C. G. UDELL.

Hand Seeder.

No. 24,594. Patented June 28, 1859.

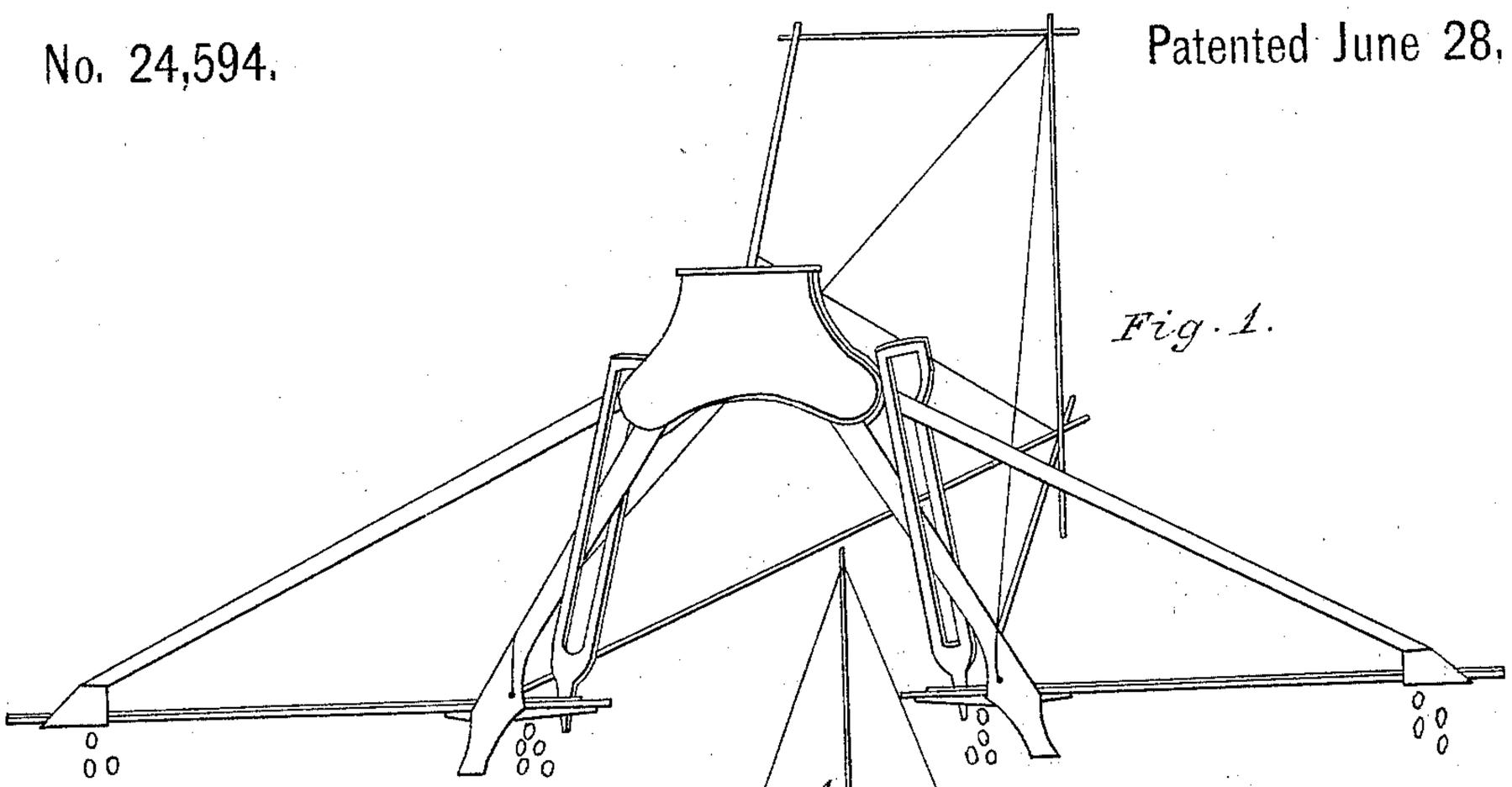

Fig. 1.

