

RICHARD BLEES.

Improvement in
No. 119,690.

Sewing Machines.

Patented Oct. 10, 1871.

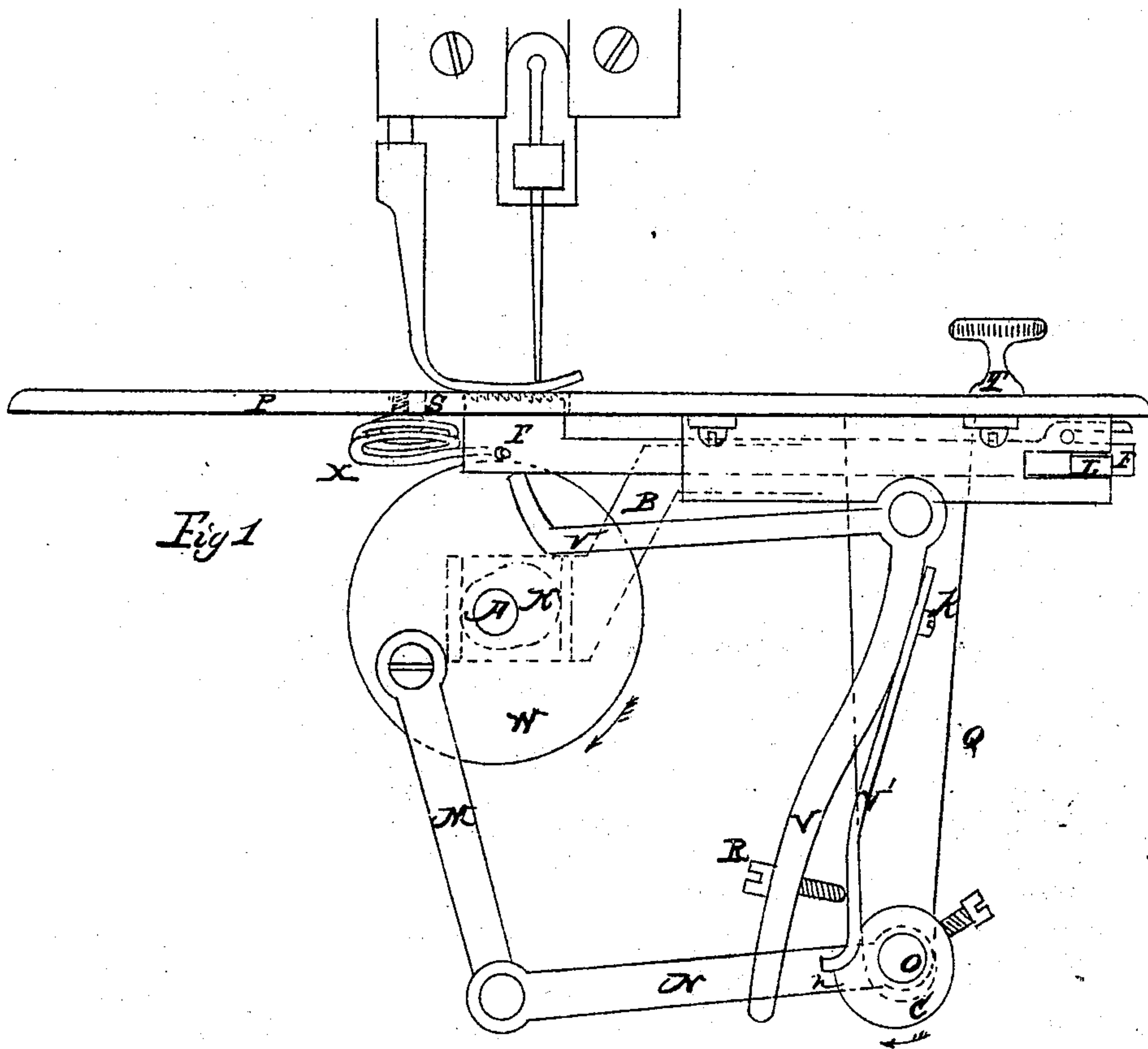
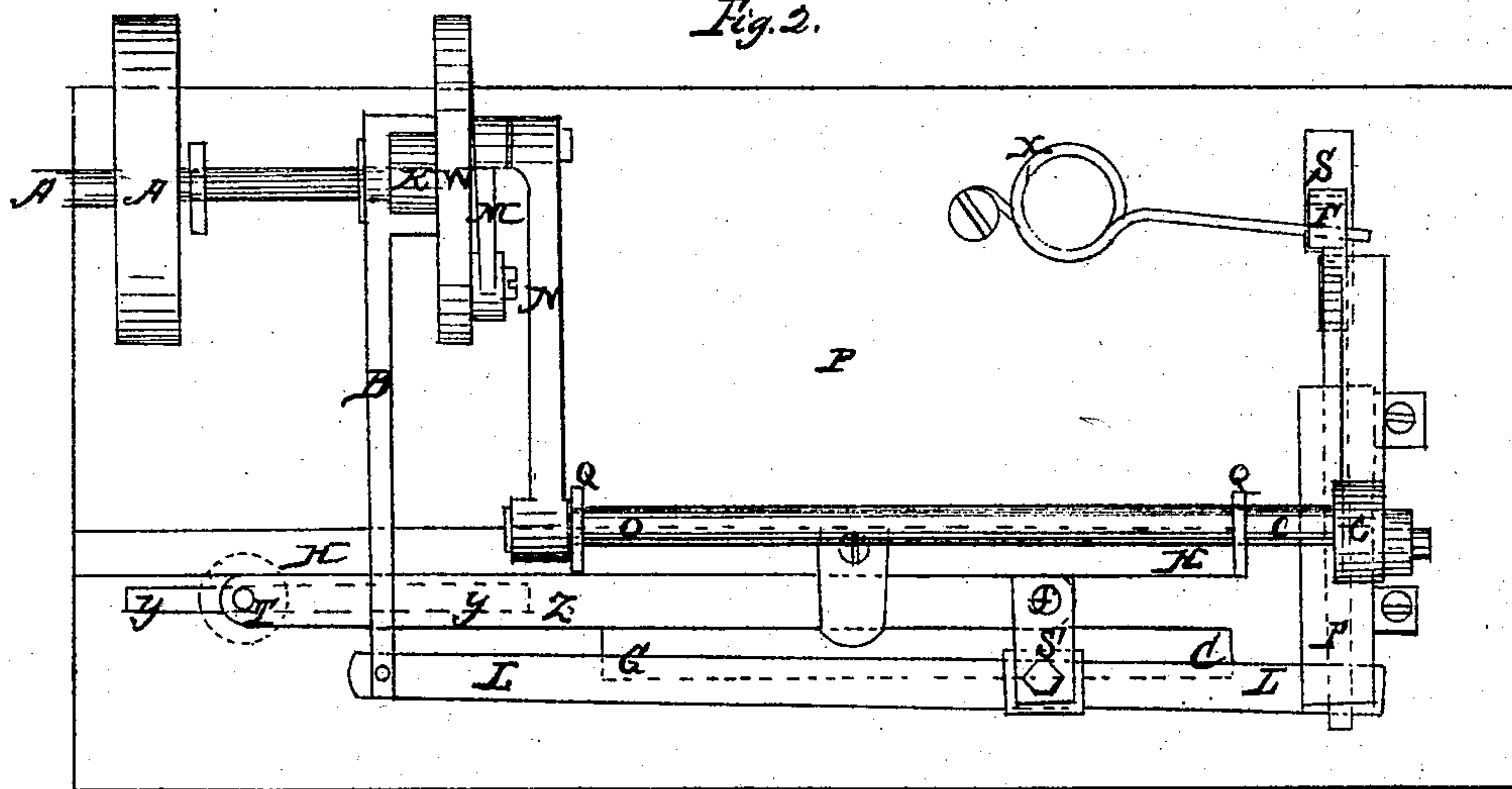


