

(No Model.)

2 Sheets—Sheet 1.

A. S. SEELEY.
CULTIVATOR GANG PLOW.

No. 506,556.

Patented Oct. 10, 1893.

Fig. 1.

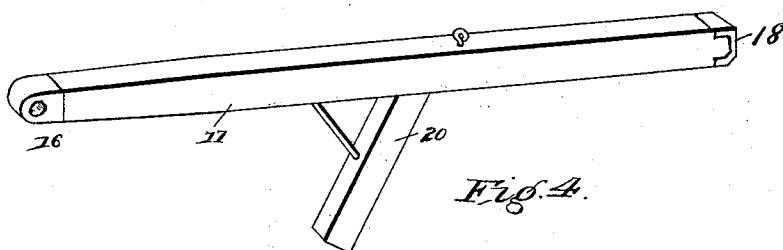
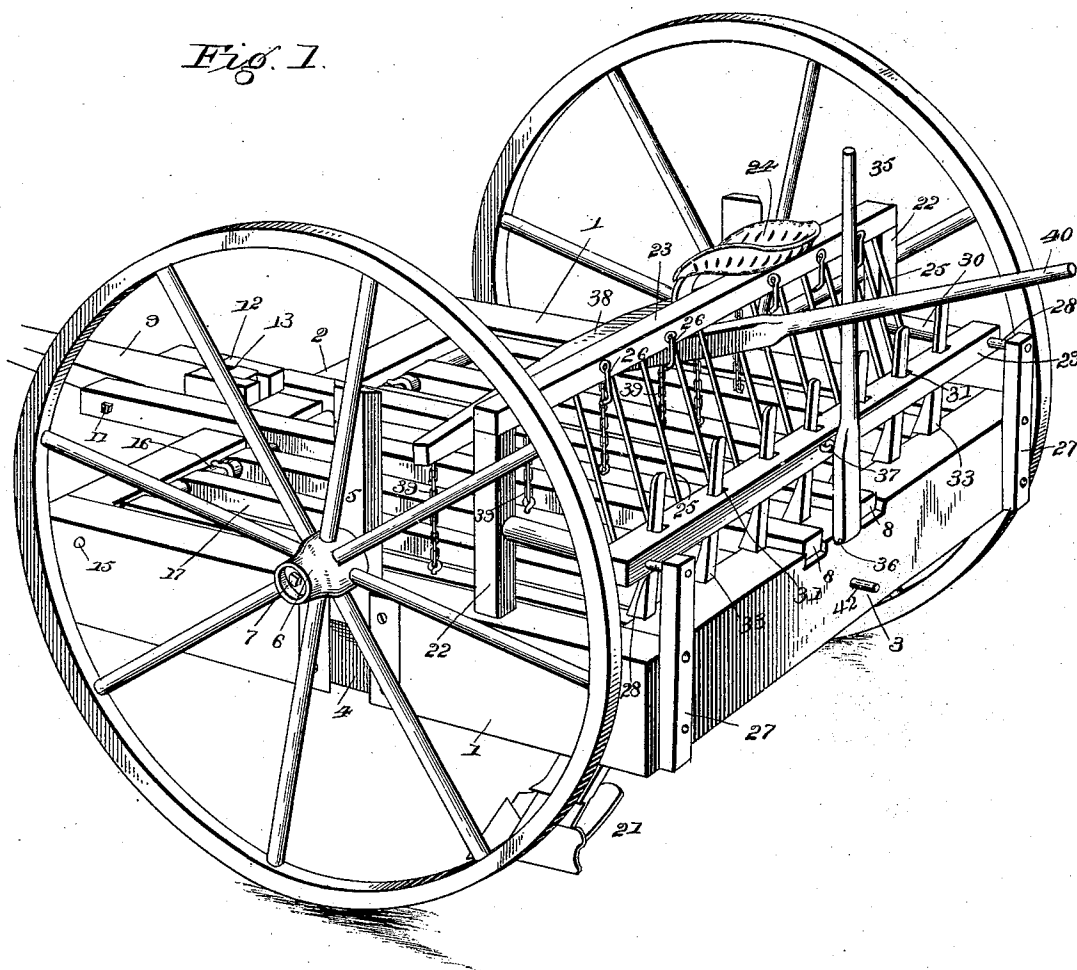


Fig. 4.

