No. 822,488. PATENTED JUNE 5, 1906.

E. STEINMANN & H. SCHIELKE.

INDICATOR FOR CHECK ROWERS.

APPLICATION FILED JULY 14, 1905.

2 SHEETS—SHEET 1.

Fig. 2.

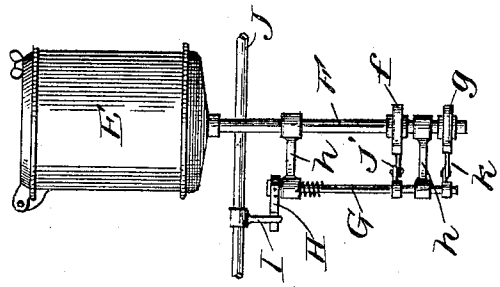


Fig. 1.

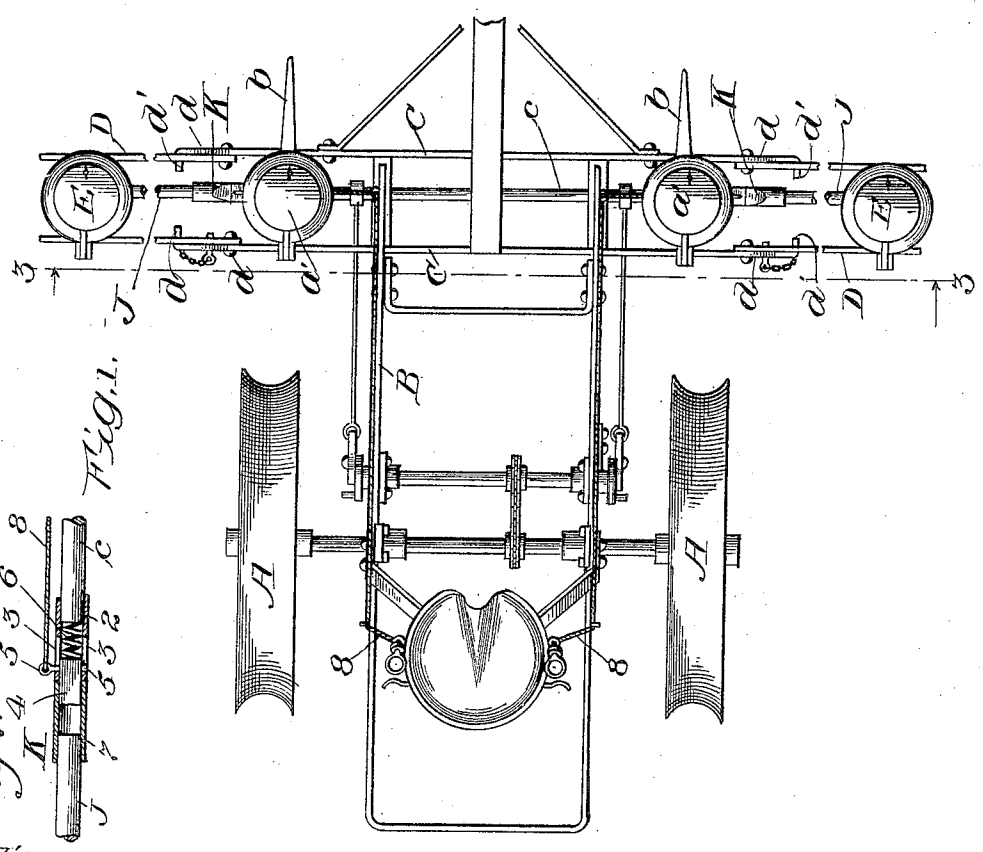


Fig. 7.

Witnesses:
O. M. Kennick
E. K. Lundy

Inventors:
Eduard Steinmann.
Herman Schielke.
By Frank D. Thomason,
Atty.

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2 SHEETS—SHEET 2.

