

(No Model.)

E. T. THOMAS.  
SEWING MACHINE.

No. 287,339.

Patented Oct. 23, 1883.

Fig:2.

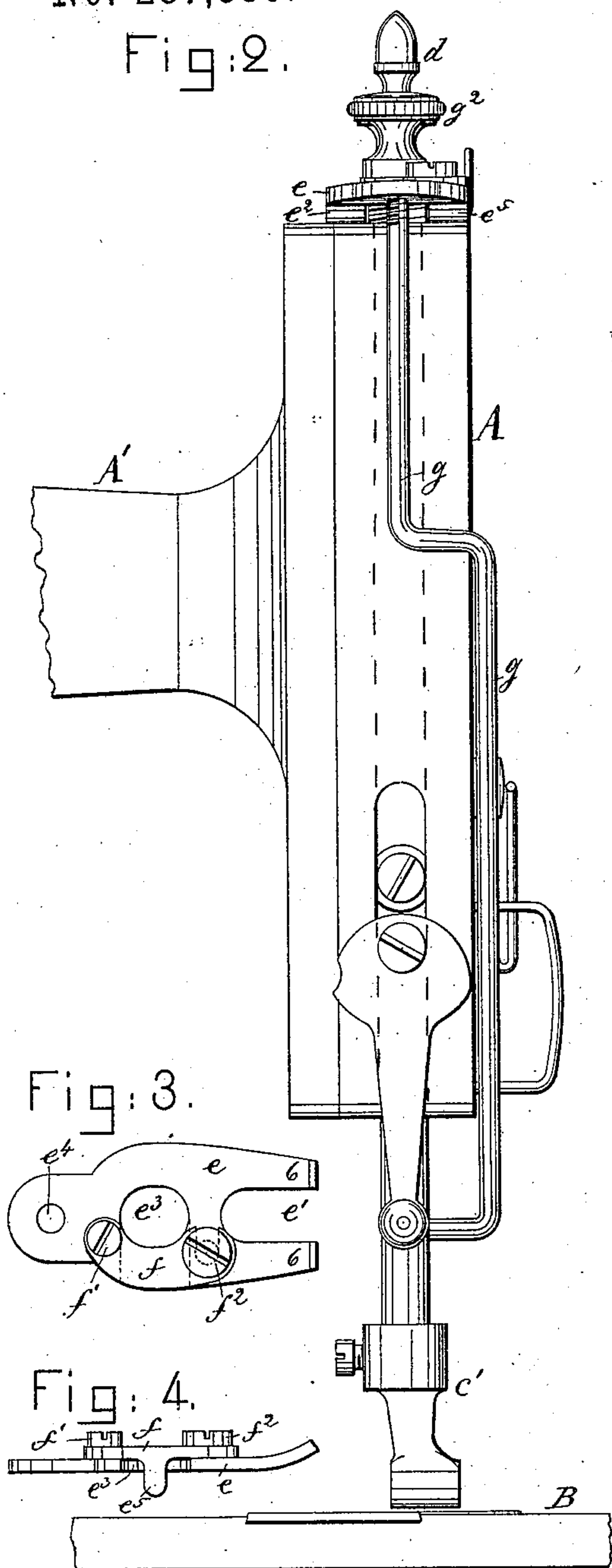


Fig:3.

