No. 819,442. PATENTED MAY 1, 1906.

A. LAUBSCHER.

MACHINE FOR SEWING SWEAT BANDS IN HATS.

APPLICATION FILED FEB. 8, 1904.

2 SHEETS—SHEET 1.

Fig. 1.

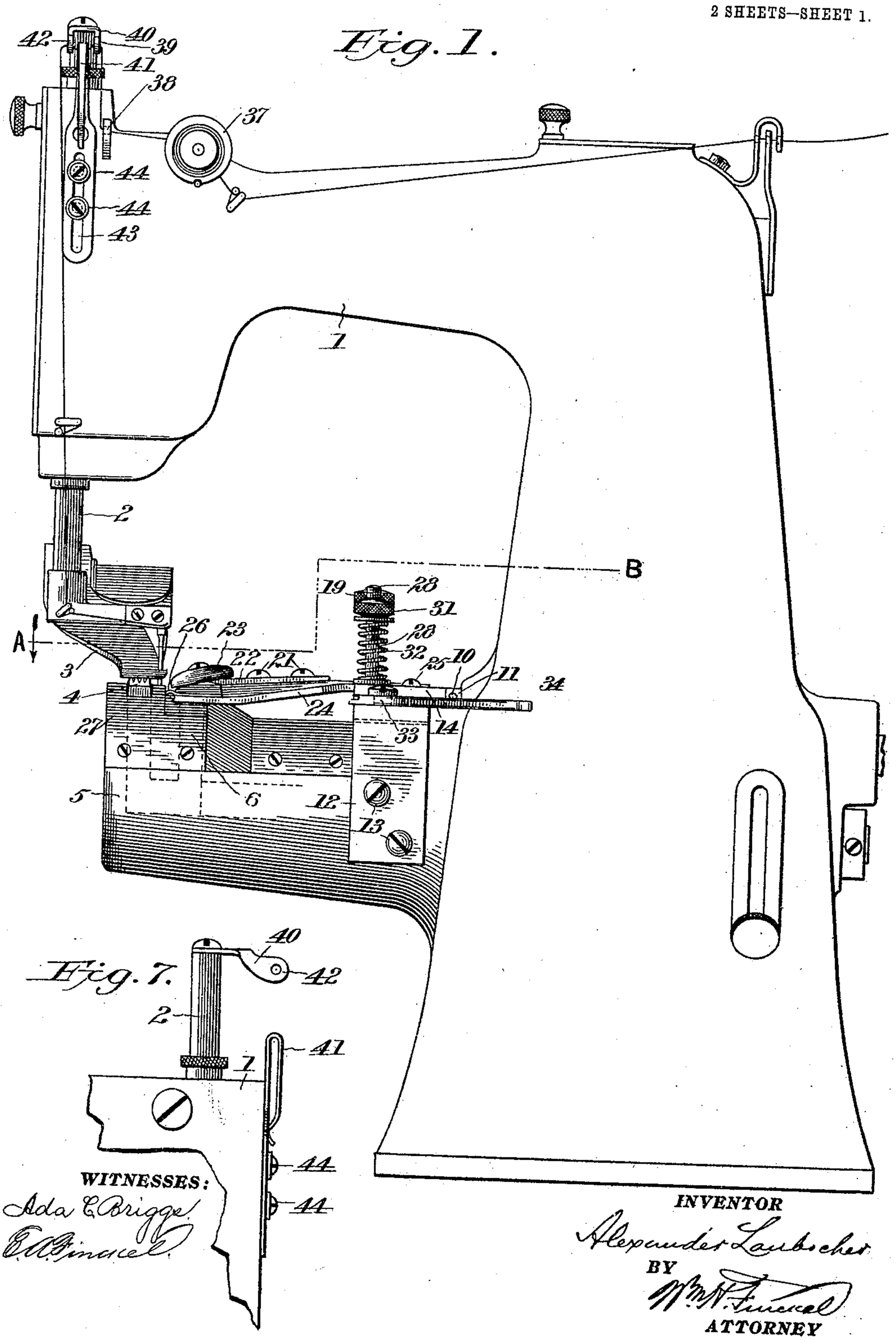

Fig. 7.

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2 SHEETS—SHEET 2.

