(No Model.)

W. L. SPENCER.

NEEDLE THREADING ATTACHMENT FOR SEWING MACHINES.

No. 282,233. Patented July 31, 1883.

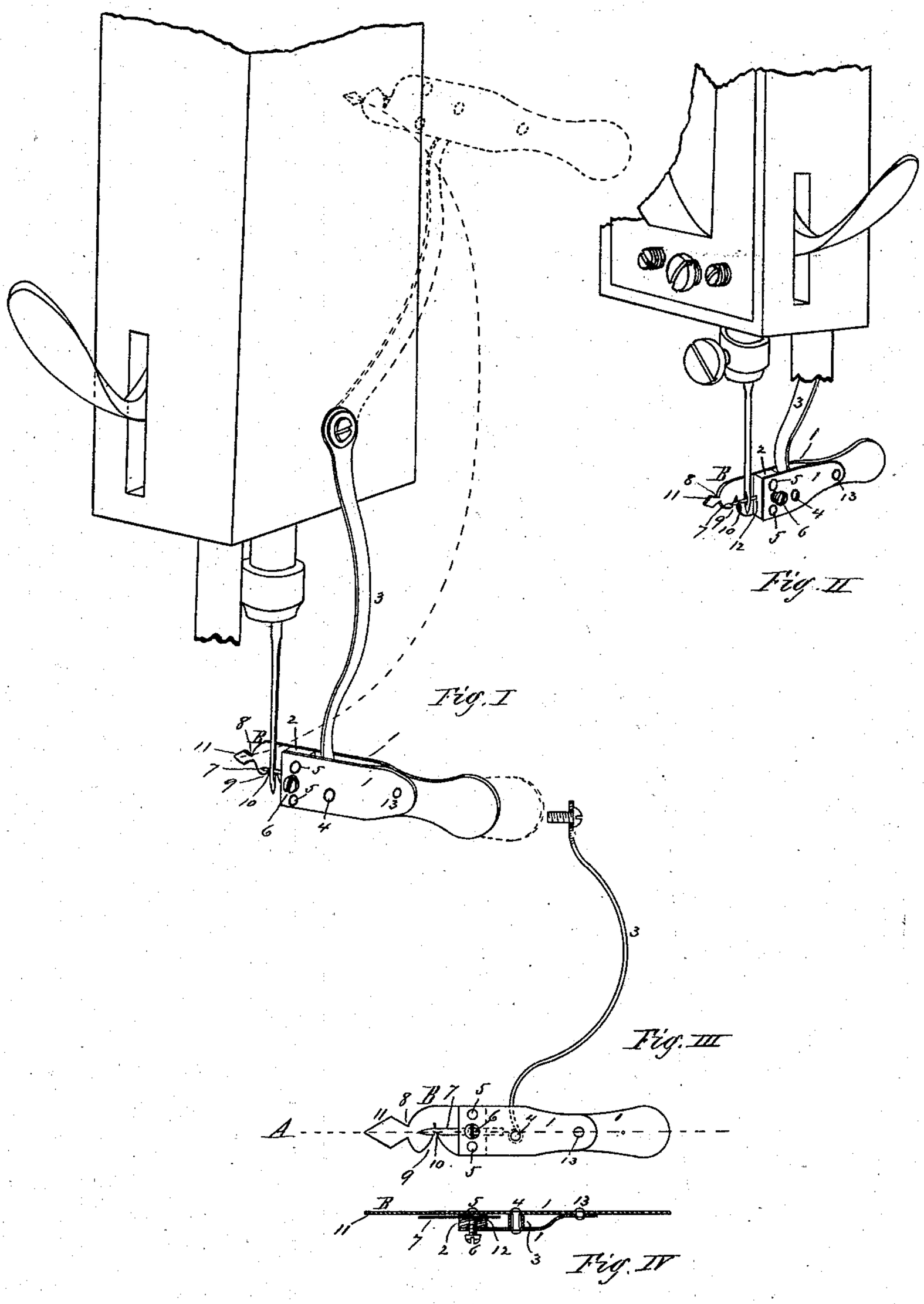

Fig. I

Fig. II

Fig. III

Fig. IV

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NEEDLE-THREADING ATTACHMENT FOR SEWING-MACHINES.

