(No Model.) 2 Sheets—Sheet 1.

C. H. BAYLEY.

SEWING MACHINE.

No. 262,269. Patented Aug. 8, 1882.

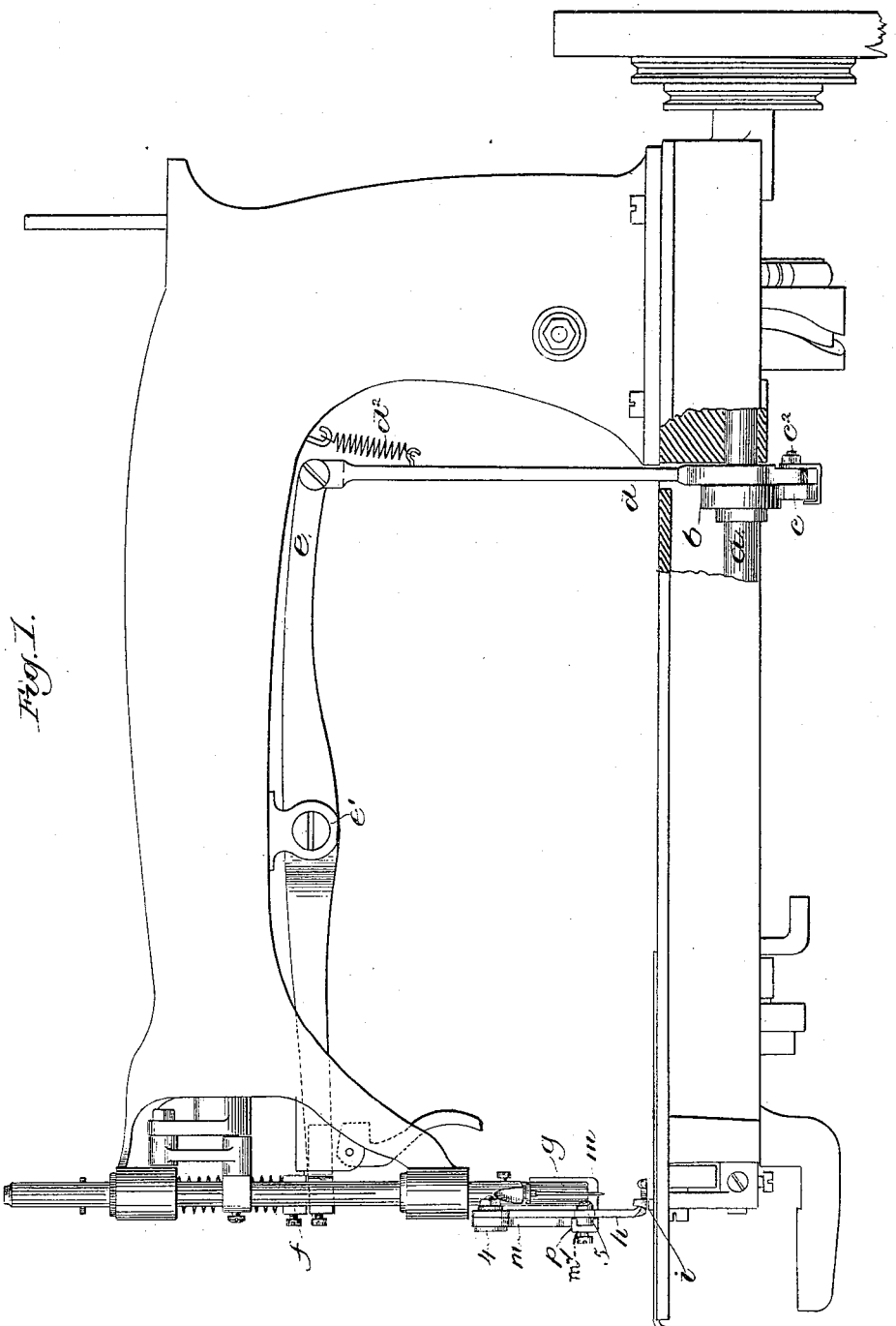


Fig. 1.

