Oct. 2, 1923. 1,469,353

G. S. BENEVENTO

HAND EMBROIDERY IMPLEMENT

Filed March 16, 1922 2 Sheets-Sheet 1

Fig. 1.

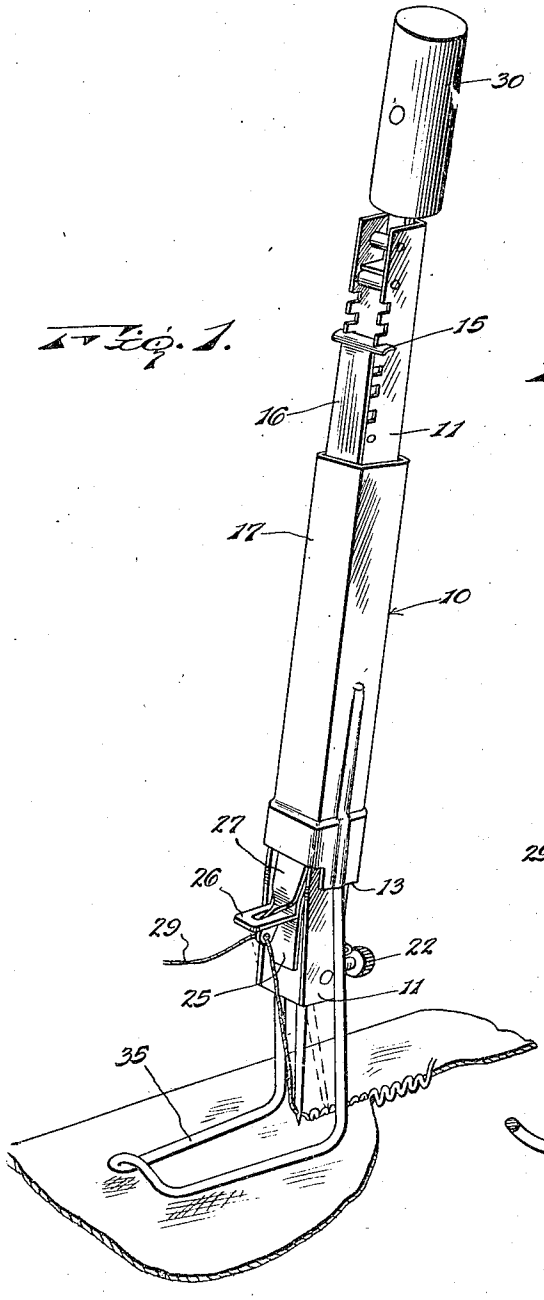
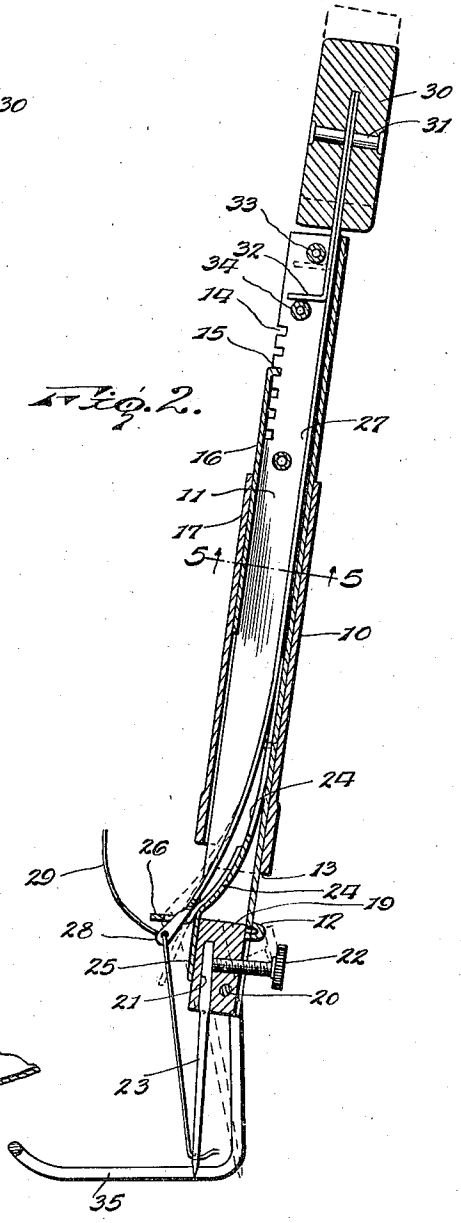


Fig. 2.



