

J. STEWART, Jr.

Sewing-Machines for Banding Hats.

No. 141,397.

Patented July 29, 1873.

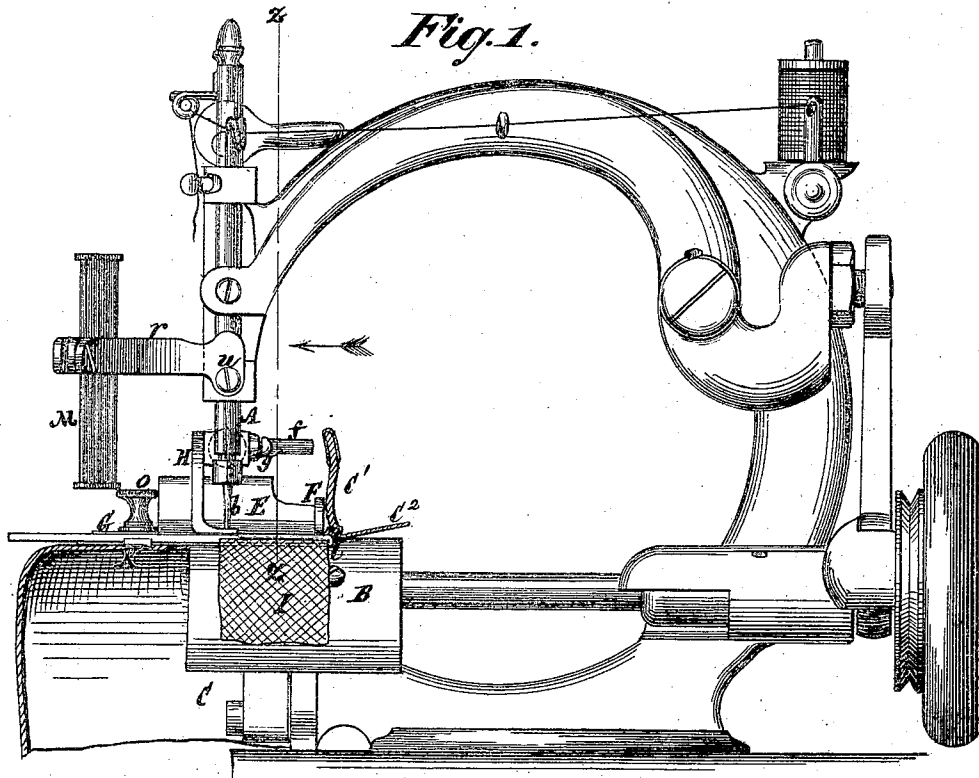
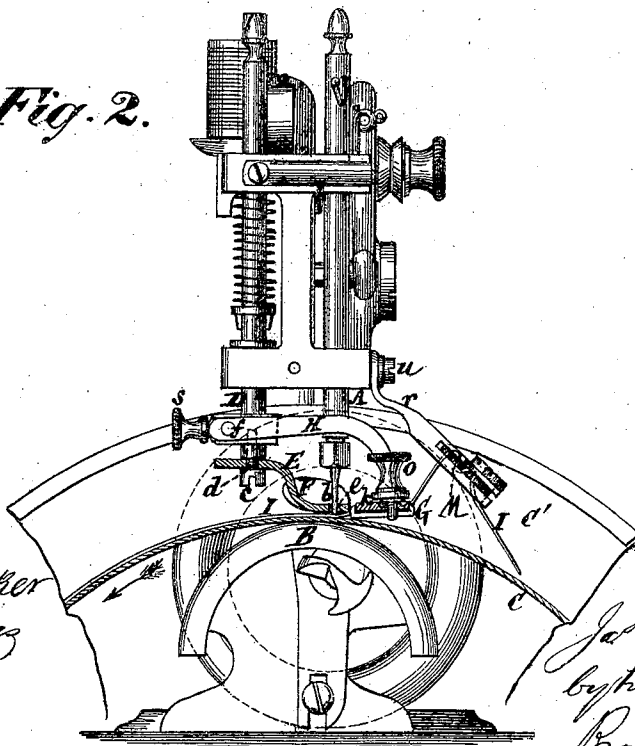


Fig. 2.



Witnesses
John Becker
Fred Hayes

Jas Stewart Jr
by his Attorneys
Brown & Allen

J. STEWART, Jr.

Sewing-Machines for Banding Hats.

No. 141,397.

Patented July 29, 1873.

Fig. 5.

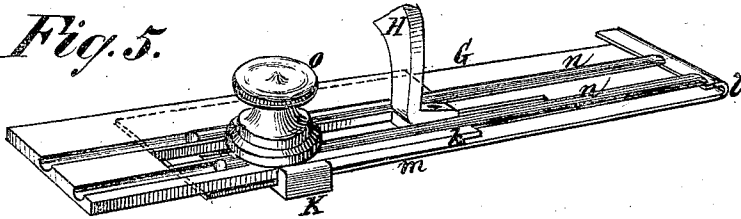


Fig. 3.

