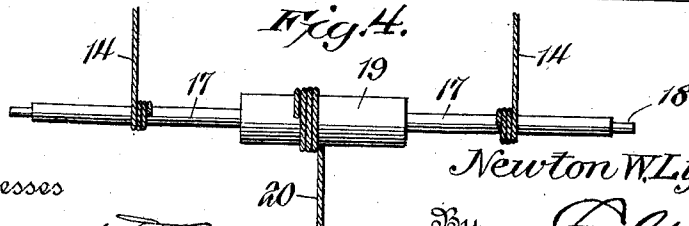
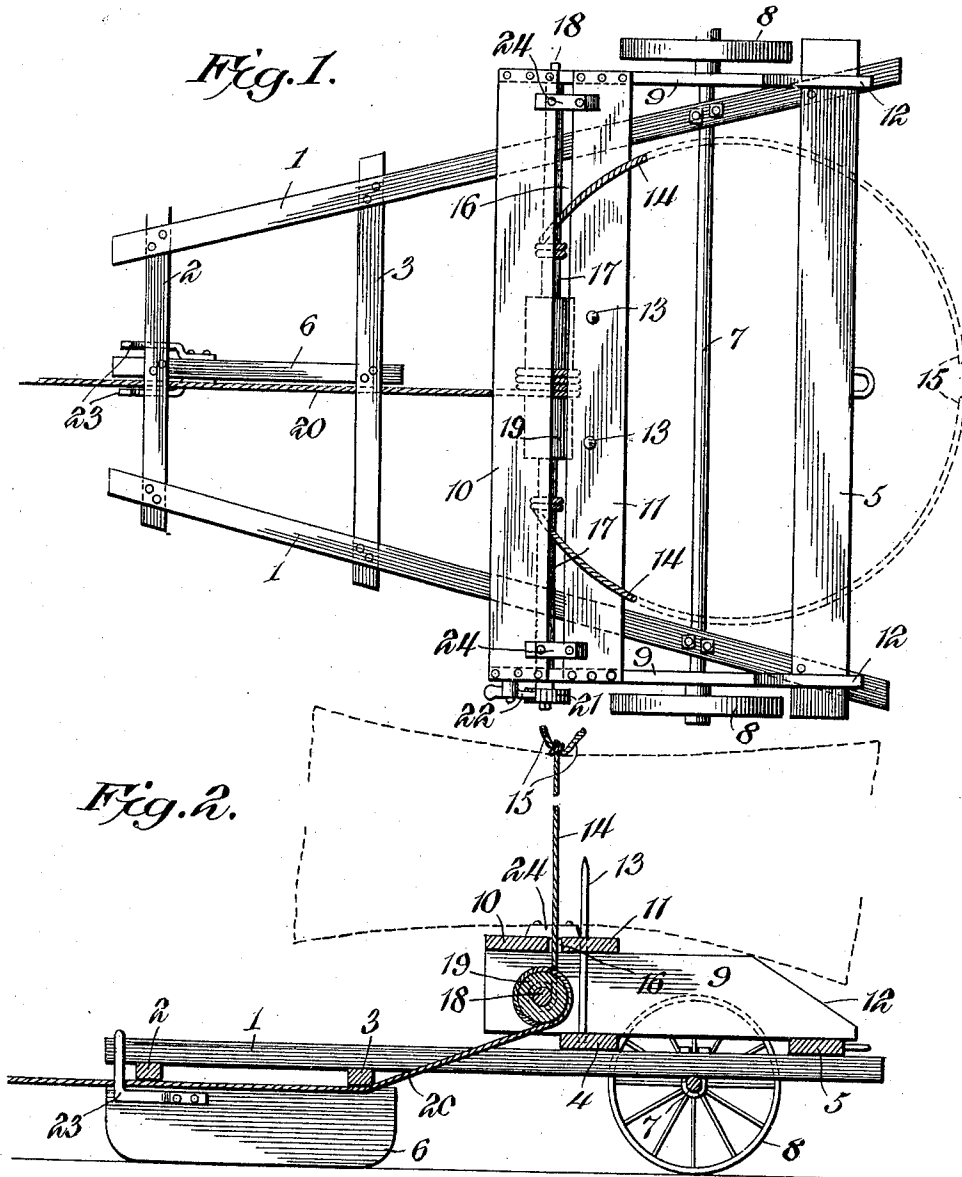


N. W. LYON.
CORN SHOCK CARRIER.
APPLICATION FILED FEB. 13, 1909.

976,481.

