T. W. BRACHER.

Machine for Sewing Sweat-Linings into Hats.

No. 221,508. **Patented Nov. 11, 1879.**

Fig. 1.

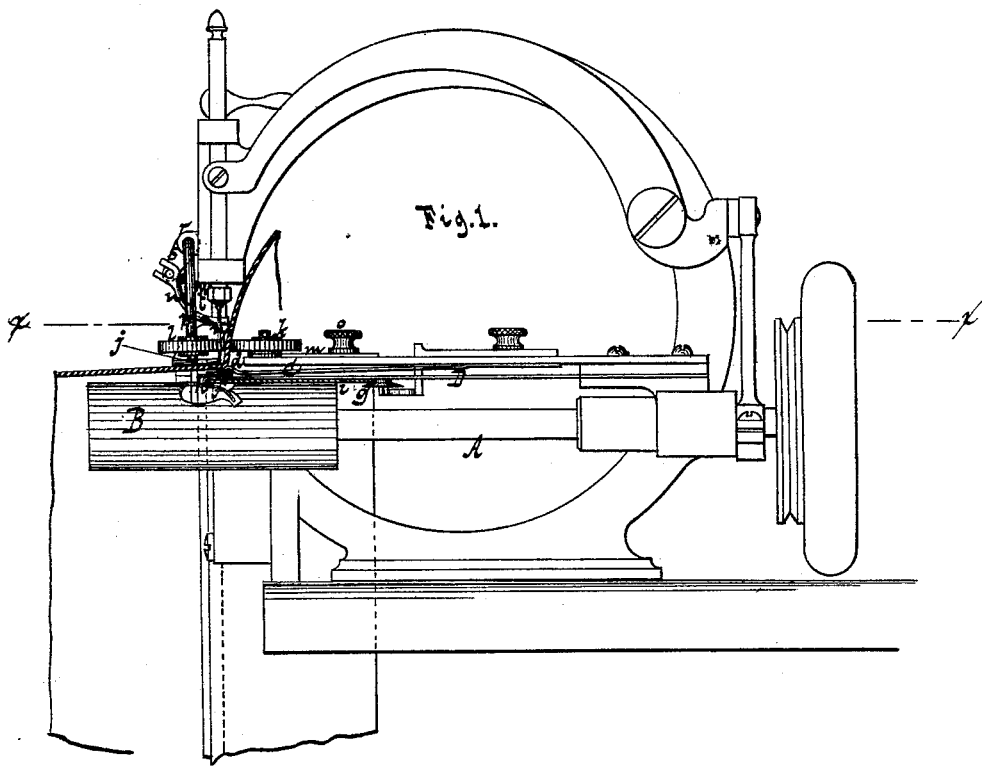


Fig. 2.

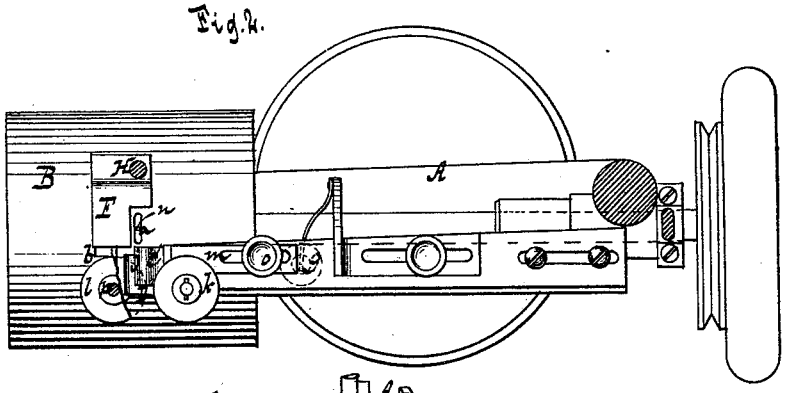
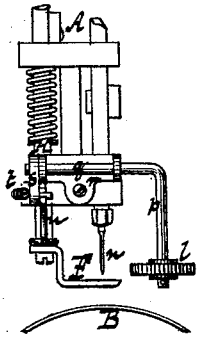


Fig. 3.



Witnesses
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UNITED STATES PATENT OFFICE.

