

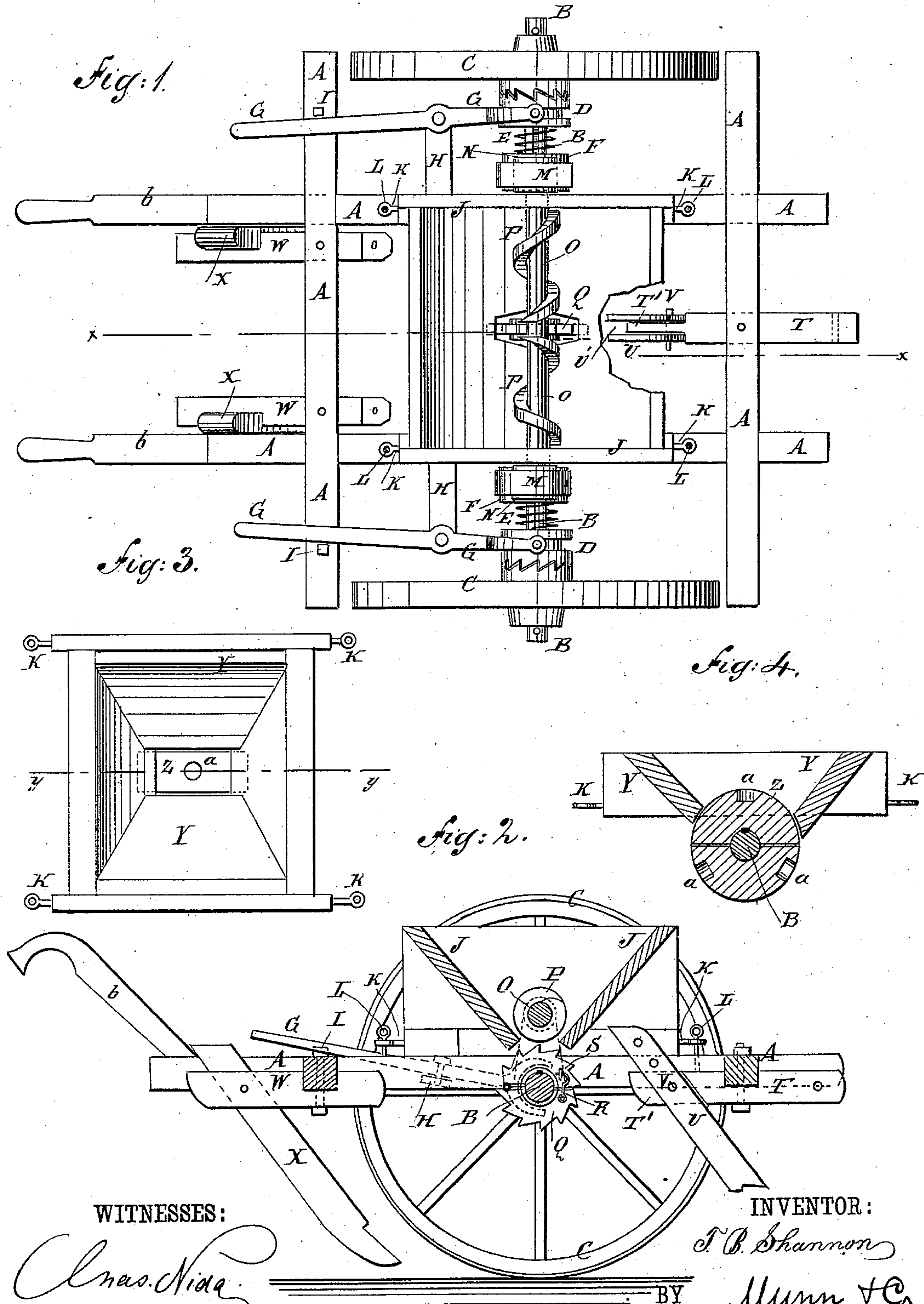
(No Model.)

T. B. SHANNON.

COMBINED SEED PLANTER AND CULTIVATOR.

No. 308,437.

Patented Nov. 25, 1884.



WITNESSES:

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THOMAS B. SHANNON, OF HUNTSVILLE, TEXAS.

COMBINED SEED-PLANTER AND CULTIVATOR.

SPECIFICATION forming part of Letters Patent No. 308,437, dated November 25, 1884.

Application filed February 5, 1884. (No model.)

To all whom it may concern:

Be it known that I, THOMAS BRANDON SHANNON, of Huntsville, in the county of Walker and State of Texas, have invented certain new and useful Improvements in a Combined Seed-Planter and Cultivator, of which the following is a full, clear, and exact description.

Reference is to be had to the accompanying drawings, forming a part of this specification, in which similar letters of reference indicate corresponding parts in all the figures.

Figure 1 is a plan view of one of my improved machines, part of the hopper being broken away. Fig. 2 is a sectional side elevation of the same, taken through the line x , Fig. 1. Fig. 3 is a plan view of the hopper and seed-dropping wheel used for planting corn. Fig. 4 is a sectional side elevation of the same, taken through the line y , Fig. 3.

