Aug. 28, 1923. 1,466,486

M. SCHLOSS

MACHINE FOR STITCHING HAT BRIMS AND THE LIKE

Filed July 18, 1918 4 Sheets-Sheet 1

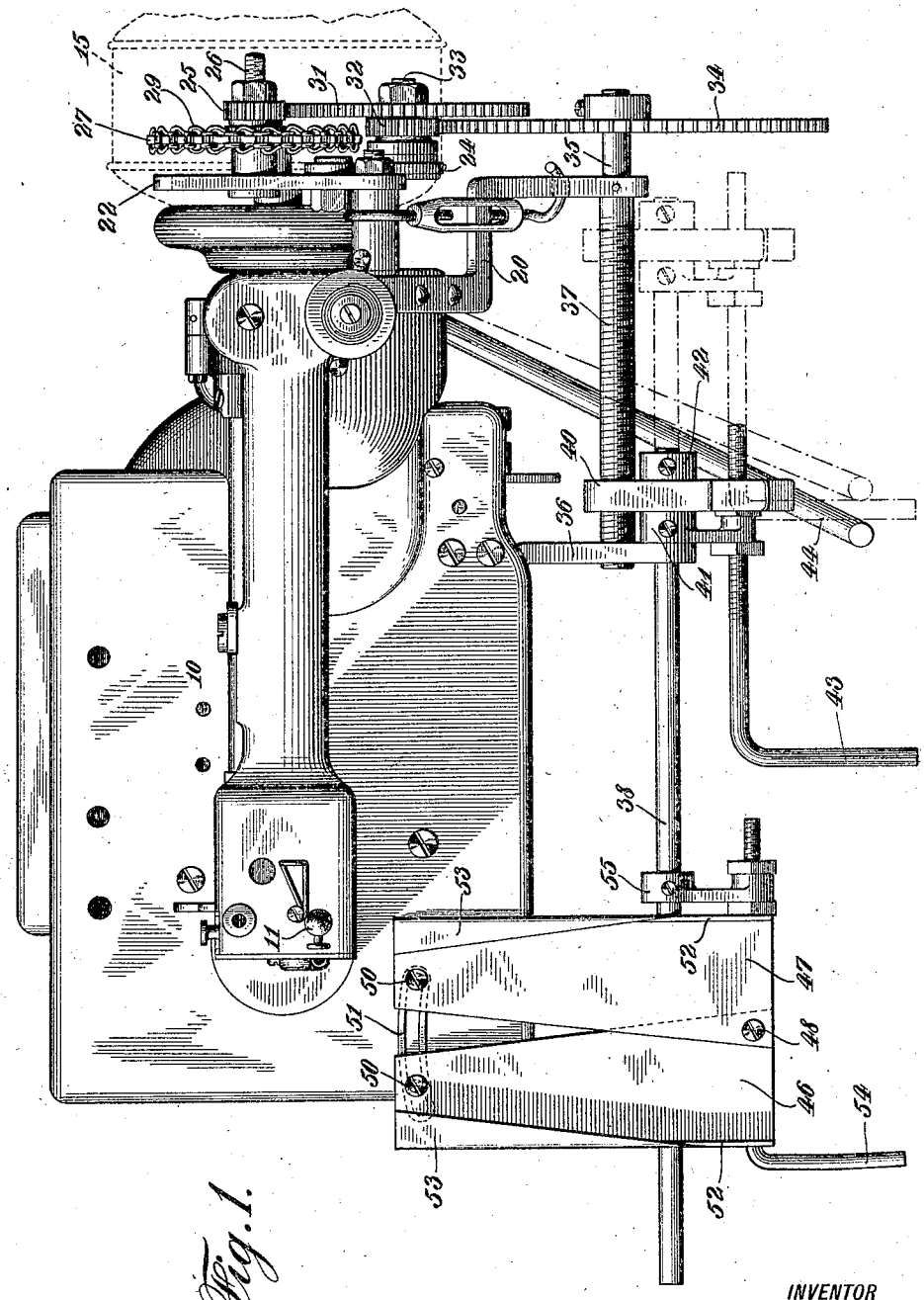

Fig. 1.

