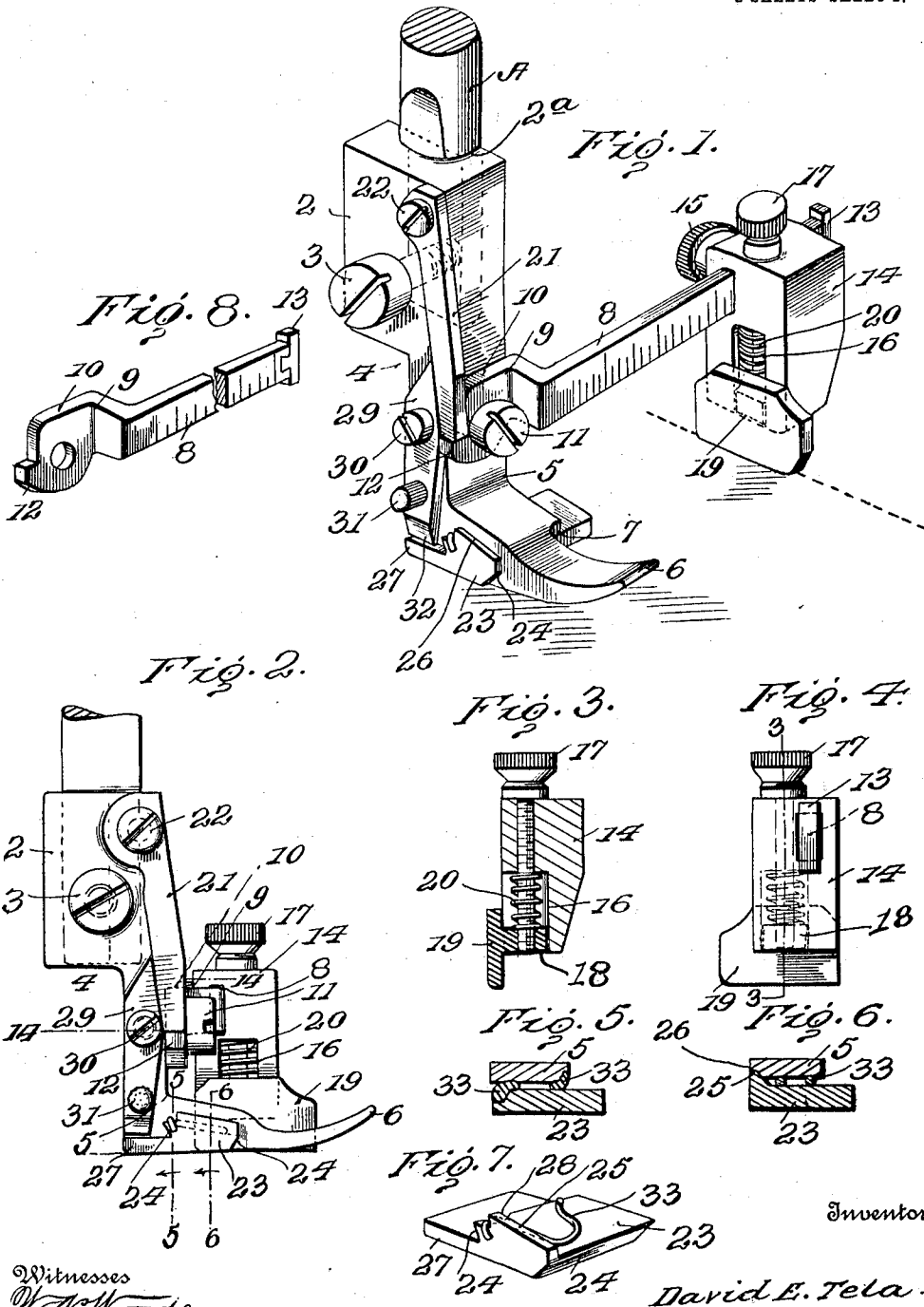


D. E. TELA.
ADJUSTABLE GAGE FOR SEWING MACHINES.
APPLICATION FILED JAN. 10, 1910.

1,053,548.

Patented Feb. 18, 1913.

