

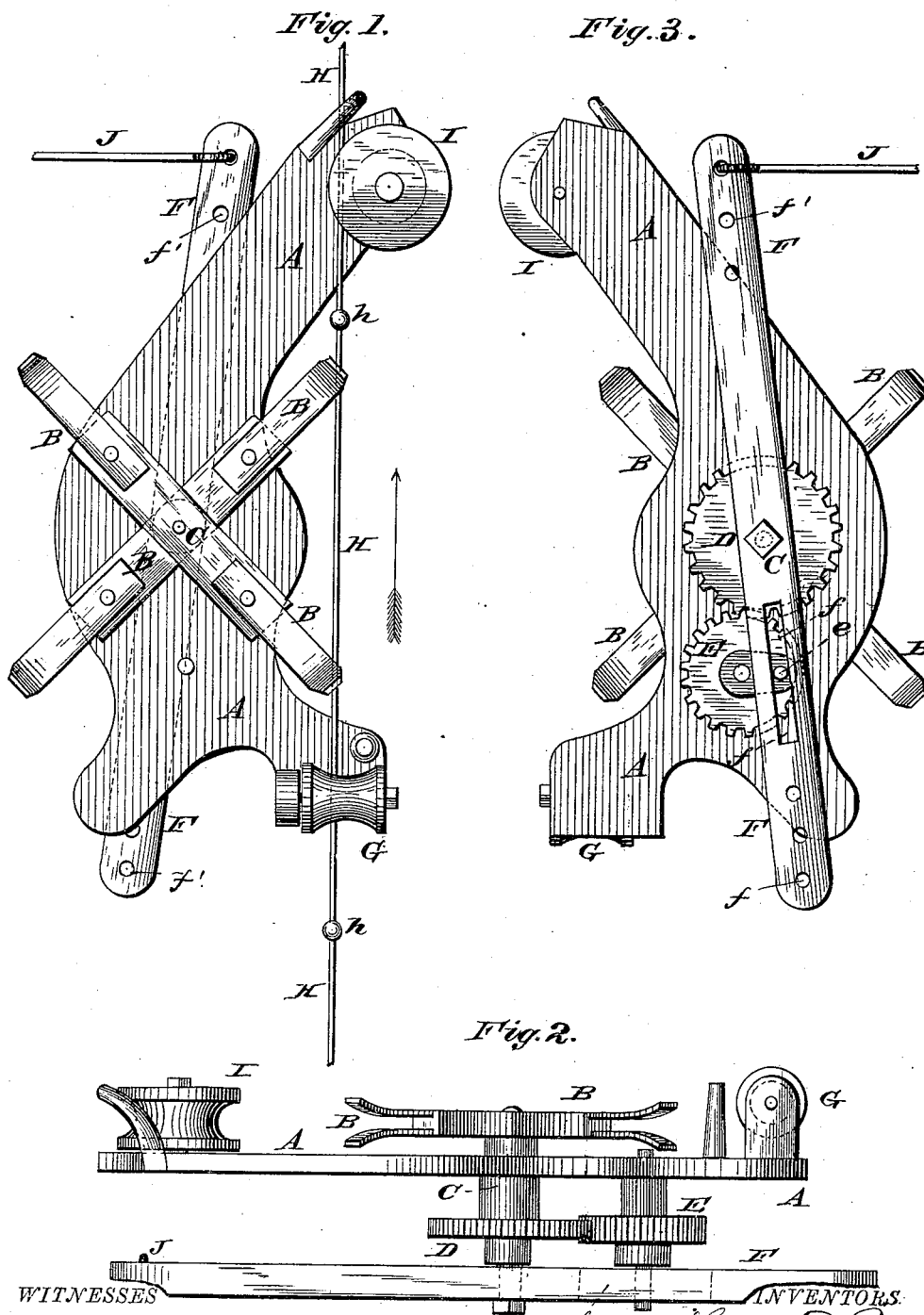
(No Model.)

L. D. BENNER & J. STAFFORD.

CHECK ROW ATTACHMENT FOR CORN PLANTERS.

No. 266,341.

Patented Oct. 24, 1882.



WITNESSES
And. G. Dietrich
P. C. Dietrich

INVENTORS
Lorenzo D. Benner
Joseph Stafford
by *W. T. B. Richards* Attorney

UNITED STATES PATENT OFFICE.

LORENZO D. BENNER AND JOSEPH STAFFORD, OF GALESBURG, ILLINOIS,
ASSIGNORS TO GEORGE C. ALDEN AND ALONZO C. CLAY, BOTH OF SAME
PLACE.

