CLASS 112, SEWING MACHINES.

134

No. 881,187.

PATENTED MAR. 10, 1908.

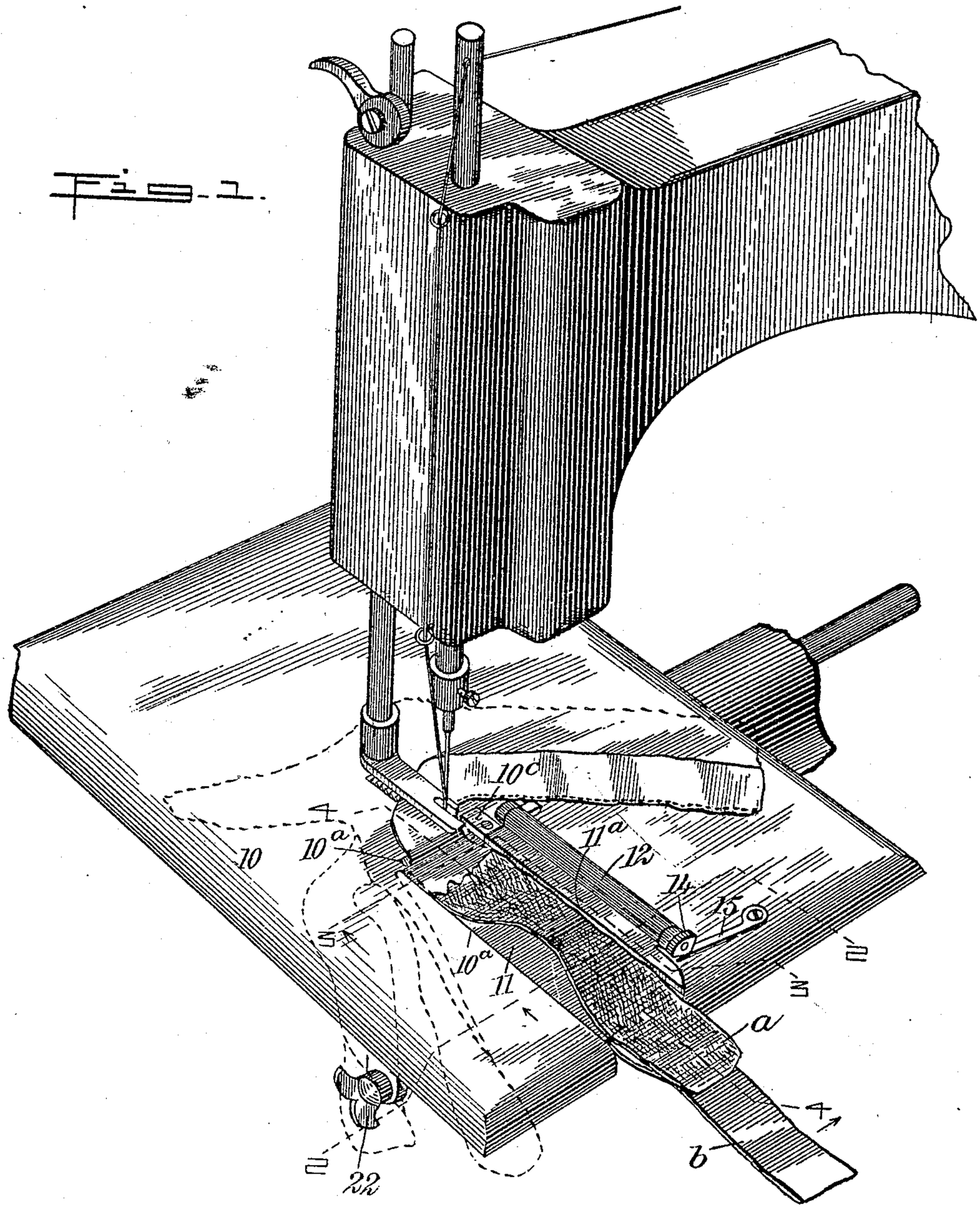
F. J. KAUFMANN.

SEWING MACHINE ATTACHMENT.