The object of this invention is to facilitate the planting of seed and the cultivating of plants, and to promote convenience in adjusting the machines for the different kinds of work.

The invention consists in the construction, arrangement, and combination of parts, as will be hereinafter fully described, and specifically set forth in the claim.

A represents the frame of the machine, to the side bars of which are attached the bearings for the axle B. Upon the journals of the axle B are placed the drive-wheels C, which are made to carry the said axle with them in their revolution by the clutches D. The teeth of the clutches D engage with teeth formed upon or attached to the inner ends of the hubs of the said drive-wheels C. The clutches D slide upon the axle B, and are held in gear with the wheels C by spiral springs E, placed upon the axle B between the said clutches and the pulleys F, or other stops attached to the said axle. The clutches D have annular grooves formed in them to receive the forked ends of the levers G, which are pivoted to arms H, or other supports attached to the side bars of the frame A. The rear parts of the clutch-levers G rest upon the projecting ends of the rear cross-bar of the frame A. The levers G are secured in position, holding the clutches D in gear or out of gear with the drive-wheels C, by placing the rear parts

of the said levers upon the inner or the outer sides of pins I, attached to the projecting ends of the rear cross-bar of the frame A.

J is the hopper for cotton-seed, which hopper is made with vertical ends and inclined sides, and has eye-bars K attached to the lower parts of its ends, to receive the pins or bolts L, by which the said hopper is secured detachably to the side bars of the frame A.

M are belts which pass around pulleys N, attached to the ends of a shaft, O. The shaft O revolves in bearings in the lower parts of the vertical ends of the hopper J. To the shaft O are attached spiral flanges P, extending from the ends of the hopper J nearly to the center of the said shaft. Beginning at the ends of the hopper J, the spiral flanges P pass upward and rearward over the shaft O, and downward and forward beneath it, so that the said flanges, as the machine is drawn forward, will push the cotton-seed from the end parts of the hopper J toward the center, and cause the said seed to pass out through the discharge-opening in the center of the bottom of the said hopper.

To the center of the axle B is attached a wheel, Q, having circumferential teeth similar to saw-teeth, and so arranged that their radial sides will be forward, as shown in Fig. 2. The upper part of the toothed wheel Q projects into the discharge-opening of the hopper J, so as to take hold of the cotton-seeds as they are forced into the said discharge-opening by the spiral flanges P and draw out the said seeds in uniform quantities. The toothed wheel Q is made in two parts hinged to each other at one end, and connected at the other end by a hook, R, and staple S, or other suitable means. The toothed wheel Q is made to revolve with the axle B by a tongue and groove, a set-screw, or other suitable means, and is kept in place upon the said shaft by collars, set-screws, or other suitable means.

To the center of the forward cross-bar of the frame A is attached the beam T, the forward end of which projects, to adapt it to serve as a draw-bar. Upon the rear end of the beam T is formed a tenon, T', having inclined shoulders, which tenon enters a slot, U', in the upper end of the standard U. The standard U is secured to the beam T by a pin or bolt, V, and has several holes formed in it

to receive the said fastening pin or bolt, so that the said standard can be readily adjusted to cause the opening-plow to work deeper or shallower in the ground.

5 To the rear cross-bar of the frame A, upon the opposite sides of and equally distant from its center, are attached short beams W, in one side of the rear parts of which are formed inclined grooves to receive the standards X.

10 The standards X are secured to the beams W by bolts or pins, and to the lower ends of the said standards are attached plows to cover the seed. The opening and covering plows are not shown in the drawings.

15 When the machine is to be used as a corn-planter, the hopper J and toothed wheel Q are removed and replaced by the hopper Y and the seed-dropper wheel Z. The hopper Y is made smaller than the hopper J, and with a
20 discharge-opening in its bottom of such a shape and size as to receive and fit upon the upper part of the seed-dropping wheel Z, which has recesses *a* in its face, to receive the seed, carry it out of the hopper, and drop it
25 to the ground, the said recesses being made of such a size that each will hold the proper amount of seed to be dropped for a hill.

When the machine is to be used for cultivating plants, the hopper and its attachments can be removed; or the clutches can be thrown 30 out of gear with the wheels to prevent the seed-dropping appliances from operating.

To the rear parts of the side bars of the frame A are attached the handles *b*, by means of which the machine is guided and controlled. 35

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

The combination of the frame A, driving-shaft B, journaled to said frame and provided with a removable hinged feed-wheel, with the 40 seed-hopper mounted on the frame over the feed-wheel and clear of shaft B, and spirally-flanged shaft O P within the feed-box, rotated from the shaft B by pulleys and belts, said seed-hopper being removably secured to the frame 45 A, substantially as shown, whereby the seed-hopper, with its shaft O P, and the feed-wheel on the drive-shaft may be readily removed to be replaced by others for different kinds of seeds.

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Witnesses:

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