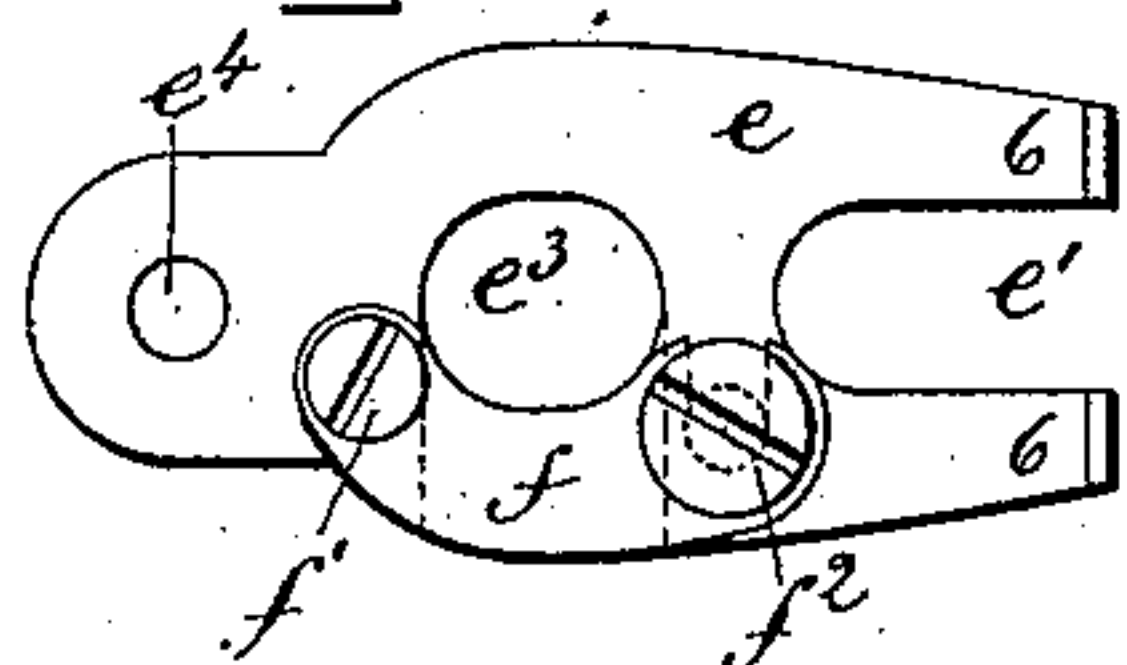


Fig:4.

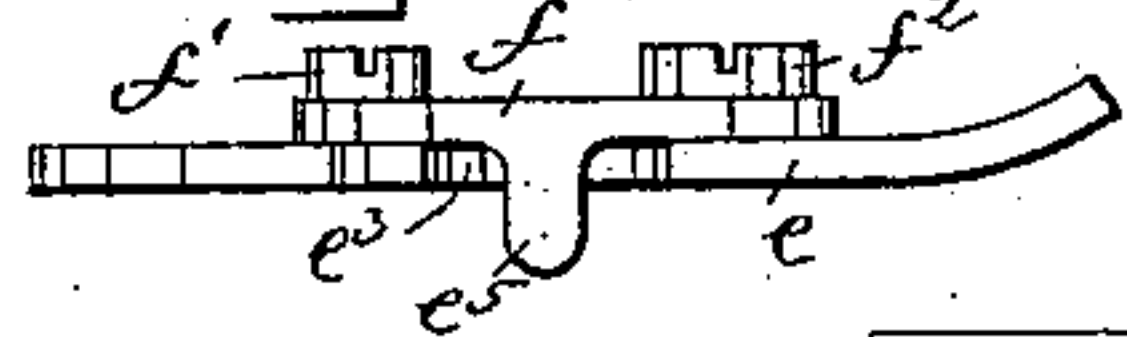
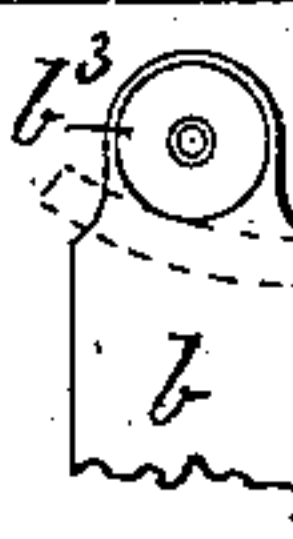


Fig:6.



Fig:7.



Witnesses.

*Fred A. Davell*  
*John F. C. Prentiss*

Fig:1.