Witnesses:

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Almeron S. Seeley.

By *hss* Attorneys.

W. S. Duwall.

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(No Model.)

2 Sheets—Sheet 2.

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Fig. 2.

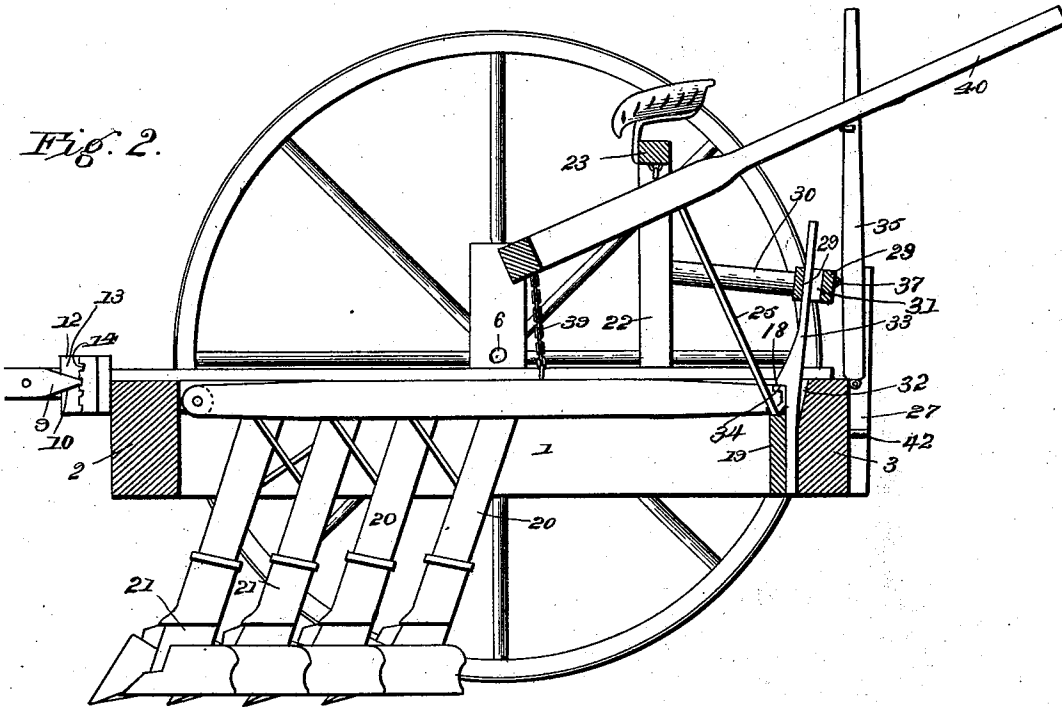
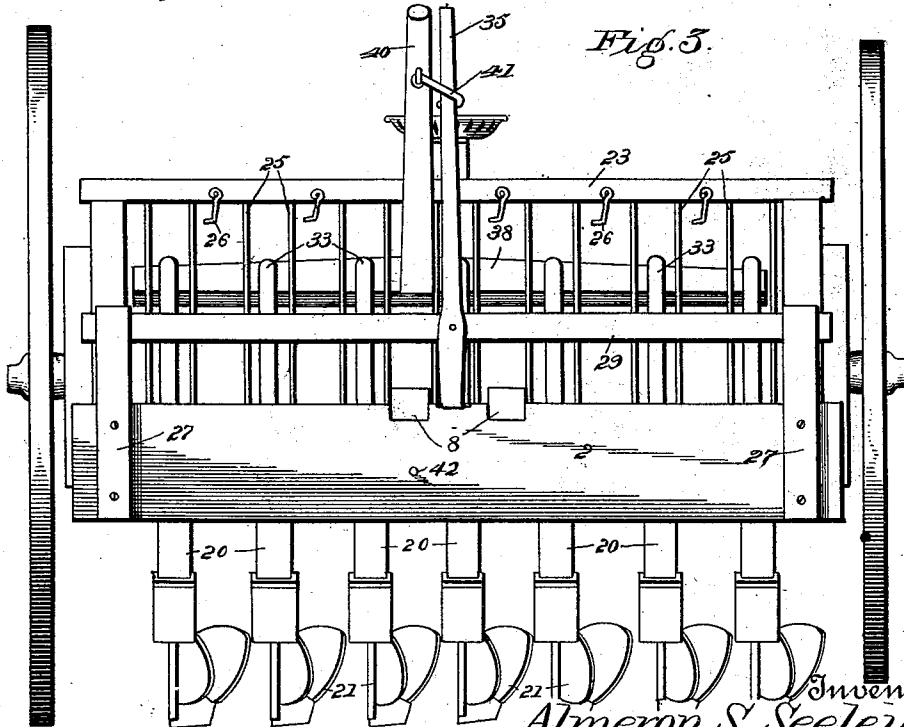


