(No Model.)

T. R. FISCHER.

THREADER FOR SEWING MACHINE NEEDLES.

No. 525,142. Patented Aug. 28, 1894.

Fig. 1.

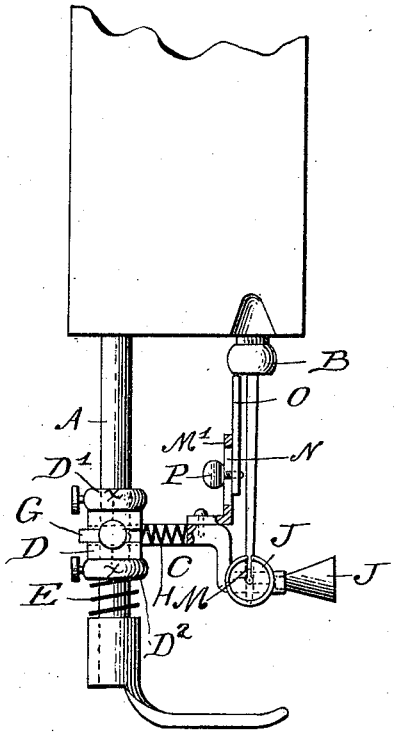


Fig. 2.

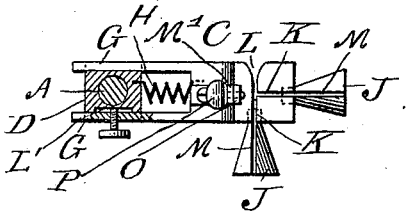
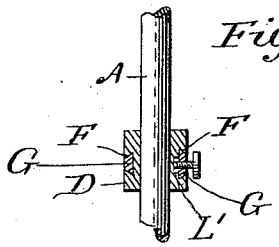


Fig. 3.



Witnesses
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UNITED STATES PATENT OFFICE.

THERESE R. FISCHER, OF BALTIMORE, MARYLAND.

THREADER FOR SEWING-MACHINE NEEDLES.

SPECIFICATION forming part of Letters Patent No. 525,142, dated August 28, 1894.

Application filed October 21, 1893. Serial No. 488,794. (No model.)

To all whom it may concern:

Be it known that I, THERESE R. FISCHER, a citizen of the United States of America, residing at Baltimore, in the State of Maryland, have invented a new and useful Improvement in Needle-Threaders for Sewing-Machines; and I do hereby declare the following to be a full, clear, and exact description of the invention, such as will enable others skilled in the art to which it appertains to make and use the same.

My invention relates to an improvement in needle threaders for sewing machines. It has for its objects, first to provide means whereby a needle may be easily threaded, and especially when it is too dark to see the eye, which is often the case though it be light enough to sew, second, to provide means for the vertical and longitudinal adjustment of the threader to make it applicable to all machines. The distance between presser bar and the needle bar not being the same on all machines and the eye of the needle not being always at the same height, this adjustment is absolutely necessary, third, to provide means for automatically adjusting the threader, whereby the eye of the needle may more easily be sighted through the thread guide, fourth, to provide means for threading a needle from either the front or side of a machine, as the case may be, this being necessary as needles are not always threaded from the same position, fifth, to provide means for limiting or controlling the stroke of the needle-bar so that it will always bring the eye of the needle opposite the channel of the guide.

My invention consists in the longitudinally and vertically adjustable thread guide adapted to be mounted on the presser bar of a machine, the adjustment being automatic if desired, and the means for controlling the stroke of the needle bar.

My invention is illustrated in the accompanying drawings, in which—

Figure 1— is a side view of my threader in position on the presser bar of a machine; Fig. 2— a plan view of the same partially in section; Fig. 3— a rear vertical sectional view on the line *x*—*x* of Fig. 1.

