

(No Model.)

3 Sheets—Sheet 1.

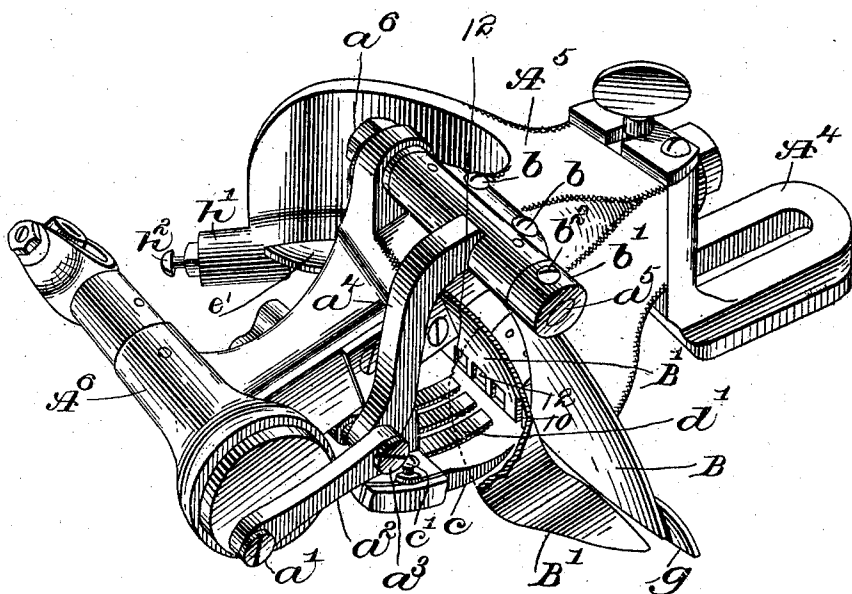
A. L. TRAVER.

ATTACHMENT FOR MACHINES FOR SEWING LOOPED FABRICS.

No. 502,478.

Patented Aug. 1, 1893.

Fig. 1.



Witnesses.

Wm. W. Shaw

Louise W. Howell

Inventor.

Adelbert Lee Traver

by Lewis & Langdon

attys.

(No Model.)

