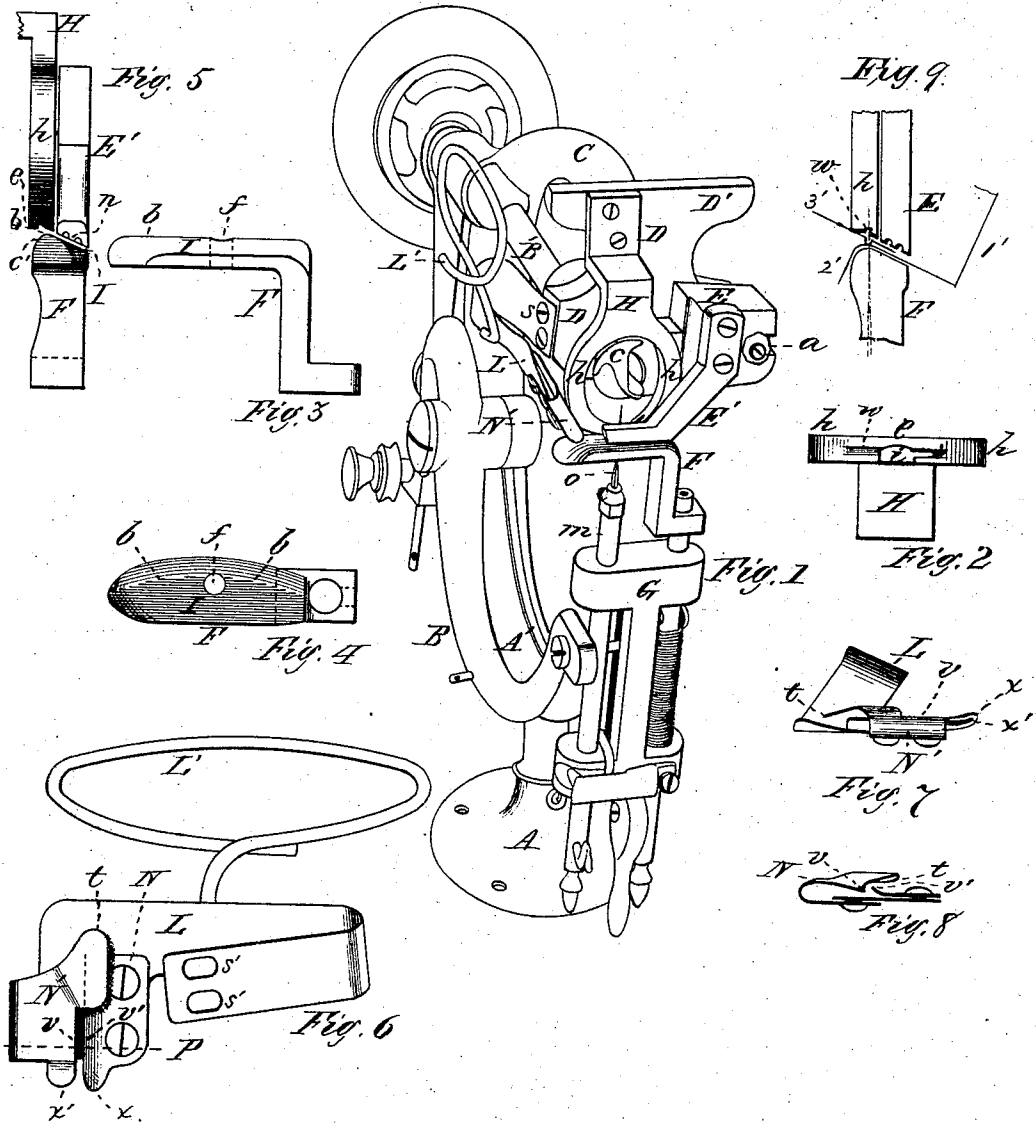


A. MOREHOUSE.

Machines for Sewing Sweat-Linings in Hats.

