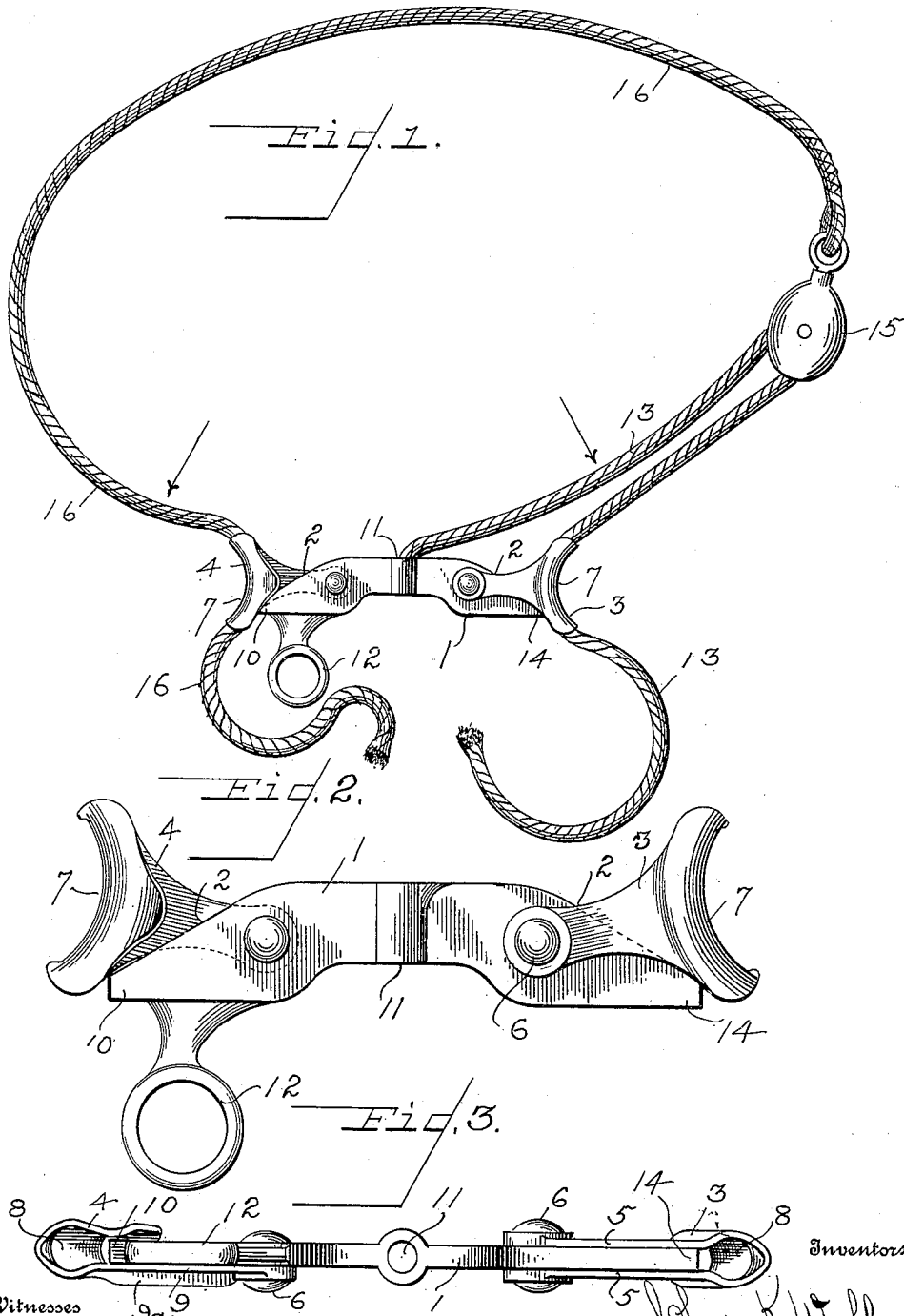


G. K. WOLF & F. McCLAIN.
SHOCK COMPRESSOR.
APPLICATION FILED NOV. 6, 1909.

979,118.

Patented Dec. 20, 1910.



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CHARLES K. WOLF AND FRED McCLAIN, OF NEAR XENIA, OHIO.

SHOCK-COMPRESSOR.

979,118.

Specification of Letters Patent.

Patented Dec. 20, 1910.

