

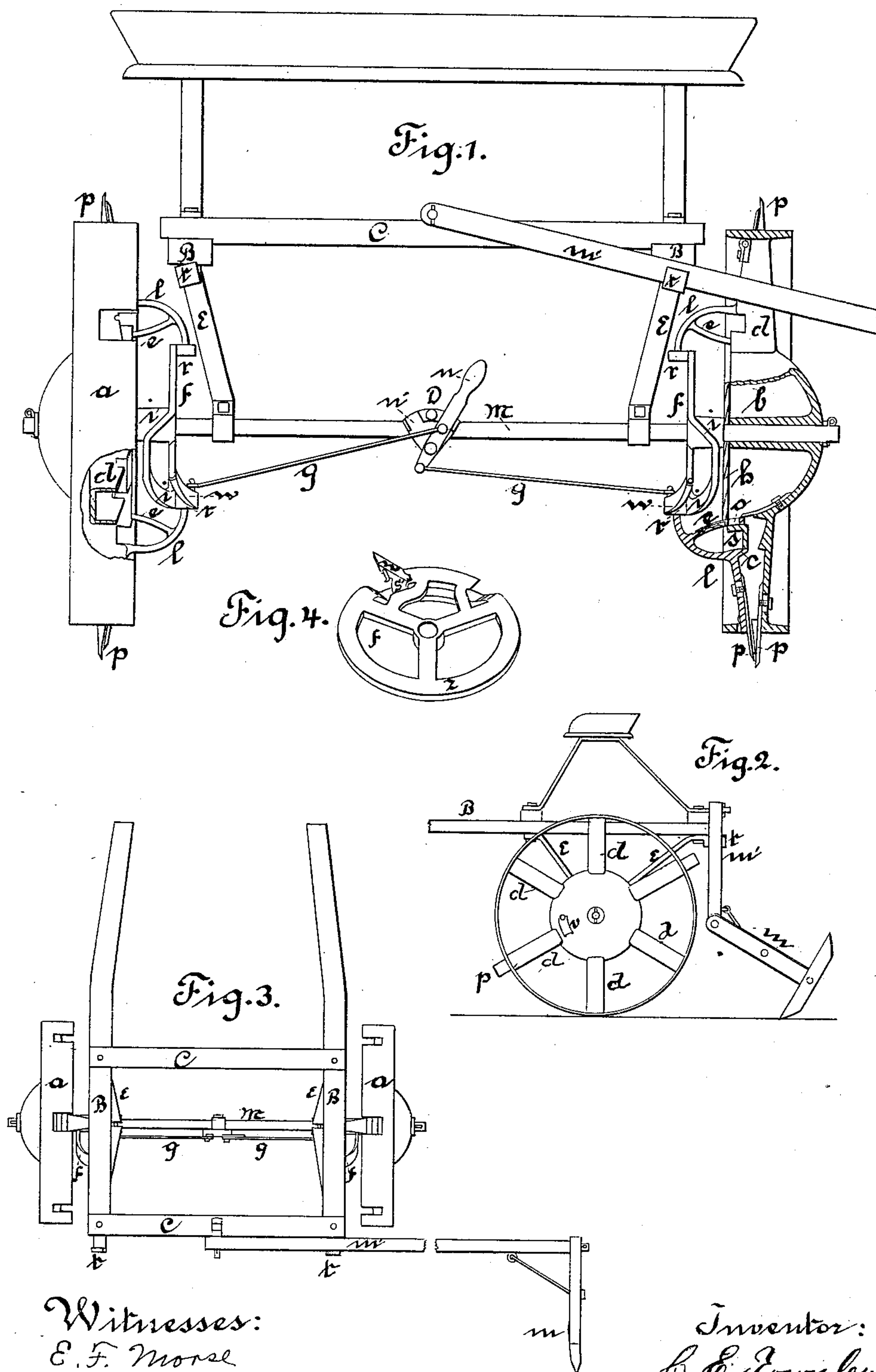
(No Model.)

C. E. TOWNLEY.

CORN PLANTER.

No. 335,255.

Patented Feb. 2, 1886.



Witnesses:
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UNITED STATES PATENT OFFICE.

CHARLES E. TOWNLEY, OF SOUTH LANSING, NEW YORK.

CORN-PLANTER.

SPECIFICATION forming part of Letters Patent No. 335,255, dated February 2, 1886.

Application filed March 27, 1885. Serial No. 160,209. (No model.)

To all whom it may concern:

Be it known that I, CHARLES E. TOWNLEY, a citizen of the United States, residing at South Lansing, in the county of Tompkins and State of New York, have invented a new and useful Corn-Planter, of which the following is a specification.

My invention relates to improvements in corn-planting sulkies in which the seed-box is a part of the supporting-wheels; and the objects of my invention are, first, to provide a simple and effective mechanism for dropping the seed-corn; second, to provide an effective and strong way to attach the marker to the sulky. I attain these objects by the mechanism illustrated in the accompanying drawings, in which—

Figure 1 is a rear elevation of my corn-planter with a part of the marking mechanism removed and a portion of both wheels broken or cut away, showing a vertical sectional view of a part of one wheel through its center on the one side, and a transverse section of an arm of the wheel on the other side. Fig. 2 is a side elevation of the same. Fig. 3 is a top view of the planter with the seat removed, and Fig. 4 is a detail view of a part of the same.

Similar letters refer to similar parts through the several views.

