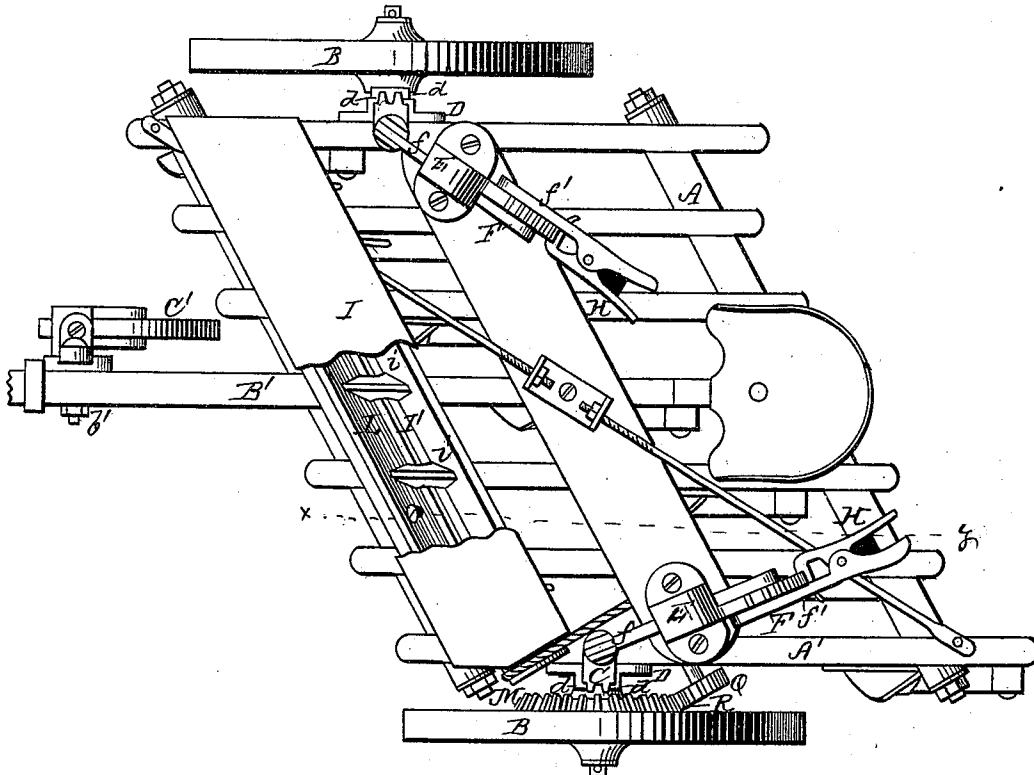


A. S. BAKER.  
CULTIVATOR.

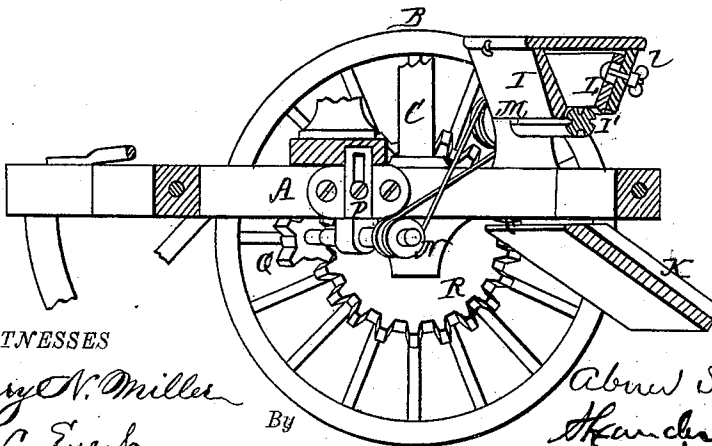
No. 174,756.

Patented March 14, 1876.

*Fig. 1.*



*Fig. 3.*



WITNESSES

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Fig. 2.

