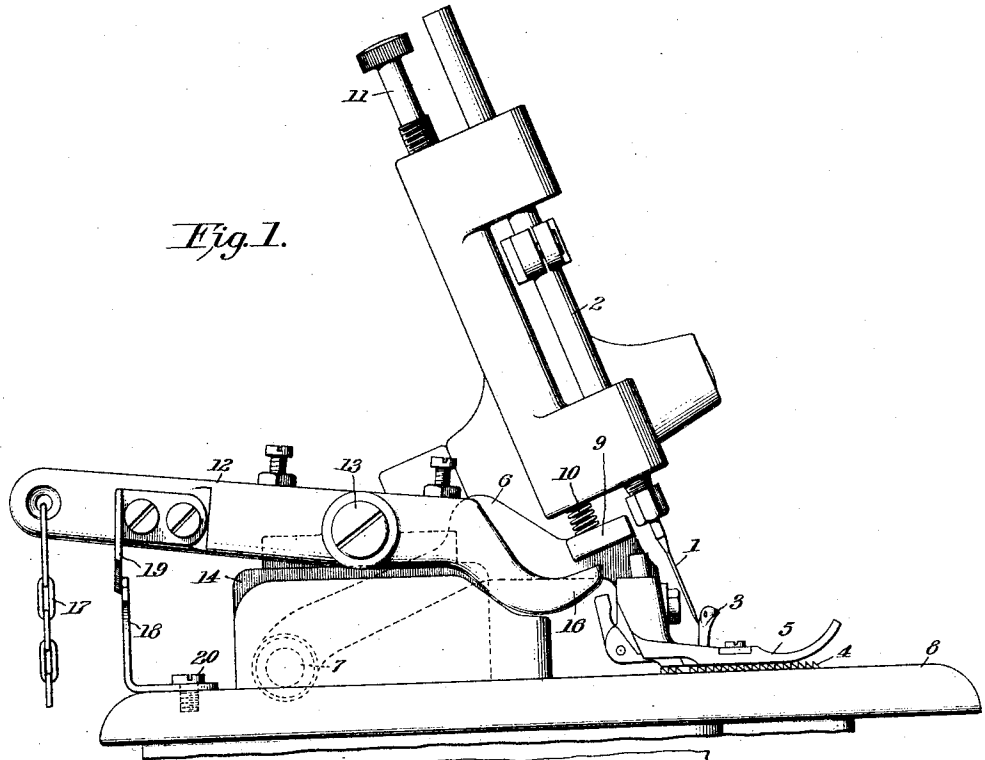
E. H. A. HABBERT AND E. STONE.

THREAD CUTTER FOR SEWING MACHINES.

APPLICATION FILED FEB. 8, 1919.

1,411,089. Patented Mar. 28, 1922.

Fig. 1.



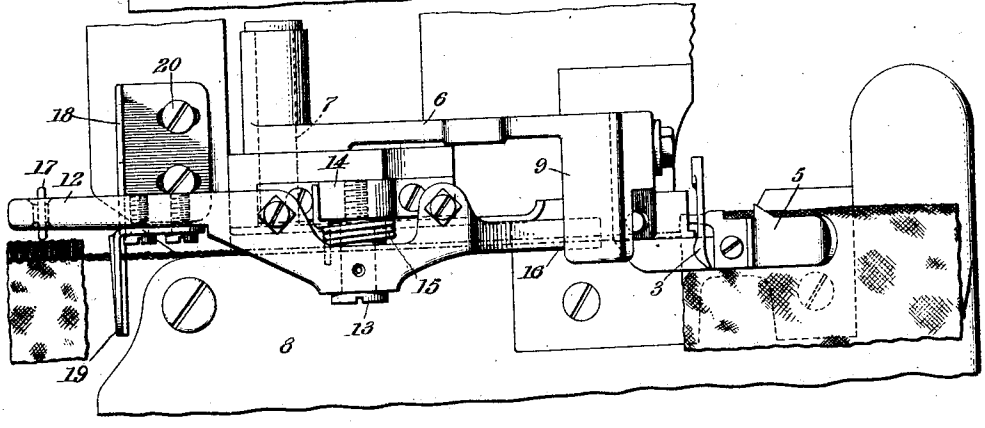


Fig. 2.

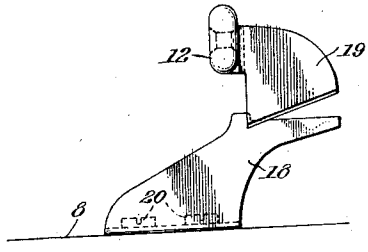


Fig. 3.