The axle M, thills B B, bars C C, and braces E E constitute the frame-work of the machine. The supporting-wheels *a* are hung loosely to axle M, so as to be free to turn on it, and each of them is provided about its bearing with a semispherical cavity, *b*, for holding the seed. The plane side of the cavity is inclosed by the plate *h*, which is securely attached to the wheel. Radiating from this cavity, and connecting the semispherical part of the wheel to the rim, are the grooved arms *d*, a transverse section of one of which is shown in Fig. 1. Left-hand-wheel cams *f*, for actuating levers *l*, are rigidly attached to axle M, which is prevented from turning by being rigidly attached to the frame-work of the machine. The cams *f* are formed, as shown in Fig. 4, with two inclined surfaces, *i i'*, which connect the two portions of their surfaces lying in parallel planes, and are provided with detached surfaces in the plane of the part *z* of the cam, to which are hinged wings *w*, which are connect-

ed by rods *g* to lever *n*, which is pivoted to casting D, secured to the axle. Lever *n* is held in position by springing into notches *n'* in casting D. Each of the wings *w* has a stop, *s'*, Fig. 4, that hooks under the cam-arm and prevents its opening too far. By operating lever *n* the wing *w* can be swung into the plane of the part *z* of the cam, or into the position shown in Fig. 4. Levers *l*, which are pivoted to the grooved arms *d* near the rim, and form with the grooved arms tubes through which the seed is fed, extend radially, and are provided at their ends with rollers *r*, that follow the face of the cam *f* as the levers *l* revolve with the wheel, thus causing the levers to rock back and forth about their axes at every revolution of the wheel, as hereinafter shown. Each of levers *l* has as part of it, or attached to it, two valves, *e* and *c*. The valve *e* is provided with an aperture, *o*, directly above which, when the lever is in the position shown in Fig. 1, is an opening leading into the cavity *b*, and below which is the plate *s*. The size of the aperture *o* can be adjusted by a slide, as shown. The valve *c* closes the tube when the lever is rocked toward the wheel. The tube being contracted at this point will be closed before the lever is rocked far enough to drop the corn from aperture *o*. The plates *p p*, which are bolted to the arms *d* and levers *l*, respectively, extend the tubes beyond the rim of the wheels, and as the wheel revolves make holes in the ground, into which the seed is dropped. The depth the corn is planted depends upon the amount these plates project beyond the wheel, and can be adjusted, as the holes in the arms and levers through which the bolts securing the plates *p p* pass are long slots, thus affording means of moving the plates so as to project more or less beyond the rim. The ends of the plates *p p* may be prevented from interfering as they are set out by making the arm *d* or lever *l*, or both, of circular form where they come in contact with the plates.

The marker *m* is made of a double-pointed tooth attached to a bar, and is pivoted to the end of arm *m'*, thus allowing it to vibrate in a longitudinal and nearly vertical plane, whereby the pointed tooth can mark the uneven surface of the ground more nearly parallel to tracks of the wheels than it would were the

arm m' adapted to vibrate in a vertical transverse plane and the marker rigidly attached to it, which is the common method. The arm m' is pivoted to the middle of the rear cross-bar, C, and is supported and firmly held in position by the hook t , which may be an extension of brace E. The arm m' can be turned about its pivot, so as to hold the marker on either side of the sulky.

10 In operation, the corn having been put into the cavity b by removing the lid v , and the wheels set so as to plant at the same time, the corn falls into and fills the apertures o as the wheels revolve. When the plates p p 15 reach the lowest point, the rollers r come in contact with the inclined wings w , which cause the rollers to run down the first incline, and thus throw the lever l toward the wheel and separate the plates p p at their lower ends, 20 thus allowing the corn that had previously fallen to the lower end of the tube to drop into the ground. At the same time the corn in aperture o is carried by the rocking of lever l beyond the plate s and falls onto the 25 valve c . The rollers r follow the surface of the cam nearest the wheel until levers l nearly reach a horizontal position, when the rollers come in contact with the second inclines, i' , and in following their surfaces throw the levers 30 back to their former position, thus opening the valve c and allowing the corn to fall to the lower end of the tube, which it does before reaching the planting position. The rollers r then follow the plane surfaces of the cams until they reach the wings w again. This operation is repeated as the wheels revolve.

The amount of corn planted in each hill is regulated by the slide, which affords means of changing the size of aperture o .

40 In the drawings two arms of each wheel are represented as being utilized as channels for the corn, but as many arms as desired may be used for this purpose.

The machine is stopped dropping corn by

shifting lever n to the other notch, n' , thus 45 turning the wings w into the plane of the part z of the cam, so that the rollers can pass smoothly over the wings w and follow the plane surface of the cam throughout the complete revolution of the wheel. 50

It may be remarked that while wings w and inclines i' react upon and rock the levers l , the inclines adjacent to wings w serve only to connect and make the surface of the cam continuous, and are therefore not essential. 55

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

1. The lever l , pivoted to arm d and forming with it a seed-tube, said lever having as a part of or attached to it a feeding-valve, e , and a 60 stop-valve, c , whereby when the lever is rocked the seed is fed from cavity b through the tube and into the ground, substantially as described.

2. The wheel a , having a seed-cavity, b , about its axis, and grooved arms d , in combination 65 with levers l , pivoted to said arms, said levers having as a part of or attached to them feeding-valves e and stop-valves c , and being rocked by cam f , substantially as and for the purpose set forth. 70

3. The cam f , rigidly attached to the axle, and having the inclined surface i' and hinged wing w , in combination with lever l , substantially as and for the purpose set forth.

4. The wing w , hinged to cam f , in combination 75 with connecting-rod g and lever n , whereby the planter can be thrown in and out of operation, substantially as described.

5. The marker m , provided with a double-pointed tooth and pivoted to reversible arm 80 m' , which is pivoted to the central part of the sulky and supported by hook t , substantially as and for the purpose set forth.

CHARLES E. TOWNLEY.

Witnesses:

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