No. 715,565. Patented Dec. 9, 1902.

W. E. DURHAM.

HEMMING ATTACHMENT FOR SEWING MACHINES.

(Application filed Aug. 20, 1902.)

(No Model.) 2 Sheets—Sheet 1.

Fig. 1.

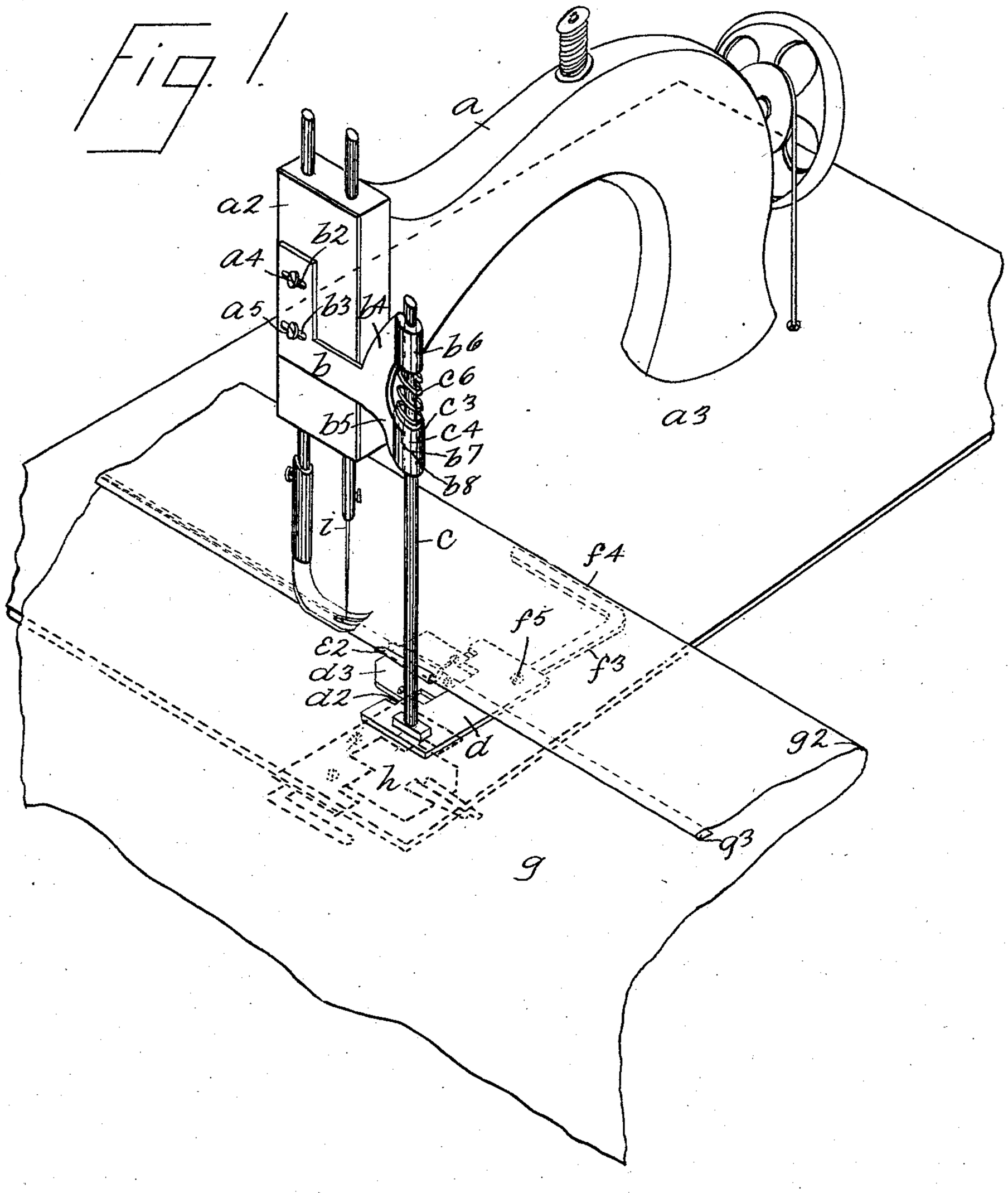

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Fig. 2

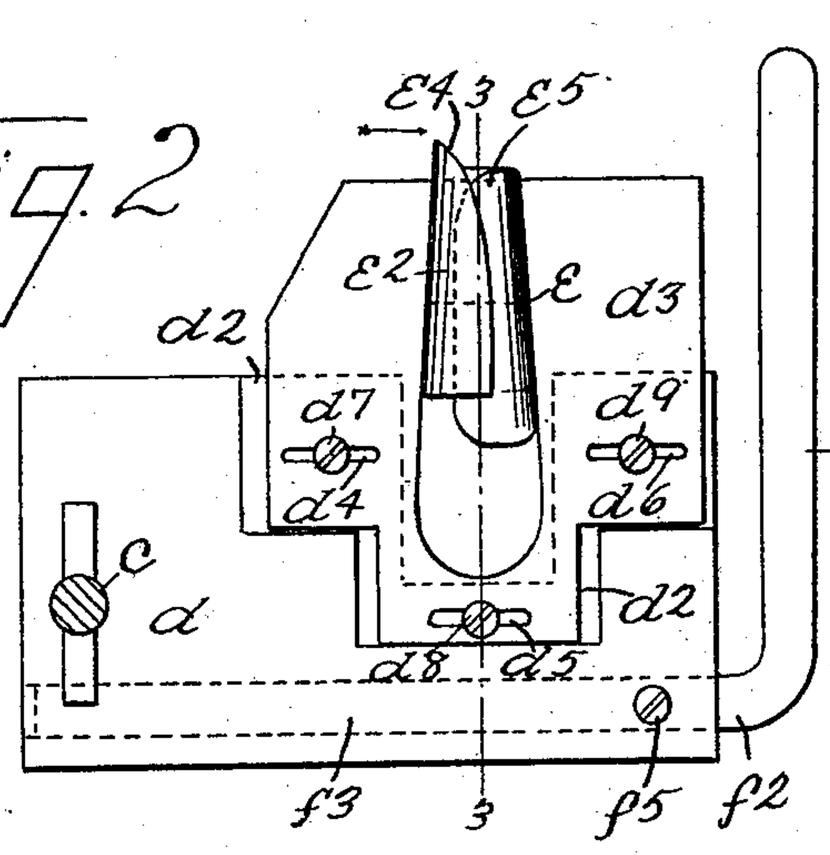


Fig. 3

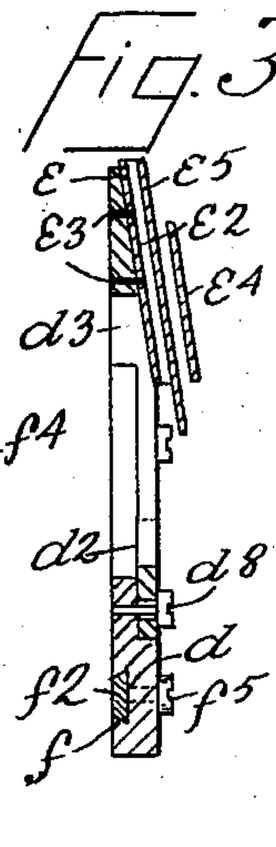


Fig. 4

