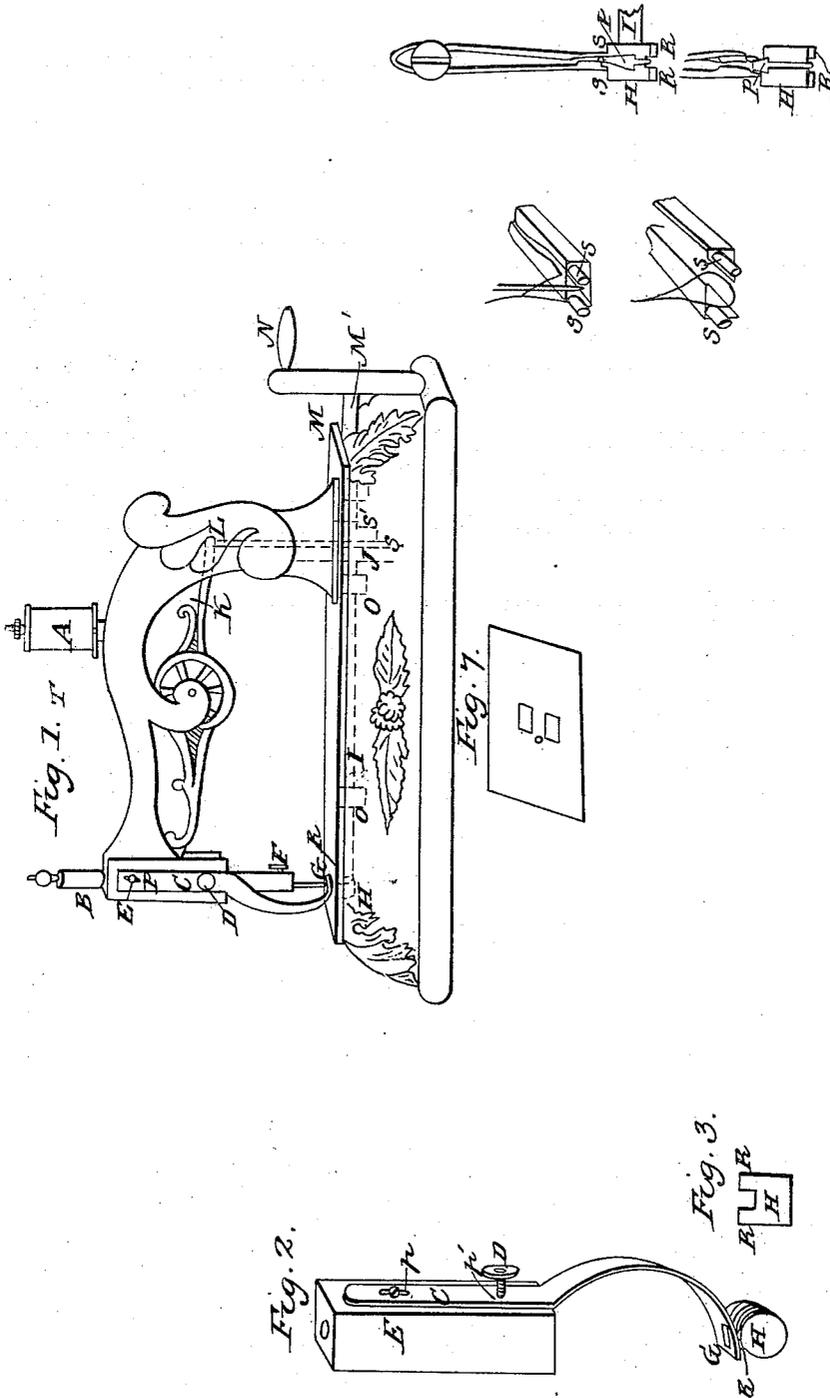


A. W. SANGSTER.

Sewing Machine.

No. 21,929.

Patented Oct. 26, 1858.



UNITED STATES PATENT OFFICE.