Witnesses
John F. C. Frenkert
Fred A. Powell.

Inventor:
Charles H. Bayley
by Crosby & Gregory Attys.

(No Model.) 2 Sheets—Sheet 2.

C. H. BAYLEY.

SEWING MACHINE.

No. 262,269. Patented Aug. 8, 1882

Fig. 2.

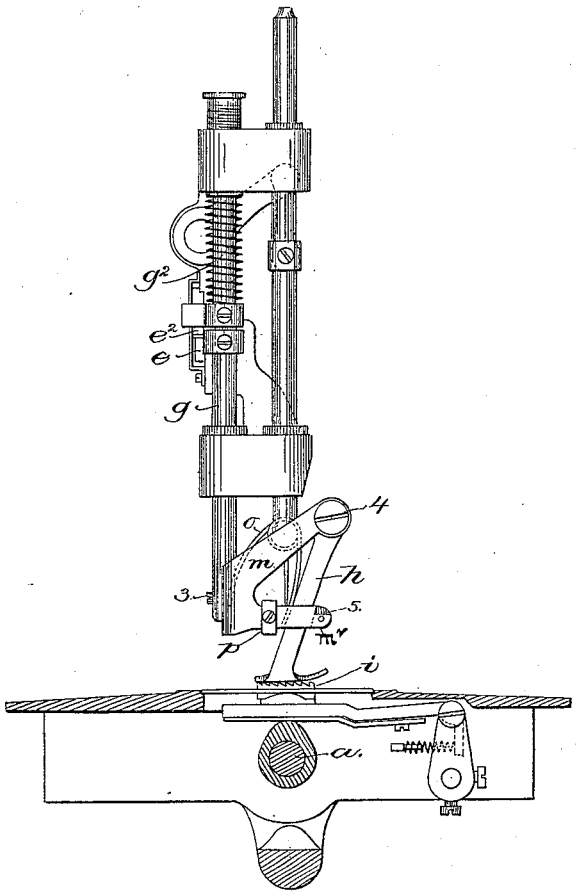


Fig. 3.

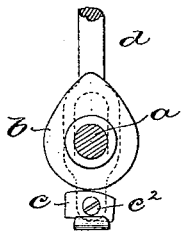
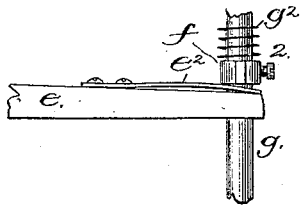


Fig. 4.



Witnesses.
John F. C. Brinkerhoff
Fred A. Powell.

Inventor.
Charles H. Bayley
by Crosby & Gregory
Attys.

UNITED STATES PATENT OFFICE.

CHARLES H. BAYLEY, OF BOSTON, MASSACHUSETTS, ASSIGNOR OF ONE-HALF TO GEORGE W. BROWN, OF SAME PLACE.

SEWING-MACHINE.

SPECIFICATION forming part of Letters Patent No. 262,269, dated August 8, 1882.

Application filed May 13, 1882. (No model.)

To all whom it may concern:

Be it known that I, CHARLES H. BAYLEY, of Boston, county of Suffolk, State of Massachusetts, have invented an Improvement in Sewing-Machines, of which the following description, in connection with the accompanying drawings, is a specification.

My invention in sewing-machines relates to improvements in the presser-foot, whereby the same is lifted positively, and is also so hung as to be moved with the usual under-feeding device when feeding the material forward for a stitch, the said presser-foot, when lifted, returning to its forward position above the material through the action of a spring.

My invention consists essentially in a lifting presser-bar combined with a presser-foot pivoted thereto, the pivot of the said foot being located in front of a perpendicular line drawn through the central part of the foot where it bears upon the material, and between the presser-bar and the operator, as will be hereinafter described, the said foot being placed in an inclined position, whereby the pressure of the spring on the presser-bar is made to cooperate with the foot and assist in feeding the material rather than offering a resistance to be overcome by the material, as would be the case if the foot were inclined in the direction opposite that herein shown, or if the foot stood perpendicular, as is most commonly the case. I have organized mechanism, as hereinafter described, to operate the said presser bar and foot.

