

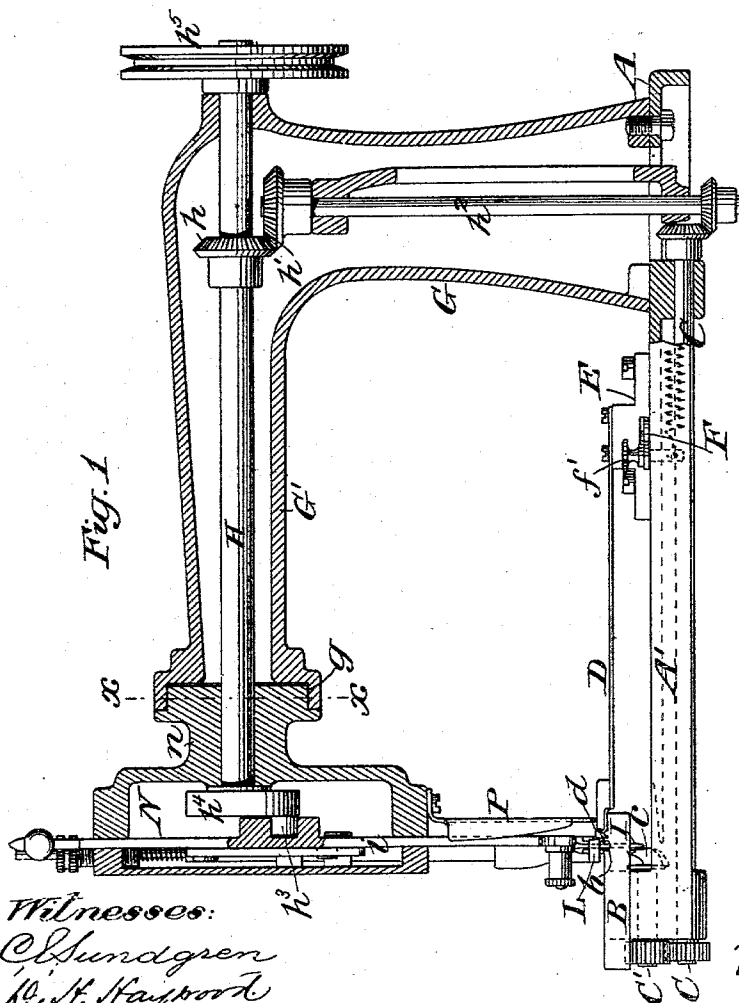
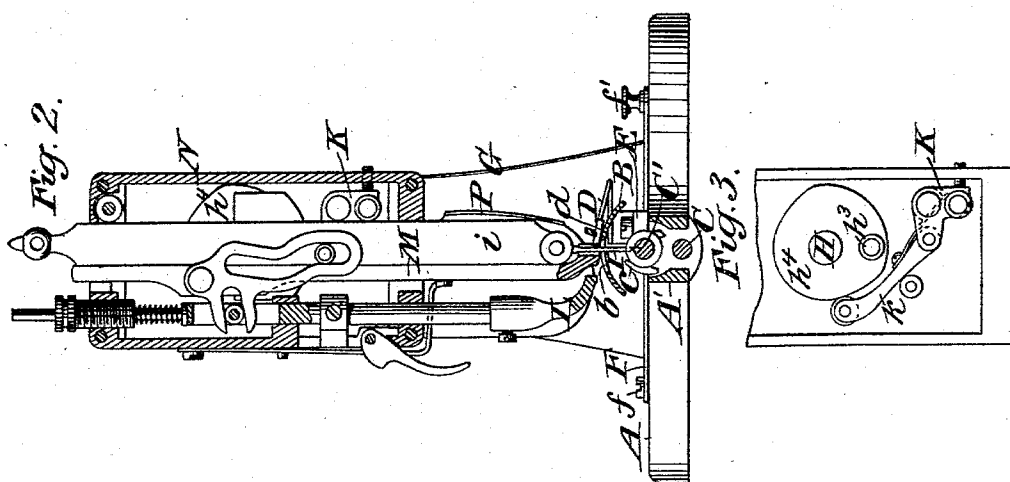
(No Model.)

2 Sheets—Sheet 1.

G. W. WEISS.
SEWING MACHINE.

No. 552,942.

Patented Jan. 14, 1896.



