May 29, 1928. 1,671,957

C. KOTTLER

TURFING NEEDLE

Filed April 9, 1925

Fig. 1

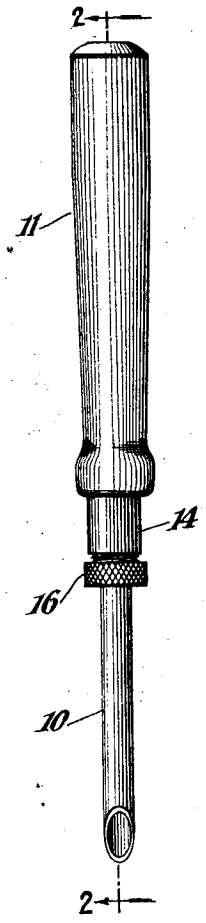


Fig. 2.

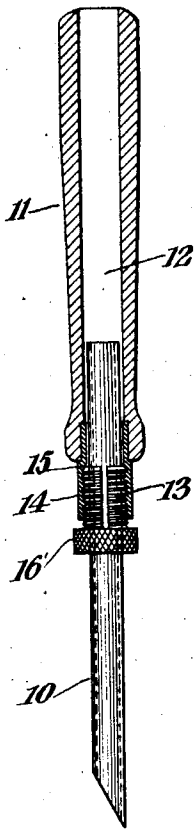


Fig. 3.

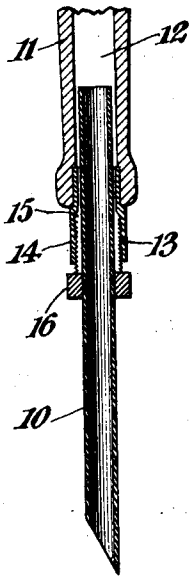
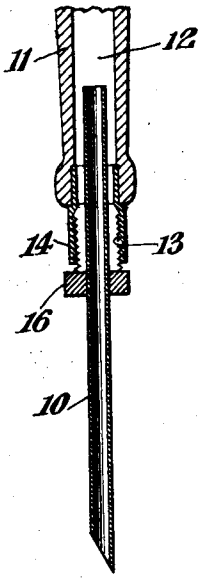


Fig. 4.



Inventor
Carl Kottler

By his Attorneys
Dean, Fairbank, Obrieght & Hirsch

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UNITED STATES PATENT OFFICE.

CARL KOTTLER, OF BROOKLYN, NEW YORK.

TURFING NEEDLE.

Application filed April 9, 1925. Serial No. 21,880.

This invention relates to turfing tools of the character used for forming a series of loops upon the surface of a fabric, as for instance, in certain kinds of art embroidery and rugs.

Tools of this character usually include a handle portion, with a tubular needle through which the thread extends, and pointed at one end whereby it may be projected through the fabric to form a loop in the thread.

One object of my invention is to provide a turfing tool in which the conventional needle may be firmly gripped adjacent to the point where it emerges from the handle, the gripping means being so designed as to serve as a stop to limit the extent to which the needle may be projected through the fabric. Thus the device involves the minimum number of parts and holds the needle rigid in respect to the handle at a point as near as possible to the projecting extremity of the needle to properly resist bending strains.

A further object of my invention is to provide a simple construction whereby any one of a series of needles of different diameters may be mounted in a single handle and firmly and effectively secured thereto. To accomplish this object, I make the connecting means in the form of a short collapsible tubular member adapted to extend into the handle and automatically gripping the needle upon being connected to the handle. Thus each needle may be provided with its corresponding connecting member or chuck, the wall thickness of the chuck being proportioned to the diameter of the needle so that all of the chucks will have the same external diameter to fit a single handle and each will have a central passage, the diameter corresponding to its particular needle.

The tool in its preferred construction is extremely simple, includes the minimum number of parts, is capable of easy adjustment to give the desired length of loop, is sturdy and efficient in use, is not liable to get out of order, and can be manufactured at very low cost.

