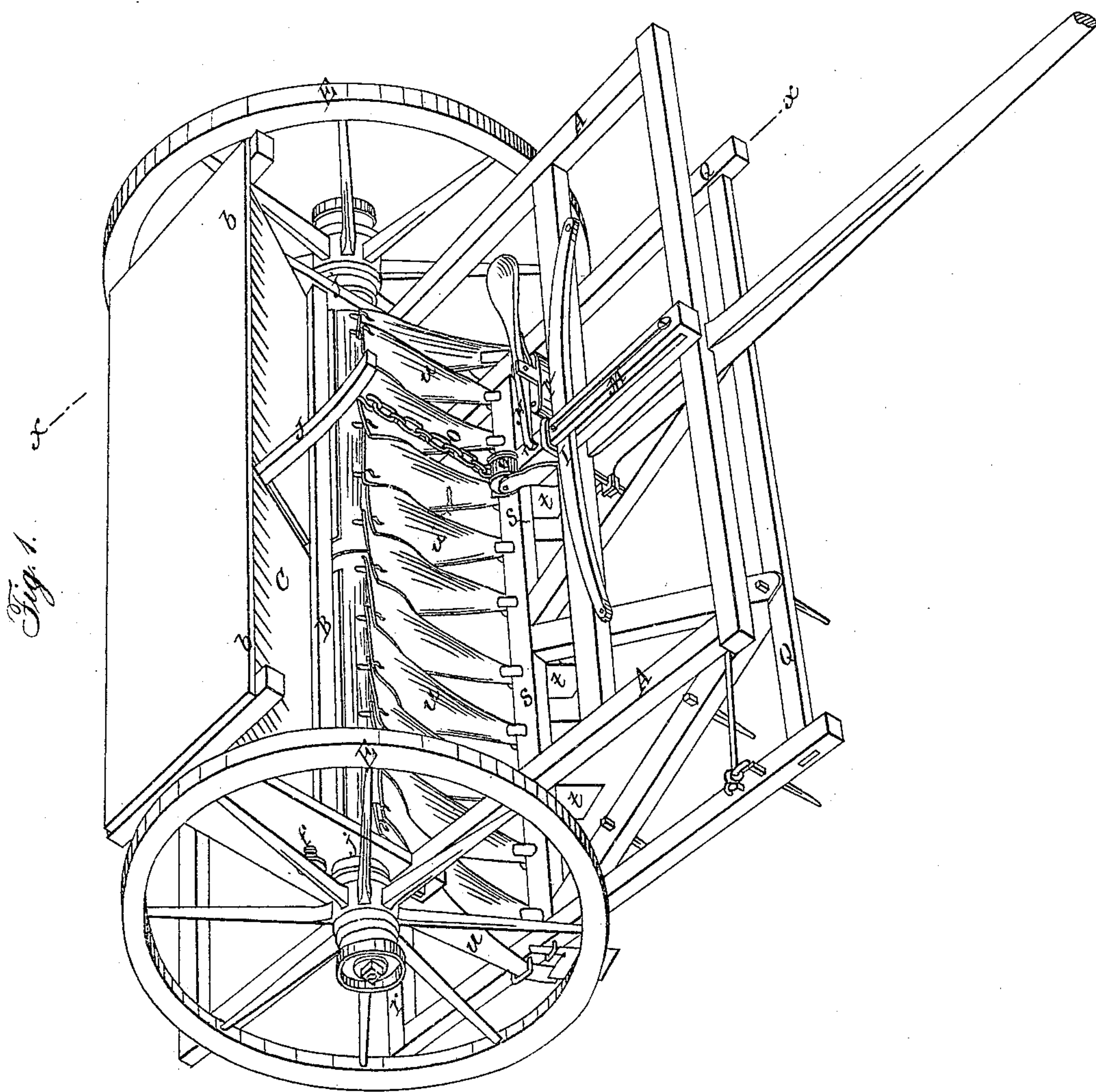


4 Sheets—Sheet 1.

Patented Nov. 2, 1852.