Fig 1

Fig. 2.



Witnesses
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RICHARD BLEES, OF BROOKLYN, NEW YORK.

IMPROVEMENT IN FEEDING MECHANISMS FOR SEWING-MACHINES.

Specification forming part of Letters Patent No. 119,690, dated October 10, 1871.

To all whom it may concern:

Be it known that I, RICHARD BLEES, of the city of Brooklyn, county of Kings and State of New York, have invented a new and Improved Method of Actuating the Feed for Sewing-Machines; and I do hereby declare that the following is a full and exact description of the construction and operation thereof, reference being had to the accompanying drawings and to the letters of reference marked thereon.

My invention consists in the method of moving the feed by adjustable levers, and in moving the levers by cams, with which they are in constant contact.

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

Figure 1 represents a vertical cross-section of a sewing-machine, and shows the cam and lever for imparting motion to the feeding-diver. Fig. 2 is a view of the machine inverted, and showing the parts under the table.

Similar letters of reference indicate the same part.

A is a revolving shaft, carrying a wheel, W, to one side of which is pivoted a bar, M, which in turn is connected to the bar N projecting from the oscillating shaft O, provided at its forward end with a cam, C, whose greatest radius is between *r* and O. V represents a bell-crank lever, having a metal strip, V', attached by a screw, k, and adjustable relatively thereto, by the set-screw R, to regulate the vertical movement of the feeding-diver F. The end of the bent lever V bears upon the bottom of F (the feed-bar) and lifts it against the force of the spring X attached to the platform P beneath. This spring also helps to draw the feed backward and downward after being drawn forward by the lever L L. When the cam C oscillates in the direction of the arrow the point *r* of the cam will raise the lever, and with it the feed-bar, to its highest point. The height is regulated by the screw R. The feed F works through an opening in the horizontal platform P P. Upon the revolving shaft A is the cam K, which imparts a horizontal motion to the bar B connected with the lever L,

which rests on a pivoted guiding-block, S, on the projection S' of the adjustable bar Z. The bar Z may be adjusted longitudinally in its bearings between the fixed plates G and H, and may be retained in any required position by the thumb-screw T, connected with the bar and projecting above the table through the slot *y*. When the screw T is moved along the slot *y* the bar Z will move through the bearings G H and the slide S', and the pivoted guiding block along on the double lever L; and as motion imparted by the bar B and cam is always the same, shifting the position of the block S will regulate the amount of motion of the opposite extremity of the lever L, to which is attached, at right angles, the feed-bar F, which thus receives its lateral motion. The levers L and V V' are so arranged and operated that as one rests the other moves, and vice versa. When the lever V has reached its highest point it remains stationary until the lever L has moved F to the other extremity of the slot S, when L becomes stationary while V falls, &c. The position of the cams C and K upon their respective shafts is, of course, such that the feed is raised to take hold of the material, and advanced horizontally when the needle of the machine has been drawn out of the material, and vice versa.

By the above-described mechanism a noiseless feed is constructed, each motion being communicated by levers actuated by cams with which they are in constant contact, while the frictional contact of the parts is reduced to a minimum, and the height and range of the feed is regulated by easy and accessible contrivances.

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

1. The feed-bar F, connecting-bar B, levers V and L, and cams K and C, all constructed, arranged, and operating substantially as described.
2. In combination, the levers L and V V', when provided with means, substantially as described, for regulating the amount of motion imparted by each to the feed-bar.

Witnesses:

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HENRY V. PELTON,

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