Witnesses:
O. Sundgren
R. H. Haywood

Inventor:
George W Weiss
by attorneys
Brown Sewall

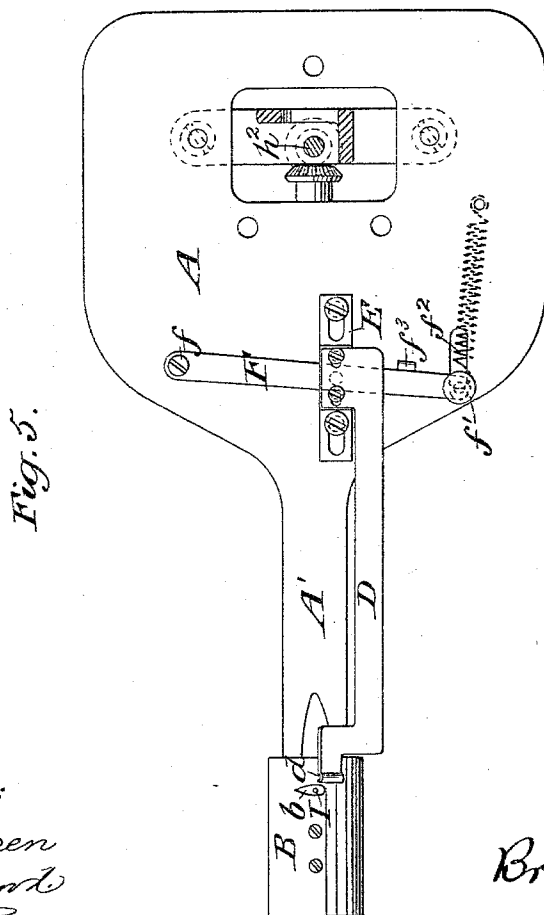
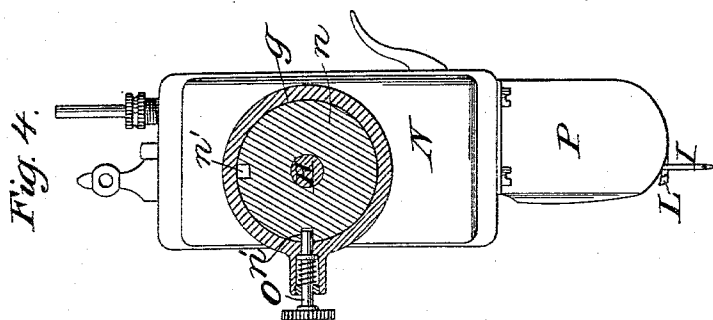
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Inventor:
George W. Weiss
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UNITED STATES PATENT OFFICE.

GEORGE W. WEISS, OF BROOKLYN, ASSIGNOR TO JOHN STEWART, OF
NEW YORK, N. Y.

SEWING-MACHINE.

SPECIFICATION forming part of Letters Patent No. 552,942, dated January 14, 1896.

Application filed January 16, 1893. Serial No. 458,558. (No model.)

To all whom it may concern:

Be it known that I, GEORGE W. WEISS, of Brooklyn, in the county of Kings and State of New York, have invented a new and useful Improvement in Sewing-Machines, of

My invention relates to an improvement in sewing-machines, and more particularly to sewing-machines for sewing sweat-bands to hats.

The object of my invention is to provide a machine by which a hat-sweat can be sewed into a hat (stiff or pliable) without difficulty, to provide means for the proper guidance and manipulation of the sweat-band, and to protect the hat or hat-brim from the operating parts of the machine.

A practical embodiment of my invention is represented in the accompanying drawings, in which—

Figure 1 is a view of the machine in longitudinal vertical section, partly in elevation. Fig. 2 is a view in end elevation with the face-cap removed. Fig. 3 is a view in detail of the mechanism for producing the needle-feed. Fig. 4 is a vertical transverse section through line *x x* of Fig. 1, looking toward the needle end; and Fig. 5 is a top plan view of the base and work-table, the standard and overhanging arm with the mechanism supported thereby being removed.

The bed-plate consists of a broad portion A farthest from the needle and a narrow horn or neck portion A' at the end nearest the needle. A curved cloth-plate B is secured to the extreme end of the horn A' and is elevated therefrom. A looper-driving shaft C extends along within the horn A' and gears with a short counter-shaft C' carrying a looper *c* on its inner end beneath the needle-slot *b* in the cloth-plate B. An adjustable work-guide D is elevated from the bed-plate and is secured to a slide E on the bed-plate A, and extends thence along and is spaced from the horn A' to a point over the cloth-plate B in proximity to the needle-slot *b*. At its extreme end the guide D is provided with a transverse groove *d*, preferably formed by curving its extreme end, and this groove is adapted to receive and guide the reed edge of the sweat-band and hold it in proper position

with relation to the needle while the reed covering and sweat-band are being sewed into the hat. The reed edge of the sweat-band is that edge along which a small reed is commonly inserted in the band to make a rounded finished edge, and the japanned-cloth strip united along one of its edges with the under side of the sweat-band projects past the reed edge to receive the stitches which unite it with the hat, the sweat-band when turned into the crown of the hat serving to conceal both the cloth strip and stitches.