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MACHINE FOR STITCHING HAT BRIMS AND THE LIKE

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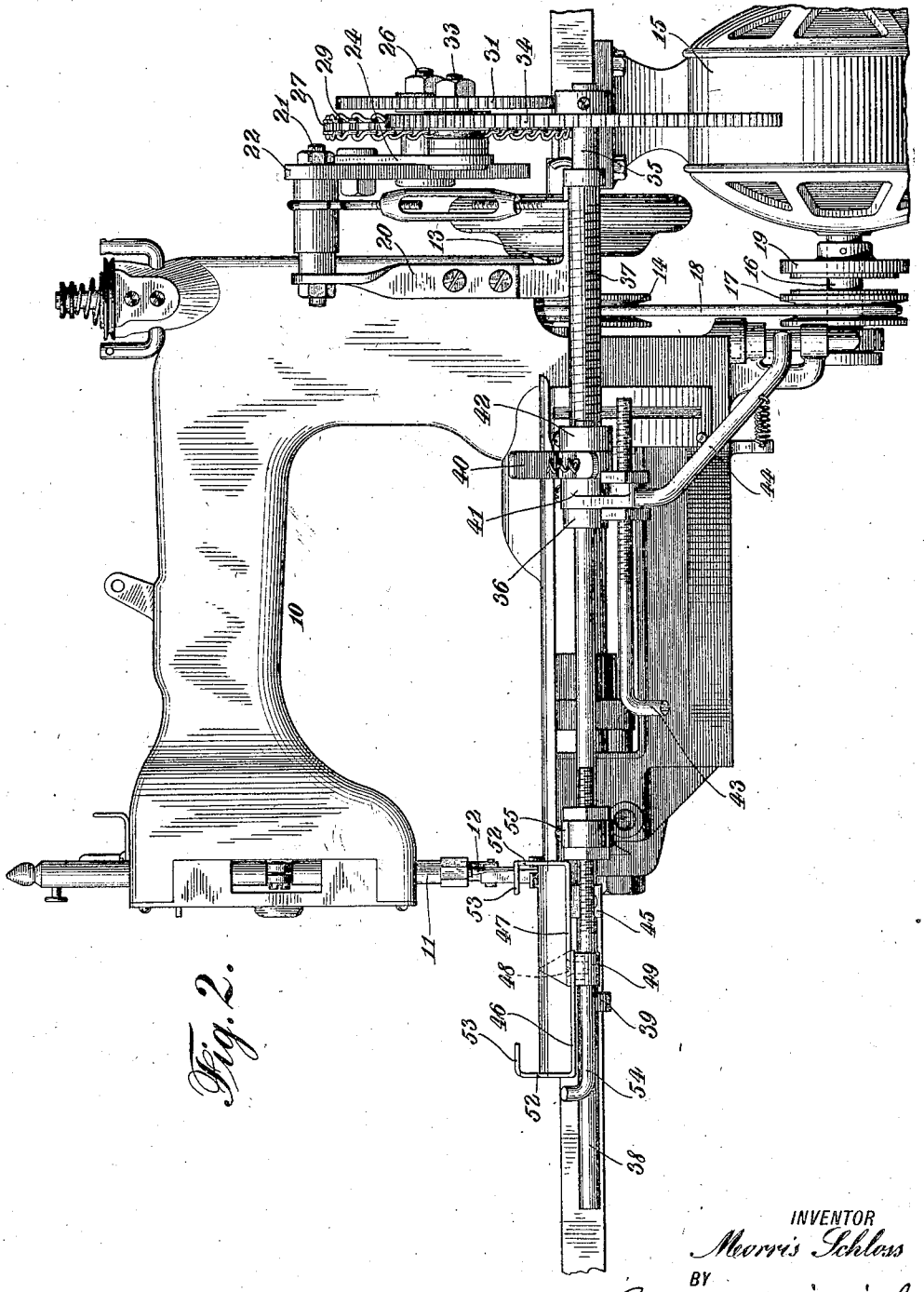

Fig. 2.

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MACHINE FOR STITCHING HAT BRIMS AND THE LIKE

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Fig. 3.