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THREAD CUTTER FOR SEWING MACHINES.

1,411,089. Specification of Letters Patent. Patented Mar. 28, 1922.

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To all whom it may concern:

Be it known that we, ENNO H. A. HABBERT and ELMER STONE, citizens of the United States, residing at Troy, in the county of Rensselaer and State of New York, have invented certain new and useful Improvements in Thread Cutters for Sewing Machines, of which the following is a specification, reference being had therein to the accompanying drawings.

This invention relates to sewing machines and especially to thread-cutters for use therewith.

In the manufacture of wearing apparel it is frequently desirable to stitch quite a number of articles in succession without stopping the operation of the machine, the successive articles being connected by a chain of stitching which it is necessary to sever subsequently. This has been done heretofore with the ordinary scissors and it has also been done with a variety of cutting attachments which are more or less awkward to manipulate and obstructive.

The present invention aims to provide a simple inexpensive and efficient cutting mechanism for severing chains of stitches connecting successive articles shortly after they pass from under the presser-foot, a cutting mechanism which may be used with facility and without hampering the operator in introducing successive pieces of work into the machine.

It further aims to simplify the construction of such cutting mechanisms by utilizing an already existing feature of construction on a commercial form of machine.

The construction comprises a pair of cutting blades one mounted on a cloth-plate of the machine in rear of the presser-foot and the other mounted on the rear end of a presser-foot lifting lever which normally has its front end separated slightly from a lug on the presser-foot. The presser-foot lifting lever has a limited movement independently of the presser foot and this limited movement is utilized to permit a cutting stroke of the blade mounted thereon without lifting the presser-foot from its cooperative relation with the feed-dog. In this way chains of stitches between successive articles may be cut without stopping the operation of the machine.

The invention is illustrated in the accompanying drawings in which Fig. 1 is an end elevation of an overseaming machine to which the invention has been applied. Fig. 2 is a plan view of a portion of the same. Fig. 3 is a rear elevation of the cutting blades in their normal open condition.

In the illustrated overedge sewing machine of the Singer No. 81 class the needle 1 carried by a needle-bar 2 cooperates with a pair of loopers one of which is indicated at 3. The needles and loopers are actuated in a manner fully disclosed in the prior art. The work is fed by the usual four motion feed-dog 4 cooperating with a presser-foot 5 which is secured to the front end of a supporting lever 6 fulcrumed on a pin 7 at the rear of the machine and in substantially the plane of the cloth-plate 8. At the front end the presser-carrying lever 6 is provided with a lateral flange 9 against the upper surface of which a coiled spring 10 socketed in the head of the machine thrusts to yieldingly hold the presser-foot down upon the feed-dog. The pressure of the foot upon the work may be varied by changing the tension of the coiled spring 10 through manipulation of the screw 11 threaded into the head.

As usual the presser-foot may be shifted away from the feed-dog and in the illustrated embodiment of the invention the presser-foot lifter is in the form of a nearly horizontal lever 12 fulcrumed intermediate its ends on a stud-pin 13 threaded into a standard 14 above the cloth-plate of the machine. About the pivot pin 13 a spring 15 is coiled and its ends are anchored respectively to the presser-foot lifting lever and the standard 14. Normally the coiled spring 15 turns the presser-foot lifting lever 12 in a clockwise direction (as viewed in Fig. 1) and holds the toe 16 of the lifting lever spaced slightly from the lateral flange 9 of the presser-carrying lever 6. The lifting lever 12 may be operated manually in any convenient manner preferably through a chain 17 connected to a knee shift or foot-treadle (not shown) below the machine.

The cutting device comprises a stationary or ledger-blade 18 and a cutting blade or knife 19 of the shape illustrated in the drawings. To permit these blades to cut nicely they may be adjusted through the screw-and-slot connections indicated at 20. Either or both of the blades 18 and 19 may be made of resilient material. In the form of the invention shown in the drawings the

ledger-blade 18 is made relatively long so as to afford the desirable resilient engagement.

It will be noticed that the ledger-blade 18 has its cutting edge formed laterally of its supporting flange and consequently that the passage of work over the rear edge of the cloth-plate is not normally obstructed. While intended especially for cutting chains of stitches, the construction may be used for cutting tape or strips of material and the invention is to be understood as comprehending the same.

The operator may use the construction of the present invention in various ways. For instance, the successive pieces of work may be introduced under the presser-foot close together or the operator may delay the introduction of a new piece of work until the machine has chained enough to reach the thread-cutter. In the first case the operator could sever the chains of stitches connecting the successive pieces of work while one piece of work is being operated upon. In the second case the operator would have to delay the introduction of a new piece of work until the preceding piece of work had passed the cutter and thereafter place the chain between the blades of the cutter for severance. But obviously the manner in which the attachment may be used may be varied by the operator as desired.

