

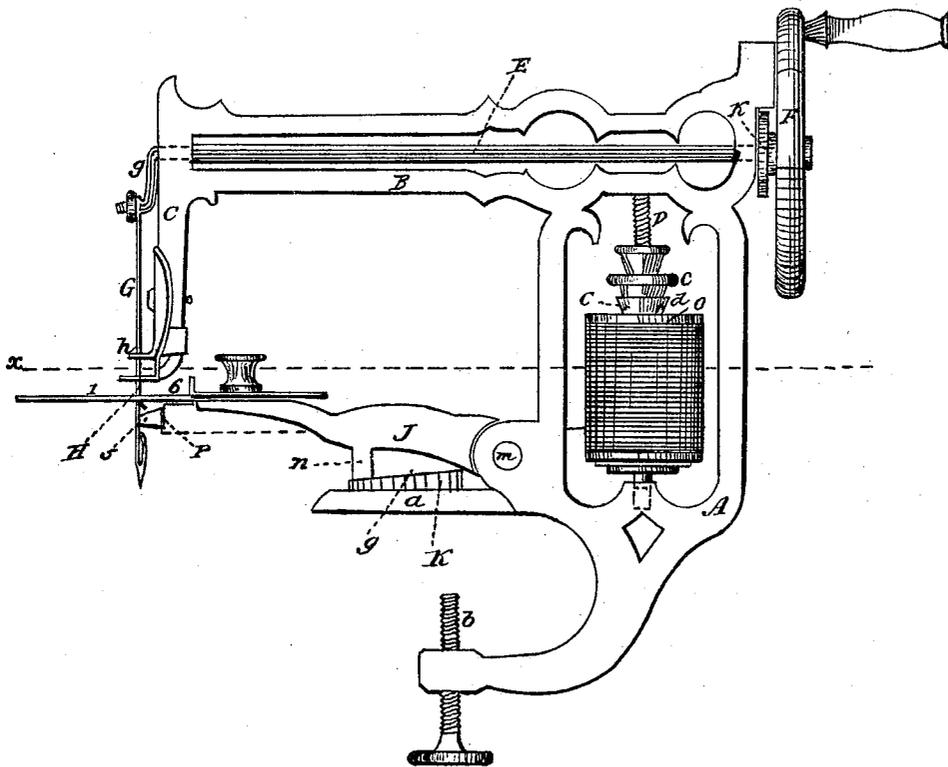
H. P. LAMSON.

Sewing Machine.

No. 79,579.

Patented July 7, 1868.

Fig. 1.



Witnesses:

J. E. Eschmacker
N. W. Stearns

Inventor.

Henry P. Lamson

H. P. LAMSON.
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Fig. 3.

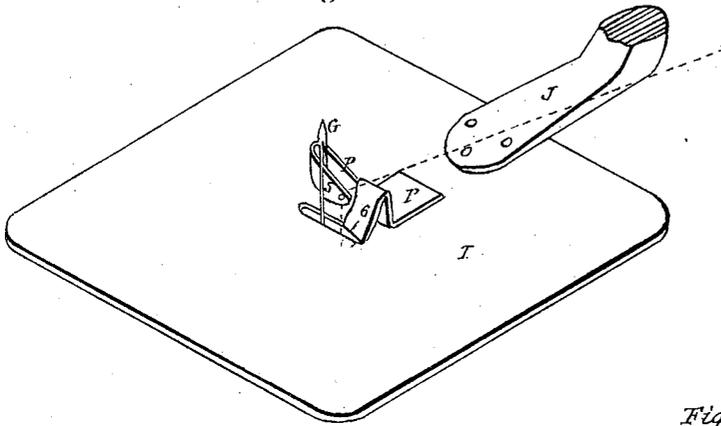


Fig. 4.

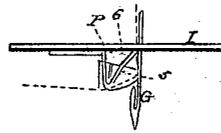
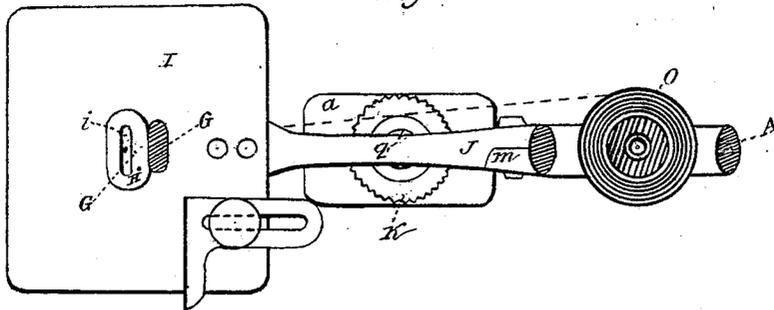


Fig. 2.



Witnesses:

R. C. Stearns
W. W. Stearns

Inventor:

Henry P. Lamson

United States Patent Office.

HENRY P. LAMSON, OF LOWELL, MASSACHUSETTS.

Letters Patent No. 79,579, dated July 7, 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, HENRY P. LAMSON, of Lowell, in the county of Middlesex, and State of Massachusetts, have invented certain new and useful Improvements in Sewing-Machines, of which the following is a full, clear, and exact description, reference being had to the accompanying drawings, making part of this specification, in which—

Figure 1 represents a side elevation of a sewing-machine having my improvements applied thereto.

