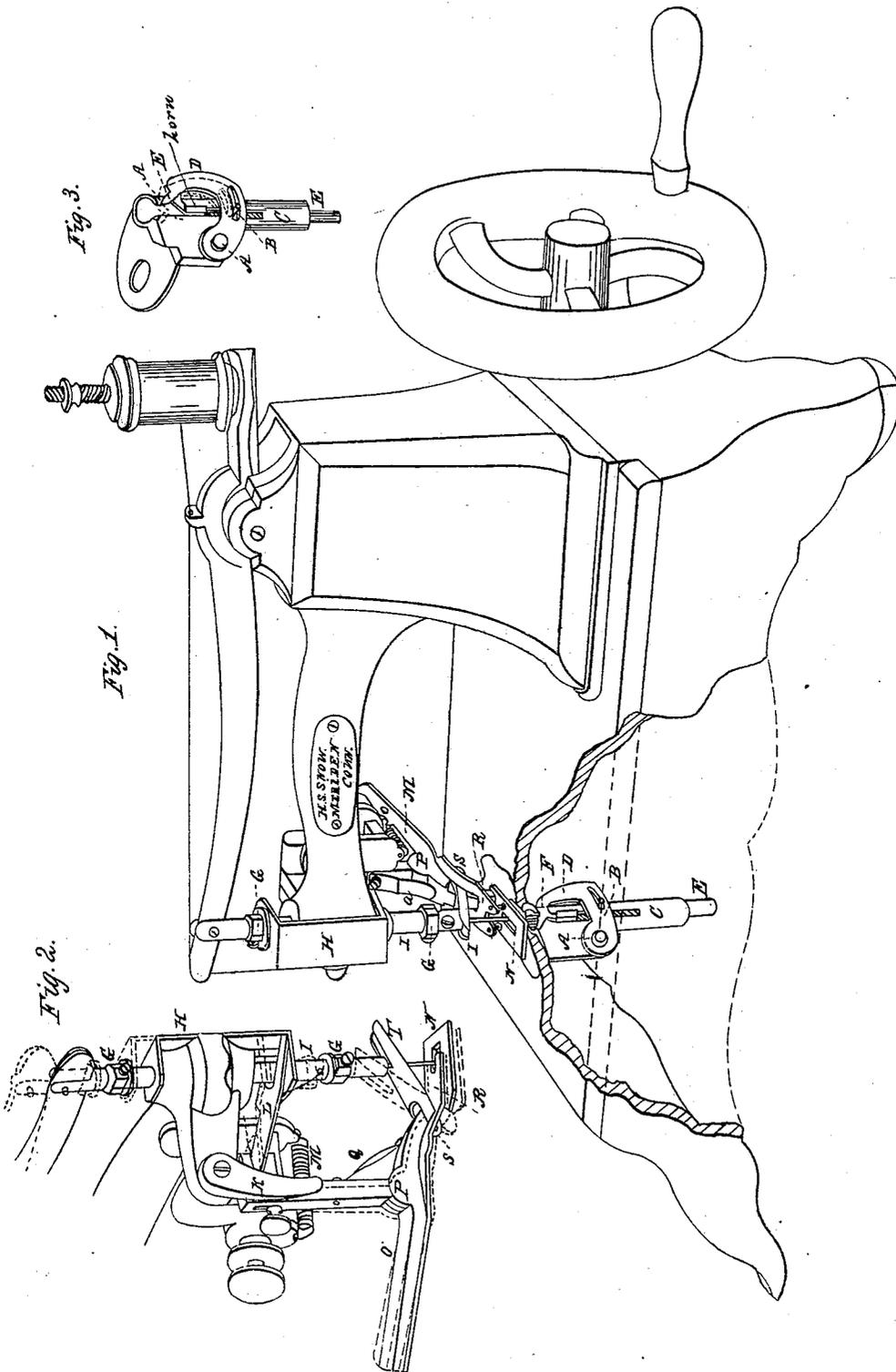


H. S. SNOW.  
Sewing Machine.

No. 20,684.