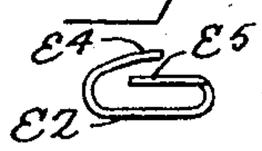


Fig. 7

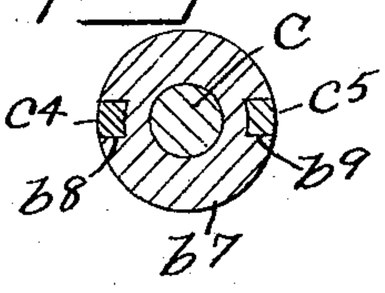


Fig. 5

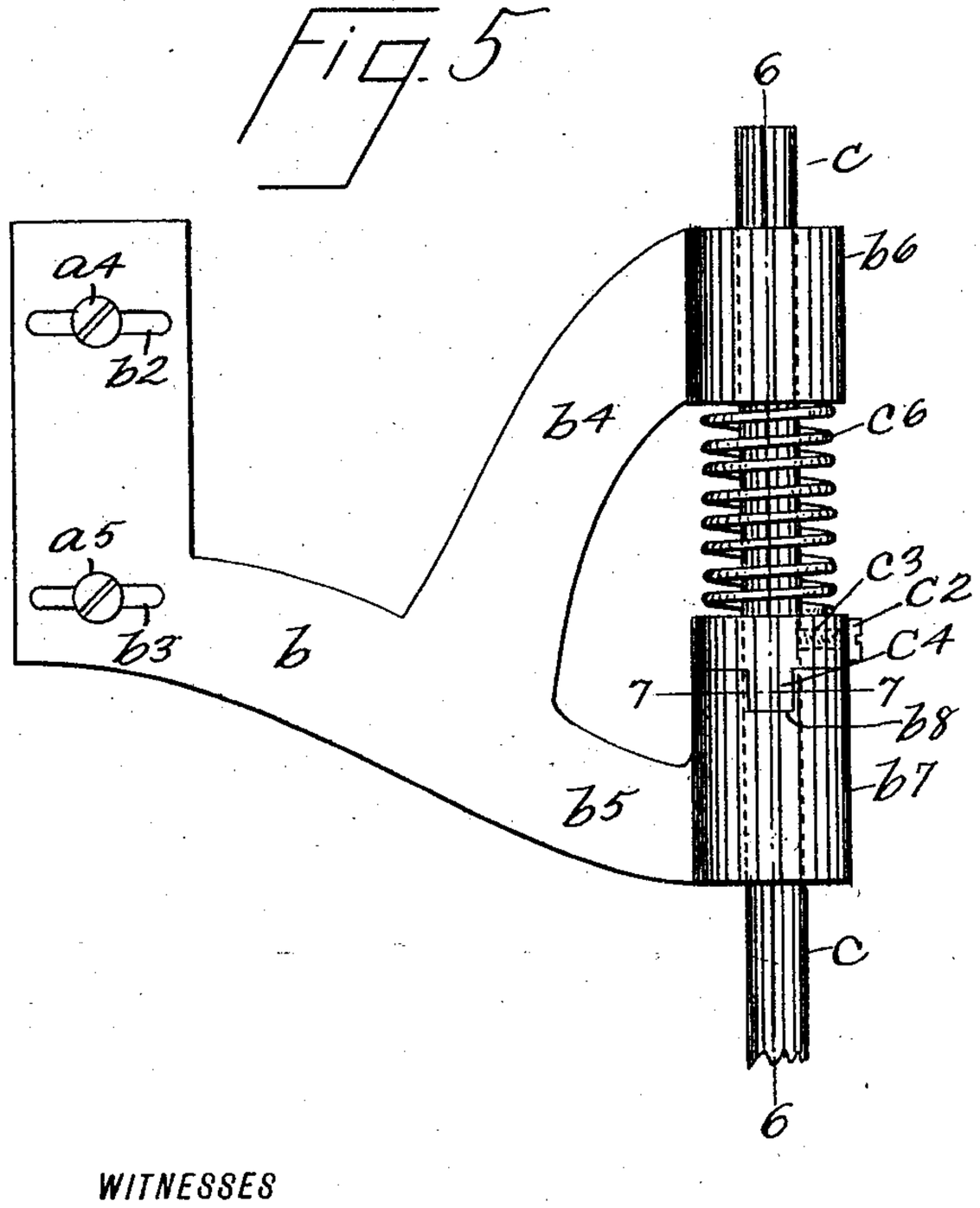
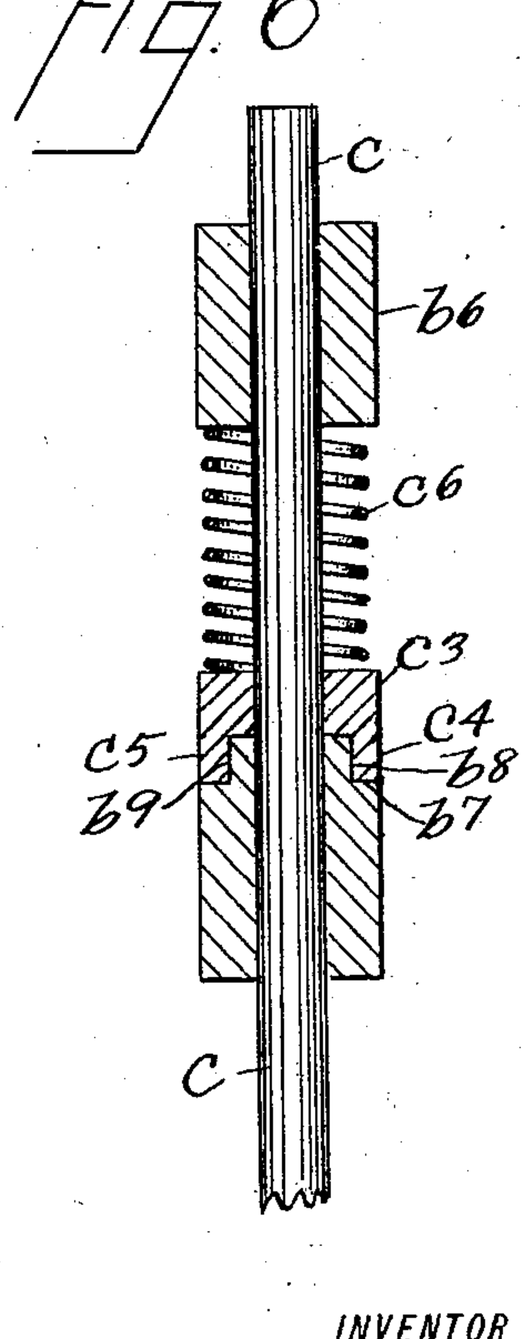