Patented Nov. 22, 1910.

2 SHEETS—SHEET 1.



Witnesses

Howard D. Orr.
H. J. Riley

Newton W. Lyon, Inventor.

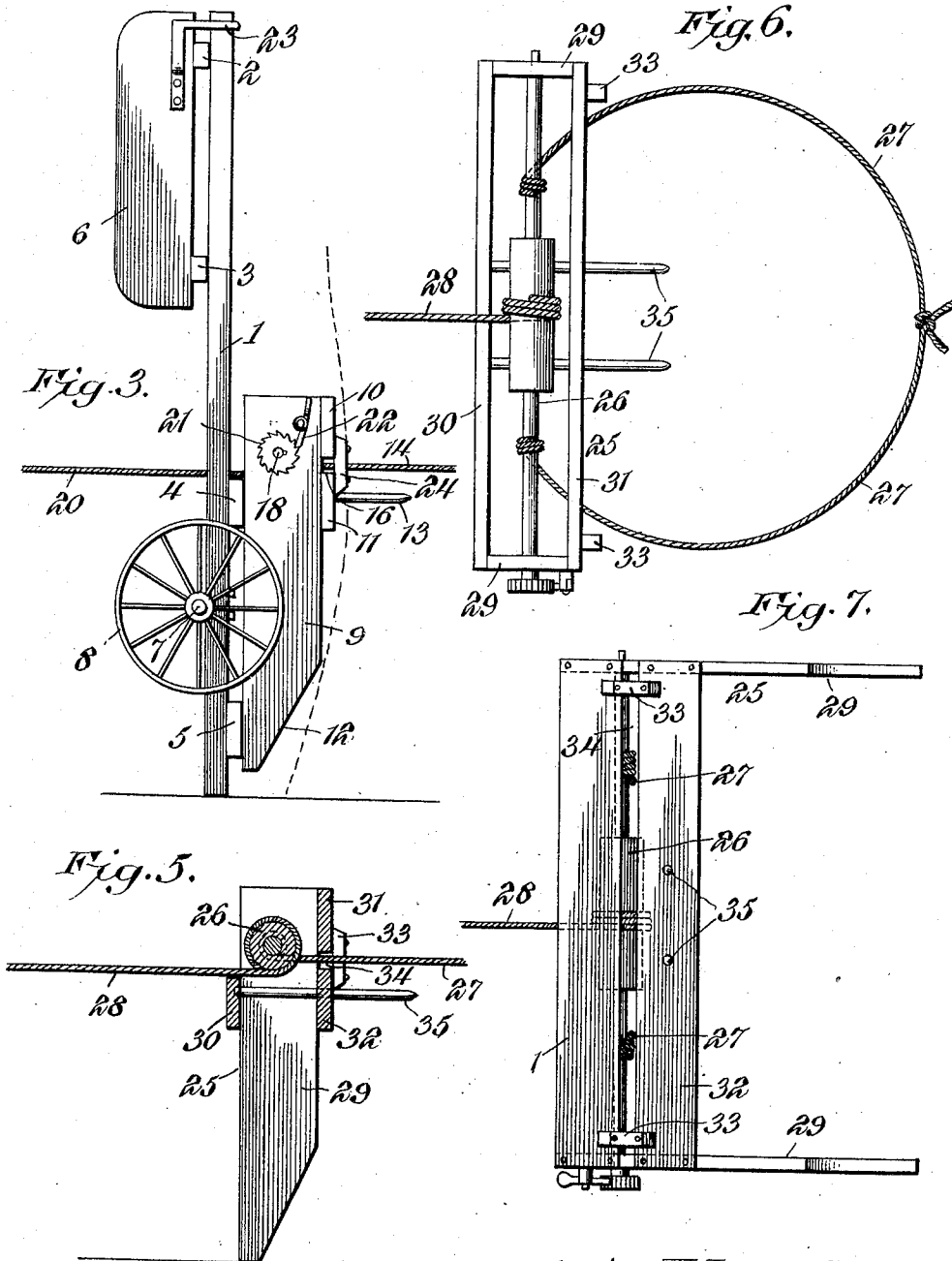
By E. J. Siggers, Attorney

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Attorney

UNITED STATES PATENT OFFICE.

