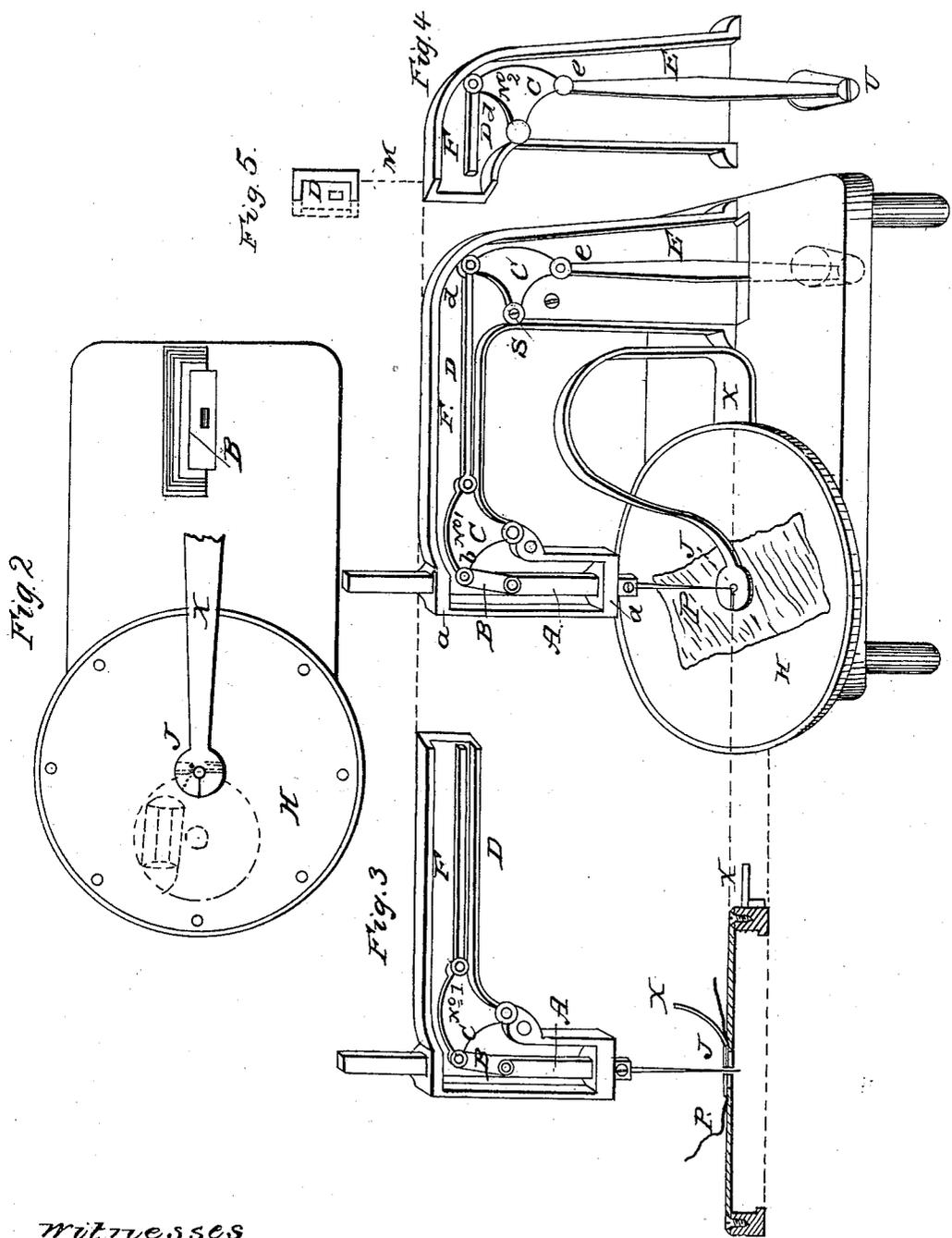


J. C. SMITH.
Sewing Machine.

No. 31,263.

Patented Jan. 29, 1861.



Witnesses
Thos J Bonheur
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JOHN C. SMITH, OF TROY, NEW YORK.

IMPROVEMENT IN SEWING-MACHINES.