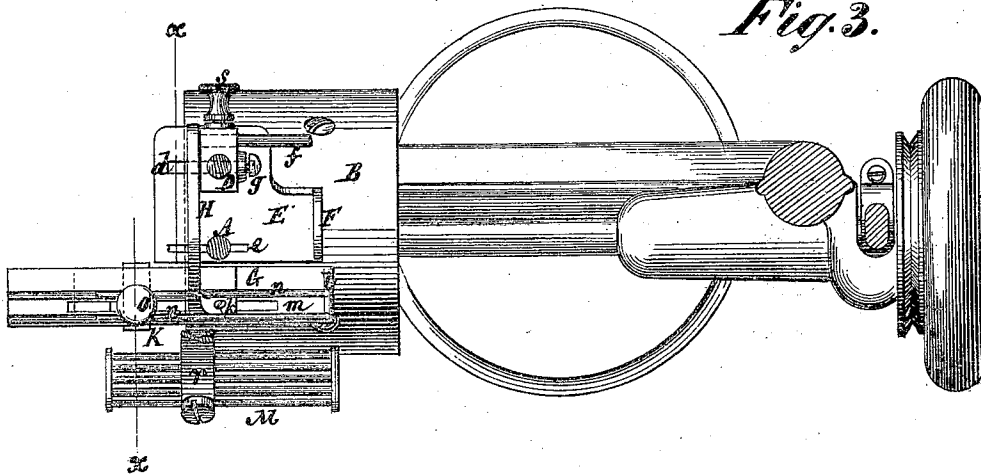
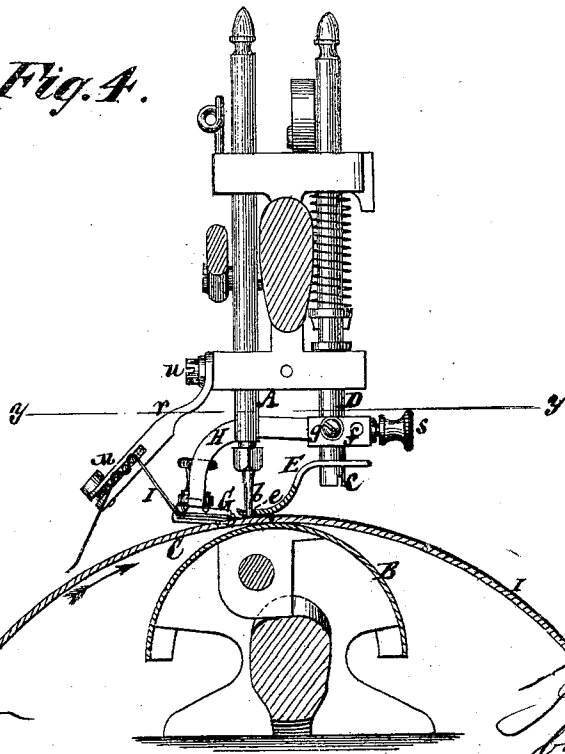


Fig. 4.



Witnesses

John Decker
Robt. Humez

Jas Stewart Jr.
by his attorneys
Brown & Allen

UNITED STATES PATENT OFFICE.

JAMES STEWART, JR., OF YONKERS, NEW YORK.

IMPROVEMENT IN SEWING-MACHINES FOR BANDING HATS.

Specification forming part of Letters Patent No. **141,397**, dated July 29, 1873; application filed April 25, 1873.

To all whom it may concern:

Be it known that I, JAMES STEWART, JR., of Yonkers, in the county of Westchester and State of New York, have invented certain new and useful Improvements in Attachments to Sewing-Machines for Banding Hats, of which the following is a specification:

This invention relates to sewing-machine attachments for automatically stitching or sewing bands on hats of various kinds; and, although here shown as applied to a Willcox & Gibbs' machine, is equally applicable to other sewing-machines. The invention provides for sewing on the band in a regular and rapid manner, preferably along its upper edge, which prevents gathering or puckering, or along its middle, or both upper edge and middle. To these ends, and to accomplish the work in a most perfect manner with provision for feeding the band with bias to insure its close fit to the rim of the hat, and to meet various other requirements, my invention differs from other attachments to sewing-machines for a like purpose in certain novel combinations, including a presser-foot provided with a back finger-guide, and adjustable in direction of its width or transversely to the feed and in proper relation to the needle, substantially as hereinafter described.

In the accompanying drawings which form part of this specification, Figure 1 represents a side view of a sewing-machine with my invention applied thereto, and with a wool or felt hat in section having the band sewn on it. Fig. 2 is a sectional front view on the lines *x x* in Fig. 3, which is a horizontal section on the line *y y* in Fig. 4, and the latter figure a vertical section on the line *z z* in Fig. 1, looking from the back toward the front of the machine. Fig. 5 is a view in perspective, upon a larger scale, of the adjustable gage used in putting on the band.

