(No Model.)

C. LAURENCE.

NEEDLE THREADER.

No. 595,953. Patented Dec. 21, 1897.

Fig. 1.

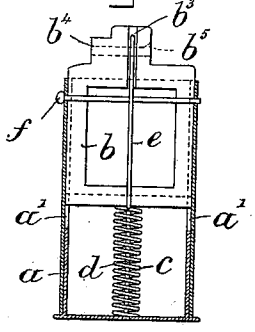


Fig. 2.

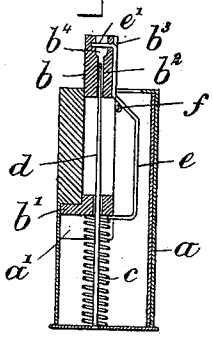


Fig. 3.

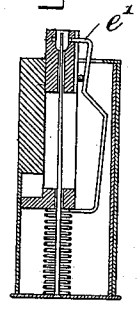


Fig. 4.

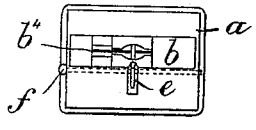


Fig. 5.

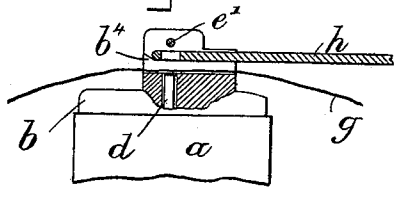


Fig. 6.

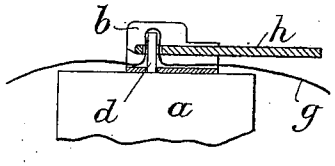


Fig. 7.

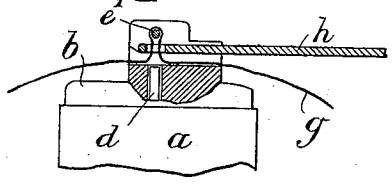
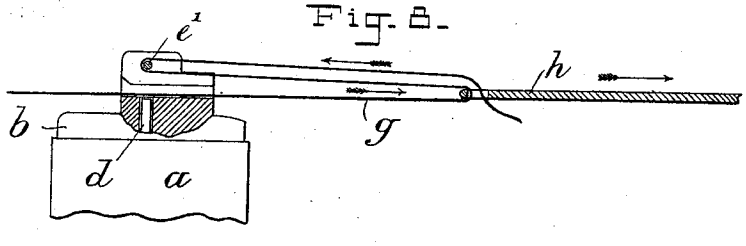


Fig. 8.



Witnesses

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UNITED STATES PATENT OFFICE.

CHARLES LAURENCE, OF KINGSTON-UPON-HULL, ENGLAND.

NEEDLE-THREADER.

SPECIFICATION forming part of Letters Patent No. 595,953, dated December 21, 1897.

Application filed August 17, 1897. Serial No. 648,571. (No model.)

To all whom it may concern:

Be it known that I, CHARLES LAURENCE, a subject of the Queen of Great Britain and Ireland, residing at Kingston-upon-Hull, in the county of York, England, have invented certain new and useful Improvements in Needle-Threaders; 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.

This invention relates to a device for threading ordinary hand sewing-needles, and has for its object to provide a mechanical needle-threader of simple construction whereby ordinary hand sewing-needles may be threaded more easily and expeditiously than hitherto; and in order that my invention may be clearly understood and readily carried into effect I will now proceed to describe the same with reference to the accompanying drawings, in which like letters of reference indicate corresponding parts in all the figures.

Figure 1 is a part sectional elevation, and Figs. 2 and 3 are transverse sectional views, of a mechanical needle-threader constructed in accordance with my invention. Fig. 4 is a corresponding plan view thereof. Figs. 5 to 8, inclusive, are part sectional views intended to illustrate the action of threading a needle by my improved device. Figs. 1 to 4 are approximately full-sized views of the apparatus, but Figs. 5 to 8 are drawn to an enlarged scale for the sake of clearness.

Referring to Figs. 1 to 4, *a* is an outer casing stamped out or manufactured in any suitable way and preferably rectangular. Inside this casing is furnished a block *b*, which is free to slide vertically and is held in position from side play by guides of suitable construction. This sliding block is kept up to its normal position by a spiral spring *c*, and the vertical travel of the block is regulated by a suitable arrangement, such as the projection *b'* on the foot of the block *b*, working in recess *a' a'*, extending across the casing. Through this block a small vertical hole b^2 is drilled for the reception of a threading-rod *d*, which is preferably an ordinary needle flattened out at its sharp end to enable it to pass through the eye of the needle to be threaded, with the eye or butt-end thereof secured to the bottom of the casing. On one side of the block a spring-rod *e* is provided, the bottom end of which is soldered or otherwise attached to the block *b*, so as to share the vertical movement thereof. The top end of the spring-rod *e* is bent over and the part *e'* inserted as a detent-pin into the small hole b^3, drilled across the block at the proper distance above and crosswise to a horizontal slot or needle-receiver b^4, provided in the head of the block. This spring-rod is so formed that when the block is pressed down the said rod encounters a pin *f*, extending across the casing, which pin, being a fixture, forces the upper end *e'* so far outward as to be clear of the threading-rod, as shown in Fig. 3. When the block *b* moves up again, the part *e'* of the spring-rod *e* returns to the position in hole b^3, as shown in Fig. 2. The object of the spring-rod *e* is to catch the loop of the thread after it has been passed through the eye of the needle to be threaded and to hold the thread until it is pulled out and broken off to the desired length. The horizontal slot, groove, or needle-receiver b^4 is cut or grooved across the sliding block *b* for the reception of the needle to be threaded in such a manner that the end of the needle abuts against an incline at b^5, which forms a gage to guide the eye of any sized needle directly over the threading-rod *d*. This slot or groove b^4 is open from the top, as shown in Figs. 2 and 4, so that the thread may be simply laid on the bottom of the needle-receiver b^4 before the needle is placed therein, and the bottom of the needle-receiver is preferably made V-shaped.

Referring to Figs. 5 to 8, inclusive, the action of my improved needle-threader is as follows: In order to thread a needle, place the cotton or thread *g* in the V-shaped slot or groove and press down the sliding block *b*, which causes the spring-rod *e* to be moved to one side clear of the V-shaped slot or groove, so that the cotton or thread may then be laid at the bottom of the slot b^4. This is only necessary for the first threading, as the cotton or thread is always in position after that, the bobbin lying in the work-basket or other convenient place. Insert the needle *h* to be threaded into the V-shaped slot above the cotton or thread *g* as far as it will go, as shown in Fig. 5. Then press the block *b* downward,

as shown in Fig. 6, when the threading-rod *d* forces the cotton or thread through the eye of the needle in the form of a loop. Then relieve the pressure on the block *b*, as shown in Fig. 7, which allows the detent-pin *e'* of the spring-rod to pass through the loop above the needle, which then withdraw, as shown in Fig. 8, and break off the thread to the desired length. Then insert another needle and repeat the process.

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

In a needle-threader, the combination with a casing, of a movable block mounted therein and having a slot across the head thereof for the reception of the needle and thread, a spring adapted to resist the movement of said block in said casing, a threading-rod passing through the said block and adapted to project into said slot when said block is depressed, a detent-pin extending across said slot when the said block is not depressed and a rod adapted to engage said detent-pin and to cause its withdrawal from said slot when said block is depressed, substantially as described.

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

CHARLES LAURENCE.

Witnesses:

ROBERT ASPLAND BELLWOOD,

JOHN COSTER.