

June 25, 1935.

S. SIDLER

2,006,185

NEEDLE THREADING DEVICE

Filed Nov. 9, 1932

2 Sheets-Sheet 1

Fig. 1

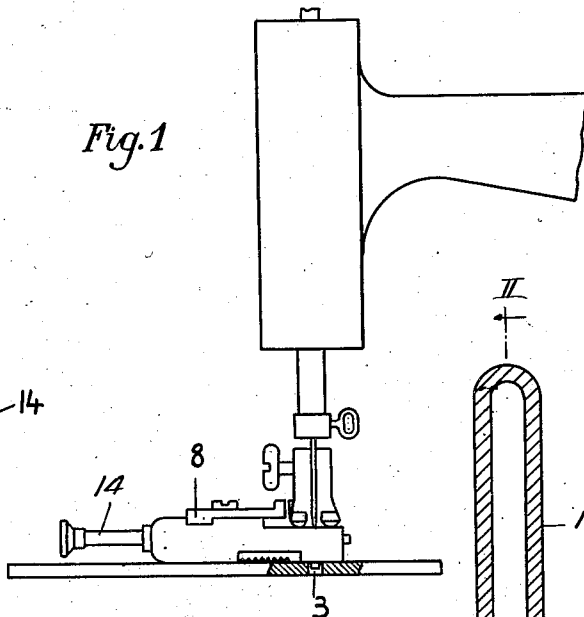


Fig. 2

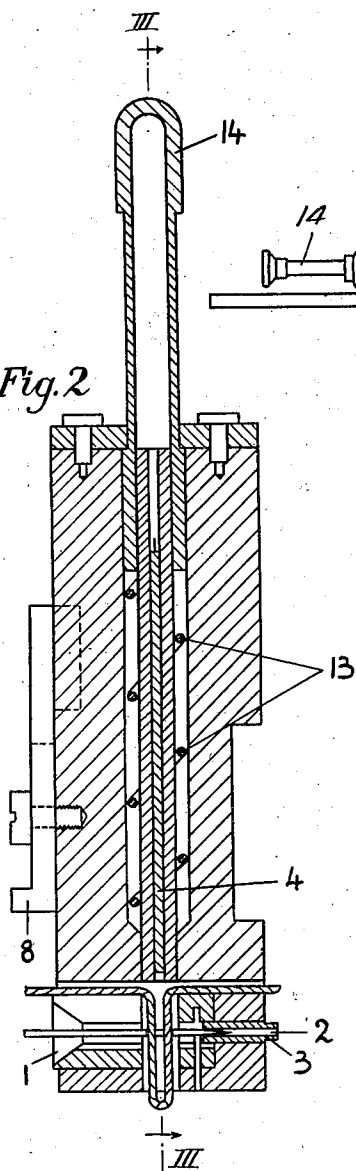
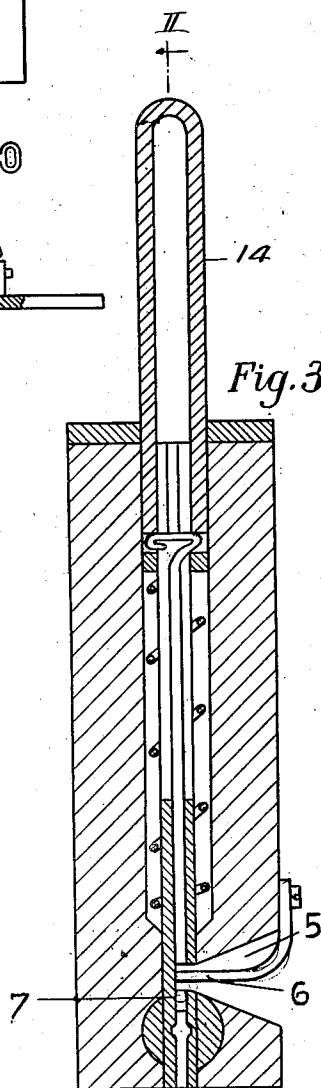


