(No Model.) 2 Sheets—Sheet 1.

H. PRATHER.

CORN PLANTER.

No. 418,747. Patented Jan. 7, 1890.

Fig. 2.

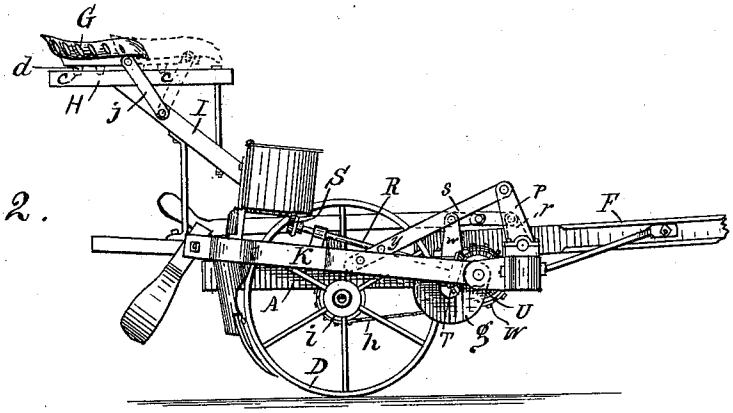
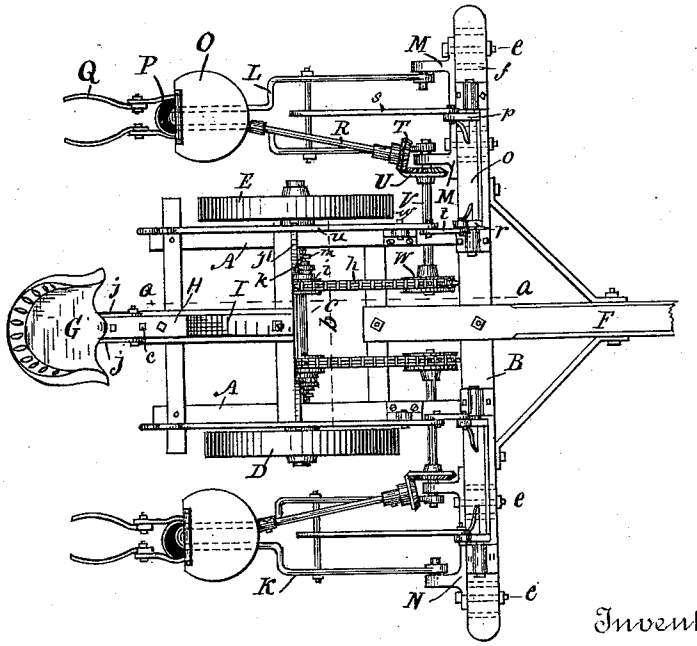


Fig. 1.



Witnesses
C. M. Hood.
A. M. Hood.

Inventor
Herman Prather
By H. P. Hood.
Attorney

N. PETERS, Photo-Lithographer, Washington, D. C.

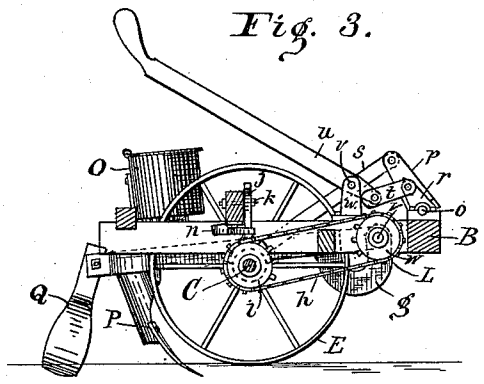
(No Model.) 2 Sheets—Sheet 2.

H. PRATHER.

CORN PLANTER.

No. 418,747. Patented Jan. 7, 1890.

Fig. 3.



