

Grain-Drill.

Patented Sept. 19, 1865.

Fig. 1.

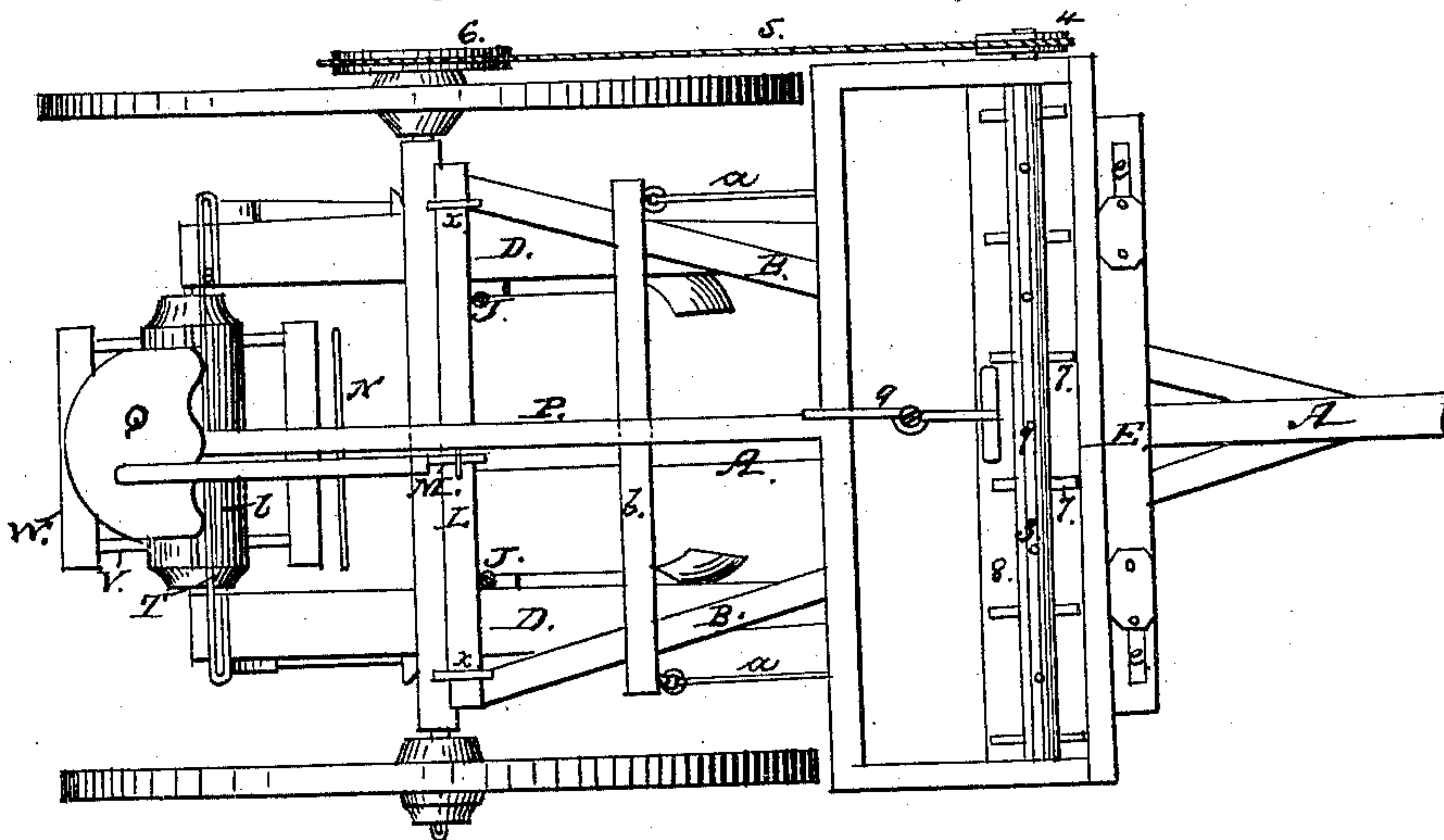
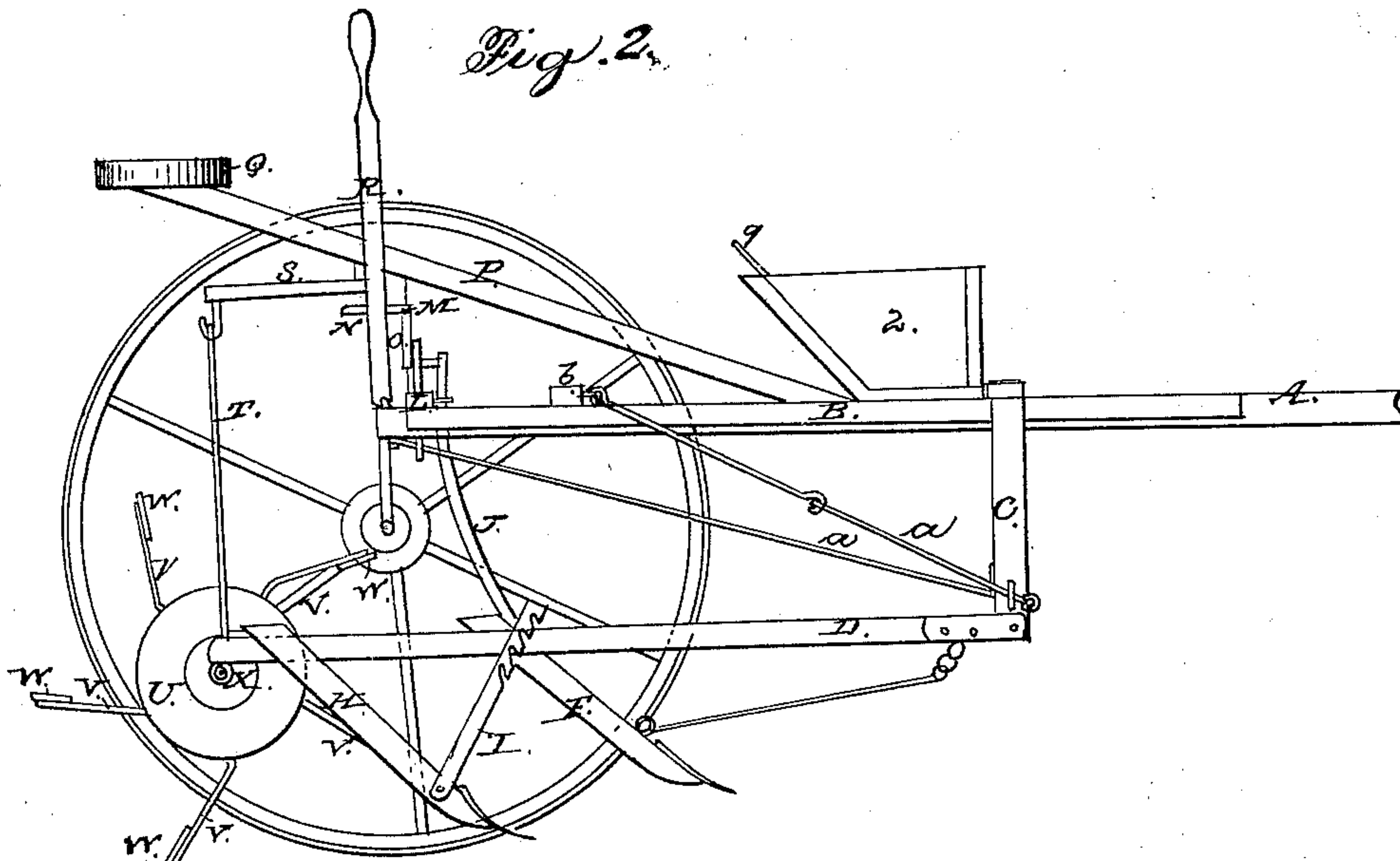