CHECK-ROW ATTACHMENT FOR CORN-PLANTERS.

SPECIFICATION forming part of Letters Patent No. 266,341, dated October 24, 1882.

Application filed August 3, 1881. Renewed June 10, 1882. (No model.)

To all whom it may concern:

Be it known that we, LORENZO D. BENNER and JOSEPH STAFFORD, citizens of the United States, residing at Galesburg, in the county of Knox and State of Illinois, have invented certain new and useful Improvements in Check-Row Attachments for Corn-Planters; and we 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, reference being had to the accompanying drawings, and to letters or figures of reference marked thereon, which form a part of this specification.

This invention relates to check-row attachments to corn-planters of that class used to transmit motion received from a knotted check-row chain to theseeding devices of the planter; and the invention consists in constructions and combinations hereinafter described, and set forth in the claims hereto annexed.

In the accompanying drawings, which illustrate our invention, and in which the similar letters used as marks of reference apply to the like parts in all of the figures, Figure 1 is a top plan of a construction embodying our invention. Fig. 2 is a side elevation. Fig. 3 is a plan seen from below.

Referring to the drawings by letters, letter A represents a base-plate on which the working parts are mounted. The plate A may be attached to the planter in any desired manner which will permit the knotted cord to be guided to the forked levers, as hereinafter described.

Letters B represent four forked arms or levers projecting radially from a shaft, C, which extends downward through and is journaled in the plate A.

D is a spur-pinion fixed on the lower end of the shaft C, so as to rotate therewith.

E is a pinion gearing with the pinion D and carrying a crank-pin, *e*.

F is a rocking or oscillating arm, journaled at its mid-length to the lower end of the shaft C, so that said shaft may rotate without imparting movement to the arm F, and so that said arm may be oscillated on the shaft C.

The crank-pin *e* passes through a slot, *f*, in the arm F.

G is an ordinary guide-pulley for the cord or wire H, which has ordinary knots, *h*.

I is also an ordinary guide-pulley.

In operation we prefer to place one of the devices shown in the drawings on each side of a two-row corn-planter, although it will be readily seen that a single device of the kind may be used, located centrally on the planter. As the machine is drawn along in close proximity to the previously-stretched knotted cord or wire in the ordinary manner, each knot *h* will in turn act upon one of the forked levers B and give a quarter of a revolution to the shaft C and pinion D, thereby imparting a half revolution to the pinion E, which by its crank-pin *e* will oscillate the bar F or give it a throw in one direction, and thereby impart a movement to the seed-slides, which may be connected with either end of the bar F by a rod, J.

The rod J may be connected with the bar F in either of a series of holes, *f'*, to regulate or adjust the extent of throw given to the seed-slides of the planter.

It will be seen that the action of one knot *h* upon a lever B will bring the next lever B into proper position for the action of the next succeeding knot, and, further, that the impulse imparted to the shaft C by the action of each knot will impart an impulse or throw to the seed-slides.

The crank-pin *e* is so arranged that at the termination of each throw of the seed-slides the crank-pin will be on its "dead-point" with relation to the bar F, and thus prevent jarring motion or tilting position of the planter from operating the seed-slides; but we do not claim the last-named feature broadly in this application, as it is shown and claimed broadly in an application of L. D. Benner pending at same time as this application.

Having thus described our invention, what we desire to claim as new is—

1. The combination, with the radially-forked levers B, which are acted upon by a knotted cord or wire, spur-pinion D, and crank-pin

E, of slotted bar F, pivoted at its central part and adapted to be oscillated by the crank-pin for operating the seed-slides of a planter, substantially as specified.

5 2. The combination, with the radially-forked levers B, which are acted upon by a knotted cord or wire, spur-pinion D, and crank-pinion E, of slotted bar F, centrally journaled or pivoted on the shaft of the pinion C, and adapted
10 to be oscillated by the crank-pin for operating the seed-slides of a planter, substantially as specified.

15 3. The combination, with the radially-forked levers B, which are acted upon by a knotted cord or wire, spur-pinion D, and a slotted bar,

F, pivoted at its central part, of a pinion, E, provided with a crank-pin, e, arranged relatively to said bar F, as shown and described, whereby at the termination of each throw of the seed-slides it will be on its dead-point with
20 relation to the bar F, substantially as and for the purpose specified.

In testimony whereof we affix our signatures in presence of two witnesses.

LORENZO D. BENNER.
JOSEPH STAFFORD.

Witnesses:

F. C. SMITH,
M. ANDREWS.