Fig. 2.

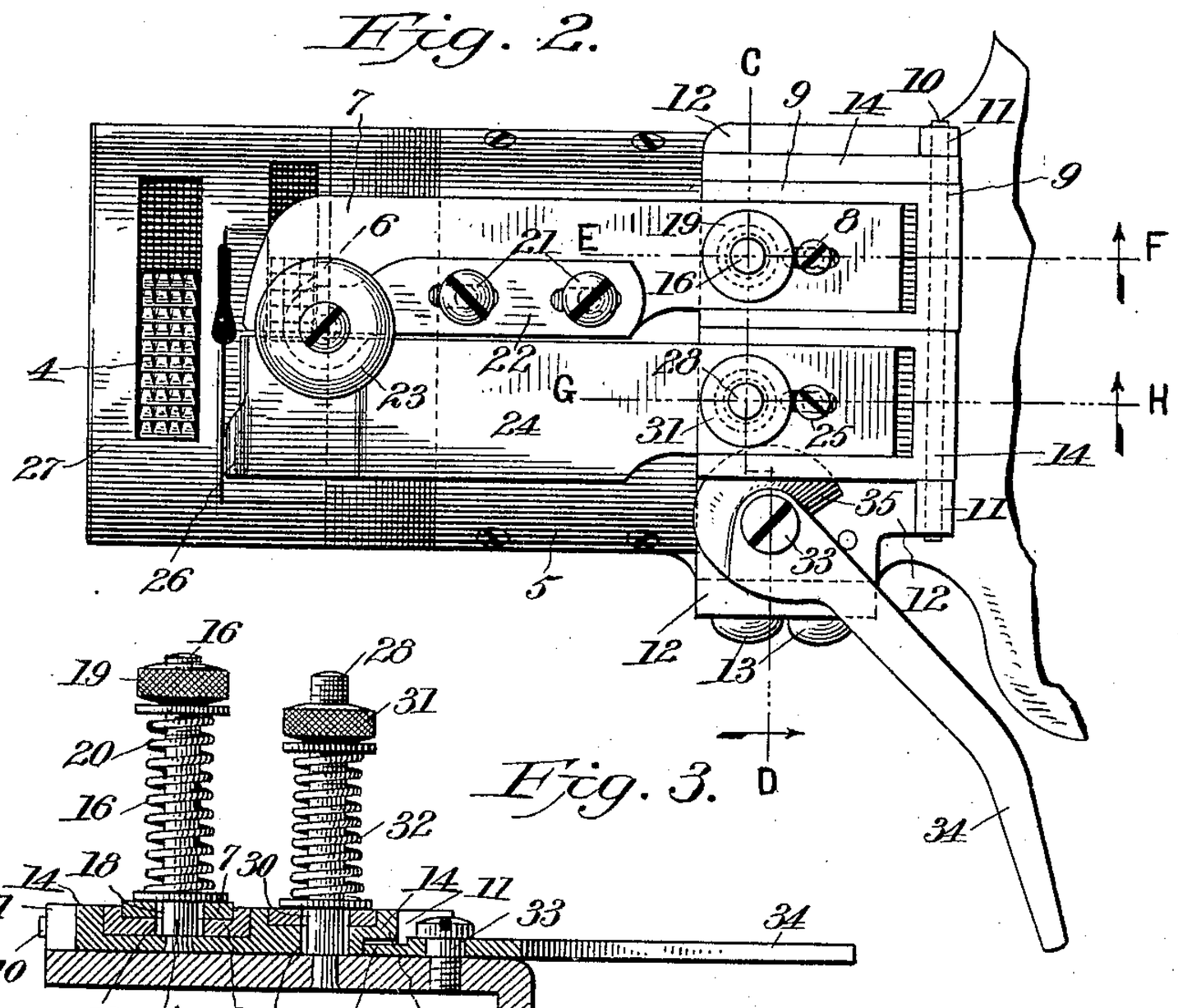


Fig. 3.

Fig. 4.