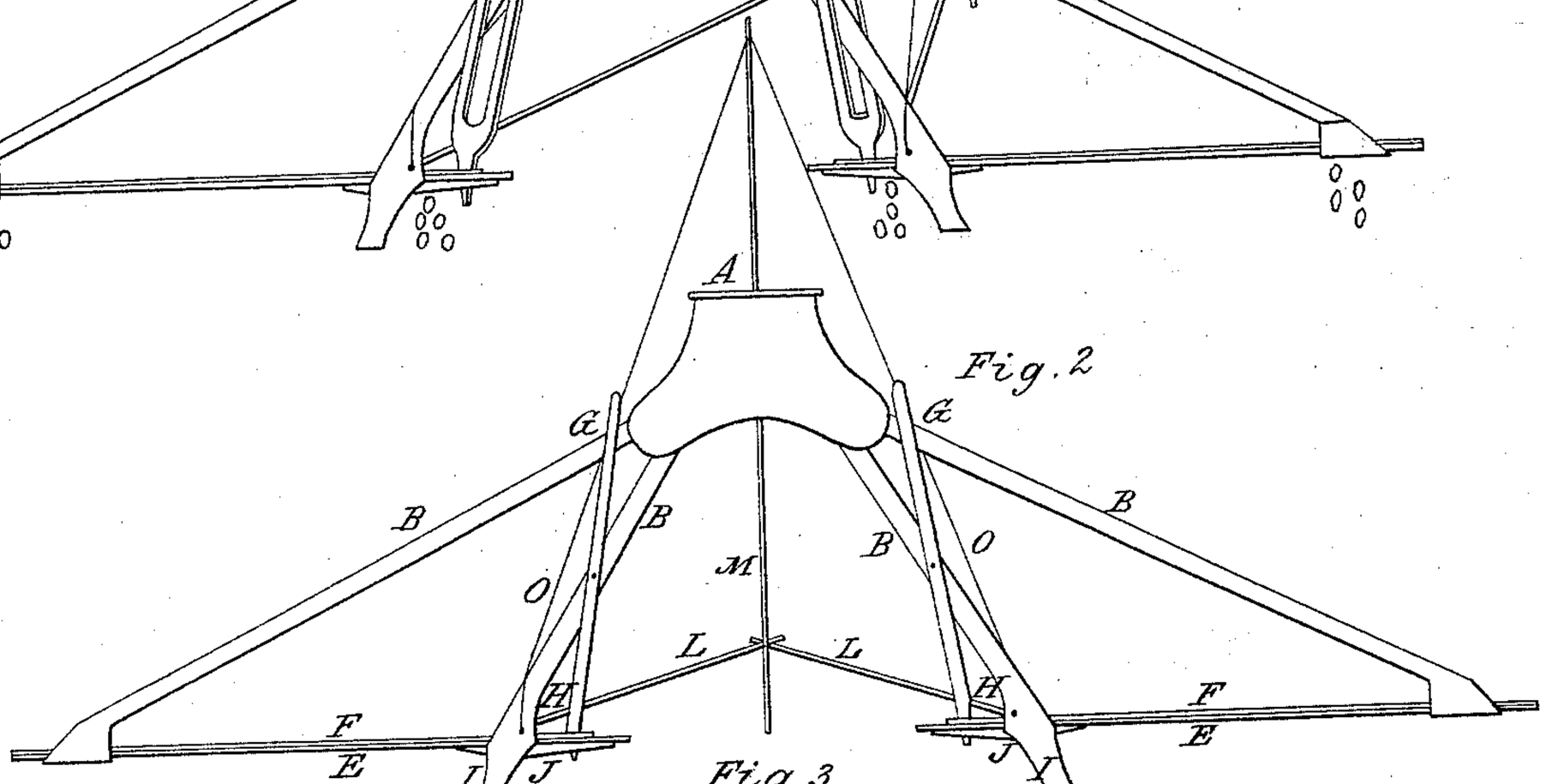

Fig. 2

Fig. 3

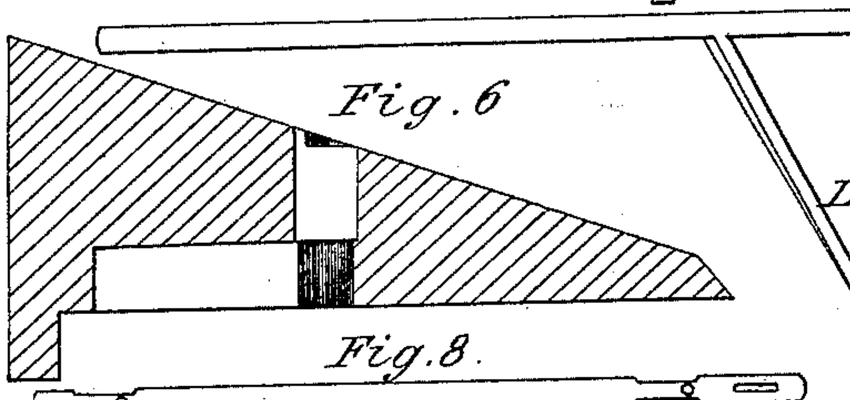

Fig. 6

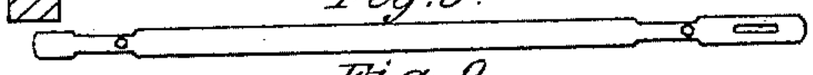

Fig. 8.

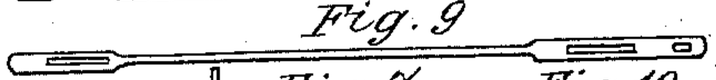

Fig. 9

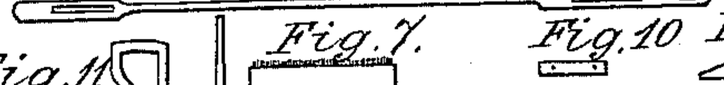

