RIXFORD & DIMMICK.

Sewing Machine.

No. 19,135. Patented Jan'y 19, 1858.

Fig.1

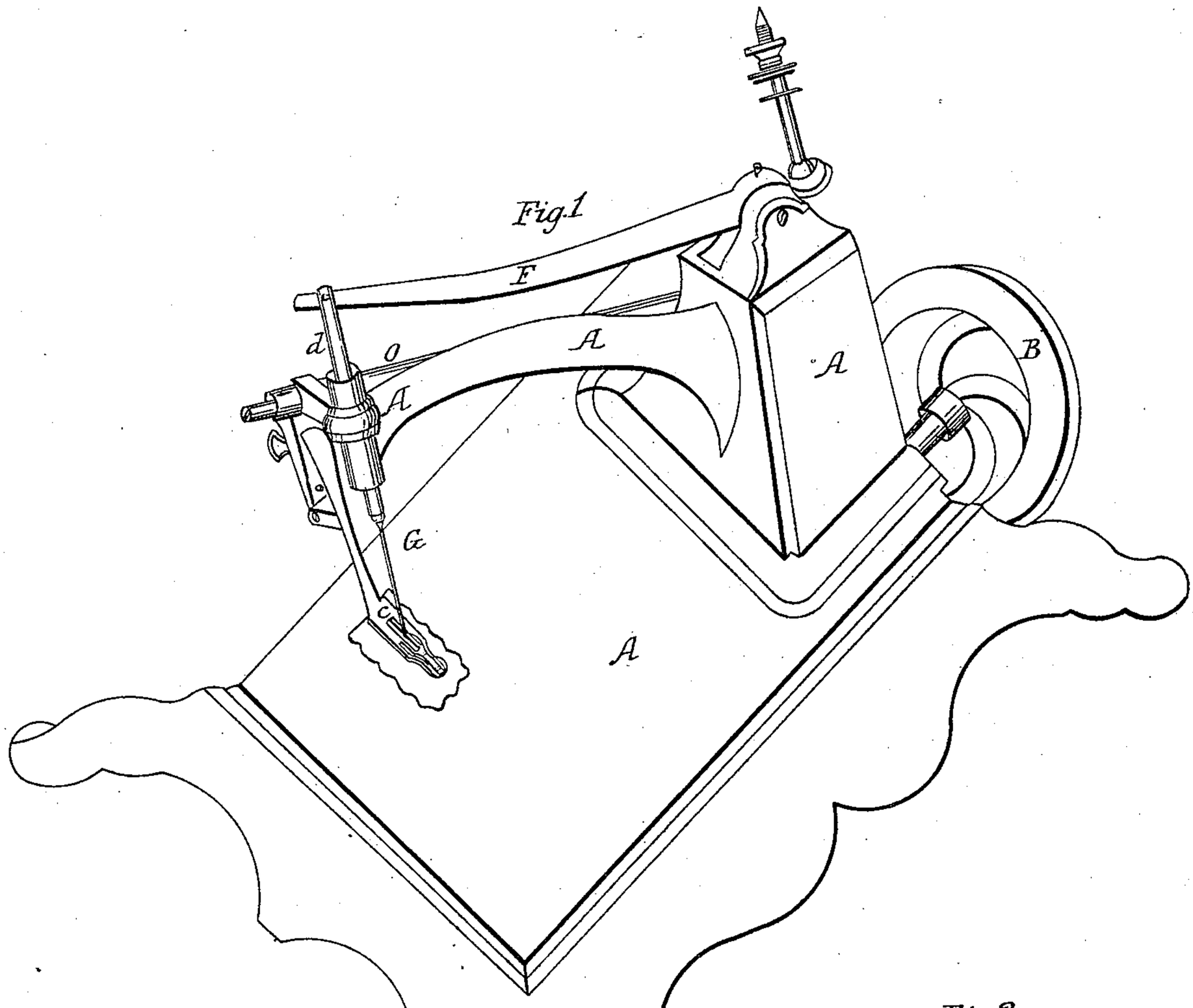


Fig.2.

