No. 749,250. PATENTED JAN. 12, 1904.

D. H. ZUCK.

CORN SHOCK TIER.

APPLICATION FILED MAY 9, 1903.

NO MODEL.

Fig. 1.

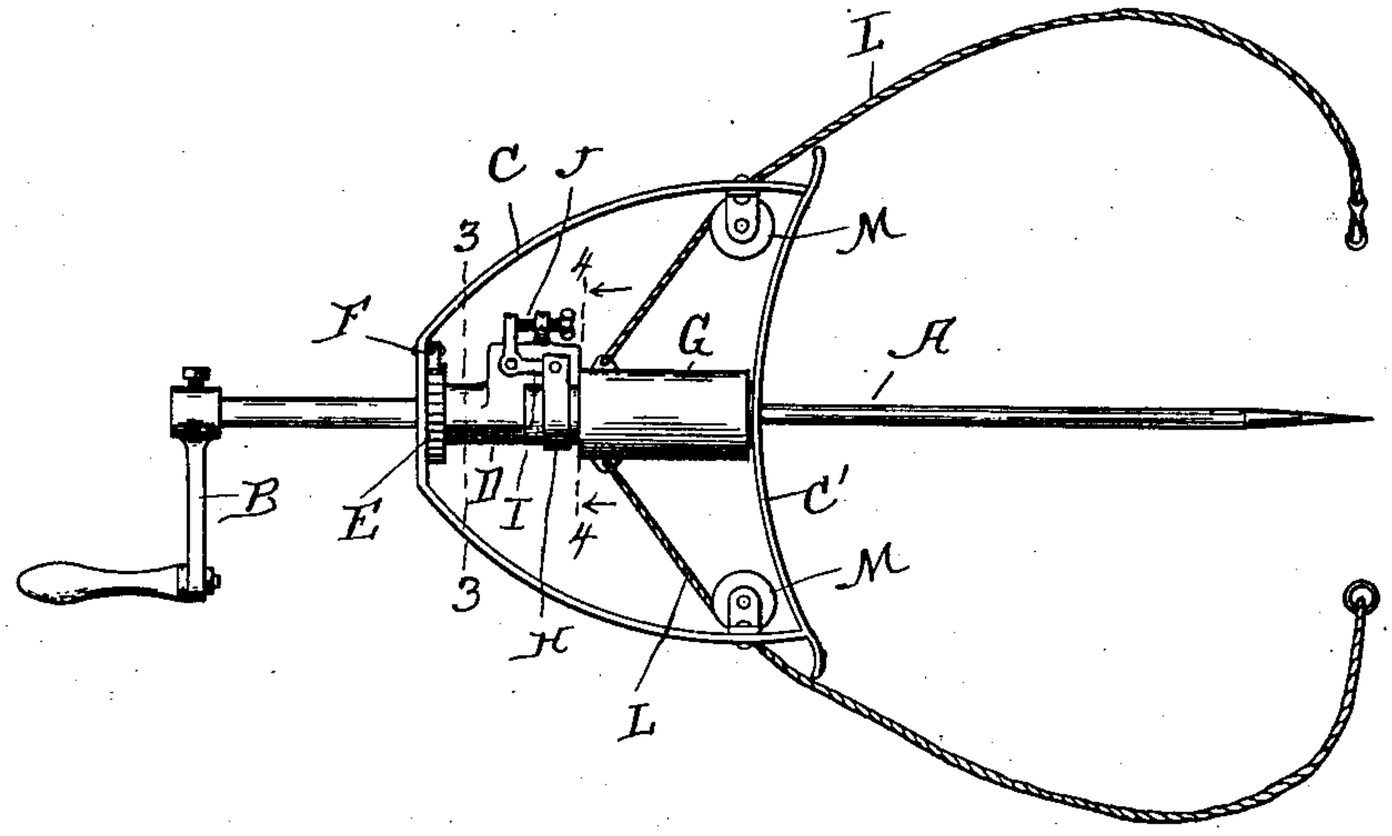


Fig. 2.

Fig. 3.