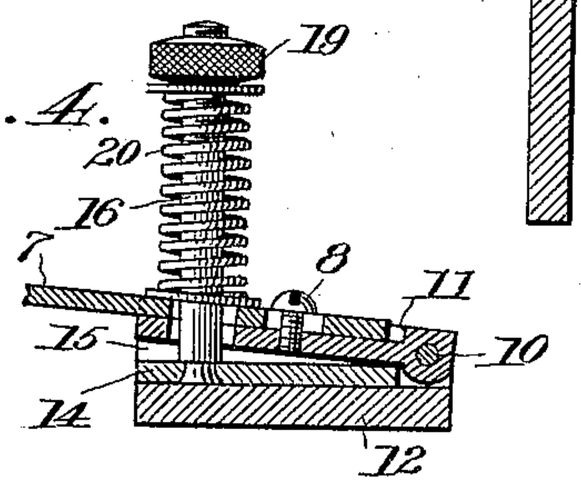


Fig. 5.

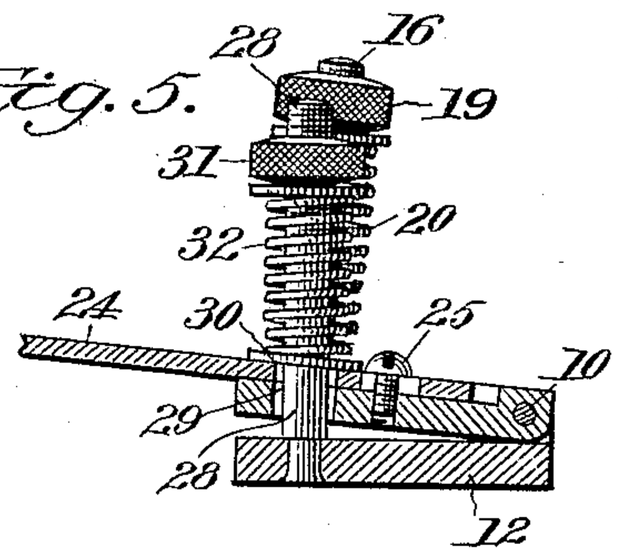
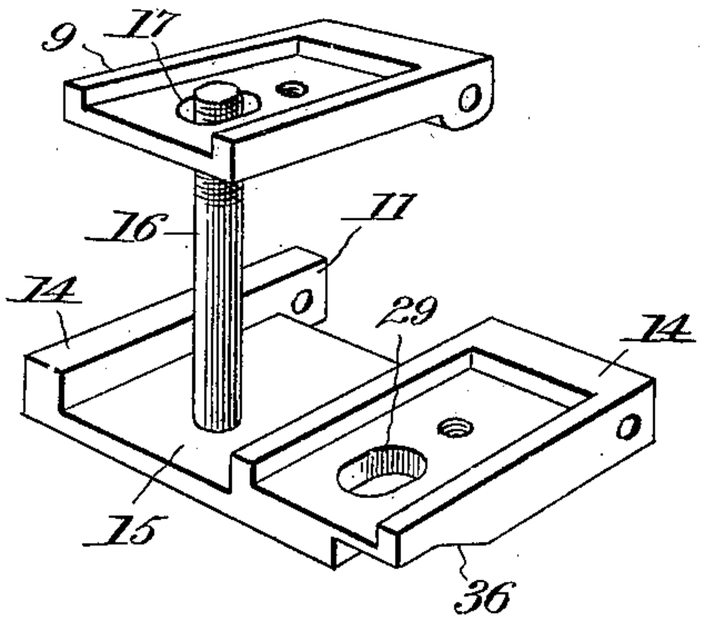


Fig. 6.



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ALEXANDER LAUBSCHER, OF BRIDGEPORT, CONNECTICUT, ASSIGNOR TO WHEELER & WILSON MANUFACTURING COMPANY, OF BRIDGEPORT, CONNECTICUT, A CORPORATION OF CONNECTICUT.

MACHINE FOR SEWING SWEAT-BANDS IN HATS.

No. 819,442. Specification of Letters Patent. Patented May 1, 1906.

Application filed February 8, 1904. Serial No. 192,613.

To all whom it may concern:

Be it known that I, ALEXANDER LAUBSCHER, a citizen of the United States, residing at Bridgeport, in the county of Fairfield and State of Connecticut, have invented a certain new and useful Improvement in Machines for Sewing Sweat-Bands in Hats, of which the following is a full, clear, and exact description.