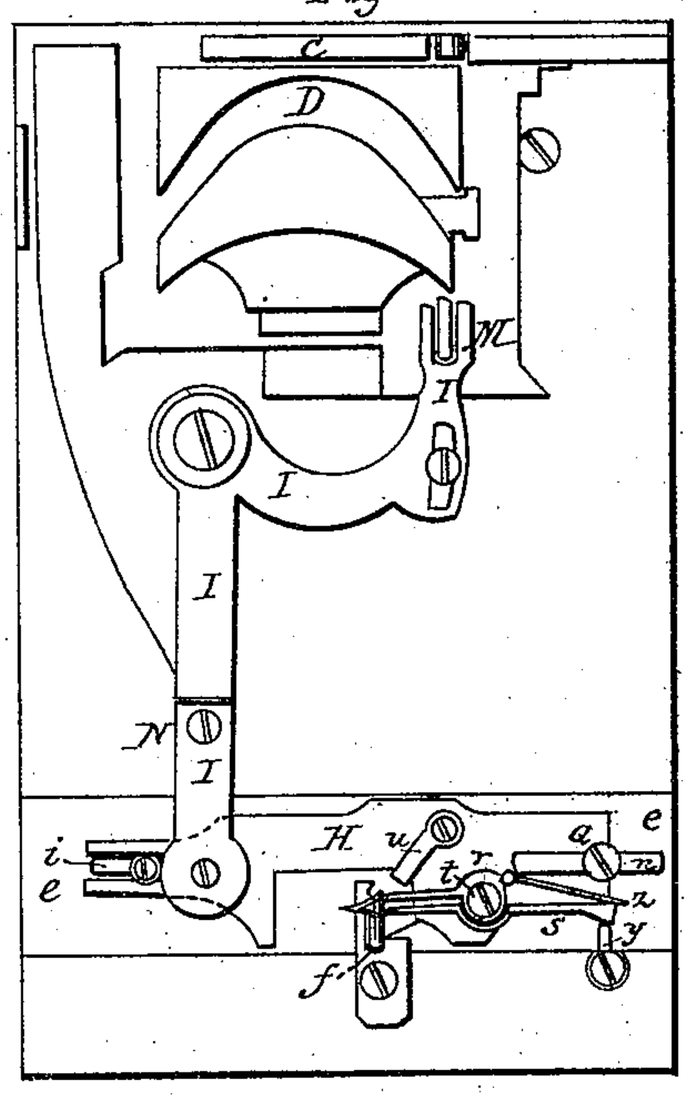


Fig.3.

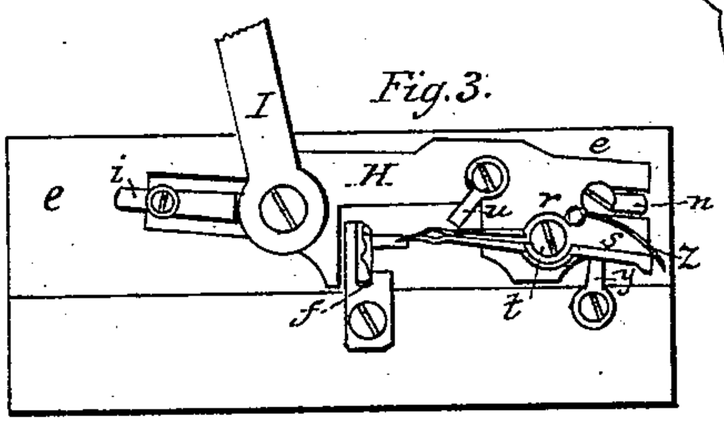
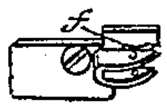


Fig.4.



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

UNITED STATES PATENT OFFICE.

MARTIAL DIMOCK AND NATHAN RIXFORD, OF MANSFIELD CENTRE, CONN.

IMPROVEMENT IN SEWING-MACHINES.

