(No Model.) 2 Sheets—Sheet 1.

J. W. BAPPLE.

COMBINED SELF DROPPING CORN PLANTER AND CHECK ROWER.

No. 266,413. Patented Oct. 24, 1882.

Fig. 1.

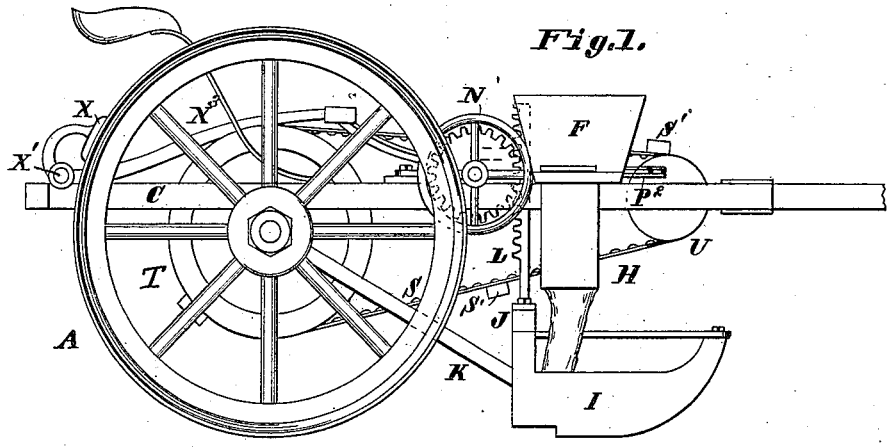


Fig. 2.

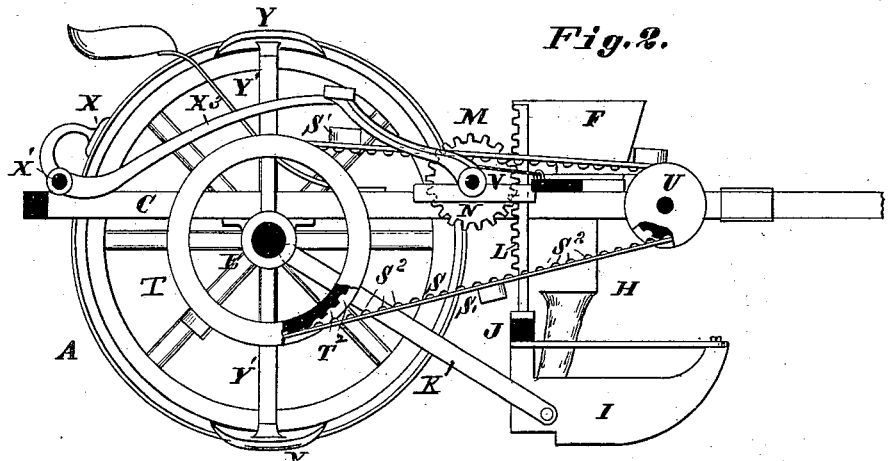
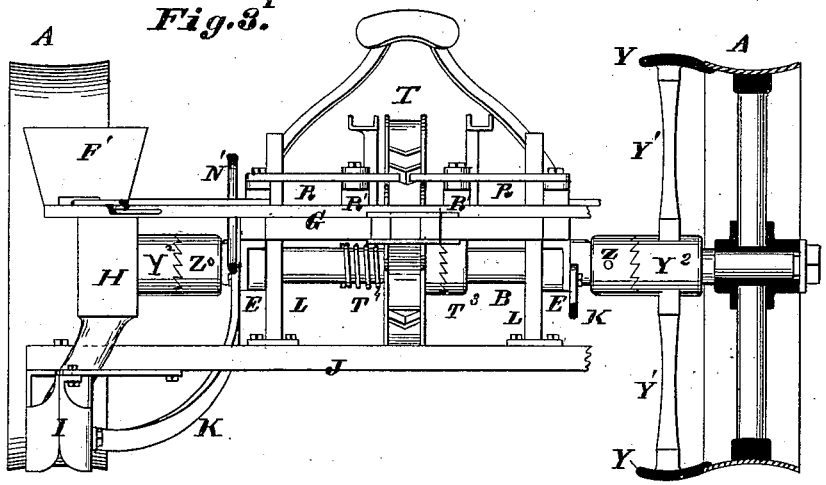


Fig. 3.