SPECIFICATION forming part of Letters Patent No. 282,233, dated July 31, 1883.

Application filed December 16, 1882. (No model.)

To all whom it may concern:

Be it known that I, WILLIAM L. SPENCER, of Springfield, in the county of Hampden and State of Massachusetts, have invented a new and useful Improvement in Threading Attachments for Sewing-Machines, of which the following is a specification.

The object of my invention is to provide a device adapted to be permanently attached to any sewing-machine and swung down into position in front of the needle and used to insert the thread through the eye of the machine-needle, and which is adapted to be moved vertically and also laterally to adjust itself with reference to the position of the needle-eye of the machine; and I accomplish this by the mechanism substantially as hereinafter described, and illustrated in the accompanying drawings, in which—

Figure I is a perspective front view of the threading device, showing it as attached to the head of a sewing-machine. Fig. II is a perspective rear view of the same as attached to a sewing-machine. Fig. III is a side view of the device, and Fig. IV is a horizontal section at line A of Fig. III.

In the drawings, 1 represents the two side plates or two sides of the device, which may consist of two thin sheet-metal plates, with a block, as 2, placed between them near one end, and all secured together by solder or by rivets, as 5, or in any other desired and efficient manner. One end of one of the plates 1 extends out in front of the block 2 to form a guide, as B, to guide the threading-needle into the eye or into the outer groove of the machine-needle, and this guide is provided with a protuberance or enlargement, 11, (more particularly in a vertical direction,) at the extreme end, with a neck, as 8, immediately in its rear. The block 2 is provided with a horizontal socket or slot at 12, adapted to receive a needle, 7, having a notch, as 10, made in its lower edge, and which needle extends horizontally alongside and parallel with the guide B, and at a sufficient distance therefrom to permit the point or extreme end of the needle 7 to enter the eye or the outer groove of the machine-needle when the said guide is placed against the side of the machine-needle. An adjusting-screw, 6, turned into a threaded hole in the block 2 and against the side of the needle 7, serves to secure the latter with its exposed end projecting out the desired distance beyond the block. A recess, as 9, is made in the lower edge of the guide B, extending in or upward to a point opposite the notch 10 of the needle 7, or farther, if desired, as shown clearly in Fig. III, to guide the thread against that part of the needle 7 in which the notch 10 is made, so that the thread, when brought against the needle, will readily enter the notch.

The rear part of the device may be made of any convenient form to be used as a handle when made of sheet metal. I prefer to bend one of the side plates, 1, inward against the other, and secure them together, as by a rivet, 13. A stud or pin, as 4, is made upon or secured to the handle, to which, as a pivot, I secure the lower end of a spring, 3, so that the block 2 may have a slight vertical tilting movement thereon; and I secure the other end of this spring 3 to the head of a sewing-machine, preferably by a screw inserted through a hole in the end of the spring and turned into the head of the machine, so that the attachment may be swung upon this screw as a pivot down into position in front of the machine-needle when required for use, or be swung away from its position in front of the machine-needle and up against the head of the machine, in which position the spring 3 operates to retain it when not in use.

When the device is brought down into position in front of the machine-needle, it hangs or is pendent upon the stud or pin 4, and is movable in a lateral direction upon the pivot or screw which secures the upper end of the spring 3 to the head of the machine, so that the device is perfectly adjustable in any direction to permit the end of the needle 7 to be readily inserted into the eyes of needles which vary in their length.

