

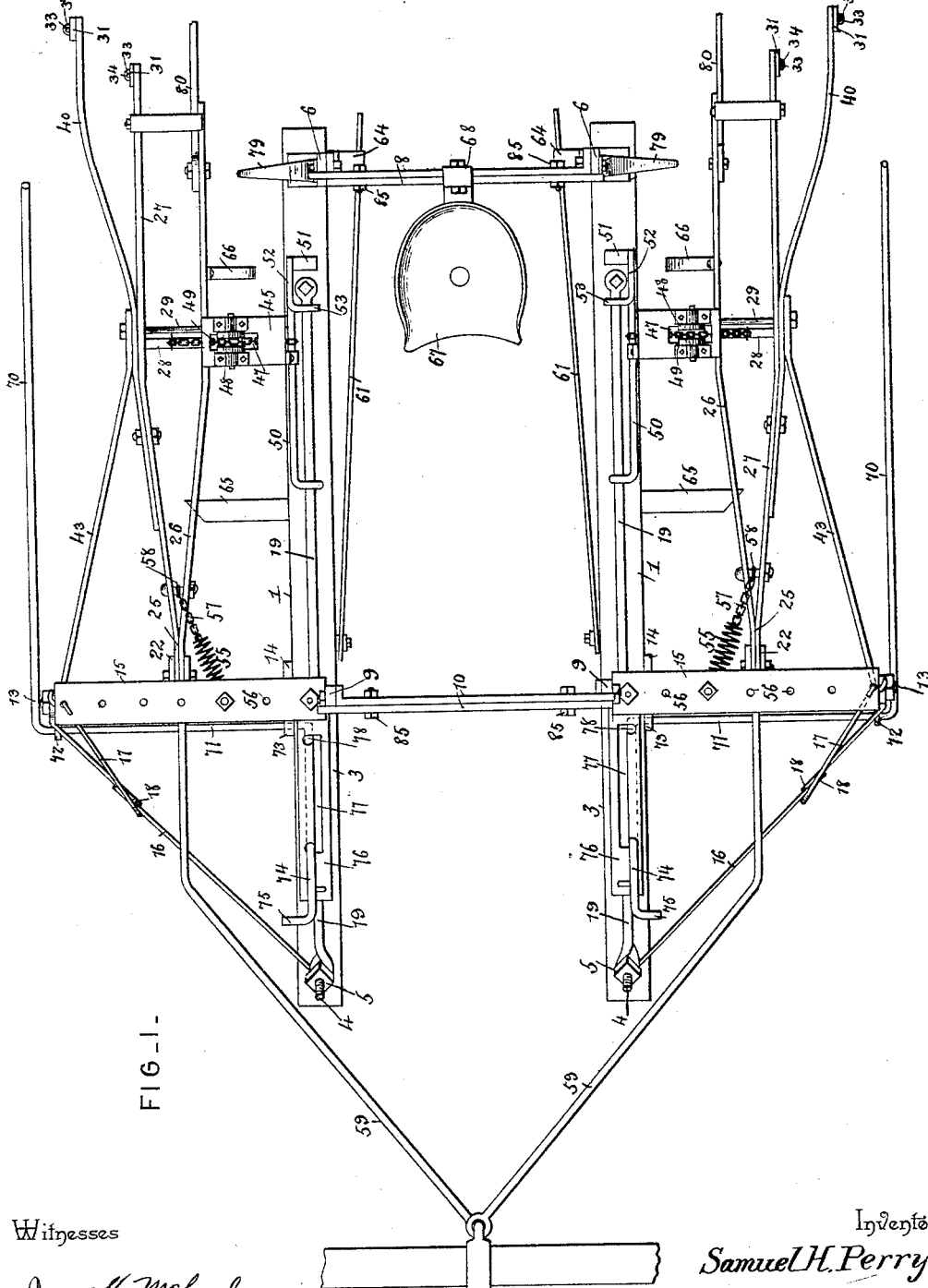
(No Model.)

4 Sheets—Sheet 1.

S. H. PERRY.
CULTIVATOR.

No. 454,602.

Patented June 23, 1891.



Witnesses

Jas. K. McArthur

Percy C. Bowen

By his Attorneys,

Cash & Co.