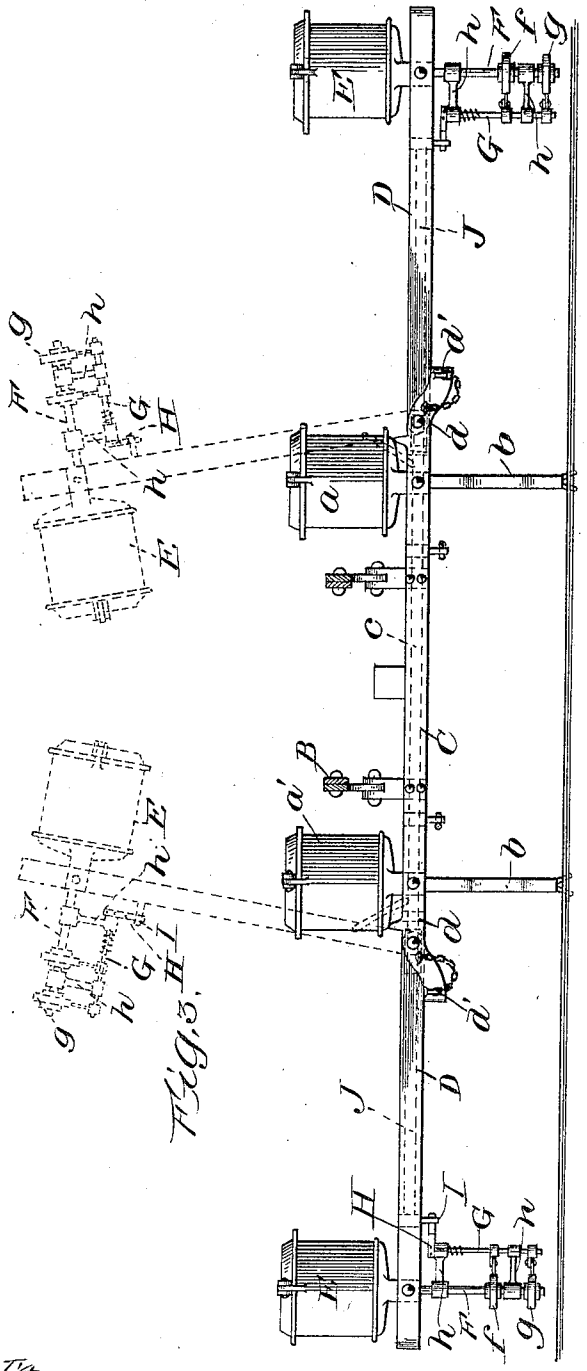


Fig. 3.

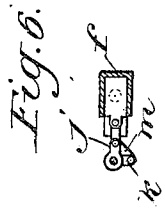


Fig. 6.

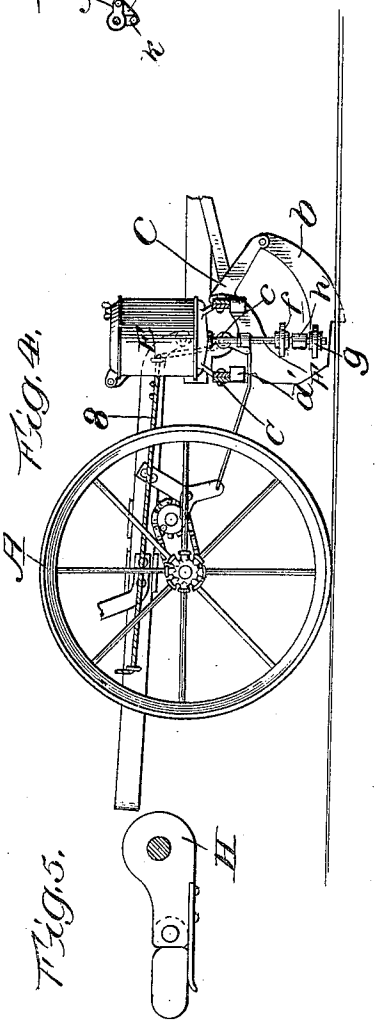


Fig. 4.

Fig. 5.