In the drawings: A designates the presser bar of a machine and B the needle bar. C the arm of my improved threader. D a sleeve mounted on the presser bar capable of vertical movement on the same and controlled by a spring E. D′ a vertically adjustable collar mounted on the presser bar adapted to limit the upward movement of the sleeve D when the spring E is employed, and D^2 a collar to limit the downward movement of the same when it is not employed. In the first instance the adjustable collar D′ on the presser bar above the sleeve D is tightened, and in the second the adjustable collar D^2 below the sleeve D is tightened.

F are dovetail slots in the sleeve D which receive dovetail prongs G projecting from the inner end of the arm C adapted to slide in the slots.

H is a spring seated in the prongs G between the sleeve D and the arm C to control the advance of the arm toward the needle.

L is a slot cut in the bed of one of the slots F and receives a screw carried by one of the prongs G to limit the longitudinal movement of the arm, and by which the same can be adjusted and secured at any point.

J are hollow thread guides projecting from the arm C, the interior of each being tapered toward the inner end and leading into open slots or channels K cut in the arm C, which in turn lead into a common V shaped opening L′ adapted to receive the needle to be threaded. The thread guides also have an opening M which is a continuation of the channel K, and by means of the combined channel the thread can be removed from the threader after the operation of threading has been completed.

M′ is a standard mounted on the arm C and provided with an elongated slot N in its face.

O is a bar secured to the standard M′ by a screw P projecting through the slot N into the bar, said bar being capable of vertical adjustment.

The operation of threading is as follows: The needle is raised to its highest position, the thread guide adjusted in position, the bar O properly adjusted under the needle bar, so that the eye of the needle will come opposite the channel K. The thread is then inserted into the thread guide J and passes from the same through the channel K into the needle. The needle being threaded, the thread is drawn out through the slots K and M and the

threader can then be swung back out of the way.

Although springs have been herein described for actuating the threader, it comes within the spirit of my invention to employ them or not as the desire may be.

Having thus described my invention, what I claim, and desire to secure by Letters Patent, is—

1. The combination with the presser bar of a sewing machine of the vertically adjustable spring controlled sleeve mounted thereon, the adjustable collar located above said sleeve, the longitudinally adjustable spring controlled arm carried in said sleeve, the internally tapering thread guide, the channel cut in the arm, and said thread guide, and the opening to receive the needle, substantially as described.

2. The combination with the presser bar of a sewing machine of the vertically adjustable sleeve mounted thereon, the longitudinally adjustable arm provided with dove tail prongs, the dove tail slots in the adjustable sleeve in which the prongs slide, the internally tapering thread guide, the channel cut in the arm and said thread guide, and the opening to receive the needle, substantially as described.

3. The combination with the presser-bar of a sewing machine, of the vertically adjustable sleeve mounted thereon, the arm carried by said sleeve longitudinally adjustable therein by means of the screw carried by said arm adapted to engage the sleeve, and provided with means for controlling the movement of the needle bar, the internally tapering thread guide, provided with a channel, substantially as described.

4. The combination with the presser bar of a sewing machine of the vertically adjustable spring controlled sleeve mounted thereon, the adjustable collar located above said sleeve, the longitudinally adjustable spring controlled arm carried in said sleeve, provided with means for controlling the movement of the needle bar, the internally tapering thread guide, the channel cut in the arm, and said thread guide, and the opening to receive the needle, substantially as described.

5. The combination with the presser bar of a sewing machine of the vertically adjustable sleeve mounted thereon, the longitudinally adjustable arm provided with dove tail prongs, and means for controlling the movement of the needle-bar, the dove tail slots in the adjustable sleeve in which the prongs slide, the internally tapering thread guide, the channel cut in the arm and said thread guide, and the opening to receive the needle, substantially as described.

6. The combination with the presser bar of a sewing machine, of the spring mounted thereon, the vertically adjustable sleeve mounted on said spring and means for controlling said adjustment the arm carried by said sleeve longitudinally adjustable therein, provided with means for controlling the movement of the needle bar, and the internally tapering thread guide provided with a channel, substantially as described.

In testimony whereof I affix my signature in presence of two witnesses.

THERESE R. FISCHER.

Witnesses:
JACOB W. HOOK,
LOTTIE FREEMAN.