

(No Model.)

2 Sheets—Sheet 1.

G. E. NORRIS.

BOSOM TAB FOLDING MACHINE.

No. 322,551.

Patented July 21, 1885.

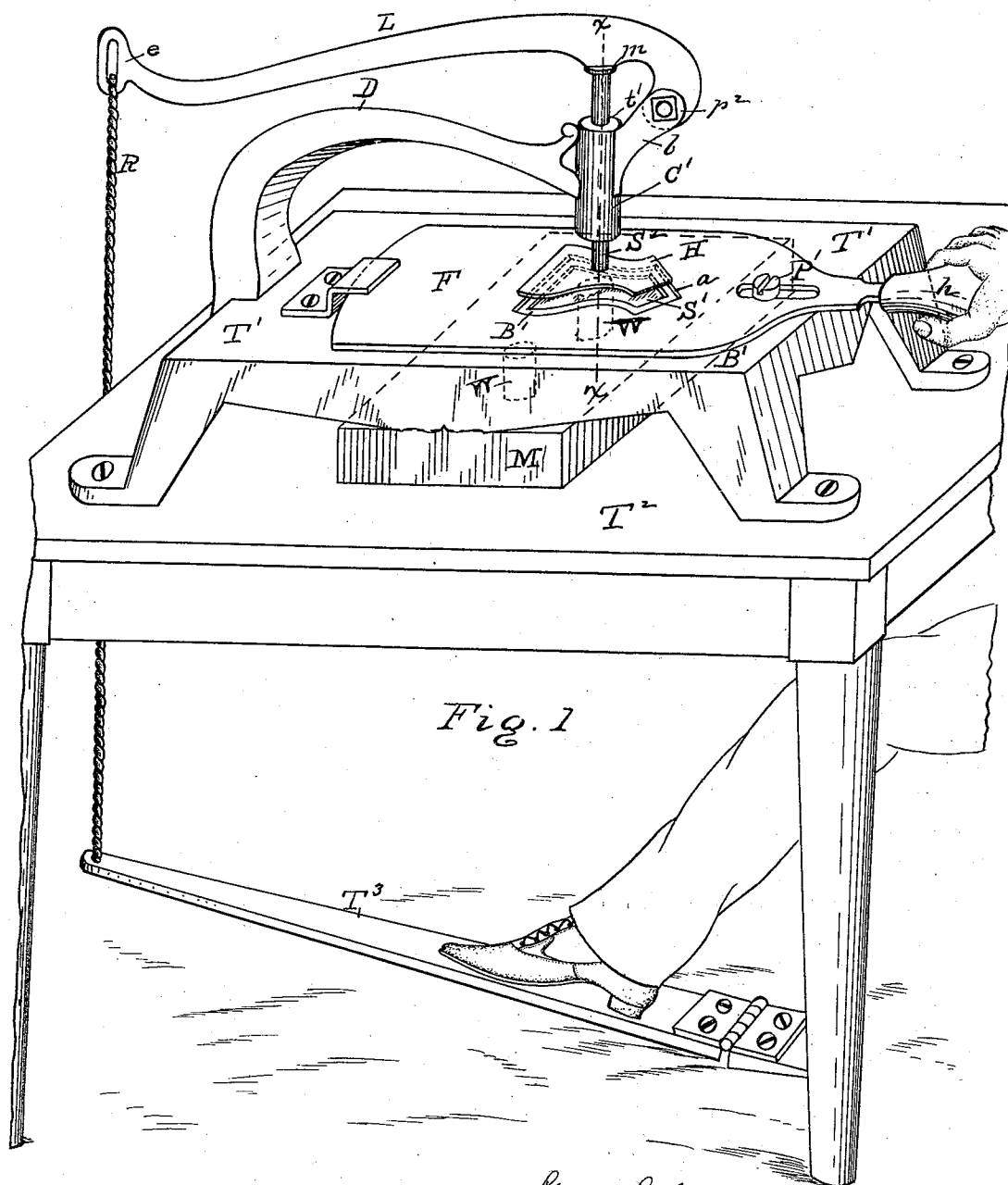


Fig. 1

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Stanley M. Holden.

Charles S. Brintnall

George E. Norris

INVENTOR

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(No Model.)

