

(No Model.)

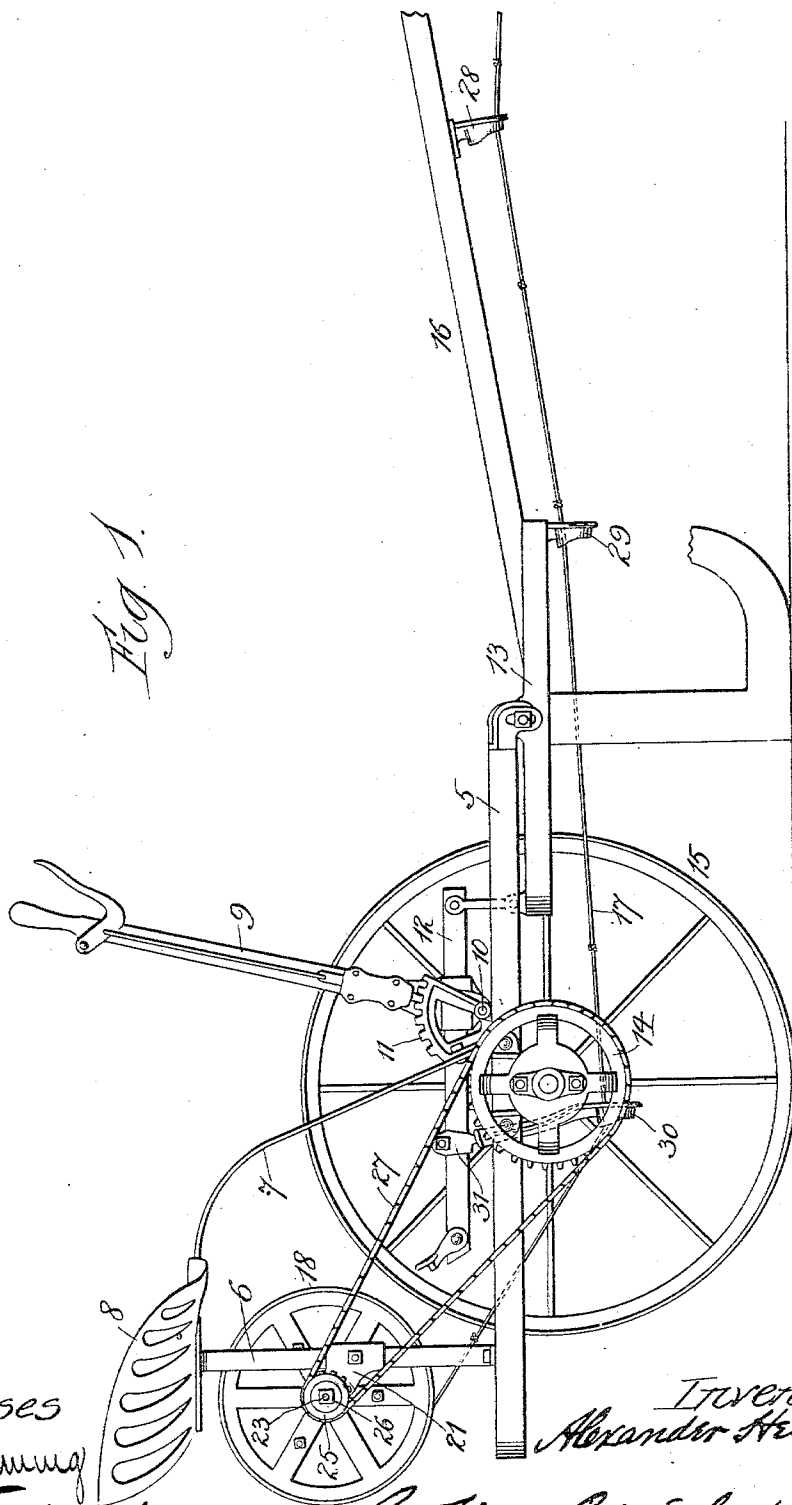
2 Sheets—Sheet 1.