Inventor

Samuel H. Perry

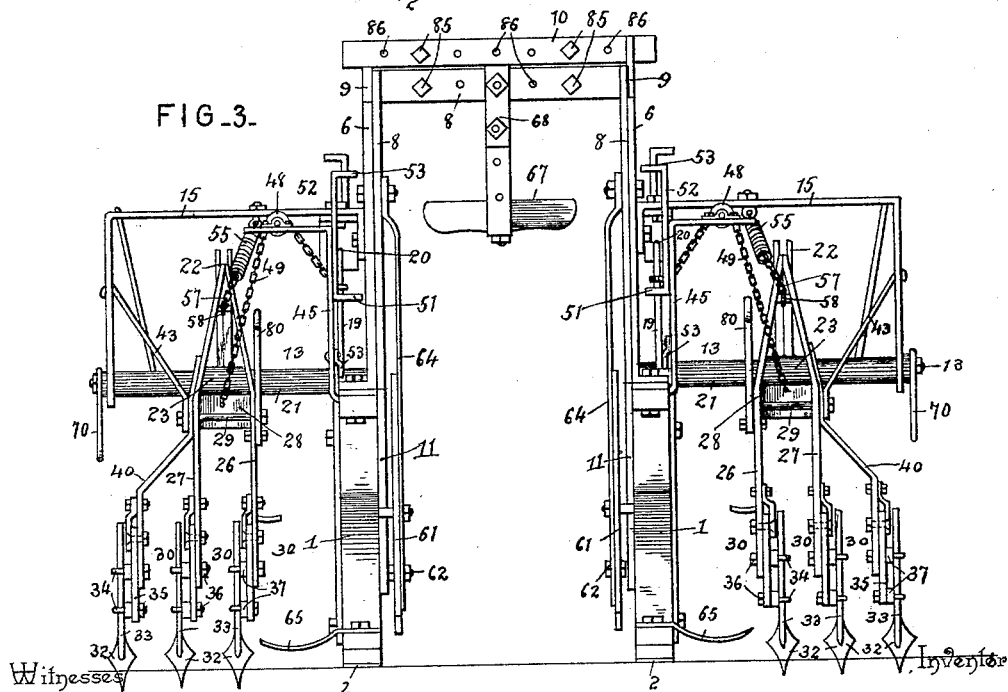
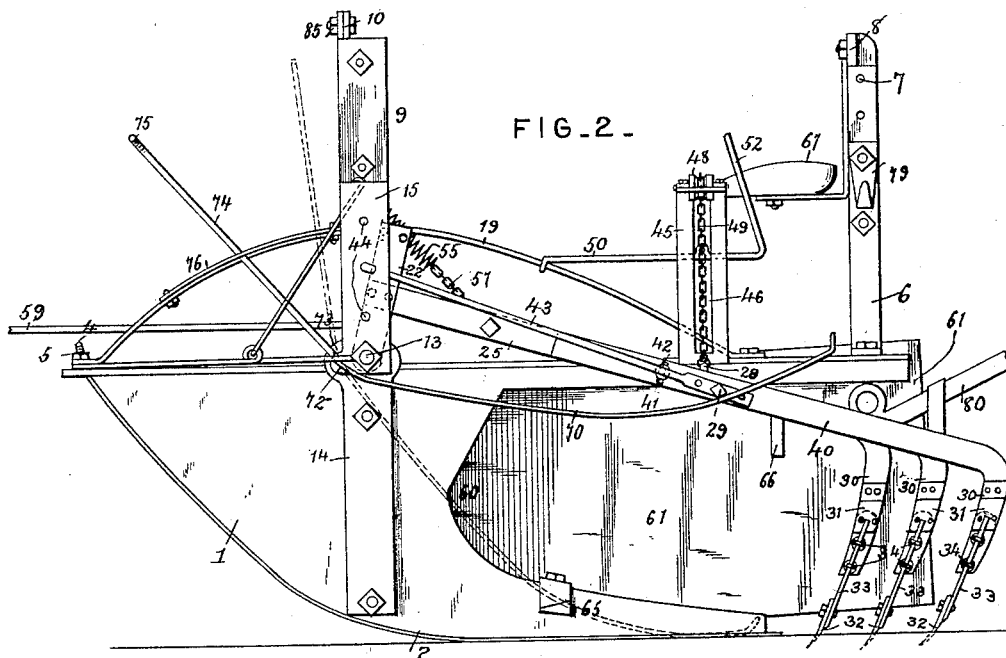
(No Model.)