No. 9,373.



C. S. TREVITT.

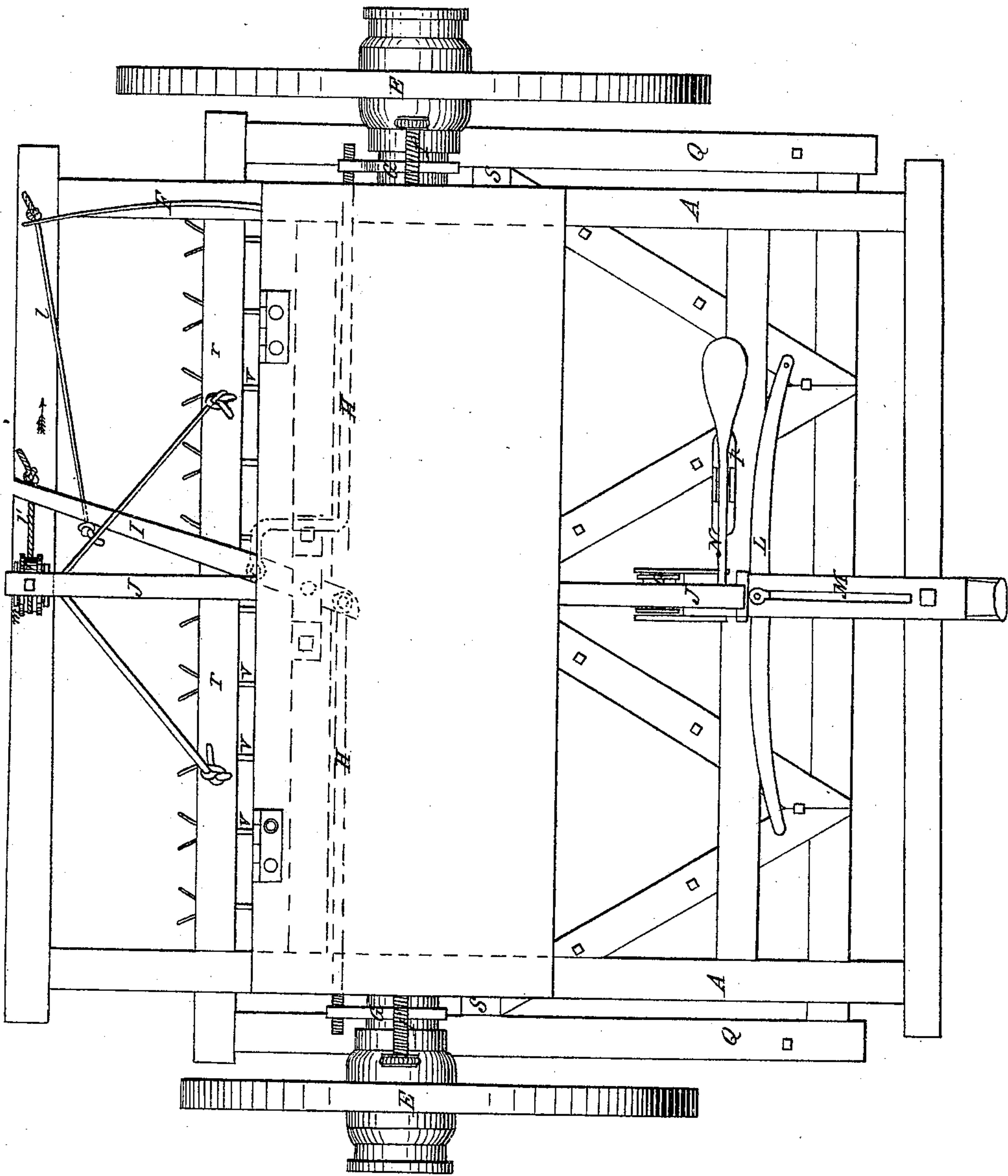
4 Sheets—Sheet 2.

Grain Drill.

No. 9,373.

