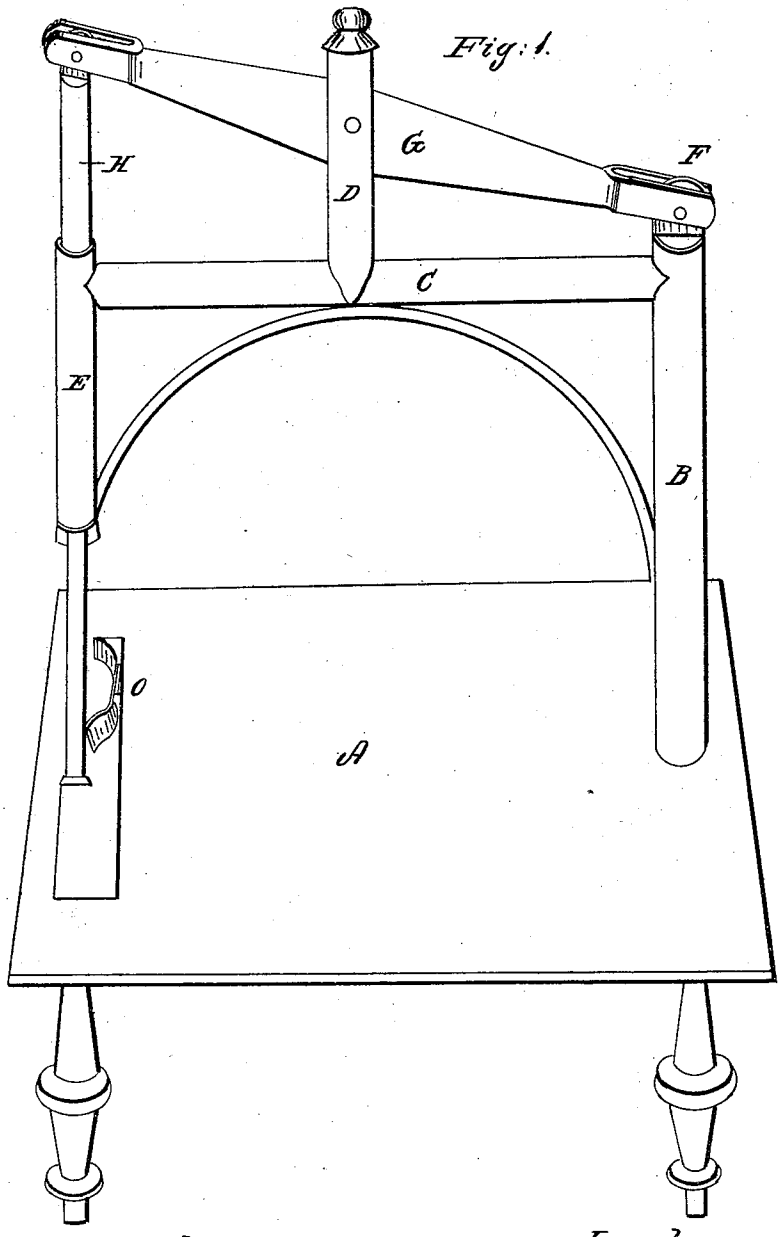
3 Sheets—Sheet 1.

T. A. DUGDALE.

Sewing Machine.

No. 20,761. Patented June 29, 1858.

Fig: 1.



Witnesses:
Charles McGuay
John Finley

Inventor:
T. A. Dugdale

3 Sheets—Sheet 2.

T. A. DUGDALE.

Sewing Machine.

No. 20,761.

Patented June 29, 1858.

Fig: 2.

