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R. THOMPSON.

CORN PLANTER.

APPLICATION FILED DEC. 12, 1903.

NO MODEL.

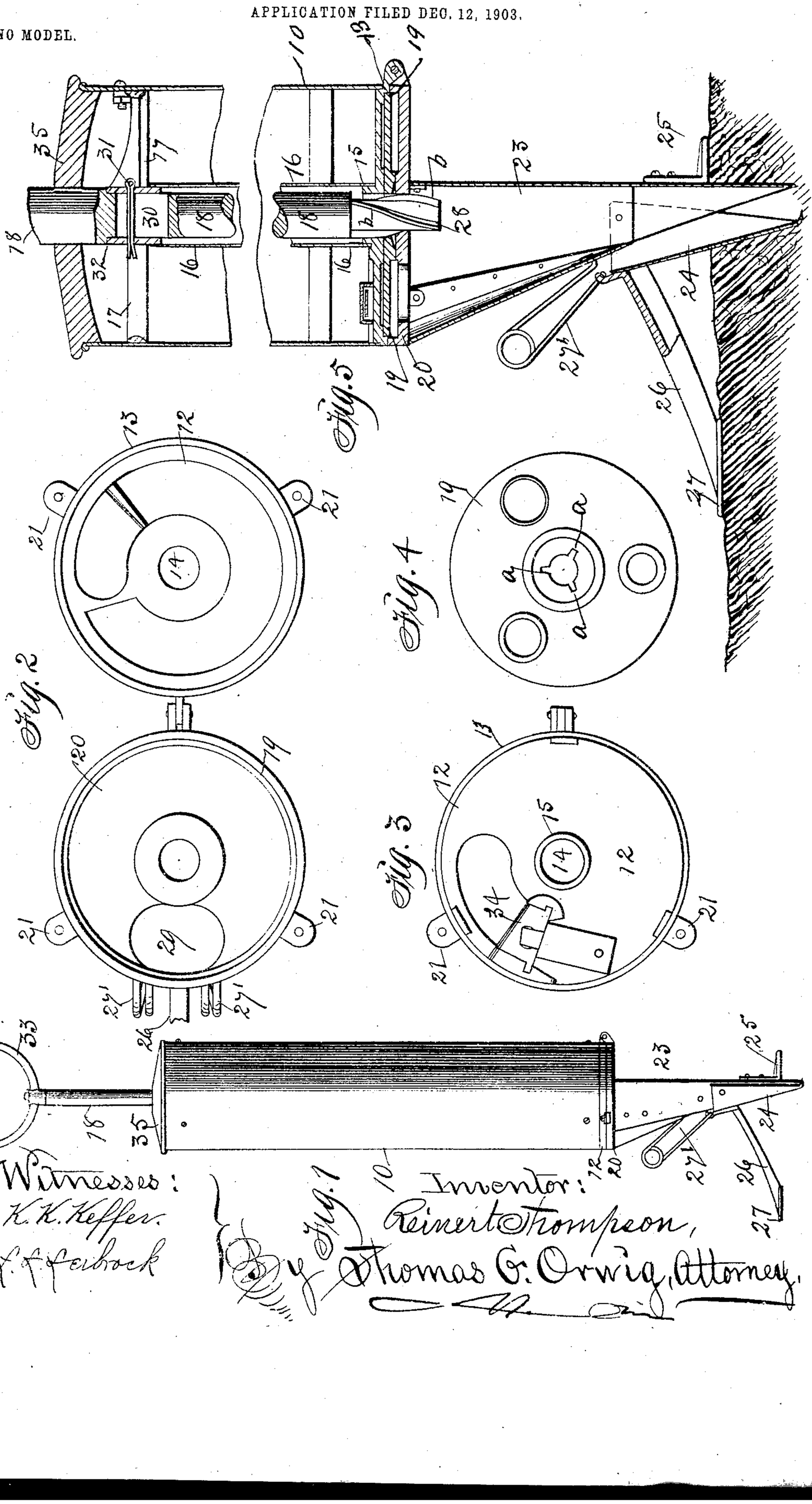

Fig. 1

Fig. 2

Fig. 3

Fig. 4

Fig. 5

Witnesses:
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UNITED STATES PATENT OFFICE.

REINERT THOMPSON, OF MOUNT MORRIS, WISCONSIN.

CORN-PLANTER.