APPLICATION FILED FEB. 4, 1905. RENEWED JAN. 11, 1907.

2 SHEETS—SHEET 1.

Fig. 1.



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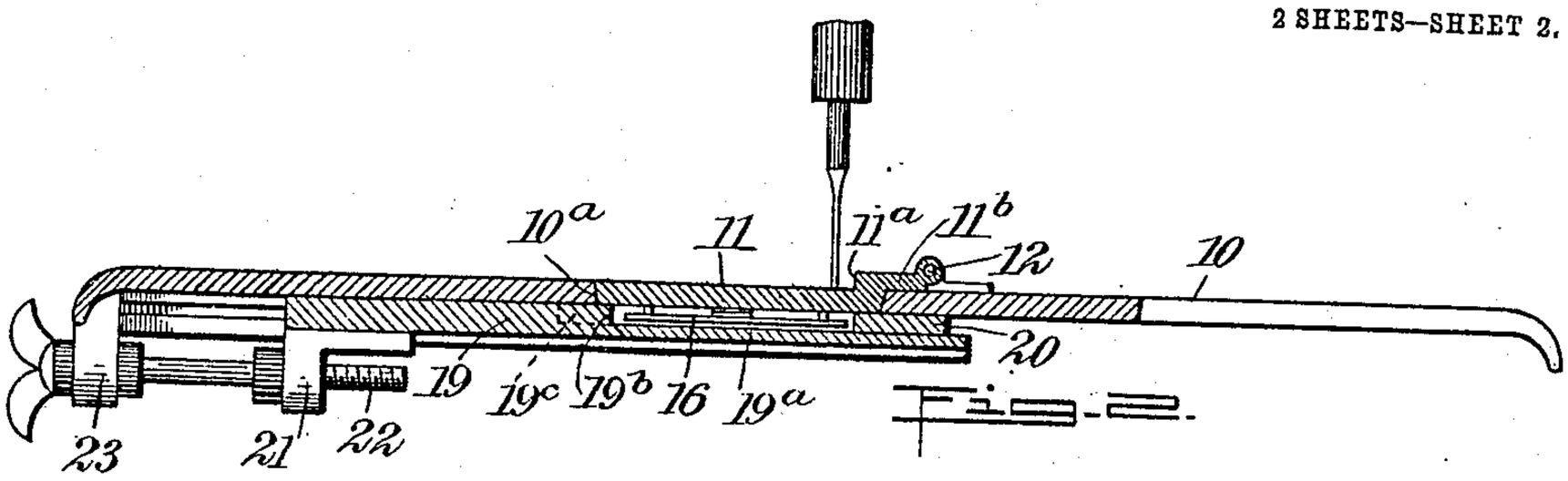

Fig. 2.

