

(No Model.)

N. JEWETT.

KNOT TYING DEVICE FOR GRAIN BINDERS.

No. 266,996.

Patented Nov. 7, 1882.

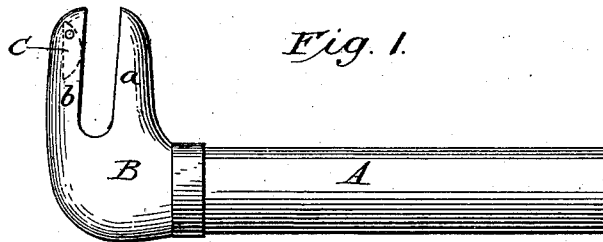


Fig. 1.

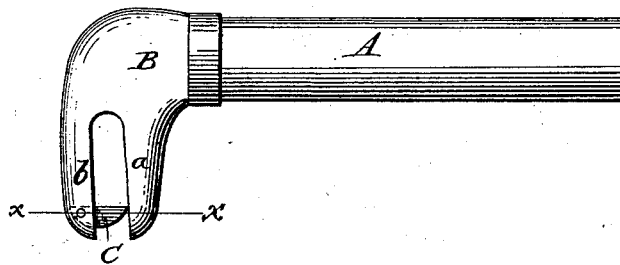


Fig. 2.



Fig. 3.

Attest.

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NATHAN JEWETT, OF TOLEDO, OHIO, ASSIGNOR OF ONE-HALF TO WILLIAM H. CRAY AND ALPHONSO E. ROOD, OF SAME PLACE.

KNOT-TYING DEVICE FOR GRAIN-BINDERS.

SPECIFICATION forming part of Letters Patent No. 266,996, dated November 7, 1882.

Application filed June 26, 1882. (No model.)

To all whom it may concern:

Be it known that I, NATHAN JEWETT, of Toledo, in the county of Lucas and State of Ohio, have invented certain new and useful Improvements in Knot-Tying Devices for Grain-Binders, of which the following is a specification.

My invention relates to that class of knot-tying devices which consist essentially of a revolving spindle provided at one end with two laterally-projecting fingers which act to loop the ends of the cord together and draw the extremities through said loop to complete the knot.

The object of the invention is to simplify the device, render its action certain, and to avoid the necessity for employing the usual supplemental mechanism for effecting the engagement of the cord between the fingers.

To this end the invention consists in constructing the tyer-head with two lateral fingers, both of which are rigid, and in combining with these rigid fingers an intermediate movable dog or latch to retain the cord.

The invention also consists in constructing a knot-tyer of the class described with a gravitating latch to retain the cord between the tying-fingers, whereby the device is rendered automatic without the employment of springs or the usual operating mechanism to move the cord-retaining finger.

Referring to the accompanying drawings, Figure 1 represents a side view of my tyer with the latch turned back to admit the cord between the tying-fingers. Fig. 2 is a similar view of the tyer with the latch in position to retain the cord. Fig. 3 is a cross-section on the line *x x* of Fig. 2.

Referring to the drawings, A represents a rotary tyer shaft or spindle, provided at one end with a head, B, extending laterally at substantially right angles thereto. This head B is divided from its outer end inward by a central slot into two fingers, *a* and *b*, the slot which separates these fingers lying at substantially right angles to the axis of the spindle A. The fingers *a* and *b* are rounded, as shown, or otherwise suitably shaped to permit the cord to be readily looped around them and

passed off over their ends, and the intermediate slot is of such width and depth as to admit of the ends of the cord being readily inserted therein. Within the finger *b*, which is recessed for the purpose, I pivot a latch, C, of such form and size that it may be turned backward within the finger, leaving the slot between the two fingers open, as shown in Fig. 1, or turned outward, as shown in Fig. 2, so as to close the end of the slot between the fingers for the purpose of retaining the cord therein. The latch is hung loosely within the bearing, and is designed to be opened and closed by gravity. The tying-fingers will revolve in a vertical or substantially vertical plane. When, in the course of their revolution, the fingers assume an upright position, as shown in Fig. 1, the latch will drop backward to admit the cord; but as the fingers, in the course of their revolution, assume a downward position the latch will drop outward, closing the slot, as in Fig. 2, to retain the cord.

In making use of the tyer it will be mounted and driven in any suitable manner, and combined with mechanism for presenting the cord properly thereto. These devices, which may be of ordinary construction and arrangement, and which are well understood in various forms to those skilled in the art, constituting no part of my invention, are not described herein.

The operation is as follows: The tyer-head is set in motion. The cord is presented across the side of the tying-fingers *a* and *b*, and is by the rotation of said fingers first formed into a loop. After the formation of this loop the ends of the cord beyond or outside of the loop are laid into the notch between the tying-fingers *a* and *b*. By the continued rotation of the head the latch is caused to fall outward, as shown in Fig. 2, and thereby retain the ends of the cord between the fingers. The knot is then completed by causing the loop to pass off from the tying-fingers over and around the retained ends of the cord, either by a continued rotation of the tyer-head or by means of stripping devices, such as are commonly known in the art for forcing the loop from the tyer.

While I have represented my device in its preferred form, it will of course be understood

that the form may be modified as desired, provided no substantial change is made in the mode of action.

Having thus described my invention, what I claim is—

1. In a tyer-head, two rotary rigid tying-fingers lying transversely of the axis of rotation, in combination with an intermediate gravitating cord-retaining latch or dog, substantially as described.

2. In a cord-tyer, the combination of the revolving spindle, the two rigid tying-fingers extending laterally from its end, and a gravitating latch, substantially as described, operating to close the space between the outer ends of said fingers.

3. In a cord-tyer, the combination of two rigid tying-fingers revolving in a substantially vertical plane, and an intermediate gravitating

latch pivoted within the outer end of one of said fingers, as described and shown.

4. A cord-tying head revolving in substantially a vertical plane, and provided with an opening to admit the cord, in combination with a gravitating cord-retaining device carried thereby to close said opening, substantially as shown.

5. The combination of the spindle A, the rigid laterally-projecting fingers *a* and *b*, and the latch C, pivoted in a recess in the inner face of the finger *b*, as described and shown.

In witness that I claim the above I hereunto set my hand this 11th day of June, A. D. 1882.

NATHAN JEWETT.

In presence of—

MARGET MYERS,
P. C. BEARD.