NEWTON W. LYON, OF BRIGHTON, IOWA.

CORN-SHOCK CARRIER.

976,481.

Specification of Letters Patent. Patented Nov. 22, 1910.

Application filed February 13, 1909. Serial No. 477,806.

To all whom it may concern:

Be it known that I, NEWTON W. LYON, a citizen of the United States, and resident of Brighton, in the county of Washington and State of Iowa, have invented an Improved Corn-Shock Carrier, of which the following is a specification.

The invention relates to improvements in shock carriers, more especially that shown and described in Patent No. 708,377, granted to me Sept. 2, 1902.

The principal object of the invention is to provide a simple, inexpensive and efficient shock carrier, equipped with mechanism for utilizing the tractive force, by which the carrier is hauled over the field, to tighten a binder rope or chain, which encircles the shock, whereby the latter is securely held on the carrier and at the same time compressed in compact form.

With these and other objects in view, the invention consists in the construction and novel combination of parts hereinafter fully described, illustrated in the accompanying drawings, and pointed out in the claims hereto appended; it being understood that various changes in the form, proportion, size and minor details of construction, within the scope of the claims, may be resorted to without departing from the spirit or sacrificing any of the advantages of the invention.

In the drawings:—Figure 1 is a plan view of a shock carrier, constructed in accordance with this invention. Fig. 2 is a longitudinal sectional view of the same. Fig. 3 is a side elevation of the shock carrier arranged in an upright position, a portion of the shock being indicated by dotted lines. Fig. 4 is a detail view of the winding shaft. Fig. 5 is a vertical sectional view of a portion of the shock carrier, illustrating another embodiment of the invention. Fig. 6 is a plan view of the same, the device being arranged in an upright position, as illustrated in Fig. 5. Fig. 7 is a plan view, the device being arranged in a horizontal position.

Like numerals of reference designate corresponding parts in all the figures of the drawings.

1—1 designate rearwardly diverging side bars or sills, connected at the front portion by cross bars 2 and 3 and at the rear portion by cross bars 4 and 5. The front cross bars 2 and 3 are secured to the lower faces of the side bars 1 and are mounted upon a centrally arranged runner 6, which supports the front

portion of the frame of the shock carrier. The cross bars 2 and 3 are arranged in spaced relation and are secured to the upper edge of the runner near the ends thereof. The cross bars 4 and 5, which are of greater width than the front cross bars 2 and 3, are secured to the upper faces of the side bars 1 in spaced relation. The rear portions of the side bars are mounted upon a transverse axle 7, journaled in suitable bearings of the side bars or sills and supporting the rear portion of the shock carrier. The axle is equipped at its ends with suitable wheels 8, which are located farther forward than the runners in the aforesaid patent. By this arrangement, the wheels are better adapted for use as a fulcrum in tilting the frame of the carrier upwardly and rearwardly either to arrange it against a shock, as hereinafter more fully described, or to facilitate the discharge of a shock in an upright position. The wheels 8 are located at the space between the bars 4 and 5 and are arranged in advance of the terminals of the rear bar 5.

The frame is equipped at its rear portion with a shock-receiving platform composed of parallel side bars or boards 9 and transverse bars or boards 10 and 11. The side bars or boards 9 are mounted upon the cross bars 4 and 5, and have tapered or beveled rear terminals 12. They are located at the inner sides of the wheels and form guards for preventing the shock from coming in contact with the same. The bars 10 and 11, which are arranged horizontally, are secured to the upper edges of the side boards 9 in spaced relation, as clearly illustrated in Figs. 1 and 2 of the drawings. The shock-receiving platform is provided with projecting shock impaling rods or pins 13, projecting from the upper face of the platform bar 11. The shock impaling rods or pins 13, which have pointed upper terminals, pierce the platform bar 11 and are secured at their lower ends to the cross bar 4 of the frame of the shock carrier.

