(Model.)

F. W. OSTROM.

GAGING ATTACHMENT FOR BUTTON HOLE STITCHING MACHINES.

No. 419,283. Patented Jan. 14, 1890.

Fig: 5.

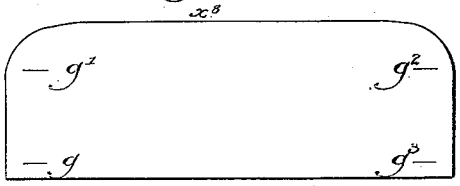

Fig: 1.

Fig: 2.

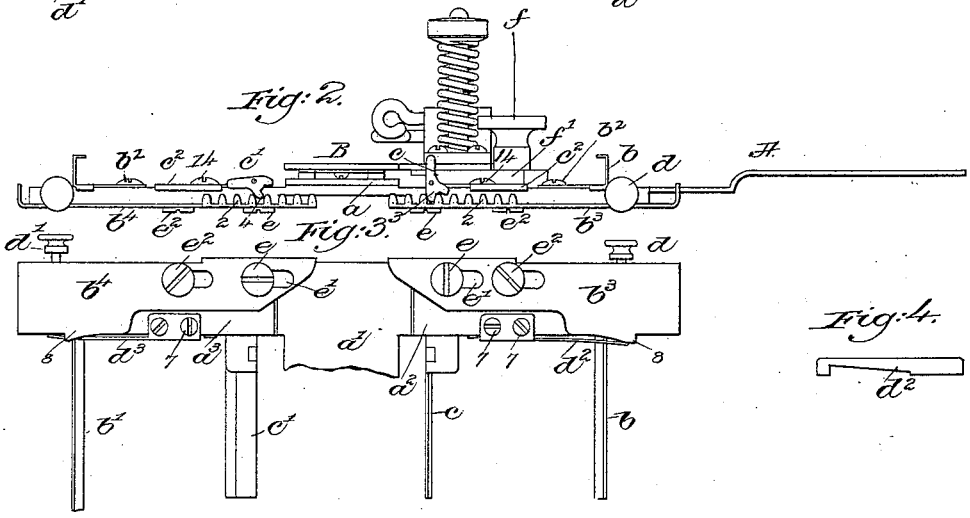

Fig: 3.

Fig: 4.

Witnesses.
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UNITED STATES PATENT OFFICE.

FREELAND W. OSTROM, OF BRIDGEPORT, CONNECTICUT.

GAGING ATTACHMENT FOR BUTTON-HOLE-STITCHING MACHINES.

SPECIFICATION forming part of Letters Patent No. 419,283, dated January 14, 1890.

Application filed March 5, 1888. Serial No. 266,209. (Model.)

To all whom it may concern:

Be it known that I, FREELAND W. OSTROM, of Bridgeport, county of Fairfield, State of Connecticut, have invented an Improvement in Gaging Attachments for Button-Hole-Stitching Machines, of which the following description, in connection with the accompanying drawings, is a specification, like letters on the drawings representing like parts.

In stitching button-holes in wearing-apparel as now most commonly done, where accuracy is desirable, the material is marked to indicate the positions for the button-holes, and much care has to be taken by the operator to place the marked portions of the material centrally in the clamp which is to hold the material to be stitched. The marking of the material prior to stitching it requires a separate handling, which adds to the cost of production.

In accordance with my invention the cloth-clamp has combined with it an arm or bar having one or more registering-gages for the registering side of the material, the said gage or gages being movable in and out of gaging position at the will of the operator, it being thus possible by my attachment to accurately locate the material for the production at any predetermined point of a button-hole.

An attachment employed for stitching button-holes in a cuff such as herein shown must have its gages so constructed as to occupy four gaging positions, two at each side the clamp, one gaging position being that to determine the position of that edge of the cuff next which is to be made the button-hole to receive the ornamental cuff-buttons, the other position being to determine from the same side of the cuff the location for the button-hole which is to receive a button by which to attach the cuff to the sleeve. To accommodate for making these button-holes in opposite ends of the cuff in succession, it becomes necessary to provide like gages at both sides of the clamp.

Cuffs are commonly made in large factories and by piece-work, the operator taking the material after it has been marked; but with my attachment this previous marking is unnecessary, the operator, by the gaging-surfaces described, being enabled to put the cuff more quickly and accurately in place than were the mark depended upon and gages were not employed.

Figure 1, in top or plan view partially broken out, represents one form of gaging attachment embodying my invention, one of the movable registering-gages being turned or moved out of registering position, the foot-plate of the registering-gage at the right being broken out to show parts below it; Fig. 2, a front elevation of the attachment shown in Fig. 1; Fig. 3, an under side view of a portion of the attachment shown in Fig. 1; Fig. 4, a detail showing one of the spring-catches at the inner edge of the attachment bar or arm. Fig. 5 represents on a small scale a cuff, showing the positions of the button-holes to be made in it.

The plate G and the pivoted lever or arm G′ above it form a cloth-clamp substantially such as shown in United States application No. 202,733, filed May 20, 1886, and need not therefore be herein specifically described; but instead of the particular clamp shown I may employ any other usual or well-known suitable form of clamp, the plate being of course shaped to adapt it to the particular class of machine to which the attachment is to be applied.