Fig. 7.

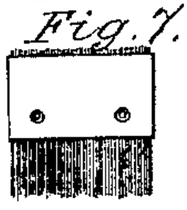

Fig. 10

Fig. 13.

Fig. 11

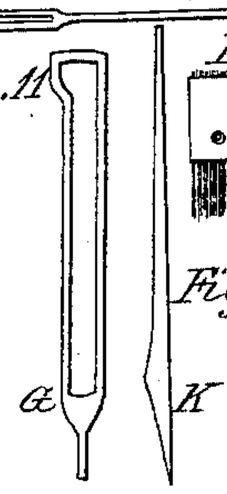

Fig. 12

Fig. 4

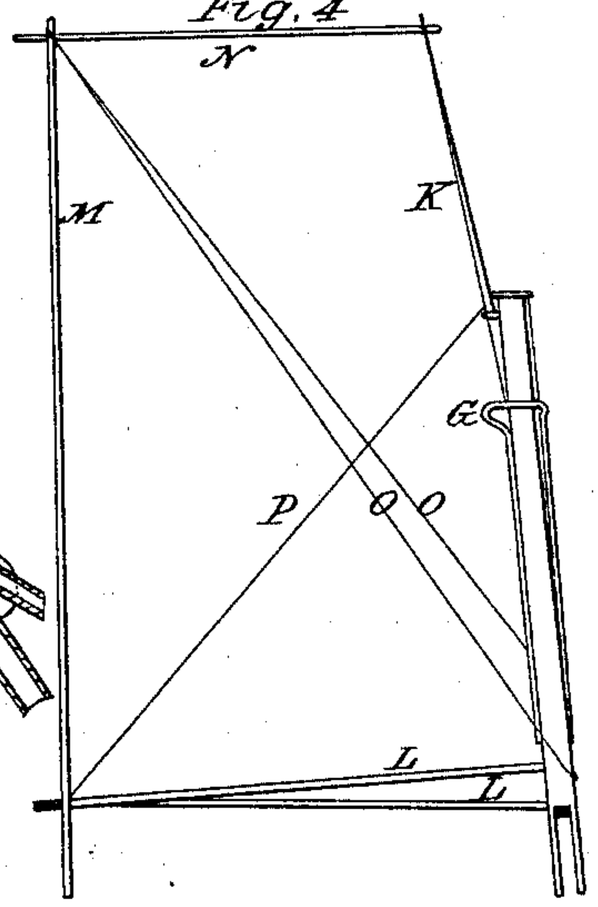

Fig. 5

Witnesses:

M. J. Goold

Edward Baldwin.