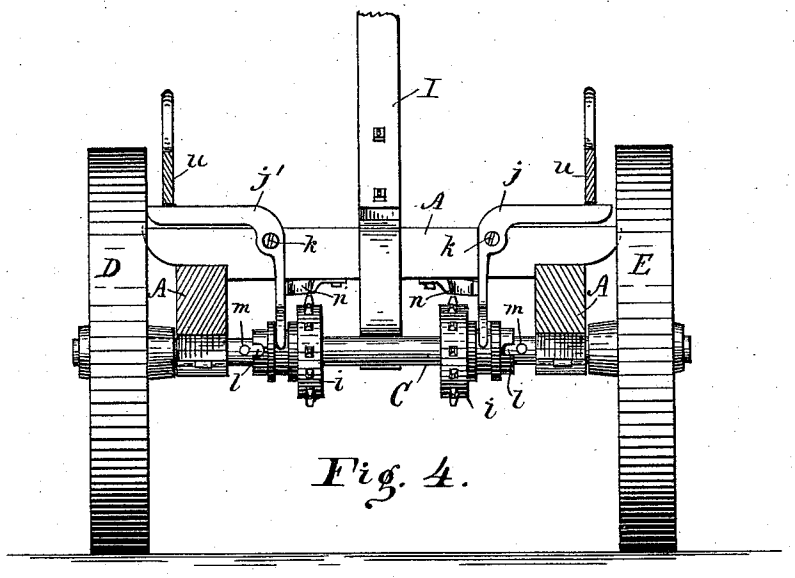


Fig. 4.

Witnesses
C. M. Hood
A. M. Hood,

Inventor
Herman Prather.
By H. P. Hood Attorney

N. PETERS, Photo-Lithographer, Washington, D. C.

UNITED STATES PATENT OFFICE.

HERMAN PRATHER, OF JONESVILLE, INDIANA.

CORN-PLANTER.

SPECIFICATION forming part of Letters Patent No. 418,747, dated January 7, 1890.

Application filed April 17, 1889. Serial No. 307,536. (No model.)

To all whom it may concern:

Be it known that I, HERMAN PRATHER, a citizen of the United States, residing at Jonesville, in the county of Bartholomew and State of Indiana, have invented a new and useful Improvement in Corn-Planters, of which the following is a specification.

My invention relates to an improvement in that class of machines for planting corn and like seeds in drills in which provision is made for the operator to ride on the machine, and a pair of drill-forming and seed-planting mechanisms are independently mounted on a frame with a driving-shaft common to both.

The object of my invention is to provide improved means for raising and lowering the drill-holes, and for disconnecting the driving mechanism, all as hereinafter fully described.

The accompanying drawings illustrate my invention.

Figure 1 represents a plan; Fig. 2, a side elevation showing the drill-hoe raised; Fig. 3, a section, as seen from line *a*, Fig. 1, looking toward the right and showing the drill-hoe in working position, and Fig. 4 is a transverse section, on a larger scale, of the main frame at *b*, Fig. 1.

The main frame consists of two side beams A A, connected by suitable cross-beams and having at their front ends a long cross-beam B, which projects laterally on each side of the frame.

The main frame is mounted on an axle C, arranged to turn in suitable bearings on the frame, and having at opposite ends carrying-wheels D and E, one of which is secured to the axle so as to turn therewith. A draft-pole F is secured to the front end of the main frame, and a seat G is mounted on the rear part of the frame, the arrangement being such that the weight of the driver when sitting in the seat will serve to counterbalance the draft-pole. For the purpose of adjusting the position of the seat to the weight of the driver it is mounted as follows: A horizontal bar H is secured at a suitable distance above the main frame to the top of a standard, which projects upward and backward from the frame. The seat G is attached to the standard I by a pair of links *j*, arranged one on each side of the standard and pivoted at opposite ends, respectively, to the standard and to the bottom of the seat. Bar H is provided near each end with one or more recesses, as at *c*, and the under side of the seat is provided with corresponding projections *d*, adapted to enter said recesses.

When a light person is to drive, the seat is thrown back to the position shown in full lines in Fig. 2, and it is swung forward to the front, as indicated in dotted lines. When a heavy person is to drive, the seat is held securely in either position by the links and still further steadied by the projections *d*.

A pair of light draft-beams K and L are attached at their forward ends to the projecting ends of the front cross-beam B by means of brackets M and N, to which the drag-beams are pivoted, so as to swing in a vertical plane. Said brackets M and N are adjustably secured to the front beam by bolts *e e*, which may be placed in either of a series of holes in the beam, (indicated by dotted lines *f*,) so that the drag-beams may be moved toward or from the main frame to regulate the distance between rows. Drag-beams K and L are each formed of two flat bars, bent to form a substantially-rectangular frame open at the front end. On the rear ends of each of the drag-beams a seed-box O, a drill-hoe P, and covering-scrapers Q, are mounted.

The seed-box is of that well-known class in which the bottom is provided with a horizontally-revoluble dropping-plate, which need not be particularly described here.