Fig. 6



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UNITED STATES PATENT OFFICE.

WILLIAM E. DURHAM, OF PORT CHESTER, NEW YORK.

HEMMING ATTACHMENT FOR SEWING-MACHINES.

SPECIFICATION forming part of Letters Patent No. 715,565, dated December 9, 1902.

Application filed August 20, 1902. Serial No. 120,360. (No model.)

To all whom it may concern:

Be it known that I, WILLIAM E. DURHAM, a citizen of the United States, residing at Port Chester, in the county of Westchester and State of New York, have invented certain new and useful Improvements in Hemming Attachments for Sewing-Machines, of which the following is a full and complete specification, such as will enable those skilled in the art to which it appertains to make and use the same.

The object of my invention is to provide an attachment for sewing-machines whereby plain hemming, hemstitch hemming, imitation-hemstitch hemming, and similar operations may be accomplished, such hems being made of any width for plain straight work—as on sheets, table-cloths, and similar articles—or for endless hems, as on pillow-cases or bags, requiring a turned edge at their open ends, a further object being to provide an attachment for sewing-machines of the class hereinafter described and claimed whereby the same may be readily applied to any sewing-machine provided with a face-plate to which my attachment is secured, thereby avoiding the necessity of removing any part of the casing or head of the machine or exposing any of its working parts.

