

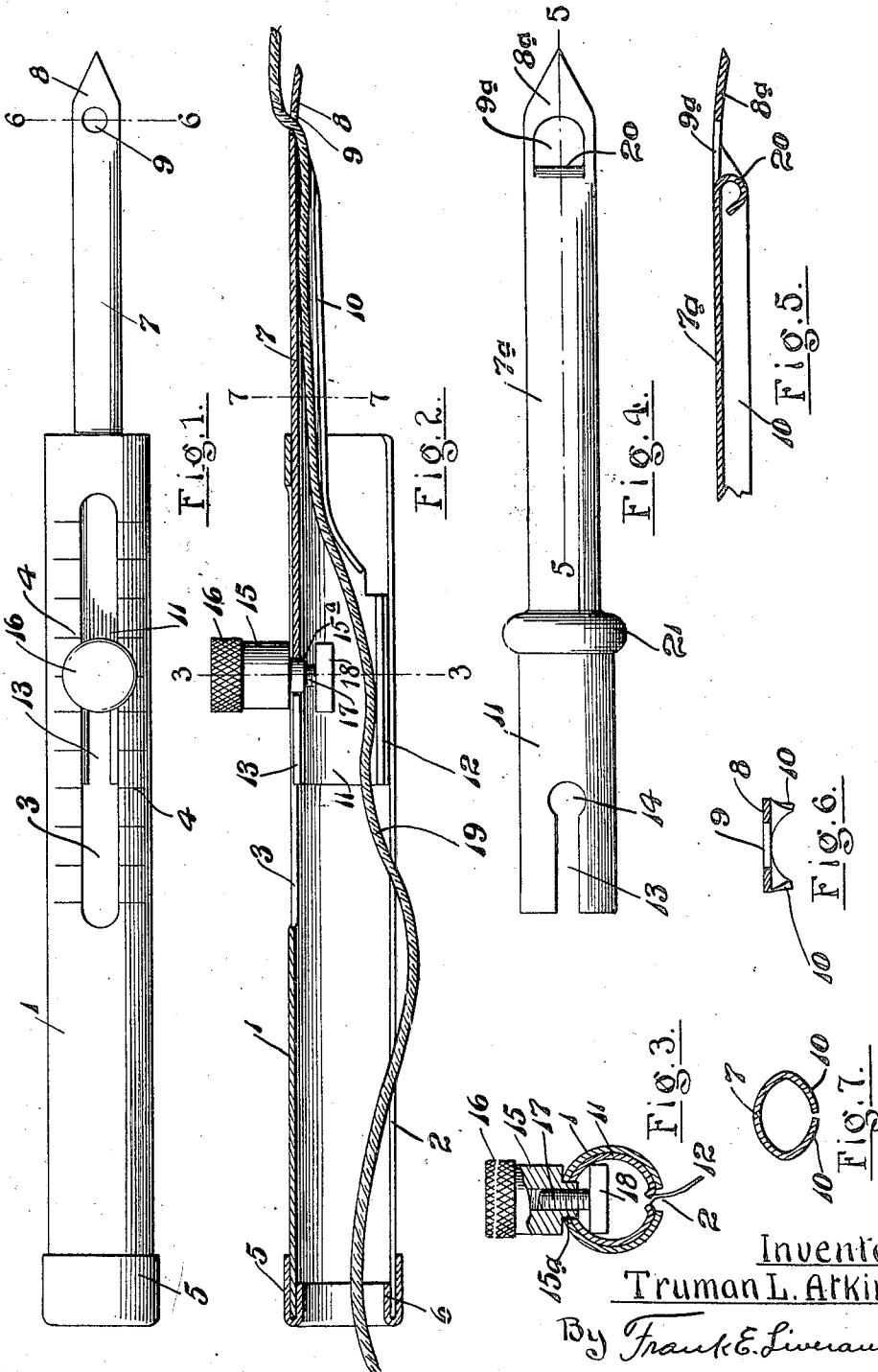
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T. L. ATKINSON

EMBROIDERY NEEDLE

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UNITED STATES PATENT OFFICE.