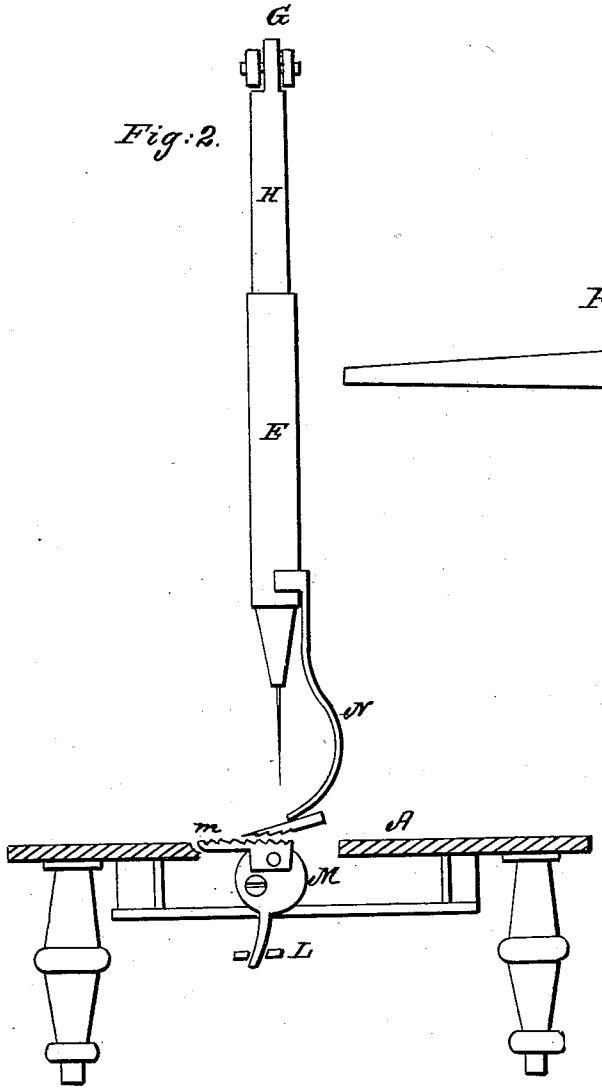


Fig: 6.

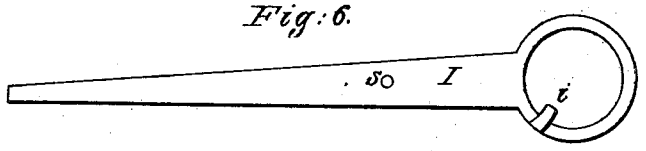


Fig: 3.

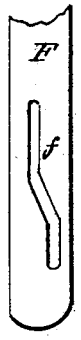
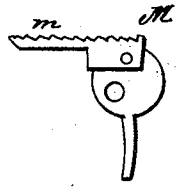


Fig: 5.



Witnesses:

Charles M. Swayne

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Inventor:

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3 Sheets—Sheet 3.

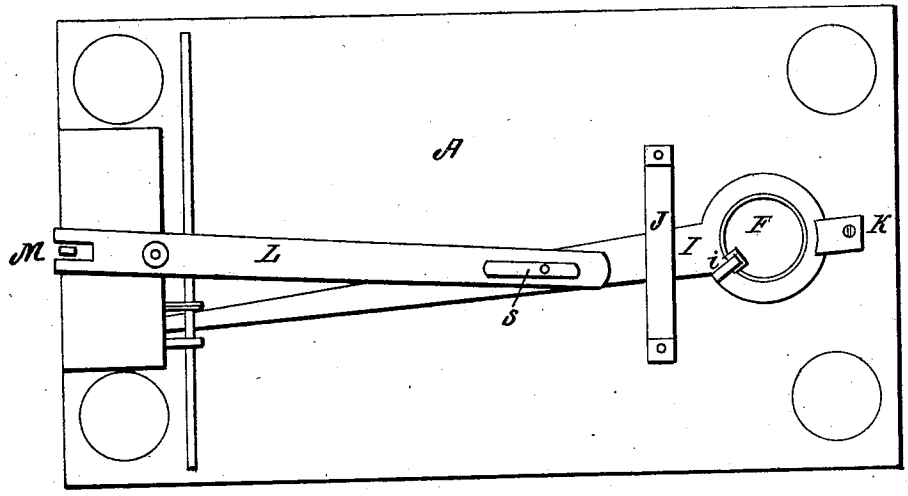
T. A. DUGDALE.

Sewing Machine.

No. 20,761.

Patented June 29, 1858.

Fig: 4.



Witnesses:

Charles M. Keary
John Finley

Inventor:

T. A. Dugdale

UNITED STATES PATENT OFFICE.