Witnesses:
Chas. Kennicl
C. K. Lundy

Inventors
Edward Steinmann.
Herman Schielke.
By Frank D. Thomson
Atty.

UNITED STATES PATENT OFFICE.

EDWARD STEINMANN, OF BETTENDORF, IOWA, AND HERMAN SCHIELKE, OF CLEVELAND, OHIO.

INDICATOR FOR CHECK-ROWERS.

No. 822,488. Specification of Letters Patent. Patented June 5, 1906.

Application filed July 14, 1905. Serial No. 269,684.

To all whom it may concern:

Be it known that we, EDWARD STEINMANN, of Bettendorf, Scott county, Iowa, and HERMAN SCHIELKE, of Cleveland, Cuyahoga county, Ohio, citizens of the United States, have invented certain new and useful Improvements in Indicators for Check-Rowers, of which the following is a full, clear, and exact description.

Our invention relates to markers or indicators for check-rower corn-planters, and is particularly applicable to wireless check-rowers; and its object is to indicate the rows in such manner that the obliteration thereof by the travel of the draft-horses is avoided. This we accomplish by the means hereinafter fully described and as particularly pointed out in the claims.

In the drawings, Figure 1 is a plan view of a check-rower embodying our invention. Fig. 2 is a rear elevation, on a larger scale, of one of the magazines in which the marking material is held and adjacent coöperating mechanism separated from the remainder of the machine. Fig. 3 is a transverse section of the machine, taken on dotted line 3 3, Fig. 1, looking in the direction indicated by the arrows. Fig. 4 is a side elevation thereof. Figs. 5, 6, and 7 are detail views of parts of our improvements.

In the drawings, A represents the running-gear, and B the supporting-frame, of a check-rower corn-planter to which our improvements are applied. The hopper-frame is pivotally connected to the overhanging forward ends of the longitudinal side members of the supporting-frame and consists of two transverse parallel bars C C, which support the hoppers *a a'*, have the colters or furrow-openers *b b* suitably attached thereto, and have the transverse rock-shaft *c* journaled in bearings attached thereto. The ends *d d* of the bars C C of the hopper-frame extend beyond the hoppers a suitable distance and have the adjacent ends of parallel extensions D D pivotally connected thereto. These extensions D are connected at suitable points along their lengths by cross-bars and at their ends farthest from the hoppers support and have suitably attached thereto magazines E E. The ends *d* extend beyond the pivotal point of the extension D and are bent downward until their upper edges are in the same horizontal plane, in which position they are as shown in Fig. 3 of the drawings, and then are bent transversely toward each other to provide supporting-offsets *d'*, upon which the lower edge of the extensions D rest and are maintained in a horizontal position, preferably in alinement with the transverse bars C of the hopper-frame, when the magazines are in working position.

The magazines E E are the same distance from the hoppers *a a'* as said hoppers are from each other, and said magazines are each provided with a discharge-pipe F, depending from their under side to a point slightly above the tilled soil. These discharge-pipes are adapted to distribute a small quantity of the liquid or powdered lime or other substance contained in said magazines for the purpose of marking the rows at equal intervals apart and are adapted to operate whenever the hoppers are actuated to drop the seed. This we accomplish by means of two valves *f* and *g*, (preferably of the gate-valve pattern,) which are located near the lower end of the discharge-pipe and operate in such manner that when one is closed the other is opened, and vice versa. These valves are actuated in the manner stated by means of a vertically-disposed automatically-returnable rock-shaft G, journaled in the ends of suitable arms *h*, projecting transversely from suitable bosses secured to the discharge-pipe, which shaft is provided with small arms *j* and *k* in the same horizontal plane as said small valves *f* and *g*, which project at right angles to each other and are connected by means of small links *m* to the adjacent ends of the gate or slides of the valves *f* and *g*, respectively, substantially as shown in the drawings.