4 Sheets—Sheet 2.

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Witnesses
Jas. H. McArthur

By his Attorneys,

Samuel H. Perry

Ray C. Bowen

Chas. H. Co.

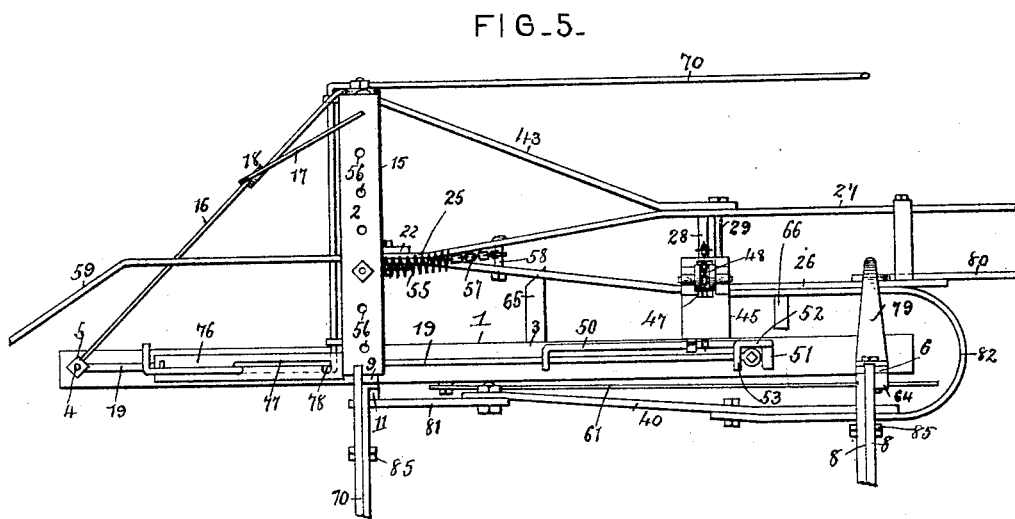
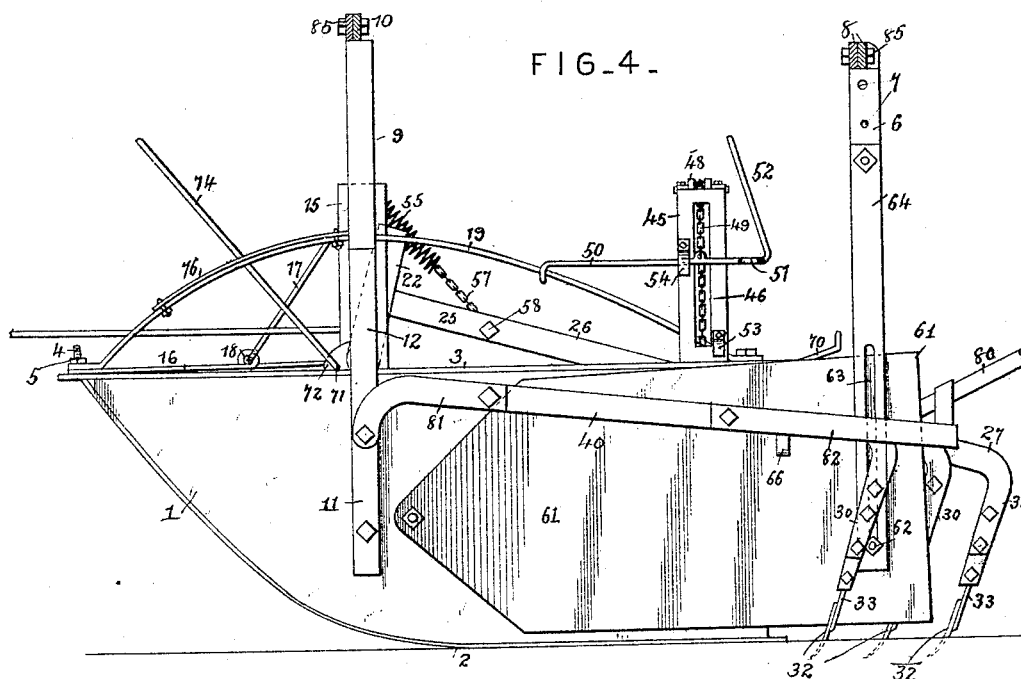
(No Model.)

