

A. W. COCHRAN.
 Looping-Attachment for Sewing-Machines.
 No. 213,393 Patented Mar. 18, 1879.

Fig. 1.

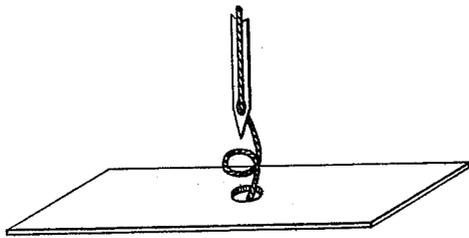


Fig. 2.

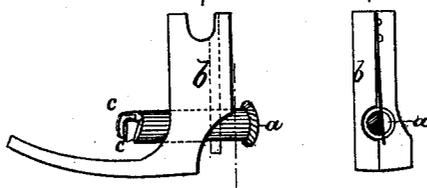


Fig. 3.

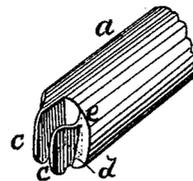


Fig. 4.

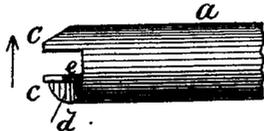


Fig. 5.



WITNESSES:

Henry N. Miller
J. N. Scarborough.

INVENTOR:

A. W. Cochran.
 BY *Mum & Co.*
 ATTORNEYS.

UNITED STATES PATENT OFFICE.

ALFRED W. COCHRAN, OF HARRIS, ALABAMA.

IMPROVEMENT IN LOOPING ATTACHMENTS FOR SEWING-MACHINES.

Specification forming part of Letters Patent No. **213,393**, dated March 18, 1879; application filed August 3, 1878.

To all whom it may concern:

Be it known that I, ALFRED W. COCHRAN, of Harris, in the county of Barbour and State of Alabama, have invented a new and Improved Looping Attachment for Sewing-Machines, of which the following is a specification:

The object of my invention is to provide a device to be used, in connection with sewing-machines, for forming a knot or tying the threads at the end of each seam, whereby the threads shall be prevented from unraveling. If a loop or bight be formed in the upper thread below the needle and above the plate, and the needle be then passed through the loop to take a stitch, a knot will be made. Forming a loop, as aforesaid, is the substance of my invention.

My invention consists in a small cylinder or arm having at one end two parallel lips or fingers which pass at each side of the thread, and a notch or offset is formed upon each lip. The cylinder is turned to form a loop by the action of the fingers and notches on the thread, which loop the needle passes through in making the next stitch, and a knot is thereby formed.

In the drawings, Figure 1 represents a needle and its thread in connection with a sewing-machine needle-plate, the thread having formed in it a loop such as will be made by my attachment. Fig. 2 is a side and rear view of a presser-foot with my improved attachment applied thereto. Fig. 3 is a perspective view, and Fig. 4 a side elevation, of the attachment enlarged. Fig. 5 is a plan view of a loop formed upon the device.

Similar letters of reference indicate corresponding parts.

a is a short cylinder or arm, made out of ivory, metal, or other suitable material, and its diameter is to be such that the loop formed by the attachment shall be large enough to permit the needle to pass readily. The cylinder *a* is to be held in the presser-foot *b* at right angles to the needle-path, and so that it can turn readily on its axis. A flat spring (shown in Fig. 2) is attached to the shank of the presser-foot, and its free end rests in a slot or notch formed in one side of the cylinder *a*, and bears against the flattened portion of the latter, so as to hold it in the required po-

sition. The outer end of cylinder *a* may be provided with an enlarged head for turning the cylinder by.

The end of cylinder *a* which is toward the needle is provided with two parallel lips or fingers, *c c*, projecting therefrom, with a narrow space between them, which forms a groove for the passage of the needle. The end of cylinder *a* outside of each lip *c* is cut to form inclines in opposite directions at each side, as seen at *d*. The direction of these inclines is parallel with the lips *c*. The lips *c* are grooved at right angles to the cylinder *a* at the base of inclines *d*, as seen at *e*, so that these grooves come at opposite sides, and the edges of the grooves *e* form offsets upon the lips *c*.

In forming the loop the device is turned axially by the operator in the direction shown by the arrow in Fig. 4. The needle should be raised to its highest point, and the thread will, of course, be in the groove between the lips *c* and close to the bottom of the groove. As the cylinder turns the thread passes into grooves *e* and is caught at two points by the edges thereof, which prevent the thread slipping off the lips *c*, and as the cylinder continues to revolve the inclines *d* press the thread forward. When the cylinder has made a complete revolution the thread will be crossed and a loop or bight formed in it, which will be held apart by the notches *e*. (See Fig. 5.) The needle being next passed through the loop to make a stitch, a knot is formed upon the upper side of the cloth.

In removing the cloth from the machine the upper thread should be loosened to prevent its coming taut until the under thread is cut; then, in cutting the upper thread, it is tightened, and will draw the upper thread up into the loop of the knot and make the knot tight and the ends secure.

A cutter placed upon the foot *b* is preferable for use in connection with the above-described device; and it is to be understood that the last stitch is made inside the edge of the cloth.

The notches, placed as shown, will cause the thread to cross below cylinder *a*, and if the attachment is placed at the bottom of the presser-foot the thread will cross just above the cloth or touch the cloth at that point. The notches *e* might, however, be in the ends of lips *c*, and

the loop would be made the same, only the crossing would be higher.

I do not limit myself to the manner of connecting the attachment described to the presser-foot, as it may be applied in other ways without departing from my invention.

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

1. The combination of the plate-spring with the rotatable cylinder having a notch in one of

its sides, as specified, and the presser-foot in which the cylinder has its bearings, as shown and described.

2. In combination with the presser-foot of a sewing-machine, a looping device for forming a loop in the needle-thread above the work, substantially as shown and described.

ALFRED W. COCHRAN.

Witnesses:

R. E. WRIGHT,

I. H. STREATER.