



# UNITED STATES PATENT OFFICE.

MICHEL MARCIL, OF AMHERST, MASSACHUSETTS, ASSIGNOR TO THE HILLS COMPANY, OF SAME PLACE.

## PRESSER-FOOT LIFTER FOR SEWING-MACHINES.

SPECIFICATION forming part of Letters Patent No. 331,206, dated November 24, 1885.

Application filed July 11, 1885. Serial No. 171,320. (No model.)

*To all whom it may concern:*

Be it known that I, MICHEL MARCIL, of Amherst, county of Hampshire, and State of Massachusetts, have invented an Improvement in Presser-Foot Lifters for 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 has for its object to improve the construction of devices for lifting the presser-foot, as will be described.

My invention consists in a needle-bar-actuating rock-shaft, a rocker attached to it, a presser-foot, a presser-bar, an auxiliary presser-bar and its attached arm, to act upon the said spring, combined with a pivoted arm adapted to be turned into the plane of movement of the rocker when it is desired to relieve the presser-foot from the pressure of its spring.

Figure 1 in side elevation represents a sewing-machine containing my improvements; Fig. 2, a front end elevation thereof; Fig. 3, a detail of the auxiliary presser-bar and the main presser-bar and its spring; and Fig. 4 is a sectional detail illustrating the guide employed to prevent the needle-bar from being rotated as it is reciprocated.

The frame-work A of the machine, shaped to sustain the working parts, has a main rotating shaft, A', provided at its front end with a hook, A<sup>2</sup>—such as ordinarily used in sewing-machines—to co-operate with the needle A<sup>3</sup> in the needle-bar A<sup>4</sup> for the formation of a chain-stitch. The shaft A' at its rear end has a pulley, A<sup>5</sup>, provided with an eccentric which actuates a connecting-rod, b<sup>4</sup>, joined by a pin, c<sup>2</sup>, with an arm, c, of a needle-bar-actuating rock-shaft, c', as shown fully in the drawings forming part of another application filed by me, Serial No. 143,133, to which reference may be had. The said needle-bar-actuating rock-shaft at its front end is provided with a rocker having two arms, d d', secured thereto by a screw, d<sup>2</sup>. The arm d' of this rocker is connected by a link, d<sup>3</sup>, with a pin, d<sup>4</sup>, projecting from the needle-bar A<sup>4</sup> at its rear side, the said pin at its rear end entering a socket of a

block, d<sup>5</sup>, having two straight sides and fitted into a vertical guide, d<sup>6</sup>, attached to or forming part of the frame-work, such block and guide insuring the movement of the needle-bar in its guides in the head without twisting, and also obviating draft-strain on the link d<sup>3</sup>. The arm of the rocker is adapted, as the needle-bar descends, to act upon the screw e of the arm e', pivoted to the auxiliary presser-bar e<sup>2</sup>, which is adapted to slide up and down in the guides e<sup>4</sup>, forming part of the rigid frame-work. This auxiliary presser-bar (see Figs. 1 and 3) has attached to it a forked arm or finger, e<sup>5</sup>, which is extended laterally to and past the main presser-bar f and under the usual spiral spring, f', which normally acts to keep the presser-foot f<sup>2</sup>, attached thereto, down upon the work.

The arm e' is provided with a head having two flat faces, and a spring, f<sup>3</sup>, attached by screw f<sup>4</sup>, acts against one or the other of the said faces to hold the said arm in either of its two positions.

When a hat is to be commenced at the tip of the crown, the braid, while the needle is down, should be subjected to the least possible pressure to permit the work to be turned on the needle as a center, and to provide for this the arm e' may be turned into the position shown by dotted lines, Fig. 1, and thereafter the arm d, at each descent of the needle, will act upon the arm e' or the screw e thereon and lift the bar e<sup>2</sup>, so that its attached arm e<sup>5</sup>, will, by its action on the spring f', relieve the regular presser-foot f<sup>2</sup> and its bar of the pressure of the said spring.

The feeding mechanism herein shown, but not described, forms the subject-matter of an application Serial No. 171,319, and the needle-bar-actuating mechanism shown, the subject-matter of an application Serial No. 143,133, and the gage shown, but not described, the subject-matter of an application Serial No. 171,318.

I claim—

The needle-bar-actuating rock-shaft and the rocker attached to it, the presser-foot, presser-bar and its spring, the auxiliary presser-bar, and its connected arm e<sup>5</sup>, to act upon the said

spring, combined with the pivoted arm  $e'$ , connected to the auxiliary presser-bar and adapted to be turned into the plane of movement of the rocker when it is desired to relieve the presser-foot from the pressure of its spring, as set forth.

In testimony whereof I have signed my name

to this specification in the presence of two subscribing witnesses.

MICHEL MARCIL.

Witnesses:

WM. A. DICKINSON,  
LEONARD M. HILLS.