4 Sheets—Sheet 3.

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Witnesses

Jas. K. McElathran

By *Ray C. Bowen*

Inventor

Samuel H. Perry

By his Attorneys,

C. A. Snow & Co.

(No Model.)

4 Sheets—Sheet 4.

S. H. PERRY.
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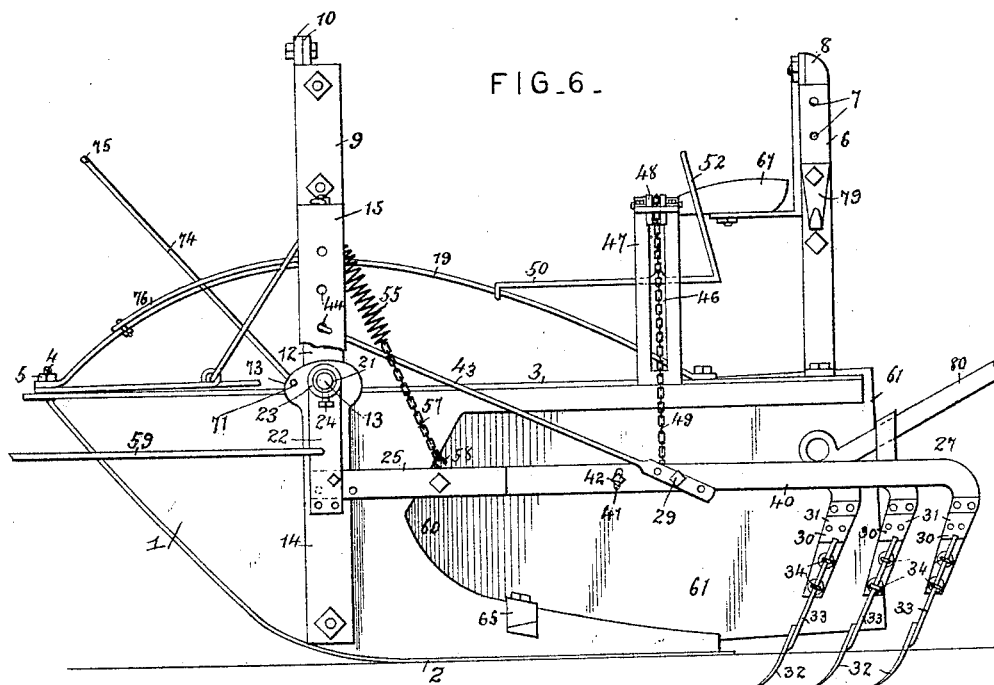


FIG. 7.

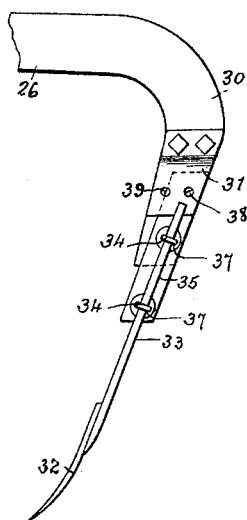
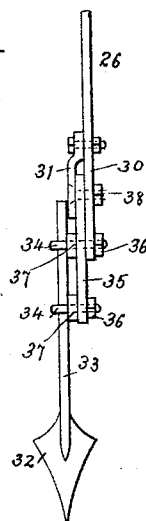


FIG. 8.



Witnesses

Jas. H. McLathran
Corey C. Bowen

By his Attorneys,

Samuel H. Perry
C. A. Snow & Co.

Inventor

UNITED STATES PATENT OFFICE.

SAMUEL H. PERRY, OF ELGIN, NEBRASKA.

CULTIVATOR.

SPECIFICATION forming part of Letters Patent No. 454,602, dated June 23, 1891.

Application filed December 31, 1890. Serial No. 376,395. (No model.)

To all whom it may concern:

Be it known that I, SAMUEL H. PERRY, a citizen of the United States, residing at Elgin, in the county of Antelope and State of Nebraska, have invented a new and useful Corn-Cultivator, of which the following is a specification.

My invention relates to cultivators for cultivating listed corn, and is designed to complete the work, taking the place of the plow in the first plowing, and it may be adjusted so as to cultivate perfectly at any stage of the growth of the corn.

With these objects in view the invention consists of the peculiar construction, combination, and arrangement of parts, that will be fully described hereinafter, and the specific points of novelty particularly pointed out in the claims.

