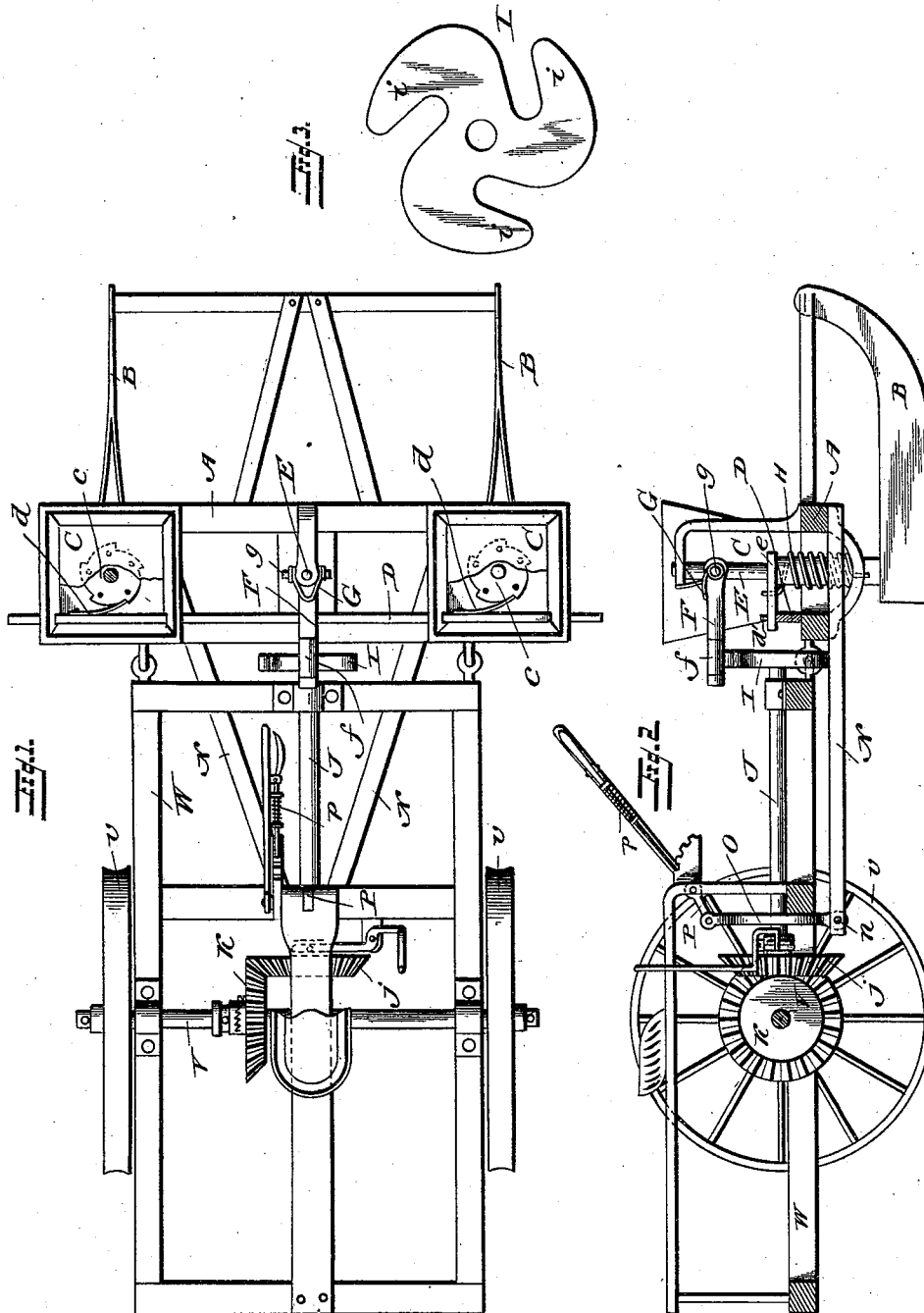


(No Model.)

F. BAYLESS.
CORN PLANTER.

No. 478,498.

Patented July 5, 1892.



Witnesses:
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UNITED STATES PATENT OFFICE.

FRANK BAYLESS, OF WILBERFORCE, OHIO.