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To all whom it may concern:

Be it known that we, CHARLES K. WOLF and FRED McCLAIN, both citizens of the United States, both residing near Xenia, in the county of Green and State of Ohio, have invented certain new and useful Improvements in Shock-Compressors, of which the following is a specification.

Our invention relates to devices for compressing and temporarily holding shocks of corn or other similar growth under compression while the permanent band or tying device is being applied.

The object of the invention is to simplify the structure as well as the means and mode of operation of such devices whereby they will not only be cheapened in construction but will be rendered more efficient and positive in operation, more easily operated, and unlikely to get out of repair. And, furthermore, to provide a device whereby the operation of binding shocks of corn or other growths can be performed with neatness, thoroughness, and despatch, and with a minimum torsional strain.

With the above primary and other incidental objects in view as will more fully appear in the specification, the invention consists of the features of construction, the parts and combinations thereof, and their mode of operation as hereinafter described and set forth in the claims.

Referring to the drawings, Figure 1 is a plan view of the assembled shock compressing device. Fig. 2 is a plan view of the tie securing member and Fig. 3 is an edge view of said member viewed from the bottom in Fig. 2.

Like parts are indicated by similar characters of reference throughout the several views.

In constructing the device there is employed a longitudinal member or supporting bar 1, the opposite ends of which are inclined as at 2. Independently pivoted to the supporting bar 1 at points adjacent to the ends 2 thereof are swinging clevises 3 and 4. The clevis 3 is U-shaped, the arms 5 thereof extending on opposite sides of the supporting bar 1 and engaging the trunnions or rivet 6. The outer extremity of both clevises are somewhat elongated and formed on the arc of a circle as indicated at 7. This portion of the clevis is substantially semi-circular in cross-section as shown at 8, Fig. 3. The clevis 4 is provided with but

one attaching arm 9, the opposite side of the clevis being shortened whereby the clevis 4 becomes substantially a hook. Inasmuch as the entire strain upon the hook-shaped clevis 4 falls upon the single arm 9, said arm is preferably reinforced by the reinforcing rib 9^a. The curved extremities of the respective clevises comprise substantially arcuate saddles in which are engaged the extremities of the binding rope or cord. The pivotal points of the clevises 3 and 4 are so located in relation to the extremities of the supporting bar 1 that when the binding rope is in place in the arcuate saddles of the clevises, the clevises will not swing past the extremities of the supporting bar 1 but when forced to the extreme limit of their movement the noses 10 and 14 of the supporting bar will engage and impinge the binding rope within the clevises. Centrally located in the supporting bar 1 is a transverse opening or eye 11 for the engagement of one length of the binding rope.

Formed integral with the supporting bar 1 and extending laterally therefrom is a lug carrying a ring or handle 12 by which the nose 10 of the supporting bar may be disengaged from the binding rope as hereinafter mentioned. The binding rope or cord comprises two lengths, the length 13 is attached to the supporting bar 1 by being passed through the central opening or eye 11 and secured by a knot or other suitable means. This length of binding rope 13 is bent upon itself to form a bight and the extremity thereof is passed through the clevis 3 and is adapted to be held against movement within the clevis by the engagement of the nose 14 of the supporting bar 1. Carried in the bight of the length 13 of the binding rope is a pulley block or sheave 15 to which is secured the second section 16 of the binding rope, the free end of which is engaged in the hook shaped clevis 4 and impinged therein by the nose 10 of the supporting bar 1.

In using the device, the extremity of the length 16 of the binding rope is passed around the shock and its free end is engaged in the hook-shaped clevis 4. The shock is then initially compressed by drawing upon the free end of the length 16. The rope 16 will pass freely through the clevis 4 from the inner side but the impingement of the nose 10 upon the rope will prevent its return movement and will tend to hold the binding cord in its operated position. This