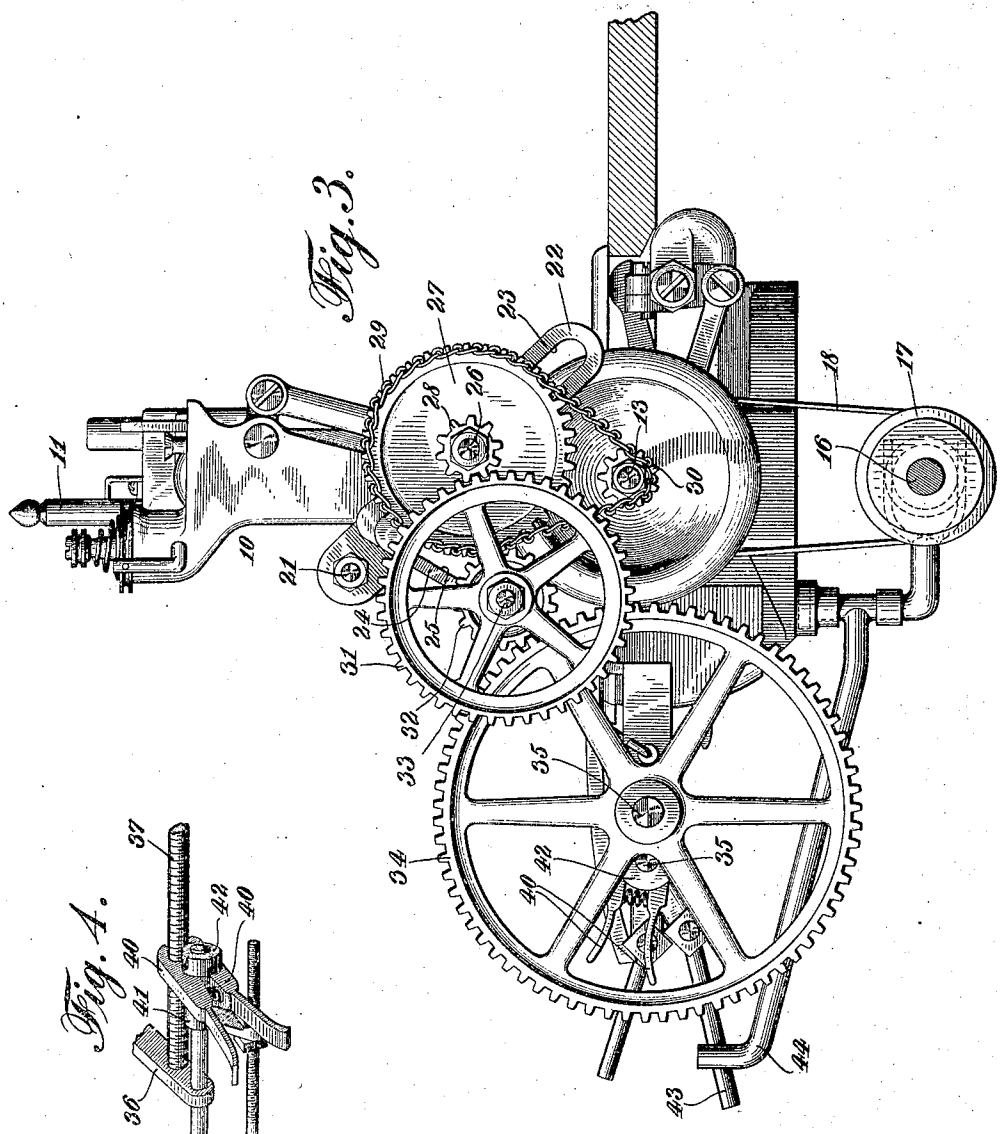

Fig. 4.

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Aug. 28, 1923. 1,466,486

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MACHINE FOR STITCHING HAT BRIMS AND THE LIKE

Filed July 18, 1918 4 Sheets-Sheet 4

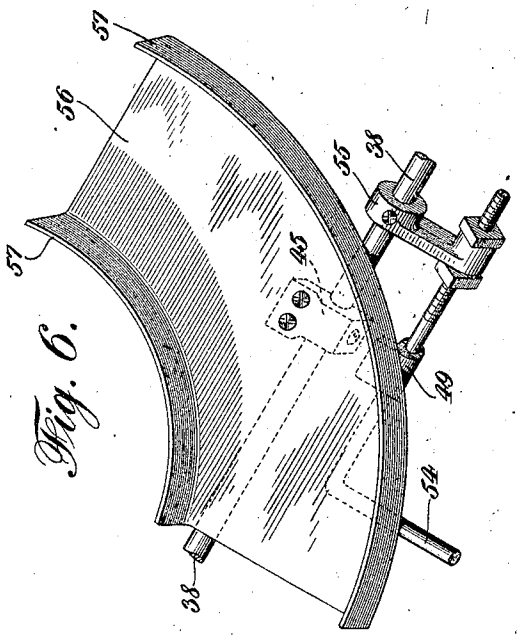
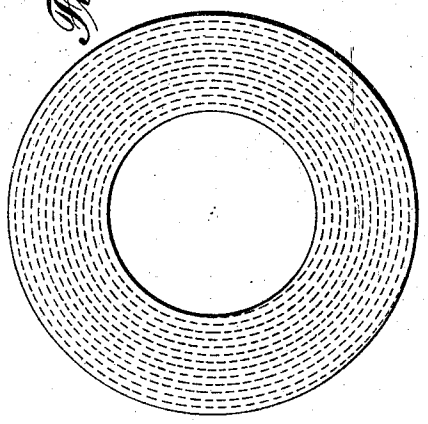


Fig. 6.

