UNITED STATES PATENT OFFICE.

AXEL LARSON, OF PRINCETON, ILLINOIS.

CORN-SHOCK-TYING DEVICE.

No. 863,289.


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To all whom it may concern:

Be it known that I, AXEL LARSON, a citizen of the United States, residing at Princeton, in the county of Bureau and State of Illinois, have invented certain new and useful Improvements in Corn-Shock-Tying Devices, of which the following is a specification.

My invention relates to corn shock tying devices and has for its object to provide an improved construction of portable device which may be brought against the shock to be tied, may readily compress the shock to receive the twine, and may be instantly disengaged from said shock when tied. These objects I accomplish in the manner and by the means hereinafter described and claimed, reference being had to the accompanying drawings, in which

Figure 1 is a side elevation of my improved device. Fig. 2 is a top plan view of the same. Fig. 3 is a vertical sectional view taken on the line 3-3, Fig. 1. Fig. 4 is an enlarged detail view of the releasing mechanism.

Similar numerals of reference denote corresponding parts in the several views.

In the said drawings the reference numeral 1 denotes the frame of my improved device, that is supported from the ground by a pair of legs 2, slotted at 3 to receive clamping screws 4 that adjustably engage said legs with said frame to vary the distance of the latter from the ground, said legs lying between suitable guide blocks 5, preferably of triangular shape, as shown.

Fixed to the front of the frame 1 is what may be termed the shock board 6, the same being curved on its front face somewhat to conform to the usual shape of the shocks to be tied.

Disposed lengthwise in the frame 1 is a beam 7, dividing the interior space of frame 1 into two rectangular spaces of unequal widths. In the larger of said spaces are mounted two drums 8 and 9, the drum 8 having one end of its shaft 10 to which it is fixed, passing through beam 7 and carrying at its end projecting into the smaller space in frame 1, a gear wheel 11, while the shaft 12 of drum 9 projects across said space and is journaled in the frame 1 on that side. Mounted to slide longitudinally on and rotatable independently of shaft 12 in said smaller space is a sleeve 13, normally forced outward by a coiled spring 14 around shaft 12, said sleeve having fixed thereto a gear wheel 15, identical with gear wheel 11, as best seen in Fig. 4. Said sleeve is notched on one side at 16 to engage a pin 17 on shaft 10 when forced outward by spring 14, and is adapted to be forced inward under the tension of said spring to disengage notch 16 from pin 17 by a lever 18, pivoted at 19 to the frame 1 and having its inner bifurcated end 20 straddling sleeve 13 to contact with the side of gear wheel 15, the outer end of said lever projecting through a slot 21 to the outside of frame 1. A shaft 22 mounted in the frame 1 carries a gear wheel 23 in constant mesh with gear wheels 11 and 15, said shaft having fixed to its outer end an operating handle 24, and said gear wheel being adapted to be checked by a dog 25 pivotally mounted in the frame 1.

Fixed to drums 8 and 9 are chains 26, the chain of one of said drums, for instance, the drum 8, being long enough to be passed around the shock to be tied and engaged with a hook 27 on the chain of the other drum 9, said chains passing through apertures 28 in frame 1 that are provided with wear plates 29.

From the above description the operation of my improved construction will be understood as follows: The legs 2 being adjusted to bring the shock board 6 to the proper height to suit the shocks to be tied, the device is laid against a shock with the shock board 6 contacting therewith and one of the chains 26, which is unwound from its drum, passed around the shock and engaged with the hook 27 of the other chain. By now rotating handle 24 the drums 8 and 9 are oppositely rotated, through gears 11, 15 and 28, and the chains wind thereon until the shock is tightly compressed thereby; it being observed that rotation is imparted to drum 9 through the engagement of pin 17 with notch 16. The binding twine is now passed around the shock and tied, the chains being held by the engagement of dog 25 with gear wheel 23. The chain may then be released by drawing lever 18 outward, which forces sleeve 13 and gear wheel 15 inward against the tension of spring 14 until notch 16 is disengaged from pin 17, which permits shaft 12 and its drum 9 to run free, thus permitting the chain to be unwound therefrom.

It will be observed that with my improved construction the shocks may be readily tied by a single operator, as he may, after placing the device against a shock, first adjust and wind the chain, then tie the shock, the chain being meanwhile maintained taut by dog 25, and finally release the tension of the chain and unhook the same.

While I have shown and prefer to employ chains 26 to compress the shock, it will be understood that I may employ in place thereof a rope or other suitable device.

It will also be understood that but a single rotatable drum may be employed, the other end of the chain or rope 28 being fastened in any suitable manner to the frame 1, though I prefer to employ two winding drums, as they produce a more evenly compressed shock.

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

1. A corn shock tying device, a frame, supports therefor, a rotatable drum in said frame, a rope or chain adapted to be passed around the shock and wound on said drum, means for rotating said drum to wind the rope or chain theron, means for maintaining said rotating means in position to retain said drum in its wound position, and means independent of said rotating and retaining means for releasing said drum.

2. A corn shock tying device, a frame, supports therefor, a rotatable shaft in said frame, a drum fixed to said shaft, a rope or chain adapted to be passed around the
shock and wound on said drum, a sleeve longitudinally and rotatably movable on said shaft, a spring for pressing said sleeve in one direction on said shaft, a pin in said shaft adapted to engage a notch in said sleeve to rotate the two in unison, gearing connected to said sleeve to rotate the latter, and a lever for forcing said sleeve longitudinally on said shaft against the tension of said spring to disengage said pin and notch to permit said shaft and drum to rotate independently of said sleeve.

3. In a cord shock tying device, a frame, supports therefor, a pair of rotatable drums in said frame, a rope or chain adapted to be passed around the shock and wound on said drums, a common means for rotating said drums to wind the cord or chain thereon, means for maintaining said rotating means in position to retain said drums in their wound position, and means independent of said rotating means for releasing one of said drums.

In testimony whereof I affix my signature, in presence of two witnesses.

AXEL LARSON.

Witnesses:
A. J. BRACKEN,
M. C. sendell.