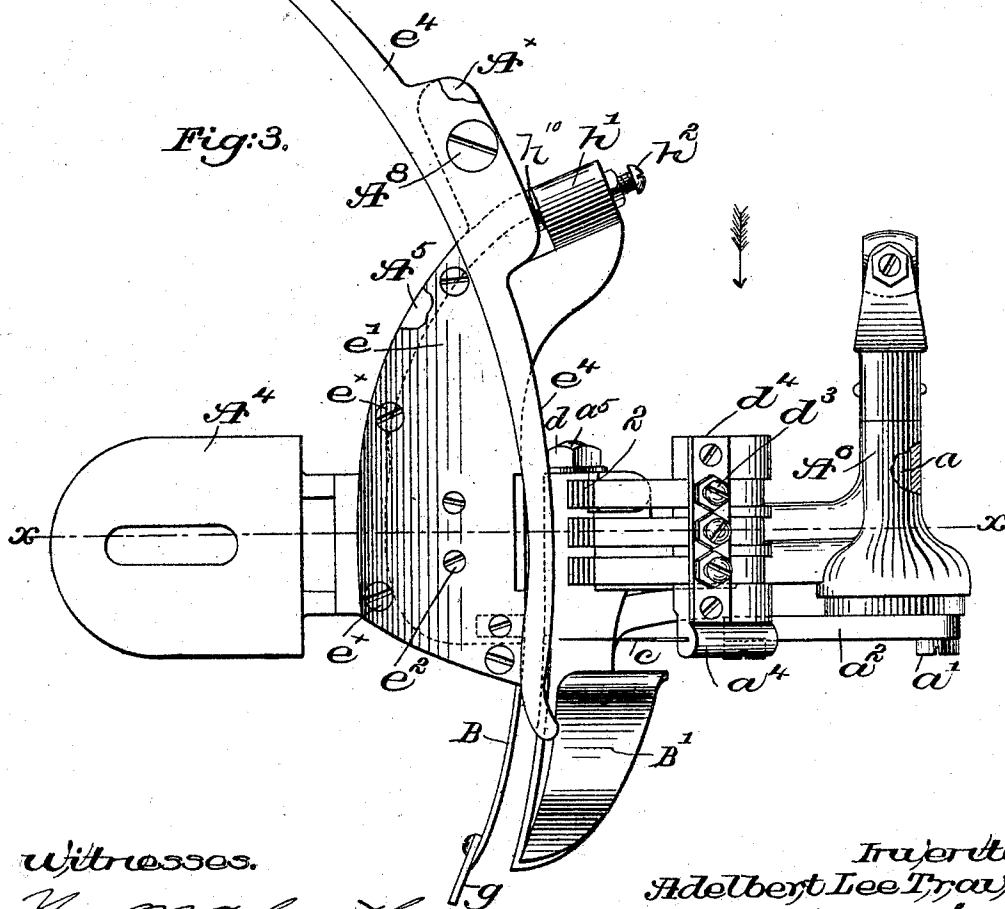
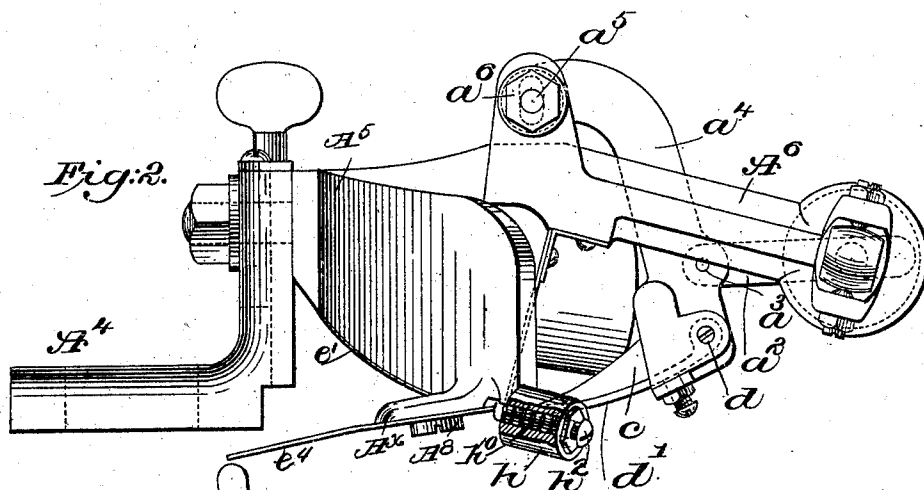
3 Sheets—Sheet 2.

A. L. TRAVER.

ATTACHMENT FOR MACHINES FOR SEWING LOOPED FABRICS.

No. 502,478.

Patented Aug. 1, 1893.



Witnesses.

Fred W. Marshworth
Lowell W. Howell

Inventor.
Adelbert Lee Traver.
by Crosby & Langdon
Attys.

(No Model.)

3 Sheets—Sheet 3.

A. L. TRAVER.

ATTACHMENT FOR MACHINES FOR SEWING LOOPED FABRICS.

No. 502,478.

Patented Aug. 1, 1893.

Fig. 4.

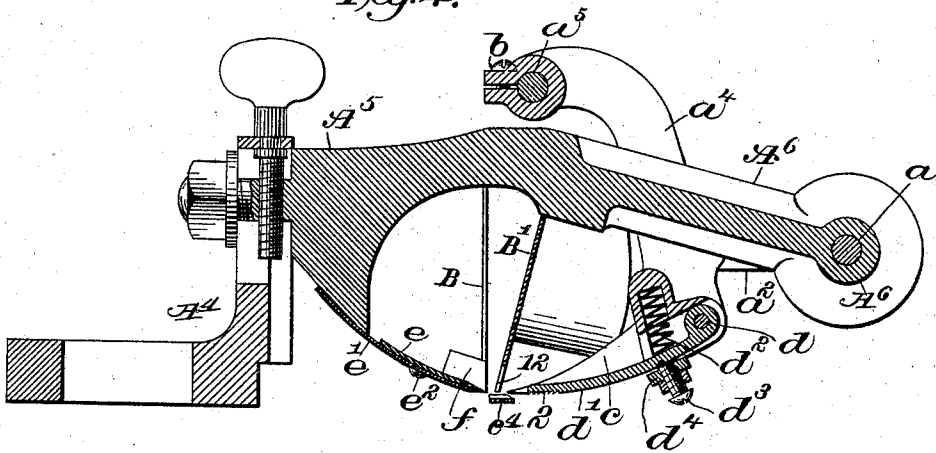
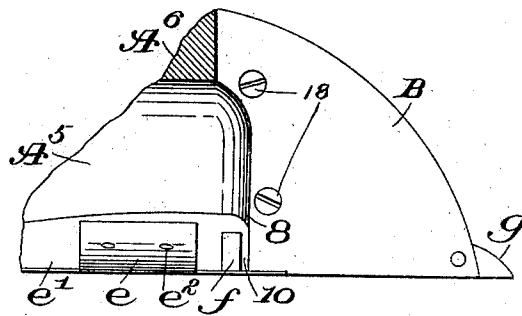