THOMAS W. BRACHER, OF NEW YORK, N. Y.

IMPROVEMENT IN MACHINES FOR SEWING SWEAT-LININGS INTO HATS.

Specification forming part of Letters Patent No. **221,508**, dated November 11, 1879; application filed July 25, 1879.

To all whom it may concern:

Be it known that I, THOMAS W. BRACHER, of the city, county, and State of New York, have invented new and useful Improvements in Machines for Sewing Sweat-Linings into Hats, which improvements are fully set forth in the following specification, reference being had to the accompanying drawings, in which—

Figure 1 represents a side view of a machine embodying my improvements. Fig. 2 is a horizontal section of the same in the plane *x x*, Fig. 1; and Fig. 3 is a front view of a portion thereof.

Similar letters indicate corresponding parts.

This invention consists in the combination, with an organized stitch-forming mechanism, of a curved plate for supporting a hat, upper and lower longitudinal gage-plates, C D, arranged parallel with each other, the former gage having a transverse groove, *d*, to guide the reed-covering and reed, and the latter gage having a lip, *f*, for guiding the inner edge of the sweat-band, and a suitable hat-guide, whereby the hat is properly supported and guided, the reed-covering and sweat-band are sewed together, and the sweat-band is secured to the hat, as more fully hereinafter set forth; also, in the combination, with an organized stitch-forming mechanism, of a curved plate adapted to support the crown of a hat near its head-opening, a suitable gage for guiding the reed in a sweat-band and retaining the same in the proper relation to the hat while the sewing progresses, and a brim-guide, so that the reed and the hat are properly guided and the reed assumes its proper position near the edge of the head-opening without fail; further, in the combination, with an organized stitch-forming mechanism, of a curved plate adapted to support the crown of a hat near its head-opening, a gage adapted to conduct a sweat-band to the sewing mechanism, and two rollers, one of which is adjustably mounted on the gage, while the other is secured to a rock-shaft and subjected to the action of a spring, so that when the hat is placed upon the curved plate its brim is compressed and guided between the two rollers, and by turning the rock-shaft against the action of its spring the brim of the hat is released; also, in the combination of the rock-shaft and the outer guide-roller carried by the same with the presser-slide and mechanism connecting the same with the rock-shaft, so that by raising the presser-foot the outer guide-roller is caused to swing out, and by dropping the presser-foot said outer guide-roller is caused to swing in toward the inner guide-roller, as will be more particularly hereinafter described; further, in the combination, with a stitch-forming mechanism and a curved work-plate, of the upper and lower longitudinal gage-plates, the former having a groove for guiding the reed of a sweat-band, and the latter a lip for guiding the inner edge of a sweat-band, and a spring-impelled roller arranged on the under side of the lower gage-plate and adapted to bear against the outer edge of the sweat-band to maintain the inner edge thereof against the lip of the lower gage, substantially as more fully hereinafter described.

In the drawings, the letter A designates a stitch-forming mechanism or sewing-machine of any suitable construction, and B is a curved plate adapted to support the crown of a hat. In this plate is an opening or throat, *a*, through which passes the needle *n* during the operation of sewing, and another opening, *b*, through which extends the feed-dog. On the frame of the sewing-machine is secured a gage, C, which can be adjusted toward and from the needle, and which is provided with a groove, *d*, adapted to catch over the reed of a sweat-band, as shown in Fig. 1. The gage C is elastic, so that it presses the reed, together with its covering, down upon the plate B, and it is so adjusted that the reed-covering extends over the needle-throat *a*, while the reed lies close on the inside of said throat. When the reed and its covering are already connected to the sweat-band, the body of the sweat-band extends beneath the gage C; but if it is desired to sew the reed-covering and the sweat-band together at the same operation whereby these parts are sewed to the hat, the sweat-band is placed in a gage, D, situated beneath the gage C, and provided with a lip, *f*, against which the front edge of the sweat-band is pressed by the action of a spring-roller, *g*, which acts on the inner or rear edge of the sweat-band, and

which is adapted to adjust itself to the varying width of the sweat-band. (See Fig. 1.)