Figure 1 represents in side elevation a Wheeler & Wilson sewing-machine with my improvements added thereto; Fig. 2, a front elevation of a sufficient portion of the same to illustrate my invention, the bed-plate being in section to show the usual under-feeding device; and Figs. 3 and 4 are details to be referred to.

The general construction of the Wheeler & Wilson machine shown in the drawings being well known need not be herein described.

The usual shaft, *a*, has placed upon it a heart-shaped cam, *b*, which acts upon a block, *c*, pivoted at c^2 upon and moving a link, *d*, slotted at its lower end to surround the said shaft. The upper end of link *d* is jointed to the rear end of the presser-bar lifting-lever *e*, pivoted at *e'*, and moves the said lever to enable it to lift the presser-bar *g* and the presser-foot *h* immediately after each forward feed-stroke of the four-motioned under-feeding device *i*, of usual construction. The cam-block *c* is kept up closely against the cam *b* by a spring, d^2. By pivoting the block *c* the contact between it and the cam *b* is not broken, noise is obviated, and the presser is always lowered positively, thus avoiding a blow upon the material and consequent shock to the machine. The forward end of lever *e* has a leaf-spring, e^2, which comes against a projection on the collar *f* of the usual presser-bar, *g*, the downward pressure of which is regulated, as usual, by a spring, g^2. The presser-bar, at its lower end, has connected with it by screw 3 a bracket, *m*, which has pivoted to it, at 4, the presser-foot *h*, the under side of which will in practice preferably be somewhat serrated. The bracket *m* has a second arm, m^2, made as a loop or guide to contain the shank of the presser-foot. This arm m^2 has a stop, 5, against which the presser-foot shank strikes when the presser-foot is in its most forward position, it being then acted upon by the spring *c*. The backward movement of the presser-foot is determined by the adjustable gage or block *p*.

It will be noticed that the pivot 4 of the upper end of the presser-foot is located between the operator and the presser-bar, and that the presser-foot shank is inclined in the direction of the forward movement of the usual four-motioned feeding device. Locating the presser-foot in this way and inclining its shank backward enables the strength of the spring g^2 on the presser-bar to so act upon the presser-foot as to tend to move the same toward the left, (see Fig. 2,) or the direction of forward movement of the feeding device *i*.

The under-feeding device *i* as it rises against the material to feed it forward impinges the material between itself and the under side of the presser-foot, and as the feeding device *i* is moved forward in the usual manner the presser-foot *h* moves about its pivot in the same direction, thus avoiding the production of friction between it and the material being fed forward; but as soon as the feeder reaches its

forward position and leaves the material the presser foot and bar g are lifted by the lever e, before described, thus permitting the spring to return the presser-foot against its stop 5. If the presser-foot were inclined in the direction opposite that shown in the drawings, the pressure of the spring g^2 upon the bar and foot would, it is obvious, exert a tendency to force the material upon which it rested in a direction opposite that in which it is to be moved when fed regularly by the feeding device i.

I claim—

1. The presser-bar and means to lift it, combined with the presser-foot pivoted thereto, and having its shank inclined backward in the direction of the forward movement of the feeding device, substantially as described.

2. The presser-bar and means to lift it, combined with the presser-foot pivoted thereto, and having its shank inclined backward in the direction of the forward movement of the feeding device, and with the four-motioned underfeeder i, to operate all substantially as described.

3. The shaft a, its cam b, the link d, the block c, pivoted thereon, and the lever e, combined with the presser-bar and the presser-foot pivoted thereto, and having its shank inclined backward in the direction of the forward movement of the feeding device, substantially as described.

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

CHARLES H. BAYLEY.

Witnesses:

G. W. GREGORY,

B. J. NOYES.