

(No Model.)

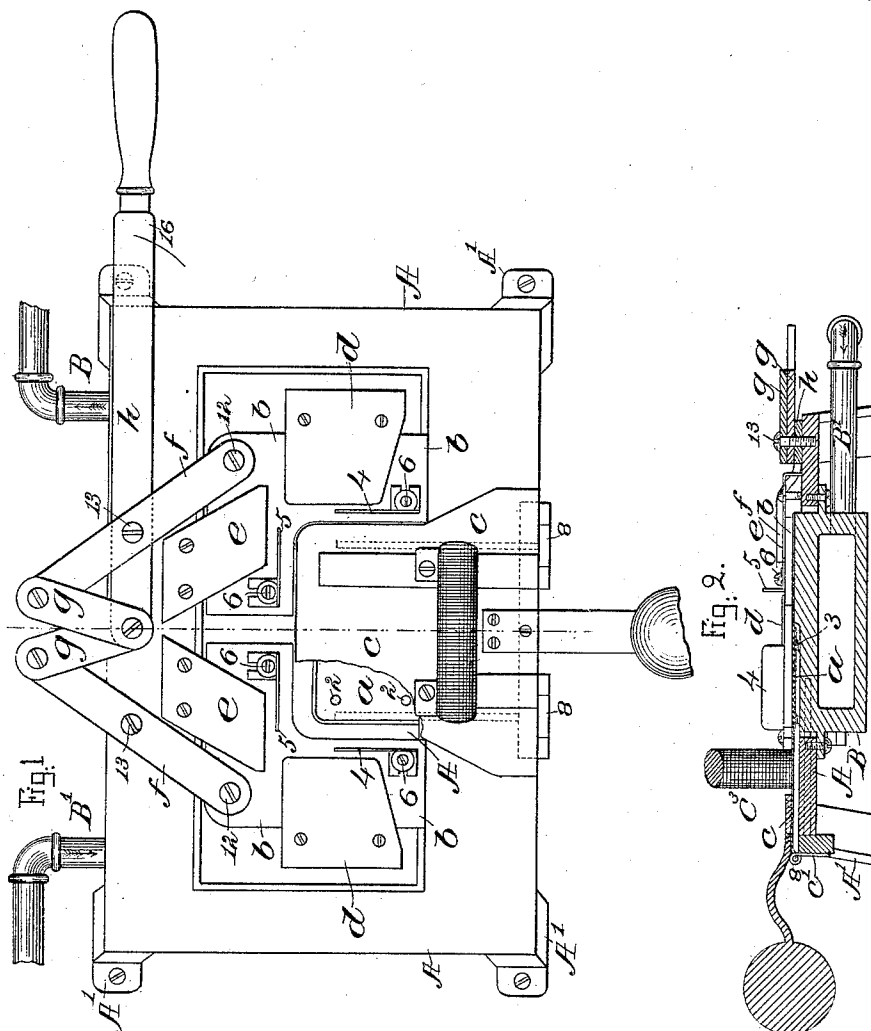
2 Sheets—Sheet 1.

C. W. SHIPPEE.

MACHINE FOR FOLDING TEXTILE OR OTHER MATERIAL.

No. 463,171.

Patented Nov. 17, 1891



Witnesses.

Fred L. Greenleaf

Edward F. Allen.

