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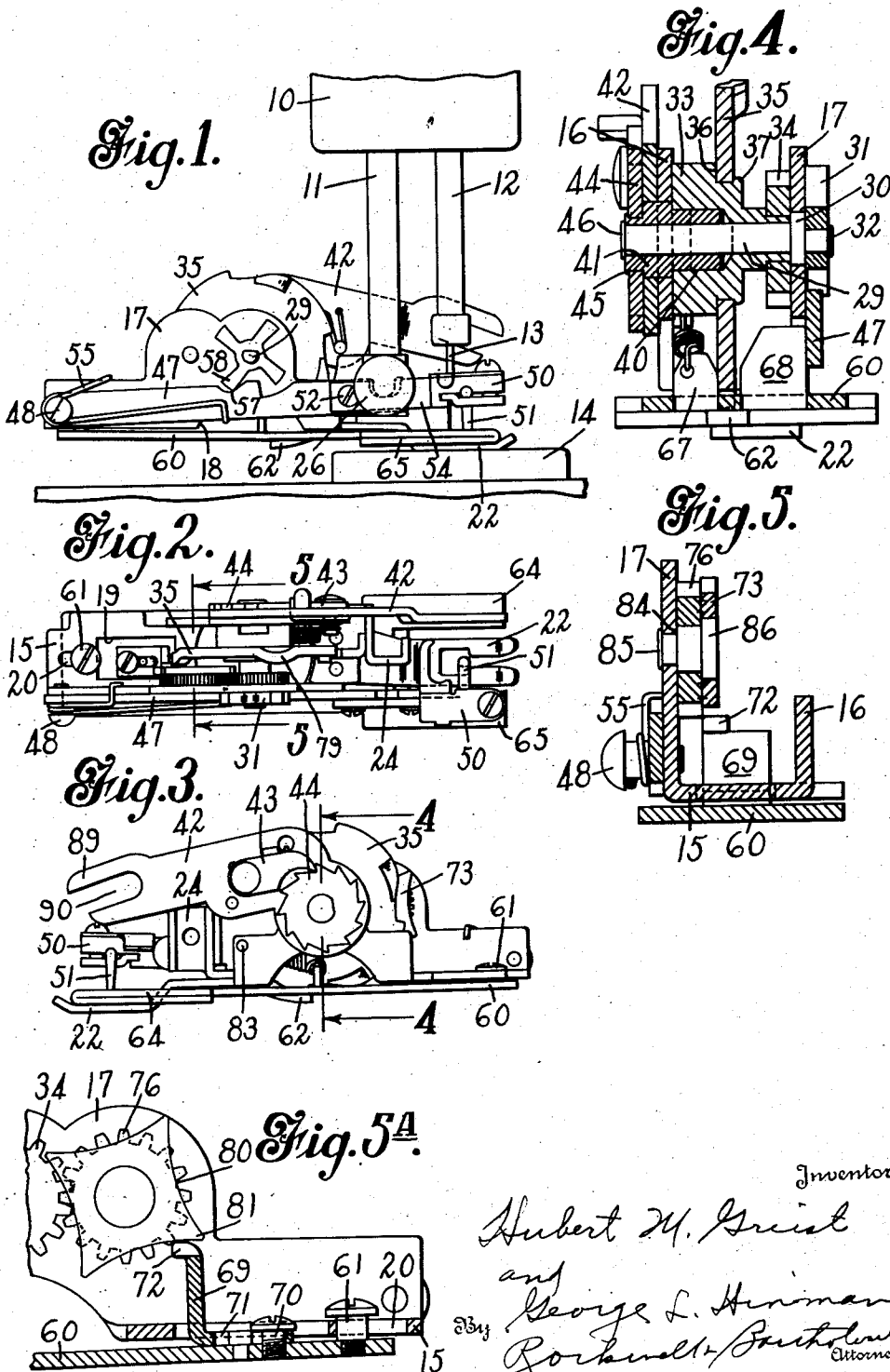
H. M. GREIST ET AL