Similar letters of reference indicate corresponding parts.

A represents the needle-bar of a Willcox & Gibbs' sewing-machine with needle *b* attached, and B the hat-bed or table, of a curved or circular form, to provide for working of the body C of the hat on or around it when sewing on the band. D is the presser-bar of the machine, and E the presser-foot, which latter

is not only adjustable up or down to suit different thicknesses of material, but is of a width sufficient to bear on the band throughout its width, and is adjustable in direction of its width or transversely to the feed by its connection with the presser-bar through a screw, *e*, the shank of which is arranged to enter or pass through a slot, *d*, in the foot, the needle *b* also working through a slot, *e*, therein. This adjustment, conjointly with the similar adjustment of a gage, G, provides for different widths of band and arrangement of the line of stitching relatively to the upper edge or middle of the band. Furthermore, the presser-foot E is constructed or provided at its rear end with a guiding-button surface finger or projection, F, against which the brim C¹ of the hat is borne or pressed by the finger of the operator, while the hat-body C is being fed or worked round or over the table B by the feeding mechanism when sewing on the band, the sweat C² of the hat being turned outward or laid over, as represented in Fig. 1. Again, the gage G, which is connected with the presser-bar by a lever or bar, H, and sliding pivot *f* controlled by a screw, S, is made capable of adjustment by means of a screw, *g*, around the axis of the presser-bar D, to give bias to the band relatively to the feed of the hat-body, to insure its lying close to the brim and prevent its working downward over the body of the hat, especially when the latter is of a stiff taper construction.

The feeding mechanism which works the hat-body over the table B in direction of the arrows shown in Figs. 2 and 4, and with it the band I, may be of the usual or any suitable construction; but it is preferred to duplicate the feeding dogs or surfaces in parallel courses, so that they will draw upon and clamp the hat-body on its inside, opposite the upper and lower edges of the band, for operation in connection with the presser-foot, bearing over the whole width of the band on its outside or above the hat-body, to prevent puckering or gathering of the band I. The adjustable gage G is composed mainly of a front lip or guiding-portion, *k*, for the upper edge of the band, which portion is carried by the lever or bar H and a back lip or guiding-portion, *l*, for the lower edge of the band, said back guiding-

portion being fitted to slide by means of a slotted plate, *m*, rods *n*, and a cross-clamp, *K*, secured by a tightening-screw, *o*, on or along the front portion of the gage, to vary the distance apart of the front and back guides *k l*, according to the width of band to be put on the hat. Said band *I* is introduced between the plate *m* and rods *n*, and under the presser-foot *E*.

When it is desired to sew the band *I* on the hat-body *C* along the top edge of the former, then the outer or front guiding edge or portion *k* of the gage is adjusted in line with the needle *b* by slackening the screw *s* and sliding the bar *H* by its elongated pivot *f*. The back guiding-portion *l* of the gage is then adjusted, by provision of the screw *o*, to correspond with the width of the band and bear against its inner or lower edge, and the presser-foot *E* with its attached back finger-guide *F* adjusted, on slackening the screw *c*, to correspond with the specified adjustments of the gage or back guide *l* of the latter, and so that the guide *F* will be in proper relation to direct the hat in its feed over or round the table *B* by the finger of the operator pressing the brim of the hat up against said guide *F*, as herein previously described.

When it is required to stitch the band in the middle of its width the front guide *k* of the gage is slid forward or out of line with the needle, and its back guide and the presser-foot adjusted to correspond, in accordance with the width of the band.

The tension device *M* is made up of a number

of bars, between or over and under more or less of which, as shown in Figs. 2 and 4, the band *I* is run, according to the amount of tension required, a soft material requiring more tension than a stiff one to insure smooth laying of the band on the hat. This tension device is pivoted, by an arm, *r*, at *u*, to the frame of the machine, so that it may be turned to one side and out of the way, as shown in Fig. 1, when no tension is required. The bars, or frame composed of bars, through which the band passes to effect tension, is fitted to slide through a clamping or slotted portion of the arm *r*, to provide for its adjustment in direction of its length to suit and guide different widths of band and to conform to the adjustments of the gage and presser-foot.

What is here claimed, and desired to be secured by Letters Patent, is—

1. The presser-foot *E* provided with a back finger-guide, *F*, and adjustable in direction of its width, or transversely to the feed and relatively to the needle, substantially as specified.

2. The combination, with the transversely-adjustable presser-foot *E*, of the adjustable gage *G*, when the latter is connected with the presser-bar by a lever, *H*, adjustable around the axis of said bar, and by a sliding pivot, *f*, in transverse relation with the feed, essentially as and for the purposes herein described.

JAMES STEWART, JR.

Witnesses:

WILLIAM R. MOTT,
WM. H. BURKNAP.