Patented June 22, 1858,



# UNITED STATES PATENT OFFICE.

HERMAN S. SNOW, OF MERIDEN, CONNECTICUT, ASSIGNOR TO HIMSELF  
AND G. F. SNOW, OF SAME PLACE.

## IMPROVEMENT IN SEWING-MACHINES.

Specification forming part of Letters Patent No. 20,684, dated June 22, 1858.

*To all whom it may concern:*

Be it known that I, HERMAN S. SNOW, of Meriden, in the county of New Haven, in the State of Connecticut, have invented a new and Improved Mode of Constructing 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 motion is given by either a crank or cam. The needle in its descent passes through the cloth with the ordinary sewing-machine needle. The point of the needle strikes a projecting stud, with a piece of horn inserted for the prevention of injury to the point, upon a slide which works parallel with the needle. Said slide works in a tube which has in its lower end a spiral spring. The slide in its descent lifts a lever, which is fastened at A with a screw, and is connected to the slide by a projecting pin, B, working in a slot. There is a slit or narrow opening in one side of the tube, directly in the path of the needle, and when the needle has reached its lowest point of descent and begins to rise the recoil of the spiral spring in the tube *c* lifts the slide, which carries with it the lever D. The rise of the needle throws out the loop through the slit in the tube, and the hook in its upward motion passes through and retains it, and, by passing in an oblique direction across the opening in the side of the same, prevents the loop from escaping, and at the same time the position and shape of the hook expands the loop in the path of the needle, and on its return, and after passing through it, the needle strikes the slide E, which lifts out the hook F, and liberates the loop, thus forming the tambour or chain stitch with a single thread. On the needle-carrier are two collars, G, adjusted by set-screws, which alternately move a slide, H, through which the needle-carrier I passes. Between this slide and the vibrating arm K is a toggle-lever, L, confined at its two ends by being notched, as represented at Fig. 2. The vibrating arm also contains the check-screw, for graduating the length of the stitch, and a spiral spring, the use of which will be explained presently. The rise of the needle-carrier lifts the slide and brings the toggle-

lever L into a horizontal position, as shown by the dotted lines, Fig. 2, while the vibrating arm has moved the feeder the length of a stitch. The recoil of the spring against the horizontal position of the toggle-lever holds the slide in its position till the needle-carrier descends nearly to its lowest point, when the slide is pushed down, and the toggle-lever takes the position shown in the drawings, Fig. 2. The spring M, acting upon the vibrating arm K, moves the feeder N forward the length of one stitch.

The feeding apparatus consists of a jointed lever, O, united to the vibrating arm at P. Resting on the cloth is a pad with a hole for the passage of the needle, said pad held down by a spring, Q. Underneath this lever is fastened a lifting-feeder, R, which is brought above the spring-pad, and rests upon it by means of its shape, which constitutes a spring. In the part resting on the pad are two sharp points projecting through the pad and through the cloth to be sewed and into the opening in the bed of the machine, which protects the points from injury. The lever forming the pad has a lever fastened to it at S, the short arm of which passes under the lifting-feeder, and the long arm T is pushed down by the needle-carrier I in its descent, thus lifting the feeder out of the cloth as it advances, and as the needle-carrier rises, the feeder, by means of its own spring, perforates the cloth as it recedes, and at the same time elevates the lever to its highest point or position, as shown in the dotted lines.

I do not claim as new imparting motion to the looper by means of the needle; nor do I claim the moving of the feeder by means of the needle-carrier, as both have been used before.

I claim—

The combination of the lifting-feeder R with lever T, or its equivalent, for lifting the feeder from the cloth by the descent of the needle-carrier, the same being arranged and operated substantially as described.

HERMAN S. SNOW.

Witnesses:

WM. H. GREEN,  
HIRAM FOSTER.