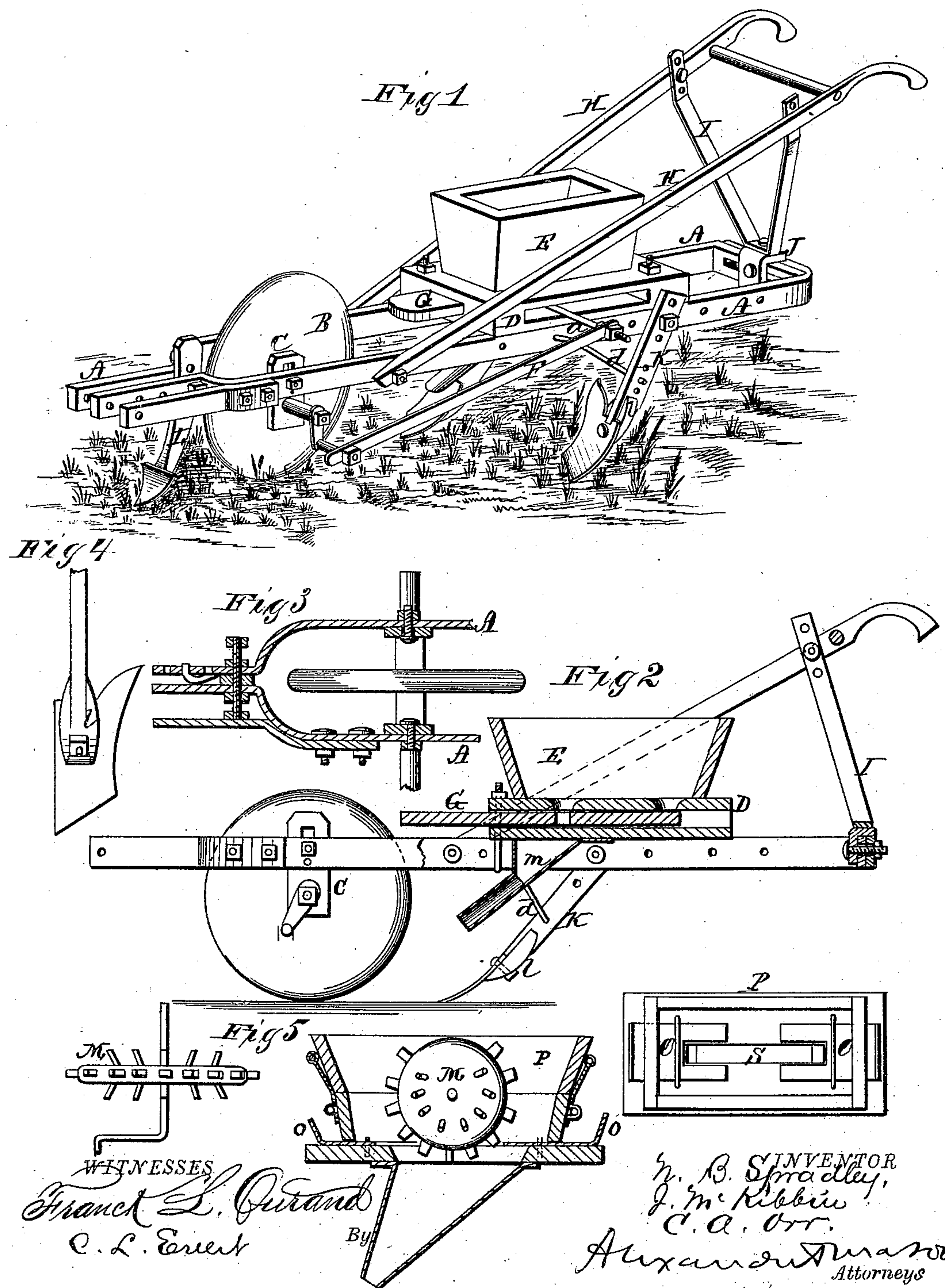


N. B. SPRADLEY, J. McKIBBIN & C. A. ORR.
 COMBINED CULTIVATOR AND SEED-PLANTER.
 No. 178,808. Patented June 13, 1876.



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NAPOLEON B. SPRADLEY, JAMES McKIBBIN, AND CHRISTIAN A. ORR, OF
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IMPROVEMENT IN COMBINED CULTIVATORS AND SEED-PLANTERS.

Specification forming part of Letters Patent No. 178,808, dated June 13, 1876; application filed
February 28, 1876.

To all whom it may concern:

Be it known that we, N. B. SPRADLEY, J. McKIBBIN, and C. A. ORR, of Oxford, in the county of Calhoun, and in the State of Alabama, have invented certain new and useful Improvements in Combined Cultivator and Seed-Planter; and do hereby declare that the following is a full, clear, and exact description thereof, reference being had to the accompanying drawings, and to the letters of reference marked thereon, making a part of this specification.