Attest:

Charles Pickles
Wm. S. Sayers

Inventor.

James W. Bapple
By Knight Bros
Attys.

(No Model.) 2 Sheets—Sheet 2.

J. W. BAPPLE.

COMBINED SELF DROPPING CORN PLANTER AND CHECK ROWER.

No. 266,413. Patented Oct. 24, 1882.

Fig. 4.

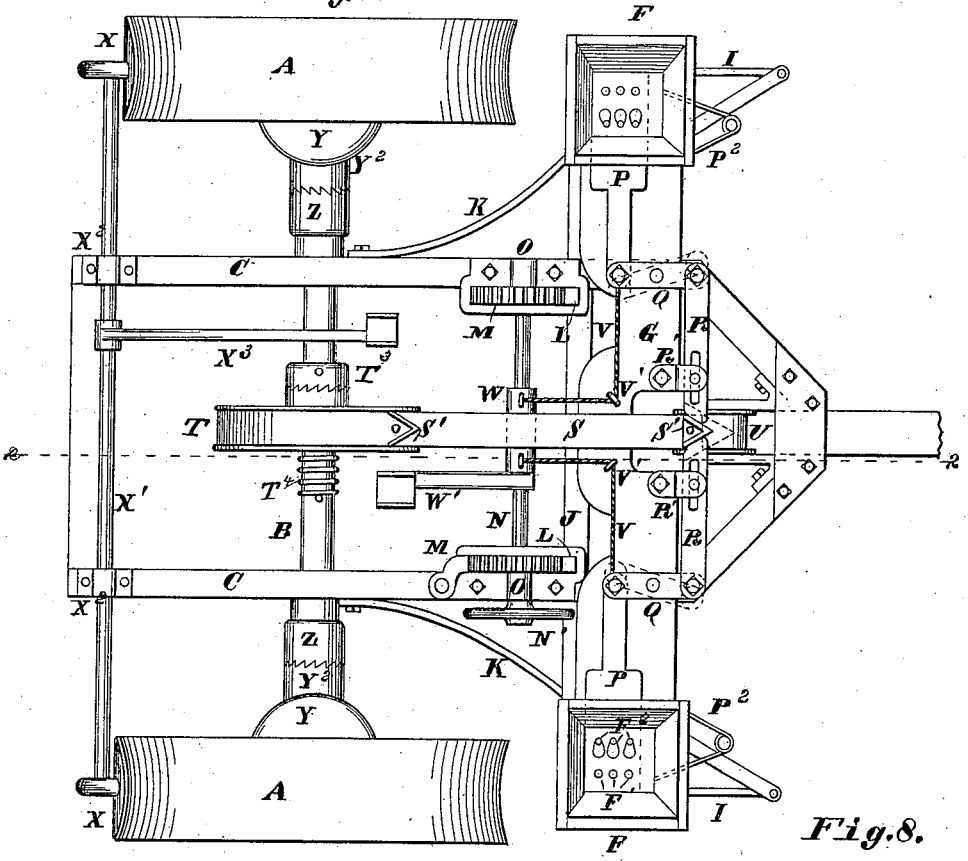


Fig. 5.

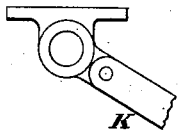


Fig. 6

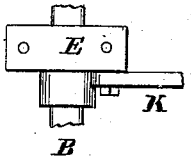


Fig. 7.

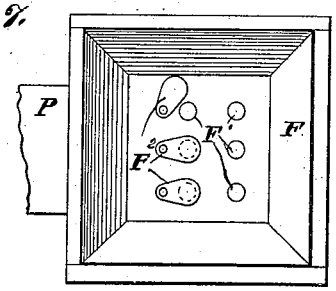


Fig. 8.

