

(No Model.)

G. C. STONE.

DEVICE FOR TWISTING AND LOOPING WITHEs.

No. 465,894.

Patented Dec. 29, 1891.

Fig. 1.

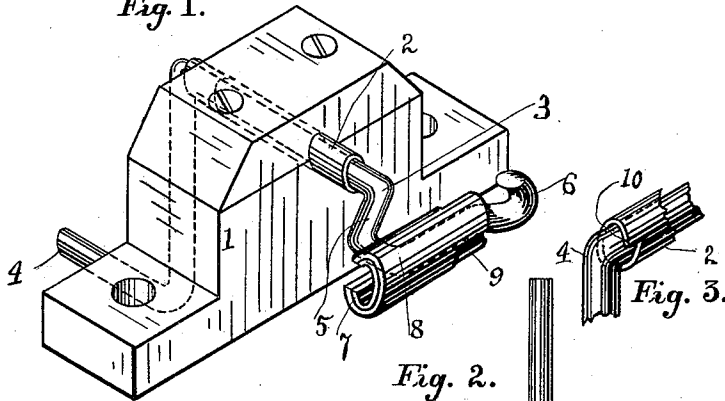


Fig. 2.

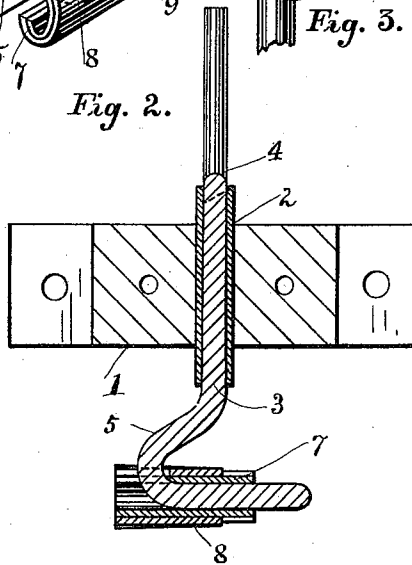


Fig. 4.

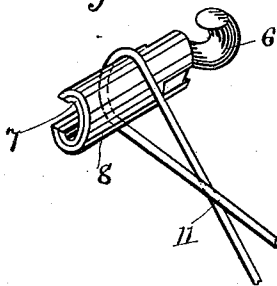


Fig. 5.

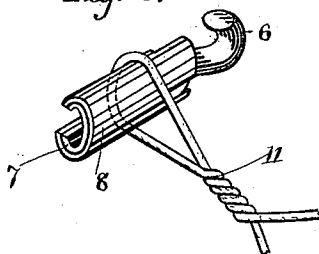


Fig. 6.

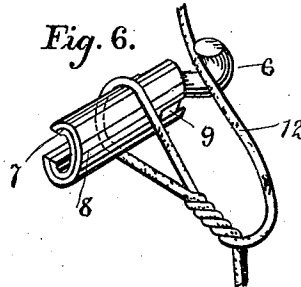


Fig. 7.

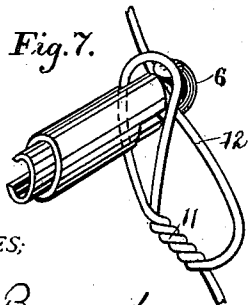
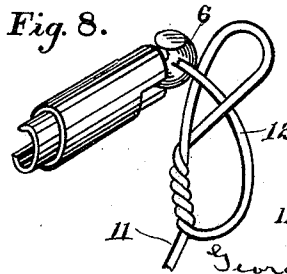


Fig. 8.



WITNESSES:

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GEORGE C. STONE, OF DANSVILLE, NEW YORK.

DEVICE FOR TWISTING AND LOOPING WITHEs.

SPECIFICATION forming part of Letters Patent No. 465,894, dated December 29, 1891.

Application filed April 11, 1891. Serial No. 388,563. (No model.)

To all whom it may concern:

Be it known that I, GEORGE C. STONE, of Dansville, in the county of Livingston and State of New York, have invented certain new and useful Improvements in Devices for Twisting and Looping Withes; and I do hereby declare the following to be a full, clear, and exact description of the same, reference being had to the accompanying drawings, forming a part of this specification, and to the figures of reference marked thereon.

My present invention has for its objects to provide a simple and cheap apparatus for looping and knotting flexible or fibrous material, as cord, rope, or withes, but particularly adapted for forming the loops in the ends of willow withes or osiers used by nurserymen and gardeners for binding young trees; and to these ends it consists in certain novelties of construction and combination of parts, all as will be hereinafter fully described, and the novel features pointed out in the claims at the end of this specification.