A. HEARST.
CHECK ROW CORN PLANTER.

No. 566,576.

Patented Aug. 25, 1896.

Fig. 1.



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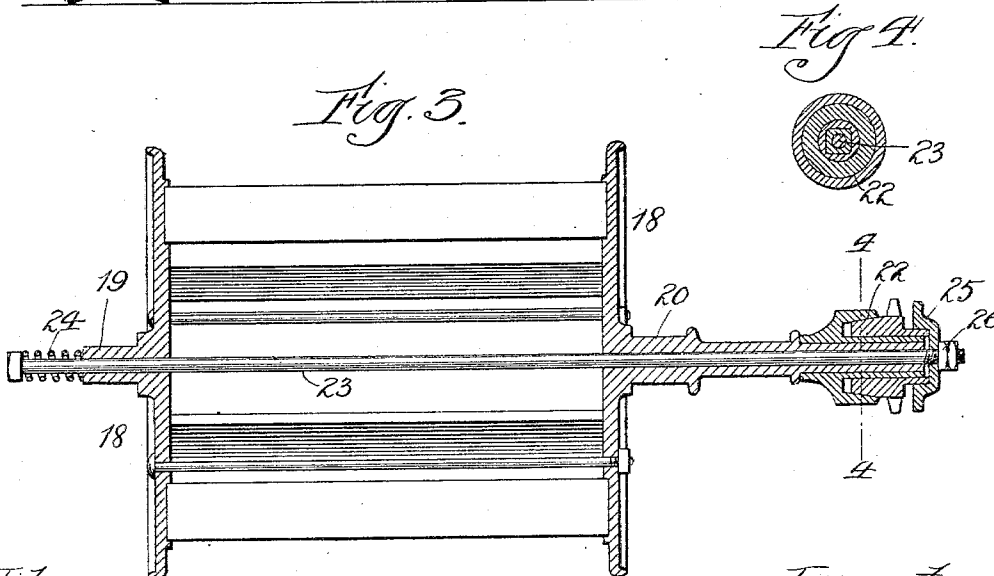
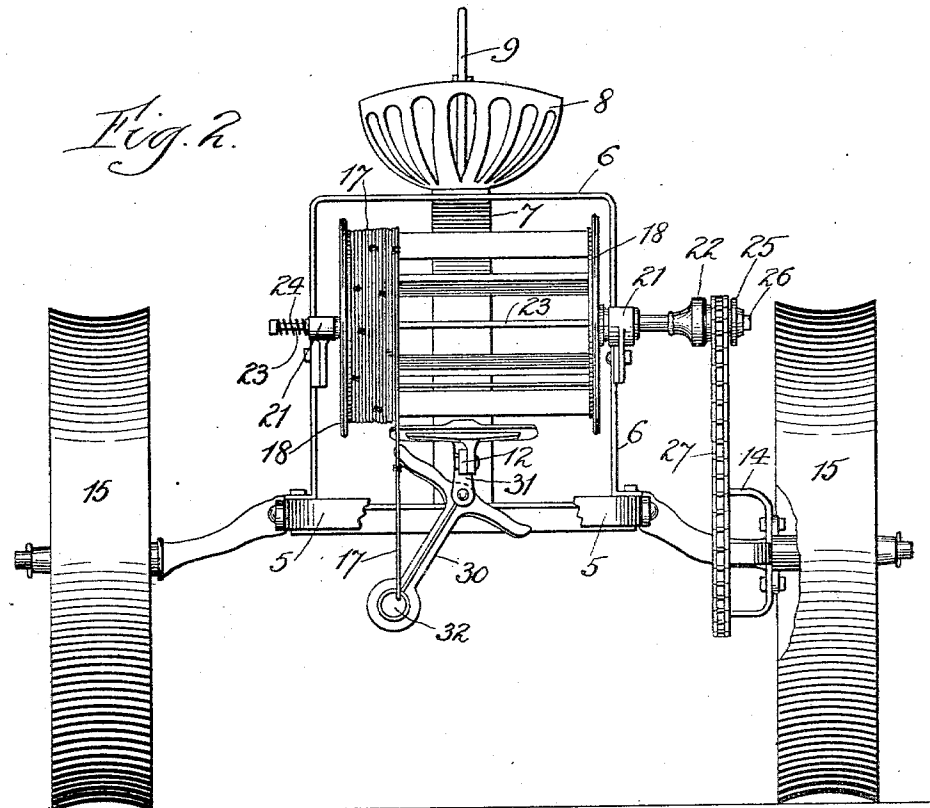
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2 Sheets—Sheet 2.