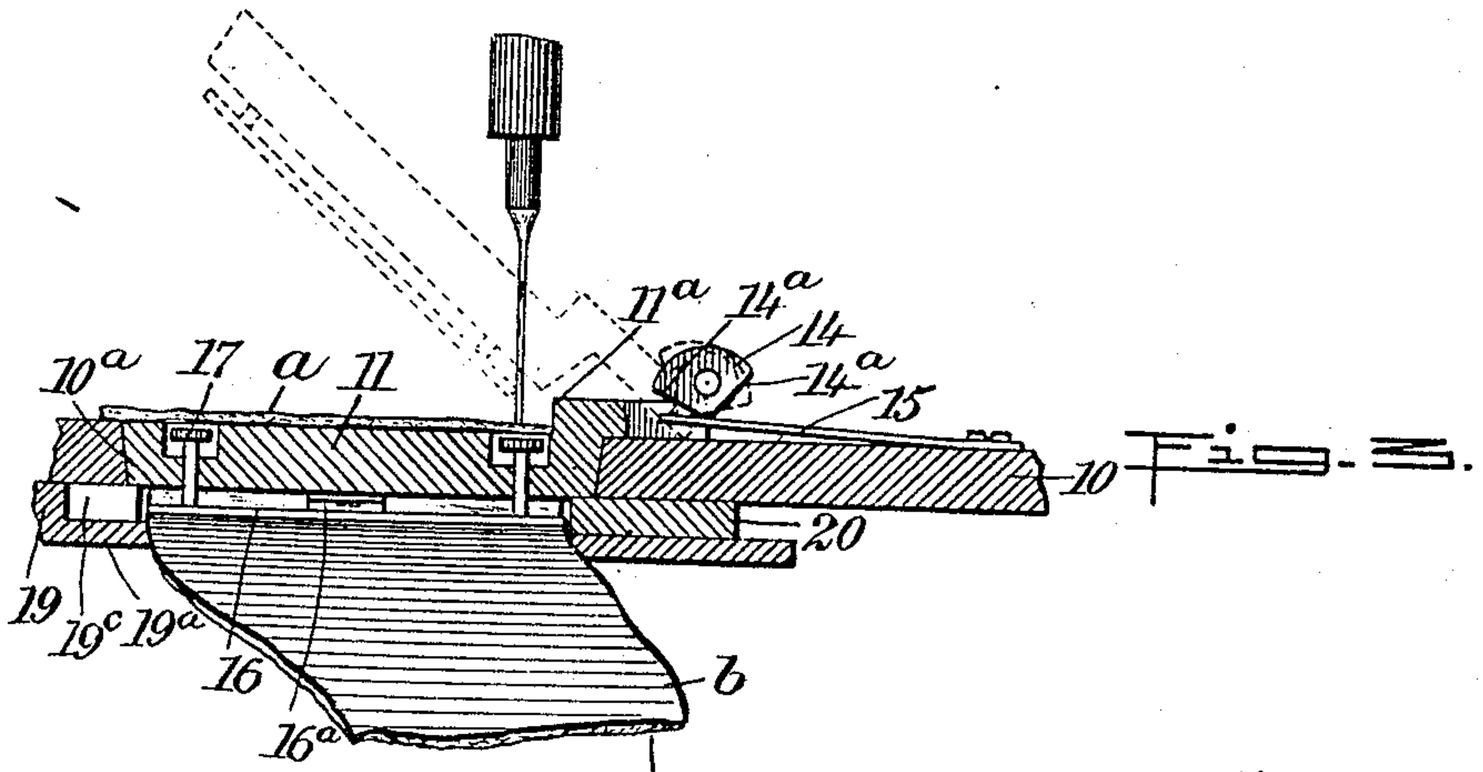

Fig. 3.

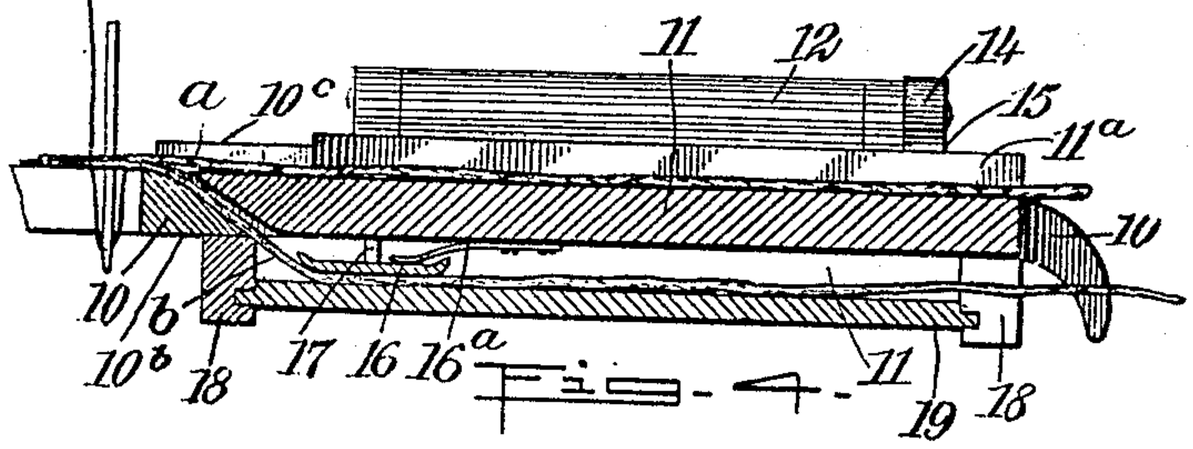

Fig. 4.