No. 155,253.

Patented Sept. 22, 1874.



Witnesses,
 C. E. Buckland.
 M. J. Foley.

Aaron Morehouse,
 Inventor,
 By J. H. Curtis,
 his Atty.

UNITED STATES PATENT OFFICE.

AARON MOREHOUSE, OF DANBURY, CONNECTICUT.

IMPROVEMENT IN MACHINES FOR SEWING SWEAT-LEATHERS IN HATS.

Specification forming part of Letters Patent No. **155,253**, dated September 22, 1874; application filed April 15, 1874.

To all whom it may concern:

Be it known that I, AARON MOREHOUSE, of Danbury, in the State of Connecticut, have invented a new and useful Machine for Sewing Sweat-Leathers into Hats; and I do hereby declare that the following is a full, clear, and exact description thereof, reference being had to the accompanying drawings making a part of this specification, and to the letters of reference marked thereon, in which—

Figure 1 is a perspective view of my invention. Fig. 2 is a reverse plan view of the guard and work-support. Fig. 3 is a side view of the presser. Fig. 4 is a plan view of the same. Fig. 5 is an end view of the presser, work-support, and feed, showing the position which they occupy relative to each other when attached to the machine. Fig. 6 is a plan view of the gage and its guide. Fig. 7 is a view of the same looking toward its edge, and Fig. 8 is a section of the same at line P of Fig. 6. Fig. 9 is an end view of the support, feed, and presser, showing the position of the hat and sweat-leather when placed in the machine to be sewed.

My invention relates to a machine for sewing sweat-leathers, having a hemmed or turned edge, into hats, the greater part of its mechanism being similar to any ordinary sewing-machine, excepting all that part which pertains to the work-support, the feed, the presser, and, in the present case, to the position of the needle.

I have adapted my invention to the ordinary well-known "Willcox and Gibbs" machine, because that machine is a rapidly-operating one; and, as thus applied, my invention consists of a work-support attached in place of the ordinary cloth-plate; a feed having an inclined or beveled face or feed-surface and operated by cams on the moving shaft; a presser having an inclined or beveled face to correspond with the beveled face of the feed; and also having a curved guide-ridge to assist in guiding the hat; a gage to open the turned-in edge of the sweat-leather and to guide the same properly to its position to be sewed to the hat, and the needle of the machine operating with its point uppermost, to enable the operator to watch the work and guide it more perfectly as it progresses.

In the drawings, Fig. 1 represents the ordinary metal working parts of the Willcox and Gibbs sewing-machine turned up-side down from the position which it ordinarily occupies upon the table, but with all the feed mechanism, the cloth-plate, and the presser-foot removed, and in place thereof the work-support H is attached to the part D, which support is made, preferably, of an annular shape, *h*, to serve as a guard to keep articles from becoming entangled in the hook, and also to enable the operator to conveniently watch the work as it progresses. The lower part of the support H has its sides *h h* connected by the narrow bar *e*, against which the wrong side of the sweat-leather, at the hemmed or turned edge, is pressed while being sewed, and with a hole, *i*, therein, through which the needle passes in its movements. The feed-block E is pivoted to the part D by the pivot *a*, which feed-block is operated by means of cams on the shaft B', which has its bearing at one end in the part D, and at the other end in the curved arm C, as in the ordinary manner. The feed E' is attached to the feed-block E, and extends out to the side of the curved arms *h* of the work-support, so that its inclined or beveled face *n* bears against the wrong side of the sweat-leather at the hemmed or turned edge, quite near to and on a line with the groove *w* in the bottom of the support H. The presser F is made with a curved ridge, *b*, on its face, as seen clearly in Fig. 4, to correspond approximately with the curve at the point where the "brim" of the hat joins the crown; and the face I on one side of said ridge *b* is flat, and is inclined or beveled to correspond with the inclined or beveled face *n* of the feed, as seen clearly in Fig. 5, and the needle passes up through a hole, *f*, in the presser, to penetrate the work.