Fig. 2.



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B. A. GRANT, OF MOUNT PLEASANT, IOWA.

IMPROVEMENT IN COMBINED SEED-SOWER AND STALK-CUTTER.

Specification forming part of Letters Patent No. 49,997, dated September 19, 1865.

To all whom it may concern:

Be it known that I, B. A. GRANT, of Mount Pleasant, in the county of Henry and State of Iowa, have invented a new and useful Improved Combined Cultivator, Seed-Sower, and Corn-stalk-Cutter; and I do hereby declare that the following is a full, clear, and exact description of the same, reference being had to the accompanying drawings, and letters and figures marked thereon, which form a part of this specification, and in which—

Figure 1 represents a top or plan view of my machine, and Fig. 2 a side elevation of the same with one of the wheels removed.

The nature of my invention consists in the novel device used in guiding the center plows so as to cause them to follow the insinuosities of the rows, the way in which the plows are adjusted, the combination of a stalk-cutter with the cultivator-frame, and the device for raising and lowering the frame and stalk-cutter.

To enable those skilled in the art to manufacture and use my invention, I will describe the same with particularity.

The same letters of reference refer to the corresponding parts in the different figures.

A represents the tongue of my machine, which extends back to the axle and is braced by the braces B B.

C C are standards passing up through the cross-piece E, and can be adjusted laterally in the slots *e e*. They are braced at the bottom by means of the rods *c c*.

D D are the plow-beams, with their front ends attached to the standards C C in such a manner as to allow the rear ends to be raised and lowered. The inside plow-standards are so attached to the beams D D as to admit of their plows being moved laterally by means of the rods J J, which are attached to said plow-standards and extend up through loops on the sliding bar L. Near the center of said bar, which is held in position by means of the brackets X X, there is a staple, through which the end of the crank M passes loosely. To the other end of the crank M the lever N is attached. The said lever N is in a position where the feet of the operator rest upon it, one upon either end, and as the operator presses down one end of the lever he, by means of the turning of the crank M, slides the bar L, which moves the tops of the rods J J, and thereby moves the plows laterally, and by pressing

down the other end of the lever N he moves the plows laterally in the other direction.

The standards H H are braced by means of the braces I I, and they are adjusted by means of the notches *h*, as shown in Fig. 1. The roller U has its bearings at X X, and is so attached as to be readily removed. To the arms V of said roller the knives W are attached. The said arms and knives are so arranged that as the machine moves forward the roller revolves and the knives strike down the cornstalks, and press them to the ground and cut them in pieces.

The lever R has an arm, S, to which is attached the bow or curved bar T, which connects the rear ends of the beams D D. The operator, sitting on the seat S, can readily raise the rear ends of said beams by throwing the upper end of said lever forward, and when the stalk-cutter U is attached for cutting stalks it raises it with the beams.

The peculiar construction of the lever with the arm S makes a very simple device for raising the beams, and at the same time applies the power at their extreme rear ends, thereby lessening the power required to raise them.

I also construct my machine so that it can be used for sowing seed by putting on the front end of the cultivator-frame the seed-box 2. The shaft 3, extending through said seed-box, is driven by the band 5, which runs on the hub 6 of the wheel and the pulley 4 on the end of said shaft. The pegs 7 are attached to said shaft at right angles to each other, so that when the shaft revolves the pegs pass down through the grain, first one on one side of a hole in the bottom of the seed-box, and then another on the other side of said hole, so as to agitate the grain and cause it to fall evenly through the bottom of said seed-box. There is an extra slide-bottom, 8, in the bottom of the seed-box, which is adjustable by means of the lever 9, so as to open and close the holes in the bottom of said seed-box, thus regulating the quantity of seed sown. *a a* are draft-rods extending from the evener *b* down to near the lower ends of the standards C C, where the whiffletrees are attached to them, thus applying the draft to the machine so that it will not bear heavily upon the horses' necks.

I construct the plow-beams D D of such width that the plows are in the desired relative positions by attaching the front plows to

the inside of the beams and the rear plows to the outside. Thus I use only two beams in my cultivator, so constructed that the stalk-cutter U can be readily attached when the operator is desirous of using the machine for cutting cornstalks.

Having thus fully described the construction and use of my machine, what I claim as my invention, and desire to secure by Letters Patent, is—

1. The combination and arrangement of the crank M, provided with the lever N, the slide-bar L, the rods J J, and the plow-standards F

F, when all constructed and operating substantially as set forth.

2. The combination and arrangement of the lever R, arm S, the connecting-bow T, and beams D D, when constructed substantially as herein specified and described.

3. The combination and arrangement of the beams D D with the cornstalk-cutter U, when constructed and operating substantially as herein set forth.

Witnesses:

GEO. W. HOLT,
B. CLARK.

B. A. GRANT.