Patented Nov. 2, 1852.

Fig. 2.



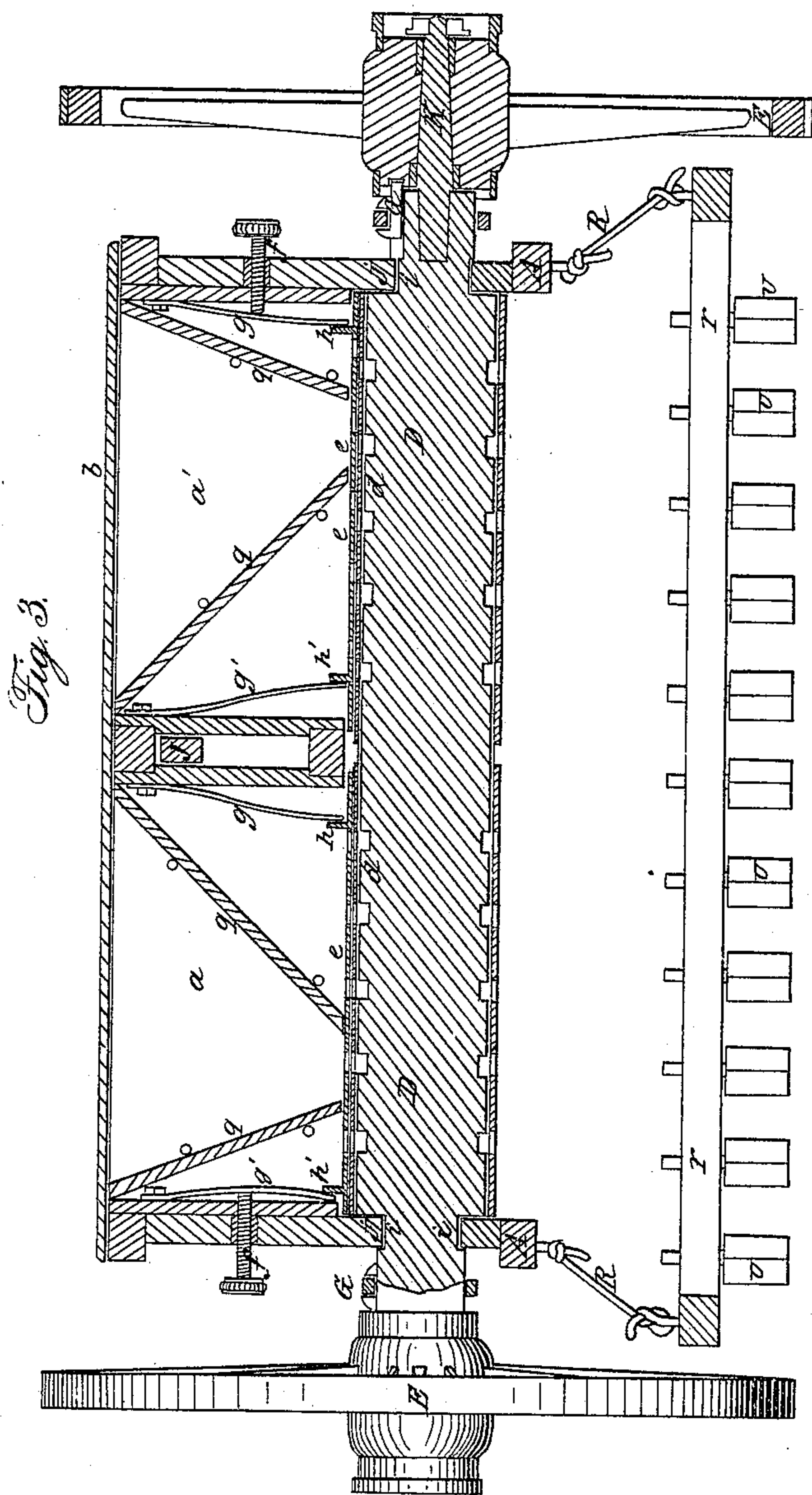
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4 Sheets—Sheet 3.