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HEMSTITCHING ATTACHMENT FOR SEWING MACHINES

Filed July 13, 1933

3 Sheets-Sheet 1



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3 Sheets-Sheet 2

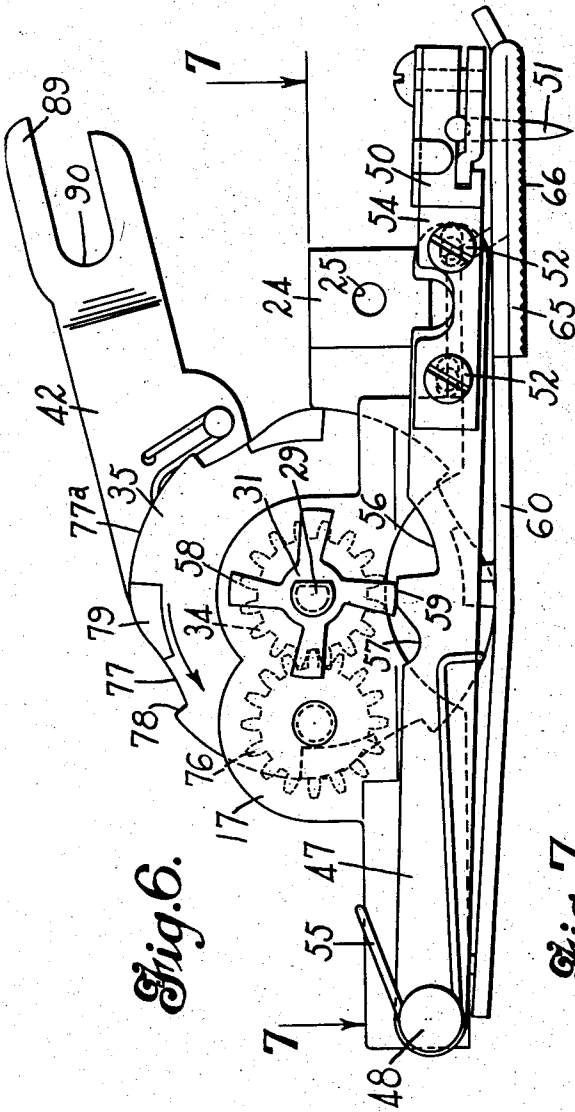
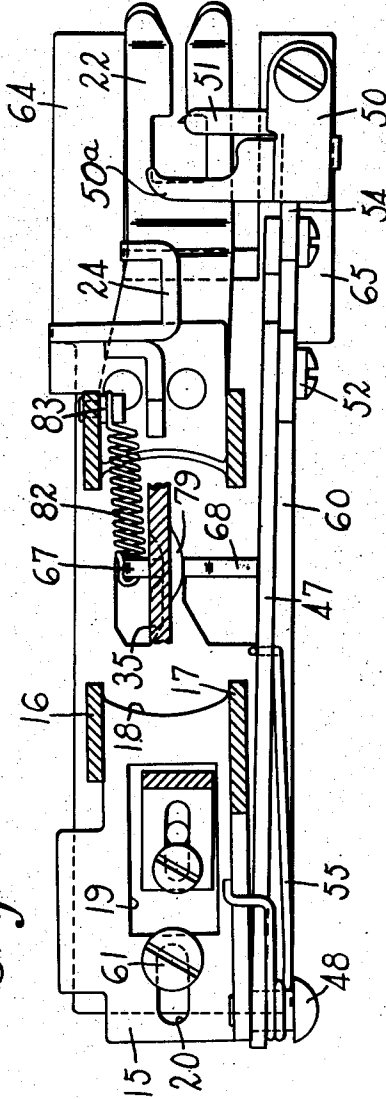


Fig. 6.

Fig. 7.