This improvement in machines for sewing sweat-bands into hats relates especially to the means for guiding and feeding the sweat-band during the sewing operation.

The invention consists of a clamp or presser having a plate hinged horizontally, so as to be movable vertically, two arms on said plate, one of them independently hinged thereon and independently coöperating with one member of a two-part feed-dog, so as properly to present the sweat-band and hat-body to the action of the stitch-forming mechanism and each arm having a graduating spring-pressure mechanism by which the pressure between the feed-dog and the clamp members may be varied to suit materials of different texture, so that the sweat-band may not be either greatly stretched in the feeding action or applied too loosely within the hat. In conjunction with this clamp or presser is a guide for the sweat-band, which is unaffected by the rise of the feed-dog, whereby is avoided any vertical vibration of the guide, and the operator is enabled to manipulate the machine with great accuracy in stitching the band in place, and as a consequence there is a greater output of work as compared with some other machines, all as will now be more particularly set forth and finally claimed.

The improvement is especially adapted for use in connection with the type of machine illustrated in Letters Patent No. 646,756, dated April 3, 1900; No. 728,602, dated May 19, 1903, and No. 734,933, dated July 28, 1903, for improvements in hat-sewing machines.

In the accompanying drawings, illustrating the invention, in the several figures of which like parts are similarly designated, Figure 1 is a front elevation of a sweat-band sewing-machine provided with this improvement. Fig. 2 is a plan view taken in the plane of line A B, Fig. 1: Fig. 3 is a vertical section taken in the plane of line C D, Fig. 2. Fig. 4 is a vertical section taken in the plane of line E F, Fig. 2. Fig. 5 is a vertical section taken in the plane of line G H, Fig. 2. Fig. 6 is a perspective view of a portion of the clamp and guide detached from the machine. Fig. 7 is an end elevation of the front of the machine, partly broken away and illustrating the adjustable take-up mechanism.

1 is the overhanging arm, supporting the needle-carrying bar 2.

3 is a presser-foot secured on the end of a presser-bar (not shown) in the usual or any approved manner and adapted to coöperate with a part 4 of the feed-dog, mounted within the work-support 5, which comprises a cylindrical extension or arm formed integral with or applied to the overhanging arm 1.

As explained in the Patent No. 734,933, referred to, it is desirable that the pressure of the feed on the hat-body be much stronger than the pressure of the feed on the sweat-band, and to this end this invention provides that the part 6 of the feed-dog shall coöperate with an arm 7, carried on the work-support and independent of the presser-foot 3. The arm 7 is adjustably secured by a screw 8 to a hinged member 9, pivoted around a pintle 10, supported by ears 11, formed on an angle iron or bracket 12, secured to the cylindrical extension 5 by screws 13. 14 is a plate also pivoted to the pintle 10 and extending beneath the member 9, so that when said plate is raised the part 9 and arm 7, secured thereto, will also be thereby lifted. The plate 14 is also provided with a recess 15, within which the member 9 fits, but is free to be lifted independently of the plate, the side walls of said recess serving to steady said member 9 and arm 7, carried thereby, against the feeding action of the feed-dog.

16 is a post which projects up through holes 17 and 18, made therefor in the part 9 and arm 7, respectively, and having on its upper threaded end a thumb-nut 19, between which and the arm 7 is interposed a coiled spring 20. By turning the thumb-nut 19 the spring-pressure of the arm 7 against the feed-dog may be increased or diminished to suit the requirements of materials of various strength and texture.

Adjustably secured on the arm 7 by screws

21 is a slide 22, upon the end of which is mounted a guide-roller 23, against which the under side of the hat-brim is pressed while passing through the machine.

24 is an arm secured adjustably to the plate 14 adjacent to the arm 7 by a screw 25 and having formed on its free end a grooved guide 26 for the beaded edge of the sweat-band. The arm 24 extends directly over a suitably-shaped throat-plate 27 and in advance of the portion 6 of the feed-dog, so that the guide 26 on the end of said arm will be unaffected by the lifting action of said dog, thereby insuring greater accuracy in handling the work.

Secured to the bracket 12 is a post 28, which projects through holes 29 and 30 in the plate 14 and arm 24, respectively, and has upon its upper threaded end a thumb-nut 31, between which and the arm 24 is interposed a coiled spring 32, whereby the downward pressure of the arm 24 may be regulated.

