 in one end for the binding screw 18.

The smaller ends of the elements 11 and 12 are rounded off slightly; and as shown in FIGURES 8, 9 and 10 the knife 26 is so mounted in the slots or keyways 25 that its edge is not exposed when these elements engage each other.

Having described our invention, what we believe to be new is:

A thread snipper comprising a bracket to be secured in a fixed position on a part of a sewing machine, a pair of rounded conical elements supported by said bracket, one of said elements being mounted to be stationary on said bracket, means connected to the bracket and slidably mounting the other element to make and break contact with the stationary element, each element having a large end and a small end and disposed so that the small ends are adjacent each other, both elements having their lateral surfaces sloping towards each other at said small ends,
spring means for urging the slidable element to engage the other element, and maintain said elements with their small ends in contact, and a knife blade having its ends seated within said elements adjacent their centers and extending from one element to the other, said blade being fully screened by said elements when said elements are in contact, said blade being exposed when the slidable element is moved away from the stationary element.