In hemming attachments for sewing-machines heretofore used it has been necessary to baste the hem before sewing; but with my device this operation is unnecessary, as the material to be operated upon may be readily fed into my attachment with one hand by the operator, thereby leaving the other hand free for the handling of the bulk of the goods operated upon, which has often heretofore compelled the operator to stop the sewing-machine while arranging the same.

My invention is fully disclosed in the following specification, of which the accompanying drawings form a part, in which the separate parts of my improvement are designated by suitable reference characters in each of the views, and in which—

Figure 1 is a perspective view of a sewing-machine provided with my hemming attachment, a part of the goods operated upon being also shown in its proper position; Fig. 2, a plan view of the operative part of my invention; Fig. 3, a section on the line 3 3 of Fig. 2; Fig. 4, an end view of an edge-turner which I employ; Fig. 5, an elevation of the support of the operative part of my invention; Fig. 6, a section on the line 6 6 of Fig. 5, and Fig. 7 a section on the line 7 7 of Fig. 5.

In Fig. 1 of the drawings I have shown at a a part of a sewing-machine provided with a face-plate a^2 and the usual table a^3, and adjustably secured to the face-plate a^2, by means of screws a^4 and a^5, is a support b, provided with transverse slots b^2 and b^3, through which the screws a^4 and a^5 are adapted to pass, and the support b extends forwardly in the direction of the operator and is provided at its outer end with arms b^4 and b^5, at the ends of which are guide-blocks b^6 and b^7, in which is loosely mounted a rod c, and secured to the rod c, by means of a set-screw c^2 and between the guide-blocks b^6 and b^7, is a collar c^3, which is provided with radially-opposite and downwardly-projecting lugs c^4 and c^5, which are adapted to engage with corresponding recesses b^8 and b^9 in the guide-block b^7, and the lugs c^4 and c^5 of the collar c^3 are adapted to be easily removed from the recesses b^8 and b^9 of the guide-block b^7.

Passing around the rod c and between the guide-block b^6 and collar c^3 is a coil-spring c^6, which acts to force the collar c^3 downwardly against the guide-block b^7, and by means of this construction it will be seen that the rod c and collar c^3, secured thereto, may be raised and revolved and the lower ends of the lugs c^4 and c^5 may rest upon the upper surface of the guide-block b^7, and if the rod c and collar c^3 be turned through one-half a revolution the lugs c^4 and c^5 will be forced into the recesses b^9 and b^8, respectively, by means of the coil-spring c^6, the object of which will be hereinafter explained.

At the lower end of the rod c and adjacent to the table a^3 is a base-plate d, which is preferably secured to the rod c and extends in its operative position toward the right, and the plate d is provided on its upper surface with a recess d^2, which is angular in form and extends almost the full length of the base-plate d, and the recess d^2 is preferably

about one-half the thickness of the base-plate d, and adjustably secured in the recess d^2 is an edge-turner plate d^3, which extends beyond the rear side of the base-plate d, and the edge-turner plate d^3 is preferably cut away on its under side where it engages the recess d^2 of the base-plate d, thereby bringing the upper and lower faces of the said base-plate and edge-turner plate in the same horizontal planes respectively, and the edge-turner plate d^3 is also provided with transverse slots d^4, d^5, and d^6, through which pass screws d^7, d^8, and d^9, which engage with the base-plate d.

The edge-turner plate d^3 is also provided with a backwardly and downwardly directed groove e on its upper face, into which is secured an edge-turning device e^2, secured in the groove e by means of screws or bolts e^3, and the outer end of the edge-turner e^2 projects beyond the side of the plate d^3, as shown in Fig. 2, and the said edge-turner e^2 is preferably composed of one piece of metal, the sides of which are bent upwardly and inwardly, as shown in Fig. 4, the member e^4 extending partly over the member e^5, and the edge-turner e^2 is tapered toward its outer end in order to bring the turned parts of the goods operated upon more closely together as the said goods pass under the needle or needles of the sewing-machine.