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UNITED STATES PATENT OFFICE.

FRANK JOSEF KAUFMANN, OF FULTONVILLE, NEW YORK, ASSIGNOR, BY MESNE ASSIGNMENTS, TO THE SINGER MANUFACTURING COMPANY, A CORPORATION OF NEW JERSEY.

SEWING-MACHINE ATTACHMENT.

No. 881,187. Specification of Letters Patent. Patented March 10, 1908.

Application filed February 4, 1905, Serial No. 244,164. Renewed January 11, 1907. Serial No. 351,903.

To all whom it may concern:

Be it known that I, FRANK JOSEF KAUFMANN, a citizen of the United States, and a resident of Fultonville, in the county of Montgomery and State of New York, have invented a new and Improved Sewing-Machine Attachment, of which the following is a full, clear, and exact description.

The invention relates to an attachment for sewing machines, intended especially to facilitate sewing fourchettes on to gloves, and for uniting other sections of fabric or other material.

The invention resides in a certain peculiar arrangement with the sewing machine work plate, of guiding and gage devices arranged to guide the two sections of the fabric or other material as they move toward the stitch forming mechanism, and to insure their proper juxtaposition during the sewing operation.

Hereinafter reference is to be had to the accompanying drawings which illustrate as an example the preferred embodiment of my invention, in which drawings like characters of reference indicate like parts in the several views, and in which

Figure 1 is a perspective view showing my invention in operation; Fig. 2 is a section taken essentially on the line 2—2 of Fig. 1; Fig. 3 is a section taken essentially on the line 3—3 of Fig. 1; and Fig. 4 is a section taken essentially on the line 4—4 of Fig. 1.

The work plate 10 of the machine is formed with an opening 10^a leading from the front edge of the work plate toward the feed dog and needle, and terminating as shown best in Fig. 4 in an upwardly inclined inner part or throat 10^b leading gradually to the needle. In this opening 10^a is adapted to lie a gage plate 11 which terminates, as shown best in Fig. 4, in a tapered part overhanging the extremity 10^b of the opening so as to leave a passage from beneath the gage plate, as the drawing shows. The gage plate 11 is formed on its upper side slightly rightward of the stitch line, with a shoulder 11^a, adapted to have the edge of one of the sections of material run against it, and serving to guide said section of material in its movement to the needle. 10^c indicates a continuation of the shoulder 11^a which is formed by a block fastened securely to the work plate 10. The gage plate 11 has a shank 11^b which lies on top of the work plate 10, and is connected thereto by a hinge 12, which permits the gage plate to be raised as indicated by the broken lines in Fig. 3. The pintle of said hinge 12 moves with the gage plate and carries a block 14 having angularly disposed flat faces 14^a which coact with a spring 15 fastened to the work plate, and which serve to hold the gage plate yieldingly either in the active position shown in full lines in Fig. 2, or in the raised or inactive position in which the gage plate lies approximately perpendicular to the work plate. A tension member 16 is carried by the gage plate 11, through the medium of pins 17 which project loosely through the gage plate and have heads at their upper ends fitted in cavities in the gage plate. This gage member or shoe 16 lies under the gage plate and is adapted to bear on the other section of fabric which passes under said plate, as will be fully set forth hereinafter. 16^a indicates a spring for pressing the tension member into action.

On its under side the work plate is formed with two guides 18, which extend transversely of the line of movement of the goods, and carry a slide 19 which has a reduced inner portion 19^a adapted to extend under the opening 10^a in the work plate, and to form a support for the second section of the material as it passes under the gage plate 11. 20 indicates a rib or bead which is formed or secured under the work plate adjacent to the hinge 12, and which is engaged on its under side by said reduced extension 19^a of the slide 19. The slide 19 is also formed with a shoulder 19^b which serves as a gage, and which upon the adjustment of the slide is moved toward or from the said rib or bead 20, thus increasing or diminishing the width of the passage under the gage plate 11. The slide 19 is further provided with a cavity 19^c opposite the tension shoe 16, and adapted to receive the adjacent end of said shoe when the slide is moved to its extreme inward position. As the tension shoe 16 extends crosswise of the direction of feed and parallel with the direction of adjustment of the slide 19, it will be observed that the cavity 19^c forms practically a notch in the shoulder 19^b, only slightly wider than the comparatively narrow shoe 16, the shoulder 19^b being continuous excepting where cut away to provide such cavity. Said slide is fitted with any desired means for adjusting it, for example, with a nut 21 engaged by a screw 22 held to