Fig. 5.



Witnesses.

Fred Marshworth
Louis W. Howell

In Witness Whereof,
Adelbert Lee Traver,
by Crosby & Gregory
attys.

UNITED STATES PATENT OFFICE.

ADELBERT LEE TRAVER, OF MELLENVILLE, NEW YORK.

ATTACHMENT FOR MACHINES FOR SEWING LOOPED FABRICS.

SPECIFICATION forming part of Letters Patent No. 502,478, dated August 1, 1893.

Application filed October 24, 1892. Serial No. 449,856. (No model.)

To all whom it may concern:

Be it known that I, ADELBERT LEE TRAVER, of Mellenville, county of Columbia, State of New York, have invented an Improvement in
5 Stitch-Separating and Raveling Attachments for Machines for Sewing Looped Fabrics, of which the following description, in connection with the accompanying drawings, is a specification, like letters and figures on the draw-
10 ings representing like parts.

This invention has for its object to improve and simplify that class of machine shown and described in United States Patent No. 431,957.

In the machine herein to be described the
15 loop-destroying device is carried by a vibrating lever mounted on a horizontal stud, said loop destroyer entering the loops of knitted fabric and by the upward inclination of its upperside breaking and destroying the loops, the loop
20 destroyer crossing, and its upper edge traveling upwardly with relation to, the inner edge of one of the guide plates. Next the vertical edge of one of the guide plates is a raveling plate, the edge of which is presented
25 in such position with relation to the stitch pins of the running-off machine as to contact with the fabric above the stitch pins, and the lever referred to as carrying the loop destroying device is also provided with a series
30 of picking out fingers fulcrumed at their outer ends, and serrated at their under sides near their inner or free ends, said fingers acting against the portions of the fabric containing the destroyed loops, and forcing such portions
35 over beyond the edge of the raveling plate and upon its upper side, and by friction picking or pulling out the broken yarn. These picking out fingers have combined with them
40 adjusting devices to position their free ends correctly with relation to the edge of the raveling plate and they are acted upon by springs to keep them seated correctly in operative position upon the raveling plate during the time
45 that they act to pick out the broken loops. I have also provided these fingers of the picking-out device with serrations at their under sides to better engage the broken loops and detach them from the body of the knitted fabric. The raveling-plate referred to is a
50 separate piece detachably secured to the bed-plate, the said raveling-plate in practice pref-

erably having attached to it a throat of hardened steel, this hardened throat adding greatly to the life of the machine.

Figure 1, in perspective shows the front 55 side of an apparatus embodying my invention; Fig. 2, an elevation of my improved apparatus looking at it in the direction of the arrow, Fig. 3. Fig. 3, is an under side view of the machine shown in Fig. 1. Fig. 4, is a section
60 on the line x Fig. 3, the apparatus being, however, overturned from the position Fig. 3; and Fig. 5, is a detail showing the inner face of the frame part A^5 .

The device to be herein described, is, it will 65 be understood, adapted to be secured to the frame-work of a turning-off machine, or to any machine having stitch pins adapted to hold knitted fabrics to be stitched.