Fig. 3.



Witnesses:

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W. S. Duwall

Inventor:
Almeron S. Seeley.

By *Chas. H. ...* Attorneys.

UNITED STATES PATENT OFFICE.

ALMERON S. SEELEY, OF EVERETT, MICHIGAN.

CULTIVATOR GANG-PLOW.

SPECIFICATION forming part of Letters Patent No. 506,556, dated October 10, 1893.

Application filed May 13, 1893. Serial No. 474,141. (No model.)

To all whom it may concern:

Be it known that I, ALMERON S. SEELEY, a citizen of the United States, residing at Everett township, in the county of Newaygo and State of Michigan, have invented a new and useful Cultivator Gang-Plow, of which the following is a specification.

My invention relates to improvements in gang-plows or cultivators, and the objects in view are to provide a machine of this class so constructed as to provide for a simultaneous or individual raising of the plows contained therein; to provide for an adjustment of the frame and tongue and for the level running of the machine.

Various other objects will appear in the following description, and the novel features thereof will be particularly pointed out in the claims.

Referring to the drawings—Figure 1 is a perspective view of a plow constructed in accordance with my invention. Fig. 2 is a vertical longitudinal sectional view thereof. Fig. 3 is a rear elevation. Fig. 4 is a detail in perspective of one of the plow beams.

Like numerals of reference indicate like parts in all the figures of the drawings.

In the practice of my invention I employ a substantial square frame, the same consisting of the opposite side-bars 1 and front and rear end bars 2 and 3, respectively. Each of the side-bars 1 is provided upon its outer face with a vertical dovetailed recess 4, and in each recess there is located a dovetailed standard 5 from the outer face of each of which extends a stub-axle 6, said axle carrying ground-wheels. The standards 5 may be adjusted, that is, they are secured by suitable devices. In the present instance, and merely as one way, I have shown binding bolts 7 for this purpose. The wheel at the left of the machine is preferably greater in diameter than that at the right, for the reason that the former travels in the plowed ground which, being softer, permits it to run deeper than the latter wheel, and hence the machine will run level when it would not were the wheels of the same diameter. A pair of longitudinal hound-bars 8 are let into the upper sides of the front and rear cross-bars 2 and 3 and are disposed parallel to each other, said hound-bars extending at their front ends beyond the

cross-bar 2 and being bolted to both cross-bars in a convenient manner.

Located between the front ends of the hound-bars 8 is a draft tongue 9, said tongue being provided at its rear extremity with a beveled tenon 10. The draft bar is pivoted by a bolt 11 between the front ends of the hound-bars, and between the rear end of the draft-bar or tongue and the front cross-bar 2 a space intervenes. In this space there is mounted for sliding between the hound-bars 8 a locking-block 12, and the same has its opposite sides grooved to receive the hound-bars, which latter form ways for the block. The front face of the block is vertically recessed, as at 13, and the bottom of this recess is provided with a series of inclined teeth or notches 14. By drawing the block back and adjusting the draft-tongue to a proper point, that is, depressing or elevating as may be desired, the front end of the frame, and sliding the block forward so that one of its teeth or notches engages with the tenon of the tongue, it will be seen that said tongue becomes locked in relative position or at a relative angle with the frame. It may be secured in this position through the instrumentality, in the present instance, of one or more binding bolts passed through either or both of the hound-bars and binding upon the block. In this manner, as will hereinafter appear, the plows are given a proper inclination and may be made to run shallow or deep, as desired.