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CHECK ROW CORN PLANTER.

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Inventor
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UNITED STATES PATENT OFFICE.

ALEXANDER HEARST, OF PEORIA, ILLINOIS.

CHECK-ROW CORN-PLANTER.

SPECIFICATION forming part of Letters Patent No. 566,576, dated August 25, 1896.

Application filed October 8, 1894. Serial No. 525,313. (No model.)

To all whom it may concern:

Be it known that I, ALEXANDER HEARST, residing at Peoria, in the county of Peoria and State of Illinois, have invented certain new and useful Improvements in Check-Row Corn-Planters, of which the following is a specification, reference being had to the accompanying drawings, in which—

Figure 1 is a side elevation of so much of a corn-planter as is required to illustrate my improvements. Fig. 2 is a rear elevation, a portion of the framework and of one of the wheels being broken away. Fig. 3 is a longitudinal section through the reel on which the wire is wound, and Fig. 4 is a section on line 4 4 of Fig. 3.

My invention relates to check-row corn-planters, and has for its objects to provide improved devices whereby the wire used in connection with the machine may be readily and evenly rolled upon a reel mounted on the machine, and to so construct and attach such reel as to prevent undue strain on the unreeled wire as the amount of wire on the reel increases. These objects I accomplish as illustrated in the drawings and as hereinafter described.

That which I regard as new will be pointed out in the claims.

In the drawings, 5 indicates the rear frame of a corn-planter, having an arch 6 near its rear end, upon which and a bent plate 7, bolted to it, a seat 8 is secured.

9 is a locking-lever pivoted at 10 to a cross-bar that constitutes a part of the frame 5.

11 indicates a rack with which the lever 9 engages.

12 indicates a bar bolted to the lever 9, and through which, when the lever is operated, the front frame 13, carrying the seeding devices, (not shown,) is raised and lowered.

14 indicates a sprocket-wheel projecting from and secured to the inner face of one of the driving-wheels 15.

16 indicates the tongue.

17 indicates the check-row wire.

The parts heretofore referred to by numbers are of any well-known construction, and by themselves form no part of my invention.

18 indicates a reel provided on each head with bearings 19 20, adapted to rest in suitable brackets 21, secured upon the vertical

portions of the arch 6. The piece projecting from the reel, and on which the bearing 20 is formed, is provided on its outer end with a two-part friction-clutch 22 of ordinary construction, on one member of which is formed a number of teeth, constituting it in effect a sprocket-wheel adapted to be engaged by an ordinary drive-chain.

23 indicates a rod extending through the center of the reel.

24 indicates a coiled spring interposed between the head of the rod and the end of the bearing 19.

25 indicates a cap screwed or slipped on the opposite end of the rod 23 and of a shape adapted to engage the outer member of the friction-clutch 22.

26 indicates a nut or nuts screwed on the end of the rod and against the cap 25.

27 indicates a driving-chain running over the sprocket-wheel 14 and the teeth on the friction-clutch. As shown in Fig. 2, the clutch is extended sufficiently to one side of the reel to bring it in substantially the same vertical plane as the edge of the sprocket-wheel 14.

28 29 indicate depending eyes, which serve as guides for the wire, secured, respectively, to the tongue of the machine and the front frame.

30 indicates a casting of approximately T shape, which, as shown, is pivoted to an ear 31, bolted to the bar 12 on the rear frame 5, but which may be pivoted to some other suitable support on such frame. In the lower end of this casting 30 is formed a guiding-eye 32 for the wire, as shown in Fig. 2.