The slide E is guided by screws passing through elongated slots in said slide and fixed in the bed-plate, and said slide moves sufficiently to advance the free end of the guide inwardly to the inner edge of the cloth-plate B for inserting the sweat-band beneath the guide, between it and the horn A'. A lever F pivotally secured to the bed-plate at *f* and loosely connected with the slide E by passing freely through a slot therein is provided with an operating-knob *f'*. A retracting-spring *f''* is connected with the under side of the bed-plate and to an extension of the knob *f'* of the lever F to throw the latter into a normal or retracted position, and the said lever F and hence the guide D is held in advanced or operative position against the tension of the spring *f''* by a stop *f'''* on the base.

A hollow supporting-standard G with an overhanging arm G' rises from the base portion A. The main drive-shaft H is mounted in the arm G' and carries a pinion *h* which gears with a pinion *h'* on an upright shaft *h''*, which also is geared with the looper drive-shaft C.

The needle is denoted by I and is carried by a needle-bar *i*, reciprocated vertically by a crank-pin *h'''* on a cam-disk *h''''* fixed on the shaft H. The needle-bar *i* is vibrated to feed the work by an angle-lever K operated by a lever *k* controlled by the cam-disk *h''''*.

The needle-bar controls the movements of the presser-foot bar L to the extent of releasing the pressure at the moment of feed by means of an intervening feed-bar M connected with the needle-bar and presser-foot bar in a well-known manner.

The needle-bar, feed-bar, presser-foot bar and their connecting mechanism are mounted

in a box head-piece N, swiveled on the drive-shaft H by means of a hub or neck *n*, the end of which fits within a socket *g* in the end of the overhanging arm G'.

5 The drive-pulley *h*⁵, removably secured on the shaft H at one end of the frame and the cam-disk *h*⁴, secured on the end of the said shaft within the box head-piece N, serves to hold the head-piece in position with the end
10 of its neck within the socket *g*. That portion of the neck *n* which enters within the socket *g* is provided with notches *n'* in its periphery for locking the head N in the desired adjustment for operating upon the work and for inserting and removing the work. A spring-
15 actuated catch O is mounted in the wall of the socket *g* in position to extend through the wall of said socket and into the notches *n'* to effect the locking of the head.

20 A guard-piece P, Fig. 4, secured at its upper end to the under side of the head N, extends downwardly parallel with and along the inner side of the needle-bar and needle to a point within a short distance of the work-table
25 B, to separate the hat-brim from unintentional contact with the moving parts. The guard is also provided with an extension arranged at a right angle to the main part and projecting in front of the needle and needle-bar, as shown
30 in Fig. 1. It will thus be seen that the hat-brim or other part of the hat will be thoroughly protected from the operating parts of the machine above the bed-plate during the operation of sewing.

35 In operation when it is desired to adjust the hat and sweat-band for attaching the latter to the hat, the head N may be first swung around to carry the needle off to one side of its normal position. The guide D is then
40 thrown inwardly to bring its free end at the edge of the cloth-plate. The sweat-band is then inserted between the guide D and the horn A' with its reed edge on the cloth-plate B in proximity to the needle-slot and with its
45 covering-strip over the needle-slot. The guide D is then shifted outwardly to bring the groove in its end on the reed edge of the sweat-band. The hat may then be inserted in position by passing its brim through the
50 free open space between the head N and the cloth-plate B to bring its body portion adjacent to the brim where the seam is to be made

over the needle-slot, and the head N may then be swung back into its normal position with the needle over the cloth-plate, and the seam
55 is then formed. When the seam is completed, the hat with its sweat-band attached thereto may be removed from the machine by again turning the head N off to one side and shifting the guide D inwardly.
60

While I have shown in the present instance a rotary looper-hook for forming the stitch, a reciprocating shuttle of well-known or approved construction might be utilized if it were found desirable to form a lock-stitch
65 instead of a chain-stitch.

What I claim is—

1. The combination with the bed-plate having a narrow horn-extension, of a throat-plate secured to the outer end of the horn and elevated therefrom, a slide supported and guided
70 on the bed-plate adjacent the inner end of the horn, a guide carried by said slide at an elevation from the bed-plate and extending lengthwise of, and spanning the distance between, the slide and throat-plate, means for
75 normally holding the guide retracted, means for shifting the guide, and means for holding the guide in operative position; substantially as described.
80

2. The combination with the bed-plate having a throat-plate secured thereto and elevated therefrom, of a slide supported and guided on the bed-plate at a distance from the throat-plate, a guide carried by said slide at
85 an elevation from the bed-plate and spanning the distance between the slide and throat-plate, means for normally holding the guide retracted, a lever pivoted to the bed-plate and loosely connected to the slide for shifting said
90 guide, and means for holding the guide in operative position; substantially as described.

3. In a sewing machine, the combination with the head thereof carrying a needle bar and needle, of a needle guard secured to and
95 depending from the head adjacent to and parallel with the bar, and comprising two plates arranged at a right-angle to each other and disposed respectively in front, and at one side, of the needle; substantially as described.

GEORGE W. WEISS.

Witnesses:

FREDK. HAYNES,
I. B. DECKER.