The nature of our invention consists in the construction and arrangement of a cultivator-frame and seed-planter, the peculiarities of which will be hereinafter more particularly set forth.

In the accompanying drawings, making part of this specification, Figure 1 represents a perspective view of our invention. Fig. 2 is a longitudinal section; Fig. 3, a top view of a portion of the beams in section. Fig. 4 is a back view of one of the standards with foot attached; and Fig. 5, a section of a hopper, and the wheel in it; also, top view of the wheel and plan view of a hopper, showing the slides in it.

In the drawings, A A represent two metallic bars, which, together, form the frame and beam of the plow. These bars are curved inward at their front ends, and embrace the standard of the front plow-tooth. At their rear ends they make a rectangular turn inward, and one overlaps the other. These two ends are slotted, and a bolt passes through these slots to confine the two together. B represents a wheel, which carries the forward end of the frame. This wheel has its bearings in two plates, C C. These plates C C are provided with a series of holes, through which they are bolted to the bars A A. These plates may be raised or lowered by means of these holes and bolts, so as to allow the plow-teeth to enter the ground deeper or shallower, as the case may require. D represents the slide-box, which is placed upon the frame back of the wheel. This box has a slot made through it longitudinally to receive the seed-slide, and also slots through it from side to side, so that a rod may be passed into the slide

to operate it. Both the top and bottom of this slide-box are provided with seed-holes, but not opposite to each other, as usual. The slide is made in the ordinary way, with seed-apertures, and it takes the seed from the upper apertures in the box and deposits it through the lower apertures. The hopper E rests upon this slide-box, and the seed spout or conveyor is secured to its under side, as seen. F represents a pitman, which connects the crank-shaft of wheel B to a rod, a, which passes through the seed-slide or into it. The crank of wheel B thus gives the seed-slide a reciprocating motion in the box to enable it to carry out the seed. H represents the handles, which are bolted to the bars A A at their forward ends, and to the handle-stay at their rear ends. This stay consists of a metallic bar, which is bowed, as seen, and bolted at its center to a clip, J, and this clip is secured to the bars A A by means of the same bolt which secures their two rear ends together. This stay has a series of holes near its ends, so that the handles can be raised or lowered to suit the height of different individuals. K K represent the rear standards, and L the front standard, for carrying the plow-points. l l represent tips, which are secured to the lower end of the standard. These tips are slotted in their upper ends, and the bottom of the stand passes into these slots, and the two are riveted or secured together. These tips, to which the plow-points are secured, are made broad enough so that when the points are secured on they have a wide and firm bearing, and cannot tilt or get out of place.

For cotton-seed we use in the hopper a wheel, M, which is provided upon its periphery, as well as upon its sides, with a series of teeth, as represented in Fig. 5. P is the cotton-seed hopper, which has a slot, S, in its bottom, through which the seeds pass, and this slot is regulated as to length by the slides O O. The teeth of the wheel M cut into this slot, and thus carry the cotton-seed through. The teeth upon the sides of the wheel serve as stirrers, and do not allow the seed to clog in the hopper. By removing the slide-box and the hoppers, and the wheel if desired, the frame can be used simply as a plow-frame or

cultivator-frame. The standards being graduated with holes and provided with braces *d*, they may be raised or lowered, or placed at different angles, to suit the purpose for which they may be used.

It will readily be seen that the standards can be changed on the bars so that they will stand opposite each other, or one behind the other, or several upon one bar, and the bars can be spread or closed to suit the work to be performed, and the handles changed to suit the requirements of the plows. The front end of the frame has a bolt passing through it, which may be provided with a right-and-left screw, and nuts, to spread the frame as much as may be required.

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

1. The metallic frame, consisting of the two perforated bars *A A*, with their rear ends bent inward, slotted, and connected together by a bolt and nut, and their front ends curved

toward each other, and forming jaws, between which is secured the adjustable shovel-beam *L*, substantially as and for the purposes herein set forth.

2. The wheel *M*, toothed upon its periphery and upon its sides, in combination with the seed-box *P*, with its slot *S* and slides *O O*, as and for the purpose specified.

3. The combination of the frame-bars *A A*, having their rear ends bent at right angles and slotted, the handle-stay *I*, formed of one piece of metal, the handles *H H*, and the clip *J*, connecting the handle-stay and the bolts *A A*, as set forth.

In testimony that we claim the foregoing we have hereunto set our hands this 14th day of February, 1876.

NAPOLEON B. SPRADLEY.

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Witnesses:

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