The upper end of shaft G is provided with an arm H, which preferably projects from the side thereof opposite to the discharge-pipe and has a spring-returnable jointed extension *n*. This arm H is engaged by a finger I, projecting down from the extremity of the auxiliary shaft J, which is journaled in suitable bearings and supported by the extensions D D in alinement with the rock-shaft *c*, to which their ends are connected by the joint K, (shown in Fig. 7,) in the same plane as the pivot-connecting extension D, to the transverse bars. Each end of shaft *c* is provided with a hollow sleeve 2, which near its extremity is provided with two diametric-

ally opposite longitudinal slots 3 3. In the bore of this hollow sleeve 2 is inserted a plunger 4, having small pins or lugs 5 5 projecting from each side and passing through and sliding in said slots 3 3. Between said plunger and the end of said rock-shaft is placed a coiled expansion-spring 6, the action of which is to keep said plunger normally pressing outward, while an operating cord or wire 8, having one end fastened near the seat, is secured to either of said pins. The adjacent ends of the auxiliary shafts J J are likewise provided with hollow sleeves 7, and the outer portion thereof is squared in cross-section to receive the end of the plunger 4.

In operation either one or both of the magazine-markers may be arranged in the horizontal position or either one or both may be raised into the position shown in dotted lines in Fig. 3 of the drawings when not in use. When in use, the shaft J, to which the rocking motion of shaft C is imparted, guides the shaft G through the engagement of the arm H on the upper end thereof by the finger I on the adjacent end of said shaft J. In order to disengage the discharge-regulating mechanism of the magazines from the shaft J when the magazines are raised to the elevation shown in dotted lines in the drawings, the finger I can be removed from the end of shaft J or loosened in any suitable manner, so as not to enable it to impart the motion of said shaft. When the magazines are raised as just described, the rock-shafts "break" by means of the joint K by simply pulling up the wire 8 and securing the same under the seat. This disengages the plunger from the hollow socket and allows the auxiliary shaft to be moved up and down, as desired, and also permits the marker to be worked on either one side or the other, as desired.

What we claim as new is—

1. A check-rower comprising a hopper-frame; hoppers supported thereby; a longitudinal rock-shaft journaled therein; an alining extension-frame at each end of said hopper-frame; magazines secured thereto; an independent extension rock-shaft journaled in each of said extension-frames and alining with said first-mentioned rock-shaft; devices for detachably connecting said extension-shafts to each end of said first-mentioned rock-shaft in the transverse plane of the hinge of said extensions, said connecting devices consisting of suitable squared sleeves on the ends of said main and extension rock-shafts, and a rectangular sliding block mounted in one of said sleeves and normally pressed toward the other of said sleeves; and means for intermittently imparting the motion of the extension-shafts to said magazines independent of each other.

2. A check-rower comprising a hopper-frame; hoppers supported thereby; a longitudinal rock-shaft journaled therein; an alining extension-frame hinged at each end of said hopper-frame; a magazine carried by each extension-frame having a downwardly-extending discharge-pipe; two valves therein one open when the other is closed; independent rock-shafts parallel to said discharge-pipes each having arms projecting therefrom, and links connecting said arms to said valves; and means actuated by the rock-shaft journaled in the hopper-frame for operating the shafts paralleling said discharge-pipes independent of each other.

3. A check-rower comprising a hopper-frame; hoppers supported thereby; a rock-shaft actuating said hoppers; an alining extension-frame hinged at each end of said hopper-frame; a magazine carried by each extension-frame having a downwardly-extending discharge-pipe; two valves therein one open when the other is closed; independent rock-shafts journaled in said extension-frames alining and detachably connected to the opposite ends of said first-mentioned rock-shaft; a rock-shaft parallel to each discharge-pipe having arms projecting therefrom and links connecting said arms to said valves; and means actuated by the rock-shafts journaled in the hopper-frame for operating the shafts paralleling said discharge-pipes independent of each other.

EDWARD STEINMANN.
HERMAN SCHIELKE.

Witnesses to signature of Edward Steinmann:
WM. HOERSCH,
RALPH C. WILLIAMSON.

Witnesses to signature of Herman Schielke:
CORBA L. WITBECK,
ALBERT CONSTANTINE.