Specification forming part of Letters Patent No. **19,135**, dated January 19, 1858.

To all whom it may concern:

Be it known that we, MARTIAL DIMOCK and NATHAN RIXFORD, of Mansfield Centre, in the county of Tolland and State of Connecticut, have invented a new and useful Improvement in Sewing-Machines; and we do hereby declare that the following is a full and exact description thereof, reference being had to the accompanying drawings, and to the letters of reference marked thereon.

Our improvement consists of an improved form of looper, in combination with a sliding plate and a new looper-guide, for the purpose of giving greater certainty to the formation of the loop in machines of cheap construction.

In the accompanying drawings, Figure 1 is a perspective view of our machine, the general features of which may be of ordinary construction. Fig. 2 represents the under side of the bed-plate of the same machine with our invention attached.

The frame of the machine is shown at A A, and may be of cast-iron. The driving-wheel is seen at B and the axle at *b*. On this axle, and under the bed-plate of the machine, are three cams, (represented at C D E in Fig. 2.) The first of these cams, C, moves the rock-shaft O, to work the feed-piece *c*, in the usual manner. The second cam, D, also operates the lever F, in the ordinary way, to drive the piston *d*, which carries the needle G. The third cam, E, works the elbow-lever I, for giving a reciprocating motion to slide K. This lever has its fulcrum at pin L, and its short arm carries a roller, M. Its long arm is in two pieces, held together by set-screw N, thus rendering the length adjustable. Instead of this lever, other means may be employed to give a reciprocating motion to slide K.

In the under side of the bed-plate a groove, *e*, is cut to receive the slide K, which is accurately guided by the two guide-pieces *i* and *n*, or by the sides of the groove *e*. The object of this slide is to carry the looper *r s*, and also the stud *u* and spring *z*, by which the looper is adjusted and vibrated.

The looper consists of two separate pieces—namely, the pendulum *r* and the beam *s*—both of which are fastened to plate K by pin *t* in such manner that their points play freely from right to left and from left to right. An adjustable stop or stud, *u*, limits the distance which the point of the pendulum *r* may vibrate to the right, while the spring *z*, acting upon the beam *s*, prevents both points of the looper from moving too far to the left. By means of the stud *y*, which strikes the cam upon the end of the beam *s*, the action of spring *z* is overcome as the looper advances, so that both points of the looper are vibrated to the right, so as to enter the loop with certainty, and rest in a position for the needle to descend between the beam and pendulum, as shown in Fig. 2. After the needle makes the downward stroke, the slide K moves backward, carrying the looper with it to the position shown in Fig. 3. Now the looper again advances, but its points pass to the right of the needle, entering the loop with certainty. Before the advance motion of the looper is quite completed the needle rises, to be ready for the second stroke.

Fig. 4 represents a new and improved loop-guide. This consists of a main plate, *f*, which lies in a position corresponding to the bed-plate of the machine, and a little below the latter, and of a pair of lips, *o o*, placed perpendicular to the main plate *f*. The plate *f* has notches in front, so that the thread, in falling away from the needle, will go into these notches and more certainly form the loop. The lips *o o* likewise guide the loop away from the needle and hold it unerringly in position to embrace the advancing looper, as will be more clearly seen in Figs. 2 and 3.

An additional feed-piece is seen in Fig. 1 at *a*. It consists of a forked or toothed spring, which we stamp from sheet metal. It is held in place by a screw. This is very cheaply made, and yet works very well. It saves much expense in fitting up the main feed-piece, as the usual teeth need not be cut.

We do not claim the looping apparatus patented by W. Sage, June 30, 1857; but

What we do claim, and desire to secure by Letters Patent of the United States, is—

The looper *s r*, in combination with the sliding plate K and the loop-guide *f o*, when arranged in the manner substantially as set forth and for the purpose specified.

In witness whereof we have set hereunto our hands in the presence of two witnesses.

MARTIAL DIMOCK.
NATHAN RIXFORD.

Witnesses:
J. ARNOLD,
CHARLES SPAFFORD.