

W. Knowland & K. Collings. Seed Planter.

PATENTED JUN 27 1871 *Fig. 1.*

116327

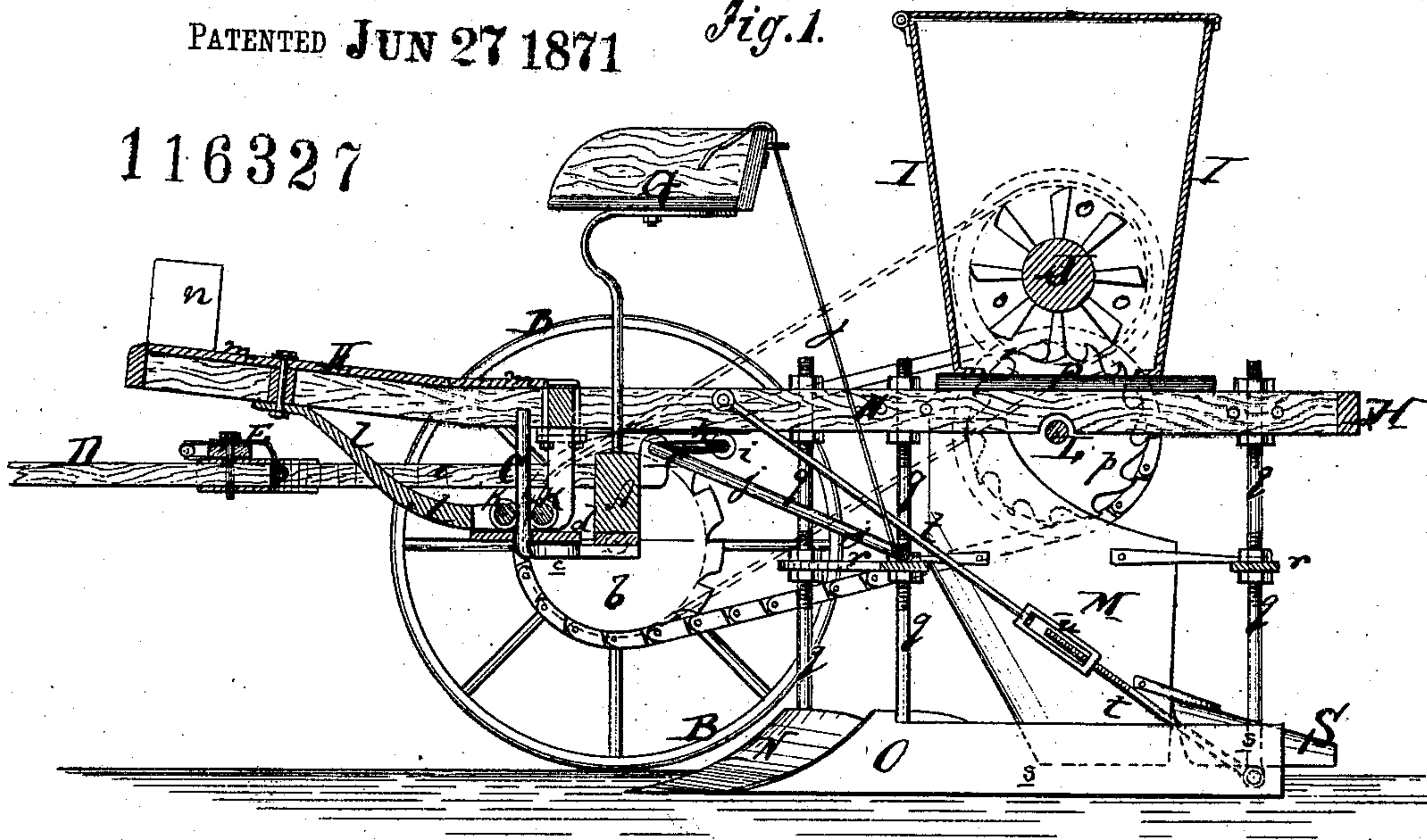
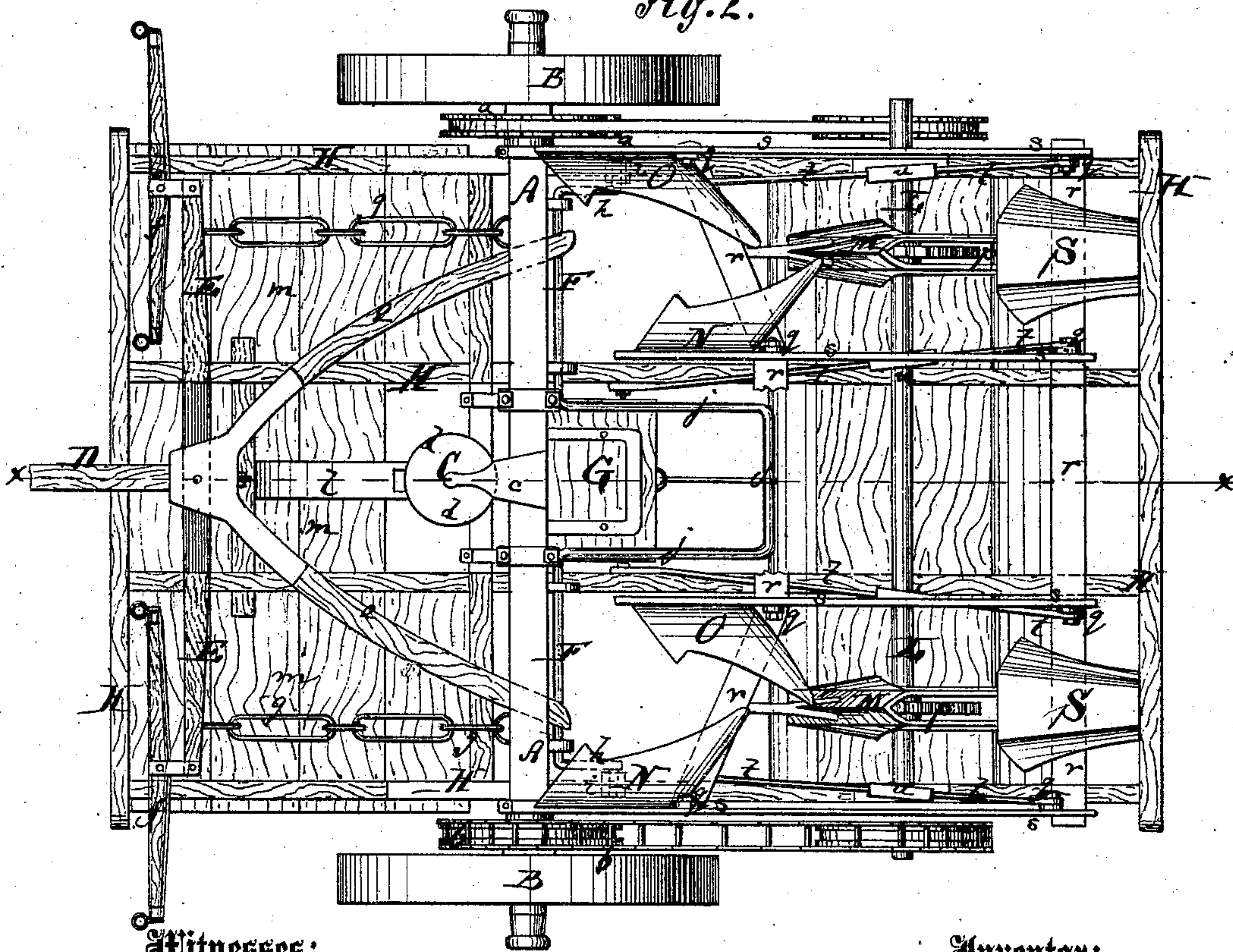