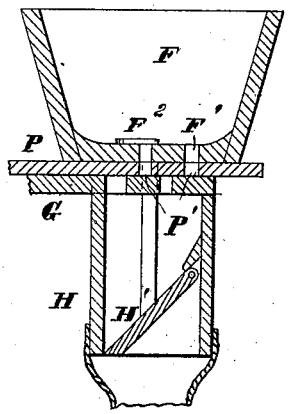
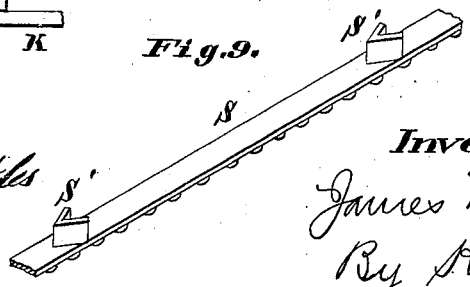


Fig. 9.



Attest:

Charles Pickles
Wm. S. Sayers.

Inventor:

James W. Bapple
By Knight Bros.
attys.

UNITED STATES PATENT OFFICE.

JAMES W. BAPPLE, OF SEDALIA, ASSIGNOR OF ONE-HALF TO JOSEPH ENGLAENDER, OF ST. LOUIS, MISSOURI.

COMBINED SELF-DROPPING CORN-PLANTER AND CHECK-ROWER.

SPECIFICATION forming part of Letters Patent No. 266,413, dated October 24, 1882.

Application filed June 20, 1882. (No model.)

To all whom it may concern:

Be it known that I, JAMES W. BAPPLE, of Sedalia, in the county of Pettis and State of Missouri, have invented a new and useful Improvement in Combined Self-Dropping Corn-Planter and Check-Rower, of which the following is a full, clear, and exact description, reference being had to the accompanying drawings, forming part of this specification, and in which—

Figure 1 is a side elevation. Fig. 2 is a longitudinal section on line 2 2, Fig. 4. Fig. 3 is a rear view, part in section. Fig. 4 is a top view. Fig. 5 is an enlarged side view of one of the journals for securing the frame to the revolving axle, and Fig. 6 is a top view of same. Fig. 7 is an enlarged top view of one of the seed-boxes, and Fig. 8 is a section of same. Fig. 9 is a detail perspective view of the belt which operates the seed-slides.

My invention relates to a machine which is self dropping and marking; and my invention consists in the points of novelty hereinafter set forth and claimed.

A A represent the ground-wheels, which are rigidly secured to their axle B.

C is the frame of the planter, supported by the axle and secured thereto by means of journal-boxes E E. Thus the axle can turn freely with the wheels.

F F are the seed-boxes, connected and supported by a suitable cross-piece, G. The boxes have legs H H, which convey the grain to the shoes I I. The shoes are connected by means of a cross-piece, J, and they are connected by strengthening-braces K K to the journal-boxes E E. Vertical racks L L are secured by their lower ends to the connecting-piece J, and they engage with cog-wheels M M on a shaft, N, having journal-bearings in boxes O O, secured to the frame C. Upon one end of the shaft N is a hand-wheel, N′, by which the shaft can be turned to raise the shoes from the ground, when desired.

P P are the seed-slides, hinged by their outer end to short levers Q Q, pivoted to the cross-piece G. To the other ends of the levers are hinged arms R R, whose other ends are slotted and held in place by brackets R′ R′. The back corners of the adjacent ends of the arms R R are rounded off so as to receive and work upon and be operated by V-shaped cams S′, secured to a belt, S, which passes around and is driven by a wheel, T, secured to the axle B. This wheel has side flanges, and its periphery is provided with transverse grooves T^2, which receive ribs S^2 on the belt, and thus there is no danger of the belt slipping on the wheel. The forward bearing of the belt is over a small wheel, U, journaled to the frame and constructed similarly to that T. Thus as the ground-wheels turn the belt moves forward, and the cams passing between the ends of the arms operate the seed-slides. The seed-slides have a double set of drop-openings, P′, corresponding to similar openings, F′, in the bottom of the seed-boxes. There are preferably three openings in each set or series, as shown. One set or series of these openings in the seed-box is provided with independent valves F^2, and thus the quantity of grains dropped at each movement of the seed-slides can be regulated. When the seed-slides have been moved forward by the belt, and the shoe has passed, they are thrown back by springs P^2 P^2, which brings the openings in them beneath the openings of the seed-boxes, allowing them to be filled with grain. There are preferably grain-rests H′ in the legs H, which are automatically opened by the seed-slides; but I claim no novelty therein.

