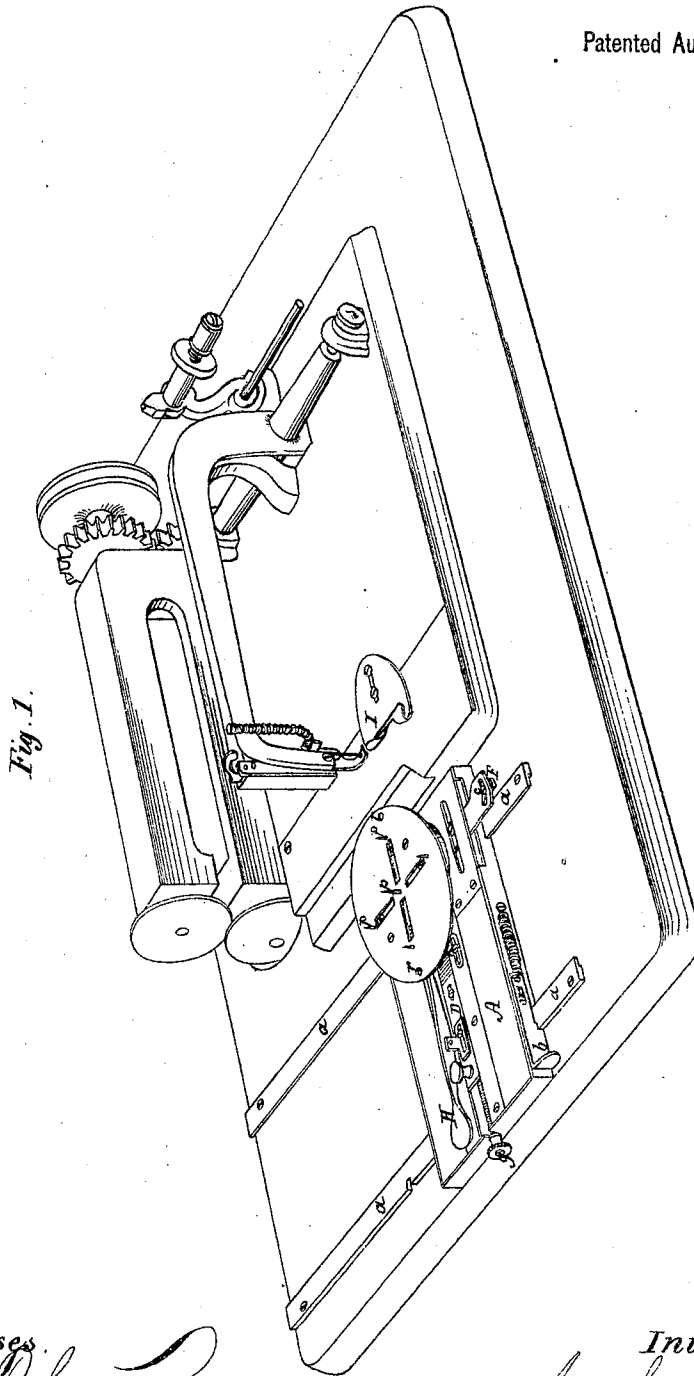


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Sewing Machine Attachment for Sticking Hat Tips to the Linings.

117,867.

Patented August 8, 1871.



Witnesses.
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F. A. Jackson.

Inventor.
Jacob L. Coles.
By Wm. C. Wood
Attorney.

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Fig. 2.

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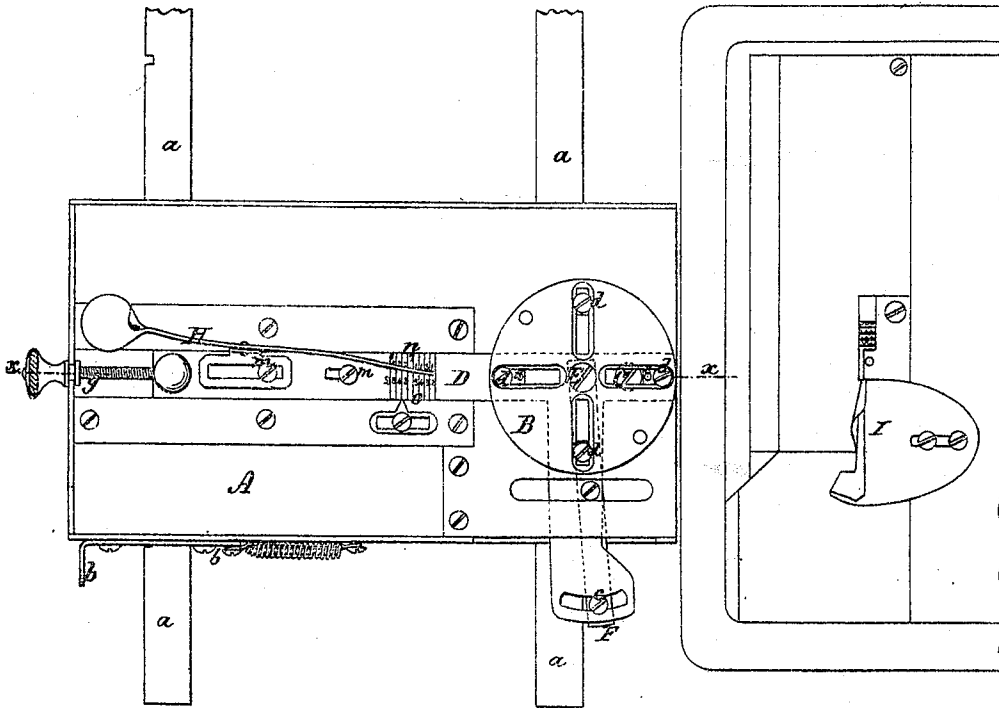


Fig. 3.