Pivoted at 33 to the bracket 12 is a lifting-lever 34, having a cam 35, which coöperates with the beveled under side 36 of the plate 14 to lift the same. The lever 34, as shown in the drawings, is in the position assumed when the arms 7 and 24 are lowered or in sewing position when the hat is being run through the machine. The arms may be raised to introduce the work by moving said lever from right to left, as will be readily understood, the cam 35 on the lever causing the plate 14 to be tilted upwardly on the pintle 10, carrying with said plate the arms which are supported thereby. The arm 7, however, may be raised independently of the arm 24, owing to the peculiar manner in which it is attached to the plate 14, such action readily accommodating itself to the slight lifting motion of the feed-dog, and, as previously pointed out, the yielding pressure of said arm upon the sweat-band may be altered at will by simply turning the thumb-nut 19.

In the machine as illustrated a single-thread or chain-stitch looper mechanism is employed, in which form it is customary to have the needle-bar 2 also act as a take-up for the thread, which in this instance leads from the tension-disk 37 through a leader 38, thence through one arm 39 of a forked leader 40, secured to the top of the needle-bar, thence down around the hook-shaped adjustable leader 41, thence up and through the other arm 42 of said leader 40, and thence down through suitable leaders to the needle. The leader 41 is adjustable by means of a longitudinal slot 43 therein, with which coöperate the set-screws 44, tapped in the arm 2.

It will be observed that the clamp or presser comprising the plate 14, arm 7, and arm 24 is pivoted horizontally, so that it and its parts move vertically in putting in and taking out the work, and that by means of the springs and their adjusting-nuts the pressure upon the clamp or presser may be varied to suit different classes of work or different conditions of work.

What I claim is—

1. In a machine for sewing sweat-bands in hats, a presser-foot and a driven feed-dog with which it coöperates to feed the hat-body, said feed-dog having portions for individual coöperation with the hat-body and the sweat-band, a work-support, a clamp or presser having a plate horizontally pivoted on the work-support and an arm horizontally pivoted on said plate movable vertically with said plate and also having an independent vertical movement thereon and provided with a spring pressing vertically upon it to hold it in contact with the sweat-band after the manner of a presser-foot, whereby the hat-body and the sweat-band are separately pressed into contact with the respective portions of the feed-dog.

2. In a machine for sewing sweat-bands in hats, a presser-foot and a driven feed-dog with which it coöperates to feed the hat-body, said feed-dog having portions for individual coöperation with the hat-body and the sweat-band, a work-support, a clamp or presser having a plate horizontally pivoted on the work-support and an arm horizontally pivoted on said plate movable vertically with said plate and having an independent vertical movement thereon and provided with a spring pressing vertically upon it to hold it in contact with the sweat-band after the manner of a presser-foot, and means to vary the pressure of said spring, whereby the hat-body and the sweat-band are separately pressed into contact with the respective portions of the feed-dog.

3. In a machine for sewing sweat-bands in hats, a presser-foot, a driven feed-dog to feed the hat-body, a vertically-movable plate, a bracket rigid with the work-support and to which said plate is hinged, an arm having one end secured to said plate, a grooved guide for the beaded edge of the sweat-band applied to the other end of said arm, a lever cooperating with said hinged plate to lift the same in order to introduce the sweat-band, and a spring for depressing said plate and arm carried thereon, in combination with an arm adjacent to said first-mentioned arm and pivoted at its heel end so as to overlie said plate while the free end coöperates with said feed-dog to feed the sweat-band, and means for varying the pressure of said arm.

4. In a machine for sewing sweat-bands in hats, a work-support, and a presser for the work, comprising a horizontally-hinged and vertically-movable plate, an arm fixed to said plate, a spring normally depressing said

arm and plate, a second spring-pressed arm independently hinged to said hinged plate and movable vertically independently of and also conjointly with it, and independent means for regulating the spring-pressure upon the respective arms.

In testimony whereof I have hereunto set my hand this 6th day of February, A. D. 1904.

ALEXANDER LAUBSCHER.

Witnesses:
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ABBIE M. DONIHU.