To thread the needle of any machine provided with this attachment, the latter is swung from its position against the head of the machine into a position in front of the machine-needle, with the inner side of the guide B placed against the side of said needle. The device being then gently forced toward the machine-needle, the extreme end of the needle 7 enters the outer groove of the machine-needle, and by tilting the handle of the attach-

ment up or down, the needle 7 will slide up or down in said groove, and when opposite the eye will enter the latter by pressure until the notch 10 passes entirely through the eye of the machine-needle. The thread, extending down from the head of the machine, is passed down on one side of the guide B, and beneath the needle 7, and in the recess 9, and up the other side of the guide, causing the thread to enter the notch 10, and while the thread is held taut with the fingers the device is drawn away from the machine-needle, withdrawing its needle 7 from the eye of the former, and a loop of the thread is drawn through the needle-eye. The device being then swung upon its pivot at the upper end of the spring 3, to bring the device up into its position against the head of the machine, the loop of thread is caught around the neck 8 just behind the protuberance 11, and the end of the thread is drawn through the needle-eye by the mere operation of moving the attachment up into its place, where it remains when not in use.

This device may be attached to any machine, and, being adapted as a permanent attachment, it is always ready for immediate use.

The attachment may be made either from sheet metal, and the parts secured together by rivets or by solder, or in any other desired manner; or it may be cast from any suitable metal, with a rearward-projecting piece to serve as a handle, and the spring be pivoted thereto, without departing from the invention in the least.

When the device is made as an attachment for and to be fitted to any particular machine, it may not be necessary to pivot the block containing the needle 7 to the spring 3; but the latter may be attached to the block or to its handle rigidly, and in any desired manner, so that when pivoted to the head of the machine by the spring 3 and swung down into position in front of the machine-needle the needle 7 of the attachment will come so nearly opposite the eye of the machine-needle that the elasticity of the spring will allow the attachment to tilt sufficiently to cause the needle 7 to readily find and enter the eye of the machine-needle. It will be seen that the exposed end of the needle 7 is extended somewhat beyond the notch 10, sufficiently to enable the end to have a firm bearing against the guide when drawn over in that direction by the operation of drawing the thread through the needle-eye. This construction provides a firm support for the needle against any undue strain, and obviates liability of breakage of the needle from that cause; and as the end of the threading-needle 7 is extended or elongated beyond its notch 10, this extended or elongated end may have a comparatively firm bearing in the eye of the machine-needle, even before the notch reaches the eye, in entering it, so that the threading-needle 7 is supported within the eye of the machine-needle, while the notch is passing to and from its position to engage the thread, by this elongated or extended end of the threading-needle beyond its notch.

Having thus described my invention, what I claim as new is—

1. The combination of a block, 2, containing a socket to receive a threading-needle, and provided with a handle and pivoted to an attaching-spring, 3, a needle having a notch in its exposed lower side, and adapted to be secured in a horizontal position in the socket of said block by an adjusting-screw, and a guide extending horizontally from said block parallel with said needle, and provided with a recess, 9, in its lower edge, and with a protuberance, 11, on the extreme forward end of said guide, substantially as described.

2. An improved needle-threading attachment for sewing-machines, containing a horizontal threading-needle having a notch in its lower side, and secured in a block attached to a spring which is adapted to be pivoted to the head of a sewing-machine, and a guide extending from said block parallel with the said needle to guide the latter into the eye of the machine-needle, and with a recess in its lower edge to guide the thread into the notch of the threading-needle, and a protuberance on the front end of the guide to catch the loop of thread and draw its end through the needle-eye, the said parts being combined substantially as described.

3. In an improved needle-threading attachment for sewing-machines, a threading-needle having a notch in its exposed lower side, and with the exposed end of said needle extended beyond said notch, so as to extend entirely through the machine-needle before said notch enters its eye, and a guide extending alongside and parallel with the extended end of said needle to furnish a bearing or support for the needle in drawing the thread through the eye of the machine-needle, substantially as described.

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