Fig. 2.



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IMPROVEMENT IN SEED-PLANTERS.

Specification forming part of Letters Patent No. 116,327, dated June 27, 1871.

To all whom it may concern:

Be it known that we, WILLIAM KNOWLAND and KEARNES COLLINGS, of Henryville, in the county of Clarke and State of Indiana, have invented a new and Improved Seed-Planter; and I do hereby declare that the following is a full, clear, and exact description thereof, which will enable others skilled in the art to make and use the same, reference being had to the accompanying drawing forming part of this specification, in which—

Figure 1 represents a vertical longitudinal section of our improved seed-planter, *x x*, Fig. 2, being the section line. Fig. 2 is an inverted plan view of the same.

Similar letters of reference indicate corresponding parts.

My invention consists in the improvement upon planters, which is hereinafter fully described and subsequently pointed out in the claim.

A in the drawing represents the axle of the seed-planter, its ends being hung in and supported by wheels B B, which constitute the main supports of the entire machine. The wheels B are connected or made together with pulleys *a b*, which serve, by endless belts or chains, to impart rotary motion to the seed-stirring and discharging devices. From the center of the axle projects forward an ear, *c*, from which projects the center pin C, on which the upper frame of the machine can turn. A disk or plate, *d*, secured to the lower part of the pin C, serves as a support for the upper frame when the same is in its lower position. From the axle project forward the front hounds or braces *e*, which at their junction hold the tongue D. To the tongue is pivoted, in the ordinary or suitable manner, the double-tree E, carrying the whiffletrees *f f* at the ends. Shaft-chains *g g* connect the ends of the double-tree with the axle, and serve to a great extent to remove the draft from the center of the axle to its ends, thereby allowing the use of a weaker axle, and consequently reducing the weight and bulk of the machine. In ears that project from the rear of the axle is hung a rock or shaft, F, which has cranks *h h* at its ends, and friction-rollers *i* on the crank-pins. A handle, *j*, is secured to the central part of the rock-shaft so that the same may readily be turned by the driver on the seat G, said seat being also supported by the axle. When the shaft F is turned to elevate the cranks the same will serve

to raise the upper frame, and to throw the ridge-shovels, furrow-makers, and closers off the ground.

The apparatus thus far described is made together into one compact truck. The frame H, which constitutes the devices for holding and discharging the seed and for preparing the ground for the reception and retention of the same, is entirely loose, and is, when the machine is in motion, supported on the ground and drawn by the pin C. This pin passes between two concave friction-rollers, *k k*, held in a brace, *l*, that projects downward from the frame, and interposes no obstacle to the elevation or vertical adjustment of the frame H. The said frame H is made of oblong or other suitable form, of wood or other material, with a number of transverse and longitudinal braces sufficient to insure the requisite strength and stability. The front of the frame H supports a platform, *m*, which is a foot-rest for the driver, and also convenient for holding vessels *n n*, in which surplus seed or implements for the repair of the machine may be contained. The rear of the frame H supports the seed-hopper I, in which the transverse shaft J, carrying the stirrers *o o*, is hung. Under the hopper is hung another transverse shaft, L, which carries disks *p p*, that are notched or grooved at the edges, entering slots in the bottom of the hopper for the purpose of discharging the seed therefrom into the discharge-tubes or seed-conduits M suspended from the frame H under the disks *p p*, respectively. The shafts J and L receive rotary motion by belts or chains from the pulleys *a b*, as shown. From the frame H are, furthermore, suspended, by screw-rods *q q*, the plows N and O, for throwing up the ridges in which the seed is to be deposited, the several screw-rods being connected and steadied by lateral braces *r*. The upper ends of the rods *q* are held on the frame by nuts *s*, whereby the shovels are made vertically adjustable. Each discharge-tube or seed-conduit M is made of metal, its front edge being made sharp by the converging of the sides. The lower end of each seed-conduit is somewhat higher than the lower edges of the plows. The seed-conduit serves, therefore, also as a furrow-opener, to prepare a channel for the seed in the ridge that is prepared by the plows. There are two plows for each seed-conduit—one right-hand plow, N, and one, O, on the

left side. These two plows throw up a ridge, in which the seed is deposited. The seed-conduit then opens a furrow in the crown of the ridge, and finally a scraper, S, secured to the back of the conduit, closes the said furrow over the seed that has meanwhile been deposited therein. The land-sides *s s* of the plows extend back in line with the scrapers, as shown, to keep up the ridge, while the parts M and S work on the same. Diagonal braces *t*, extending up from the rear ends of the land-sides, serve to steady the same. These braces have right-and-left nuts, *u*, to be lengthened or shortened at will. The frame H, with all its aforesaid appendages, is placed over the axle A in the manner shown, center draft being

applied by the pin C. The weight of the frame, hopper, &c., keeps the plows down to the required depth. The same are raised out of the ground by means of the shaft F, as hereinbefore described.

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

In a seed-planter, the roller *i*, crank-shaft F, and axle A, combined, as described, with a frame, H, as and for the purpose set forth.

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