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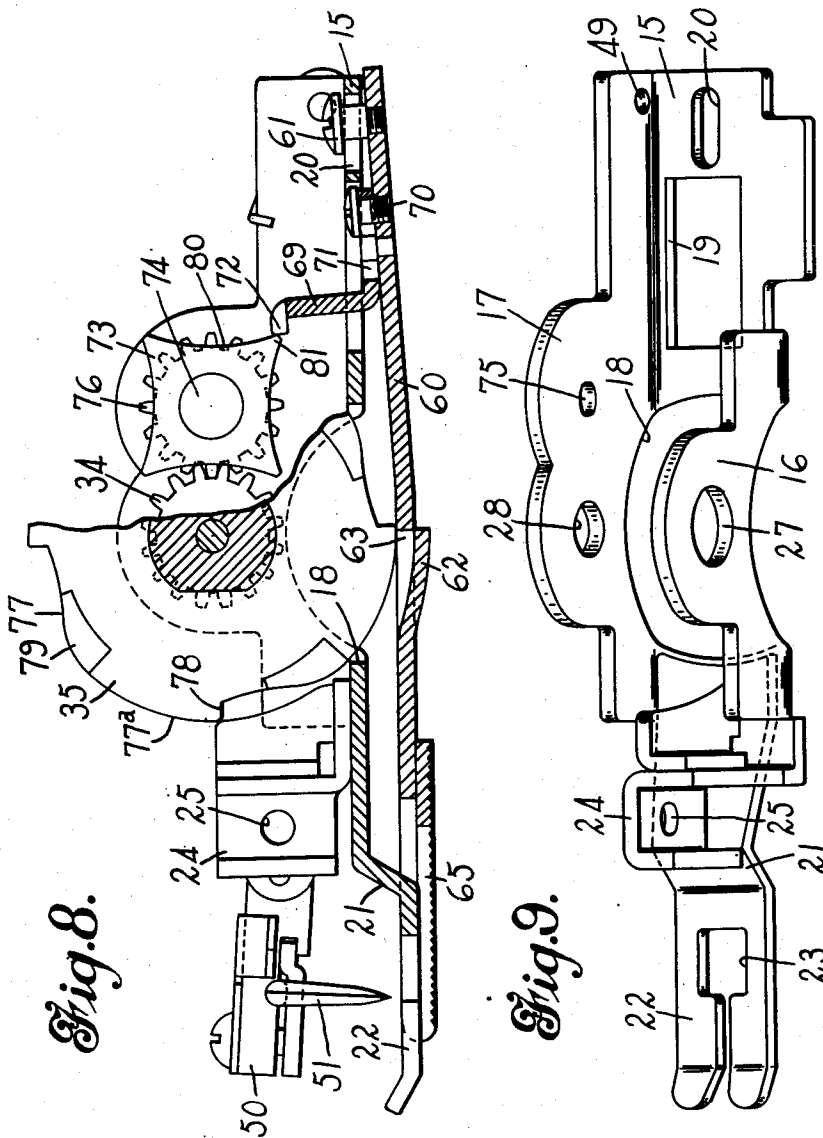


Fig. 8.

Fig. 9.

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UNITED STATES PATENT OFFICE

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HEMSTITCHING ATTACHMENT FOR SEWING MACHINES

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21 Claims. (Cl. 112-160)

This invention relates to devices for doing hemstitching work and more particularly to a simple attachment for the ordinary household sewing machine in order to enable the operator to perform hemstitching thereupon.

Heretofore while machines have been constructed with which hemstitching may be done, and while devices have been proposed which are designed for attachment to the usual household sewing machines, such devices for various reasons have not been entirely satisfactory and have been of complicated and intricate construction so that they are not only more or less expensive to manufacture but are difficult to maintain in proper working order.

One object of the present invention is to produce a new and improved hemstitching device for attachment to the usual household sewing machine.

Another object of the invention is the provision of a hemstitching device which will consist of relatively few parts and which may be manufactured at a relatively small expense and at the same time be efficient and positive in operation.

Another object of the invention is to provide a hemstitching attachment for household sewing machines which may be attached easily and quickly to the sewing machine without the need of any special tools, so that the attachment may be applied by any seamstress.

To these and other ends, the invention consists in the novel features and combinations of parts to be hereinafter described and claimed.

In the accompanying drawings:

Fig. 1 is a side elevational view of our device as applied to an ordinary household sewing machine;

Fig. 2 is a top plan view of the attachment;

Fig. 3 is a side elevational view taken from the side opposite that shown in Fig. 1;

Fig. 4 is a sectional view on line 4-4 of Fig. 3;

Fig. 5 is a sectional view on line 5-5 of Fig. 2;

Fig. 5A is a fragmentary detail view showing the position of the feeding mechanism at the beginning of the cycle of operations;

Fig. 6 is an enlarged side elevational view similar to that shown in Fig. 1 but showing the parts in a different position;

Fig. 7 is a sectional view on line 7-7 of Fig. 6;

Fig. 8 is a longitudinal sectional view of the attachment, some of the parts being broken away and some omitted for the sake of clearness; and

Fig. 9 is a perspective view of the frame or supporting portion of the device.

To illustrate a preferred embodiment of our invention, we have shown in Fig. 1 a portion of the head 10 of a sewing machine, the usual

presser bar 11, and needle bar 12, the latter carrying at its lower end the usual sewing needle 13.

In the use of the attachment herein described, the usual presser foot is removed from the presser bar 11 and the attachment secured to the presser bar in place thereof, as will be hereinafter described, the attachment being provided with a presser foot of its own. Also, the usual feeding plate or feeding dog in the sewing machine is covered by a plate or cover 14, as the attachment is provided with a feeding arrangement to feed the cloth therethrough in accordance with the requirements of the hemstitching operation which are different from that employed in the usual sewing operation.