Fig. 8.



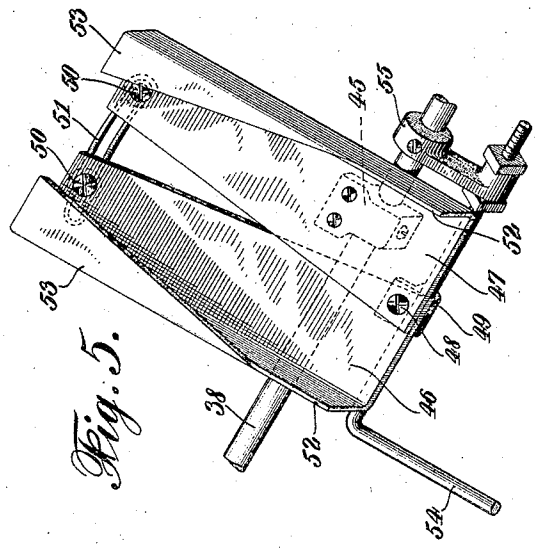


Fig. 5.

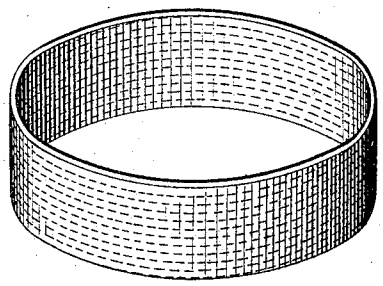


Fig. 7.

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Patented Aug. 28, 1923. 1,466,486

UNITED STATES PATENT OFFICE.

MORRIS SCHLOSS, OF NEW YORK, N. Y.

MACHINE FOR STITCHING HAT BRIMS AND THE LIKE.

Application filed July 18, 1918. Serial No. 245,463.

To all whom it may concern:

Be it known that I, MORRIS SCHLOSS, a citizen of the United States, residing at the city of New York, borough of Manhattan, in the county and State of New York, have invented certain new and useful Improvements in Machines for Stitching Hat Brims and the like, of which the following is a full, clear, and exact specification.

This invention relates to improvements in machines for stitching hat-brims and analogous articles, and the same has for its object to provide a machine of the character specified by means of which a continuous spiral row of stitching may be produced upon a flat body, or upon a hollow cylindrical body of material.

Further said invention has for its object to provide a machine of the character specified in which the work is automatically and positively fed and guided to and past the needle in order to insure absolute regularity in the spacing of the successive convolutions of the spiral row of stitching.

Further said invention has for its object to provide a machine of the character specified in which the spiral feeding and guiding means may be so adjusted that the same will automatically arrest the operation of the machine when the end of the desired spiral row of stitching has been reached.

Further said invention has for its object to provide a machine of the character specified in which the spiral feeding and guiding means is so constructed and arranged that after completing one spiral row of stitching the same may be easily and quickly reset to repeat its operation.

Further said invention has for its object to provide a machine of this type in which the distance between adjacent spirals of the stitching may be readily varied.

Further said invention has for its object to provide a machine of this type which is simple in its construction, and efficient and positive in its operation.

Other objects will in part be obvious and in part be pointed out hereinafter.

To the attainment of the aforesaid objects and ends my invention consists in the novel details of construction, and in the combination, connection and arrangement of parts hereinafter more fully described and then pointed out in the claims.

In the accompanying drawings wherein like numerals of reference refer to like parts throughout the several views—

Figure 1 is a plan view of a machine constructed according to and embodying my invention;

Fig. 2 is a front elevational view thereof;

Fig. 3 is an end view thereof;

Fig. 4 is a detail view of the spring pressed jaws and the associated parts;

Fig. 5 is a detail view showing a guide plate adapted for use in connection with tubular hat-brims;

Fig. 6 is a detail view showing a guide plate adapted for use in connection with flat annular hat-brims;

Fig. 7 is a perspective view of a tubular hat-brim having the spiral stitching applied thereto, and

Fig. 8 is a plan view of a flat, annular hat-brim having the spiral stitching applied thereto.