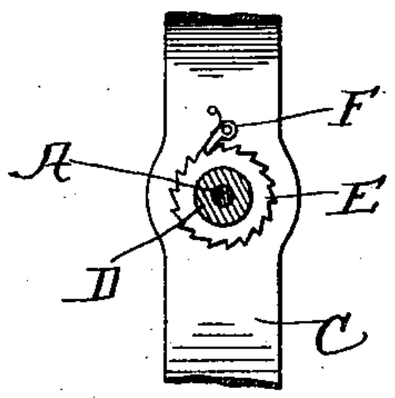
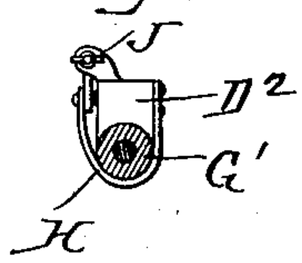


Fig. 4.



Witnesses
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No. 749,250. Patented January 12, 1904.

UNITED STATES PATENT OFFICE.

DAVID H. ZUCK, OF MOUNT CARROLL, ILLINOIS.

CORN-SHOCK TIER.

SPECIFICATION forming part of Letters Patent No. 749,250, dated January 12, 1904.

Application filed May 9, 1903. Serial No. 156,359. (No model.)

To all whom it may concern:

Be it known that I, DAVID H. ZUCK, a citizen of the United States, residing at Mount Carroll, county of Carroll, and State of Illinois, have invented a certain new and useful Improvement in Corn-Shock Tiers, of which the following is a specification.

My invention relates to a new and useful improvement in corn-shock tiers, and has for its object to provide an efficient, simple, and durable appliance for compressing the corn-shocks into a bundle, so that the same may be tied.

With this end in view this invention consists in the details of construction and combination of elements hereinafter set forth and then specifically designated by the claims.

In order that those skilled in the art to which this invention appertains may understand how to make and use the same, the construction and operation will now be described in detail, referring to the accompanying drawings, forming a part of this specification, in which—

Figure 1 is a side elevation of my improved appliance; Fig. 2, a longitudinal section through the same; Fig. 3, a section taken on the line 3 3 of Fig. 1 looking in the direction of the arrow; Fig. 4, a section taken on the line 4 4 of Fig. 1 looking in the direction of the arrow.

A represents the spindle, sharpened at its outer end and provided with a shoulder A′ near its other end. The shoulder end of the spindle is provided with a crank-arm B for turning the same.

C represents a housing which is slipped upon the spindle up to the shoulder A′, and the end of the housing next to the pointed end of the spindle is concaved, as represented at C′, for the purpose of conforming to the shape of the corn-shock. Upon the interior of the housing and surrounding the spindle A is a sleeve D, which is secured to said spindle by means of a set-screw D′. This sleeve D is provided upon its end next to the shoulder A′ with a ratchet-wheel E, which the spring-pawl F, secured to the housing, engages, so that the spindle can only be turned in one direction. G is another sleeve surrounding the spindle upon the interior of the housing, and this sleeve G is provided with a hub G′, which hub is surrounded by a spring-band H, which band is secured at one end to the extension D^2 of the sleeve D and is secured at the other end to one member of a bell-crank lever I, pivoted to the sleeve D. The other member of the bell-crank lever is engaged by a thumb-screw J, threaded through a bearing extending from the sleeve D, so that when the thumb-screw J is tightened the spring-band H will be brought in frictional contact with the hub G′ of the sleeve G, and thus cause the sleeves D and G to rotate in unison with one another; but when the spring-band H is loosened the sleeves D and G are free to revolve independent of one another, the sleeve G being journaled loosely upon the spindle A. Upon the interior of the sleeve G is arranged a spring K, one end of which is attached to the plate C′ of the housing, the other end of said spring being attached to the sleeve G, this spring being a torsion-spring, so that when the sleeve is revolved in one direction the spring will be tightened and when the sleeve is released the spring will tend to revolve the sleeve back to its normal position, the purpose of which will be described later on.

L represents two ropes or other flexible connections, secured at one end to opposite sides of the sleeve or drum G and passing outward through opposite sides of the housing C over guide-pulleys M. The other end of one of these ropes or flexible connections is provided with a snap-hook, and the other end of the other rope is provided with a ring adapted to be engaged by the snap-hook.