2 SHEETS-SHEET 1.



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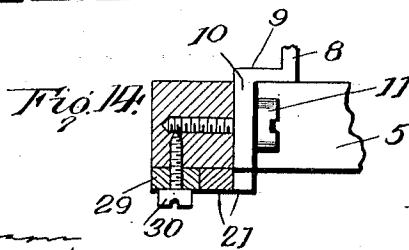
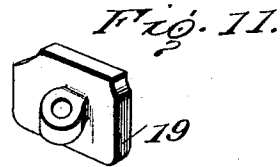
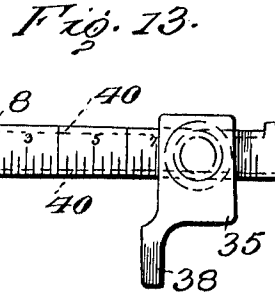
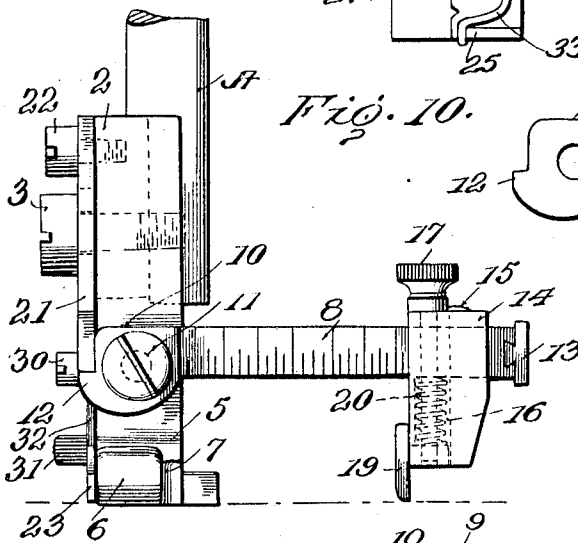
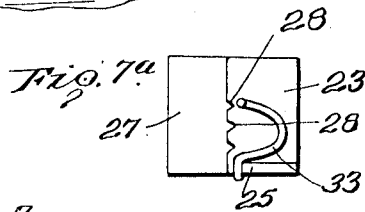
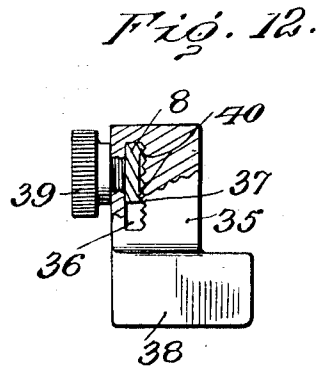
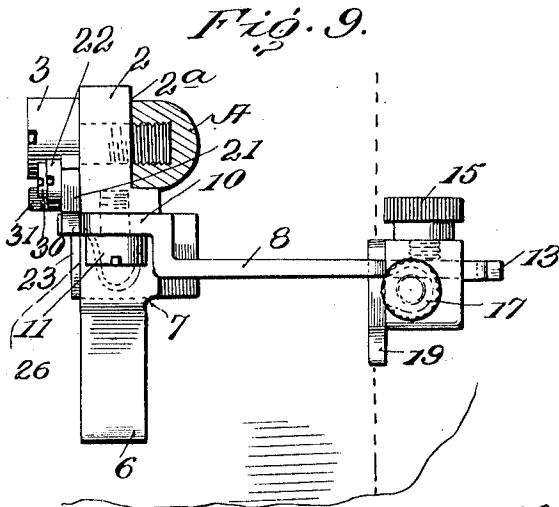
Attorney

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2 SHEETS-SHEET 2.



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UNITED STATES PATENT OFFICE.

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ADJUSTABLE GAGE FOR SEWING-MACHINES.

1,053,548.

Specification of Letters Patent.

Patented Feb. 18, 1913.

Application filed January 10, 1910. Serial No. 537,357.

To all whom it may concern:

Be it known that I, DAVID E. TELA, a citizen of the United States, residing at Spokane, in the county of Spokane and State of Washington, have invented certain new and useful Improvements in Adjustable Gages for Sewing-Machines, of which the following is a specification.

My invention relates to sewing machine attachments and particularly to the presser foot of a sewing machine and a gage bar adapted to be attached thereto.

The objects of the invention are to provide an adjustable gage bar which is attached to the presser foot, as before stated, and which may be turned down into an operative position or turned up vertically parallel with the presser foot into an inoperative position, this gage bar being provided on its end with a guide rest which may be adjusted vertically to suit the thickness of the cloth being operated on.