The parts of the attachment are supported upon a base or support, as shown in Fig. 9. This member comprises a horizontal base or plate portion 15 provided with upstanding flanges 16 and 17 at the side edges thereof. The base plate is provided with a large opening 18 adjacent its central portion, a smaller opening 19 rearwardly of the opening 18, and a slot 20 adjacent its rear edge. Adjacent the front edge the plate 15 is extended forwardly and offset downwardly, as shown at 21, terminating in a presser foot 22 provided with a relatively large opening 23 through which moves the ordinary machine needle and the piercer of the hemstitching attachment, as will be described more particularly hereinafter.

Secured to the forward portion of the plate 15 in upstanding position is a U-shaped member 24 designed to fit against and embrace the presser bar 11 and be secured thereto. It is ordinary practice to secure the presser foot to the presser bar of the sewing machine by means of a screw. When the presser foot is removed our attachment may be put upon the presser bar in its place and a screw passed through the opening 25 in the U-shaped part 24 of the attachment, the screw entering the opening in the presser bar provided for the connection of the usual presser foot. It is, therefore, only necessary to remove the presser foot and secure our attachment to the presser bar by means of a screw entering this opening which is already provided. It is preferable to provide a screw for this purpose with an enlarged head 26 which may be threaded in place by the fingers or a pair of pliers, for example, so that the attachment may be very easily secured to the machine.

The flange 16 is provided with an opening 27 in alignment with an opening 28 in the flange 17 to accommodate a rotatable shaft or arbor which extends through these flanges and carries a number of the working parts of the device.

It may here be stated that the operation of the present device in performing hemstitching work

generally consists in making an opening in the cloth upon which hemstitching is to be done, by means of a piercer or sharp-pointed tool provided for this purpose, effecting a stitch in this opening, moving the cloth to one side so as to make a side stitch, effecting a return movement of the cloth to make a return stitch again in the opening, then feeding the cloth forwardly, making a forward stitch between the first and a second opening previously formed by the piercer. Generally speaking, therefore, there are three distinct parts to each cycle of operations, during which time the needle of the sewing machine makes three stitches. The first of these operations is the downward movement of the piercer to make the opening in the cloth and the movement of the cloth to one side to make the side stitch. The second operation may generally be described as comprising the return movement of the cloth to make the return stitch, while the third operation comprises the release of the piercer, the effecting of the feeding movement of the cloth and the placing of the parts in position for the beginning of the next cycle. The mechanism for effecting the piercing of the cloth, the movement of the cloth to one side and return, and the feeding of the cloth will now be described.

As shown in Fig. 4, a shaft or arbor 29 is mounted within the openings 27 and 28 of the flanges 16 and 17. This shaft is provided with an enlarged disk-like portion 30 resting in the opening 28 and designed to serve as a bearing for that end of the shaft. Between the disk 30 and the adjacent end of the shaft is mounted thereon a cam wheel 31 which may be secured non-rotatably upon the shaft by riveting over the end of the shaft, as at 32, to force the cam against the disk 30.

Between the flanges 16 and 17 a shouldered collar 33 is mounted on the shaft, the collar having a gear 34 secured thereto adjacent the flange 17 and having a cam wheel 35 secured upon another part thereof, this cam wheel being secured upon the collar by being held frictionally between the shoulder 36 and the riveted portion 37 of the reduced portion of the collar. The collar 33 is provided with an end opening 40 adjacent the flange 16, within which opening is mounted a bushing 41, this bushing surrounding the shaft 29 and bearing in the flange and forming the shaft bearing in the flange 16. Without the flange a lever 42 is loosely mounted upon the bushing 41, the lever having a pawl 43 pivoted thereon, which pawl is in engagement with a toothed wheel 44 secured upon the bushing 41 by having the end of the bushing riveted over the side of the wheel, as shown at 45.

The end of the shaft 29 is riveted over the bushing 41, as shown at 46, in order to secure the bushing 41, the collar 33 and the gear 34 non-rotatably to the shaft 29, these elements being held between the disk 30 and the riveted portion 46 of the shaft, and it will be apparent that they will be turned when the shaft is rotated.

An arm 47 pivoted to the flange 17 by means of a bolt 48 passing through the arm and through an opening 49 in the flange. This arm extends forwardly, and secured to its free end is the piercer head 50 carrying the piercer 51. The piercer head is secured to the arm 47 by means of the screws 52 which pass through slotted openings in the plate 54 which extends rearwardly from the head 50 so that the head may

be adjusted to some extent. A spring 55 normally urges this arm upwardly in order to maintain its upper surface against the cam wheel 31. Adjacent the cam wheel the upper surface of the arm is provided with notches 56 and 57 to receive the arms 58 of the wheel 31. It will be apparent that upon rotation of the shaft 29 by operation of the lever 42 and pawl 43, the cam wheel 31 will be rotated in the direction of the arrow shown in Fig. 6. One of the arms 58 will, therefore, be caused to enter the notch 57 and upon further rotation will ride up upon the high portion 59 between the notches 56 and 57 and depress the arm 47 to cause the piercer 51 to enter the cloth. The depressed position of this arm is shown in Fig. 6. Further rotation of the shaft 29 will cause this arm 58 to move opposite the notch 56, at which time the spring 55 will cause the arm 47 to move upwardly to withdraw the piercer from the cloth, and this upward movement will be checked by the engagement of the following arm 58 in the notch 57. There are four of the arms 58 upon the cam 31, while there are twelve teeth upon the wheel 44; thus one stroke of the piercer arm 47 will be effected for each three upward movements of the lever 42.