In the accompanying drawings, I have illustrated a preferred embodiment of my invention. In these drawings,

Figure 1 is a side elevation of the complete tool,

Figure 2 is a central longitudinal section on the line 2—2 of Figure 1, the chuck being shown in elevation,

Figure 3 is a section similar to a portion of Figure 2 but showing the chuck in section, and

Figure 4 is a section similar to Figure 3 but showing a smaller needle attached to the same handle.

In the construction illustrated, there is employed the conventional type of needle 10, which is of tubular form and pointed at one end. In connection with the needle there is employed a handle 11 which may be made of any suitable material and is provided with a central passage 12 extending into it from one end and into which the needle projects. This passage is slightly larger than the maximum size of needle to be used in connection with the handle, and the passage 12 is open at the rear end so that the thread may extend through the handle and through the tubular needle.

For connecting the needle, to the handle, I provide a tubular clamping member 13 having a central passage of a diameter to fairly snugly fit the needle and an exterior diameter such that it may be extended into the handle. The handle is shown as having a ferrule 14, the outer end of which is interiorly threaded and the intermediate portion of which includes a tapered section 15. The tubular clamping member 13 is in the form of a chuck and has a threaded portion adapted to extend into the ferrule and a head portion 16 by means of which the chuck may be screwed into the ferrule. The body portion of the chuck is slitted lengthwise at a plurality of points so as to be collapsible and to be forced into firm gripping relationship with the needle when the inner end of the chuck is screwed into the ferrule to such a point that the end engages the cam surface 15.

The outer end of the chuck serves as a stop to limit the extent to which the needle may be projected through the fabric. In adjusting the tool, or in assemblying the parts, the head of the chuck is placed at the desired point along the length of the needle and held at this point while the handle is screwed on to the chuck to collapse the latter, grip the needle, and rigidly connect the chuck to the handle. It will be noted that the handle does not directly engage with the needle so that upon screwing it on to the chuck, there is no tendency of the latter to disturb the selected relative positioning of the stop and needle. It will also be noted

that the needle is held firmly along a considerable portion of its length, namely the length of the chuck, and this holding or gripping action is as near as possible to the projecting operating end of the needle.

It will be further noted that the chuck forms a spacing means between the handle and the needle so that the diameter of the needle bears no direct relationship to the dimensions of any of the parts of the handle. This is important because it permits of the manufacture of a series of needles of different diameters to be furnished with a single handle. Each needle may have its own individual chuck with an internal diameter snugly fitting the needle and all of the chucks having the same external diameter threaded to engage the single handle. This obviously permits economy in manufacture.

It will thus be seen that there is herein described apparatus in which the several features of this invention are embodied, and which apparatus in its action attains the various objects of the invention and is well suited to meet the requirements of practical use.

As many changes could be made in the above construction and many apparently widely different embodiments of this invention could be made without departing from the scope thereof, it is intended that all matter contained in the above description or shown in the accompanying drawings shall be interpreted as illustrative and not in a limiting sense.

Having thus described my invention what I claim as new and desire to secure by Letters Patent is:

1. A turfing implement including a handle having a passage lengthwise thereof interiorly threaded at the front end, a pointed tubular turfing needle extending into said passage and adjustable lengthwise thereof, and a combined stop and chuck exteriorly threaded and adapted upon said chuck being screwed into said handle to grip said needle adjacent to where the pointed end emerges from the handle.

2. A turfing implement including a handle having a passage lengthwise thereof interiorly threaded at one end, a pointed tubular turfing needle extending into said passage and adjustable lengthwise thereof, and a chuck exteriorly threaded and adapted upon said chuck being screwed into said handle to grip said needle adjacent to the point where the needle emerges from the handle, the thickness of the wall of the chuck being proportioned to the diameter of the needle whereby needles of different diameters may be used with corresponding chucks in a single handle.

Signed at New York city in the county of New York and State of New York, this 7th day of April A. D. 1925.

CARL KOTTLER.