

W. PEARSON.
SEWING MACHINE.

No. 26,201.

Patented Nov. 22, 1859.

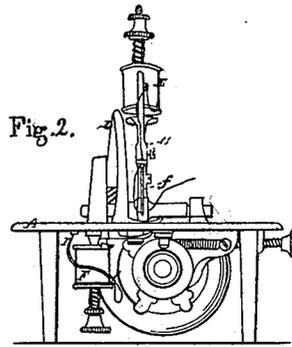
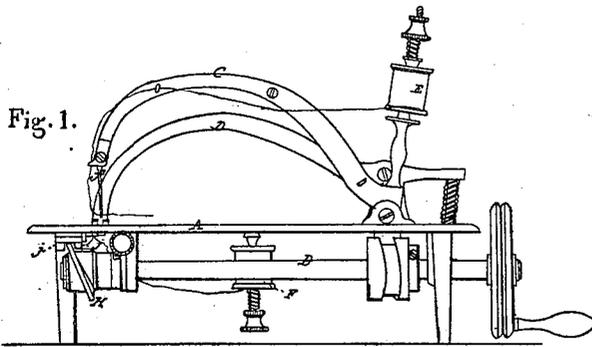


Fig. 3.

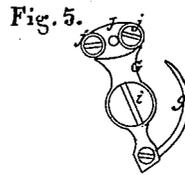
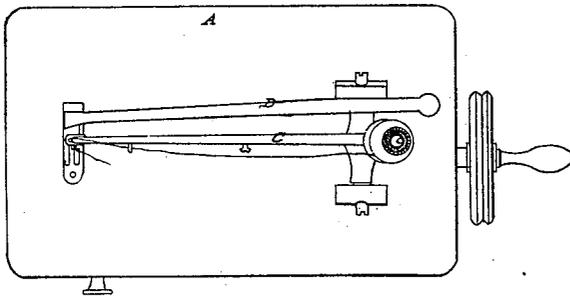


Fig. 6.

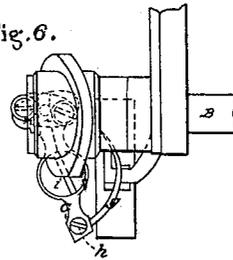


Fig. 4.

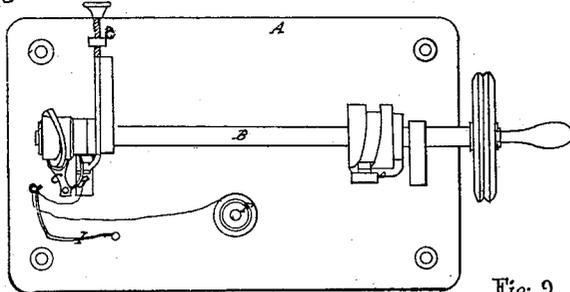


Fig. 7.

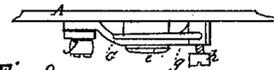


Fig. 8.

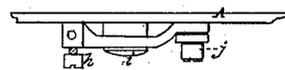
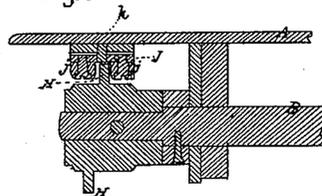


Fig. 9.



Witnesses.

Chas. Dutton
R. Kendall

Inventor.

William Pearson

UNITED STATES PATENT OFFICE.

WILLIAM PEARSON, OF WINDSOR LOCKS, CONNECTICUT.

IMPROVEMENT IN SEWING-MACHINES.

Specification forming part of Letters Patent No. 26,201, dated November 22, 1889.

To all whom it may concern:

Be it known that I, WILLIAM PEARSON, of Windsor Locks, in the county of Hartford and State of Connecticut, have invented certain Improvements in Sewing-Machines, the construction and operation of which I have described in the following specification and illustrated in its accompanying drawings with sufficient clearness to enable competent and skillful workmen in the arts to which it pertains or is most nearly allied to make and use my invention.

My said invention consists in the combination, with the vibrating looper and with the cam-flange by which it is operated, of a vibrating bar or hanger which carries two friction-rollers, and is attached to the looper or the arm of the looper by a pivot the axial line of which is located midway between the friction-rollers, by which the said friction-rollers are made capable of adjusting themselves to the inclination of the cam-flange, and are thus prevented from binding upon it, while at the same time they are allowed to come up snugly, and thus prevent loss of motion, as hereinafter more fully set forth.

My invention is illustrated in the accompanying drawings, as follows:

Figure 1 is a side elevation of my machine. Fig. 2 is an end view. Fig. 3 is a plan. Fig. 4 is an under side view. Fig. 5 is a detail view, showing more clearly the construction of the looper and the attachment to it of the vibrating bar which carries the friction-rollers. It is an under side view. Fig. 6 is also a detail under side view, showing the looper and the cam-flange which operates it in connection. Fig. 7 shows the looper and its attachments as viewed from the right-hand side of Fig. 5, and is an elevation. Fig. 8 is a view in elevation from the opposite side. Fig. 9 is a section taken through the center of the main shaft of the machine, and shows more clearly the mode of attaching the friction-rollers to the looper, and the manner in which they operate in connection with the cam-flange by which they are driven.

A is the bed of the machine. B is the main shaft. C is the needle-beam, and D is the arm which carries the pressure-pad.

The thread is supplied to the needle and looper from the spools E and F.

f is the needle, and *g* is the curved part of the looper, which curved part is secured in the part G by means of a set-screw, *h*. The part G is hung upon a pivot, *i*, upon which the whole looper vibrates. The part *g* is so curved that its inner surface will coincide with a circle struck from the center of the axis *i*, and the needle is so arranged in connection with it that it will descend within the curve of the looper, while at the same time the arrangement of the looper upon an axis upon the opposite side of the needle from the axis upon which the needle-beam vibrates allows the looper, while so arranged as to bring the needle within its curve, to also itself vibrate within the curve of the needle, by which arrangement both are made, in connection with each other, to take the stitch with the utmost facility.

I is a small spring thread-carrier, which supports the lower thread between the spool and the looper. It is intended to be sufficiently flexible to yield to any undue strain upon the thread.

H is the flange-cam by which motion is given to the looper. The working part of this cam works between two friction-rollers, *j j*, which are hung upon pins in the vibrating bar J, which is attached to the part G by a pivot *k*, upon which it is permitted to vibrate. It is obvious that if the friction-rollers were not allowed to change their relative position to the looper bar or part G, the varying inclinations of the cam-flange from a direct circumferential line would make it necessary to leave considerably more room between the rollers than simply the thickness of the cam-flange, or else the obliquity of direction between the rollers which the cam would have in portions of its movement would cause the parts to bind, and this evil would be increased by the obliquity given to the position of the rollers toward the limit of vibration of the looper in either direction. It is for the purpose of overcoming this difficulty that I attach the friction-rollers and vibrating bar in the manner described, so as to allow them to assume any position which the relative direction of the

cam-flange may require to allow the parts to work freely, and yet without allowing play or causing the parts to bind in any part of the movement, and without making the cam-flange of an ununiform thickness.

The particular improvement which I claim as constituting the said invention, and originally and first invented by me, is—

The combination of the vibrating looper, the

cam-flange which operates it, and the vibrating bar J, carrying the friction-rollers *jj*, the parts being constructed, combined, and arranged substantially as and for the purposes set forth.

WILLIAM PEARSON.

Witnesses:

C. H. C. DEXTER,
R. KENDALL.