An arm 50^a is attached to the piercer head 50 and extends into the path of the needle bar 12, so that when the latter descends the arm 50 will be moved downwardly and cause the piercer 51 to enter the cloth to some extent to preform an opening therein. It will be understood that the piercer is one step in advance of the needle so that while the latter is entering one opening, the former will be making a subsequent opening.

The forward feeding movement of the cloth is effected by means of a feed bar 60 pivotally and slidably secured to the plate 15 by means of the screw 61 secured in the body of the feed bar 60 and having its body portion passing through the slot 20. This is, of course, not a true pivotal attachment, but, nevertheless, will permit a pivotal movement of this bar in order that the forward end thereof may be raised and lowered to engage and disengage the cloth.

Adjacent the intermediate portion of this bar the metal thereof is displaced downwardly, as shown at 62, to provide a recess 63, and at its forward end the bar is bifurcated to provide the spaced members 64 and 65, between which is received the presser foot 22. The material of these members is doubled over upon itself, as shown more particularly in Fig. 6, and the lower surfaces of these doubled portions are roughened as shown at 66, to engage and effect a feeding movement of the cloth. It is this feed bar that feeds the cloth forwardly and also effects the side and return movement of the cloth heretofore referred to.

Upon this feed bar are provided the vertically disposed lugs 67 and 68 which project upwardly through the opening 18 in the plate 15 and which are disposed upon opposite sides of the cam wheel 35 to be engaged thereby. These lugs may be conveniently formed by striking up portions of the feed bar 60 and are situated closely adjacent the recess 63. Secured to the feed bar 60 is an L-shaped member 69 which projects upwardly through the opening 19 of the plate 15. A screw 70 passes through an elongated opening 71 of this member, the screw being secured to the feed bar 60 so that the L-shaped member may be adjusted forwardly and rearwardly of this bar. At its upper end the

L-shaped member is provided with a horizontally disposed portion or lug 72 designed to be engaged by a cam member 73 rotatably mounted on a stub shaft 74 secured in an opening 75 in the flange 17. Secured to the cam 73 is a gear 76 which meshes with the gear 34 upon the shaft 29.

The cam 35, to which reference has already been made, is provided upon its periphery with four cam surfaces 77 each followed by a dwell 77a terminating in an abrupt shoulder 78, and the material of this wheel is displaced laterally at four points about its periphery, as shown at 79 to provide four lateral camming portions as well as four vertical camming portions 77. These cams in conjunction with the feed bar 60 effect the forward and side movements of the cloth.

At the beginning of the operation of the device the feed bar is in the position shown in Fig. 3 which is slightly above the presser foot 22, and the shoulder 78 of the cam lies in the recess 63. When the arm 42 is brought upwardly to turn the shaft 29, the cam surface 77 will depress the feed bar downwardly upon the cloth, and continued movement of the lever 42 will cause the lateral cam portions 79 to pass between the lugs 67 and 68 and move the feed bar and cloth to the right, as shown in Fig. 7. A second stroke of the lever 42 causes the dwell 77a of the cam wheel to hold the feed bar upon the cloth while the cam portion 79 continues its movement and effects a return of the feed bar to the left from the position shown in Fig. 7. The needle then moves downwardly and effects another stitch in the opening made by the piercer, and the parts are then in position for a forward feeding of the cloth.

This forward feeding movement is accomplished by the feed bar 60. It will be recalled that this feed bar has, by the cam portion 77 and dwell portion 77a, been moved downwardly and held against the cloth. The rearward movement of this feed bar is effected by the cam 73. This cam has four curved or dwell portions 80 between which are the high shoulder portions 81, these surfaces being in position to engage against the lug 72, the lug being urged against the cam surface by means of the spring 82 connected at one end to the lug 67 and at the other end to the flange 16 by the stud 83. This spring is inclined in an upward direction toward the stud 83 so that it not only tends to draw the lug 72 toward the cam 73, but also tends to draw the feed bar upwardly when not held down by the cams 77 and 77a.