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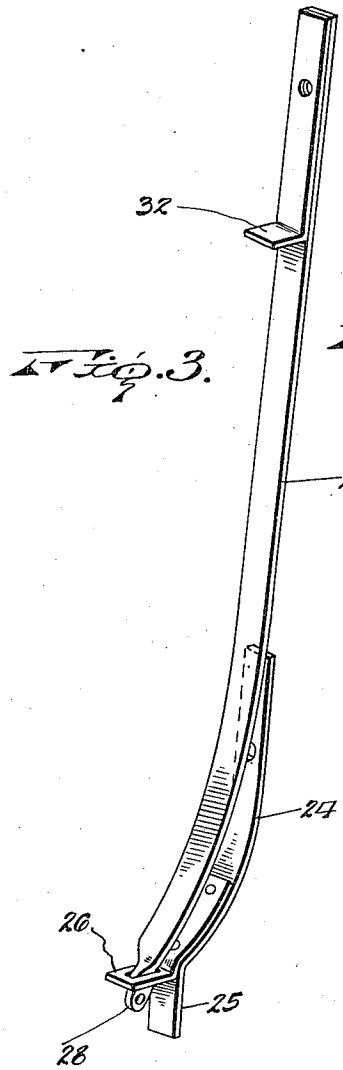


Fig. 3.

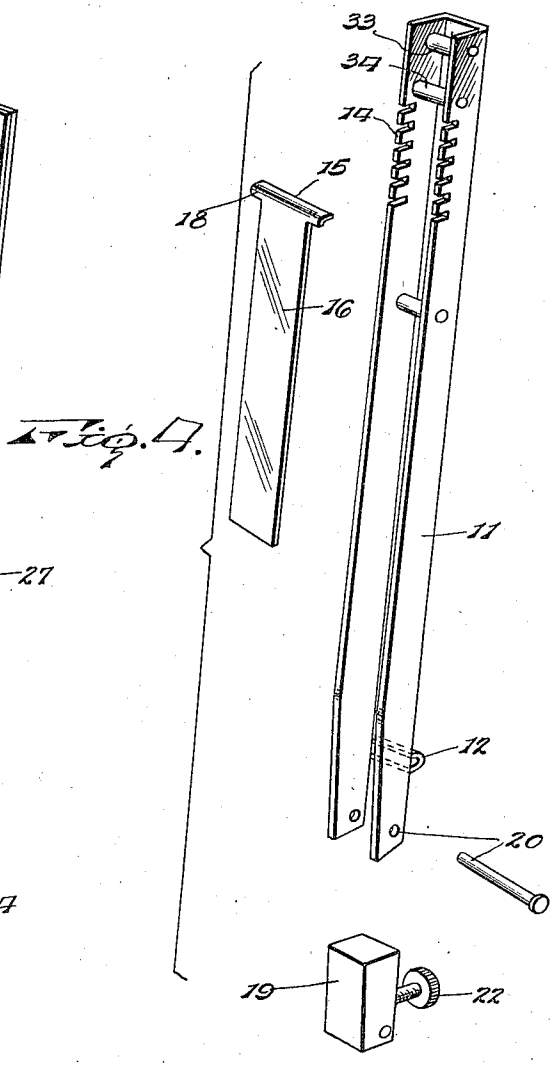


Fig. 4.

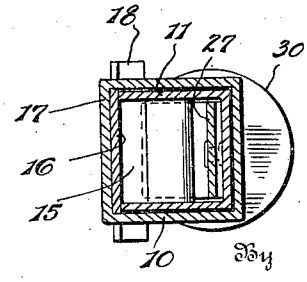


Fig. 5.

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UNITED STATES PATENT OFFICE.

GIUSEPPE S. BENEVENTO, OF DONORA, PENNSYLVANIA.

HAND-EMBROIDERY IMPLEMENT.

Application filed March 16, 1922. Serial No. 544,286.

To all whom it may concern:

Be it known that I, GIUSEPPE S. BENEVENTO, citizen of the United States, residing at Donora, in the county of Washington and State of Pennsylvania, have invented certain new and useful Improvements in Hand-Embroidery Implements, of which the following is a specification.

My invention relates to improvements in hand embroidery needles as applied to fabric turfing in particular. The device is provided with adjustable automatic feed to insure perfectly uniform stitches whether the operator follows straight lines or curves in the pattern to be embroidered.

The main object of the invention is to provide an implement of this class that has simplified means for threading.

A common disadvantage of hand embroidery needles is, that they take a long time to thread because the eyes, through which the thread must be passed, are very inaccessible and in most cases there are several of them not all in alignment. In my implement, only one eye besides the needle eye itself is provided, and that eye is exposed when ready for threading, whereby this operation may be performed with the greatest ease.

Another object of the invention is to construct the device, so that the thread is held firmly during the upstroke of the needle, that is to say that no feeding takes place at any other time, than when the needle is pushed through the fabric.

One embodiment of the invention is illustrated in the accompanying drawings; and

Figure 1 shows a perspective view of the implement in operation;

Figure 2 a longitudinal section of the implement;

Figure 3 a perspective view of the thread regulating device therein;

Figure 4 a perspective view of some other details of the implement; and

Figure 5 a transverse section along line 5—5 of Figure 2.

