T. J. W. ROBERTSON.

Sewing Machine.

No. 16,850. Patented March 17, 1857.

Fig. 1.

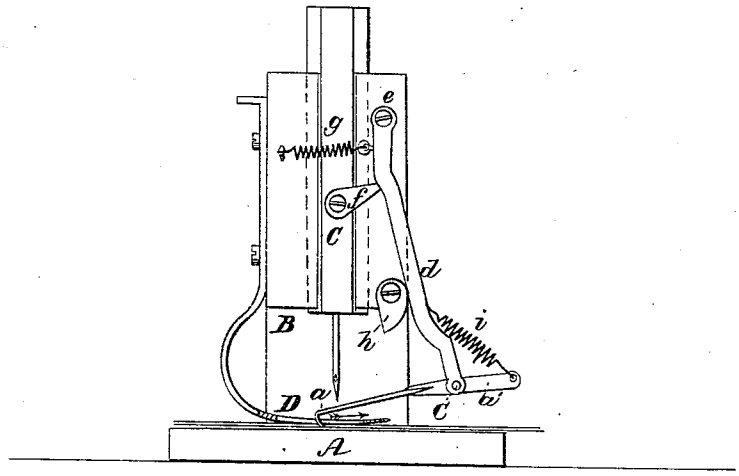
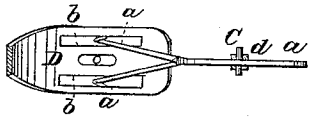


Fig. 2.



N. PETERS. Photo-Lithographer. Washington, D. C.

UNITED STATES PATENT OFFICE.

T. J. W. ROBERTSON, OF NEW YORK, N. Y.

IMPROVEMENT IN SEWING-MACHINES.

Specification forming part of Letters Patent No. 16,850, dated March 17, 1857.

To all whom it may concern:

Be it known that I, T. J. W. ROBERTSON, of the city, county, and State of New York, have invented a new feeding device for producing what is known as the "feed movement" of the cloth or other material in sewing-machines; and I do hereby declare that the following is a full, clear, and exact description of the same, reference being had to the accompanying drawings, forming part of this specification, in which—

Figure 1 is a front view of the work-table, the needle-bar, and its guides, and the clamping-foot of a sewing-machine, showing also my new feed-motion. Fig. 2 is a plan of the clamping-foot, and what I term the "feeding-hook."

Similar letters of reference indicate corresponding parts in both figures.

This invention consists in feeding the cloth by means of a hook, substantially as hereinafter described.

A is the work-table, upon which the cloth or other fabric to be sewed, which is represented by a double red line, is laid.

B is the stand, which contains the guides in which the needle-bar C works.

D is the elastic foot, which clamps the cloth and confines it to the table A, and prevents its rising therefrom when the needle is withdrawn from it.

All the above parts are the same as are found in other sewing-machines.

a a is the feeding-hook, which may consist of a straight arm terminating in a single sharp-hooked point, or of a forked arm terminating in two sharp-hooked points, as represented in Figs. 1 and 2. The latter form is perhaps preferable, for the reason that the points which are to catch hold of the cloth and draw it along may operate on both sides of the needle, slots *b b* being provided in the foot D for the said forks to pass through the foot, so that the cloth may be clamped between the foot and the table all round where the hooks operate. The feeding-hook is attached by a transverse pin, *c*, to an upright lever, *d*, which hangs on a fulcrum-pin, *e*, secured to the stand B, so as to be capable of swinging in a vertical plane or planes parallel with the intended direction of the feed movement of the cloth. The feeding-hook may be made of sufficient weight for its points to fall upon and catch into the cloth with sufficient tenacity to draw it along when they are moved in the direction toward which they incline, as shown by the arrow in Fig. 1; or, if it is not made heavy enough to catch with sufficient tenacity, it may be extended beyond the pin *c* to form a heel, *a'*, to be connected with the lever *d* by a light spring, *i*, for the purpose of forcing the points into the cloth. The weight or spring does not require to be heavy, but only sufficient to prevent any tripping action of the hook over the surface of the cloth, as it is not necessary for the hook to press hard upon the cloth with a clamp-like action, or to confine the cloth to the table—that being done by the clamping-foot D—and the hook would operate just as well if the table were made with recesses opposite to where the points work. The necessary reciprocating movement of the feeding-hook is effected by a wiping-piece, *f*, attached to the needle-bar C for the purpose of wiping against the lever *d* every time the needle-bar rises, and a spring, *g*, which throws back the lever against a stop, *h*, attached to the stand B. The points only catch the cloth during their movement in the direction in which they incline, as indicated by the arrow in Fig. 1. When moving in the opposite direction they slide over the surface. The length of feed may be varied to regulate the length of stitch, either by moving the stop *h*, which is made eccentric for that purpose, or by shifting the wiping-piece *f* to throw its point in or out.

Various methods besides that herein set forth may be adopted for giving motion to the hook.

I do not claim the broad idea of pulling the cloth through a sewing-machine independent of any tool or contrivance for so doing; neither do I claim the broad idea of moving cloth by means of hooks in all kinds of machines, for an example of such a movement is seen in the weaving-temple of J. C. Tilton, patented 1855; but

I claim and desire to secure by Letters Patent—

Feeding the cloth in sewing-machines by means of a hook having one or more points, constructed and operated substantially as described.

T. J. W. ROBERTSON.

Witnesses:

J. W. COOMBS,

R. BAEKLEN.