The plate G, forming the lower member of the cloth-clamp, has attached to it by screws *a a* a lug *a′*, forming part of a frame, the other part of the frame consisting of arms or bars a^2 a^3, which, as shown in the drawings in Sheet 1, support two rigid gages *b b′*, connected adjustably thereto by a screw, as b^2, and two movable or hinged gages, as *c* and *c′*. These arms or bars at their lower side are provided with like sliding plates b^3 b^4, held thereto loosely and guided by screws *e* and e^2, the plates having like rack-teeth, as 2, which teeth engage like teeth or projections, as 3 4, on or forming a rigid part of one or the other of the movable registering-gages *c c′*, the said registering-gages, as shown on Sheet 1 of the accompanying drawings, being each hinged or pivoted to a thin foot-plate, as c^2, adjustably connected to the said arms or bars a^2 and a^3, respectively, by like screws 14.

The arms or bars a^2 or a^3 are slotted to contain like spiral springs, as 5, each spring at one end being connected with a stud, as 6, of

the slide-plates, the opposite or outer end of each spring being attached to a releasing-pin, as d or d', the inner end of each of the said releasing-pins acting when pushed in against one or the other of the like catches d^2 or d^3, secured by screws, as 7, to one or the other of the said arms a^2 or a^3, each catch being adapted to engage a lug or projection, as 8, upon a slide-plate b^3 or b^4, thus holding each slide-plate in with its attached spring stretched, the registering-gage, co-operating with a slide so pulled in and held, being turned down, as shown, by the gage c', so as to not present an obstruction to resist the movement of the material or to present an elevated surface over which the material would have to be bent when being clamped in position. To enable either of the said registering-gages to be elevated into gaging position, it is only necessary to push upon the releasing-pin and free the spring-catch from the lug 8 engaged by it, when the spring 5 referred to will immediately assume control of and move the slide-plate outwardly and move or turn up the registering-gage into registering position, the extent of outward movement of the slide-plate being determined by the screw, as e, which acts in the slot e' of the sliding-plate as a stop, the other screw, as e^2, acting as a guide for the said slide-plate, the said slide-plate and screw being alike on both arms or bars a^2 a^3.

The clamp-base has adjustably attached to it by a set-screw f an abutting gage, as f', the said gage receiving against it one end of the cuff to be stitched.

Let it be assumed that the button-hole g in a cuff (see Fig. 5) is first to be made and that the side x^8 of the cuff is its registering side. To do this the operator, without any mark on the cuff, will place the said edge x^8 against the stationary gage b, secured to the arm a^2, the registering-gage c next to it and between it and the clamp being at such time turned or moved down flat upon the arm a^2 or out of the way, so as not to form an obstruction or elevation. With the parts in this position and the cuff in normal or flat position the clamp will be closed. To work the second or inner button-hole g' the operator will push the releasing-pin d and remove the spring-catch d^2 from engagement with the slide-plate b^3, thus enabling the spring 5 to operate the slide-plate b^3 and turn the registering-gage c up into registering position, this being done after the cuff has been clamped in position to properly stitch the first button-hole g. At the completion of the button-hole g the operator will move the cuff to the left and place the registering edge thereof in contact with the movable registering-gage c previously put into gaging position, and thereafter the material will again be clamped for the button-hole g' to be stitched. While working the button-holes g g' at one end of the cuff, as stated, the gages at the left of the clamp are performing no function, the movable registering-gage c' being turned down out of registering position.

To stitch the button-holes g^2 g^3 at the opposite end of the cuff and in the order mentioned, so as to feed the cuff always to the left, which is merely a matter of convenience, the operator will first use the registering-gage c', and as soon as the material is clamped will turn it down or move it out of registering position, so as not to in any way obstruct the movement or clamping of the material when the button-hole g^3 is to be stitched.

For some kinds of work other than the style of cuff shown one of the movable registering-gages may be omitted, and for other work one or both of the rigid gages may be omitted.

I claim—

1. The combination, with a button-hole work-clamp, of a bar or frame at the front thereof and a rigid and a movable gage on said bar or frame on each side of the button-hole slot of the said work-clamp.

2. The combination, with a button-hole work-clamp, of a bar or frame at the front thereof, a rigid gage and a movable gage on said bar or frame on each side of the button-hole slot of the said clamp, and spring-actuated sliding plates for operating said movable gages.

3. The combination, with a button-hole work-clamp, of a bar or frame at the front thereof, a rigid and a movable gage on said bar or plate on each side of the button-hole slot of the said work-clamp, said movable gages being provided with teeth or projections, as 3 4, spring-actuated sliding plates, as b^3, having teeth, as 2, to engage the teeth or projections on said movable gages, and lugs, as 8, spring-catches, as d^2 d^3, to engage said lugs, and releasing-pins to disengage said catches from said lugs.

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

FREELAND W. OSTROM.

Witnesses:

ISAAC HOLDEN,

LOUIS H. BAKER.