(No Model.)

T. W. BRACHER & S. W. BALCH.

MACHINE FOR STITCHING SWEAT BANDS FOR HATS.

No. 488,934. Patented Dec. 27, 1892.

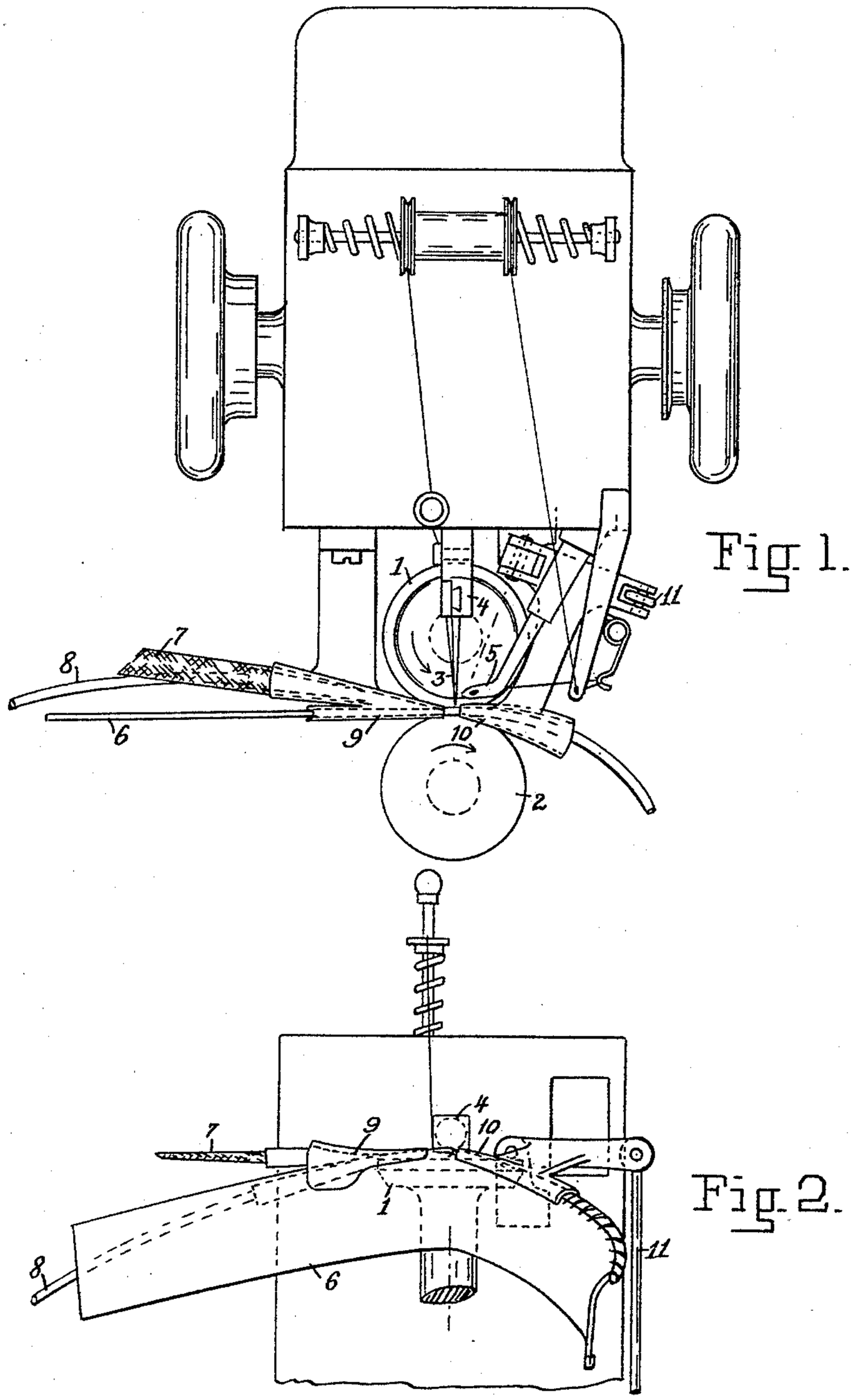

Fig. 1.

Fig. 2.

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MACHINE FOR STITCHING SWEAT-BANDS FOR HATS.

SPECIFICATION forming part of Letters Patent No. 488,934, dated December 27, 1892.

Application filed August 5, 1891. Serial No. 401,811. (No model.)

To all whom it may concern:

Be it known that we, THOMAS W. BRACHER, of New York city, in the county of New York, and SAMUEL W. BALCH, of Yonkers, in the county of Westchester, State of New York, have invented certain new and useful Improvements in Sewing-Machines for Stitching Sweat-Bands for Hats, of which the following is a specification.

Sweat-bands when intended for the better grades of hats are provided with an edge, usually consisting of a small rattan, cord, or wire, which serves as a spring to the edge, and is usually covered with a narrow tape of cloth. This tape of cloth is folded over the spring, and is sewed to the strip of leather used for the sweat-band, thus making an ornamental bead, while the loose edges of the cloth afford a convenient attachment for the basting threads that fasten the sweat-band to the hat. This edge or bead may be attached to the sweat-band by any of the well known stitches made by sewing-machines in uniting fabrics, or the stitch may be taken on the edge of the sweat-band without the addition of the spring or cloth.