In loading a shock of corn, or other material upon the shock carrier, the latter is placed in an upright position against the shock, as illustrated in Fig. 3 of the drawings, with the projecting portions of the rods or pins embedded in the shock. The shock is then bound to the carrier by flexible binding elements 14, consisting of ropes, chains or the like. The flexible binding elements, which have their free or outer ter-

minals 15 tied, or otherwise united, extend through the space 16 between the platform boards 10 and 11, and are wound around reduced end portions 17 of a winding shaft 18, which is also provided with a central enlarged portion 19 for the reception of a flexible traction element, consisting of a cable or rope 20, having its rear portion wound around the enlarged portion of the winding shaft in a direction the reverse of that of the binding elements, whereby when the traction rope is pulled upon, it will unwind from and rotate the shaft 18 in a direction, which will wind the binding ropes around the reduced end portions of the shaft. This will result in compressing and binding the shock tightly to the shock carrier. The binding ropes may be detachably connected to the winding shaft in any suitable manner, and it will be apparent that the larger the diameter of the central portion of the shaft is made without changing the size of the end portions, the greater will be the force of the traction rope in operating the binding ropes. When the shock carrier frame is arranged in an upright position against a shock, the traction rope extends outwardly from the winding shaft at right angles to the frame in an approximately horizontal position. When the resistance of the shock to further compression in an upright position becomes sufficient, the shock and shock carrier will be pulled forwardly and downwardly to a horizontal position, and the shock will be further compressed until the resistance of the material becomes equal to the tractive force of the shock carrier, or the force necessary to draw the carrier along.

In order to prevent the binding ropes from becoming loose when the traction rope is slackened, the winding shaft is provided with a ratchet wheel 21, which is engaged by a pawl 22, pivoted at an intermediate point to the adjacent side board 9 of the platform, and adapted to lock the winding shaft against retrograde rotation. The pawl is located in advance of the ratchet wheel, and its front portion forms a handle by means of which it may be readily manipulated.

The traction rope extends forwardly from the winding shaft along one side of the runner 6, and through either one of a pair of guides 23, constructed of metal and secured to the runner at opposite sides thereof. The guides are approximately L-shaped and are curved forwardly and upwardly, as clearly shown in Fig. 2 of the drawings. The traction rope may be readily engaged with and disengaged from the guides by lifting it over the upper end of the upwardly projecting portion of the adjacent guide. The guide, which is open at the top, enables the traction rope to be disconnected from the front of the frame to permit the

latter to be placed in an upright position against a shock and to enable the traction rope to extend horizontally from the winding shaft for pulling the shock over upon the carrier. As soon as the shock carrier and the shock fall over upon the ground, the traction rope is engaged with the nearer one of the guides and is then ready for hauling the shock carrier over the field.

The binding ropes are adapted to be wound around the end portions of the shaft between the central enlarged portion and a pair of blocks 24, secured to the upper faces of the platform boards 10 and 11 and arranged adjacent to the ends thereof and adapted to prevent the binding rope from coiling too close to the side boards or guards 9.

In Figs. 5 to 7 inclusive is illustrated an embodiment of the invention, designed solely for binding or compressing shocks of corn, or other material in order that they may be pulled over upon a hay slide or low vehicle to be transferred by such means to the desired point. This form of invention embodies a frame 25, a winding shaft 26, having binding elements 27 and a traction or operating element 28, similar to the binding and traction ropes heretofore described. The frame, which is provided with a platform, is composed of side boards 29, a lower connecting bar 30, and upper platform bars or boards 31 and 32, spaced apart to provide a passage for the binding ropes, which are prevented from coiling too close to the side 25 of the frame by blocks 33, spanning the space 34 between the platform boards and secured to the same adjacent to the sides 29. The frame 25, which is adapted to be arranged in an upright position, as illustrated in Figs. 5 and 6 to place it against a shock, is equipped with impaling pins or rods 35, and it is operated in the manner heretofore described, the binding ropes being secured around the shock and the traction or operating rope being pulled outward to compress the material of the shock and draw the same over upon the ground, hay slide or low vehicle.

The shock may be retained in its contracted condition after the binding ropes 14 or 27 have been removed. This is effected by placing the rope across the platform when the same is turned up against the shock, and after the latter has been compressed as far as possible the supplemental binding rope is secured around the shock next to the binding ropes, which will then be bound at two points, thereby enabling the shock to be more readily handled by a horse hay fork or otherwise than when simply tied at the top. When the shock is tied at both the top and bottom, it forms a bundle easy to handle.