At the beginning of the cycle of operations the lug 72 is below the cam surface 80 on the cam 73, and the feed bar is held forwardly and upwardly by the spring 82, as shown in Figs. 3 and 5A, and it will be recalled that during the first upward stroke of the lever 42 the feed bar is moved downwardly so that its forward end engages the cloth, as shown in Fig. 6, and that during the second upward stroke of the lever 42 the feed bar is still held in this position by the dwell portion 77a of the cam 35, as shown in Fig. 8. It is during this second upward stroke of the lever 42 that the feed bar is returned laterally from its sidewise movement to its original position so that the parts are ready for a forward feeding movement of the cloth. In this position the lug 72 is substantially at the center of the dwell portion 80 of the cam 73. During the third upward stroke of the lever 42 the lug 72

rides over the cam surface 80 toward the point 81 and moves the feed bar 60 to the right, as shown in Figs. 3 and 8, against the tension of the spring 82, and as the forward end of the feed bar is pressing against the cloth, this produces a feeding motion of the cloth preliminary to another operation. Toward the end of this third upward stroke of the lever 42 the shoulder 78 of the cam 35 drops into the recess 63 (Fig. 8), thus permitting the spring to move the feed bar upwardly out of contact with the cloth. Just after the feed bar is thus disengaged from the cloth, the high point 81 of the cam 73 moves out of contact with the lug 72 and thus releases this lug so that the spring 82 moves the feed bar rearwardly from the forward position shown in Fig. 8 to the rearward position shown in Fig. 3. At this time it will be understood that the screw 61 rides in the slot 20 to permit this movement. The parts are now in their original positions and are ready for a further hemstitching operation.

The shaft 74 is a shouldered member, as shown in Fig. 5, and is secured in place by having a shoulder 84 thereof lodged against the flange 17, and the end of the shaft riveted or swaged over against the flange, as shown at 85. The gear 76 is rotatably mounted upon this shaft between the flange and the enlarged end 86 of the shaft, and the cam member 73 is mounted upon this enlarged end 86 and is secured to the gear 76 by a convenient method, such as spot welding, so that the cam member and gear rotate together upon the shaft.

The lever 42 is provided with a bifurcated end 89 providing a slot 90 within which is adapted to be received the usual screw attached to the needle bar 12 of the sewing machine so that the device is operated by the reciprocating movements of the needle bar. It will, of course, be understood that during the downward movements of the needle bar the pawl 43 simply rides freely over the teeth of the wheel 44, and that the upward stroke of the needle bar is the effective stroke so far as concerns the operation of the hemstitching attachment. It may also be observed that as there are twelve teeth provided upon the wheel 44, and as three of these are employed during a complete cycle of operations of the hemstitching device, a complete revolution of the member 44 effects four hemstitching operations. Thus, there are four cam arms 58, four separate cam surfaces upon the cam wheel 35, and likewise, four cam surfaces upon the cam 73, so that each of these members performs its particular operation four times during each revolution.

A brief description of the entire operation of the device may now be helpful. Assuming that a hole has been made in the cloth by the piercer and the cloth has been fed forwardly so that the needle now registers with this hole, with the parts in the position shown in Figs. 1, 2 and 3, the needle bar 12 of the sewing machine has descended to make a stitch in the cloth. During the descent of this bar the end thereof strikes the arm 50^a of the piercer and drives this member into the cloth to preform another hole to be made therein, although this is not absolutely essential to the operation of the device. When the needle bar 12 moves upwardly, the lever 42 is likewise moved upwardly and the pawl 43 moves the toothed wheel 44 through a distance equal to one tooth's space, thus rotating the shaft 29. This causes one of the arms 58 (that shown in the recess 57 in Fig. 1) to ride up-

wardly upon the surface 59 and move the piercer arm 47 downwardly, thus moving the piercer 51 through the cloth to make a relatively large opening therein. At the time that the piercer member is moving downwardly the cam surface 77 will move the feed bar 60 downwardly in contact with the cloth, thus slightly raising the presser foot 22. Thereafter, but still during the first stroke of the lever 42, the lateral cam surface 79 upon the cam wheel 35 will engage the lug 68 to move the front end of the feed bar 60 from the position shown in Fig. 2 to the position shown in Fig. 7 so that the cloth will have been moved laterally. The piercer arm 47 is likewise moved laterally at this time by contact of the lug 68 therewith so that the piercer 51 is moved with the cloth in order that the hole made by the piercer will not be enlarged.