In the drawings, Figure 1 is a perspective view of a tying and twisting device constructed in accordance with my invention; Fig. 2, a sectional view thereof; Fig. 3, a perspective view showing the locking device preferably employed; Figs. 4 to 8, inclusive, views showing the various stages of the looping operation.

Similar figures of reference in the several figures indicate similar parts.

The figure 1 indicates a suitable block for supporting the device herein shown detached, but adapted to be secured to any support, such as a bench or table, and arranged in this block is a tube 2, in which a shaft 3 has its bearings. This shaft has formed upon one end the operating handle or crank 4 and upon the other an arm 5, curved out and extending at right angles to the shaft, with its end formed into a small hook 6. Secured upon the arm 5 is a bearing-sleeve 7, upon which slides another sleeve 8, both said sleeves being slotted at the rear for the passage of the shank, and the former serving as a support for the latter, upon which it may freely slide. The sleeve 8 is made slightly tapering, as shown, and is cut away at opposite sides at 9, corresponding with sides of the eye of hook 6, so that when the sleeve is slid out, the solid part at the top

will bridge the space to the end of the hook, and that at the bottom will engage with the lower side or shoulder of it, as in Fig. 7.

While the sleeve 8 is permitted a sliding motion on sleeve 7, it will be seen that said motion is limited in one direction by the hook 6 and in the other by the shank of the arm 5 of the shaft.

I provide a suitable catch for co-operating with the shaft and preventing its backward rotation, while it will not prevent its motion forward or in a direction to properly twist the material operated upon. In the present instance I accomplish this by cutting the end of the tube, (or a separate collar may be provided, if the tube does not form the bearing,) so as to form a shoulder 10 (see Figs. 2 and 3) abrupt on one side and inclined on the other with which the handle 4 co-operates, so that when there is a longitudinal draft on the shaft and the handle is rotated in the proper direction it will slip over the projection, and when released the draft will retain it against the abrupt shoulder and backward motion will be prevented.

By an inspection of Figs. 4 to 8 the operation will now be apparent. When forming the loops in the ends of withes or willow switches—such as are used to bind young trees—for instance—the operator, starting with the shaft in the position indicated in Fig. 1, bends the switch 11 around the sleeve 8 and grasping both ends with one hand with the other turns the handle, say, three or as many times as desired, to the right, twisting the ends, as in Fig. 5, and forming a loop on the sleeve. Then the draft on the switch holding handle 4 against the catch 10, preventing backward movement, he with one hand places the loose end 12 of the withe in the hook 6, as in Fig. 6, and strips the loop over said hook, as in Fig. 7, the sleeve 8 sliding up until in contact with the hook end, and the latter retaining the end of the switch until the loop passes over it, pulling it through, as in Fig. 8. The withe with the loop in the end may then be fastened around the trees in the usual manner.

While I have described and designed this implement particularly for the purpose of forming loops in withes, it is evident that it can be employed for many other analogous

purposes. It will be noted that the sleeve 8 is slightly tapering toward the hook 6, this being for the purpose of permitting the loop to more readily slip off when pulled by the operator's hand holding the withe.

Instead of employing the catch shown co-operating with the shaft, I may use any other; but I have found this to be admirably adapted for use and exceedingly simple.

10 While in the present construction it is desirable to employ the bearing-sleeve 7, supporting the movable sleeve 8, this is not essential, as if the outer end of arm 5 were made large enough and of a special casting it might be dispensed with; but in the present form, where the shaft, crank, arm, and hook are made of a single piece of metal suitably formed, it is necessary to secure the proper positioning and operation of the parts.

20 I claim as my invention—

1. The combination, with the shaft having the arm extending at an angle thereto, provided with the hook on its end, of the sliding sleeve located on the arm and adapted to co-

operate with the hook, when moved in one direction, substantially as described. 25

2. The combination, with the shaft having the arm provided with the hook, of the sliding sleeve located on the arm and prevented from rotation, having the slots at the side corresponding to the sides of the hook, substantially as described. 30

3. The combination, with the shaft having the arm provided with the hook and the bearing-sleeve on the arm, of the sliding sleeve having slots at the sides near one end and co-operating with the hook, substantially as described. 35

4. In a looping and twisting implement of the kind described, the combination, with the shaft having the arm thereon extending at right angles thereto provided with the hook, of the catch for preventing the backward rotation of the shaft, substantially as described. 40

G. C. STONE.

Witnesses:

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