E. W. RYDER.

TENSION DEVICE FOR CHECK ROW PLANTERS.

APPLICATION FILED JULY 29, 1910.

977,134. Patented Nov. 29, 1910.

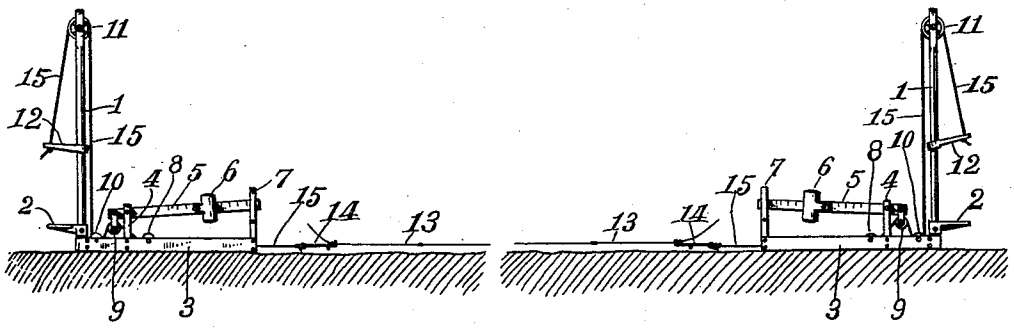

Fig. 1.

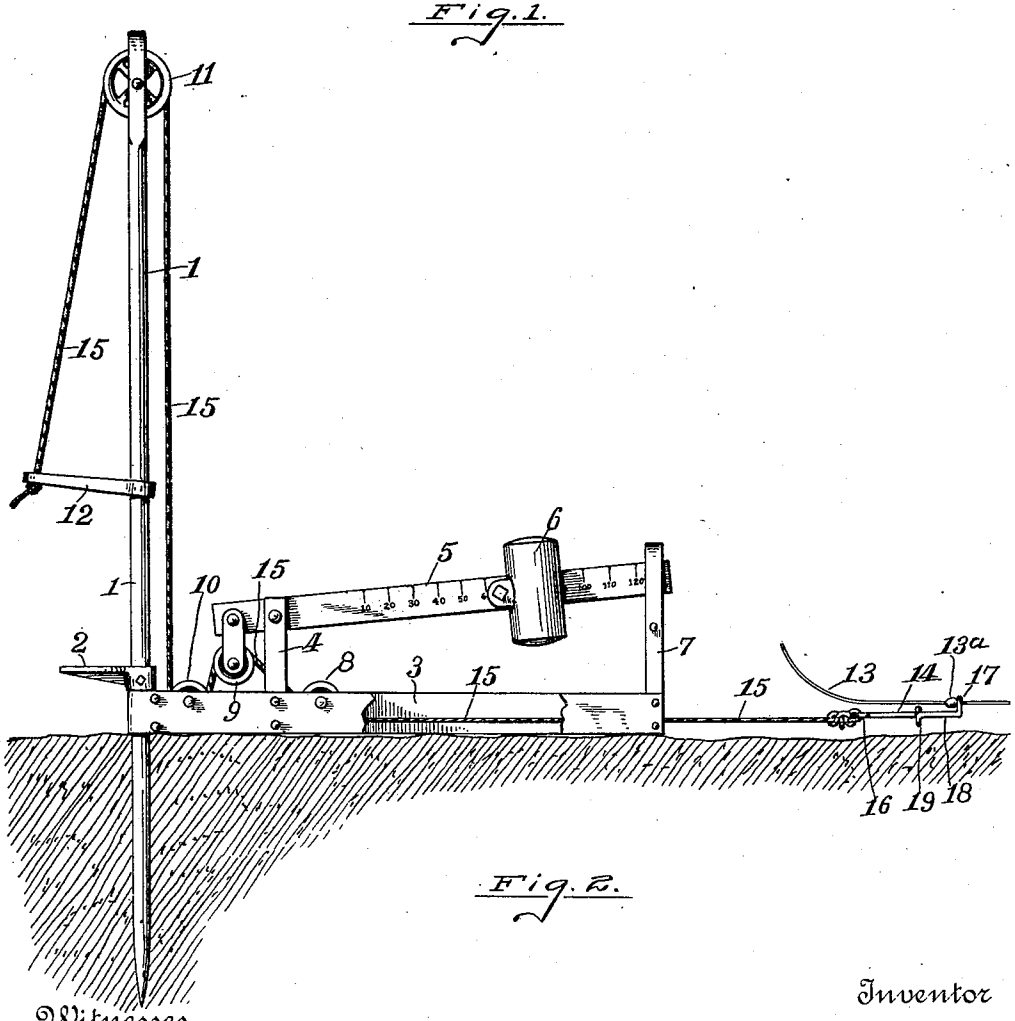

Fig. 2.

Witnesses

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TENSION DEVICE FOR CHECK-ROW PLANTERS.

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To all whom it may concern:

Be it known that I, ENOCH W. RYDER, a citizen of the United States of America, residing at Dowagiac, in the county of Cass and State of Michigan, have invented certain new and useful Improvements in Tension Devices for Check-Row Planters; and I do hereby declare the following to be a full, clear, and exact description of the invention, such as will enable others skilled in the art to which it appertains to make and use the same.