turn in a lug 23 depending from the work plate. By the operation of this screw 22 the slide may be moved in or out, and the width of the passage for the bottom section of material increased or diminished at will.

When using the machine for sewing fourchettes on to gloves, the material forming the glove proper is laid on the work plate and the fourchette is passed through the opening 10^a and laid on the extension 19^a of the slide 19, and the gage plate 11 is then thrown down so as to lie over the fourchette and under the glove proper. The edge of the glove to which the fourchette is to be joined is then run along the gage shoulder 11^a, and the slide 19 is properly adjusted to hold the corresponding edge of the fourchette engaged with the wall or bead 20. The fourchette passes under the tension shoe and thence up through the extension or throat 10^b of the opening 10^a under the glove, so that the two may be stitched together, as is indicated in Fig. 4.

In Figs. 1, 3 and 4 of the drawings *a* indicates the glove proper and *b* indicates the fourchette. The tension device or shoe 16 may be utilized to regulate the movement of the fourchette toward the stitch forming devices.

It is apparent that various other operations may be performed with the aid of my invention and that it is in no way limited to the specific use above described.

From the foregoing description, it will be seen that the under section or strip of material *b* passes to the needle through a channel or guideway below the upper face of the work-plate having upon one side the adjustable edge-guiding shoulder 19^b and upon the opposite side the guiding edge of the rib or bead 20 with the slide-plate 19 forming its bottom, while the gage-plate 11 disposed within the opening 10^a forms a cover-plate for such channel and also constitutes a movable section of the work-plate affording a support for the upper section *a* of the material to which the strip *b* is to be united.

It is evident that the essential part of the opening 10^a is its forward or throat portion 10^b through which the strip *b* is delivered to the stitch-forming mechanism, and that its extension to or toward the front edge of the work-plate, as illustrated in the accompanying drawings, is not material to the present invention, excepting in connection with the gage-plate forming the removable section 11 of the work-plate recited as a feature in certain of the appended claims.

Various changes in the form, proportions and minor details of my invention may be resorted to without departing from the spirit and scope thereof; hence I consider myself entitled to all such variations as may lie within the terms of my claims.

Having thus described the preferred form of my invention, what I claim as new and desire to secure by Letters Patent is:

1. A sewing machine having an opening in the work plate adjacent to the stitch forming devices, and means located under the work plate adjacent to the opening and providing gage shoulders or surfaces between which a section of material is guided in its movement through said opening, one of said shoulders or surfaces being adjustable toward or from the other for the purpose specified.

2. A sewing machine having an opening in the work plate adjacent to the stitch forming devices, a member forming a guide below the upper surface of the work-plate adjacent to said opening, and a slide also arranged below the upper face of the work-plate and having a gage shoulder opposite the guide and adjustable toward and from the same.

3. A sewing machine having an opening in the work plate adjacent to the stitch forming devices, a part located below the upper face of the work plate adjacent to said opening to form a gage surface for one edge of a section of material passed up through said opening in the work-plate, and a slide located below the upper face of the work-plate and having a reduced extension engaging the under side of the said part, and also having a gage shoulder lying opposite the said part and movable with the slide toward and from the said part, for the purpose specified.

4. A sewing machine having an opening in the work plate adjacent to the stitch forming devices, a gage member movably situated in said opening and terminating short of the inner extremity thereof, and a part having a gage surface adjustably mounted under the work plate adjacent to said opening, and spaced from the gage member to form a passage between the gage member and the said part.

5. A sewing machine provided with a work plate provided with an opening therein leading to the stitch forming devices, a gage member placed in said opening and terminating short of the inner extremity thereof, a slide mounted under the work plate and extending across the opening, said slide having a gage shoulder at one side of the opening.