Referring to the drawings, A^4 represents a 70 stand adapted, as stated, to be secured to any stationary part of the turning-off machine used, of whatever form. This stand has adjustably secured upon it a frame A^5 having a forward extension A^6 which contains or sup- 75 ports a suitable bearing for the rotating shaft a having at one end a crank pin a' which receives a link a^2 pivoted at a^3 to an arm a^4 in turn pivoted upon a stud a^5 preferably made adjustable on the frame by or through a nut 80 a^6 , the slot in the frame being of larger diameter than the part of the stud extended through it.

The hub of the arm a^4 embracing the stud a^5 loosely is represented as slotted and clamped 85 together by suitable screws b , the hub of the arm being prevented from slipping off the stud by a suitable collar b' confined in position by the set screw b^2 . The vibrating arm a^4 in this instance of my invention carries a 90 loop-destroying device c , shown as a curved blade, attached to the arm by a suitable set screw c' . The adjustment of the stud a^5 vertically enables the point of the loop destroying device to penetrate the knitted fabric at 95 the desired distance above the stitch pins. This arm has a suitable stud d upon which is pivoted a series of broad, flat fingers d' constituting a picking-out device, said fingers being acted upon at their upper sides by springs 100 d^2 which normally act to keep the said fingers pressed against preferably the points of the

adjusting screws d^3 inserted in a cross bar d^4 attached by screws or otherwise to the said arm. The adjustment of the set screws enables the acting ends of the fingers to be put
 5 into the proper position with relation to the raveling-plate e' or throat e thereon made as a thin piece of steel attached to the plate e' . The adjustment of the fingers d' by the screws d^3 referred to enables them to be adapted to
 10 the thickness of the work to be picked out.

The frame-work has attached to it an outer guide plate B' provided with slots 12 through which reciprocate the fingers d' of the picking-out device, and the under sides of these
 15 fingers are serrated as at 2 to enable them to get a better hold upon the loops which have been broken or destroyed by the loop-destroyer, c .

The raveling plate e' , the shape of which is
 20 best represented in the under side view Fig. 3, is attached to the frame part A^5 by suitable screws e^x , one edge of said plate in practice being located at a short distance above the stitch pins holding the knitted fabric, the
 25 picking-out fingers in their movement bending the fabric, having the destroyed loops of yarn, over the edge of the raveling plate and upon its upper side, the said fingers traveling along over the upper side of said plate and being
 30 borne down on the knitted fabric by the springs d^2 .

The frame part A^5 has an extension A^x on which is pivoted at A^8 a deflector e^4 , substantially such as shown and described in my Patent
 35 No. 490,417, dated January 24, 1893, but herein I have provided the apparatus with a sleeve h' in which is an adjusting screw h^2 to act on a spring h^{10} which in turn presses against the back edge of the deflector. By adjusting the
 40 screw h^2 , the deflector acted on by said spring is kept pressed against the work hanging on the stitch pin, the direction of pressure being toward the base of the stitch pin to thus keep the material upon the stitch pins and at
 45 the same time the deflector prevents the fabric below the stitch pins from being lifted and thrown out of shape while the loop destroying device and the picking out device act. The knitted fabric having been impaled on
 50 the stitch pins, common to said patent and to said application, is fed by the pin wheel between the guide plates B , B' , which are substantially as in said patent and application, said guide plates receiving between them and
 55 acting on the cut edges of the knitted fabric or material above the stitch pins to smooth out the wrinkles and curls therein. The plate B nearest the base of the stitch pins and connected to frame A^5 by screws 18, is made short,
 60 see Fig. 5, and its inner end terminates as a vertical edge 8, across which moves the loop-destroying blade, its inclined top edge moving vertically with relation to the said edge 8 in the reciprocations of the blade and while the
 65 said loop-destroyer is passing through the knitted fabric in the process of destroying the surplus loops in order that the thread of which

they are composed may be subsequently picked out by the fingers d' . The plate B prior to this has had a short slot, but herein I have
 70 erected on the plate e' near the edge 8, a block f , so as to leave a slot or throat 10 open at its top, said slot being entirely unobstructed, so that it is impossible for any of the detached
 75 yarn to collect in the apparatus and thus interfere with the free movement of the loop-destroyer.