The needle bar 12 then descends to again enter the cloth and make a stitch to one side of the opening made by the piercer. When the needle bar again moves upwardly, a second upward stroke of the lever 42 will be produced. During this stroke the cam surface 79 moves out of contact with the lug 68, and the surface of this member contacting with the lug 67 effects a return lateral movement of the forward end of the feed bar 60 to bring the cloth back to its original position. This lateral movement is also aided by the spring 82 which occupies a slightly diagonal position when the feed bar is moved to one side.

The needle bar again descends and makes another stitch in the opening made by the piercer, thus completing the return side stitch so as to bring the parts in position for a forward feeding movement and for a forward stitch in the cloth. When the needle bar again ascends and effects the third upward movement of the lever 42, the cam arm 58 rides out of contact with the part 59 and drops into the recess 56 (Fig. 6), thus releasing the piercer arm 47 and permitting it to be moved upwardly out of the cloth by the spring 55. Thereafter, the lug 72 is caused to ride toward the high portion 81 of the cam 73 and thus move the feed bar 60 to the right, as shown in Fig. 8, to effect a forward feeding movement of the cloth. Just prior to the end of this forward feeding movement, the shoulder 78 of the cam wheel 39 drops into the recess 63 to permit the free end of the feed bar 60 to be raised upwardly out of contact with the cloth by the spring 82. Just after this has taken place, the high point 81 of the cam 73 rides upwardly out of contact with the lug 72 and thus releases this lug, which is secured to the feed bar 60 so that the latter will be moved forwardly by the spring 82 to its original position. The parts are now in position for a subsequent cycle of operations, for when the needle bar again descends it will take a forward stitch in the cloth and strike the piercer head to cause the latter to be moved downwardly, as previously explained.

While we have shown and described a preferred embodiment of the invention, it will be understood that it is not to be limited to all of the details shown, but is capable of modification and variation within the spirit of the invention and within the scope of the appended claims.

What we claim is:

1. A hemstitching attachment for sewing machines comprising a frame member for attachment to the presser bar of the machine, means carried by said frame member to feed the cloth

laterally and forwardly, including a feed bar, and a cam member carried by the frame for pressing said feed bar against the cloth and moving it laterally while in contact therewith.

2. A hemstitching attachment for sewing machines comprising a frame member for attachment to the presser bar of the machine, means carried by said frame member to feed the cloth laterally and forwardly, including a feed bar, and a rotatable cam member carried by the frame for pressing the feed bar against the cloth and moving it laterally while in contact therewith.

3. A hemstitching attachment for sewing machines comprising a frame member adapted to be attached to the presser bar of the machine, means carried by said frame member to feed the cloth laterally and forwardly, including a feed bar movably secured to the frame for lateral, longitudinal and vertical movement, means for forcing said feed bar downwardly against the cloth, and a spring for raising said feed bar from the cloth when said first-named means is inactive and moving it longitudinally in one direction.

4. A hemstitching attachment for sewing machines comprising a frame member adapted to be attached to the presser bar of the machine, means carried by said frame member to feed the cloth laterally and forwardly, including a feed bar movably secured to the frame for lateral, longitudinal and vertical movement, a cam member acting directly upon the feed bar for pressing said feed bar against the cloth, and a spring for raising the feed bar from the cloth when said pressure is relieved.

5. A hemstitching attachment for sewing machines comprising a frame member adapted to be secured to the presser bar of the machine, means attached to the frame member for feeding the cloth laterally and forwardly, said means including a feed bar movably attached to the frame for longitudinal and vertical movement, and means to move said feed bar longitudinally of the frame, including a rotatable cam member carried by the frame.

6. A hemstitching attachment for sewing machines comprising a frame member adapted to be secured to the presser bar of the machine, means attached to the frame member for feeding the cloth laterally and forwardly, said means including a feed bar movably attached to the frame for longitudinal and vertical movement, and means to move said feed bar longitudinally of the frame, including a rotatable cam member carried by the frame and a part secured to said feed bar extending to a position to be engaged by said cam member.

7. A hemstitching attachment for sewing machines comprising a frame member adapted to be secured to the presser bar of the machine, means attached to the frame member for feeding the cloth laterally and forwardly, said means including a feed bar movably attached to the frame for longitudinal and vertical movement, means to move said feed bar longitudinally of the frame, including a rotatable cam member carried by the frame and a part secured to said feed bar extending to a position to be engaged by said cam member, and a spring to move said feed bar in a reverse direction when said cam is inactive.

8. A hemstitching attachment for sewing machines comprising a frame adapted to be attached to the presser bar of the machine, means

carried by said frame to move the cloth laterally and forwardly, including a feed bar connected to the frame for vertical and longitudinal movements, cam means to move said feed bar in one direction in its vertical movement and in one direction in its longitudinal movement, and spring means to move the feed bar in a reverse direction.