Inventor

Charles W. Shippee

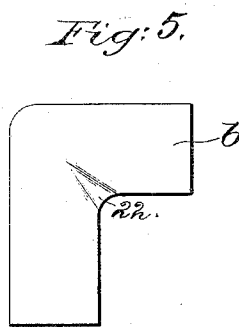
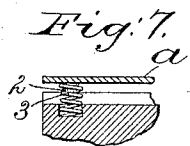
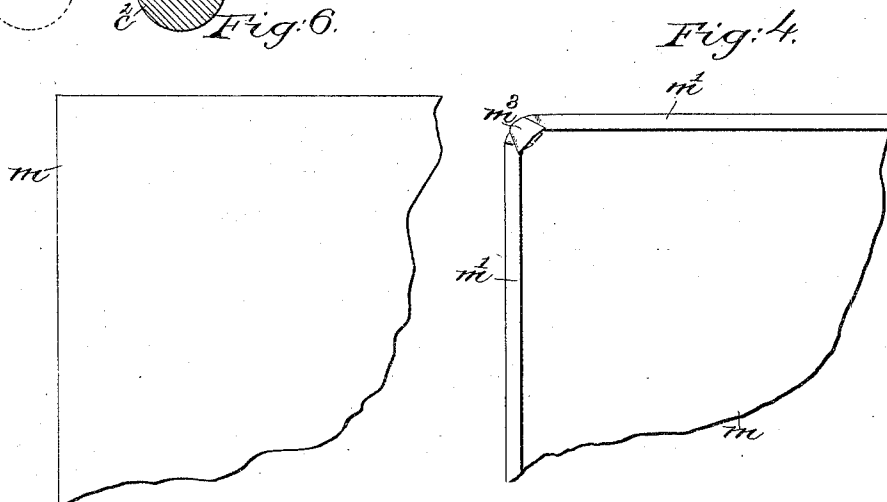
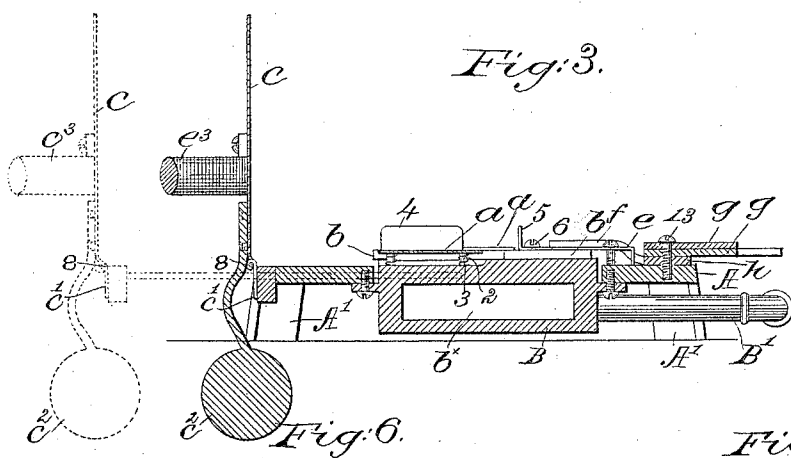
by Lemby Gregory attys.

C. W. SHIPPEE.

MACHINE FOR FOLDING TEXTILE OR OTHER MATERIAL.

No. 463,171.

Patented Nov. 17, 1891.



Witnesses.
Fred S. Grunleaf.
Edward F. Allen.

Inventor.
Charles W. Shippee
by Lemmy Gregory attys.

UNITED STATES PATENT OFFICE.

CHARLES W. SHIPPEE, OF MILFORD, MASSACHUSETTS.

MACHINE FOR FOLDING TEXTILE OR OTHER MATERIAL.

SPECIFICATION forming part of Letters Patent No. 463,171, dated November 17, 1891.

Application filed February 20, 1891. Serial No. 382,251. (No model.)

To all whom it may concern:

Be it known that I, CHARLES W. SHIPPEE, of Milford, county of Worcester, State of Massachusetts, have invented an Improvement in Machines for Folding Textile or other Material, of which the following description, in connection with the accompanying drawings, is a specification, like letters and figures on the drawings representing like parts.

10 In the manufacture of cuffs for shirts and collars and in the manufacture of wearing-apparel the pocket-lapels and also the edges of the apparel have to be inturned to leave a finished edge.

15 I have devised a simple and efficient machine for automatically turning over the raw or other edges of textile material.

My improved machine contains a thin form-plate, diagonally-movable folding-plates, and a clamping-plate to co-operate with the form-plate and hold the material being laid by the folding-plates about the edges of the form-plate. The form-plate is represented as pivotally supported, so that it may be turned 25 down on the material supported by the edges of the folding-plates and the clamping-plate; but the edges having been folded over on the form-plate by the inward movement of the folding-plates the form-plate is withdrawn 30 from under the folded edges of the material while the said edges are yet acted upon by the folding-plates, thus leaving the said edges held only between the folding and clamping plates. In this way the edges which are folded 35 over are set better and more closely than would be the case if the folding-plates were retracted before the form-plate. The under sides of the folding-plates may be provided with grooves to aid in plaiting the overturned 40 edge at a corner.

My invention will also preferably contain a heating-chamber to subject the material being folded to heat, so that the folding-plates act as irons in ironing.

45 Figure 1 in plan view represents a machine for shaping a piece of cloth for a cuff or the lapel of a coat, the form-plate being partially broken out to show the clamping-plate below it; Fig. 2, a section thereof in the line *a*, the 50 form-plate being supposed to have been shut down upon the material until the upper end of the form-plate is below the lower edge of

the folding-plates. Fig. 3 is a partial sectional detail, also in the same line, it however, showing the clamping-plate and the form-plate as elevated as it will be when the body 55 of the material is laid upon the clamping-plate and the edges of the material on the edges of the folding-plates. Fig. 4 is a detail showing a piece of material having its edges 60 folded over on the machine to be described; Fig. 5, an under side view of one of the folding-plates. Fig. 6 shows part of a blank to be folded as in Fig. 4 for a cuff or lapel; Fig. 7, an enlarged detail showing one corner 55 of the clamping-plate, its attached pin 2, and spring 3, together with part of the bed, it having a hole for the pin.