The operation of the device is as follows: The pointed end of the spindle A is thrust transversely through the shock of corn and the ropes L are passed around the shock of corn and the ends secured together by the snap-hook and ring, and then by turning the thumb-screw J the sleeve D and drum G are secured together, as before described, by the band H, and then by turning the crank B and revolving the spindle and the drum G, with which the ropes L are wound upon the drum, the shock of corn is drawn in and compressed as far as desired, and when the shock is thus compressed it is tied in the usual manner with

a string or rope, and then by loosening the thumb-screw J the drum G will be released from the sleeve D, and the spring K, which had been tightened by the revolving of the drum in a retrograde direction, arrests the excessive unwinding of the rope, and when the ends of the rope are disengaged the spring K automatically takes up the dangling rope and wraps it on the drum out of the way and ready for use at next shock. The apparatus is then removed from the shock and ready to be applied to another one.

The advantage of my invention lies in the simplicity with which the same is operated and also in the fact that the spindle does not need to be revolved in the opposite direction to loosen the ropes, it simply being necessary to release the thumb-screw J.

Of course I do not wish to be limited to the exact construction here shown, as slight modifications could be made without departing from the spirit of my invention.

Having thus fully described my invention, what I claim as new and useful is—

1. In a device of the character described, a pointed spindle, a crank secured to the spindle, a housing mounted upon the spindle loosely, a sleeve secured to the spindle within the housing, a ratchet carried by the sleeve, a pawl pivoted to the housing and in spring contact with the ratchet, a drum mounted loosely upon the spindle, a hub formed upon the drum, a spring-band surrounding the hub and carried by the sleeve, means for tightening or loosening the spring-band, the hub of the drum, ropes or other flexible connections secured at one end to opposite sides of the drum and passing out of the housing over suitable guide-wheels, means for securing the other ends of the ropes together, and a spring located within the drum, one end of which is attached to the housing, and the other end to the drum, as and for the purpose specified.

2. In a device of the character described, a pointed spindle, a crank secured to said spindle, a shoulder formed upon the spindle, a housing loosely mounted upon the spindle against the shoulder, a sleeve secured to the spindle within the housing, a ratchet-wheel carried by the sleeve, a spring-pawl pivoted to the housing and in engagement with said ratchet-wheel, a drum mounted loosely upon the spindle, a hub formed with the drum, a band secured at one end to the sleeve and passing around the hub of the drum, adjustable means carried by the sleeve to which the other end of the band is connected for the purpose of tightening or loosening the band upon the hub of the drum, a spring arranged within the drum, one end of said spring being connected to the housing and the other end to the drum, flexible connections connected at one end to opposite sides of the drum and passing out of the housing over suitable guide-wheels, and means for connecting the other ends of the flexible connections together, as and for the purpose specified.

3. In a device of the character described, a pointed spindle provided with a shoulder near the opposite end to the pointed end, a crank secured to the spindle on the end opposite the point, a housing loosely mounted upon the spindle against the shoulder, the end of the housing nearest the pointed end of the spindle being formed concaved, a sleeve secured to the spindle upon the interior of the housing, a ratchet-wheel carried by said sleeve, a spring-pawl pivoted to the housing and in engagement with said ratchet-wheel, a drum mounted loosely upon the spindle, a hub formed with the drum, a band secured at one end to the sleeve and passing around the hub of the drum, a bell-crank lever pivoted to the sleeve, to one member of which the other end of the band is secured, a thumb-screw threaded through the bearing formed with the sleeve, said thumb-screw bearing against the other member of the bell-crank lever, a coil-spring coiled about the spindle and arranged within the drum, one end of said spring being attached to the housing, and the other end to the drum, flexible connections connected at one end to the opposite sides of the drum and passing out of the housing over suitable guide-pulleys, the other end of one of the flexible connections provided with a snap-hook and the other end of the other flexible connection provided with a ring, as and for the purpose specified.

In testimony whereof I have hereunto affixed my signature in the presence of two subscribing witnesses.

DAVID H. ZUCK.

Witnesses:
C. B. DAUGHTERS,
C. LYNN DAUGHTERS.