A still further object is to provide means for holding the gage bar seat in its operative or inoperative positions.

For a full understanding of the invention and the merits thereof and also to acquire a knowledge of the details of construction, reference is to be had to the following description and accompanying drawing, in which:

Figure 1 is a perspective view of my improved attachment; Fig. 2 is a side elevation of the same; Fig. 3 is a vertical section through the gage block on line 3—3 of Fig. 4; Fig. 4 is an end elevation of the gage block; Fig. 5 is a transverse section of the presser foot and sole piece on line 5—5 of Fig. 2; Fig. 6 is a like view taken nearer to the end of the foot on line 6—6 of Fig. 2; Fig. 7 is a perspective detailed view of the sole piece; Fig. 7^a is a top plan of the sole piece shown in Fig. 7; Fig. 8 is a perspective detailed view of the gage bar; Fig. 9 is a top view of the gage bar; Fig. 10 is a front elevation; Fig. 11 is a perspective detail of the guide rest; Fig. 12 is a view of a modified gage block; Fig. 13 is a front view of the modified gage block; Fig. 14 is a fragmentary sectional view on the line 14—14 of Fig. 2.

Corresponding and like parts are referred to in the following description and indicated in all the views of the drawing by the same reference characters.

Referring to the drawing, A designates the usual presser rod of a sewing machine, and 2 the usual presser foot. The shank of this presser foot is cut away at its upper end, as at 2^a, to engage with the lower end of the presser rod, and is held in position thereon by a screw 3 which passes through the body of the presser foot and into the presser rod, the screw being provided with a head whereby it may be easily operated. The presser foot shank is cut-away on its rear face, as at 4, and the shank is then extended at right angles, as at 5, to form the presser foot proper, the extremity thereof being upwardly curved, as at 6, as usual. The extremity of the presser foot is also cut-away, as at 7, and it is at the junction of this cut-away portion with the side of the presser foot that the needle operates.

Pivotaly supported upon the front of the shank 2 is the gage bar 8. The inner end of the gage bar is angled, as at 9, so as to form an attaching base 10 through which passes a screw 11 having a head whereby it may be operated. The inner end of the base 10 is provided with an outwardly projecting lip 12 for the engagement of a spring, as will be later described. The gage bar is provided with graduations upon its face, these graduations preferably forming a scale divided into quarter inches and fractions thereof. The extremity of the gage bar is provided with a removable stop 13. Sliding upon the gage bar 8 is the gage block 14, the rear face of the block being provided with a set screw 15 which engages with the bar 8, so as to hold the gage block set in any desired position. The gage block is formed on its inside face below the bar 8 with a cylindrical recess 16 which intersects the face of the block, so that the recess is open down one side, and passing through the gage block in alinement with the recess 16 is a screw 17 having a milled head, whereby it may be operated. This screw engages with an inwardly projecting lug 18 on a guide rest 19, so that when the screw 17 is rotated the guiding rest will be lifted or moved downward with relation to the gage block 14. A coil spring 20 acts to force the guide-rest 19 downward. This is the preferable form of my construction, although I have shown in Fig. 12 a still simpler form which will be hereinafter described.

In order to hold the gage bar 8 in either of its positions, I provide the spring 21 which is mounted upon the outside face of the shank 2 by means of a screw 22. This spring 21 extends downward and forward and engages with the lip 12 and in this position preventing the gage bar from being turned down below a horizontal position. It will be seen also that this spring 21 will tend to prevent a movement of the gage bar into a vertical position, inasmuch as the corner of the base 10 will engage with the spring when an attempt is made to turn the bar into its vertical position. Thus, also it will be seen that when the bar is turned into its vertical position, the spring will hold it in place by contacting with the side edge of the bar.