Passing through the two side-bars 1 immediately in rear of the cross-bar 2 is a transverse rod 15, and at intervals there is located and pivoted upon the rod cast-metal blocks 16 whose front ends are reduced and perforated to receive the rod and whose rear portions are bifurcated to embrace the front ends of the series of plow-beams 17. The plow-beams 17, at their rear ends are fitted with cast-metal caps 18 bifurcated to embrace the ends of the beams and are also beveled at their rear ends, as shown, and are adapted to rest upon a transverse rest-bar 19 which is secured to the inner face of the rear cross-bar 3 and is reduced from its upper end to its lower edge.

Each of the plow-beams is provided with depending standards 20 suitably braced, and the said standards are arranged in a diagonal

series extending from the right-hand front corner to the left-hand rear corner of the frame. To each standard there may be secured any suitable plow, but I prefer to secure thereto and employ a plow 21, the construction of which is covered by a companion application concurrently pending and bearing Serial No. 469,594, and which was filed April 8, 1893. A pair of standards 22 rise from the side-bars 1 near the rear ends of the latter and they support a cross-piece or bar 23 at the center of which is located a seat 24 for the accommodation of the driver. A series of inclined rods 25 extend from the cross-bar 23 to the rest-bar 19 and are spaced apart so as to form guides for the plow-beams and as a means for supporting them in relative position or parallel to each other. Between the pairs of rods 25 there are pivoted to the rear side of the cross-bar 23 hooks 26 which may be employed for suspending any one or all of the plows with their rear ends elevated and their plows out of contact with the soil. A pair of end standards 27 rise from the rear corners of the frame and are connected to the standards 22 by horizontal guide-rods 28. A vibrating transverse-bar 29 is perforated at its ends and mounted upon and supported by the rods 28 and its forward movement is limited to spacing sleeves 30 also located upon the rods and interposed between the bars 29 and the standards 22. The transverse bar 29 in line with the beams is provided with a series of openings 31, and said openings are also in line with the recesses 32 formed in the inner side of the rear cross-bar 3 immediately above the rest-bar 19. In each of these recesses 32 there is located a spring-lever 33 whose upper end extends through the opening 31 in the bar 29 in which it is adapted to vibrate, being considerably smaller than the opening and is provided near its lower end with a shoulder 34, abrupt upon its under side and inclined upon its upper side. When the plow-beams are depressed or in their lowered position and resting upon the rest-bar 19, it will be seen that the shoulders take over the rear ends of said beams and hold them in depressed positions, and hence their plows are operatively in contact with the ground. It will be seen that any one of the plows may be liberated from engagement with its spring lever by a simple rearward drawing of the upper end of the lever so as to disengage the shoulder of the lever from the beam. In this manner any one of the plows may be liberated together with its beam so as to pass over an obstruction lying in its path and may be supported by means of its hook in such elevated position. By withdrawing the hook, however, the plow will fall, and the rear beveled end of the beam readily ride over the beveled shoulder to resume its position upon the rest-bar and be locked by the lever. The hand lever 35 is fulcrumed at its lower end to the rest-bar 3, as indicated at 36, immediately in rear of the bar 29, and

is connected to the center of said bar by means of a link 37. It will be seen that by a rearward movement of this lever the entire series of spring levers will be disengaged from the rear ends of their plow beams so that, by mechanism hereinafter described, the entire series of plow beams may be simultaneously elevated for the purpose of traveling to and from the field of operation or for passing over any obstructions that may lie in the path of the machine. A transverse yoke-bar 38 is arranged above the series of plow beams in advance of the cross-bar 23, and the same is connected at intervals by short chains 39 to the plow beams. From the center of this yoke-bar 38 a lever 40 extends rearward between convenient guide-rods 25 and to the rear of the machine where it is provided with a hook 41 which, when the lever is depressed and the yoke-bar elevated, may be engaged with a suitable stud 42 extending from the rear side of the bar 3. The lever is fulcrumed upon the underside of the cross-bar 23 through the medium of a couple of links 43. It will be observed that by first a pull upon the hand-lever 35 which liberates all of the plow beams the lever 40 may be depressed and the entire series elevated and locked in such elevated position by the hook and stud described. In this manner the machine is adapted for traveling to and from the field of operation or for passing over obstructions that may lie in the path of the gang of plows. If obstructions lie solely in the path of one or two plows the spring levers may be operated individually and also the beams whose plows are thus exposed elevated individually and supported by the supporting-hooks in such position until the danger has been avoided.

