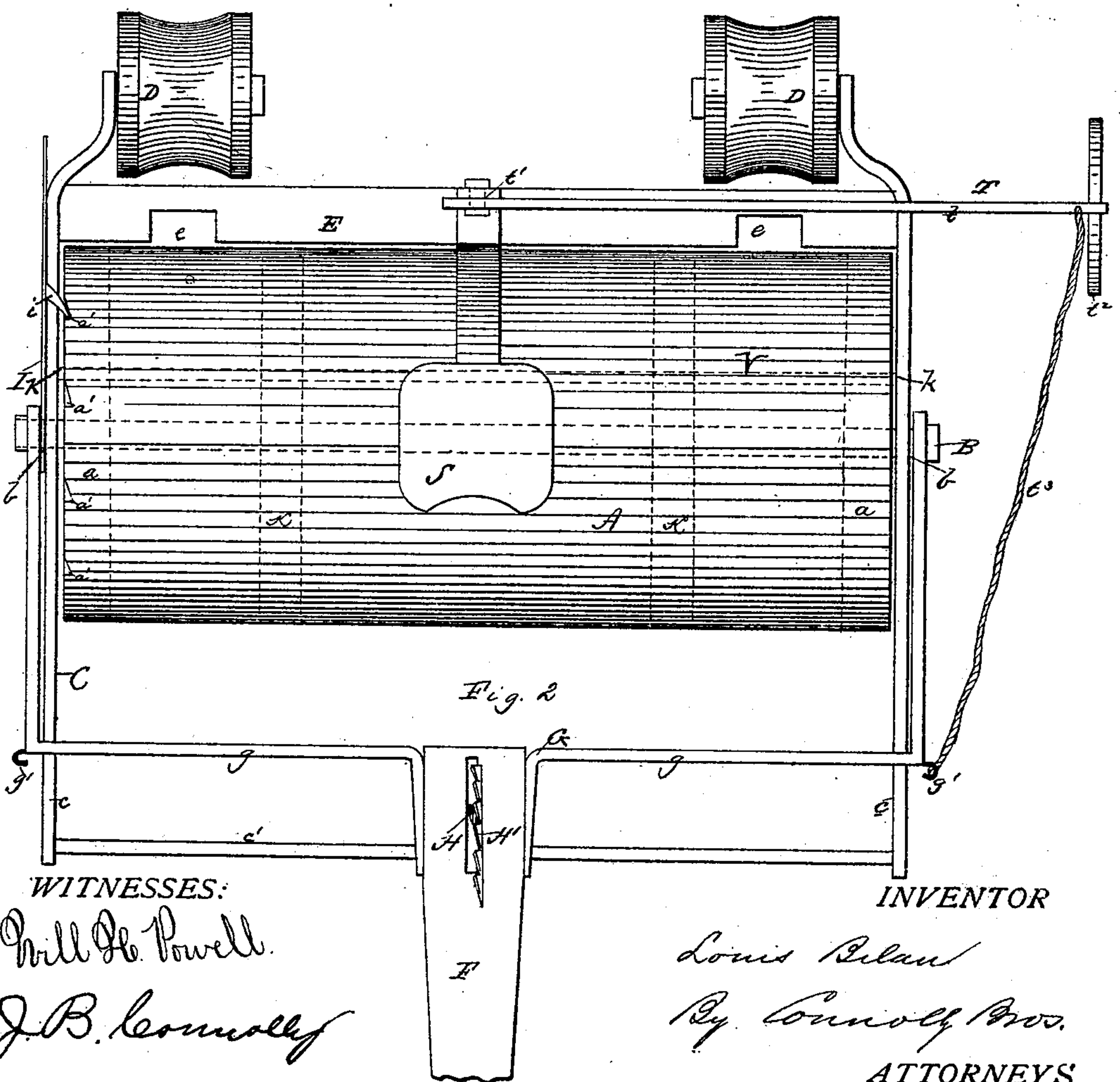
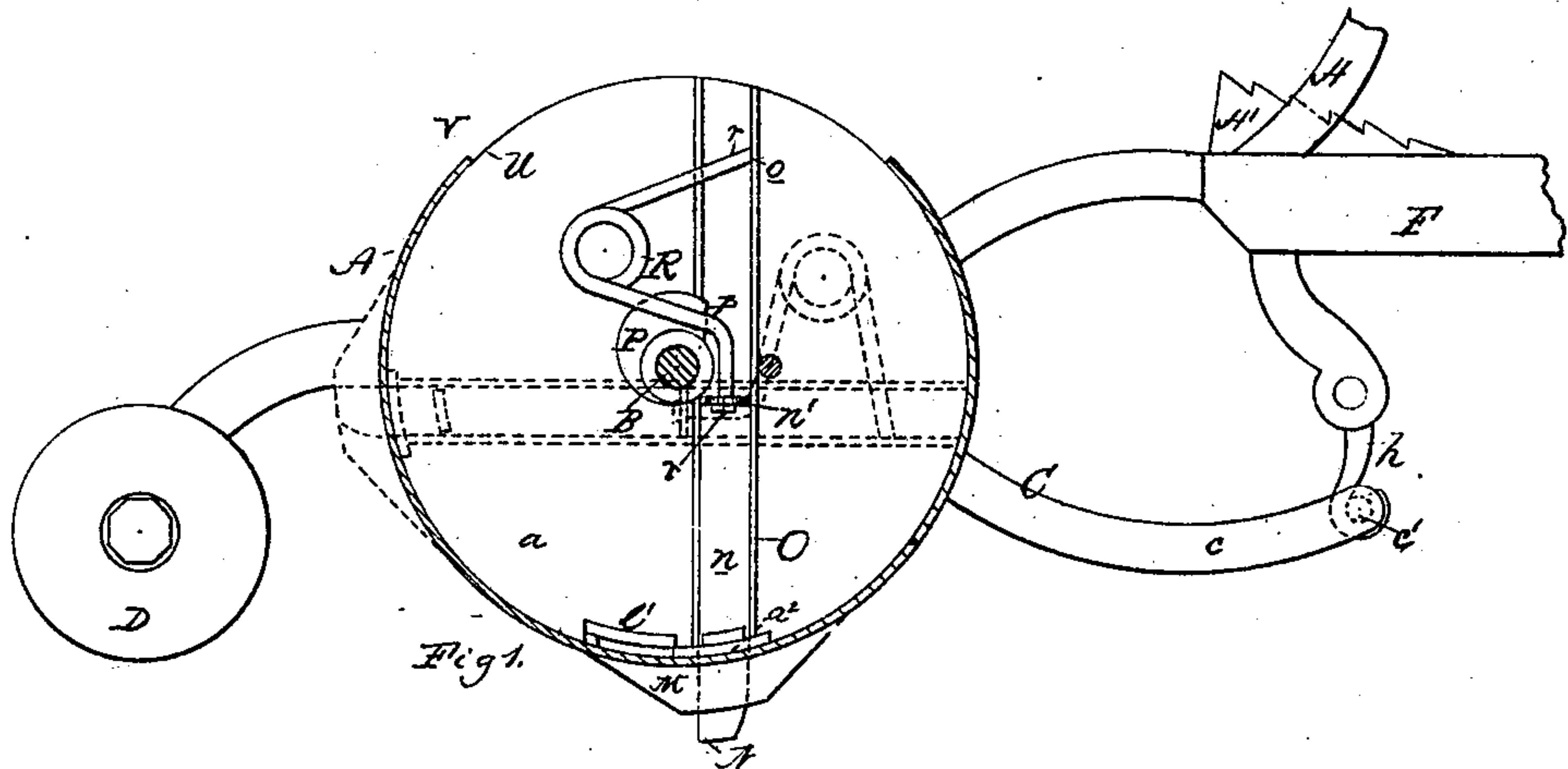


