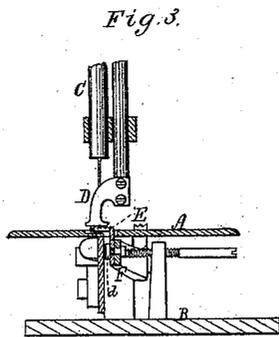
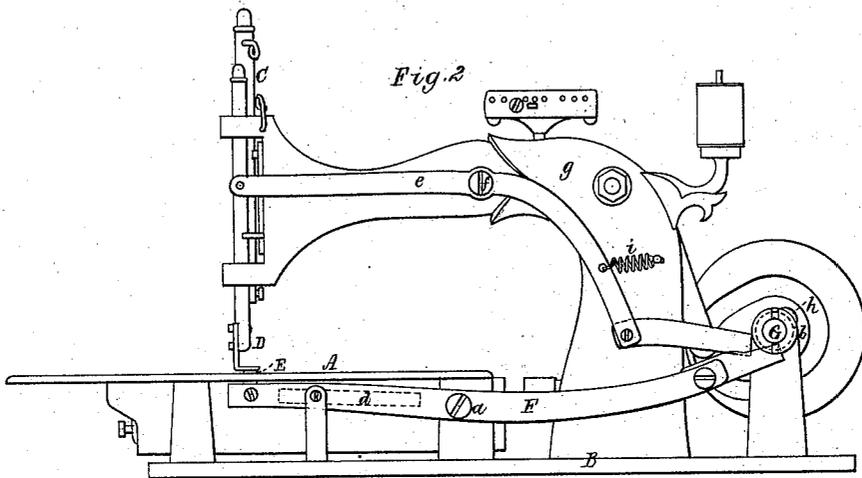
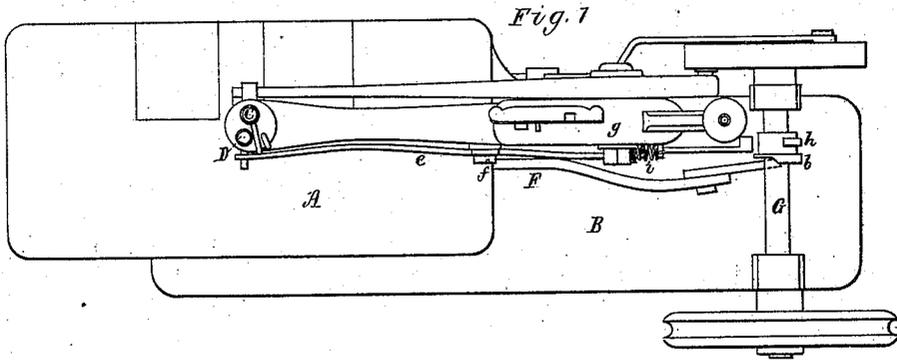


J. KEITH.  
SEWING-MACHINE.

No. 173,967.

Patented Feb. 22, 1876.



Witnesses.

*S. N. Piper*  
*L. N. Miller*

Jeremiah Keith.

*by his attorney*  
*R. W. Ledy*

# UNITED STATES PATENT OFFICE.

JEREMIAH KEITH, OF PROVIDENCE, RHODE ISLAND.

## IMPROVEMENT IN SEWING-MACHINES.

Specification forming part of Letters Patent No. **173,967**, dated February 22, 1876; application filed July 27, 1875.

*To all whom it may concern:*

Be it known that I, JEREMIAH KEITH, of the city and county of Providence and State of Rhode Island, have invented a new and useful Improvement in Sewing-Machines; and do hereby declare the same to be fully described in the following specification and represented in the accompanying drawings, of which—

Figure 1 is a top view, Fig. 2 a front elevation, and Fig. 3 a transverse section, of a sewing-machine provided with my invention, such machine being what is termed a needle and shuttle machine, my invention being equally applicable to various other sewing-machines.

In carrying out my improvement the work-feeder has an intermittent reciprocating motion, or forward and backward movements only, and the presser is to be provided with mechanism for raising and holding it off the work when the needle may be therein, the same being so that the feeder shall be moved backward while the work is held by the needle. From this it will be seen that the feeder has no up-and-down motions, or motions away from and toward the work, beside its motions back and forth—that is to say, it is not what sewing-machine manufacturers term a "four motion feeder," as it has but two motions, in consequence of which there are less wear and friction of the parts in operation, and the feeding mechanism is much simplified, comparatively speaking.

In the drawings, A denotes the table, and B the frame, of the machine. C is the needle-bar or carrier, D the presser, and E the feeder. The said feeder is fixed to a lever, F, that swings horizontally on its fulcrum *a*, and at its rear part bears against a cam, *b*, fixed on the driving-shaft G, such cam being to move the lever in one direction, a spring, *d*, arranged between the lever and

the frame, serving to move the said lever in the opposite way. To the presser another lever, *e*, is pivoted, at or near its front arm, such lever *e* having its fulcrum *f* supported by the neck *g* of the frame. A small cam or wiper, *h*, fixed on the driving-shaft, serves to operate the said lever in one direction. A spring, *i*, connected with the lever and the frame, answers to effect a counter movement of the lever.

The mechanism for operating the needle or the shuttle, being no part of my invention, need not be described.

At the proper time, while the needle may be in the work, the presser is to be raised up a little, or off the work sufficiently, to relieve it and the feeder from the pressure of the said presser. This having been done, and while the needle is in the work, so as to hold it firmly in place, the feeder is to be moved backward underneath the work, after which the presser is to drop back upon the work, the needle to rise out of it, and the feeder to be advanced, so as to feed the work forward the necessary distance for the creation of a new stitch.

I claim—

In a sewing-machine, a reciprocating work-feeder, provided with mechanism for operating it, as described—viz, to cause it to retreat and advance to feed the work without, in the meantime, moving out of and into contact therewith—in combination with a separate presser, provided with mechanism for raising and holding it off the work when the needle may be therein, in order that the feeder may be moved backward underneath the work, and the latter during such movement be sustained by the needle, all substantially as specified.

JEREMIAH KEITH.

Witnesses:

R. H. EDDY,  
J. R. SNOW.