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EMBROIDERY NEEDLE.

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To all whom it may concern:

Be it known that I, TRUMAN L. ATKINSON, a citizen of the United States of America, residing at Ludington, in the county of Mason and State of Michigan, have invented certain new and useful Improvements in Embroidery Needles; 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 novel construction of embroidery needle. It is an object and purpose of the invention to make an embroidery needle substantially wholly of sheet metal, fashioning the same by simple operations to make an embroidery needle which is very easily threaded and in which the yarn, thread or the like used therewith enters at one end of the handle of the needle and is wholly within the same for the length of the needle, thereby obviating any trouble many times caused where the yarn, thread or the like is carried to the device at a point between the ends thereof. A further object of the invention is to form the device with a handle and a needle part readily adjustable with respect to each other and provided with a scale for regulating the adjustment to any desired point, said scale being very readily seen and conveniently placed for guidance in adjusting the two parts with respect to each other. Many other objects and purposes, together with novel constructions for attaining the same will be apparent as understanding of the invention is had from the following description, taken in connection with the accompanying drawing, in which,

Fig. 1 is a plan of the embroidery needle of my invention.

Fig. 2 is a central longitudinal vertical section through the device.

Fig. 3 is a transverse vertical section taken substantially on the plane of line 3—3, of Fig. 2.

Fig. 4 is a plan view of a modified form of needle part to be used with the device for certain types of work.

Fig. 5 is a fragmentary longitudinal section on the plane of line 5—5, of Fig. 4.

Fig. 6 is an enlarged transverse section on line 6—6 of Fig. 1, and

Fig. 7 is a transverse section on line 7—7, of Fig. 2.

Like reference characters refer to like parts in the different figures of the drawing.

The handle 1 of the device is formed from a piece of sheet metal into cylindrical form, the edges of the metal being spaced apart on the under side whereby a longitudinal slot 2 is made the full length of the handle. In the upper side of the handle an elongated slot 3, closed at both ends, is cut substantially half the length of the handle at its forward portion. At each side of the slot a consecutive series of spaced apart indicating lines 4 are made. The back end of the handle is covered by a sheet metal ferrule 5, the edges of which are turned back, as shown at 6, the ferrule thus clasp the rear end of the handle 1 and closing the bottom slot 2 at such end.

The needle portion of the device is formed from a single piece of sheet metal with a projecting prong 7, the front end of which is pointed and bent slightly downward, as indicated at 8, the pointed portion being flat in cross section, as shown in Fig. 6. An opening 9 is made through the prong near its pointed end for the passage of yarn or thread as will later appear. The prong is reinforced back of the point by downwardly and inwardly turned sides 10, coming almost together. At the rear end the needle portion is made into substantially cylindrical form, the cylinder 11 made being of a size to enter the front end of the handle 1 for slidable movement with respect to the handle. The metal from which cylinder 11 is made at its adjacent edges and on the under side of the cylinder is turned inwardly, making lips 12 which lie directly over the slot 2, as shown in Fig. 3. In its upper side the part 11 is slotted from its rear end for a distance, as shown at 13, the slot being enlarged and made circular at its inner end as appears at 14.

A cylindrical member 15 formed at its upper end with a slightly enlarged knurled head 16 is interiorly bored and threaded to form a binding nut which screws on to a screw 17 projecting upwardly from a head

18 located within the part 11 of the needle portion of the device. Nut 15 has a lower projection 15^a of smaller diameter or of a size to readily enter the circular end 14 of slot 13. It is evident that by tightening the nut, the needle portion of the device may be securely clamped to the handle portion, and that on loosening said nut, the needle portion is freed for movement to any desired position, the scale at 4 giving guidance as to any desired place to stop and secure the parts together. By reason of the part 15^a entering opening 14, the needle portion is connected with the nut 15 and may be moved with it. By unscrewing the nut far enough that part 15^a is disassociated from the needle portion of the device, said needle portion may be entirely removed and replaced by another of different size of prong and point for a different grade of work, the size of the end portion 11 remaining the same. Slot 13 permits free passage of the screw 17 in removing or replacing needle members in the handle.