SPECIFICATION forming part of Letters Patent No. 774,711, dated November 8, 1904.

Application filed December 12, 1903. Serial No. 184,978. (No model.)

To all whom it may concern:

Be it known that I, REINERT THOMPSON, a citizen of the United States, residing at Mount Morris, in the county of Waushara and State of Wisconsin, have invented a new and useful Corn-Planter, of which the following is a specification.

My object is to provide a neat, strong, and durable corn-planter adapted to be manually operated on prepared ground anywhere and specially adapted to be advantageously operated by a person in fields where stones, stumps, and other obstructions prevent the use of corn-planter mechanism mounted on a carriage.

My invention consists in the construction, arrangement, and combination of parts, as hereinafter set forth, pointed out in my claims, and illustrated in the accompanying drawings, in which—

Figure 1 is a side view of the complete implement ready for use. Fig. 2 is an enlarged bottom view of the cylinder and top view of the seed-conveyer and automatic dropper hinged to the lower end of the cylinder. Fig. 3 is a top view of the bottom of the cylinder detached from the cylinder. Fig. 4 is a top view of the seed-dropper disk, that has a plurality of seed-cups that vary in size. Fig. 5 is a sectional view of the cylinder, that shows the positions of the different operative parts relative to each other and the cylinder.

The numeral 10 designates a cylinder about fourteen inches long and four inches in diameter, preferably made of sheet metal. A cast-metal bottom 12 has an annular flange 13 projecting upward at its circumference to engage the outside surface of the lower end of the cylinder 10. It has an aperture 14 at its center and a flange 15 around the aperture to engage the inside surface of a tube 16, fitted thereto and fixed in concentric position with the cylinder by means of said flange 15 and a frame 17, fixed in the top portion of the cylinder, as shown in Fig. 5, or in any suitable way as required to retain a reciprocating wooden stem 18, slidably connected with the tube 16, and an oscillatable seed-dropper plate 19, fitted to the under side of the fixed bottom 13 and on top of an auxiliary disk 20, hinged to the bottom of the cylinder 10, as shown in Figs. 1 and 5, or in any suitable way that interchangeable and oscillatable seed-dropping plates 19 can be put in place and removed at pleasure. The disks 13 and 20 are provided with integral perforated lugs 21, that adapt them to be detachably fixed together by means of screws, as shown in Fig. 1.

To the under side of the hinged plate 20 is fixed a tubular seed-conveyer 23, and to its lower end portion is hinged a spring-actuated valve 24, adapted to be opened and closed automatically as required for dropping seeds at intervals, and to the rear face of the conveyer is fixed a heel 25 in the form of a bracket adapted to restrict the penetration of the end of the seed-conveyer 23 into the ground, and to the front face and top portion of the valve 24 is fixed a foot 26, that projects downward and forward and terminates in a flat and widened toe part 27, adapted to engage the surface of the ground and to open the valve 24, as required to drop seeds into the cavity made in the loose soil, by the joint action of the lower end of the conveyer 23 and the foot 26. The spring 27′, fixed to the conveyer 23, engages the top end of the foot-piece 26 and normally retains the valve 24 closed, and when the pointed end of the conveyer 23 is forced into the ground the valve 24 will be automatically opened and will widen the cavity in the ground and allow the seeds to spread apart, so that the plants will not all grow up in close contact with each other.

The seed-dropper plate 19 has a central aperture and a plurality of open cam-grooves *a*, and to the lower end of the stem 18 is fixed a metal extension 28, that has spiral ribs or cams *b* adapted to traverse the grooves *a* in the plate 19 to oscillate said plate every time the pointed end of the conveyer 23 is pressed into the ground by means of the stem 18, to which is fixed a metal extension 28, that has spiral ribs or cams *b* adapted to traverse the grooves *a* in the plate 19 to oscillate said plate every time the pointed end of the conveyer 23 is pressed into the ground, as required, to convey seeds in one of its cups to the opening 29 in the plate 20, so as to allow them to drop down through the conveyer 23.

The stem 18 is provided with a slot 30 and

a key 31, extended through said slot, fixed in the hub of the frame 17 in such a manner that the stem is allowed up and down motions, but no rotary motion, and an annular shoulder 32 on the stem restricts its vertical reciprocating motion. A handle 33 is fixed to the top of the stem 18 for carrying and operating the complete implement.