I do not limit my invention to the particular details of construction herein shown and described and hold that I may vary the same to any degree and extent within the knowledge of the skilled mechanic without departing from the spirit or sacrificing any of the advantages thereof.

Having described my invention, what I claim is—

1. In a gang-plow, the combination with the frame, a rest-bar at the rear end thereof, a series of plow beams pivoted to the front end of the frame and at their rear ends supported by the rest-bar, of vertically disposed spring-locking levers arranged in rear of the ends of the plow-beams and shouldered to engage the same, and means for supporting said plow-beams when elevated, substantially as specified.

2. In a gang-plow, the combination with the rectangular frame, having a rear rest-bar, the series of plow-beams pivoted in the frame and at their rear ends upon the rest-bars, and a series of shouldered spring-levers arranged in rear of the plow-beams engaging and extending above the same, of a series of guides for the plow-beams, a superimposed cross-bar,

and supporting hooks arranged between the guides depending from the cross-bar and adapted to engage the beams, substantially as specified.

- 5 3. In a gang-plow, the combination with the rectangular frame having a rear rest-bar, a series of plow beams connected to the front ends of the frame and supported at their rear ends upon the rest-bar, of a series of spring-levers secured to the rear bar and extending and adapted to engage the rear ends of the beams, opposite horizontal guides, a vibrator-bar mounted upon the guides and having openings for loosely receiving the upper portions of the spring-levers, a lever fulcrumed upon the frame and connected to the vibratory bar for operating the latter, a yoke-bar arranged above the beams, connections between the yoke-bar and the beams, a lever connected to the yoke-bar and adapted to elevate the same, and means for locking the said lever in such position, substantially as specified.

4. In a gang-plow, the combination with the oblong frame, the rear rest-bar, the transverse rod at the front end of the frame, the series of plow-carrying beams, the beveled castings at the rear ends of the beams, the reduced and bifurcated castings at the front ends of the beams and perforated to receive the rod, the series of intermediate spacing sleeves arranged upon the rod, of the shouldered levers arranged at the rear ends of the beams and secured to the rear ends of the frame, and a supporting device for the beams, substantially as specified.

5. In a gang-plow, the combination with the rectangular frame, the series of plow-beams pivoted at their front ends thereto, a rear rest

bar for the beams, of opposite vertical standards 22, a transverse connecting-bar 23, depending guide-rods 25 connecting the bar 23 with the rest-bar, the series of pivoted hooks 25, the series of levers 33 having the shoulders 34 and set in the recesses 32 formed in the inner face of the rear cross-bar 3, the standards 27 at the rear end of the machine, of guide-rods connecting the same with the standards 22, the spacing sleeves 31 receiving the upper ends of the levers, the lever 35 pivoted as at 36 and connected to the bar 29, the yoke-bar 38, the chains connecting the same with the beams, the lever 40 connected to the yoke-bar and fulcrumed on the bar 23, the hook depending from the lever, and the stud extending from the frame, substantially as specified.

6. In a plow, the combination with the frame, opposite parallel hound-bars extending beyond the front end of the frame, a draft tongue pivoted between the front ends of the hound-bars and provided with a beveled tongue, of a block grooved upon its opposite sides to fit between the hound-bars, means for locking the block in position, a groove formed in the front end of the block for the reception of the tongue, and a series of teeth or notches formed in the bottom of the groove to engage in the tongue, substantially as specified.

In testimony that I claim the foregoing as my own I have hereto affixed my signature in the presence of two witnesses.

ALMERON S. SEELEY.

Witnesses:

G. C. REED,
S. M. COFFEY.