Inventor:

Calvin G. Udell

UNITED STATES PATENT OFFICE.

C. G. UDELL, OF MORRIS, ILLINOIS.

IMPROVEMENT IN CORN-PLANTERS.

Specification forming part of Letters Patent No. **24,594,** dated June 28, 1859.

To all whom it may concern:

Be it known that I, CALVIN G. UDELL, of the city of Morris, in the county of Grundy and State of Illinois, have invented certain new and useful improvements in seed-droppers for dropping corn or other seed in squares or check-rows without previously marking the ground; and I do hereby declare that the following is a full, clear, and exact description of the construction and operation of the same, reference being had to the accompanying drawings and the letters of reference marked thereon, in which—

Figure 1 is a perspective view. Fig. 2 is a front elevation. Fig. 3 is a plan. Fig. 4 is an end view. Fig. 5 is a transverse section. Fig. 6 is a section of a brush and holder, drawn full size. Fig. 7 is a full-sized plan of the socket in which the bristles are inserted. Fig. 8 is a plan of the connecting-bars. Fig. 9 is a plan of the valve-slides. Fig. 10 is a plan of the pieces inserted in the valve-slides, containing the different-sized openings, which serve as seed-measurers. Fig. 11 is a plan of the handles or levers. Fig. 12 is a plan of the standard. Fig. 13 is a plan of the bracket by which the standard is attached to the seed-box.

A is a seed-box with a cover on the top. The seed-box is formed by connecting four tubes, B B B B, by two side pieces in such a manner that the upper sides of the outer and longer tubes, by being bent, form the end inclosures, and the under sides of the inner tubes form the floor or bottom of the seed-box. The upper sides of the shorter tubes extend nearly through the seed-box in an upward direction and form partitions C C in the same. An oblong piece, D, passes from near the top through the center to the bottom of the side pieces of the seed-box, which forms a third partition, and also strengthens the machine by being secured to the side pieces of the said box. The tubes—the two inner and shorter of which are made larger in their lateral dimension at their upper ends, so that all may hold equal quantities—diverge laterally and downward from the box, so as to end at certain distances from each other, corresponding to the distance which it is intended to drop the rows of seed. At their lower ends, where they unite with the connecting-bars E E, they are enlarged, so as to form cavities for brushes and the working of the valves hereinafter described.

The connecting-bars are oblong pieces, made of any suitable material, forming seats for the valve-slides F F, connecting the tubes on each side, holding them in their proper position, and extending beyond the outer tubes suitable distances, for the purposes hereinafter described, outwardly, so as to guard the valve-slides, which are moved inward and outward by the motion of the levers or handles G G, the ends of which pass through oblong openings of suitable length near the inner ends of the connecting-bars, which openings limit the motion of the handles or levers outward and inward, and hence that of the valve-slides, to the proper points for the valves to fill and discharge each time the levers are moved. Each connecting-bar has two openings for the discharge of seed.

The valve-slides F F are made of nearly the same length as the connecting-bars which form their seats, extending through the cavities at the bottom of the tubes, through apertures for that purpose, and have each an opening near their inner ends, through which pass the lower ends of the levers or handles. Each of the valve-slides has two oblong openings—one under the end of each tube—into which openings are fitted slats having different openings, which serve as seed-measurers. By reversing the ends of these slats either the larger or smaller openings may be made to pass under the seed-cavities. In each seed-cavity at the bottom of the tubes is a brush-holder, H, inserted over the valve-slide and closing up the opening in the side of the cavity, having a foot on each side resting on the connecting-bar. In each of these holders is a brush inserted in a metallic socket. (See Fig. 7.) The holders are held in their places by screws driven through the sides of the tubes. By drawing these screws the brushes may be liberated and taken out for adjustment.