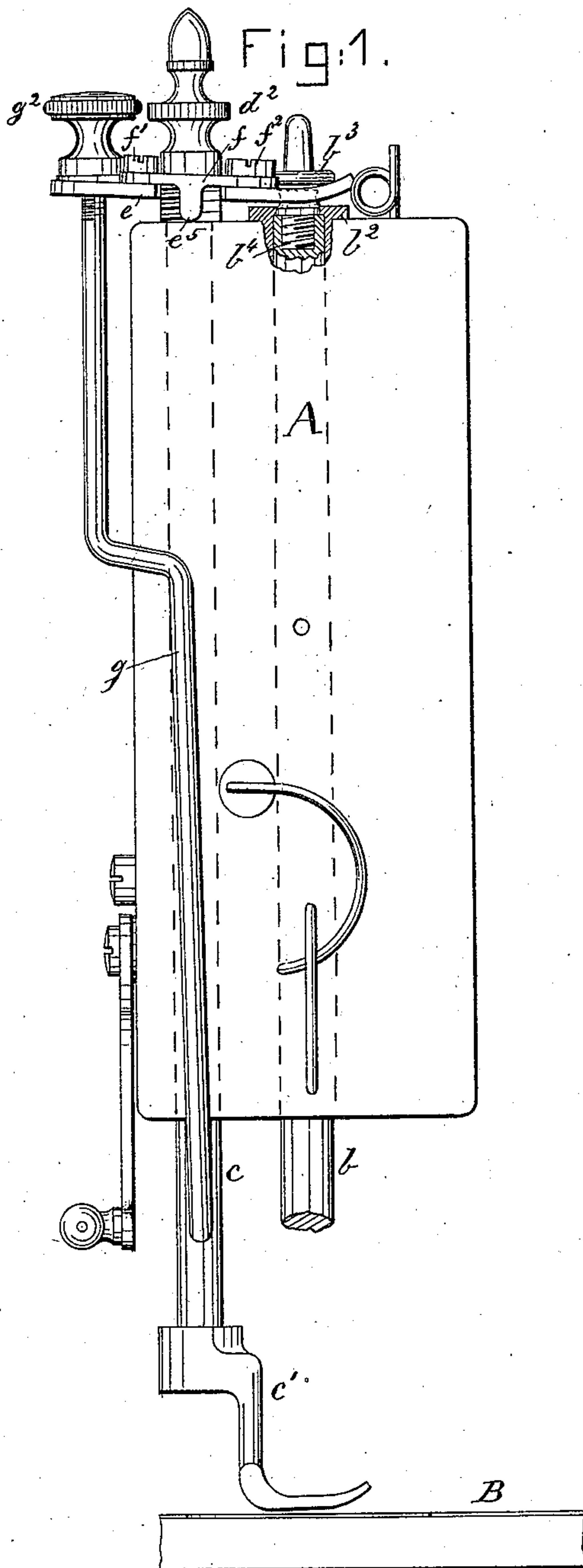
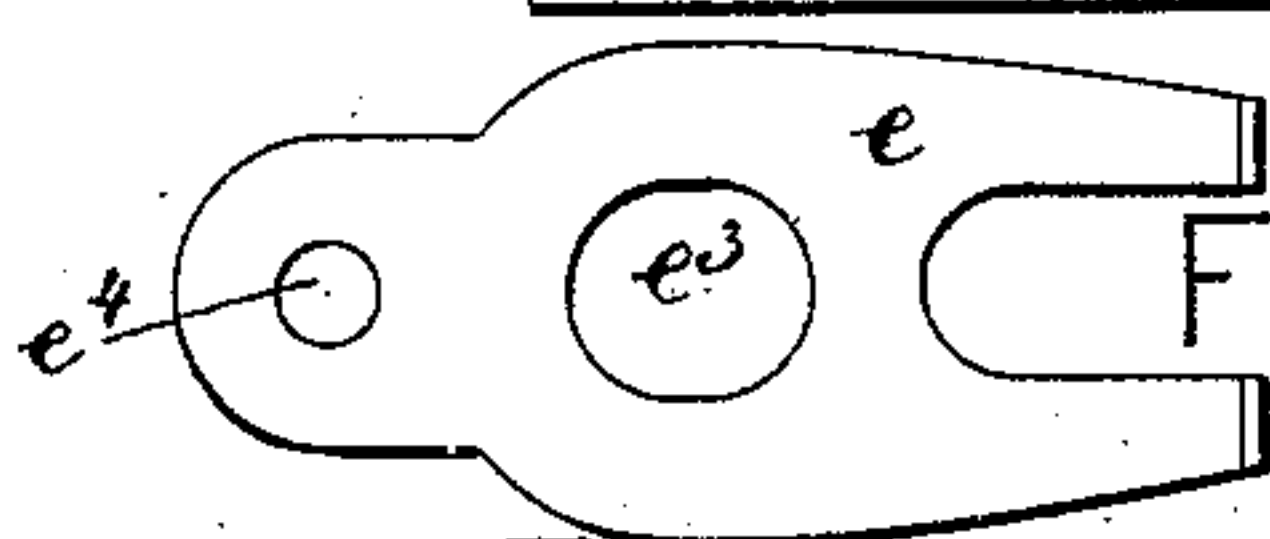