(No Model.)

L. BILAN.
CORN PLANTER.

No. 270,728.

Patented Jan. 16, 1883.



WITNESSES:

Will H. Powell.
J. B. Connolly

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ATTORNEYS

UNITED STATES PATENT OFFICE.

LOUIS BILAN, OF IOWA CITY, IOWA, ASSIGNOR OF ONE-FOURTH TO F. J. HORAK, OF SAME PLACE.

CORN-PLANTER.

SPECIFICATION forming part of Letters Patent No. 270,728, dated January 16, 1883.

Application filed July 31, 1882. (No model.)

To all whom it may concern:

Be it known that I, LOUIS BILAN, a citizen of the United States, residing at Iowa City, in the county of Johnson and State of Iowa, have invented certain new and useful Improvements in Corn-Planters; and I do hereby declare the following to be a full, clear, and exact description of the invention, reference being had to the accompanying drawings, which form part of this specification, in which—

Figure 1 is a vertical longitudinal section. Fig. 2 is a plan view.

My invention has for its object to provide a corn-planter and marker by which the grain carried in a roller will be thrust therefrom by the action of a plunger and deposited in beds formed by the roller, being subsequently covered by covering-rollers.

My invention consists essentially of a hollow roller or cylinder, forming a receptacle for corn, and provided with spring-plungers which drive or thrust the grain outwardly through openings and deposit it in beds or hollows formed by bosses on the outside of the roller, through which said plungers work.

My improvements further consist in certain details of construction and combination hereinafter fully set forth.

Referring to the accompanying drawings, A designates a hollow cylinder or roller, having ends *a a* and mounted on a central shaft, B, on which it may be freely revolved. Said shaft has squared ends *b b*, which fit in corresponding openings in a frame, C, so that as the roller turns the shaft will not rotate. The frame C consists of the two side pieces, *c c*, and the front cross-bar or rod, *c'*. The rear ends of said side pieces are bent downwardly and inwardly, as shown, and carry two covering-rollers, D D. Connecting said side pieces in the rear of the roller A and in advance of the rollers D D is a flat bar, E, which forms a scraper for said roller A.