The handles or levers are made so as to straddle the tubes on either side, and are pivoted to the shorter tubes by pins passing through the sides of the tubes. At the bottom the sides of the handles are united, so as to pass through the openings in the ends of the valve-slides and the oblong openings in the connecting-bars, and act as levers for working the valves. At the top the front sides of the handles are curved forward of the tubes for the double purpose of admitting the hands and to

balance the machine by counterbalancing the weight of the measuring-rods and marker hereinafter described. The sides of the inner tubes are extended through the connecting-bars, to which they are secured, and form two legs, I I, which elevate the machine, allowing the seed to scatter as it falls.

Beneath the connecting-bars are four longitudinal brackets, on which the said bars rest, and to which they are secured. These brackets are also secured to the sides of the legs, and serve to strengthen the machine at these joints.

K is a standard secured to the back side of the seed-box, in a central position, of such shape that it leans forward, so as to be out of the way of the operator.

L L are measuring-rods secured to the two brush-holders in the inner tubes, and extending horizontally and diagonally toward each other, meeting at their front ends, thus forming a measure. Through the ends of these bars, where they meet, passes the rod M, which is used for three purposes: First, its lower end serves as a third leg to the machine; second, it marks the distance which the operator should move the machine forward each time; third, its upper end, in connection with the standard K, forms a guide by which the line of apertures for the discharge of seed is kept at right angles to a line from the operator to the point where the rows should terminate. N is a bar extending from the top of the standard to the top of the rod M to keep the rod in its proper position. The measuring-rods, marker, and guide are still further braced by cords, one of which, O, is tied to a screw in one of the short tubes, and passes to the top of the rod M, around which it is wound, thence to a screw in the other short tube. Another cord, P, is tied around the front ends of the measuring-rods and the rod M, and extends to the standard K, to which it is tied near the top of the seed-box.

Lightness being desirable in the construction of my machine, white pine or any other material may be used. The handles and brush-holders may be made of wood or iron. The sockets in which the bristles are inserted may be cast of any soft metal.

The manner of operating my machine is this: I set a stake on the opposite side of the field from where I commence to operate, at a point half-way between where I want to drop the second and third rows. I also set a stake on the side of the field where I commence, at the point half-way between where I want to drop the second and third rows in returning. I then set the machine down, taking care that the standard and rod in front are in line with the stake on the opposite side of the field. The valves being closed, the seed falls into the openings, and is ready to be discharged by pressing the tops of the levers or handles outward, the openings containing the seed in the meantime passing under the brushes, which sweep off all surplus seed which may rest over them. Then closing the valves by pressing the handles inward, I am ready to move the machine forward over the mark made by the foot of the marking-rod, when I proceed as before, taking care to set the machine down so that the standard and marking-rod are in line with the stake toward which I am operating, and the center of the machine directly over the mark made by the rod the last time the machine was set down. After operating across the field in this way I turn the machine around, set it down at a proper distance from the last row, the standard and rod, as before, in line with the stake at the opposite side of the field, and the machine at such a point that the four hills last dropped will be in line with the first four hills in the returning-rows. I then proceed as before, the marking-rod each time leaving a mark in line with the next transverse row. Each time before starting the stake must be reset, so as to guide the operator in returning.

What I claim as my invention, and desire to secure by Letters Patent, is—

1. The arrangement of the grain-box A, tubes B B, connecting-bars E E, and legs I I, the whole being constructed and operated substantially in the manner and for the purpose set forth.

2. In combination with the above, the measure L L, marking-rod M, and guide K, the whole being constructed and operated substantially in the manner and for the purpose set forth.

CALVIN G. UDELL.

Witnesses:

EDEN A. BALDWIN,

M. J. GOOLD.