Referring to the drawings, 10 indicates a sewing-machine head, of any approved type, comprising a reciprocatable needle bar 11 to the lower end of which a needle 12 is secured. The bar 11 is reciprocated, in the well-known manner, by means of suitable mechanism operatively connected to the bar 11 and to a shaft 13 having a pulley 14 secured thereto. 15 indicates an electric motor, carried by the frame of the sewing-machine, having a shaft 16 upon which is loosely mounted a pulley 17 operatively connected to the pulley 14 by a belt 18. The pulley 17 is adapted to be moved into and out of engagement with a clutch member 19, secured to the shaft 16, as hereinafter described.

A bracket 20, secured to the head 10 of the machine, carries, at its upper end, a support 21 to which is secured one end of an arm 22 having a longitudinally-extending slot 23 formed therein. Secured to the arm 22, and forming an angle therewith, is an arm 24 provided with a longitudinally-extending slot 25. A stud 26 is adjustably supported within the slot 23 of the arm 22, and rotatably mounted upon said stud 26 is a sprocket wheel 27 having a pinion 28 fixed thereto. A sprocket chain 29 connects the sprocket wheel 27 with a sprocket wheel 30 fixed to the shaft 13 of the machine head 10.

The pinion 28 meshes with a gear wheel 31 carrying a pinion 32 and rotatably mounted upon a stud 33 adjustably supported within the slot 25 formed in the arm 24. The

pinion 32, in turn, meshes with a gear wheel 34 secured to a shaft 35 rotatably supported by the bracket 20 and by a bracket 36 secured to the machine head 10. The shaft 35 is provided, intermediate the supporting brackets 20 and 36, with an endless screw 37.

A rod 38, slidably and rotatably supported by the bracket 36 and by a bracket 39 secured to the head 10, carries a pair of spring pressed jaws 40 which are held in position upon the rod 38 by sleeves 41 and 42 fixed thereto adjacent one end thereof. The inner ends of the jaws 40 are provided with recesses shaped to conform to the endless screw 37 and provided with threads to engage the threads thereof, whereby they jointly form a travelling nut, constituting a follower. As the endless screw 37 is rotated, the follower, formed of the inner ends of the jaws 40, will travel along the same, thereby causing a longitudinal movement of the rod 38 within its supporting brackets 36 and 39. An actuating member 43 is adjustably supported by the sleeve 41, and is so positioned that, when the rod 38 has moved a predetermined distance, it will engage the free end of an arm 44, operatively connected to the pulley 17, and actuate the arm 44 to move the pulley 17 out of engagement with the clutch member 19, in order to disconnect the same from the driving shaft 16 of the electric motor 15.

A supporting member 45, fixed to the rod 38, has removably secured thereto a guide-plate, which serves to support the hat-brim and to feed the same to the needle 12, transversely to the normal line of feed. As shown in Figs. 1 to 5 inclusive, the guide-plate consists of two sections 46 and 47, having their outer ends pivotally connected to one another, as by a screw 48 engaging a block 49, and having their inner ends adjustably connected to one another by means of bolts 50, 50 carried by the sections 46 and 47 and engaging a slotted, arc-shaped link 51. The sections 46, 47, of the guide-plate are provided at their outer edges with upwardly-extending walls 52 provided, throughout a portion of their length, with inwardly-extending portions 53. A finger-piece 54, carried by the block 49 and by a bracket 55 secured to the rod 38, is provided for adjusting the rod 38 relatively to the machine head 10 in order to properly position the guide-plate 46, 47 with respect to the needle 12 at the beginning of the stitching operation.

The guide-plate 46, 47, above described, is adapted for use in connection with the stitching of hat-brims of the tubular type shown in Fig. 7. For stitching hat-brims of the flat, annular type, shown in Fig. 8, an arc-shaped guide-plate 56 is employed having upwardly-extending walls 57 at its outer edges, as shown in Fig. 6.

When either one of the guide-plates is in use, its inner end rests upon the bed plate of the machine head 10 in front of the needle 12, thus insuring that the hat-brim to be stitched will be properly presented to the needle 12, and the side walls of the guide plates prevent lateral shifting of the hat-brim. When the guide plate 46, 47 is used the sections thereof are so adjusted relatively to one another that the distance between the inner ends of the walls 52, 52, will correspond to the width of the hat-brim to be stitched.