In the accompanying drawings, Figure 1 is a plan view of my improved corn-cultivator. Fig. 2 is a side elevation thereof. Fig. 3 is a rear elevation of the same. Fig. 4 is a central longitudinal sectional view showing the parts adjusted for the second cultivating. Fig. 5 is a plan view of one side of the invention, showing the parts adjusted as in Fig. 4. Fig. 6 is a side elevation of my invention, showing the parts adjusted to the third position. Fig. 7 is a side elevation, on an enlarged scale, of the rear end of one of the plow-beams, showing the shovel in position. Fig. 8 is a rear elevation of the same.

Similar numerals of reference denote corresponding parts in the several views.

1 1 designate two runners upon which the frame-work of my improved cultivator is supported, said runners being shod with irons 2 2, like the runners of a sleigh, and having their tops protected and strengthened by iron strips 3 3, the front ends of which are provided with openings to receive the reduced front ends 4 4 of the runner-irons 2 2, the extremities of which latter are screw-threaded to receive the nuts 5 5. Upon the top of the runners 1 1, near the rear ends thereof, are secured two upwardly-projecting standards 6 6, in which are a series of holes 7 7. An L-shaped piece 8 is bolted to each of the standards 6 6, and the upper horizontal arms of the pieces 8 8 are bolted together, thus connecting the rear ends of the runners. At a point

a short distance forward of the center of the runners 1 1 are two upwardly-projecting standards 9 9, to the upper ends of which are also bolted L-shaped pieces 10 10, similar to the pieces 8 8, which secure the runners together at their forward ends. The standards 9 9 have two branches 11 13 at their lower ends, one of which 11 extends downwardly and is bolted to the inner sides of the runners 1 1, while the other branch 13 is round and bent outwardly at right angles to form an arm, which passes through the upper end of a plate 14 to the outside of the runners. These arms 13 13 extend laterally from the sides of the runners and have their outer ends supported in the depending ends of L-shaped brackets 15, the upper horizontal arms of which are bolted to the standards 9 9. The frame is braced by the braces 16 16, which are secured upon the reduced front ends of the runner-irons 2 2 and extend to the outer ends of the arms 13 13, and these arms are further braced by the braces 17 17, which are hooked into eyes 18 18 upon the braces 16 16 and secured at their other ends to the elbows of the brackets 15 15. Braces 19 19 extend from the front ends of the runners 1 1 and are curved backward above said runners, passing through eyes 20 20, secured beneath the inner ends of the L-shaped brackets 15 15, the rear ends of said braces 19 19 being secured to the tops of the runners near the rear ends thereof. Sleeves 21 21 are fitted upon the arms 13 13 and carry adjustable brackets 22 22, which latter are provided with hollow sleeves 23 23, fitting over the sleeves 21 21, to which they may be secured in any desirable position by set-screws 24 24. The brackets 22 22 are bifurcated at their free ends to receive the front ends of the plow-beams 25 25, which are secured therein by bolts in the said brackets and through the front end of the plow-beam. The plow-beams 25 25 are each formed of two pieces or beams 26 27, which are united at their forward ends to form the beam 25, but are separated near their rear ends by a block 28, placed between their inner sides and secured by a bolt 29, which passes through the beams 26 27, having a head at one end and a nut fitted to its opposite end, by means of which the said beams may be drawn together upon the sepa-

rating-block 28, thereby holding them firmly together. The rear ends of the beams 26 and 27 are curved downwardly, as at 30, and have secured to them near their lower ends a bracket 31. The shovels 32 32 are provided with shanks 33 33, which pass through eyes 34 34, the said eyes having shanks which pass through pieces 35 35, to which they are secured by lock-nuts 36 36, screwed upon the threaded ends of the said shanks. Washers 37 37 are placed between the shanks 33 of the shovels 32 to hold the shank 33 at a slight distance from the pieces 35 to prevent the said shanks from coming in contact with the brackets 31. The shanks of the upper eyes 34 pass through the lower end of the curved portion 30 of the beams 26 27, and thus pivot the pieces 35, carrying the shovels to the lower ends of the beams. The upper ends of the pieces 35 pass under the brackets 31, and are adjustably secured therein by a short bolt or pin 38, which passes through a series of openings 39 in the said bracket 31 and the curved portion 30 of the plow-beams and through an opening in the upper end of the piece 35. Thus it will be seen that the inclination of the shovel may be changed or adjusted by changing the pin 38 in the openings 39.