Fig. 3



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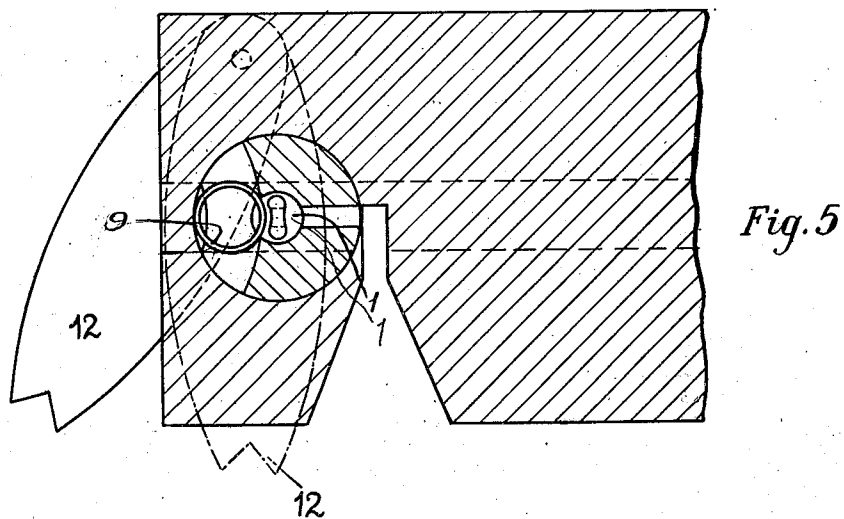
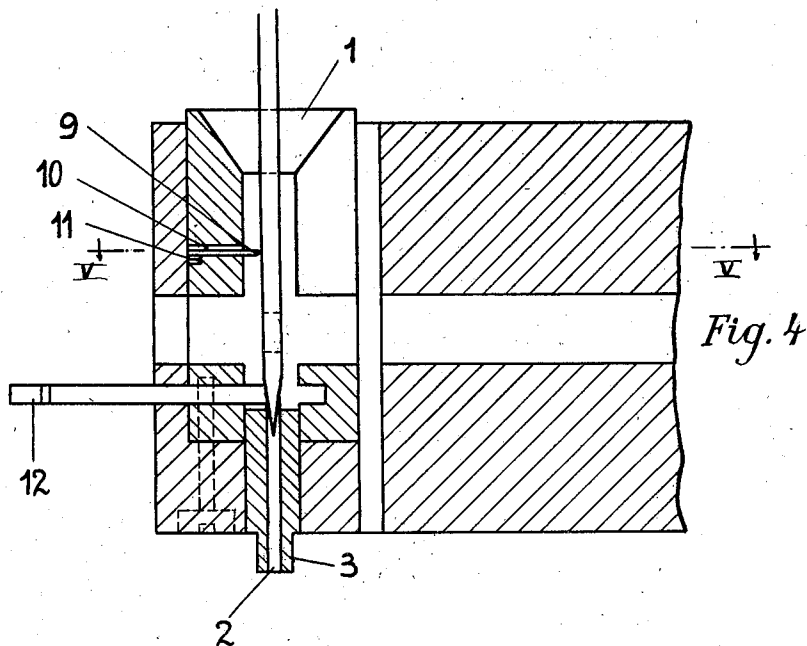
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2 Sheets-Sheet 2



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UNITED STATES PATENT OFFICE

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NEEDLE THREADING DEVICE

Siegfried Sidler, Zurich, Switzerland

Application November 9, 1932, Serial No. 641,815
In Germany January 30, 1932

3 Claims. (Cl. 112—225)

This invention relates to needle threading devices of the kind in which the thread passage has a slot reaching into the needle guide bushing and also into the part of the needle channel projecting into the threading pin channel, a clamping spring being provided in the thread passage which holds the thread in readiness for threading when it has automatically returned through the slot into the passage after each threading operation.