A spring-actuated plate 34, hinged to the plate 13, serves as a cut-off, as required, to restrict the passage of more seeds than are desired to be dropped at one time. A removable cover 35 is fitted to the top of the cylinder 10 and provided with a central aperture, through which the stem 18 is extended.

In the practical use of my invention when seeds are placed in the cylinder and the complete implement carried by a person walking in a furrow the distance between the points where seeds are to be dropped can be regulated by the steps of the operator and the seeds dropped and planted in the ground by simply pressing the lower pointed end of the implement into the loose soil and then lifting it out again.

Having thus described the purpose of my invention and the construction and function of each element and subcombination, the practical operation and utility of the implement will be readily understood by persons familiar with the art to which it pertains.

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

1. In a hand corn-planter, a cylinder having a fixed bottom provided with a central aperture, and a flange around the aperture, a tube fixed in said frame, a frame fixed in the top of the cylinder, a reciprocating stem slidably connected with said frame and provided with an annular shoulder to restrict its vertical motion and also provided with means to prevent rotary motion, arranged and combined to operate in the manner set forth, for the purposes stated.

2. In a hand corn-planter, a cylinder having a fixed bottom provided with a central aperture, a frame fixed in the top of the cylinder, a reciprocating stem slidably connected with said frame and provided with an annular shoulder to restrict its vertical motion and also provided with means to prevent rotary motion, a bottom fixed to the cylinder and provided with a central aperture and a vertical flange around the aperture and a tube fixed to said flange and the frame at the top of the cylinder and a seed-dropper plate hinged to the fixed bottom and provided with an aperture for the passage of the stem, arranged and combined to operate in the manner set forth for the purposes stated.

3. In a hand corn-planter, a cylinder having a fixed bottom provided with a central aperture, a frame fixed in the top of the cylinder, a reciprocating stem slidably connected with said frame and provided with an annular shoulder to restrict its vertical motion, a bottom fixed to the cylinder and provided with a central aperture and a vertical flange around the aperture and a tube fixed to said flange and the frame at the top of the cylinder, a circular plate hinged to the fixed bottom and provided with a central opening for the passage of the stem and an aperture at its circumference for the passage of seeds, arranged and combined to operate in the manner set forth for the purposes stated.

4. In a hand corn-planter, a cylinder having a fixed bottom provided with a central aperture, a frame fixed in the top of the cylinder, a reciprocating stem slidably connected with said frame and provided with an annular shoulder to restrict its vertical motion, a bottom fixed to the cylinder and provided with a central aperture and a vertical flange around the aperture and a tube fixed to said flange and the frame at the top of the cylinder, a circular plate hinged to the fixed bottom and provided with a central opening for the passage of the stem and an aperture at its circumference for the passage of seeds, a seed-dropper plate provided with a central aperture for the passage of the reciprocating stem and a plurality of seed-cups, placed on top of said hinged plate and means for oscillating said seed-dropper plate, arranged and combined to operate in the manner set forth for the purposes stated.

5. In a hand corn-planter, a cylinder having a fixed bottom provided with an aperture for the passage of seeds and a cut-off on its top to limit the quantity of seeds passed at a time and a central flanged aperture, a tube fixed to said flange, a reciprocating stem fitted in the tube and provided with spiral cams, a circular plate hinged to the fixed bottom and provided with a central opening for the passage of the stem and an aperture for the passage of seeds and a seed-dropper plate provided with a central aperture and cam-grooves for the passage of the spiral cams and reciprocating stem and also provided with a plurality of seed-cups, arranged and combined as shown and described for the purposes stated.

6. An implement for planting corn, comprising a cylinder having a fixed bottom provided with a seed-passage and a central aperture, a plate hinged to the bottom and provided with an aperture for the passage of a reciprocating stem and an opening for the passage of seeds, a disk having seed-cups and a central aperture provided with cam-grooves placed on the hinged bottom, a seed cut-off on top of the fixed bottom, a frame fixed in the top portion of the cylinder, a reciprocating stem slidably connected with said frame and provided with spiral cams at its lower end to traverse said cam-grooves in the disk, a seed-conveyer fixed to the hinged bottom

and pointed at its lower end, a valve hinged to the lower end of the seed-conveyer, a heel fixed to the conveyer to restrict the depth of the penetration of the pointed end of the conveyer into the ground, a foot fixed to the valve and a spring fixed to the conveyer and connected with the valve and foot, arranged and combined to operate in the manner set forth for the purposes stated.

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