In threading the needle, the thread or yarn 19 is passed through the ferrule at the back end of the handle and thence through the slot 2 after which it is carried to and through opening 9 in the needle prong. On taking up the slack in the thread or yarn it passes upwardly through the slot 2 in the handle so as to be located within the handle and directly under the prong 7. The front end of the cylindrical handle, being larger than the cross section of the prong, serves as a stop for the insertion of the needle through goods embroidered. The extent of insertion of the needle prong is adjusted by loosening nut 15 and adjusting the needle portion as previously described.

I have shown in Fig. 4 a needle member of modified form in which the prong 7^a is larger and wider and in which the opening 9^a near the point 8^a is made by cutting the metal at three sides and leaving it connected at the back edge, turning the same downwardly and to the rear thereby making a smooth and rounded surface, shown at 20 for the embroidery material to pass over. This is particularly useful in the making of rugs in which rag strips are threaded through the needle, there being no catching of the material on the sides of the opening. The same kind of opening is useful with other embroidery materials. Inasmuch as the length of the prong that is to pass through the goods with this type of needle prong is constant, an annular enlarged shoulder or ring 21 is made entirely around the needle portion between the prong and the inner end 11, stopping the insertion into the end of the handle 1 at a certain point. This ring then serves as a stop to the insertion of the prong through the goods. The same securing means is used to connect to

the handle with this form of needle member as with the others.

The embroidery needle constructed as described is relatively simple, economical to construct, and very effective for the purpose it is to serve. It has but few parts all strong and durable and readily and easily constructed and assembled. The feeding of the embroidery yarn or other material into the end of and lengthwise of the device is a valuable feature of the invention. Variations in the exact detail of construction may be resorted to without changing the invention defined in the appended claims, and I consider the invention comprehends all such variations and modifications as come within the scope of such claims.

I claim:

1. An embroidery needle, comprising a cylindrical handle slotted lengthwise on its under side for its entire length and slotted for part of its length on its upper side, a ferrule attached around the handle at one end and closing the lower slot at said end, a needle member slidably inserted in the other end of the handle having an inner end of cylindrical form longitudinally slotted on its under side to come into conjunction with the lower slot in the handle, and means extending through the upper slot in the handle and through the inner end portion of the needle member for adjustably connecting the handle and needle member together; said handle at each side of the upper slot being provided with an indicating scale, substantially as and for the purposes described.

2. An embroidery needle, comprising a cylindrical handle open at both ends and slotted lengthwise thereof on its under side for substantially its entire length, one end of the slot being closed for a short distance, a needle member slidably inserted into the other end of the handle having its inner end of open cylindrical form slotted on its under side longitudinally to come into conjunction with the slot in the handle, and means for adjustably securing the needle member in any one of a number of different positions with respect to the handle.

3. An embroidery needle comprising a cylindrical handle open at both ends and slotted lengthwise thereof from one end nearly to the opposite end and on the under side, and slotted for part of its length at its upper side, a needle member slidably inserted in the handle and formed with a cylindrical inner end slotted longitudinally for its full length on its under side, said slot lying in conjunction with the under slot in the handle, and means extending through the upper slot in the handle and through the inner end portion of the needle member for adjustably connecting the handle and needle member together.

4. An embroidery needle member formed through formed by striking the metal downwardly and turning it back upon itself, substantially as described. 10
5 one end of and at the upper side of said cylindrical portion, said prong having a pointed outer end and an opening there-

In testimony whereof I affix my signature.

TRUMAN L. ATKINSON.