Grain Drill.

No. 9,373.

Patented Nov. 2, 1852.



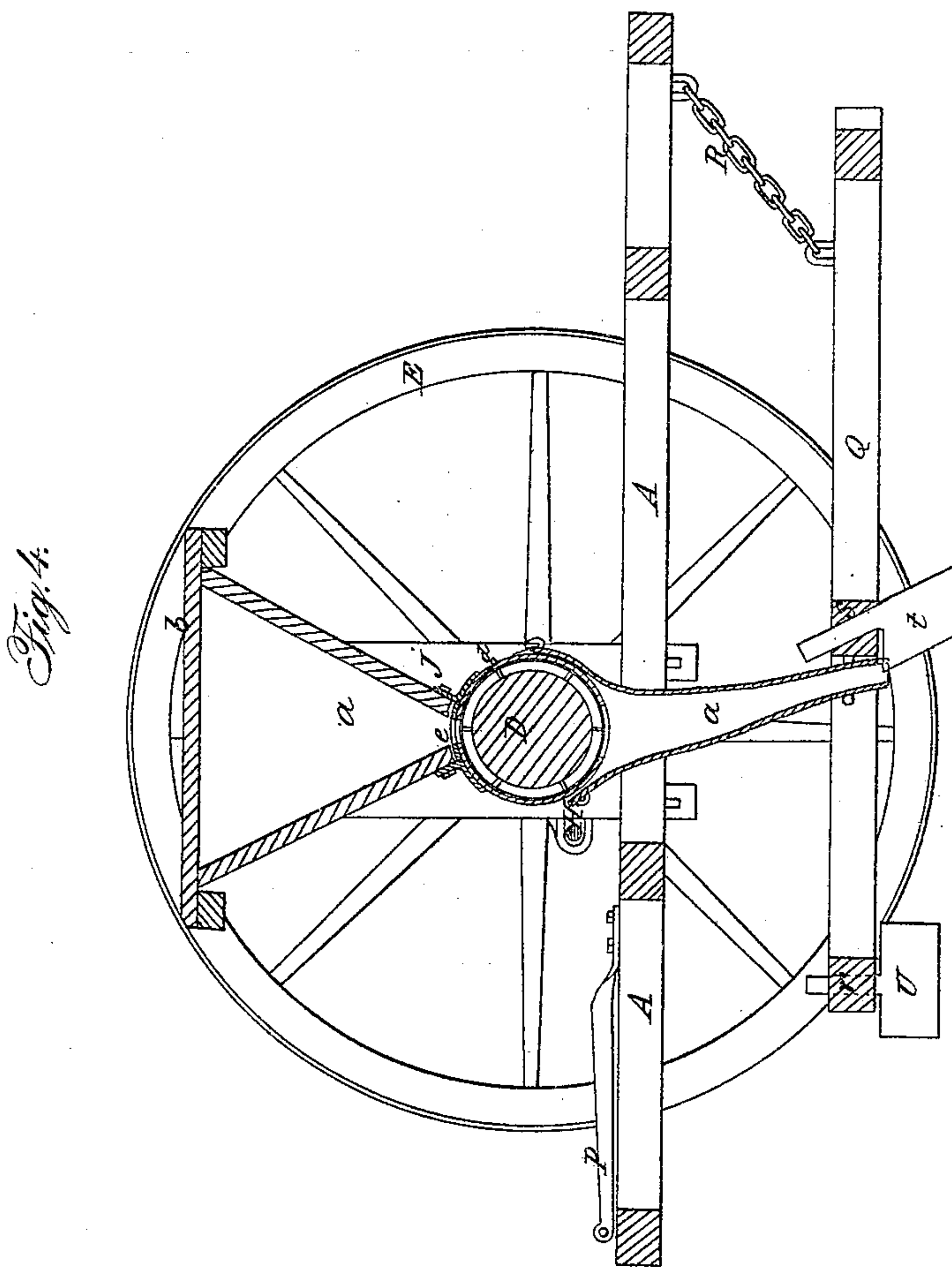
C. S. TREVITT.