CORN-PLANTER.

SPECIFICATION forming part of Letters Patent No. 478,498, dated July 5, 1892.

Application filed March 12, 1892. Serial No. 424,707. (No model.)

To all whom it may concern:

Be it known that I, FRANK BAYLESS, of Wilberforce, in the county of Greene and State of Ohio, have invented certain new and useful Improvements in Corn-Planters; and I do hereby declare that the following is a full, clear, and exact description thereof, reference being had to the accompanying drawings, and to the letters of reference marked thereon, which form part of this specification, in which—

Figure 1 is a plan view of my improved corn-planting machine. Fig. 2 is a vertical longitudinal section through the same. Fig. 3 is a detail of the cam-disk.

This invention is an improvement in machines for planting corn, &c.; and it especially relates to the mechanism for actuating the dropping disks or slides; and it consists, essentially, in novel mechanism for converting a rotary movement of a shaft into reciprocating movements of a dropper-actuating bar, and in certain other novel details of construction and combination of parts herein after described and claimed.

Referring to the drawings by letter, A designates the front frame of the machine, having furrow-openers B B at its ends, and above the openers are seed-boxes C C, which, as shown, are provided with rotatable dropping-disks *c c* of any suitable construction. These disks are operated, as shown, by a reciprocating bar D, lying transversely on frame A and projecting beside both disks and having spring-dogs or ratchets *d d*, which successively engage ratchet-teeth or lugs on the peripheries of the disks and impart a partial revolution to the disks for each complete reciprocation of the bar.

The particular construction of the furrow-openers, seed-boxes, and dropping-disks is not an essential part of my present invention, and any suitable construction of such parts may be employed.

E designates a vertical stub-shaft journaled in brackets or other bearings of suitable construction at the center of the frame A or at a point intermediate the boxes.

e is an arm rigidly connected at one end to the shaft, while its outer end is slotted and engages an upstanding pin *d'* on bar D, so

that when shaft E is rocked back and forth the bar will be reciprocated.

F is a lever connected to the shaft E above arm *e* by a transverse pin *g* in such manner that it can rise and fall or swing vertically without affecting the shaft, but cannot turn sidewise without moving the shaft.

G is a spring attached to pin *g* or the shaft E, as shown, and bearing lever F down at all times.

f is a friction roller or sleeve on the extremity of lever F, which bears upon the periphery of a cam-disk I, mounted on the forward end of a shaft J, journaled in and longitudinally of a frame W, which is shackled at its forward end to frame A, and is supported on a transverse rotatable axle or shaft V, carried by wheels *v v*, fixed thereto.

K is a bevel-gear on the shaft V, which meshes with a bevel-gear *j* on shaft J, thereby imparting rotary motion to shaft J and disk I from shaft V. Gear K is preferably loose on shaft V, but may be locked thereto by a suitable clutch. Gear *j* may be loose on shaft J but provided with a locking-clutch, or shaft J may be made in two parts connected by a clutch. The object of the clutch connections to one of said parts is to enable the revolution of disk I to be stopped without stopping the movement of shaft V when the machine is on the road or turning in the field where it is not desired to plant seed.

Disk I is formed with three radial cam-arms *i*, which are bent or curved backward, so that their outer edges are on lines convolutely curved to the axis of the disk, as shown in Fig. 3. The end of lever F overreaches the edge of the disk, and its roller *f* always bears against the outer or left-hand edge of the upmost arm *i* of the disk, being held in contact therewith by spring G, which bears it down, and by a spring H, which is connected to shaft E and frame in such manner as to force the shaft and arms to revolve toward the right-hand side of the machine and move bar D back also. Instead of attaching spring H to shaft E, springs could be attached to frame A and bar D, so as to draw the latter back after it is thrown forward by means of the cam, lever, shaft, and arm, as will be readily understood. In other words, any arrange-