The implement consists of a casing 10, here shown tubular and of rectangular cross section. In this casing the needle bar 11 is mounted to slide and the needle bar is preferably made of plate bent into a U-shaped cross section to fit with a slight play within the casing 10. In the lower end and at the rear side of the needle bar 11 is formed an abutment 12 which is intended to limit the upward movement of the needle bar in the casing 10 and is for that reason made to strike the lower edge 13 of the casing 10, when the needle bar is lifted. At the top of the forward edges of the needle bar a number of indentations 14 are provided intended for engagement with the lip 15 of the regulating strip 16, which is placed between the forward edges of the needle bar 11 and a corresponding wall 17 of the casing 10. The lip 15 extends transversely over the top of the casing 10 so that the projections 18 thereof may engage the top of the wall 17 to limit the downward movement of the needle bar 11 in the casing 10. By shifting the lip 15 into engagement with the different indentations 14 the length of a stroke of the needle bar can be regulated.

At the lower end of the needle bar 11 is provided a block 19 which is pivoted at 20 so as to have a slight oscillating movement in the bar. A socket 21 is formed in the block 19, which also has a set screw 22 for clamping the needle 23 in place. The block 19 with the needle 23 is held in upright position by means of a spring 24, which is riveted in the back portion of the needle bar and engages the block 19 with a finger 25. On the spring 24 is provided a loop 26 which partakes of the movements of the finger 25.

On the needle bar 11 is mounted a rod 27, which at its lower end carries an eye 28 for the thread or yarn 29. The lower end of the rod 27 with the eye 28 is embraced by the loop 26 and is adapted to have a slight sliding movement therein as will be described further on. At the upper end of the rod 27 is rigidly secured a handle 30 by means of a rivet 31 or any other suitable means. The handle 30 is situated above the upper end of the needle bar 11. A stop 32 is formed on the rod 27 and projects forwardly between an upper and a lower abutment pin 33 and 34 respectively. In this manner a limited sliding movement of the rod 27 with the handle 30 is provided with regard to the needle bar 11 and in such a manner that, when the handle 30 is pushed downwardly, the eye 28 will be exposed be-

low the loop 26, but when the handle 30 is lifted the rod 27 will draw the eye up into the loop 26, so that the thread engaged in the eye 28 will be firmly held by the loop 26 and no feed thereof can take place, when the eye 28 is withdrawn in this manner. The casing 10 is provided with a pressing foot 35 preferably made of a bent wire in the usual manner.

The operation of the device is as follows:—By first setting the regulating strip 16 in engagement with the appropriate indentation 14 in the needle bar 11 the length of the stitches will be regulated. With the handle 30 pressed downwardly in the needle bar 11 so that the eye 28 will be exposed, the thread 29 is inserted through the eye 28 and also through the eye provided at the lower end of the needle 23. The implement is now ready for use and is placed with the foot 35 resting on top of the fabric and with one hand of the operator gripping around the casing 10 and with the other hand the handle 30, a pressure is now exerted on the handle 30 to push the needle through the fabric. In doing this, the resistance is enough to tilt the block 19 with the needle 23, so that the needle will take the position shown in dotted lines in Figures 1 and 2, while the needle passes through the fabric. Simultaneously the foot 35 will travel forward so that, when the needle is withdrawn, the position of the implement for the next stitch is decided. When the operator now lifts the handle 30, the rod 27 with the eye 28 will be drawn upwards, so that the thread 29 going through the eye 28 will be lifted into the loop 26 and there held rigidly until the next down pressure is made when the thread will again be free to run through the eye 28.

Having thus described the invention, what is claimed as new is:

1. An embroidery implement comprising a needle bar, a casing therefor wherein said bar is mounted to reciprocate, a handle, a thread engaging member secured on the handle, interengaging elements on said bar and said member permitting a limited, sliding movement of the handle with relation to said bar and yieldable means on the bar adapted to cooperate with said member to clamp the thread during the retracting movement of the bar, a needle socket pivoted at the end of the bar away from said handle, said means engaging with said socket to normally hold it in upright position with the needle parallel with the axis of the implement.

2. An embroidery implement comprising a needle bar, a casing wherein said bar is mounted to reciprocate, a handle provided with a thread engaging member, said handle and member having slidable engagement in said needle bar, means limiting the sliding movement of said handle and member, a spring secured in said needle bar and provided with a loop engaging said member, a block having a needle socket and pivotally mounted in said needle bar, said spring normally holding the block with the needle parallel with the axis of the implement, whereby said thread engaging member clamps the thread in said loop when said handle is in retracted position, and said spring permits the tilting of the block with the needle when a downward pressure is exerted on the handle.

In testimony whereof I affix my signature.

GIUSEPPE S. BENEVENTO. [L. S.]