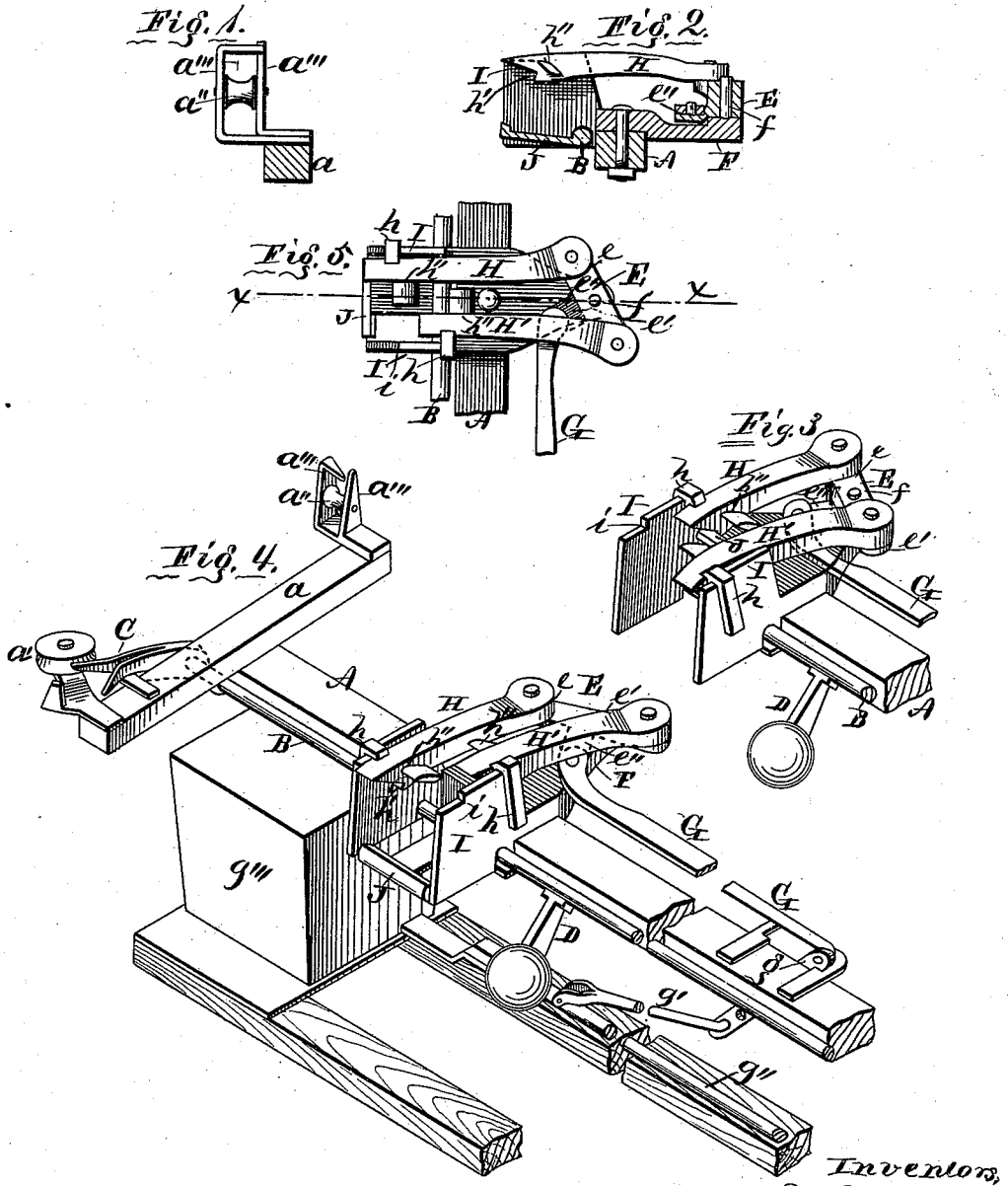
J. E. BERING, A. & M. BARNES.

Corn-Planter.

No. 197,818. Patented Dec. 4, 1877.



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UNITED STATES PATENT OFFICE.

JAMES E. BERING, OF DECATUR, AND ALDEN BARNES AND MONROE BARNES, OF McLEAN COUNTY, ILLINOIS.

IMPROVEMENT IN CORN-PLANTERS.

Specification forming part of Letters Patent No. **197,818**, dated December 4, 1877; application filed August 9, 1877.

To all whom it may concern:

Be it known that we, JAS. EDWD. BERING, of Decatur, in the county of Macon, Illinois, and ALDEN BARNES and MONROE BARNES, of the county of McLean and State of Illinois, have invented certain new and useful Improvements in Corn-Planters; and we do hereby declare that the following is a full, clear, and exact description thereof, which 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 of reference marked thereon, which form a part of this specification.

Figure 1 is a detail view. Fig. 2 is a vertical sectional view in the line *x x* in Fig. 5. Fig. 3 is a perspective view, with the parts in different relative positions from the positions shown at Fig. 4. Fig. 4 is a perspective view of a construction embodying our invention. Fig. 5 is a top view of the main parts of our invention.