The under side of the foot 5 is cut away for the reception of a sole piece 23, this sole piece having the peculiar form shown in Fig. 7. The sides of the sole piece are downwardly and inwardly inclined, as at 24, and the recess in the foot in which the sole piece is received has also downwardly and inwardly inclined walls, so that the sole piece when in position, is held within the foot and may slide laterally. The outer end of the sole piece 23 is formed with an upwardly extending flange 25 which fits in a slight cut-away portion 26 formed at the end face of the foot 5, as shown in Fig. 6, thus the flanged end of the sole piece is normally flush with the side of the presser foot. The rear side of the sole piece is provided with the rearward extension 27 which is likewise accommodated in a recess extending longitudinally along the heel of the presser foot. The upper face of the sole piece, at its rear edge, is provided with notches 28, as shown in Fig. 7^a, for engagement with a pivoted catch 29. This catch, as shown in Fig. 1, is pivotally attached to the side of the presser foot by means of the attaching screw 30, this screw passing into the shank of the presser foot so far that it intersects the screw-thread opening for the screw 11, so that the attaching screw 30 may hold the latter tightly in place. The lower end of the catch 29 is provided with a button or lug 31 whereby the catch may be shifted. The lower extremity of the catch is beveled to form a knife edge 32 which engages with one or the other of the notches 28. Interposed between the upper face of the sole piece and the inner face of the recess in which the sole piece is carried, is the spring 33. This spring is U-shaped and tends to expand laterally. One end of the spring is attached to the sole piece 23, while the other end of the spring engages with the presser foot 5, and thus the sole piece is held normally in such position that the flange 25 is flush with the side of the foot. The spring 33, however, permits the sole piece to move

laterally, and it may be then held in its adjusted position by means of the catch 29 or by contact with the guide-rest 19.

The presser foot and sole piece above described form the subject of a separate application for patent forming a division of this present case, filed on the third day of June, 1911, Serial No. 631,174, and is shown and described in this application illustrating the preferred construction of the presser foot and its coaction with the sliding gage block and rest.

I do not wish to be limited to the particular means so far illustrated, for attaching the sliding gage block 14 to the gage bar, or to the means shown for elevating the guide-rest 19 to adjust it to the thickness of the cloth. In Fig. 13 I show another form of this attachment, in which 8 is the gage bar and 35 the sliding gage block. This block has a slot 36 which is wider than the width of the gage bar, the outer face of the slot being formed with a plurality of teeth 37. The bottom of the block on its inside corner is provided with an integral downwardly extending guide-rest 38 which also projects out laterally beyond the face of the block. A set screw 39 having a side inner end passes through the rear face of the gage block and engages with the inner face of the gage bar. The gage bar, upon its face, is provided with longitudinally extending ribs 40 which are adapted to engage with the teeth 37. The object of this form of gage block is to set it higher or lower on the bar without other means of elevation, and a further object is to obtain efficient lateral stability by forming a plurality of small teeth on the outer face of the slot and ribs on the face of the gage bar. It will, however, be obvious that these teeth and ribs can be omitted for a machine used for light work. The operation of this form of attachment will be easily understood. By loosening the set screw 39, the gage block 35 may be moved up or down upon the gage bar, and by again tightening the set screw, the block is held in its adjusted position.

While I have shown what I believe to be the preferred form of my invention, I do not wish to be limited to the precise details of this construction, as it is obvious that it may be modified in minor details without departing from the spirit of the invention.

My attachment is to be made as light as possible consistent with strength, to avoid any clumsiness of construction, and the gage bar and guide-rest are especially required to be light, and as thin as possible, consistent with rigidity, so as to give sufficient space between the needle-carrying rod (not shown) and the presser foot-carrying rod A and permit the gage to be disposed between the two when turned up. The material for the main part of the foot 5, the sole piece and the slid-

ing gage block, is to be steel. The gage bar, however, may be of any material which will give sufficient rigidity.

In the practical operation of my invention, the gage-bar, when not in use, is to be turned into a vertical position, and when needed is simply pulled down to a horizontal position. The set-screw 15 at the rear of the sliding gage block 14 is then loosened and the gage block shifted to the desired point upon the scale, the set-screw being again tightened. Then the device is ready for edge stitching. If the stitching is to be made upon a seam, the guide-rest 19 in Fig. 1 or the gage-block itself in Fig. 12 is adjusted vertically to accommodate the thickness of the cloth under the rest. This rest 19 (or the rest 38 in Figs. 12 and 13) should only press lightly upon the cloth. The catch 29 is normally out of engagement with the sole-piece, but when the rows of stitching are to be placed closer together than the projection of the sole-piece, then the sole-piece can be shifted laterally as much as necessary by shifting the guide-rest 19. The guide-rest 19 and the sole-piece will be held in this shifted position by the set-screw 15. When the gage-block is shifted back the sole-piece will be returned to its normal position by the spring 33. The catch 29 is never required while the gage is in operation, nor is used in seaming or other plain stitching. It is only used when narrow piping is desired to be made. This sole piece is very seldom required to be shifted without using the gage, but it will be seen that my device is capable of this operation. It is only necessary to push the sole piece out, releasing the catch 29 for this purpose, and when the sole piece is shifted to the required extent, depressing the catch into engagement with the notches 28 in the sole piece. When the sole piece is to be shifted back to its original and normal position, it is only necessary to release the catch 29 and the spring 33 will force the sole piece inward.