My invention relates to improvements in tension devices for check row planters for the wire of check row planters. Owing to the great length of wire used and variations in the operation thereof due to variable tension thereon, the check rows are not accurately in line but as the machine reciprocates across the field, the slack in the wire, if any, is taken up in the direction that the machine is moving, which being alternate, results in defective alinement of the check row.

The object of my invention is to prevent this by providing a device that will maintain a sufficient and uniform tension upon the knotted wire used in connection with this class of devices, and to provide the same with various new and useful features hereinafter more fully described and particularly pointed out in the claims, reference being had to the accompanying drawings in which:

Figure 1 is a side elevation, on a reduced scale, of a device embodying my invention, and Fig. 2 an enlarged side elevation of one end of the same with a portion broken away.

1 represents a stake preferably of metal adapted to be forced into the ground to serve as an anchor for the device.

2 is a foot rest attached to the stake to assist in forcing the same into the ground by placing the foot of the operator thereon, and also serving to prevent the parallel bars 3 from slipping upward when in use. These bars 3 consist preferably of band iron folded at the middle around the stake 1 and extending horizontally therefrom in parallel and spaced apart relation.

4 are hangers projecting upward from the bars 3 to the upper end of which is pivoted a lever 5 on which is mounted an adjustable weight 6 to vary the tension according to the length of the wires in use, and preferably a scale is marked on the lever indicating the proper position of the weight for different lengths of wires measured in rods.

7 is a guide fixed at the end of the bar 3 in which the lever 5 has a limited vertical movement about its pivot.

8 and 10 are pulleys journaled between the bars 3 and spaced apart at the respective sides of a pulley 9 carried by the short arm of the lever 5 and suspended below the same.

11 is a pulley at the top of the stake 1.

12 is an arm vertically adjustable on the stake 1 and slidable thereon when at right angles thereto and clamps the same when turned from said right angle position.

13 represents a knotted wire commonly used in connection with check row machines.

14 is a device, hereinafter described, to detachably engage the wire and tension the same by engaging one of the knots thereon. To this device is attached a cord 15 extending therefrom between the bars 3 under the pulley 8, over the pulley 9, under the pulley 10, upward over the pulley 11 and thence extending downward and secured to the outward end of the arm 12.

The device 14 consists of preferably a piece of heavy wire or rod formed with an eye 16 in one end to receive the cord 15, having a straight shank extending therefrom to a hook portion 17 to receive the wire and engage a knot thereon. This hook 17 is bent laterally at right angles to the shank. To retain the wire 13 in this hook portion, the rod is extended from the hook back toward the eye 16 parallel with the shank portion and at a short distance therefrom to let the wire pass therebetween and is thence turned laterally and partially around the shank 14 as at 19.

In operation: the stake 1 is first forced into the ground until the bars 3 are near the same. The hook then being attached to the wire 13 engages a knot thereon; the arm 12 is then carried down the stake 1 until the tension on the cord 15 and wires 13 is sufficient to raise the lever 5 and weight 6. The lever and weight will then maintain a constant tension during the time that the wire is in use.

The cord attaching device shown is not

herein claimed, but is reserved for a separate application in accordance with requirement of division.

What I claim is;—

1. A tension device, comprising a stake, a pivoted lever connected to the stake, a weight adjustable on the lever, a pulley carried by the lever, pulleys below the plane of the pulley on the lever, a cord engaging the lower side of the last named pulleys and the upper side of the pulley on the lever, means for attaching the cord to a check row wire, and means for attaching the cord to the stake.

2. A tension device, comprising a stake, and arm adjustable on the stake, parallel bars attached to the stake, pulleys journaled between the bars, a hanger extending upward from the bars, a lever pivoted to the hangers, a weight on the long arm of the lever, a pulley carried by the short arm of the lever, a cord extending below the pulleys between the bars and above the pulley on the lever and attached to the arm on the stake, and means for attaching the cord to a check row wire.

3. A tension device, comprising a stake, parallel bars attached to the stake, a hanger extending upward from the bars, a lever pivoted to the upper end of the hanger, a pulley carried by the short end of the lever, pulleys journaled between bars and at the respective sides of the pulley on the lever, an arm adjustable on the stake, a cord extending between the bars and below the pulleys therebetween and also extending above the pulley on the lever and attached to the arm on the stake, and means for attaching the cord to a check row wire.

4. A tension device, comprising a stake, a pulley at the top of the stake, an adjustable arm and a foot rest on the stake, parallel bars attached to the stake below the foot rest, two pulleys journaled between the bars and spaced apart, a lever pivotally supported above the bars, a pulley carried by the lever above and between the first named pulleys, a weight adjustable on the lever, a cord attached to the arm and thence extending over the pulley at the top of the stake, thence beneath one of the pulleys between the bars, thence over the pulley on the lever, thence under the other pulley between the bars and thence outward between the bars, and means for attaching said cord to a check row wire.

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

ENOCH W. RYDER.

Witnesses:

C. E. SWEET,

LENA EAST.