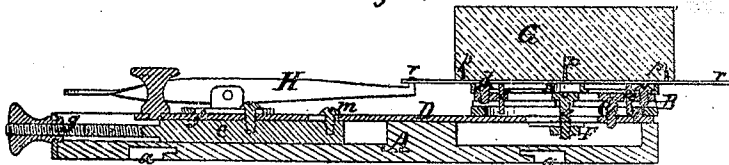


Fig. 4.

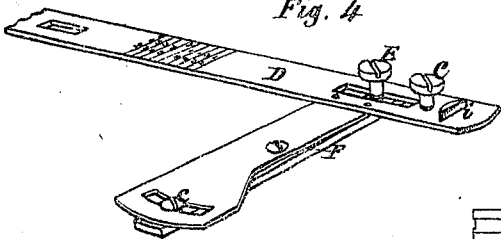


Fig. 5.

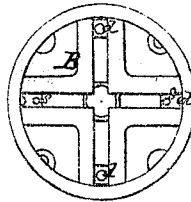


Fig. 6.



Witnesses.
Phil. H. Larned.
F. A. Jackson.

Inventor.
Jacob L. Coles.
 By *Wm. Wood*
Attorney.

UNITED STATES PATENT OFFICE.

JACOB L. COLES, OF NEWARK, NEW JERSEY.

IMPROVEMENT IN MACHINES FOR SEWING HAT-TIPS TO LININGS.

Specification forming part of Letters Patent No. 117,867, dated August 8, 1871.

To all whom it may concern:

Be it known that I, JACOB L. COLES, of the city of Newark, in the county of Essex and State of New Jersey, have invented a new and useful Sewing-Machine Attachment for Stitching Hat-Tips to the Lining.

My invention consists in certain novelties of construction and arrangement of the devices for describing the oval; in a novel method of adjusting the turn-table with relation to the needle and cutting mechanism; in a novel method of adjustment by which the form of the oval may be varied; in a novel mode of transferring the apparatus from the cutting to the stitching mechanism; in a novel mode of securing the turn-table while placing a tip thereon; and in a novel method of holding the tip onto the turn-table while being cut oval and stitched; and I do hereby declare that the following specification, taken in connection with the drawing furnished and forming a part of the same, is a true, clear, and exact description thereof.

In the drawing, Figure 1, sheet 1, represents, in perspective, a sewing-machine table with a sewing-machine, rotary shears, traveling-carriage, and turn-table to carry the hat-lining tips. Fig. 2, sheet 2, represents, in top view, the traveling-carriage, turn-table, and a portion of the sewing-machine. Fig. 3 represents a longitudinal vertical section on line *x x*, Fig. 2. Fig. 4 represents, in perspective, the sliding gauge-plate with its connecting-lever. Fig. 5 represents a bottom view of the turn-table, and Fig. 6 a side view of the same.

A in all the figures represents the carriage on which the turn-table is mounted. It is to be understood that my improvement has been particularly adapted to the Grover & Baker sewing-machine, and is also adapted to be used in connection with the ordinary rotary shears. The line of the feed and the cutting-line of the shears are practically coincident, the shears and stitching mechanism being side by side, with a proper distance between. Parallel with the line of the feed and the faces of the shears are two railways, *a*, secured to the top of the table. Each is provided with a side groove or its equivalent. The carriage is mounted on these rails in such a manner that, while it can be readily moved lengthwise on the rails, it cannot be detached from the table. This is effected by means of suitable de-