Two separate plow-beams 40 40 are provided for my improved cultivator, and are adapted to be placed upon the outside of the plow-beams 26 and 27 or between the runners 1 1, as may be most desirable for the work to be performed. When my invention is used instead of a plow for the first plowing of corn, the plow-beams 40 40 are placed upon the outside of the beams 27, an opening being provided in the said beams 40 for the bolt 29 and a transverse slot 41 being also provided in the said beams 40, through which a bolt 42 is adapted to pass to adjustably secure the beams 40 to the beams 27. The rear ends of the beams 40 are provided with plow-shovels similar to those upon the beams 26 and 27.

A brace 43 is secured to each of the plow-beams 25 25 by the bolt 29, which passes through one of a series of openings in the rear end thereof, the forward ends of the braces 43 being hooked in one of a series of openings 44 in the vertical arm of each of the brackets 15 15. Thus the braces 43 43 are adjustable with relation to the plow-beams and also in the vertical arms of the brackets 15 15.

Curved uprights 45 45 are secured to the upper side of the runners 1 1 in rear of the center thereof, said uprights being slotted, as at 46 and 47. Within the upper slot 47 is mounted a pulley 48, over which passes a chain 49, one end of which is secured to the block 28.

A lever 50 is fulcrumed at one end to each of the braces 19 19, the rear free end of which lies in close proximity to the uprights 45, the extremity of the said lever being formed into a foot-piece 51. An arm 52 extends upwardly

from the end of the lever 50 near the foot-piece 51, having its upper end formed into a handle 53.

The chains 49, having one end secured to the bolts 29 of the plow-beams, pass upward through the slot 47, over the pulleys 48, back through the slot 47, then through the slot 46, and have their other ends secured to the levers 50. Thus it will be understood that when the levers 50 are depressed the plow-beams will be raised from the ground. A bracket 53 is secured to each of the uprights 45, under which the lever 50 may be placed to hold the plow-beams in a raised position, and a similar bracket 54 is secured near the upper ends of the said uprights 45 to confine the lever 50 when in its raised position, the plow-beams then being down.

To prevent the plows resting too heavily upon the ground, and thereby cutting too deep, which might injure the roots of the young corn, I provide coiled spring 55, the upper ends of which are secured in one of a series of holes 56 in the horizontal portion of the brackets 15, by means of which said springs 55 may be moved or adjusted longitudinally of the horizontal portion of the brackets 15. To the rear ends of the springs 55 are attached chains 57; and the plow-beams are provided with hooks 58, over which a link of the chains 57 may be hooked, thus allowing the tension of the spring to be regulated as desired. The draft-rods 59 59 are attached to the brackets 22 22 and are curved forwardly to meet at a point in front of the machine, where they are attached to the usual whiffletree.

The runners 1 1 are cut away, as at 60, to get rid of unnecessary weight, and a light fender 61 is pivoted to the inside of each of the runners at its forward end, while the rear end of said fender 61 is supported by a bolt 62, adapted to slide in a vertical slot 63, formed in downwardly-projecting pieces 64 64, secured to the L-shaped pieces 8 8. Thus if the fenders 61 should meet an obstruction they will be free to rise and ride over the same, the bolts 62 moving upward in the slots 63, and when said obstruction is passed will fall back to their original position. Knives 65 65 are secured to the runners 1 1 near the bottom thereof and arranged to cut off the weeds close to the ground in advance of the shovels 32.

To enable the driver to steady the shovels in the ground, I provide the foot-pieces 66 66, one secured to each of the plow-beams 26 on opposite sides of the machine. The driver's seat 67 is adjustably secured to a bracket 68, arranged upon the horizontal arms of the L-shaped pieces 8 8. Thus it will be seen that the foot-pieces 66 66 upon the plow-beams and the foot-pieces 51 upon the levers 50 50 will be within easy reach of the driver's feet when seated upon the seat 67.

To prevent the machine from tilting over sidewise, I provide the runners 70 70, one situ-

ated upon each side beyond the shovels. The said runners 70 70 are curved and extend along the side of the machine from a point slightly in advance of the arms 13 13 nearly as far as the ends of the runners 1 1, as shown in Fig. 2. Connected to or formed integral with the front ends of each of the runners 70 is a horizontal transverse rod 71, which extends through an eye 72, formed upon the front side of the lower end of the vertical portion of the L-shaped brackets 15 toward the runners 1, near which it has another bearing in an eye 73, formed in the front side of the upper end of the plate 14. The rod 71 is then bent upwardly to form a lever 74, provided at its upper end with a handle 75.