The supporting-plate A, standing on suitable legs A', has within or forming part of it, 70 as herein shown, a bed B, herein represented as hollow, to constitute a heater, the chamber *b*^x having connected to it, as shown, suitable inlet and outlet pipes B' B² for steam or other heating medium. The upper side of the bed 75 or heater B is cut away to receive the clamping-plate *a*, preferably a thin plate supported near each corner by a suitable spring 3, surrounding a pin 2, extended downwardly through the spring and into a hole in the bed 80 or heater, the springs acting normally to keep the upper side of the said clamping-plate up flush, or substantially so, with the upper side of the folding-plates *b b*, which rest on the bed or heater about the clamping-plate, and 85 which, as shown, carry gages 4 5, made adjustable by like screws 6.

The gages, when the folding-plates are open or retracted, as shown in Fig. 1, serve to position the edges of the blank or material to be 90 folded, the said material being laid on the clamping-plate, but with its edges overlapping the top edges of the folding-plates and against the gages.

The form-plate *c* is hinged or pivoted at 8 95 on slides or carriages *c'*, which may be slid out and in in suitable guideways in the bed-plate, and preferably the form-plate will have a counterbalancing-weight *c*² to normally keep the form-plate lifted, as in Fig. 3. (See 100 dotted lines.) The form-plate has a hand-piece *c*³, which will be covered to protect the hand of the operator.

The bed or heater has, as shown, attached

spring-plates d d , and the supporting-plate has attached spring-plates e e , which bear upon and keep the sliding folding-plates down on the heater, yet permit them, if the material demands, to adapt themselves to the thickness of the material or to any variations in thickness thereof.

The folding-plates have jointed to them at 12 the inner ends of like levers f , pivoted on the frame A at 13, the opposite or outer ends of the said levers being attached by links g to the inner end of the actuating-lever h , having its fulcrum, as shown, on one of the studs 13, which forms a fulcrum for one of the levers f .

It will be understood that the shape of the form-plate must correspond with the shape desired for the article to be produced and that the inner edge of the co-operating folding-plates must be made to conform thereto operatively, and hence the shape of the form-plate and of the folding-plates may be varied according to the work to be done without departing from my invention.

In operation it will be assumed that a piece of cloth m , called a "blank," has been cut to approximate the shape it is to retain when folded. The blank is laid on the clamping-plate while the latter is held up by its springs or in other suitable manner, and the edges of the material are made to overlap the edges of the folding-plates and abut against the gages. In this condition the form-plate is pushed forward and turned down upon the blank, and the form and clamping plates on the one side and the folding-plates on the other side have their relative positions changed vertically, so that the form-plate occupies a position at or below the plane of movement of the lower sides of the folding-plates. During the relative change of vertical position of the parts named the edge of the blank outside the form and clamping plates and previously resting on the folding-plate are drawn down about the inner edge of the folding-plate and between such edge and the edges of the form-plate. In this condition the operator, while he holds with his left hand the handle c of the form-plate, takes the handle h in his right hand and by moving the latter in the direction of the arrow 16, causes the folding-plates to be moved diagonally over the edges of the form-plate, thus folding the edges of the blank snugly over the folding-plate wherever the said edges are opposed, and during this operation

the grooves 22 at the corners of the folding-plates (see Fig. 5) act to plait or gather in and lay smoothly any fullness of the material at a corner of the form-plate. The folding-plates having been closed, the operator with his left hand will pull the form-plate longitudinally out from between the folding and clamping plates and out from the edge folds of the blank or material just laid over it, leaving the folded edges m' held clamped between the plates a and b , where the folded edges are closely creased.

In Fig. 4 I have shown a plaited corner m^3 , such as may be laid by the grooved part 22 of the folding-plate.

I claim—

1. In a folding-machine, the clamping-plate, the form-plate, and the folding-plates, combined with means for actuating the folding-plates, the clamping and folding plates being made vertically movable one with relation to the other, substantially as described.

2. The diagonally-movable folding-plates, the edge-gages located above them to receive against them the edges of the blank, which edges overlap the folding-plates, and the spring-supported clamping-plate, combined with a form-plate, between which and the clamping-plate the material is held, and with a heater, substantially as described.

3. The diagonally-movable folding-plates provided with grooves, the edge-gages located above them to receive against them the edges of the blank, which edges overlap the folding-plates, and the spring-supported clamping-plate, combined with the form-plate, between which and the clamping-plate the material is held, and with a heater, substantially as described.

4. The diagonally-movable folding-plates, the clamping-plate to sustain the material between the open folding-plates, means to move the said plates, and the heater, combined with the hinged or pivoted form-plate, also made longitudinally movable, whereby the form-plate may be withdrawn from between the folded-over edges, substantially as described.

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

CHARLES W. SHIPPEE.

Witnesses:

GEO. W. GREGORY,
EDWARD F. ALLEN.