9. A hemstitching attachment for sewing machines comprising a frame adapted to be attached to the presser bar of the machine, means carried by said frame to move the cloth laterally and forwardly, including a feed bar connected to the frame for vertical and longitudinal movements, cam means to move said feed bar in one direction in its vertical movement and in one direction in its longitudinal movement, and common means to move said feed bar in the other direction vertically and in the other direction longitudinally.

10. A hemstitching attachment for sewing machines comprising a frame adapted to be attached to the presser bar of the machine, means carried by said frame to move the cloth laterally and forwardly, including a feed bar connected to the frame for vertical and longitudinal movements, cam means to move said feed bar in one direction in its vertical movement and in one direction in its longitudinal movement, and a single spring to move said feed bar in a reverse direction when released by said cam means.

11. A hemstitching attachment for sewing machines comprising a frame portion adapted to be secured to the presser bar of the sewing machine, a presser foot secured to said frame portion, a feed bar connected to said frame portion for lateral and vertical movements, and a rotatable cam member carried by the frame portion and engaging directly with the feed bar to force said feed bar downwardly against the cloth and raise said presser foot therefrom.

12. In a hemstitching attachment for sewing machines, a frame portion, a piercer member, an arm pivoted to the frame portion upon which said member is mounted, means engaging said arm to move the piercer downwardly through the cloth, means to move the cloth sidewise and back again from its normal position, and said engaging means holding said piercer in engagement with the cloth during such movement.

13. A hemstitching attachment for sewing machines comprising a frame adapted to be attached to the presser bar of the machine, means carried by said frame to move the cloth forwardly and to move it laterally in both directions, a piercer pivoted to the frame on a horizontal axis, and means to effect vertical movement of the piercer to make a hole in the cloth.

14. A hemstitching attachment for sewing machines comprising a frame adapted to be attached to the presser bar of the machine, means carried by said frame to move the cloth forwardly and to move it laterally in both directions, a piercer pivoted to the frame on a horizontal axis, and cam means to effect vertical movement of the piercer to make a hole in the cloth.

15. A hemstitching attachment for sewing machines having a presser bar and a needle bar, said attachment comprising a frame adapted to

be attached to the presser bar of the machine, a piercer member movably connected to the frame for vertical movement, and means actuated by the upward movement of the needle bar of the machine to positively force said piercer downwardly to make a hole in the cloth.

16. A hemstitching attachment for sewing machines having a presser bar and a needle bar, said attachment comprising a frame adapted to be attached to the presser bar of the machine, a piercer member movably connected to the frame for vertical movement, means actuated by the upward movement of the needle bar of the machine to positively force said piercer downwardly to make a hole in the cloth, and a spring to raise the piercer to its original position when the latter is released.

17. A hemstitching attachment for sewing machines comprising a frame adapted to be secured to the presser bar of the machine, an arm pivotally connected to said frame, a piercer member carried by said arm, and a rotatable cam engaging said arm to force it downwardly to effect the piercing of the cloth.

18. A hemstitching attachment for sewing machines comprising a frame attachable to the presser bar of the machine, a feed bar connected to the frame for lateral movement, an arm connected to the frame for vertical movement, a piercer carried by said arm, means to move said feed bar laterally with respect to the frame, and means upon the feed bar engaging said arm to move the piercer laterally with the feed bar.

19. A hemstitching attachment for sewing machines comprising a frame attachable to the presser bar of the machine, a feed bar connected to the frame for lateral movement, an arm connected to the frame for vertical movement, a piercer carried by said arm, means to move said feed bar laterally with respect to the frame, and means upon the feed bar engaging said arm to move the piercer laterally with the feed bar, said feed bar moving means comprising a cam and upstanding lugs upon the feed bar between which said cam engages.

20. A hemstitching attachment for sewing machines comprising a frame member adapted to be secured to the presser bar of the machine, means attached to the frame member for feeding the cloth laterally and forwardly, said means including a feed bar movably attached to the frame for longitudinal and vertical movement, and means to move said feed bar longitudinally of the frame, including a rotatable cam member carried by the frame and a part secured to said feed bar and actuated by said cam member.

21. A hemstitching attachment for sewing machines comprising a frame member adapted to be secured to the presser bar of the machine, means attached to the frame member for feeding the cloth laterally and forwardly, said means including a feed bar movably attached to the frame for longitudinal and vertical movement, means to move said feed bar longitudinally of the frame, including a rotatable cam member carried by the frame and a part secured to said feed bar and actuated by said cam member, and a spring to move said feed bar in a reverse direction when said cam member is inactive.

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