The operation is as follows: When it is desired to remove the check-row wire from a portion of the field where it has been staked out in the usual manner, one end of such wire is released from the stake to which it has been secured and passed through the guides or eyes 28, 29, and 32 and up to the reel 18, to which it is secured. The team attached to the machine is then driven across the field in the direction of the wire, reeling the wire up, as it passes along, on the reel 18, which is rotated through the medium of the chain 27, that passes over the sprocket-wheel 14 and the teeth on the face of the clutch.

It will be evident that the rotation of the

reel will be relatively faster than the speed of the machine, which is necessary in order to take up the slack wire, and it will also be evident that as the wire is wound upon the reel the diameter of the winding-surface will be increased by the coils of wire one upon another to such an extent as to exert a great strain on the wire and on the supporting-post to which one end of the wire is still attached, unless some means are provided for counteracting such strain. By means of the construction shown I avoid such dangerous strain on the wire and the reel and post, for as the strain increases the effect will be to cause the clutch to slip and check or retard the rotation of the reel until sufficient wire has been coiled up to release the strain, when, by the friction of the two parts of the clutch, the reel will again be rotated in the direction to reel up the wire, and then again being forced to slip back by reason of the wire again unduly tightening. This checking or retarding of the rotation of the reel will occur again and again in the process of coiling the wire on the reel and will insure the wire being tightly coiled at all times without subjecting any of the parts to an undue strain. By means of the pressure exerted by the coiled spring 24 the two parts of the clutch are always held together to insure their proper coaction. By tightening or loosening the nut or nuts 26 on the end of the rod 23 the degree of friction between the parts of the clutch can be readily regulated.

The wire being taken up on the reel is strung through the guiding-eyes 28, 29, and 32, as before stated, which insures its being kept at all times out of the way of the team, as it will follow any side movement that may be imparted to the tongue of the machine as the planter moves across the field. To coil the wire evenly and regularly on the reel, the driver, with his feet on the head of the T-shaped casting 30, moves such casting slowly from side to side, thereby controlling and directing the formation of the coils of wire on the reel, as the wire passing through the eye 32 in such casting necessarily moves from side to side with the movement of the casting.

I am aware that reels have heretofore been employed in connection with corn-planters for winding up the check-row wire used in connection with such machines, but in such prior constructions the means employed have either been too expensive, too complicated,

or too cumbersome to render them desirable. By my construction I provide a cheap, simple, and durable device, and one that regulates itself at all times to the increasing tension on the wire during the process of reeling the same.

I have herein spoken of the "wire" 17 for the reason that I contemplate the use of the ordinary jointed check-row wire as the best device known for the purpose, but it will of course be understood that such term "wire" is meant to include any of the known substitutes therefor which may be used with such a machine.

That which I claim as my invention, and desire to secure by Letters Patent, is—

1. The combination with a reel and a driving device, of a pivoted vibrating arm arranged below and in front of said reel, said vibrating arm being provided at one end with a wire-guide as described, and provided at the other end with projecting foot-supports, and a frame having a suitable journal for said pivoted arm.

2. In a corn-planter, the combination with a reel and means for rotating the same, of a clutch 22, a rod 23 passing through the reel and the clutch, and a spring interposed between one end of the rod and the reel for regulating the amount of friction between the parts of the clutch, substantially as described.

3. In a corn-planter, the combination with a reel, and means for rotating and devices for checking or retarding the rotation of the reel, of a pivoted vibrating arm arranged below and in front of said reel and provided at one end with a wire-guide and at the other end with projecting foot-supports and a frame to which said arm is pivoted, substantially as described.

4. In combination with a corn-planter, a reel, a rod passing through said reel, a clutch upon said rod, one member of which is provided with teeth, a spring interposed between one end of the rod and the reel for regulating the amount of friction between the parts of the clutch, and a chain engaging the toothed part of the clutch and driven from the driving-wheels of the planter, substantially as described.

ALEXANDER HEARST.

Witnesses:

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