Fig:5.



Inventor.

*Eddy T. Thomas.*  
*by Crosby & Gregory attys*



# UNITED STATES PATENT OFFICE.

EDDY T. THOMAS, OF NEW YORK, N. Y., ASSIGNOR TO THE WEED SEWING MACHINE COMPANY, OF HARTFORD, CONNECTICUT.

## SEWING-MACHINE.

SPECIFICATION forming part of Letters Patent No. 287,339, dated October 23, 1882.

Application filed April 6, 1883. (No model.)

*To all whom it may concern:*

Be it known that I, EDDY T. THOMAS, of New York, county and State of New York, have invented an Improvement in Sewing-Machines, of which the following description, in connection with the accompanying drawings, is a specification, like letters on the drawings representing like parts.

This invention in sewing-machines relates to improvements in mechanism for lifting the presser-foot.

My invention consists, essentially, in a lever adapted to be supported above the head of the machine, and to be moved or rocked by a projection or stud at the upper end of and carried by the needle-bar, the said lever being connected with the shank of the presser-bar by a rod or link extended outside of the head of the machine. I have slotted the foot-lifting lever centrally, or nearly so, and have provided it with a gate leading into the said slot, in order that the lever may be readily applied to the top of the sewing-machine head and about the presser-bar, or the usual presser-bar-regulating tubular sleeve, without removing the said sleeve.

Figure 1 represents in front elevation a sufficient portion of a Weed sewing-machine to illustrate a practical application of my invention; Fig. 2, a side elevation of Fig. 1; Fig. 3, a top view of the lifting-lever detached; Fig. 4, an edge view of Fig. 3; Fig. 5, a modified form of lever, and Figs. 6 and 7 modifications showing how a flat needle-bar will be changed to operate my improved lever.

The head A, neck A', needle-bar *b*, presser-bar *c*, presser-foot *c'*, bed-plate B, and tubular presser-bar-adjusting nut *d* are all substantially as in the Weed sewing-machine. I have selected that machine upon which to show my improvements; but it will be understood that my improvements are equally applicable to any other well-known sewing-machine having a reciprocating needle-bar and presser-bar. The needle-bar is reciprocated, as usual, in a bushing, *b*<sup>2</sup>. The upper end of the needle-bar is provided with a head or tappet, *b*<sup>3</sup>—in this instance shown as having an annular ring or collar, and as having a threaded foot screwed into a threaded opening made in the top of

the needle-bar. The presser-foot-lifting lever *e* is made as a short bent lever having its front end slotted, as at *e'*, or notched, to form one or more fingers, 6 6, and slightly turned up or rounded, to embrace the needle-bar and be struck by the head tappet or projection *b*<sup>3</sup> as the needle completes its descent, at which time the lever *e* is rocked or vibrated to lift the presser foot and bar *c'*, to permit the fabric or material being sewed to be freely turned about the usual needle carried by the needle-bar *b*, the said needle acting as a center. The lever, near its center, has bearings or lugs *e*<sup>2</sup> *e*<sup>5</sup>, one of which, *e*<sup>2</sup>, as shown in Fig. 1, forms part of the lever, while the other one, *e*<sup>5</sup>, is made to form a part of the gate *f*, pivoted at *f'*, and provided with a locking device, *f*<sup>2</sup>, shown as a screw turned into the lever *e*, and adapted to be straddled by the forked end of the said gate. This gate serves to close one side of the opening *e*<sup>3</sup> on the lever *e*, near its center, the opening in which the presser-bar-regulating nut *d* rests when the lugs or ears *e*<sup>2</sup> *e*<sup>5</sup> rest on the top of the head A of the sewing-machine, as in Figs. 1 and 2. The said nut serves to prevent improper lateral or longitudinal movement of the lever *e*, and to obviate removing the said nut when provided with a head or collar of larger diameter than the opening *e*<sup>3</sup> of the lever prior to applying the lever *e* in place, the latter is provided with the gate, which may be turned aside on its pivot *f'* and permit the lever *e* to be applied to the said nut by a lateral movement, when the gate will be closed and fastened by the screw *f*<sup>2</sup>.

