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UNITED STATES PATENT OFFICE.

JOHN O'NEIL, OF NEW YORK, N. Y., ASSIGNOR TO HIMSELF AND R. A. SCHONEMAN, OF SAME PLACE.

IMPROVEMENT IN SEWING-MACHINES.

Specification forming part of Letters Patent No. 137,618, dated April 8, 1873; application filed January 6, 1873.

To all whom it may concern:

Be it known that I, JOHN O'NEIL, of the city, county, and State of New York, have invented a new and useful Improvement in Sewing-Machines, of which the following is a specification:

This invention consists in a simple and efficient arrangement of gear for working the rock-shaft which carries the hook and works the feed.

Figure 1 is a side elevation of a machine constructed according to my improvement, with a part of the stand for supporting the needlearm broken away; also a section of a hatframe, as applied to be wired in the brim. Fig. 2 is a rear elevation of the machine, except a portion of the lower part of the stand. Fig. 3 is a transverse section of Fig. 1 on the line x x.

The machine is designed more particularly for securing the wire a in the brim b of a lady's hat-frame, of which c represents the crown, and the frame or stand is therefore constructed as represented in the side elevation in Fig. 1, to allow of presenting the hatframe so as to be properly acted upon. The said frame consists of a stand or platform, A, for the support of the housings B C, one of which supports the stationary arm D, and both support the journal E of the needle-arm F, which said platform is supported on suitable legs G H, which are cast with the plat-form, and form part of it, and the legs G extend upward beyond the table, and unite in a plate, L, which bends over from the platform at K, under the stationary arm, and extends along horizontally to a point a little beyond the said arm, and thus is adapted for the application of the hat-frames aforesaid. The

needle-arm has an extension, M, placed below the journals E, and connected at its lower end with wrist-pin K of drive-shaft N by the strap O. This extension M is also connected by rod U with bell-crank T, which is attached by a connection, X, to a block, W, having a pin that enters a slot of the arm V in the rock-shaft Q, which carries the parts for catching the upper thread, and also the feed operating cams, so that the reciprocation of the block turns the arm and shaft. The feed-plate S is confined in the groove of plate L by the spring It rests against the cam g on the rock-shaft, which raises and moves it forward and back, and the length of the feed is varied by the set screw h. The part i of the cam on which the plate rests raises it, the part j pushes it forward, and the part k pushes it back. For regulating the length of the feed, the part kof the cam is caused to act on an adjustingscrew, h, which, being shifted to or from the cam, causes the feed bar to be pushed back more or less, so that its forward movement is correspondingly varied. Besides holding the feed-plate in its place in the groove e the spring f holds said plate in any position in which it may be left at rest by the cam.

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

The arrangement of the bell-crank T, connecting-rod U, slotted block W, slotted arm V, and connecting-link X with the needle-arm and the rock-shaft, for operating the latter in the manner described.

JOHN O'NEIL.

Witnesses: T. B. Mosher, ALEX. F. ROBERTS.