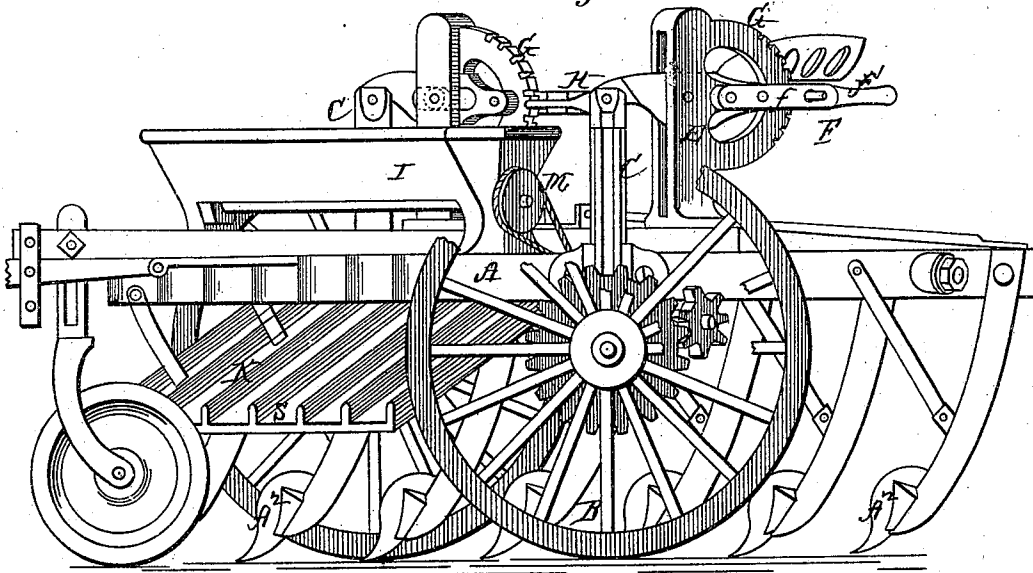


Fig. 5.

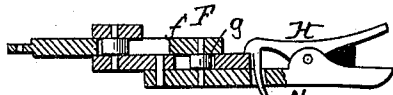


Fig. 6.

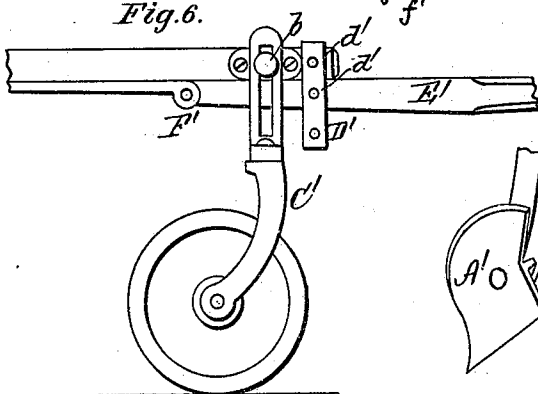
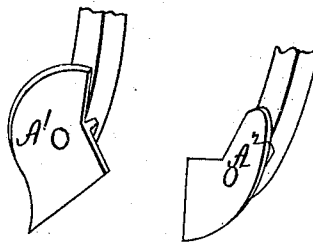


Fig. 4.



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# UNITED STATES PATENT OFFICE.

ABNER S. BAKER, OF KALAMAZOO, MICHIGAN, ASSIGNOR OF ONE-HALF HIS  
RIGHT TO JOHN GROVES, OF SAME PLACE.

## IMPROVEMENT IN CULTIVATORS.

Specification forming part of Letters Patent No. **174,756**, dated March 14, 1876; application filed  
August 14, 1875.

*To all whom it may concern:*

Be it known that I, ABNER S. BAKER, of Kalamazoo, in the county of Kalamazoo and in the State of Michigan, have invented certain new and useful Improvements in Seed-Planters and Cultivators; 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.

This invention relates to an improved broadcast seeder and cultivator, or gang-plow, combined; and it consists in a improved combination of devices for raising the rhomboidal frame or truck, for the purpose of throwing the beveled wheels out of gear, consisting of two compound levers working in standards attached to opposite sides of the frame, and provided with devices for fastening the same in any desired position, said levers being connected with vertical standards to which the wheels are journaled, and which slide in ways formed upon standards or plates attached to the machine on opposite sides, as more fully hereinafter described.

In the drawings, Figure 1 represents a top view of my improved apparatus. Fig. 2 represents a perspective view of the same. Fig. 3 represents a section through the line *xy* of Fig. 1. Fig. 4 detached views of the right and left plows; Fig. 5, a detached view of one of the compound levers, and Fig. 6 a detached view of the short and main tongues and the adjustable caster.

The letter A represents a strong frame or truck constructed in the form of a rhomboid or oblique-angled parallelogram, and B the wheels upon which it is mounted. The said wheels are journaled on short journals on the lower ends of the vertical standards C C, which are flanged on each side, and are held in ways *d d* in the standards or plates D D, which are secured to opposite sides of the frame A, and in which said standards C C are adapted to move vertically. E E represent two slotted vertical standards mounted on the top of the frame A, on opposite sides thereof, and F F two compound levers passing through the slots and adapted to work therein. Said

