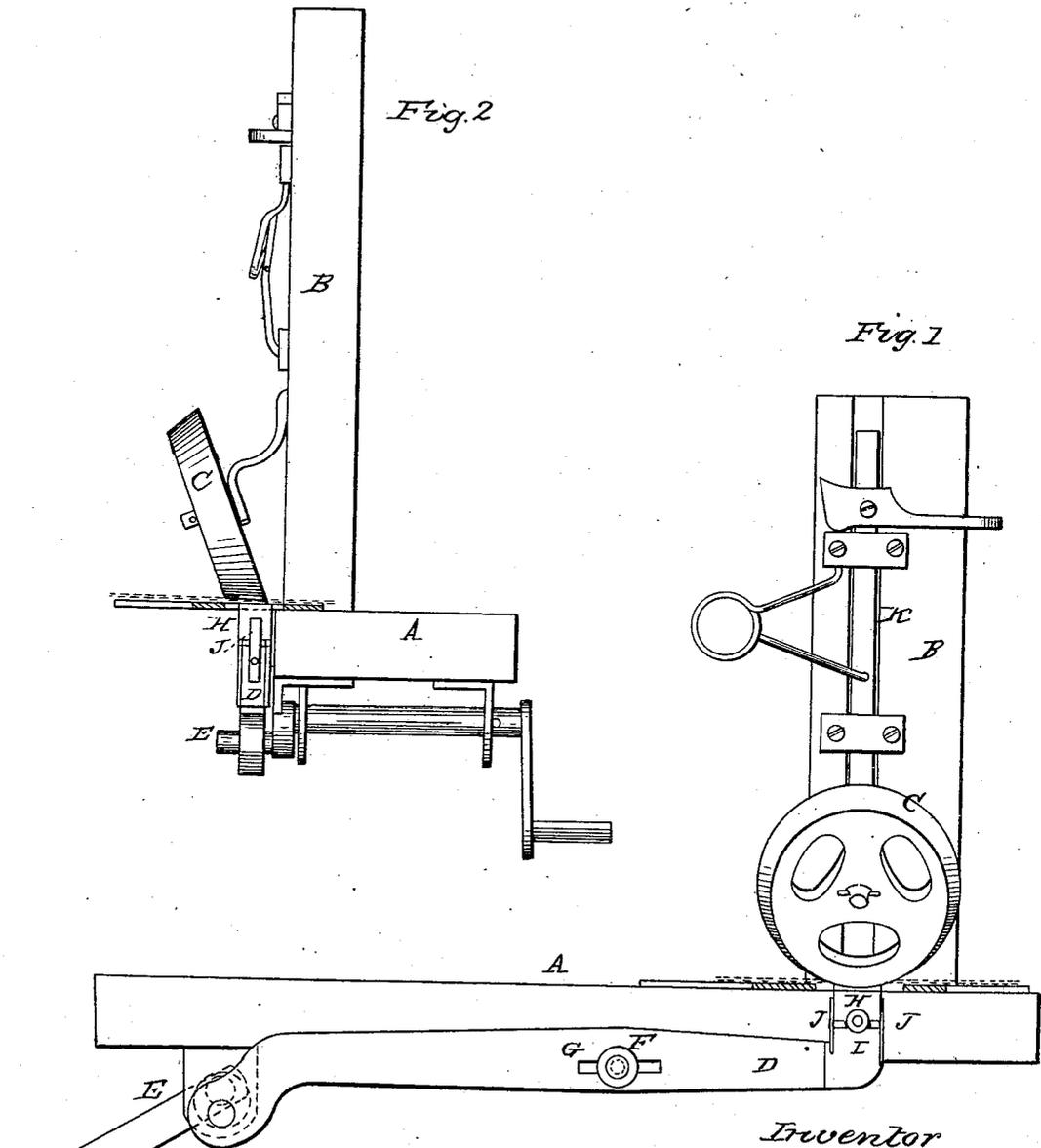


M. R. SMITH.
Sewing Machine.

No. 84,389.