THOS. A. DUGDALE, OF RICHMOND, INDIANA, ASSIGNOR TO HIMSELF AND JNO. A. BURBANK, OF SAME PLACE.

IMPROVEMENT IN SEWING-MACHINES.

Specification forming part of Letters Patent No. **20,761**, dated June 29, 1858.

To all whom it may concern:

Be it known that I, THOS. A. DUGDALE, of Richmond, in the county of Wayne and State of Indiana, have invented new and useful Improvements in Sewing-Machines; and I 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.

The nature of my invention consists in the manner in which bar F and slot *f* and lever I and pin *i* and feed-hand *m* and eccentric lever M are constructed and combined.

To enable others skilled in the art to make and use my invention, I will proceed to describe its construction and operation.

Figure 1 is a perspective view of my invention. Fig. 2 is an end elevation. Fig. 3 shows the lower end of bar F. Fig. 4 shows the under side of the machine. Fig. 5 shows the feed-hand *m* and the eccentric or lever M. Fig. 6 shows the lever I.

A is the bed-plate of the machine.

B is a hollow cylindrical upright attached to plate A, and serves as a guide to bar F.

C is an arm connecting B and E.

D is an upright upon the center of arm C. It has a mortise near its upper end for the reception of lever G.

E is a hollow cylindrical guide for the passage of the needle-bar H.

F is an upright cylindrical bar, sliding in upright B. It is connected with lever G by means of a slotted joint. At its lower end in Fig. 3 is a slot, *f*. This slot moves lever I, which operates the shuttle-carrier. Slot *f* descends perpendicularly for a short distance to allow the shuttle to rest until the needle ascends sufficiently to form a loop, then deflects to the right to give the required motion to the shuttle, and again takes a perpendicular direction to allow the needle to take up the slack thread. This bar F should receive motion from a pitman and crank attached to its lower end.

G is a lever working in upright D, connecting the cylindrical slotted bar F with the needle-bar H, and imparting motion from the former to the latter.

H is the needle-bar.

I is a lever that moves the shuttle-carrier. Lever I has a ring at one end that encircles the lower end of bar F, and a stud or lip, *i*, playing in slot *f* in said bar F, by which it receives motion either quick or slow in proportion to the inclination of the slot *f*. It has a stud, *i*, projecting into the circle toward the center, which plays in the slot *f*, while the ring encircles bar F, and bar F becomes the fulcrum upon which lever I plays, and while it plays freely upon its fulcrum receives motion by the ascent and descent of the same.

J and K are plates attached to the under side of the bed-plate A, and are designed to retain lever I in its proper position.

L is a lever pivoted near one end. Upon its long end there is a slot embracing stud S upon lever I. Upon the other end is a slot that receives the lower end of eccentric or lever M, to which is attached the feed-hand *m*.

m M is a feed-hand and eccentric with a lever at its lower side, as shown in Fig. 5. Said eccentric or its lever plays in a slot in lever L. While one end of feed-hand *m* slides up an inclined plane, and by that means is raised up against the cloth, the other end is raised and pushed forward at the same time by means of the eccentric M.

N is a cloth-holder to prevent the cloth rising when acted upon by feed-hand *m*.

Operation: It will be seen that by moving the cylindrical bar F up and down motion is imparted to lever G, and from that to the needle-bar H. Motion is also imparted to lever I, lever L, and the eccentric M and feed-hand *m* by means of the arrangement of slot *f*, and the circle at the end of lever I and stud *i* playing horizontally on upright bar F by means of slot *f*. Thus a cheap durable machine is constructed.

I do not claim giving motion to the shuttle and feeding device by means of the vibrating motion of the needle-arm. I do not claim the spiral groove, cam, eccentric, or inclined plane, neither separately or combined, as they have before been used; but

What I claim as my invention, and desire to secure by Letters Patent, is—

The construction of lever I with its circle at the end through which upright F works, in combination with stud *i* and slot *f* and eccentric M and feed-hand *m*, the whole being constructed, arranged, and operated substantially as above described, and for the purposes set forth.

Witnesses: THOS. A. DUGDALE.

JOHN FINLEY,

CHARLES M. SWANG.