Figure 2 is a horizontal section of the same on the line $x x$ of fig. 1.

Figure 3 is a perspective view of the under side of the cloth-table, showing my improved spring-guide.

Figure 4 is an elevation, showing the side of the spring-guide opposite to that represented in fig. 1.

This invention relates to certain improvements in sewing-machines, for which Letters Patent were granted to Henry J. Hancock, on the 6th day of August, A. D. 1867, said machine using a single thread, and making a chain or tambour-stitch by means of an ordinary tambour or hook-eyed needle that is made both to produce the stitch and effect the feed of the cloth; and my invention consists in an improved spring-guide, which is secured to the under side of the cloth-bed or table, serving not only to hold the thread and direct it into the most suitable position to insure its being caught by the hook of the needle, but also to close the hook upon the thread and prevent its point from catching in the cloth as the needle ascends.

To enable others skilled in the art to understand and use my invention, I will proceed to describe the manner in which I have carried it out.

Referring to the accompanying drawings, A, B, and C represent the frame of the machine, which may be made of cast iron or other suitable metal. Said machine may be held to or secured on a bench or table by means of a plate, a , projecting from the portion A of the frame, and a binding-screw, b .

D is the spool-spindle or support on which the spool turns, the tension of the thread being regulated by a screw-nut, c , which bears on a piece of rubber, d , or a spiral spring placed within a tapering cup, e , the lower end of which fits into the spool, and serves as a guide, the nut, c , being kept in place by means of a lock-nut placed above it.

The lower end of the spindle D fits into a cavity (seen dotted) in the frame A, the cavity containing a piece of rubber or a spiral spring, which serves to force the upper end of the spindle into a cavity in the frame above. The spindle is thus held securely in place, and, with the spool, may be easily removed and replaced when desired.

E is a rod or shaft, operated by a wheel, F, in the rear, for giving, by means of a crank or cranked formation, g , on the said rod in front, the necessary up-and-down and lateral motions to the needle G, to work it in and out of the cloth, and effect the feed of the latter; said needle being freely connected at its top with the crank, g , and working loosely or freely below through an adjustable guide, h , and slot, i , of a stationary foot or presser, H, attached to the portion C of the frame. This needle is of a tambour or hook-eyed construction at its point, and has a flexible barb, and it works through a slot in the table I, corresponding to the slot i of the foot H. The shaft E is prevented from being revolved in the wrong direction, (which would endanger the breaking of the needle or disarrangement of the stitch,) by a ratchet-wheel, k , and pawl, l , as seen in fig. 1.

The table I is supported by an arm, J, pivoted at m to the portion A of the frame, and provided with a stem or projection, n , the object of which will be hereinafter described.

The thread, represented by red lines in the drawings, is passed from the spool, o , through the eye of a spring-guide, p , fig. 3, which is made of brass or other suitable metal, and is secured to the under side of the cloth-table I. The portion 5 of this guide p , which is provided with an eye for the passage of the thread, is bent into such form that when the needle G is carried past it, it will yield to the pressure of the needle, and on returning to its original position will draw the thread closely against the side of the needle just above the barb, and so present it in the most suitable manner to insure its being caught by the hook or barb of the needle. This portion 5 of the guide p , by reason of its breadth and the bend given to it, is also rigid in a vertical direction, to resist being pulled upward by the thread, and so that its point cannot by any possibility be drawn by the

tension of the thread into or through the slot in the table I. The other portion, 6, of the guide *p*, which is bent over and upward, so as to extend into the slot in the table I, also serves to guide the thread, and as the needle ascends, its barb comes in contact with the portion 6 of the guide, by which its point is pressed into a groove in the shank of the needle, thus securely enclosing the thread within the barb, and preventing any liability of its escaping therefrom, while the free passage of the needle up through the cloth is insured, as the point of the barb or hook is not exposed, and cannot catch in the cloth as the needle is withdrawn.

The general action of my improved machine is similar to that of certain other machines; the needle in its descent penetrating the cloth, and causing its barb to pass below the loop previously made, and which is now left upon the needle-shank, and in its ascent catching the thread anew, and pulling it in the form of a loop above the cloth, and through the previously-made loop, which is now discharged over the closed barb and off the needle; the needle also, by its lateral movement, feeding the cloth.

To secure a sufficiently firm, yet free and readily-adjustable hold of the cloth on the table I, said table, which is carried by the lever or pivoted arm J, is raised or lowered with the greatest dispatch yet nicety, to suit different thicknesses of material or other requirements, by means of a milled or other disk, K, turning on a centre at *g* on the plate *a* of the frame, and of a wedge-shaped or inclined construction on its upper face, the same being arranged below the stem *n* of the arm J, so that, on turning the disk in a suitable direction, the table I is raised, or, by turning it in an opposite direction, lowered, by its weight and that of the arm J, and in both positions of adjustment a firm base or support given to the table.

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

The guide-piece *p*, formed with a spring thread-guide to yield against the pressure of the needle, and then to carry the thread athwart its path, and also with another guide-piece, serving to govern the path of the thread as well as to close the needle-barb.

I also claim the spring-guide *p*, in combination with the cloth-table of a sewing-machine, and with a flexible barbed needle, operating substantially as and for the purpose set forth.

HENRY P. LAMSON.

Witnesses:

P. E. TESCHEMACHER,

N. W. STEARNS.