Patented Nov. 24, 1868.



Witnesses
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M. R. SMITH, OF ARMONK, NEW YORK.

Letters Patent No. 84,389, dated November 24, 1868.

IMPROVEMENT IN SEWING-MACHINES.

The Schedule referred to in these Letters Patent and making part of the same.

To all whom it may concern :

Be it known that I, M. R. SMITH, of Armonk, in the county of Westchester, and State of New York, have invented a new and useful Improvement in Sewing-Machines; and I do hereby declare that the following is a full, clear, and exact description thereof, which will enable those skilled in the art to make and use the same, reference being had to the accompanying drawings, forming part of this specification, in which—

Figure 1 is an elevation, in side view, of a feed for sewing-machines, made according to my invention.

Figure 2 is an end view.

Similar letters of reference indicate corresponding parts.

This invention consists in an improvement in the feed of sewing-machines, whereby the feed-dog, or device which imparts motion to the material that is being sewn, is made capable of adjusting itself automatically to uneven places, and seams, and knots in the material.

The letter A designates the table of a sewing-machine, and

B, the standard, which supports the usual presser-bar, K.

C is a smooth presser-roller, whose periphery revolves in coincidence with the plane of the table.

Directly beneath the bar, the table is cut away, as usual, to allow the feeding-block to come against the presser-roller, or other pressing-surface used. This block is made concave, in this example, to fit the presser-roller, and its surface is also made smooth. The block is pivoted at I, transversely, to the upper face of a right-angled bar or lever, D, the place of the pivot being raised a little distance above the face of the lever, to allow the block to vibrate about its pivot.

Flat springs, J J, one on each end of the block, rise from the lever D, to keep the block level, and to restore it to that condition after each movement on its pivot or joint.

The lever D extends from the place of the feed, beneath the table, or along a slot made for it therein, to a crank, E, which works in its outer end, and which gives to it a compound motion upon a fulcrum, F, fixed in the table; or beneath it, which fulcrum passes through a long slot made lengthwise of the bar or lever. When the crank is turned, the outer end of the lever is carried around with it in a circular path, the lever receiving, at the same time, a reciprocating longitudi-

nal movement by sliding to and fro on the fulcrum-pin F, which passes through the slot G. The inner end of the lever, to which the block H is attached, also moves in a circular path, whose radius is less than that of the other end, because the fulcrum-pin F is nearer to the inner end than it is to the outer end.

This fulcrum-pin may be made adjustable, so as to alter the throw of the inner end of the bar or lever.

When the crank-end of the lever is depressed, the block H approaches the presser-foot or roller, and adjusts itself to its surface, and carries it around on its axis by means of frictional contact, the block rocking on its pivot as the pivot passes to the left of the vertical line that goes through the axis of the presser-roller or foot. When the inner end of the bar or lever D descends, it leaves the presser-roller and comes in contact with it next on the right, observing fig. 1. By means of this device, it will be observed that the cloth or material to be sewn, which is here shown in red outline, is held between the block H and the pressing-surface, and is, consequently, carried along. If a seam or knot occurs in the cloth, the block will press the seam against the wheel with one of its ends, and will rock on its pivot until the other end touches the presser-roller or foot, when the feed of the cloth will proceed without delay and with regularity, the same as if the cloth were plain. As the seam or knot advances, the block will oscillate on its pivot until that one of its ends which is most distant from the seam or knot rests against the wheel, thereby establishing two points of contact between the feeding-block and the pressing-roller, and preventing irregularity in the feed, and doing away with the difficulties experienced in the ordinary reciprocating and wheel-feeds, when uneven surfaces, knots, or seams present themselves in the cloth.

I claim as new, and desire to secure by Letters Patent—

The pivoted self-adjusting block H, in combination with the lever D and the presser-roller C, substantially as described, for the purpose specified.

The above specification of my invention signed by me, this 24th day of April, 1866.

M. R. SMITH.

Witnesses:

WM. F. MCNAMARA,
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