If desired, the gate may be omitted and the lever be made as in Fig. 5, and in such modification both lugs or ears, like *e*<sup>2</sup>, will form a part of the lever.

When the nut *d* has a large head, *d*<sup>2</sup>, it is best to use the gate, for then the lever may be made narrower, and the removal of the nut be obviated when it is desired to put the lever *e* in place or remove it. The outer end of the lever *e* has an opening, *e*<sup>4</sup>, to receive the rod or link *g*, connected at its lower end with the shank of the presser, the connection, as herein shown, being made by bending the end of the rod and entering it in a hole in the presser-bar *c*. The upper end of the rod or link *g* is



screw-threaded, to receive an adjusting-nut,  $g^2$ , by which to regulate the amount of movement to be imparted to the foot  $c'$ . If the lever and rod or link are to be applied to a flat needle-bar, or one having a transverse hole, through which the needle-thread is passed, as usual, to the needle, it is necessary only to bore out the said hole and make it large enough to receive the head  $b^3$ , (shown in Figs. 6 and 7,) it being composed of a hollow stud having a head at one end and screw-threaded at its other end, to receive a nut, 3.

In some classes of work it is of considerable advantage to lift the presser-foot automatically during each stitch, and when such work is being done the lever  $e$  and link or rod  $g$  may be quickly added to the machine, and also the head  $b^3$ , if the needle-bar of the machine is not already provided with a head or projection, and the bent lower end of the rod  $g$  may be inserted in a hole commonly found in the shank of the presser-bar.

When not desired, this foot-lifting apparatus may be readily removed, and by it an ordinary sewing-machine may have its foot lifted with but little cost to the owner.

One of the prongs at the front end of the lever  $e$  might be omitted, and yet the head  $b^3$ , striking the lever  $e$ , would turn it; but the two prongs are more efficient.

I claim—

1. The presser-foot-lifting lever provided at its front end with one or more fingers, and adapted to rest and rock on the head of the machine, and provided with an opening to surround or pass over a projection above the

said head, and adapted to prevent lateral movement of the said lever on the said head, combined with a rod or link adapted to be connected with the presser-foot, whereby when the said lever is rocked by a projection carried by the needle-bar in its descent the presser-foot will be lifted, substantially as described. 40

2. The head of the machine, the needle-bar provided with a head or projection, and the presser-bar and the presser-bar nut, combined with a lever,  $e$ , adapted to rest, as described, upon the said head about the said nut, and with the rod or link  $g$ , connected with the shank of the presser, whereby the needle-bar in its descent operates the lever and lifts the presser, substantially as described. 45 50

3. The lever  $e$ , forked or provided at one end with one or more fingers, and having an opening,  $e^3$ , combined with a gate to close the said opening, substantially as described. 55

4. The head  $A$  and the lever  $e$ , supported thereon, as shown, the needle-bar provided with a head, the presser bar and foot, the nut to receive and hold the lever  $e$  in place, and the rod or link  $g$ , combined with the nut  $g^2$ , the said lever and rod or bar being located outside the head, and operating substantially as described. 60

In testimony whereof I have signed my name to this specification in the presence of two subscribing witnesses. 65

EDDY T. THOMAS.

Witnesses:

BERNARD J. KELLY,  
SPENCER C. DOTY.