vices, which engage with the side grooves in the rails. Attached to the side edge of the carriage is a spring-latch, *b*, which engages with notches cut in the edge of one of the rails *a* when the carriage is in proper working position, and holds it securely either in front of the needle or the shears, as may be desired. When the carriage is to be moved the spring-latches are to be disengaged from the notches. B is the turn-table. It is circular in form, and, although it has a continuous periphery, it is nearly divided into quarter sections by two diametrical slots, crossing each other at right angles and forming at the center a circular opening. A main stud, C, attached to the top surface of a sliding gauge-plate, D, is so fitted through slots in the turn-table that, while the table can be freely turned in any direction permitted by the slots, it cannot be detached from the gauge-plate unless the stud be first removed. An auxiliary stud, E, mounted upon one end of a horizontal pivoted lever, F, projects upward through the slots in the same manner as the main stud C, already described. The opposite end of the lever F projects beyond the side of the carriage, and is held in any desired position by means of a slot and set-screw, *c*, operating in a well-known manner. At the outer ends of each slot in the turn-table are check-blocks, held in position by set-screws *d*, by which the length of the slots may be varied. It is obvious, when the main and auxiliary studs are closely adjacent and the check-blocks properly adjusted to correspond, that the oval form described will be but slightly varied from a circle, while, on the contrary, when the studs are widely separated the form of the oval will be correspondingly lengthened, provided that the slots be proportionably elongated by setting the check-blocks. Projecting upward from the upper surface of the gauge-plate D, at its outer end, is a stud, *i*, which is sufficiently far beyond the main stud C to allow the pin *s* in the check-blocks to pass between them, which prevents the turn-table from being drawn directly toward the cutting or stitching mechanism when the center of the oval described is furthest from the line of the feed or shears. The gauge-plate D occupies a slot in the carriage, and is composed of two parts, a base-plate, *e*, and a crown-plate, *f*. It is to the crown-plate that the turn-table is attached. The base-plate is connected, by a thumb-screw, *g*, and its tap, to the outer end rail of the

carriage in such a manner that by turning the thumb-screw the gauge-plate and turn-table may be moved on the carriage to and from the stitching or cutting mechanism, and thus vary the size of the oval to be cut or stitched. The crown-plate *f* is attached to the base-plate *e* by means of set-screw *m* operating in a slot cut in the crown-plate. The object to be accomplished by this mode of adjustment is the ready facility by which, after having put one line of stitches around a certain periphery by a slight independent longitudinal movement of the crown-plate, a still smaller or a greater oval can be described on the same piece of fabric. Short scales, prepared in an obvious manner, are placed at *n* and also at *o* for determining the exact movement of the crown-plate independent of the base-plate, as well as to determine the movement given to the gauge-plate as a whole independent of the carriage. The turn-table is surmounted by a face-plate, oval in form. The two are connected by means of screws. Projecting upward from the surface of the face-plate are several sharp-pointed spurs, *p*, for holding the fabric to the plate. A holding-block, *G*, of cork or other suitable material, is employed in connection with the spurs. A thumb-lever, *H*, so mounted that its inner end will engage with the face-plate of the turn-table at *r*, is provided for the purpose of holding the turn-table in the desired position while the fabric is being placed thereon.

Before explaining the operation of my apparatus I will first state that the tip of a hat is what might be termed the crown-piece of the lining. The sides of the lining are stitched to the tip at one edge and to the inside edge of the rim at the other edge. The tips are usually made of silk, upon which some ornamental device, motto, or name of maker has already been printed. These printed devices or mottoes, when the hat is completed, should be made to show or read on a line across the smallest diameter of the oval. When printed the pieces are usually square or of irregular form. Such a piece of fabric is placed upon the turn-table, being first careful that the thumb-lever *H* engages with one of the recesses *r* in the turn-table face-plate and that the horizontal line of the printed device extends across the narrow portion of the oval. The holding-block *G* is pressed down upon the fabric, the spurs *p* penetrating the lower surface of the block; the lever *H* is then disengaged, the carriage placed in

front of the cutting mechanism, and the latch *b* put in proper relation with the notch in the rail nearest to the cutting-shears. The proper size of the oval is determined by the scale at *o* or *n*; the edge of the fabric is then inserted between the shears, which are then rotated, while the table is turned by the hand or by the drawing action of the shears; the latch *b* is then disengaged and the carriage brought in front of the stitching mechanism, when the latch again engages with the proper notch in the rail *a*; the lining is then placed with its edge and the edge of the tip into proper relations with a hemming and folding-guide, *I*, operating in the usual manner in front of the needle. Upon starting the machine the feed-motion revolves the table. Upon completing this line of stitching, or even before that is done, a line of embroidery-stitching can be put into the tip, and the distance between the two lines of stitching may be varied, as desired, and determined by means of the scales at *n* and *o*, as already described.

I am aware that devices have heretofore been constructed for accomplishing the same results as are effected by my own apparatus; and

I therefore claim as new and desire to secure by Letters Patent—

1. The carriage *A*, the oval turning mechanism, and the screw for adjusting the same in relation to the stitching and cutting mechanism, when combined with and made movable laterally on ways parallel to the line of the feed-motion of the sewing-machine, as described.

2. The carriage *A*, sustaining the oval turning mechanism, mounted on railways and controlled by latches, in combination with stitching and cutting mechanism, as described.

3. The combination of the turn-table slotted as described, the main stud, and the auxiliary stud, the table being partially controlled in its movement with relation to the stitching mechanism by the stud *i*, as and for the purposes specified.

4. The adjustable lever for controlling the auxiliary stud, in combination with the turn-table slotted as described, the central stud, and the auxiliary stud, as and for the purposes specified.

5. The combination of the stop-latch and the turn-table face-plate, substantially as described.

JACOB L. COLES.

Witnesses:

PHIL. F. LARNER,
WM. C. WOOD.