By means of the present invention a

shock may be bound in less time and in more compact form than is possible by the use of the hand lever and ratchet of the aforesaid patent, as such mechanism is unavoidably slow in rotating the winding shaft. The height at which the shocks are bound depends on the distance the winding shaft is arranged from the rear ends of the sills 1 or the side boards 29. By tying two or more shocks together at the top they will stand more securely.

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

1. A shock handling device comprising a movable shock carrying frame adapted to be arranged either in an upright or a horizontal position and having a platform, a winding shaft located beneath the platform and arranged at a point intermediate of the ends of the frame, binding ropes connected with the winding shaft and extending upwardly from the platform, and a traction rope extending downwardly from the winding shaft and forwardly beneath the frame to the front portion thereof, whereby it is adapted to extend from the front of the frame when the latter is in a horizontal position and from a point intermediate of the ends of the frame and approximately at right angles thereto when the frame is in an upright position, said binding and traction ropes being wound on the shaft in opposite directions.

2. A shock handling device comprising a movable shock carrying frame, a winding shaft arranged at a point intermediate of the ends of the frame, binding and traction ropes attached to the shaft and wound thereon in opposite directions, whereby when traction is applied to haul the shock carrying frame the binding ropes will be wound around the shaft and tightened, and means for detachably connecting the traction rope with the front of the frame, so that the traction rope may be disconnected from the front of the frame to permit the latter to be arranged in an upright position against a shock while the traction rope extends from the shaft approximately at right angles to the frame.

3. A shock handling device comprising a movable shock carrying frame, a winding shaft arranged at a point intermediate of the ends of the frame, binding and traction ropes attached to the shaft and wound thereon in opposite directions, whereby when traction is applied to haul the shock carrying frame the binding ropes will be wound around the shaft and tightened, and a guide arranged at the front of the frame and receiving the traction rope, said guide being open at the top and permitting the traction rope to be detached when the frame is arranged in an upright position and to extend

from the winding shaft approximately at right angles to the frame.

4. A shock carrying device comprising a frame, a platform, side boards supporting the platform in an elevated position and forming guards for a shock, a winding shaft mounted between the side boards and arranged beneath the platform, and traction and binding ropes attached to the shaft and wound thereon in opposite directions, the traction rope being extended forwardly beneath the frame and adapted to extend directly from the winding shaft approximately at right angles to the frame when the latter is in an upright position.

5. A shock handling device comprising a frame having a platform and provided at the front with a centrally arranged runner, a winding shaft arranged beneath the platform in rear of the runner, traction and binding ropes attached to the shaft and adapted to be wound thereon in opposite directions, whereby when traction is applied the binding ropes will be wound around the shaft and tightened, and guides located at opposite sides of the said runner and arranged to detachably receive the traction rope.

6. A shock handling device comprising a frame provided at the front with a centrally arranged runner, a winding shaft arranged beneath the frame in rear of the runner, traction and binding ropes attached to the shaft and adapted to be wound thereon in opposite directions, whereby when traction is applied the binding ropes will be wound around the shaft and tightened, and approximately L-shaped guides secured to the runner and open at the top to detachably receive the traction rope.

7. A shock handling device comprising a frame, a platform, side boards supporting the platform in an elevated position and forming guides for a shock, a winding shaft mounted in said side boards, traction and binding ropes or cables attached to the shaft and wound thereon in opposite directions, the binding ropes or cables being adapted to extend around the opposite sides of the shock and the traction rope or cable extending forwardly substantially at right angles to the frame in tilting the shock, a ratchet wheel connected with the winding shaft, and a locking pawl for engaging the ratchet wheel.

8. A shock handling device comprising a movable shock carrying frame having a platform, an axle carrying the frame and arranged at a point between the ends thereof, carrying wheels arranged on the axle, said wheels and axle permitting the frame to be tilted and arranged either in an upright or a horizontal position, a winding shaft located beneath the platform and arranged at a point between the ends thereof, binding

ropes connected with the winding shaft and
extending upwardly from the platform, a
traction rope extending downwardly from
the shaft and forwardly beneath the frame
5 to the front portion thereof, whereby it is
adapted to extend from the front of the
frame when the latter is in a horizontal po-
sition and from a point between the ends of
the frame and approximately at right angles

thereto when the frame is in an upright po- 10
sition, said traction and binding ropes being
wound on the shaft in opposite directions,
and means for locking the shaft.

NEWTON W. LYON.

Witnesses:

W. A. WILLIAMS,
J. F. GILL.