

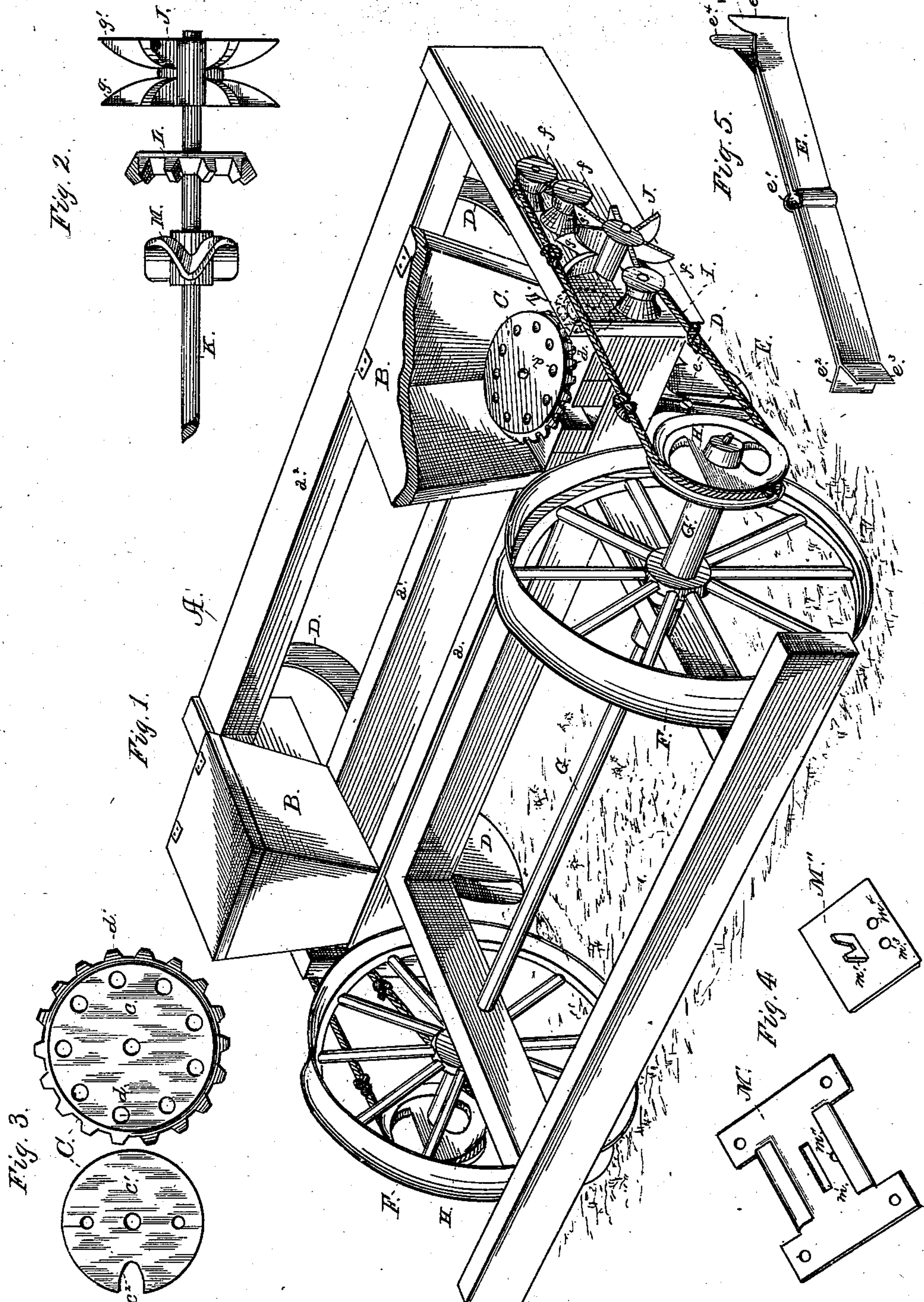
(No Model.)

W. H. KUSSMAUL & F. REIGER

CORN PLANTER.

No. 256,487.

Patented Apr. 18, 1882.



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UNITED STATES PATENT OFFICE.

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CORN-PLANTER.

SPECIFICATION forming part of Letters Patent No. 256,487, dated April 18, 1882.

Application filed January 16, 1882. (No model.)

To all whom it may concern:

Be it known that we, WM. H. KUSSMAUL, of Springfield, in the county of Sangamon and State of Illinois, and FRITZ REIGER, of Springfield, in the county of Sangamon and State of Illinois, have invented a new and useful Improvement in Corn-Planters; and we do hereby declare that the following is a full and exact description of the same, reference being had to the accompanying drawings, and to the letters of reference marked thereon.