4 Sheets—Sheet 4.

Grain Drill.

No. 9,373.

Patented Nov. 2, 1852.



UNITED STATES PATENT OFFICE.

CONSTANT S. TREVITT, OF ELLICOTTVILLE, NEW YORK.

IMPROVEMENT IN SEED-PLANTERS.

Specification forming part of Letters Patent No. 9,373, dated November 2, 1852.

To all whom it may concern:

Be it known that I, CONSTANT S. TREVITT, of Ellicottville, in the county of Cattaraugus and State of New York, have invented certain new and useful Improvements in Seed-Drills and Cultivators, of which the following is a full, clear, and exact description, reference being made to the accompanying drawings, which make part of this specification, and in which—

Figure 1 is a view in perspective of my said machine, and Fig. 2 is a plan thereof. Fig. 3 is a vertical section taken longitudinally through the wheels, axle, and hopper; and Fig. 4 is a vertical section taken longitudinally through the machine at the line *x x* of Fig. 1.

My improved machine consists mainly of two parts—a seed-distributor mounted upon a frame which is supported on wheels and fitted with a tongue or shafts to draw it by, and a cultivator and harrow suspended beneath the frame of the seed-distributor—the two members of the machine being so combined and arranged that they can be used either separately or in connection.

The seed-distributing portion of the machine consists of a rectangular frame, A, surmounted by a second frame, B, which extends across it a little nearer the rear than the front end. This frame supports the hopper or seed-box C, which is divided into two compartments, *a* *a'*, both of which are covered by a hinged lid, *b*, which, when shut, forms a convenient seat for the driver. The front and rear sides of the hopper converge downward, so as to leave a long narrow slot or opening at the bottom. This opening is fitted with a bottom, *d*, perforated at suitable intervals to permit the discharge of seed. This perforated bottom has a register-plate, *e*, perforated in a corresponding manner, which overlies it, and is adjustable by means of a screw, *f*, by which it can be set to leave the openings for the discharge of the grain wider or narrower, as a greater or less quantity of seed is to be sown to the acre. The adjusting-screw *f*, instead of acting directly upon the register *e*, acts against a spring, *g'*, which constantly tends to press toward the point of the screw. The lower end of this spring extends behind a snug, *h'*, which projects up from the register-plate *e*, so that when pressed out by the screw *f* it will act upon the snug and force the plate toward the opposite end of the hopper. The opposite end of the

register is fitted with a second snug, *h*, and a spring, *g'*, by which it is forced toward the adjusting-screw, so that when the screw is drawn back the register will be forced to follow it by the spring *g'* to contract the opening through which the grain is discharged. By this arrangement the register is held between two elastic points that will yield in case a stick, nail, or other obstruction gets into the discharge-aperture, and permit the same to be drawn through without endangering the breakage of the register.

The distributing-roller D is placed beneath the hopper, and is fitted with journals *i*, that turn in bearings in the ends *j* of the frame B. These journals project beyond the frame far enough to form axles *k* for the wheels E, which carry the frame. The wheels are secured upon the axles *k* by means of nuts or linchpins in the usual manner. Between the inner side of the hubs of the wheels E and the ends of the frame B sliding clutches G are placed, which can be simultaneously moved outward to connect the roller and wheels together, so that the former will be turned with the latter, or which can be simultaneously moved inward to disconnect the wheels and roller. This movement of the clutches is effected by means of shifting rods H, which slide in guides behind the roller and connect at their inner end with the lever I, on the opposite sides of its fulcrum, so that when the lever is turned it will move both the rods simultaneously outward or inward. The hinder extremity of the lever I is connected by a horizontal cord, *l*, with a spring, P, that constantly pulls the lever in the direction of the arrow. The lever I is also connected by a cord, *l'*, with the hinder extremity of a lever, J, which passes through the space between the inner ends of the two divisions *a* *a'* of the hopper and turns on a fulcrum supported in them. The cord *l'* passes round a pulley, *m*, on its way from the lever I to the lever J, so that when the hinder extremity of the lever J is raised the hinder extremity of the lever I will be moved toward the pulley *m*, and will draw the clutches inward to disconnect the roller from the wheel, so as to stop the discharge of the seed and to facilitate the turning of the machine by permitting the wheel to roll in either the same or opposite directions and with equal or unequal speed. The front extremity of the lever J is connected by a