Specification forming part of Letters Patent No. 31,263, dated January 29, 1861.

To all whom it may concern:

Be it known that I, JOHN C. SMITH, of the city of Troy, in the county of Rensselaer and State of New York, have invented new and useful Improvements in Sewing-Machines; and I do hereby declare that the following is a full and exact description of the same, reference being had to the annexed drawings, which make a part of this specification, and in which—

Figure 1 is a drawing in perspective. Fig. 2 is a drawing of the bed or sewing-plate when looking right down on it, with a part of the spring or foot X. Figs. 3 and 4 are perspective divisions of Fig. 1. Fig. 5 is a sectional drawing of Fig. 4 at M, as indicated by the dotted line.

The same letters of reference indicate like parts in all the figures.

The description of my improvements in sewing-machines is as follows:

F is a fixed arm or support, rising from a table or platform vertically to any desired height above the same, then bending forward horizontally to and over the center of the sewing-plate H, the end of this plate being so constructed as to form bearings or guides *a a* for the needle-bar A to reciprocate vertically in when operating the machine.

B is a link with one end attached by pins to needle-bar A and the other end at *b* to the triangular or quadrant-shaped piece C, No. 1, which has a free oscillating motion on its bearing or pivot S in a recess provided in the arm F for arranging the needle-driving connections.

D is a connecting rod or bar having one end attached by a pin at *c* to quadrant C, No. 1, and the other end attached by a pin at *d* to quadrant C, No. 2.

F is a pitman. The upper end is connected by pin *e* on quadrant C, No. 2, the lower end being connected to a crank or its equivalent on the driving-shaft U.

The above-described parts in the combination, as set forth and shown in the drawings, constitute the means by which power applied to the driving-shaft is made to give the desired positive reciprocating rectilinear motion to the needle-bar and needle, and with much less friction than is experienced in many other devices and arrangements in use for driving the needle.

H, as shown in Figs. 1, 2, and 3, is a round

sewing-plate, having an opening in its center through which to drive the needle and admit the operation of a feed-motion. On this plate the cloth P slides or is moved when being sewed. This plate is so constructed and arranged on bearings that it may have a rotary motion given by hand in a horizontal plane about the needle or needle-hole as a center, when desired or necessary in sewing curves or irregular lines of sewing or stitching. Permanently attached to this plate, as shown in Figs. 1, 2, and 3, is a large spring or flexible arm, X, extending a suitable distance upward from one side of the sewing-plate H, then curving over and extending backward and downward until the foot or boss J rests precisely over and touches the center of the sewing-plate H, so as to form an elastic boss or foot, by means of which the cloth P is held in position while being sewed, and also stripping the cloth from the needle when rising for a succeeding stitch.

It is well known that great difficulty is experienced in turning the cloth directly by hand or fingers on the ordinary stationary sewing-plates in general use so as to obtain uniform curves or angles and even stitch on account of the pulling or straining of the cloth by the fingers, which is apt to stretch and move it from the true line of the seam, as also to disturb the uniformity of the stitch. This plate, as described, and in connection with the flexible arm X with the boss J, is claimed to remove that difficulty or defect experienced in the operation of the ordinary sewing-plates in present use.

In the arrangement of the sewing-plate and flexible arm, as above described, the arm serves for two distinct uses—viz., as a foot or boss for holding the cloth down to the sewing-plate and feed-motion, and as a convenient handle to turn the plate while the cloth is being sewed to any curve or angle required—the plate, cloth, flexible arm, and boss or foot turning simultaneously, so that it is not necessary to handle the cloth directly in order to sew curves or angles.

I do not claim broadly, as herein described, a fixed arm or any individual device or part without reference to other parts in sewing-machines; but

I claim—

In combination with the needle-bar or its

equivalent, the revolving sewing-plate H, with its flexible arm X and boss J, so constructed and arranged as to be rotated or turned by hand in directions as desired about the needle and bar as a center of motion and also hold the cloth between the plate and boss when being sewed, being constructed and arranged

substantially and operating in the manner and for the purposes as herein fully described and shown.

JOHN C. SMITH.

Witnesses:

THOS. J. CORNELIUS,

THOMAS F. MORAN.