The object of the invention is to construct the device so that it can be used both for ordinary hand sewing needles and for sewing machine needles. To this end the device is provided with centering means, an adjustable lateral abutment, an apertured abutment for the point of a machine needle, and means for covering the aperture for use in threading hand needles.

An example embodying the invention is illustrated in the accompanying drawings.

Figure 1 shows the device in position beneath a sewing machine needle.

Figure 2 is a longitudinal vertical section taken on the line II—II of Figure 3, on a larger scale than Figure 1, certain details being omitted for clearness.

Figure 3 is a longitudinal horizontal section taken on the line III—III of Figure 2, to the same scale as Figure 2.

Figure 4 is a detail section taken on the same plane as Figure 2 but drawn to a much larger scale, and

Figure 5 is a detail section on the line V—V of Figure 4.

The thread is first laid in the passage 5 and drawn beneath the spring 6 which presses it into the groove 7 and thus prevents its slipping out during the threading period.

The device when put beneath the machine needle is brought into correct position with the needle eye opposite the threading pin by the aid of the centering projection 3 and an adjustable lateral abutment 8 which is set once and for all for the particular machine with which the device is to be used. The projection 3 fits into the usual hole in the machine base which the needle enters during sewing, while the abutment 8 abuts against the side of the presser foot of the machine. If the needle point in which the eye is located, is entered into the guide bushing 1, the projecting part of a spring 9 affords a certain resistance which will be greater or smaller according to the angular position of the device about the needle axis, because the eye part of the needle is not cylindrical. The effect of this spring is to set the

device more exactly if necessary. The needle point enters the aperture 2 in the apertured abutment 3 until owing to its increasing diameter it abuts the edge of the aperture and can be pushed down no further. The thread is then pushed through the needle eye by threading pin 4 which is returned by the spring 13, the needle withdrawn by turning the machine, and the device can then be removed. The threading pin 4 is actuated by the aid of an external plunger 14. To insert the spring 9, a slot 10 is formed by milling, having a step 11 which prevents the spring entering the bushing 1 far enough to prevent the entry of the needle. Only one such spring 9 is shown in the drawing, but two springs could be used respectively located above and below the threading pin whereby needles of varying thickness would be better aligned.

To enable the device to be used for ordinary hand sewing needles, a stop plate 12 is pivoted in a slot so that it can be moved inwards to cover the aperture 2. The thickness and position of plate 12 are arranged so that when swung inwards and a needle inserted eye end first, the needle abuts this plate with its eye on a level with the threading pin 4. The needle is if necessary, automatically turned by the spring 9 bearing against its non-circular section in the region of the eye, about its own axis to bring the eye into a position facing the threading pin 4 which is then actuated to thread the needle, the thread having previously been laid in the passage 5 as described above.

What I claim is:—

1. In a needle threading device of the kind described having a threading pin for carrying a thread through the eye of a needle, the combination of a projection and an adjustable abutment adapted together to center the device beneath the needle of a sewing machine by entering the aperture in the machine base beneath the needle and abutting the presser foot of the machine respectively, and an abutment having an aperture therein for receiving the point of the machine needle and stopping it with its eye aligned with the threading pin.

2. In a needle threading device of the kind described having a needle guide bushing and a threading pin for carrying a thread through the eye of a needle, the combination of a projection and an adjustable abutment adapted together to center the device beneath the needle of a sewing machine, an abutment having an aperture therein for receiving the point of the machine needle and stopping it with its eye aligned with

the threading pin, and a spring projecting into the needle guide bushing for completing the setting of the device angularly about the needle axis.

3. In a needle threading device of the kind described, the combination of means for centering the device beneath the needle of a sewing ma-

chine, an abutment having an aperture therein for the point of the machine needle, and a stop plate pivoted in a slot located so as to cover said aperture when swung inwards.

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