F is the tongue, which is secured to a yoke, G, whose sides *g g* pass around to the ends of the roller A and receive the ends of the shaft B.

H is a lever pivoted in the tongue F, its short arm having a hook or link connection, *h*, with the cross-bar *c'* of the frame C. When

the front end of the tongue is supported as it is by the neck-chains when a team is hitched to it a backward movement of the lever will elevate the forward end of the frame C and lift roller A off the ground. To hold the roller in this position, the lever may be engaged with a notched plate or standard, H', supported on the tongue. When the roller is thus elevated it may be rotated, either directly by hand or foot, or by means of a lever, I, which swings loosely on one end of the shaft B, said lever having a lateral projection or tooth, *i*, which may be brought into engagement by the vibration of the lever with an annular rack or series of notches, *a'*, on the outside of the adjacent head of the lever.

The roller A, as stated, is hollow, and may be divided into three or more compartments by means of disks K K, which can, if desired, be slid toward or from each other to enlarge or diminish the size of the feeding-compartments between said disks and the fixed heads or ends of the roller. To cause said disks to revolve with the roller, a rod, *k*, passes through them and into the heads *a a*. If desired, instead of a single roller A, two rollers may be employed, the inner heads of which would be composed of or correspond to the disks K K. The roller A has openings *a² a²*, which may be opened or closed to any desired extent by means of internal slides, *l' l'*. The openings are flaring or of hopper form, and proceed through bosses or shoes M M, formed on or attached externally to the roller A. As the roller turns, on being drawn over the ground, these shoes make beds or depressions therein, into which the grain delivered from the roller is deposited. To produce a forced delivery of the grain, plungers N N are employed. Said plungers have stems *n*, which are adapted to slide or move in guides O O, attached to the inner sides of the heads *a a* of the roller. To produce the movement of the plungers, cams P P are rigidly secured onto shaft B in such position that lugs *n'* on the stems *n* will ride upon such cams as the roller turns. This will cause the plungers to be drawn inwardly, uncovering the openings *a² a²* in the roller, leaving space for the passage of the grain in front of the ends of said plungers.

R R represent coiled springs, whose ends r are fastened respectively to the lugs n' on the plunger-stems n and to other lugs, $o o$, on the guides O. When the rotation of the roller brings the lugs n' to the straight sides or edges $p p$ of the cams P P, at which time the openings $a^2 a^2$ are on the ground and in the position shown in full lines in Fig. 1, these springs throw the plungers suddenly down, forcing the grain before them and embedding the same in the beds or hollows made by the shoes M M. As the roller turns, the plungers are withdrawn inwardly and the covering-rollers cover over the deposited grain. At each revolution of the roller A there is as an automatic discharge or forced projection of grain outwardly from said roller and a deposition of the same in the beds prepared for its reception.

In traveling to and from the field, or in passing over places where it is not desired to plant, the roller A may be elevated by means of the lever H in the manner already described. When so elevated the roller does not revolve, its revolution when down depending on its traction on the ground. At the beginning of a row or after a turn, when it is desired to obtain an alignment with a row already planted, the roller A may be duly rotated, as already described, by means of the lever I.

A driver's seat, S, is mounted on the scraper E, and to permit the passage of the shoes M M through said scraper notches $e e$ are formed in the latter.

T represents a marker, consisting of a bar, t , pivoted at t' on the seat or scraper and car-

rying a shoe, t^2 . It is secured forwardly by a cord or chain, t^3 , connected to a hook, g' , on the yoke G, and may be thrown or turned over on its pivot to mark on either side of the machine.

U is an opening for introducing grain to the roller, closed by a gate or slide, V.

What I claim as my invention is as follows:

1. A corn-planter or seed-sower comprising a hollow land-roller, forming a grain-chamber, said roller having external projections or shoes and internal spring-plungers, said plungers being raised by a cam and forced down by a spring through openings in said shoes, substantially as shown and set forth.

2. The combination, with hollow roller A and shaft B, of spring-plungers N N, having stems n , which move in guides O, and cams P P, fixed on said shaft, substantially as shown and described.

3. The combination, with roller A, of shaft B, frame C, rollers D, tongue-yoke F, and lever H, with connection h , substantially as shown and set forth.

4. In combination with roller A and frame C, having rollers D, which support frame when raised, the lever I, for rotating such roller when the frame is raised, substantially as shown and described.

In testimony that I claim the foregoing I have hereunto set my hand this 17th day of July, 1882.

LOUIS BILAN.

Witnesses:

WENZEL HANDEL,
JOZEF LINDER.