Similar letters of reference indicate similar parts in the different views.

This invention relates to devices for transmitting motion to the seeding apparatus of corn-planters by contact with knots on a stretched wire or cord; and consists in constructing the arms or pawls which receive motion from the rock-shaft with cams upon their sides, by means of which they are elevated in their return movements, so as to pass over the forwardly-moving tappet, which actuates them; and it further consists in constructing the pawls so that they will be acted upon by the tappet in its forward movement, but allow it to pass beneath them in its return movement.

The invention further consists in the use of guard-arms on the sides of the pawls, for retaining them in position on the cam-track, upon which their ends slide back and forth.

The invention also consists in combining with the rock-shaft, which is actuated by a knotted wire or cord, and the devices which receive motion from a tappet on said rock-shaft, stops, which hold the parts and prevent the seeding-plates being thrown backward by accidental causes; and, further, in constructing the pawls and tappet so that the tappet will raise the pawl and release it from said stop, all as hereinafter fully described.

Referring to the drawings by letters, A represents one end of the ordinary bar, attached transversely on the planting-machine, and has the ordinary head *a* on each of its ends, and bearings for the rock-shaft B, which is provided with the ordinary forked lever C on each end, and the weighted arm D on its main portion. The heads *a* are each provided with the usual guide-pulley *a'* at their forward ends, and *a''* at their rear ends. The pulley *a''* is journaled between standards *a'''*, the outer one of which is bent inward at its upper end, so as to extend across and forward of the inner standard, so that the check-row wire may be placed therein and removed therefrom by turning a portion of it into a nearly-vertical position. While the wire is in a nearly-horizontal position, as in operation in the field, the bent standard *a'''* will prevent its being thrown from between the standards by jostling of the machine or otherwise.

E is a rock-plate, having three arms, *e e' e''*, and is journaled on a stud, *f*, which projects from a standard, F, which extends rearward from the bar A. The arm *e''* is hinged to a rod, G, which connects it with a lever, *g*, which may connect directly, or by a rod, *g'*, with the bar *g''*, which connects and operates the seed-slides in the hoppers *g'''*. H H' are pawls, journaled, respectively, to the arms *e e'*, and the forward end of each provided with a guard, *h*, which aligns its movements upon a cam-track, I, of which there is one for each pawl, H H', attached to and projecting upward and forward from the bar A. The forward end of each track I is lowered to form a shoulder or stop, *i*. Each pawl H H' has a shoulder, *h'*, on its under side and forward end, and a cam, *h''*, projecting from their adjacent faces, formed as shown at Fig. 2. J is a tappet fixed upon the shaft B, between the tracks I, its outer end broadened, as shown at Fig. 4, and formed in its cross-section as shown at Fig. 2.

The operation is as follows: Suppose the parts to be in the positions shown at Fig. 4, and the forward movement of the machine to bring one of the forked levers C in contact with a knot on the actuating-wire, carrying

the forked lever back, and with it the tappet J. As the tappet J moves backward it will first strike beneath the forward curved lower side and end of the pawl H and raise it, so that the guard *h* will be lifted and released from the stop *i* on the track I; then, striking the shoulder *h'*, it will carry the pawl H backward to the position shown at Fig. 3, thereby oscillating the plate E, and actuating the seeding devices in the evident manner, and at the same time bringing the pawl H' forward, and with its guard *h* resting behind a shoulder or stop, *i*, on its track I, to prevent a return movement by any jostling, shaking, or tilting of the planter.

While the parts remain in the last-described positions, the weighted arm D, acting in the usual manner, carries the shaft B and tappet J back to their normal positions, (shown at Fig. 4,) and into position for the action of the tappet on the pawl H' at its next forward movement, in a similar manner to its action on the pawl H, as described.

To prevent the shoulder *h'* of a returning pawl coming in contact with the tappet as it carries the other pawl backward, we provide the cams *h''* on the adjacent sides of the pawls H H', and so constructed that they will, by sliding contact, always tend to raise the returning pawl, so that it may pass over the advancing tappet.

What we claim as new, and desire to secure by Letters Patent, is—

1. The pawls H H', having cams *h''* on their adjacent sides, for elevating them alternately in their return movements for passage over the tappet J, substantially as described, and for the purpose specified.

2. The pawls H H', having guard-arms *h*, combined to operate with the tappet J and cam-tracks I, substantially as described, and for the purpose specified.

3. In combination with pawls or arms H, for actuating the seeding mechanism of a corn-planter, stops *i*, for locking the parts when desired, substantially as described, and for the purpose specified.

4. The pawls H H', having inclined under forward surfaces, combined to operate with the tappets J, for raising the guard-arms *h* from the stops *i*, substantially as and for the purpose specified.

In testimony that we claim the foregoing as our own we affix our signatures in presence of two witnesses.

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