The seed slides may be thrown out of gear with the belt by means of cords V V, secured to the ends of the seed-slides, passing through staples V′ in the cross-piece G, and connected by their other ends to a rock sleeve, W, on the shaft N. On one end of the sleeve is a treadle or foot-lever, W′, by which the sleeve can be rocked, and thus the driver, while sitting on his seat, can throw the seed-slides back, when desired, so that they will not be operated by the moving belt.

X X are scrapers for cleaning the peripheries of the ground-wheels. They are on the opposite ends of a rock shaft, X′, which has journal-bearings in boxes X^2, secured to the frame C.

X^3 is a foot-lever, rigidly secured to the shaft X′, and by pressing upon this lever the scrapers may fill the office of brake-shoes.

Y Y are markers secured by arms Y′ to sleeves Y^2 Y^2 on the axle B. These markers are made to turn with the wheels, and they check or mark the ground the desired distance apart for the rows of corn, so that in crossing the field in one direction marks are made which will be guides for the driver while crossing the field in the other direction. The inner ends of the sleeves Y^2 are provided with teeth which interlock or engage with similar teeth on the outer ends of collars Z, which are rigidly secured to the shaft. Thus the markers are made to turn with the ground-wheels. The arms of the markers are made sufficiently light to be capable of springing slightly, and it will be seen that there is distance enough between the outer ends of the sleeves Y^2 and the inner ends of the wheel-hubs for the sleeves to be slid endwise sufficiently to be disengaged from the collars. Thus, if when a field has been crossed the markers are not in the proper positions, (or if one is and the other not, their relative position having been changed in turning around,) for recrossing they are simply turned backward, the inclines of the teeth slipping over each other, springing the sleeves outward until they are in the proper positions for dropping the next hills of corn. When the markers of both wheels have the same relative positions and the belt is not in the proper position to drop the next hills of corn in the right place the position of the belt will have to be changed only. The wheel T is loose upon the shaft, and is turned by means of teeth-connection with a collar, T^3, secured to the shaft B, so as to turn with it. The wheel is held into engagement with the collar by means of a spiral spring, T^4. Now, when it is desired to change the position of the belt the wheel T is moved endwise on the shaft, compressing the spring and disengaging it from the collar, so that it can be turned to adjust the belt.

I claim as my invention—

1. In a planter, the combination of slides P P, swinging levers Q Q, arms R R, springs for pressing said slides outward, belt S, provided with cams S′, adapted to force the arms apart, and the wheels T and U, as set forth.

2. In a planter, the combination of belt S, provided on its outer side with cams S′, and transverse ribs S^2 on its inner side, the belt-supporting wheels T U, having transverse grooves T^2, the slides P, springs P^2, levers Q, and arms R, as set forth.

3. In a planter, the combination of slides P P, cords V V, guides V′ V′, shaft N, rock-sleeve W, and foot-lever W′, as set forth.

4. In a planter, the combination of markers Y Y, mounted on arms Y′ Y′, extending from sleeves Y^2 Y^2, clutch-collar Z, axle B, wheels T and U, having grooves T^2, belt S, having cams S′, and ribs S^2, slides P P, arms R R, and levers Q Q, as set forth.

JAMES W. BAPPLE.

Witnesses:
JULIUS HAMMERSTEIN,
GEO. H. KNIGHT.