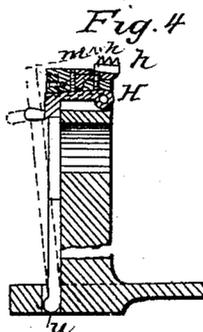
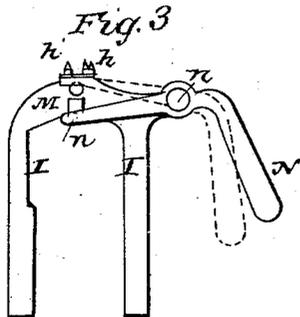
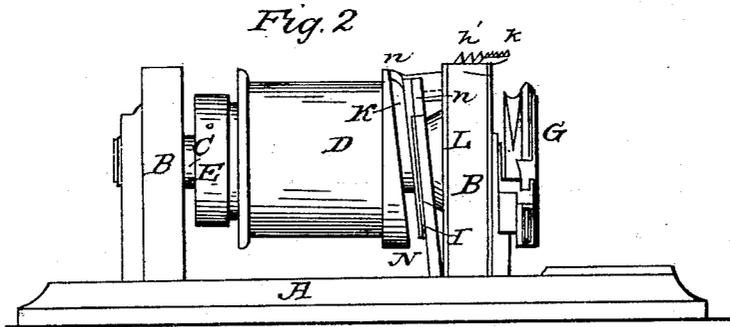
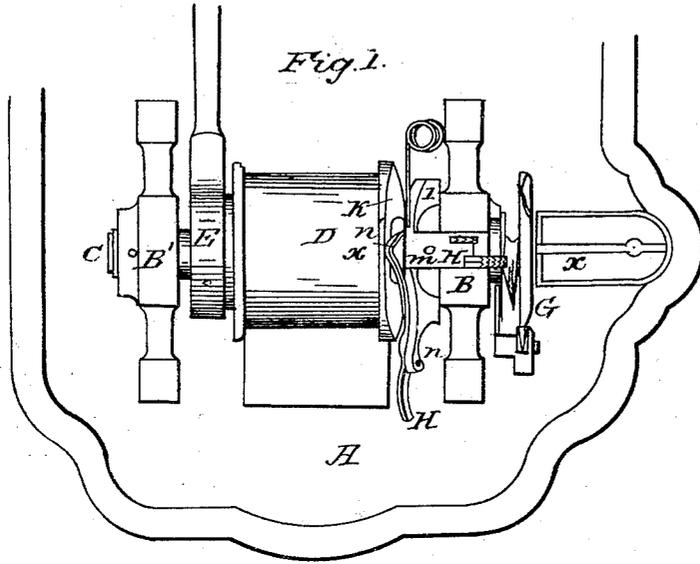


J. A. & H. A. HOUSE.

Feeding Device for Sewing Machines.

No. 67,652.

Patented Aug. 13, 1867.



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ASSIGNORS TO WHEELER & WILSON MANUFACTURING COMPANY.

Letters Patent No. 67,652, dated August 13, 1867.

IMPROVEMENT IN FEEDING-DEVICE FOR 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 we, JAMES ALFORD HOUSE and HENRY ALONZO HOUSE, both of Bridgeport, in the county of Fairfield, and State of Connecticut, have invented certain new and useful improvements in Feeding-Devices for Sewing Machines, of which the following is a full, clear, and exact description, reference being had to the accompanying drawings, which make part of this specification, and in which—

Figure 1 represents a plan or top view of so much of a sewing machine embracing our improvements as is necessary to illustrate our invention, the stitching-plate and all the parts above it being removed.

Figure 2 represents a view, in elevation of the same, as seen from the front.

Figure 3 represents a similar view of the feed-regulator, and

Figure 4 a vertical transverse section through the feeding-device at the line *x x* of fig. 1.

Our invention is more especially adapted to machines of the "Wheeler and Wilson" class, and its objects are to render the feed adjustable and easily to be removed, and also to render the machine noiseless, to which ends our improvements consist—

First. In an adjustable feed-frame, arranged between the driving-pulley and the standard of the frame, and having both a vertical and lateral vibration.

Second. In combining a vibrating feed-frame with a cam, so shaped as to give an increasing movement as it recedes from its centre, by means of an interposed adjusting lever pivoted to move from or towards the axis of the cam, without moving the frame.

Third. In adjusting the feed vertically by means of a lifting-lever in the feed-block.

In the accompanying drawings our improvements are shown as applied to a Wheeler and Wilson sewing machine. The mechanism is supported in two standards, B B', mounted on a bed-plate, A. The main shaft C is mounted in proper bearings in these standards, and rotated by a band encircling the pulley D. An eccentric, E, on this shaft vibrates the needle-arm by means of a pitman, F. A rotating-hook, G, is mounted on the end of the driving-shaft.

The feeding-devices to which our improvements more particularly relate consist of two serrated lugs, *h h'*, mounted on a block, H, fitting loosely in a groove in the standard B, directly over the axis of the main shaft, and attached to a magnet-shaped frame, I, which slips over the main axle, its feet entering sockets *u* in the bed-plate. The cam K, on the end of the driving-pulley D, in its rotation, imparts a horizontal vibratory movement to this frame, while a lifting-cam, L, on the main axle, gives it vertical vibration. The feed can be raised or lowered by means of a set-screw, *m*, passing through the feed-block H, and acting on a lever, M, hinged at one end to play vertically in a slot in the under side of the block. To vary the stroke of the feed, and consequently the length of stitch, an elbow-lever, N, is pivoted to turn vertically on a pivot, *n*, in the frame I. A boss or swell, *n'*, on the inner end of this lever, rests against the face of the cam. A spring, O, one end of which is secured to the standard B and the other end to the vibrating feed-frame I, presses this frame and lever N both downward and inwards towards the driving-pulley. The cam K is so shaped as to give an increased motion as the distance from its centre is increased, while the lifting-cam L lifts uniformly. By this means the vertical movement of the feed remains unchanged, while its horizontal movement is varied, the vertical adjustment of the feed being effected independently, as hereinbefore explained. The cone shape of the lifting-cam renders its movements more smooth, and avoids shocks and jars.

It is obvious, by the foregoing description, that our improvements secure a simple, compact, and noiseless machine, and one capable of rapid adjustment, removal, or replacement of parts.

By removing the table and the glass part of the presser-foot, and lifting the spring O out of its fastening in the vibrating-frame I, the whole feeding-apparatus can be lifted out of the machine.

The general construction and operation of our machine being similar to that known as the "Wheeler and Wilson," a detailed description of its parts is deemed unnecessary here.

What we claim as our invention, and desire to secure by Letters Patent, is—

1. The vibrating feed-frame I, constructed, arranged, and operated substantially as and for the purpose described.
2. The combination of the vibrating feed-frame with the adjusting lever and cam, for the purpose of varying the length of the feed.
3. The combination ~~of the~~ vibrating feed-block with the adjusting lever and set-screw, for the purpose of adjusting the feed vertically.

In testimony whereof we have hereunto subscribed our names.

JAMES A. HOUSE,
HENRY A. HOUSE.

Witnesses:

GEORGE C. BISHOP,
CHARLES H. DIMOND.