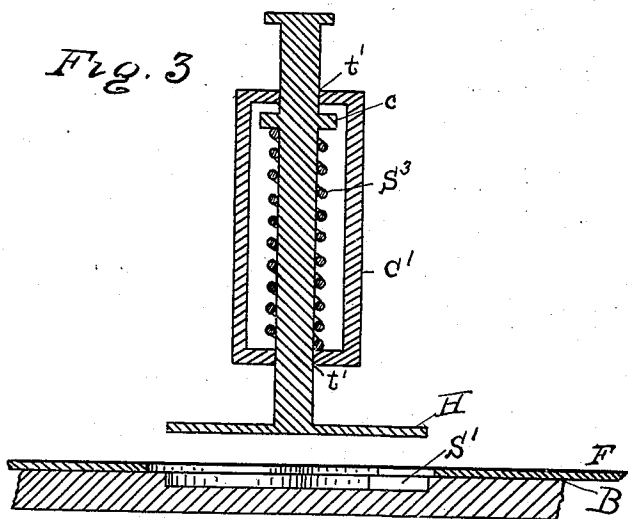
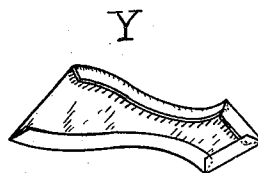
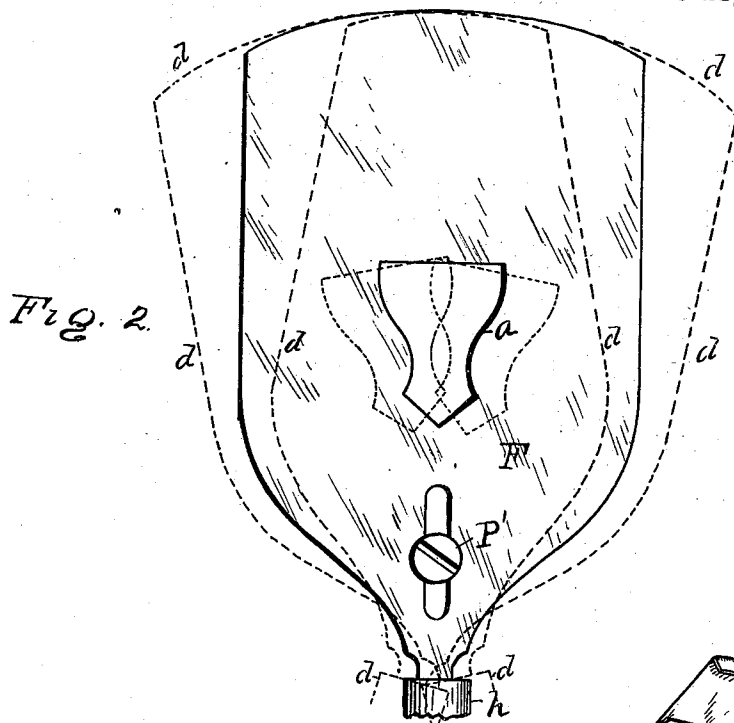
2 Sheets—Sheet 2.

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UNITED STATES PATENT OFFICE.

GEORGE E. NORRIS, OF TROY, ASSIGNOR OF ONE-HALF TO JAMES K. P. PINE, OF LANSINGBURG, NEW YORK.

BOSOM-TAB-FOLDING MACHINE.

SPECIFICATION forming part of Letters Patent No. 322,551, dated July 21, 1885.

Application filed January 16, 1885. (No model.)

To all whom it may concern:

Be it known that I, GEORGE E. NORRIS, of the city of Troy, county of Rensselaer, State of New York, have invented a new and useful
5 Improvement in Bosom-Tab-Folding Machines, of which the following is a specification.

My invention relates to a mechanism for infolding the edges of the blanks from which
10 shirt-bosom bottom tabs are made. These tabs are usually made of two thicknesses of material of like form, having infolded edges upon their sides and tapering ends, with the
15 blanks laid back to back and border-stitched to unite them and their edge infolds. The tabs thus made are at their upper ends attached to the bottom of the shirt-bosom, so as to leave them free from the shirt below their
20 attachment, they being provided with a button-hole for attachment to other garments, by such a connection to keep them pulled down flat against the person of the wearer.

The object of my invention is to produce by
25 machinery the infolds upon the edges of the blanks.

My invention consists, as will be more fully detailed hereinafter in connection with its illustration, in the combination of a holder-plate having the form which it is desired to
30 give to the tab when its edges are infolded, and which holder-plate by means of a treadle or other mechanism is actuated to be raised from off or forced down onto a folding-bed, a folding-plate having a cut-out area that corresponds in form to the holder-plate, but enough
35 larger than the latter for the passage of the holder-plate and an impressed blank through said cut-out area, and a sink in the bed having the same form as the holder-plate but just
40 enough larger than the latter to receive the holder and a blank when pressed down into said sink, the said folder-plate being adapted to be moved pivotally, so that the edges of the cut-out area will pass alternately over the
45 sides and tapering ends of the holder-plate top surface and turn down edges of the impressed blank thereat and thereon.

Accompanying this specification, to form a part of it, there are two plates of drawings;

containing three figures, illustrating my invention, with the same designation of parts by letter-reference used in all of them.

Of these illustrations, Figure 1 shows a perspective of my invention with the holder-plate shown as raised from off the folding-bed. Fig. 2 shows a plan view of the folder-plate, with
55 dotted lines indicating its position when moved laterally to pass over the top of the holder-plate and an impressed blank. Fig. 3 shows a cross-section of the machine taken through the line *x x* of Fig. 1.

The several parts of the mechanism are designated by letter-reference, and the function of the parts is described as follows:

The letter *T* designates the table proper, 65 and *T*² the under table on which the former rests.

The letter *B* designates the bed made with the sink *S*.