A. W. SANGSTER, OF BUFFALO, NEW YORK, ASSIGNOR TO V. M. RICE, JOEL THAYER, JAS. SANGSTER, AND ELIZA REMINGTON, ALL OF SAME PLACE.

IMPROVEMENT IN SEWING-MACHINES.

Specification forming part of Letters Patent No. 21,929, dated October 26, 1858.

To all whom it may concern:

Be it known that I, AMOS W. SANGSTER, of Buffalo, in the county of Erie and State of New York, have invented a new and Improved Mode of Feeding Cloth or other Material while being Sewed; 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, and to the letters of reference marked thereon.

In order that those skilled in the art may use and manufacture my invention, I will proceed to describe its construction and operation.

The nature of the invention consists in providing a revolving cam or wheel, in combination with an adjustable foot-piece or equivalent, between which and by means of which the cloth is fed to the machine and the length of the stitches regulated.

In the annexed drawings similar characters refer to like parts.

In Figure 1, A represents a spool of thread; T, the thread as drawn from said spool; B, the needle-bar. C is an adjustable spring pressure-arm, secured to the frame, as shown in the drawings, by means of a screw, E. D is a set-screw, by means of which the lower portion of the arm C is moved to or from the frame-work to which it is secured. G is a foot-piece secured to the lower end of the arm C, and of course changes its position in accordance with arm C. The foot-piece may be moved forward or backward, thus lengthening or shortening the stitch, as may be required. H represents a cam attached to the shaft I, by which it is revolved. O and O' are the supports of the shaft I. J is a pulley, by means of which said shaft is revolved. N is a rod connecting the crank-pin S with the lever K. R is intended to represent one of the projections of the cam H. S' represents a crank attached to the shaft M'. M is a driving-wheel, and N' is a crank by means of which said wheel is revolved.

The same letters in Figs. 2, 3, and 4 represent like parts.

If a piece of cloth be placed between the cam H and the foot-piece G of the adjustable spring pressure-arm C, and the machine be operated, it will be observed that the edges of the projections R and R', Fig. 3, of that cam will pass through the slots in the plate (seen in Fig. 4) and press against the cloth. As

the cam continues its motion the foot-piece G, while it presses the cloth against the edges, will yield sufficiently to allow them to move on, carrying the cloth forward the length of a stitch. After these projections have left the cloth the foot-piece presses it down firmly to the plate, Fig. 4, and the needle descends and ascends, leaving the loop of the thread below it. In the meantime the revolution of the cam has again brought the edges of its projections R R' in contact with the cloth, and the foot-piece, yielding and pressing as before, assists them in holding the cloth while they carry it forward the length of a stitch at each revolution of the cam. By pressing the arm C closer to the frame-work by means of the set-screw D, the foot-piece G is moved forward and the cloth is held to the edges of the projections of the cam till they have passed farther around in their revolution, thus increasing the stitch. By moving the foot-piece backward the edges of the projections R and R' leave the cloth sooner, and the stitch is thus shortened. The arm C can be adjusted to any thickness of cloth by loosening the screw E and raising that arm, which the slot P allows of, and then fastening it again as before.

The arm C is made of steel or any other suitable material, so that it will spring when acted upon between the point where it is secured to the frame and the screw D by that screw, and also between the screw D and foot-piece G when the foot-piece is acted upon by the projections R R' of the cam H. The chief objects of the arm C are to enable the operator to increase or diminish the feed at his discretion and to hold the cloth to the edges of the projections of the cam while they are pressing it forward.

Having thus fully described my improvement, what I claim as new, and desire to secure by Letters Patent, is—

The combination of the cam or wheel H, provided with one or more projections on its periphery, with the adjustable foot-piece G, or its equivalent, for feeding the cloth and regulating the length of stitch in the manner described, and without the use of an intermediate feed-piece.

AMOS W. SANGSTER.

Witnesses:

CHARLES P. THAYER,
E. SELDEN THAYER.