The crown of the hat to which the sweat-band is to be sewed is passed over the curved supporting-plate B, so that the edge of the head-opening lies close to the groove *d* of the gage C, and over the reed-covering *h* and the outer edge of the sweat-band *i*, Fig. 1, and it is retained in this position by the presser-foot F, so that if the sewing mechanism is set in operation a row of stitches are formed through the crown of the hat, through the reed-covering, and through the sweat-band, near its outer edge, and which unite the reed-covering and the sweat-band simultaneously with each other and with the hat. The reed-covering may, however, be sewed to the sweat-band by a separate operation, and then both together placed beneath the gage C and sewed to the hat, as already explained.

By the action of the groove *d* in the gage C the reed is guided and retained in the proper relation toward the edge of the head-opening in the hat, which is of the greatest importance in order to produce a neat job.

On the upper surface of the gage C is formed a shoulder, *j*, which forms a guide for the edge of the head-opening in the hat; but, in order to guide the hat still better, I have provided a brim-guide, which consists of two rollers, *k l*, the inner roller, *k*, being mounted on a pin secured to a slide, *m*, which is adjusted on the gage C by means of a set-screw, *o*, so that said roller can be set in line with or directly over the shoulder *j* of the gage C. The outer roller, *l*, is mounted on an arm, *p*, extending from a rock-shaft, *q*, which has its bearings in a bracket, *r*, that is firmly secured to the front of the frame of the sewing-machine. From this rock-shaft extends an arm, *s*, to which is hitched a spring, *t*, that has a tendency to throw the roller *l* in against the roller *k*, and to compress the brim of the hat between the two rollers, so that a secure guide for the hat is obtained, and when the sweat-band has been sewed to the hat the reed occupies its proper position on the edge of the head-opening of the hat.

The arm *s* connects by a suitable link, *u*, with the presser-slide H, so that by raising the presser-slide the roller *l* is caused to swing outward away from the roller *k*, and by lowering the presser-slide the roller *l* is permitted to follow the action of the spring *t*, and to swing in toward the roller *k*.

By these means the operation of introducing a hat into the sewing-machine and of removing the same from the sewing-machine is materially facilitated.

I am aware that various sewing-machines have been constructed for sewing sweat-bands into hats, and I do not, therefore, claim such as my invention.

What I claim as new, and desire to secure by Letters Patent, is—

1. The combination, with an organized stitch-forming mechanism, of a curved plate for supporting a hat, upper and lower longitudinal gage-plates, C D, arranged parallel with each other, the former gage having a transverse groove, *d*, to guide the reed-covering and reed, and the latter gage having a lip, *f*, for guiding the inner edge of the sweat-band, and a suitable hat-guide, substantially as described, whereby the hat is properly supported and guided, the reed-covering and sweat-band are sewed together, and the sweat-band is sewed to the hat, as set forth.

2. The combination, with an organized stitch-forming mechanism, of a curved plate adapted to support the crown of a hat near its head-opening, a suitable gage for guiding the reed in a sweat-band and retaining the same in the proper relation to the hat while the sewing progresses, and a brim-guide, constructed and adapted to operate substantially as described.

3. The combination, with an organized stitch-forming mechanism, of a curved plate adapted to support the crown of a hat near its head-opening, a gage adapted to conduct a sweat-band to the sewing mechanism, and two rollers, one of which is adjustably mounted on the gage, while the other is secured to a rock-shaft and subjected to the action of a spring, constructed and adapted to operate substantially as described.

4. The combination of the rock-shaft and the outer guide-roller carried by the same, with the presser-slide and mechanism connecting the same with the rock-shaft, substantially as described, for the purposes set forth.

5. The combination, with a stitch-forming mechanism and a curved work-plate, of the upper and lower longitudinal gage plates, C D, the former having a groove, *d*, for guiding the reed of a sweat-band, and the latter a lip, *f*, for guiding the inner edge of a sweat-band, and a spring-impelled roller arranged on the under side of the lower gage-plate, and adapted to bear against the outer edge of the sweat-band to maintain the inner edge thereof against the lip of the lower gage, substantially as and for the purposes described.

In testimony that I claim the foregoing I have hereunto set my hand and seal this 23d day of July, 1879.

T. W. BRACHER. [L. S.]

Witnesses:
W. HAUFF,
CHAS. WAHLERS.