The letter *H* indicates the holder-plate made
70 to have upon its ends and side edges the form to be given to the completed blank. This holder-plate, upon its top surface, is centrally attached to a stud, *S*², made with a collar, *c*, and the letter *S*³ designates a spiral spring encircling said stud; and *C* indicates a cylinder
75 surrounding and inclosing said spring and stud, this cylinder being provided with top and bottom passage-ways, *t*, for the vertical movement of the stud therein.

The letter *D* designates a bracket, which at
80 one of its ends is connected to the table, and at its other end to the cylinder *C* to support the latter.

The letter *F* designates a folder-plate hav-
85 ing a cut-out area, *a*, that corresponds in form to that of the holder-plate *H*, but larger than the latter, and enough so for the vertical passage through it of the holder-plate and an impressed blank. This folder-plate is constructed
90 with a pivotal connection, *p*, and is made with a handle, *h*, by grasping which the operator can move said folder-plate around on its pivoted connection laterally, as indicated by the dotted lines *d* of Fig. 2.

The letter *B* designates the folding-bed,
95 which is made with a sink, *S*, and this sink is made to correspond in form and size with the

bottom of the holder, but just enough larger than it to allow the vertical passage of the holder and an impressed blank into said sink.

The letter L indicates a lever that at p^2 is pivoted to a bracket, b , on the cylinder C' , and this lever, at its other end, e , is connected by a rope, R , with a hinged treadle, T^3 . At m this lever L is in contact with the top of the stud S^2 , so that as the treadle is pressed down by the foot of the operator the lever L is also moved down on its pivotal connection, so as to press down the stud S^2 and the holder-plate against the force of the spring S^3 , and with the parts so arranged that when the pressure upon the hinged treadle is released the stud and connected holder-plate are raised by the action of the said spring.

The annexed figure Y shows a tab-blank after having its edges infolded.

The letter M designates a lamp, and W its wicks, the lamp resting on the table T^2 with its wicks immediately beneath the bed B' , the object and purpose of which is to heat the bed, so as to fix the infolds made in the edges of the blanks by heat and pressure, as in ironing fabrics.

The operation of these parts is as follows: A tab-blank having been placed under the holder-plate, with it raised, as shown at Fig. 1, the operator presses down the treadle, which forces down the holder-plate through the cut-away area of the folder-plate and into the sink S' . When this has been done with the parts thus held, the folder-plate is moved laterally, so as to carry the edges of the blank over the top surface of the holder-plate and turn the infolds of the blank down thereon, the position of the folder-plate while performing this operation being indicated by the dotted line d of Fig. 2. When this has been done as described, then the pressure upon the treadle is released and the holder-plate allowed to rise under the influence of the spring S^3 , and the tab-blank is removed from the holder-plate and another one inserted as before. The blanks thus folded have a uniform appearance, and their infolded edges produce a good finish when stitched in from their coincidence thus obtained.

While I have shown a lamp used to heat the folding-bed, steam or hot air may be used, or gas may be burned within a ventilating-inclosure beneath the bed to accomplish the same result.

In an application for a patent made by me and filed in the Patent Office December 26, 1884, I illustrate and describe a folder-plate having a cut-out area that upon both ends and one side corresponds to the form of the blank-holder and blank, and which folder-plate is arranged to slide over and from off

both ends and one side of the blank to produce infolded edges, my invention herein differing from that shown in said application in the fact that the folder-plate used in this application is pivoted and arranged to move laterally on a pivoted connection, while in the older application named both the end-to-end and side movements of the folder-plate over the holder-plate on the bed are at right angles to each other and no sink is used.

While I have shown my invention as applied to infolding the edges of bosom-tab blanks, yet by coincidentally varying the form of the holder-plate, the cut-out area of the folding-plate, and sink, so as to infold the edges of a blank intermediately placed, my invention may be applied to infold the edges of collars, gussets, or other articles.

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

1. In a machine for infolding the edges of bosom-tab blanks, the combination of the folding-bed B' , made with the sink S' , the folding-plate F , made with the cut-out area a , and the pivot P' , and the holder-plate H , the said parts being arranged and constructed to operate substantially in the manner as and for the purposes set forth.

2. In a machine for infolding bosom-tab blanks, the combination of a bed made with a sink having laterally the form of the completed tab, a holder-plate adapted to descend into said sink and ascend therefrom, said holder-plate having the form of the sink, but smaller, and an intermediately-arranged folder-plate having a cut-out area in form coincident to that of the holder and sink, but a little larger, and said folding-plate constructed with a pivot for lateral movement, substantially in the manner as and for the purposes set forth.

3. In a machine for infolding the edges of bosom-tab blanks, the combination of the folding-bed B' , made with the sink S' , the folding-plate F , made with the cut-out area a , and the pivot P' , the holder-plate H , the stud S^2 , spring S^3 , the cylinder C' , the lever L , and the treadle T^3 , said parts being constructed and arranged to operate substantially in the manner as and for the purposes set forth.

Signed at Troy, New York, this 5th day of January, 1885, and in the presence of the two witnesses whose names were by them hereto written.

GEO. E. NORRIS.

Witnesses:

CHARLES S. BRINTNALL,
C. H. SHEPARD.