The other working parts of the machine, as shown in the drawings, are similar to the ordinary Willcox and Gibbs machine, except that to attach it to the table a foot or standard, A, should be cast upon the curved arm A', through which screws could be inserted.

Secured to the part D by screws *s* inserted through slots *s'*, is a gage, L, having upon one side a piece, N', provided with a tongue, *t*, and a guiding-edge, *v*, and upon the opposite

side another guiding-edge, v' , and a wire guide, L' , may be attached to the gage to assist in guiding the sweat-leather through the gage. The tongue t of the gage is bent down or inward toward the main part L of the gage, and the edge v of the part N' is also bent inward, while the edge v' is bent outward, or stands outward farther from the main part L than the edge v , as seen clearly in Fig. 8.

In the manufacture of the machine I should consider it best to pivot the feed-block E to the part D , at a point near the top at D' , and as near to the support H as possible, in order to arrange the sewing and feed mechanism closely together.

The operation of my invention is as follows: The hat-brim is placed in between the faces of the presser F and feed E' , with the crown of the hat downward, the corner at the point where the rim joins the crown resting upon the curved ridge b of the presser, as seen clearly in Fig. 9, in which $1'$ represents the crown of the hat, $2'$ the brim, and $3'$ the sweat-leather. The sweat-leather, having the edges hemmed or turned in, is then passed through the wire-guide L' , and the tongue t enters between the folded portions of the sweat-lining, spreads the turned part out again, and the sweat-lining is then drawn in between the presser and feed, and the ridge b of the presser forces the crease of the sweat-leather, where it was turned or hemmed, up into the groove w of the support H , so as to hold the folded edge as open as possible, and firm for the needle to penetrate it.

As the machine is operated the feed draws the sweat-leather in, and moves the hat in the same direction, which causes the hat to revolve, and the leather is kept in the proper position for the needle to penetrate the leather and form the stitches just at the point where the leather is hemmed or turned over, the leather, as it is sewed in, standing out from the crown, as shown in Fig. 9. After the sewing is finished, the leather is simply turned back into the crown at the line where the edge was first turned in. The edges v and v' , by bearing against the hem or fold of the sweat-lining, (see Fig. 9,) prevent the sweat-leather from moving to either side as it passes

in to the needle, and the curved edge b of the presser keeps the hat in the same relative position to the leather while the hat revolves, so that the line of stitching is made just at the corner, at the point where the brim joins the crown on the outside of the hat, and at the line of the fold where the edge of the leather was folded or turned in on the inside of the hat, and when finished, and the sweat-leather turned into the hat, the line of stitching is entirely hidden by the leather on the inside, and is entirely hidden by the hat-band on the outside.

Having thus described my invention, what I claim as new is—

1. The piece H , provided with the arms h , which serve as a guard to the hook, the groove w in its supporting-face e , and the perforation i for the needle to pass through, said piece H operating in connection with a presser to hold the folded edge of the hemmed sweat-leather apart, and in a firm position for the needle to penetrate it, substantially as described.
2. The combination of the beveled presser F , provided with the curved ridge b , and the support H having the groove w in its lower face, substantially as described.
3. The feed E' , provided with its beveled face n , operating on the inner side of the hat, in combination with the presser F , having its curved ridge b and beveled face l , and operating on the other side of the hat, substantially as described.
4. The combination of the beveled feed E' , the beveled pressure F , provided with the curved ridge b , and the support H , provided with a groove, w , in its lower face, substantially as described.
5. The gage L , provided with the guiding-edges v and v' , one elevated above the other to keep the leather from moving to either side, and also provided with the tongue t , turned inward toward the part L , to open the turned-in edge of the leather, substantially as set forth.

AARON MOREHOUSE.

Witnesses:

ROGER AVERILL,
THEODORE H. BENEDICT.