The invention hereinafter described has reference to that class of inventions known as "corn-planters," and has for its object the securing of a planter which will be simple and cheap in construction and perfect in operation.

It consists of certain novel combinations by means of which the above objects are obtained, the principal elements composing such combinations being an endless knotted cord or wire, which passes over a star-wheel situated on the end of a bar, which extends entirely across the planter on a line that will bring it under the feed-boxes, and is provided at a certain point with a cog-wheel and at another point with a peculiar-shaped wheel, the cog-wheel being so placed that it will engage with a revolving drop, and thereby operate the same, and the other wheel so placed as to engage with and vibrate a peculiar-shaped rod, which extends from a point under the feed-box and drops down through a metal spout to the furrow-openers, by means of which rod the grain is distributed in the furrows; and it further consists of a construction which will be hereinafter referred to as a modification of the above, said construction being applicable to planters wherein sliding drops are used in place of the revolving drop above referred to. In this latter case the endless knotted cord or wire before mentioned is used, as also is the peculiar-shaped rod, which is placed in the spout which leads down to the furrow-openers, the difference between the two constructions being that when the sliding drop is employed it is provided on its under side with two projections, which form a fork, and with which the peculiar-shaped wheel placed on the rod above mentioned engages, thus causing that wheel to perform the double function of operating the drop and vibrating the peculiar-shaped rod,

by means of which the grain is distributed after passing through the drop. It will be seen that in this modification the cog-wheel which was mentioned in connection with the main device is done away with.

In the following description reference will be made to the accompanying drawings, and to the letters of reference marked thereon, said drawings forming a part of this specification, and intended to represent, in Figure 1, a perspective view of a corn-planter wherein our device is employed; Fig. 2, a view in detail of a rod provided with its several wheels; Fig. 3, a view in detail of the revolving drop used in our construction; Fig. 4, a detail view of the sliding drop used in the modification, and Fig. 5 a view in detail of the peculiar-shaped rod which is pivoted in the spout placed below the feed-box and then passes down to the furrow-openers.

Like letters refer to corresponding parts throughout the several views.

A represents the frame-work of the planter. At the points shown in Fig. 1, or at any suitable points, are placed the feed-boxes B B, said boxes being secured in any desirable manner to the cross-pieces *a a'* of the frame. These boxes are of any convenient shape, and are composed of any suitable material. In the bottom of each is placed a revolving drop, C, (shown clearly in detail in Fig. 3.) As represented in that figure, this drop is composed of two metal plates, *c c'*, the one *c'* being intended to be firmly secured to the cross-pieces *a a'* and in such a position that the opening *c²*, with which it is provided, will be brought immediately over the spout D, which spout leads down and forms the furrow-openers, and through which the grain descends to the ground. The plate *c*, as shown in the drawings, is provided with a series of holes or openings, *d*, and on its outer edge with the teeth *d'*, which are intended to engage with the cog-wheel L, hereinafter referred to. This plate is made to fit over the plate *c'*, and is so secured as to be allowed to revolve around said plate, and thus bring in turn each of the holes *d* over the openings *c²*, before mentioned. As before stated, there is situated directly under the openings *c²* of the plate *c'* a spout, D, which is firmly secured in any desirable manner to the

under side of the cross-piece a , and extends down and forms the furrow-openers, and has its other end secured to the cross-piece a^2 of the frame. In this spout is placed the peculiar-shaped rod E, (shown in Fig. 5.) This rod, by means of a screw, e , which passes through the hole e' , is pivoted in said spout. It is made of any suitable material, and is provided at its lower end with the projections e^2 e^3 and at its upper end with the projections e^4 e^5 , the object of which construction will be hereinafter more fully explained.

The wheels F are mounted on the axle G. The projections G' are firmly secured in the hub of said wheels, so as to revolve with them. They have their ends which enter the wheels made hollow, so as to fit over the axle G, and have mounted on their other or outer ends the small auxiliary wheels H H, as shown in Fig. 1, said wheels being suitably grooved to receive the endless knotted cord or wire I, which is designed to pass around them. This knotted cord, as is shown in Fig. 1, also passes around the small anti-friction rollers $f f f$, secured to the side of the frame for that purpose, and also between the prongs $g g'$ of the star-wheels J. These wheels J are made of any suitable material, and are of the form shown in Figs. 1 and 2. They are firmly secured to the ends of a rod, K, which rod extends the entire width of the planter and protrudes through the sides of the frame. The rod K has also firmly attached to it the cog-wheels L, one of said wheels being shown in dotted lines in Fig. 1 and in full lines in Fig. 2, said wheels being so situated that they will engage with the toothed edge of the revolving drop C. At another point on this rod K is placed the peculiar-shaped wheel M, (shown in Fig. 2,) said wheel being so situated that it will be directly above the upper end of the spout D and will engage with the projections e^4 e^5 on the upper end of rod E, hinged in said spout.