Our invention relates to a deflector under which the edge of the sweat-band passes as soon as it is stitched, and which, as will be hereinafter shown, assists in keeping that part of the leather which is approaching the machine in proper place in the gage, and by bending or curving the sweat-band as it is being stitched, causes it to take a natural form after stitching with the stitched edge turned or flanged over when it is coiled so as to properly set in the hat. To accomplish these results it is necessary to bring the deflector quite near to the stitching-point, where the work is gripped by the feed-disks, in order that the stitched edge may pass under it as soon as the stitch is formed. By making the angle of this deflector with the direction in which the work is fed, variable at the will of the operator while the work is going on, an additional advantage is attained, in thus enabling a ready adjustment to variations in the curvature to which the edge of the leather has been cut and to enable the operator to increase this deflection when the center of the leather is passing the stitching point, since this part comes at the front of the hat where more curving of the edge is desirable.

In the accompanying drawings:—Figure 1 shows in top or plan view, a sewing-machine embodying our improvements, and Fig. 2 shows a portion of the same in front elevation, with the front feed-disk removed in order to show more clearly the parts embodying our improvements.

The sewing-machine, in connection with which our improvements are shown, is of the type commonly used in glove-sewing. Two feed-disks 1 and 2 grip and feed the work.

The other elements of the machine, to which attention is directed, in connection with the description of our invention, are the needle 3 carried by the needle-bar 4, and the hook 5 which carries the loops of thread over the edge of the work.

The sweat-band is formed by stitching the leather 6, together with the cloth 7 and spring 8. These are guided by a gage 9 and delivered from it between the feed-disks close to the point where the stitching is done. These turn in the direction of the arrows to feed the work. Parts of the gage surround the spring and the cloth and converge to the stitching point together with a groove on the underside in which the edge of the leather is held by hand and passed horizontally between the feed-disks adjoining which it is stitched. The deflector 10 on the opposite side of the feed-disks from the gage also contains a groove making an angle with the groove in the gage whereby the sweat-band is bent in the direction of its width and the edge to be stitched is slightly stretched as it passes the stitching point. This angle or bend is in a vertical plane, and therefore appears in the elevation, Fig. 2.

The leather, it is to be noted, is gripped by the feed-disks at a point very close to where it is pierced by the needle. Since these feed-disks grip the work substantially in a point about which it is somewhat free to turn, these become a convenient fulcrum, about which the work is slightly pried or turned by the deflector, so that the leather is held up against the groove in the gage, and the band may be

removed from under this gage as soon as the stitching has progressed sufficiently to bring the edge well under the deflector. This action, it will be seen, makes a lever of the sweat-band, and from its yielding and flexible nature, it is to be noted, that the deflector must be brought close to the stitching point. By making the deflection greater than is needed merely to attain the above end, the additional advantage of imparting a flange to the sweat-band is attained. This results from forcibly bending the leather in the direction of its width at the stitching point so that the edge is somewhat stretched. The sweat-band will therefore as soon as released and coiled, curl its stitched edge outward as desired in order to set properly in the hat. The amount of this curling or flanging can be increased by giving a greater angle to the deflector, and in order to do this, provision has been made by which the operator is enabled to vary this angle while the sewing is going on. This deflector is hinged in its attachment to the sewing-machine and the axis of the hinge is made horizontal and positioned so that a prolongation of its axis as indicated by the dotted line in Fig. 1 will approximately meet the end of the deflector where the work enters. A rod 11 attached to the deflector passes within reach of the operator and through it the deflector may be inclined as desired. The deflector is also slightly at an angle, or rather curved from the direction of the gage in a horizontal plane as shown in Fig. 1, in order that the work may be delivered at a more convenient point. For this latter construction we make no claim.

The gage with which the deflector co-operates, has been described with conduits for a tape of cloth and for a spring. These elements are, however, not an essential feature of the gage in stitching edges without the spring and cloth, and when these are omitted, the deflector, still usefully co-operates with the gage in the manner described.

Having described our improvements we claim as new and desire to secure by Letters Patent:—

1. In a sewing machine for stitching sweat-bands the combination with feed disks, of a gage for guiding the edge of the sweat-band to the sewing mechanism and a deflector for guiding the stitched edge of the sweat-band from the sewing mechanism, said gage and deflector being attached to said sewing machine on opposite sides to and closely adjoining the sewing needle and having each a groove at an angle to the other in a plane between and parallel with the longitudinal axes of the feed-disks whereby the sweat-band is bent in the direction of its width as it passes the stitching point, substantially as and for the purpose set forth.

2. In a sewing-machine for stitching sweat-bands a gage attached thereto with a groove for guiding the edge of the sweat-band to the sewing mechanism in combination with a deflector for guiding the stitched edge from said sewing mechanism, and hinged so that the amount of deflection may be varied, together with means substantially as described for varying said deflection, substantially as and for the purpose set forth.

3. A sewing machine for stitching sweat-bands provided with a gage for guiding and a pair of feed disks for feeding the leather and spring in their proper relative positions to the stitching mechanism, deflecting mechanism for receiving the stitched leather as it comes from the stitching mechanism, and with a stitching mechanism so timed and operated that the stitches are formed while the leather is still held in a bent and stretched position, whereby the flanging of the same is accomplished, substantially as and for the purpose specified.

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