chain, O, with the double-tree or evener L, to which the horses are hitched. The evener is arranged to slide in a slotted bar M, which has a pulley, o, at its hinder extremity, round which the chain passes. A pin in the top of the evener slides in a slot in the upper side of the bar M to guide the evener as it moves to and fro. A lever-detent, N, is mounted on a fulcrum in the top of a standard, p, adjacent to the hinder end of the slotted bar M. The outer arm of this detent-lever has a spring under it which constantly tends to raise it, and consequently to depress its inner end, on which a pin, n, is formed, which descends in an aperture in the bar M and through the links of the chain O to hold the evener in any desired position. When the chain O is drawn back and the front end lever, J, raised to permit the lever I to turn and move the clutches into gear with the wheels the evener L is in the position shown in Fig. 1.

In order to disconnect the clutches from the wheel the driver may depress with his foot the outer end of the detent-lever to raise the detent n and liberate the chain to allow the horses to draw the evener forward and depress the forward end of the lever J. This plan will only, however, be resorted to when the clutches stick, or are with difficulty disconnected, or when it is intended to keep them disconnected for some length of time; but ordinarily, when the disconnection is only to be maintained while the machine is turning round in the field, the driver will place his foot on the front end of the lever J to depress and hold it down until the horses turn round, when he will remove his foot and allow the lever to rise again and permit the spring to throw the clutches into gear with the wheel.

Each division of the hopper is fitted with removable corner-boards g to contract the opening at the bottom to a single hole. This adapts the machine to the planting of two rows of corn or other seeds at a wide distance apart, which is often desirable. The hopper, as arranged without the corner-boards, will deposit seed in a series of drills as numerous and as close together as the discharge-openings in their bottoms.

The harrow and cultivator consists of a frame, Q, suspended by cords or straps R beneath

the frame A. The front bar and the diagonal braces of the frame Q are fitted with harrow-teeth to pulverize the soil, while the two cross-bars r and s are fitted with cultivator-teeth t and v, corresponding in number with the delivery-apertures for the seed, with which the front series are connected by flexible tubes u. The front series of teeth, t, make the furrows for the reception of the seed, which is deposited from the lower end of the tubes u immediately behind them, while the teeth v are for the purpose of covering the seed deposited in the furrows made by the teeth t. The hinder teeth, v, are placed opposite the spaces between the teeth t, so that they may split the ridge formed between the latter and turn it both ways into the furrows to cover the seed.

As it would be exceedingly inconvenient to turn the machine with the harrow and cultivator teeth resting on the ground, or to move it from place to place while they are in that position, I have made provision for raising them at will, and for raising them at all times when the operation of the seed-distributor is suspended. I effect the raising and lowering of the lower frame, Q, with its teeth, by attaching the cords or hangers by which its rear end is suspended to the hinder extremity of the lever J, so that whenever the latter is moved to disconnect the seed-roller from the wheels the frame Q will be raised and drawn back until its front suspension-cords are brought into an oblique position to lift the teeth above the ground, the whole being sufficiently elevated to prevent it from obstructing the running of the machine.

By unhooking the swing-frame and the flexible seed-tubes from the wheel-frame the seed-distributor can be used by itself to sow either seeds or manure broadcast.

What I claim is—

The combination of the perforated register-plate e, the adjusting-screw f, and the springs g g', arranged and operating as described.

In testimony whereof I have hereunto subscribed my name.

C. S. TREVITT.

Witnesses:

E. H. SOUTHWICK,
ANSON GIBBS.