The advantages of my invention are that it provides a gage bar which may be easily adjusted from a vertical inoperative position to a horizontal operative position, which gage-bar is not in the way under normal circumstances, and which is positively held in its horizontal position. The gage block may be easily adjusted so that stitchings may be made of any width, and the gage block guide-rest adjusted to suit any thickness of cloth. The sole piece 23 makes the under side of the foot sufficiently wide, so that the presser foot 5 will engage with the reciprocating feed rack (not shown) beneath across its whole face. At the same time, it can be forced inward as previously described. If the presser foot is narrower than the feeding rack beneath, the feeding rack can engage with the cloth only at that

portion upon which the foot presses, and the effect, especially in soft goods, is to make the cloth pull upward and thus make the stitching uneven. The sole piece in the under side of the foot keeps its place without the necessity of any adjustment, and needs no attention except when it is to be shifted outward without using the gage bar. The gage bar is positively held in its inoperative position, but can be moved into its operative position in a moment, and it will be seen that the gage bar is held high enough so that it does not obscure the light falling on the needle point.

Having thus described the invention what is claimed as new is:

1. An attachment for sewing machines including a presser foot having a vertical shank, a gage bar pivotally mounted upon the shank above the presser foot for lateral rotative movement whereby the gage bar may be turned into a position of alinement with the shank or at right angles thereto and to the direction of the presser foot, and a gage adjustably mounted on the gage bar and movable toward or from the presser foot.
2. An attachment for sewing machines including a presser foot, a gage-bar pivoted to the foot for a lateral rotative movement whereby the gage-bar may be moved into a horizontal position or into a vertical position in alinement with the foot, a movable member slidable on the gage-bar, means for holding the movable member adjusted, a rest vertically movable in the movable member, a screw for adjusting the rest, and a spring interposed between the rest and the movable member and acting to force the rest downward.
3. An attachment for sewing machines including a presser foot having a shank and a foot portion proper extending out at right angles to the shank, a gage bar pivoted at one end to the front face of the shank above the foot proper and having a lateral rotative movement whereby the gage bar may move into a horizontal position or into a vertical position into alinement with the presser foot shank, a shiftable member adjustably carried on the gage bar, and yielding means for holding the gage bar in its vertical position or in its horizontal position.
4. An attachment for sewing machines including a presser foot having a shank and a foot portion proper at right angles to the shank, a gage bar pivoted at one end to the front face of the shank above the foot and having a lateral rotative movement, a shiftable member adjustably carried on the gage bar and through which the gage bar passes, and yielding means for holding the gage bar in a vertical position in alinement with the presser foot shank but permitting the

bar to be turned laterally to a horizontal position, said means limiting the downward movement of the free end of the gage bar.

5 5. An attachment for sewing machines, including a presser foot, a gage-bar pivoted to the front face of the foot having lateral rotative movement in a vertical plane, said gage-bar at its pivotal end being provided with an outwardly extending lip, and a
10 spring attached to the side of the presser foot and extending down into position to be engaged by said lip when the bar is turned to a horizontal position.

15 6. An attachment for sewing machines, including a presser foot, a gage-bar pivoted to the front face of the foot for lateral rotative movement in a vertical plane, the piv-

otal end of the gage-bar being rectangular but provided with a lip at its lower corner, a spring mounted on the presser foot and laterally yieldable, said spring extending downward into position to engage the side or end respectively of the gage-bar when the gage-bar is turned into its vertical or horizontal position respectively, the end of
25 said spring engaging with the lip on the gage-bar to limit the downward movement of the free end of the bar.

In testimony whereof I affix my signature in presence of two witnesses.

DAVID E. TELA. [L. S.]

Witnesses:

C. D. ST. MORRIS,

V. T. TASTIN.

Copies of this patent may be obtained for five cents each, by addressing the "Commissioner of Patents, Washington, D. C."