Having referred to all the parts used in our improved planter, and having explained the construction and position occupied by each, we will now describe the manner in which they operate.

The grain being placed in the boxes B B, the planter is started. By the revolution of the wheels F and H the endless knotted cord I is caused to pass around the star-wheel J, which action brings the knots placed on said cord in contact with the edges of the prongs $g g'$ of said wheel, thus causing that wheel, together with the other wheels attached to the rod K, to revolve. By the revolution of the wheel L the teeth placed thereon engage with the teeth made in the edge of the upper plate of the revolving drop C, and, as will be clearly understood, as this upper plate turns on its pivot each of the holes d made therethrough will in turn be brought over the openings e^2 of the lower plate of said drop, thus forming a clear opening through those two plates, through which the grain placed in the feed-boxes is

discharged into the spout D placed thereunder. In its revolution one of the curved sides of the peculiar-shaped wheel M is brought in contact with the projection e^4 of the rod E, thus forcing that rod to one side and allowing the grain to descend down the spout D, in which said rod is secured, until it reaches the projection e^3 , placed on the opposite or lower end of the rod, which projection holds it in the spout and prevents it from reaching the ground. The grain is thus held until the wheel M comes in contact with the projection e^5 , which causes the position of the rod E to be changed, thus leaving the space at the bottom of the spout formerly closed by the projection e^3 open, and allowing the spout to discharge the amount of grain already received, and at the same time receive a fresh supply on the opposite side of the rod E. Thus it will be seen that by the use of the above-described device a planter is secured by means of which the grain is distributed in the furrows with certainty and regularity.

As a modification of the above, we will now describe a planter in which a sliding drop is used instead of the revolving drop above described. In this construction the cog-wheel L, situated on the rod K, is omitted, such omission and the difference in the construction of the drop itself being the only changes made. By reference to Fig. 4 the construction of the drop used in this modification will be understood. As shown in that figure, it is composed of two plates, $M' M^2$. Of these plates the one M' is intended to be secured in any desirable manner in the bottom of the feed-box. It has two of its sides bent so as to form grooves or guides, in which the plate M^2 moves. At a suitable point it is provided with a slot, m , through which is passed the fork-shaped projection m' , with which the plate M^2 is provided. At a point which comes directly over the spout D, before referred to, it is provided with the hole or opening m^2 , over which the holes m^3 and m^4 in turn are brought as the plate M^2 is moved from side to side. The fork-shaped projection m' , which is secured to the plate M^2 , is of such a length that after passing through the slot m it will reach down to a point at which it will engage with the peculiar-shaped wheel M, previously described.

The operation is as follows: By means of the mechanism described in the main device the star-wheel J and the peculiar-shaped wheel M are caused to revolve. In its revolution one of the inclined sides of the wheel M is brought against one of the forks of the projection m' , which forces the plate M^2 to one side and brings the hole m^3 over the hole m^2 , thus leaving a clear opening, through which the grain falls to the spout D, the rod E being operated, in the manner before described, by this same wheel M. As the wheel M continues to revolve another of its inclined sides strikes the other fork of the projection m' , thus forcing the plate M^2 in the opposite direction and bringing the hole m^4 over the hole m^2 .

This operation being continued, the grain is distributed in the furrows with certainty and regularity.

Having thus described our invention, what we claim as new therein, and desire to secure by Letters Patent, is—

1. In a corn-planter, the rod K, provided with the star-wheel J and the cog-wheel L, in combination with the knotted cord I and the revolving drop C, all the parts constructed and arranged substantially as set forth.

2. In a corn-planter, the rod K, provided

with the star-wheel J, the cog-wheel L, and the wheel M, in combination with the knotted cord I, the revolving drop C, the rod E, and spout D, substantially as set forth.

This specification signed and witnessed this 10th day of January, 1882.

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FRITZ REIGER.

Witnesses:

SAMUEL D. SCHOLES,
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