initial compression of the shock by the pulling in one direction tends to twist the shock or place it under torsional strain which tends to disarrange the stalks of corn or other growth from their original positions, and if left in this position the shock would be easily blown over and would not shed water as satisfactorily as when the stalks are substantially straight. After the shock has been initially compressed the free end of the length 13 of the binding rope is drawn through the clevis 3 in the same manner. The nose 14 of the supporting bar cooperating with the clevis 3 tends to clamp the rope in its operated position. The length 13 of the binding rope passing through the pulley block 15 draws upon the opposite end of the length 16 of the binding rope and completes the compression of the shock by tending to twist it in the opposite direction whereby the stalks disarranged by the initial compression are returned to normal position. It will be noted that the pulling strand of the tie 13 is outermost whereby it will be out of contact with the corn thereby permitting the device to be more easily operated, inasmuch as the pulling strand will not rub over the stalks of corn and furthermore, it reduces the wear upon the binding rope. The shock when under compression, through its tendency to expand presses outward in the direction of the arrows in Fig. 1. This outward pressure tends to swing the clevises 3 and 4 about their pivotal connection whereby the clevises and the rope engaged therewith are pressed tightly into engagement with the impinging noses 10 and 14. When it is desired to release the compressing device after the permanent tie has been applied, the nose 10 is pulled away from the binding rope 16 by means of the handle 12.

One of the advantages resulting from this construction is that there are few moving parts in which the blades of corn can become entangled, such as is the case in a device employing a number of pulley wheels or other rotary or swinging bearings. The arcuate saddles of the clevises form extended bearing surfaces whereby the rope will not be easily worn or frayed and, they furthermore form rigid abutments against which the rope is impinged by the noses 10 and 14 of the bar 1.

It has been found by experience that the attachment of the bight 13 in such a manner that the bight will lie in a plane common with the clevises as by having the opening 11 extend in a plane common with the plane of movement of the clevises, is of material advantage. If the bight 13 does not pull upon the bar 1 in a plane common with the clevises, there is a tendency of the entire clamping device to skew or twist which interferes with the ease of operation.

From the above description it will be ap-

parent that there is thus produced a device of the character described, possessing the particular features of advantage before enumerated as desirable, but which obviously is susceptible of modification in its form, proportion, detail construction and arrangement of parts without departing from the principle involved, or sacrificing any of its advantages.

Having thus described our invention we claim:

1. In a device of the character described, a main bar having beveled ends, forming impinging noses, swinging clevises independently pivoted to the main bar in proximity to the inclined ends, said clevises having elongated arcuate bases, formed substantially semi-circular in cross-section, and an encircling band having a fixed end engaging the bar intermediate the clevises engaging in the clevises and adjustably held therein by being automatically impinged therein by the inclined ends of the bar.

2. In a device of the character described, a main supporting bar, swinging clevises independently pivoted to the bar adjacent to the ends thereof, an encircling band comprising two sections, one of the sections being attached to the supporting bar intermediate the clevises, the said section being bent outward upon itself to form a bight, the free end thereof being passed through one of the clevises and located outermost and away from the shock, a pulley block carried by the second section of the band, the pulley block being engaged in the bight of the first sections, the free end of the second section of the band being passed through the other clevis, the free portions being automatically clamped within the clevises in adjusted position by the ends of the bar.

3. In a device of the character described, a main supporting bar forming a link in the shock encircling structure, swinging clevises independently pivoted to the bar adjacent to the ends thereof also forming links in the shock encircling structure, the bases of said clevises being elongated and formed arcuate in a plane common with the plane of movement of the pivoted clevis, one of the clevises being double armed or U-shaped, the other clevis being formed hook shaped, a bight of binding rope permanently attached to the supporting bar intermediate the clevises, the free end thereof being passed through the U-shaped clevis and adapted to be automatically impinged therein by the extremity of the supporting bar, a pulley block carried in said bight of binding rope, a length of binding rope attached to the pulley block its free end being adapted to be engaged in the hook shaped clevis, by the opposite extremity of the bar.

4. In a device of the character described, a main supporting bar forming a link in the

shock encircling structure, swinging clevises
independently pivoted to the bar adjacent
to the ends thereof also forming links in the
shock encircling structure, an opening
5 through said bar extending in a plane com-
mon with the plane of movement of the
swinging clevises, and located intermediate
said clevises, a length of binding rope en-
gaged in said opening in the bar the free
10 end of said length being bent outward upon
itself and automatically clamped in one of
the clevises by the end of the bar, thereby
forming a bight adapted to lie in a plane
common with the plane of movement of the
15 clevises, the operating or most rapidly mov-

ing strand or bight being outermost and
away from the shock, a second length of
binding rope engaged at one end in the bight
and having its free end automatically
clamped in the other clevis, by the opposite 20
end of the bar.

In testimony whereof, we have hereunto
set our hands this 2nd day of November
A. D. 1909.

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Witnesses:

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