The operation of the machine is as follows:—

The guide plate 46, 47, or the guide plate 56, is affixed to the supporting member 45, depending on whether the hat-brim to be stitched is of the tubular, or flat, annular type, and the rod 38 is moved to the left, as seen in Fig. 1, in order to position the guide-plate in advance of the needle 12. When moving the rod 38 to thus adjust the guide plate, it is of course understood that the jaws 40 will be opened to disengage them from the endless screw 37, by pressing upon the free outer ends thereof. When the guide plate is thus adjusted the hat-brim to be stitched is placed in position upon the guide-plate and upon the bed plate of the machine head 10. The arm 44 is then moved to cause the pulley 17 to engage the clutch member 19 on the motor shaft 16, whereupon rotation of the shaft 13 will be effected. The rotation of the shaft 13 will operate the needle bar 11, carrying the needle 12, in the usual manner, and will also cause the rotation of the endless screw 37 on the shaft 35 by means of the gearing above described. As the endless screw 37 rotates it will cause the guide plate 46, 47, or 56, as the case may be, to travel at a uniform rate from the left to the right, as seen in Fig. 1, in a direction transverse to the normal line of feed of the machine and at a slower speed than that of the normal feed, thus causing the stitching to be produced upon the material in a spiral form.

At the completion of the stitching operation the actuating member 43 will engage the free end of the arm 44 and move the same to throw the pulley 17 out of engagement with the clutch member 19, whereupon the operation of the machine is stopped.

The distance between the adjacent rows of stitching on the hat-brim may be varied by varying the rate of rotation of the endless screw 37, which controls the transverse movement of the guide plate. The rate of rotation of the endless screw 37 may be altered by varying the proportion of certain of the gears and pinions, for example, by removing the gear wheel 27 and pinion 30, or either thereof, and substituting in place thereof a gear wheel and a pinion having a

greater or a less number of teeth. The thus substituted gear wheel and pinion may be readily adjusted to mesh with one another and with the remainder of the train of gearing by varying the positions of the adjustably mounted arms 22 and 24 relatively to one another and to the support 21, and by varying the position of one or both of the studs 26 and 33, upon which the gear wheels and pinions are mounted, within the slots 23 and 25 of the arms 22 and 24.

Having thus described my said invention what I claim and desire to secure by Letters Patent is:

1. The combination of a sewing machine with a support to receive the article to be stitched and a rotatable member operatively connected to said support for moving the same transversely to the normal line of feed of the machine, a driven gear on said rotatable member, a driving gear for transmitting movement to said driven gear, an intermediate gear between said driving gear and said driven gear, a supporting bracket for said intermediate gear, a pair of slotted members carried by said bracket and a stud adjustably secured upon said slotted members, substantially as specified.

2. The combination of a sewing machine with a support to receive the article to be stitched and a screw-threaded member operatively connected to said support for moving the same transversely to the normal line of feed of the machine, a driven gear on said screw-threaded member, a driving gear for transmitting movement to said driven gear, a supporting bracket, a slotted member pivotally mounted upon said supporting bracket, a second slotted member associated with said first-named slotted member, a stud adjustably disposed upon said slotted members, and an intermediate gear mounted on said stud for transmitting movement from said driving gear to the gear on said screw-threaded member, substantially as specified.

3. The combination of a sewing machine with a support to receive the article to be stitched and a screw-threaded member operatively connected to said support for moving the same transversely to the normal line of feed of the machine, a driven gear on said screw-threaded member, a driving gear for transmitting movement to said driven gear, a supporting bracket, a slotted member pivotally mounted upon said supporting bracket, a second slotted member associated with said first-named slotted member, a stud adjustably disposed upon said slotted members, and an intermediate gear removably mounted on said stud for transmitting movement from said driving gear to the gear on said screw-threaded member, substantially as specified.

4. The combination of a sewing machine with a trough-shaped plate to support the article to be stitched, said plate comprising a plurality of sections adjustably connected to one another at their outer ends and having means adjacent their inner ends to hold them to their adjusted positions, and means for moving said plate transversely to the normal line of feed of the machine, substantially as specified.

Signed at the city of New York, in the county and State of New York, this 29th day of June, one thousand nine hundred and eighteen.

MORRIS SCHLOSS.

Witnesses:
CONRAD A. DIETERICH,
WILLIAM P. JONES.