The mechanisms for rotating the dropping-plate and for raising and lowering the drag-beam are alike on both sides of the machine, and I will therefore describe these mechanisms for one side only.

R is a shaft extending along the drag-beam, mounted in bearings thereon, and having at its rear end a bevel gear-wheel S, which engages and drives the dropping-plate (not shown) of the seed-box in the usual well-known manner, and having at the other end a bevel gear-wheel T, which engages a corresponding gear-wheel U, secured to a shaft V. One end of shaft V is journaled in the bracket M, and forms the pivot on which that side of the drag-beam swings, the bar which forms that side of the beam being bent down, as at *g*, to pass the gear-wheel U, and the other end of said shaft is journaled in the side beam of

the main frame. To the inner end of shaft V a sprocket-wheel W is secured, and said sprocket-wheel is connected by a chain belt *h* with a similar sprocket-wheel *i*, which is mounted on the axle C so as to turn easily thereon. The hub of sprocket-wheel *i* is provided with a circumferential groove, adapted to receive the forked end of a bent lever *j'*, which is pivoted at *k*, above the axle, to a cross-beam of the main frame. Said hub is also provided on its end with a notch or shoulder *l*, adapted to engage a pin *m*, inserted in and projecting from the axle, and lever *j'* is so arranged in connection with a spring *n*, secured to the main frame and engaging the lever, that the sprocket-wheel *i* is normally held in engagement with the pin *m*, and is disengaged therefrom by the depression of the horizontal arm of the lever.

For the purpose of raising and locking the drill-hoe out of working position, I mount in suitable bearings on the front cross-beam a rock-shaft *o*, having at opposite ends arms *p* and *r*. Arm *p* and the drag-beam are connected by a link *s*, and arm *r* is connected by a link *t* with a lever *u*, which is fulcrumed at *v* to a standard *w*, erected on the main frame, thus forming a toggle-joint. The long arm of lever *u* is of such length as to be easily within the reach of the driver when sitting on the seat, and the arrangement is such that when the long arm of the lever is thrown down and rests on the horizontal arm of the bent lever *j'*, the toggle-joint formed by the short arm of lever *u* and link *t* is straightened, and the arms *r* and *p* of the rock-shaft *o* are thereby forced forward, and the drag-beam is lifted, so that the drill-hoe is out of engagement, and the toggle being raised a little beyond the center the weight of the drag-beam and its attachments operates to hold the long arm of the lever down against the horizontal arm of lever *j'* with sufficient force to overcome the tension of spring *n* and slide sprocket-wheel *i* along the axle until it is disengaged from the pin *m*, thus stopping the dropping mechanism. When the long arm of the lever is raised, the drag-beam falls to a working position till arrested by the end of link *t* coming in contact with the forward side of the standard *w*, and the dropping mechanism is at the same time put in engagement with the axle by the recoil of spring *n*.

In operation while driving to the field levers *u* are thrown down, thus raising the hoes clear of the ground, and the dropping mechanisms are thrown out of gear, as above described. When at work, the levers *u* are raised, thus allowing the hoes to drop to enter the ground, and the dropping mechanism is operated by the turning of the axle as the machine moves forward.

The depth to which the drill-hoe may go may be regulated by changing the effective length of link *s*, the link being provided with a series of holes *y* for that purpose.

I claim as my invention—

1. In a corn-planter, the combination, with the main frame and the drag-bar hinged thereto, of the rock-shaft *o*, having arms *p* and *r* and mounted on the main frame, lever *u*, also mounted on the main frame, link *s*, connecting arm *p* and the drag-bar, and link *t*, connecting arm *r* and lever *u*, all arranged to co-operate in the manner described and for the purpose set forth.

2. In a corn-planter, the combination, with the main frame, the axle having carrying-wheels secured thereto and supporting the main frame, the sprocket-wheel mounted loosely on the axle and adapted to engage a projection on the axle so as to revolve therewith, the spring arranged to hold the sprocket-wheel normally in engagement with the axle, the drag-bar carrying the seed-dropping mechanism, and intermediate mechanism connecting the seed-dropping mechanism and the sprocket-wheel, of the rock-shaft *o*, having arms *p* and *r*, lever *u*, links *s* and *t*, and lever *j'*, all arranged to co-operate substantially as specified, whereby the sprocket-wheel is disengaged from the axle and held out of engagement therewith by the weight of the drag-bar, as set forth.

HERMAN PRATHER.

Witnesses:
ALBERT BOZELL,
G. W. RAINS.