ment of springs may be employed which will throw the bar D and shaft and lever back to normal position after they have been shifted by the action of the cam-disk. The cam-disk having three arms, lever F will be shifted three times for each revolution of shaft J, and consequently bar D reciprocated three times forward by the positive rocking of the shaft E and three times backward by the counter action of the springs. The number of arms on disk I might be increased or diminished, but three will give about the best results. For each reciprocation of bar D a planting of seed will be dropped from the boxes, and the distance apart of the plantings may be determined, first, by the circumference of the wheels *v*, and then by the relative sizes of gears K *j*. In practical use the gear *j* may be removable and another larger or smaller gear substituted therefor, according to whether the plantings are to be farther apart or nearer together. If the gear *j* be relatively much smaller than gear K, the bar D can be reciprocated so rapidly as to practically "drill" the seed. Instead of using interchangeable gears *j* a disk having two or more concentric series of gear-teeth may be used on shaft J, gear K being adapted to be shifted into engagement with either set of teeth, thus varying the relative rotations of shafts J and V. I contemplate, also, using slide-droppers in the seed-boxes in some cases, if desired, which will be connected to and operated by bar D.

N N are yoke-bars connected to frame A and extending backward under frame W to about the center thereof, their rear ends being connected by a rod *n*.

O is a split link loosely connected by one end to rod *n* and embracing shaft J, (with which, however, it has no connection,) and its upper end is connected to a crank-arm P, operated by a lever *p*, which is arranged on frame W within convenient reach of the driver. The driver's seat is on frame W and the lever for operating the clutch for regulating the driving of shaft J from shaft V is in easy reach. The shaft J prevents link O moving laterally, but allows it free vertical adjustment, and by this link the relative horizontal positions of frames A and W and the depth of furrows may be regulated. Wheels *v v* may be constructed to serve as furrow-closers, or any suitable furrow-closing devices may be attached to the machine.

Having described my invention, what I claim as new, and desire to secure by Letters Patent thereon, is—

1. The combination of the frame, the seed-boxes, the reciprocating dropper-actuating bar, the vertical rock-shaft operating said bar, the horizontally-projecting vertically-yielding lever connected to said rock-shaft, and a revolving cam-disk for operating said lever, substantially as described.

2. The combination of the reciprocating bar, the vertical rock-shaft having a horizontal arm connected to said bar, the horizontal swinging lever connected to said bar, and the rotatable cam-disk operating said lever, and springs for throwing said parts back to normal position, substantially as described.

3. The combination of the dropper-actuating bar, a rock-shaft, an arm connecting said shaft and bar, a vertically-swinging spring-controlled lever connected to said shaft, a friction-sleeve on the end thereof, and a revolvable cam-disk upon which the free end of said lever bears, substantially as and for the purpose specified.

4. The combination of the reciprocating dropper-actuating bar, the spring-controlled rock-shaft for shifting said bar, and the lever connected to said rock-shaft, with the frame mounted on a rotatable wheeled shaft, the longitudinal shaft geared to said wheeled shaft, and the cam-disk on the end of the longitudinal shaft engaging said lever, substantially as described.

5. The combination of the furrow-opening frame, the wheeled frame shackled thereto, the longitudinal shaft journaled in the wheeled frame, a cammed disk mounted on the front end of said shaft, and mechanism for operating said longitudinal shaft from the main wheels, with the dropper-actuating bar on the furrow-opening frame, the vertical rock-shaft for operating said bar, and the lever connected to said rock-shaft and bearing against the cams of said disk and operated thereby, substantially as described.

6. The combination of the seed-boxes, dropping mechanism therein, and the reciprocating actuating-bar therefor, with the spring-controlled rock-shaft, its arm connected to said bar, and the spring-controlled swinging lever connected to said shaft, and a revolvable cam-disk engaging the free end of the lever, substantially as described.

7. The combination of the furrow-opening frame, its seed-boxes, and reciprocating dropper-actuating bar, the rear frame, its wheeled axle, the yoke connected to the front frame, and the adjusting-link connections between said yoke and rear frame, the transverse shaft in the rear frame, the gearing for operating said shaft, the cam-disk on the front end thereof, the rock-shaft on the front frame, the lever connected thereto and engaging said disk, and the springs for throwing said shaft, lever, and reciprocating bar back to normal position, all substantially as and for the purpose set forth.

In testimony that I claim the foregoing as my own I affix my signature in presence of two witnesses.

FRANK BAYLESS.

Witnesses:

T. D. PRATTIS,
J. P. SHORTER.