6. A sewing machine having an opening in the work plate adjacent to the stitch forming devices, and a gage member movably mounted at one side of said opening and adapted to move in and out of the same, said gage member having a part lying flush with and forming a movable section of the work plate when the gage member is fitted in the opening, and also having a gage shoulder running parallel with the stitch line, said gage member terminating short of the inner wall of the opening in the work plate whereby one section of the work may be passed under the gage member and up through the

space between the same and the inner wall of the opening, and another section of the work may be run over the gage member past said gage shoulder.

7. A sewing machine having an opening in the work plate adjacent to the stitch forming devices, a gage member movably mounted at one side of said opening and adapted to move in and out of the same, said gage member having a part lying flush with and forming a movable section of the work plate when the gage member is fitted in the opening, and also having a gage shoulder running parallel with the stitch line, said gage member terminating short of the inner wall of the opening in the work plate whereby one section of the work may be passed under the gage member and up through the space between the same and the inner wall of the opening, and another section of the work may be run over the gage member past said gage shoulder, and additional gage members lying under the work plate and adapted to guide the movement of the first named section of work.

8. A sewing machine having an opening in the work plate adjacent to the stitch forming devices, a gage member movably mounted at one side of said opening and adapted to move in and out of the same, said gage member having a part lying flush with and forming a movable section of the work plate when the gage member is fitted in the opening, and also having a gage shoulder running parallel with the stitch line, said gage member terminating short of the inner wall of the opening in the work plate whereby one section of the work may be passed under the gage member and up through the space between the same and inner wall of the opening, and another section of the work may be run over the gage member past said gage shoulder, a part located under the said gage member and spaced therefrom to permit the first named section of the work to run between the gage member and said part, a tension member adapted to bear on top of the first named section of work, and means for yieldingly pressing the tension member into position.

9. A sewing machine having an opening in the work plate to permit one section of the work to be passed up through the same, and the other section of the work to be passed over the work plate, a member extending under the work plate and spaced therefrom, and adapted to have the first named section of work passed over it, a loosely mounted tension shoe lying between the work plate and said member, and adapted to have the first named section of work passed under it, and a means for yieldingly pressing said tension shoe against said section of work.

10. In a sewing machine, the combination with the stitch-forming and feeding mechanisms, of a work-plate provided with a work-guiding channel arranged therein below its upper face and within the line of feed, a cover-plate therefor movable transversely of said work-plate into and out of said channel, and holding means for maintaining said cover-plate in operative position within said channel.

11. In a sewing machine, the combination with the stitch-forming and feeding mechanisms, of a work-plate provided below its upper face in the line of feed with a channel having a fixed work-guiding shoulder, and a cover-plate for said channel movable in relation to said work-guiding shoulder and having its upper face flush with that of the work-plate.

12. In a sewing machine, the combination with the stitch-forming and feeding mechanisms, of a work-plate provided with a work-guiding channel arranged therein below its upper face and in the line of feed, a cover-plate therefor, and a hinge connection between said cover-plate and work-plate including a pintle extending along and parallel with one edge of the cover-plate and parallel with said channel.

13. In a sewing machine, the combination with the stitch-forming and feeding mechanisms, of a work-plate provided with a work-guiding channel arranged therein below its upper face and in the line of feed, a cover-plate therefor hinged to said work-plate along one edge, and means including a spring whereby said cover-plate is forcibly maintained in extreme closed or open position.

14. In a sewing machine, the combination with the stitch-forming and feeding mechanisms, of a work-plate provided with a work-guiding channel arranged below its upper face and in the line of feed, a cover-plate therefor having its upper face flush with that of said work-plate and provided with a projecting guide member parallel with said work-guiding channel, and a hinge connection between said work-plate and cover-plate parallel with said work-guiding channel.

In testimony whereof I have signed my name to this specification in the presence of two subscribing witnesses.

FRANK JOSEF KAUFMANN.

Witnesses:
HENRY H. RULISON,
CHAS. W. HECKERT, Jr.