Passing through a longitudinal groove in the bottom of the base-plate d is a guide-bar f^2, provided with an outwardly-directed member f^3 and at the outer end thereof with a member f^4, which is bent at right angles to the member f^3 and in the same horizontal plane, and on the upper face of the base-plate d is a set-screw f^5, by means of which the guide-bar f^2 may be held in any desired position, and at g I have shown a piece of muslin or other goods which is being operated upon, and the body portion thereof is shown as turned over at g^2, the width of such turn being regulated by means of the member f^4 of the guide-bar f^2, and at g^3 I have shown a second turn, which extends a short distance beneath the portion g^2, as shown in Fig. 1.

The operator first places the goods to be hemmed on the table a^3 of the sewing-machine, the bulk of the goods being at the left of the machine, and only as much as is necessary is then drawn underneath the base-plate d and guide-bar f^2, and a portion g^2 thereof is then turned over and to the left, and a turn under then being made the portion g^3 is then passed beneath the member e^5 of the edge-turner e^2, the portion g^2 of the goods passing out between the members e^4 and e^5 and around and beneath the guide f^2, the body portion g passing from the guide-arm f^2 beneath the base-plate d and to the left out of the way. The body portion of the goods g and the turned portion g^3, which emerges from the edge-turner, are then passed beneath the needle and are stitched together, and the position of the stitch may be regulated by means of the screws d^7, d^8, and d^9. It is only necessary for the operator to feed the goods into the edge-turner, simply keeping a tension on the goods as the same is being drawn beneath the needle, and by means of the screws a^4 and a^5 the entire attachment may be moved backwardly or forwardly and the edge-turner caused to recede from or approach the needle according to the thickness of the material being operated upon.

Should it be desired to remove the base-plate d from its operative position and out of the way, the rod c is forced up, thereby disengaging the lugs c^4 and c^5 from the recesses b^8 and b^9, and the said base-plate may then be swung into the position shown in dotted lines at h in Fig. 1, and, as will be readily seen, the entire attachment may be easily removed from the sewing-machine or attached thereto at will, and various changes in and modifications of the same may be made without departing from the spirit of my invention or sacrificing its advantages.

From the foregoing description it will be seen that the rod c is supported in front of the needle-bar i, a little to the left thereof, and the edge-turner proper of the hemming device, when said device is in position for use, is directly in front of the needle-bar i and the needle supported thereby, and the hemming device and the rod c may be raised and turned out of the way whenever it is desired to use the machine independently thereof.

Having fully described my invention, what I claim as new, and desire to secure by Letters Patent, is—

1. The combination with a sewing-machine of an attachment connected with the face-plate thereof and comprising a support forwardly and backwardly adjustable on said plate, a spring-depressed and vertically-movable rod mounted in said support, and a hemming attachment connected with the lower end of said rod and movable therewith and comprising a base-plate, a transversely-adjustable edge-turning plate connected therewith, an edge-turner connected with the last-named plate, and a guide-bar adjustable transversely of the base-plate, substantially as shown and described.

2. The combination with a sewing-machine of an attachment connected with the face-plate thereof and comprising a support forwardly and backwardly adjustable on said plate, a spring-depressed and vertically-movable rod mounted in said support, and a hemming attachment connected with the lower end of said rod and movable therewith and comprising a base-plate, a transversely-adjustable edge-turning plate connected therewith, an edge-turner connected with the last-named plate, and a guide-bar adjustable transversely of the base-plate, said hemming at-

tachment being adapted to be turned in a horizontal plane through an arc of one hundred and eighty degrees, and means for locking said device either in its normal or in its turned position, substantially as shown and described.

In testimony that I claim the foregoing as my invention I have signed my name, in presence of the subscribing witnesses, this 19th day of August, 1902.

WM. E. DURHAM.

Witnesses:
F. A. STEWART,
C. E. MULREANY.