compound levers consist each of two levers, *f* and *f'*. The lever *f* is slotted longitudinally at its center, and one end attached to the slotted head of the standard C, the other end being pivoted to the lever *f'* between its fulcrum or point of attachment *g'* and its handle. Each standard C has formed on one side a toothed segment, G, to the side of which the handle of the lever *f'* works, said lever being provided with a hand-pawl, H, which engages the teeth of the segment, but which can be thrown out of the same when it is desired to shift the levers for the purpose of elevating or lowering the truck by pressure thereon by the hand. It will be seen that, as thus constructed, the compound lever, in lifting or depressing the standard C, will not throw it out of a straight line, as the lever *f* will slide on its fulcrum, preventing its end from passing through the arc of a circle, as it would if the fulcrum were stationary. The letter I represents the seed-box extending across the front of the frame, directly behind, and parallel with, its front edge. Said box is of a triangular shape, the apex downward, an opening being left its entire length at the bottom, in which there is located a recessed shaft or roller, I', which is capable of a rotary movement, and forces the seed from the box to the distributing-board K below. The said box I is provided with a series of equidistant partitions, *i*, and a gage-plate, L, on the inside, secured to one of the sides by means of set-screws *l* passing through slots therein, by which it is rendered adjustable to regulate or gage the seeds dropped from the box. Said roller or shaft has secured to one end a pulley, M, which is connected by a belt, chain, or band, with a similar pulley, N, mounted on a short shaft, O, journaled in an adjustable hanger, P, attached to the frame A. The other end of said shaft is mounted with a beveled gear-wheel, Q, which meshes with a larger beveled gear-wheel, R, secured to the wheel B of the machine. This gearing serves to transmit the power from the wheels of the apparatus to operate the seeder or roller I' and force the seeds from the seed-box. K represents a distributing-board set directly under, and parallel with, the seed-box, inclin-

ing toward the front of the apparatus. Said distributor is provided on its upper surface with a series of parallel ridges, *s*, corresponding in number with the partitions of the seed-boxes, for the purpose of conveying the seed from each compartment separately to the earth. To the rear of said distributing-trough, and secured to the under side of the frame, is a series or gang of plows, seven in number. Said plows are formed of shares *A*<sup>2</sup>, attached to depending legs, as usual, which extend from side to side of the machine from one acute angle to the other thereof, all being turned in the same direction, as illustrated, when the machine is employed as a seeder for sowing broadcast. For cultivating corn, however, I provide two interchangeable shares turning in opposite directions, as indicated by the letter *A*<sup>1</sup>, Fig. 4, which are attached and used as hereinafter explained. The letter *B*<sup>1</sup> represents a short tongue attached to the front of the frame *A*. To one side of said tongue is attached, by means of a screw-bolt, *b*<sup>1</sup>, a slotted standard, to which is swiveled a caster, *C*<sup>1</sup>. By this means the tongue and frame can be elevated or lowered at will to regulate the depth of the plows, as will be evident. To the front end of the short tongue is also secured a depending yoke or shackle, *D*<sup>1</sup>, through which the main tongue *E*<sup>1</sup> sets, being hinged or pivoted at its rear end to the short tongue at *F*<sup>1</sup>. Said yoke or shackle is provided with apertures *d*<sup>1</sup> on opposite sides, and the tongue with a similar aperture, through which a pin may be inserted for securing the tongue *F*<sup>1</sup> rigidly and adjusting the same, or it may be left free as may be desired.

In employing the apparatus for corn I make use of the reverse shares *A*<sup>1</sup>, Fig. 4. I detach

the seed-box, or disconnect the gearing by which the seeder is driven, and then take out the middle-share leg, leaving three shares or teeth each side of the row of corn, and by means of the reverse teeth can throw the soil to or from the rows at pleasure. When the corn is young, in which case it is necessary to throw the soil from the rows, I take off the right-hand share or tooth from the middle leg of the left-hand side of the frame, and the right-hand tooth or share from the right-hand side of the same, and substitute in their places the left-hand or reverse teeth. After the plant has grown sufficiently to stand the soil necessary to form the hill, I take the two left-hand teeth, and place them—one on the left-hand leg on the left-hand side of the frame, and the other on the middle leg of the right-hand side of the frame, in which position they will turn all weeds and grass into the hill. For summer fallow the machine is employed, as first described and illustrated, with the exception of the seeding attachment.

Having fully described my invention, what I claim, and desire to secure by Letters Patent of the United States, is—

The combination, substantially as described, of the compound levers *F f*<sup>1</sup> working on standards *E* attached to frame *A*, and the standards *C* working in plates or standards *D*, and carrying the wheels *B*, on which the truck is supported, for the purposes set forth.

In testimony that I claim the foregoing I have hereunto set my hand this 27th day of April, 1875.

ABNER S. BAKER.

Witnesses:

AMOS D. ALLEN,  
S. R. BELL.