The plate B has been provided with a gate g , see Figs. 3 and 5, which may be raised and lowered with relation to the upper side of the
 80 usual stitch pins so as to prevent the work thereon from getting between the stitch pins and the lower edge of the guard plate B located nearest the base of the stitch pins.

The detachable raveling plate e for some
 85 classes of work might be omitted and the fingers d' be permitted to act directly against a portion of the plate e' .

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

1. In a raveling apparatus adapted to be applied to a running-off machine having stitch points, the combination with the frame-work, the horizontal stud a^5 , the vibrating lever a^4
 95 mounted on said stud, the loop-destroying plate attached to said lever, a rotating shaft, intermediate devices to actuate said lever, the slotted guide-plate B' , the short guide-plate B having the vertical edge 8 across
 100 which the loop-destroying plate travels, and the raveling plate, one edge of which acts as a support for one face of the material above but close to the stitch pins, combined with a
 105 yielding picking-out finger carried by said lever a^4 and serrated at its under side and adapted to act against the part of the material containing the destroyed loops, push said material over the top of the raveling plate, and detach the yarn of the destroyed loops,
 110 substantially as described.

2. In a raveling apparatus adapted to be applied to a running-off machine having stitch points, the combination with the frame-work, the horizontal stud a^5 , the vibrating lever a^4
 115 mounted on said stud, the loop destroying plate attached to said lever, a rotating shaft, intermediate devices to actuate said lever, the slotted guide-plate B' , the short guide-plate B having the vertical edge 8 across which
 120 the loop destroying plate travels, and the raveling plate, one edge of which acts as a support for one face of the material above but close to the stitch pins, combined with yielding picking-out fingers carried by said lever
 125 a^4 , and devices to adjust the position of the free ends of the fingers vertically with relation to the edge of the raveling plate, substantially as described.

3. In a raveling apparatus adapted to be applied to a running-off machine having stitch-points, the combination with the frame-work, the horizontal stud a^5 , the vibrating lever a^4
 130 mounted on said stud, the loop-destroying

plate attached to said lever, a rotating shaft, intermediate devices to actuate said lever, the slotted guide-plate B', the short guide-plate B having the vertical edge 8 across which the loop-destroying plate travels, and the raveling plate, one edge of which acts as a support for one face of the material above but close to the stitch pins, and provided with the throat piece e, combined with a yielding picking-out finger carried by said lever a^4 and serrated at its under side and adapted to act against the part of the material containing the destroyed loops, push said material over upon the top of the raveling plate and detach the yarn of the destroyed loops, substantially as described.

4. In a raveling apparatus adapted to be applied to a running-off machine having stitch points, the combination with the frame-work, the horizontal stud a^5 , the vibrating lever a^4 mounted on said stud, the loop-destroying plate attached to said lever, a rotating shaft, intermediate devices to actuate said lever, the slotted guide-plate B', the short guide-plate B having the vertical edge 8 across which the loop-destroying plate travels, and the raveling plate, one edge of which acts as a support for one face of the material above but close to the stitch pins, combined with yielding picking-out fingers carried by said lever a^4 , devices to adjust the position of the free ends of the fingers vertically with relation to

the edge of the raveling plate, and springs to keep said fingers down in working position, substantially as described.

5. In a raveling apparatus adapted to be applied to a running-off machine having stitch points, the combination with the frame-work, the horizontal stud a^5 , the vibrating lever a^4 mounted on said stud, the loop-destroying plate attached to said lever, a rotating shaft, intermediate devices to actuate said lever, the slotted guide-plate B', the short guide-plate B having the vertical edge 8 across which the loop-destroying plate travels, and the raveling plate, one edge of which acts as a support for one face of the material above but close to the stitch pins, combined with a yielding picking-out finger carried by said lever a^4 and serrated at its under side and adapted to act against the part of the material containing the destroyed loops, push said material over upon the top of the raveling plate, and detach the yarn of the destroyed loops, and with a deflector to keep the work down as described while the loop destroyer acts, substantially as described.

In testimony whereof I have signed my name to this specification in the presence of two subscribing witnesses.

ADELBERT LEE TRAVER.

Witnesses:

WILLIAM ROWE,
H. H. CAMERON.