Having thus set forth the nature of the invention, what we claim herein is—

1. In a sewing machine, a presser-foot, a presser-foot lifter, a ledger-blade mounted on a fixed part of the machine in rear of the presser-foot, a cutting blade sustained independently of the presser-foot and arranged to cooperate with the ledger-blade upon actuation of the presser-foot lifter in the direction in which it is moved to lift the presser-foot.

2. In a sewing machine having stitch-forming mechanism including a shiftable element functionating in the normal operation of the machine and also having a pivoted lever for moving said element, a spring normally holding said lever out of engagement with the element and permitting limited movement of the lever without shifting the element, and shearing mechanism including a blade fixed to said lever and spaced from its pivot, and manual means for operating said lever and shearing thread without interruption of a stitching operation.

3. In a sewing machine having stitch-forming mechanism including a shiftable element functionating in the normal operation of the machine and also having a pivoted lever for shifting the element, said lever being movable independently of the element, and cutting mechanism including a blade secured to said lever and having a cutting edge spaced from the lever's pivot, whereby a cutting operation may be performed without shifting the element.

4. In a sewing machine having a presser-foot, a presser-foot lifter having limited movement independently of the presser-foot, a ledger-blade mounted on a fixed part of the machine in rear of the presser-foot, a blade having a cutting edge movable by the presser-foot lifter across the edge of the ledger-blade without shifting the presser-foot.

5. In a sewing machine having stitch-forming mechanism including a shiftable element functionating in the normal operation of the machine and also having means for moving said element, which means is capable of limited movement independently thereof, a pair of cutting blades one of which is operatively connected to said means and may be brought into cooperative cutting relation with the other without interrupting the operation of the sewing machine.

6. In a thread-cutter for sewing machines, in combination, a shiftable element, a member for moving said shiftable element having limited movement independent of said element, a cutting blade mounted on said member, a ledger-blade mounted on a stationary part of the machine, said cutting blade being movable across said ledger-blade without displacement of the shiftable element.

7. A sewing machine having a plurality of stitch-forming instrumentalities, a member for shifting one of said stitch-forming instrumentalities away from its normal cooperative relation with the other stitch-forming instrumentalities and said member having a movement independent thereof, and cutting mechanism including a blade carried by said member whereby stitches connecting successive pieces of work may be severed without interrupting the operation of the machine.

8. In an overedge sewing machine having a cloth-plate, a presser-foot, a spring urging the presser-foot down upon the work, means for lifting said presser-foot away from the work and movable independently of the presser-foot, a ledger-blade secured to the cloth-plate at one side of the line of seam-formation and having a cutting edge overhanging the line of seam-formation, a cutting blade secured to said means and adapted to cooperate with said ledger-blade to sever a chain of stitching, whereby thread may be severed if desired without interrupting the operation of the machine.

9. In a sewing machine having a work-support, in combination, a presser-foot, a presser-foot lifter normally held out of shifting engagement with the presser-foot and capable of limited movement independent of the presser-foot, a cutting blade on

said lifter, and a ledger-blade mounted on the work-support, said blades being normally held open and being adapted to sever thread without interrupting the operation of the machine.

10. In an overedge sewing machine having a cloth-plate, a presser-foot, means movably supporting the foot, a spring for holding the presser-foot yieldingly down upon the work, a presser-foot lifting lever extending lengthwise in a direction nearly parallel with the cloth-plate and fulcrumed intermediate its ends one of which ends is normally held spaced from engagement with the presser-foot, a cutting blade on the other end of the lifting lever, a ledger-blade on the cloth-plate arranged to cooperate with the first mentioned blade whereby a thread chain may be severed manually without shifting the presser-foot or without interrupting the operation of the machine.

11. In a sewing machine having a work support and a presser-foot, a presser-foot lifter having limited movement independently of the presser-foot, and cutting means located above the work support and connected to said presser-foot lifter, whereby upon actuation of the presser-foot lifter the cutting means may be actuated without shifting the presser-foot.

12. In a sewing machine, a presser-foot, a presser-foot lifter having a limited movement independently of said presser-foot, and a thread-cutter connected to be operated by said presser-foot lifter to cut the thread during said limited movement of the presser-foot lifter without necessitating the lifting of the presser-foot.

In testimony whereof, we have signed our names to this specification.

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ELMER STONE.