W. B. BARTRAM.

Sewing Machines for Stitching Eyelet Holes.

No. 54,671. Patented May 15, 1866.

Fig: 1.

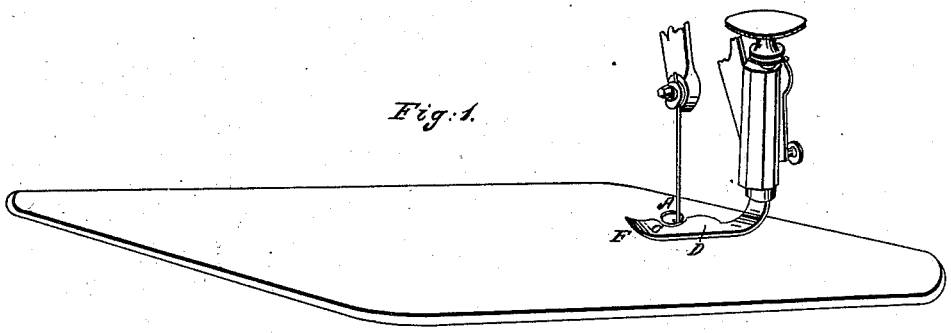


Fig: 3.

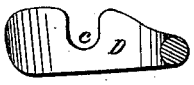


Fig: 4.

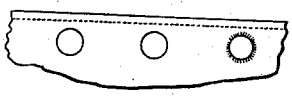
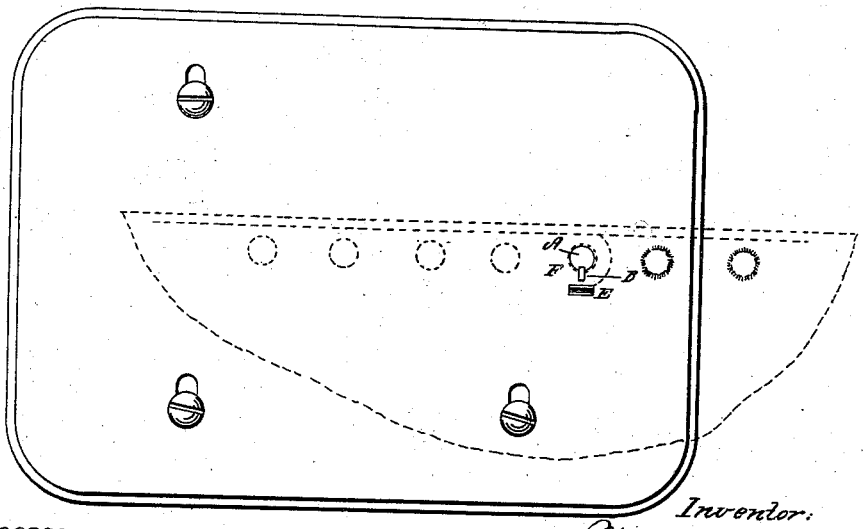


Fig: 2.



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UNITED STATES PATENT OFFICE.

W. B. BARTRAM, OF NORWALK, CONNECTICUT.

IMPROVEMENT IN SEWING-MACHINES FOR STITCHINC EYELET-HOLES.

Specification forming part of Letters Patent No. **54,671**, dated May 15, 1866.

To all whom it may concern:

Be it known that I, WALKER B. BARTRAM, of Norwalk, in the county of Fairfield and State of Connecticut, have invented a new and useful Improvement in Sewing-Machines for Stitching Eyelet-Holes; and I do hereby declare the following to be a full, clear, and exact description of the same, reference being had to the accompanying drawings, in which—

Figure 1 is a perspective view of a sewing-machine table having my improvement attached. Fig. 2 is a plan view of the same. Fig. 3 is a plan of the presser-foot. Fig. 4 is a plan of a portion of the work, showing the eyelets when cut.

In stitching eyelets by machinery it is required that perforations should be made at the desired points, and that while the sewing mechanism is in operation the material should be caused to revolve about a point which is the center or axis of the eyelet. To effect this it has hitherto been deemed necessary that the cloth should be more or less firmly attached to a rotating frame of some kind, forming a portion of the machine, by which means it should be kept properly distended and in position. The devices referred to add in a greater or less degree to the complexity and cost of the machine, and it is therefore desirable to dispense with them if possible.

My invention relates to that class or sewing-machines which produce a zigzag stitch, adapted to the working of button and eyelet holes; and it consists in the application of a fixed cylindrical pin or guide of such size as will correspond to and fit the eyelets to be worked, about which as an axis the cloth is to be revolved, an advancing motion being imparted to the cloth by a rectilinear feed-movement, which, in conjunction with the restraining action of said guide, gives a rotary motion to the cloth about said axis without the aid of any other guiding device therefor, the cloth being properly confined between the stationary smooth surfaces of the table and presser-foot. In addition to this a lateral motion is to be imparted either to the cloth, the table, or the needle, in order to allow the stitches to be secured both through the cloth and over the edge of the button-hole or eyelet. The mode which I have found well adapted for this purpose is that of giving a reciprocating lateral motion to the table and material, as shown and described in my Patent No. 50,870.

That others may understand my invention, I will particularly describe it.

I place a small cylindrical stud, A, upon the table F of my machine. This stud is of such diameter as will properly fit within the intended eyelet-hole. Its position is such that the needle-slot B, if continued, would cut vertically through its center. Its elevation is sufficient to permit it to extend entirely through the cloth and be embraced by the presser-foot D, which is notched for that purpose, and which has no motion except its vertical movement in rising from and falling upon the table F.

The feed E may be in any of the ordinary forms which operate in planes vertical to the surface of the table F, and tend to move the cloth in straight lines. It is located in the ordinary position at one side of the needle and guide A, and removed a little distance therefrom.

When the guide A has been passed through the intended eyelet, the presser-foot D descends in the usual manner, and the operation of stitching may commence. It will be observed that the cloth is now compressed between the smooth surfaces of the table F and the presser-foot D, which therefore form two stationary holding devices, to keep it properly distended and supported, while at the same time it is free to move between them in obedience to the combined action of the feeding device E and the guide A.

When the machinery is set in motion the needle strikes alternately through the cloth and through the eyelet, each stroke producing the required stitch in the manner known as "zigzag," and the feed operating intermittently upon the cloth causes it to move in the intervals between the stitches. The tendency of this movement is to follow a straight line; but the guide A, inserted through the material being operated upon, prevents any forward motion thereof in that direction, and the result is a circular movement around the said guide in the direction pointed by the red arrow

in Fig. 2. These operations are continued until the cloth or other material has made a complete circuit and the eyelet is finished.

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

The combination of the cylindrical guide A and a presser-foot, D, with a rectilinear forward feed-movement, and a horizontally-reciprocating mechanism to effect a lateral feed of the cloth, for the purpose set forth.

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