Slotted guide-plates 76 76 are secured to the braces 19 19 and arranged to guide the levers 74, which pass through the slots 77 in the said guide-plates. The ends of the slots 77 are enlarged to form recesses 78, into which the lever 74 is placed to prevent accidental displacement thereof.

When turning my machine at the end of the field or when traveling on the road, the runners 70 70 are lowered by drawing the levers 74 backward, as shown in dotted lines in Fig. 2, and serve to steady the machine; but when the device is used as a cultivator the said runners are raised by pushing the levers 74 forward. In either case the runners are held in position by the levers 74 being placed in the recesses 78 at the ends of the slot 77 in the guide-plates 76.

Suitable hooks 79 79 extend outwardly from the standards 6 6 and serve to hang the plow-beams on when the shovels are not in use.

Should the driver prefer to walk behind the cultivator I provide handles 80 80, secured to the rear ends of the plow-beams, by means of which the shovels may be steadied, raised, or lowered.

The position of the plows, as described hereinbefore, is the proper one when the cultivator is used for the first plowing of corn.

When the cultivator is used for the second plowing or for cultivating check-rowed corn, the plow-beams 40 are removed from the beams 27 and secured to short beams 81 81, which are secured to the downwardly-projecting ends 11 11 of the standards 9 9 on the inside of the runners 1 1. Curved connecting-beams 82 82 are secured to the rear ends of the plow-beams 26 26 at one end, and to the rear ends of the plow-beams 40 40 at their opposite ends, thus connecting the beams 40 with the beams 26, as shown in Figs. 4 and 5.

When it is desired to run the plows deeper in the ground, the front ends of the plow-beams 25 25 and rear ends of the draft-rods 59 59 are disconnected from the brackets 22 22, and the latter are turned about the arms 13 13 until they project downwardly below the said arms. The plow-beams 25 25 are then secured to the brackets 22 22 by passing the bolt through the suitable holes in the said brackets. The draft-rods are passed beneath

the arms 13 and hooked to the brackets 22 22, as shown in Fig. 6.

When in operation, the runners 1 1 of my invention straddle the rows of corn, the plows running on either side thereof. The distance of the runners 1 1 from each other may be varied by means of the horizontal arms of the L-shaped pieces 8 8 and 10 10, which it will be seen by reference to the drawings, are bolted together by bolts 85 85, which pass through a series of openings 86 86 in the said horizontal arms.

The brackets 22 22, carrying the plow-beams, may be moved laterally on the sleeves 21 21 by loosening the set-screw 24 24, as will be readily understood.

Having thus described my invention, what I claim, and desire to secure by Letters Patent, is—

1. In a cultivator, the combination of the runners adjustably secured together, having the standards 9 9, with the brackets 22 and the plow-beams 25, attached to the brackets and carrying the plows, substantially as described.

2. In a cultivator, the combination of the runners adjustably secured together, having the standards 9 9 and the arms 13 13, the latter having sleeves 21 21, with the brackets 22 22 and the plow-beams 25, carrying the plows and attached to the brackets, substantially as described.

3. In a cultivator, the combination of the runners adjustably secured together and being cut away, as at 60, and having the lateral arms to which are secured the plow-beams, and the knives 65 65, with the fenders 61, pivoted to the runners, substantially as described.

4. In a cultivator, the combination of the runners adjustably secured together, having lateral arms 13 13, to which are secured the brackets 22 22, with the plow-beams 25, attached to the brackets and formed of the two beams 26 and 27, secured together at their forward ends and held at a suitable distance from each other at their rear ends by the block 28, each of the said beams having a shovel or plow-point secured to the rear end thereof, substantially as described.

5. In a cultivator, the combination, with the runners 1 1, adjustably secured together, having the sets of plow-beams and plows suitably attached thereto, of the runners 70 70, suitably pivoted to the forward ends of the runners 1 1, having handles by means of which the said runners 70 70 may be operated, substantially as described, and for the purpose set forth.

6. In a cultivator, the combination, with the runners 1 1, adjustably secured together and having lateral arms, and the plow-beams pivoted at their forward ends to the said arms and carrying suitable plows at their rear ends, of curved uprights 45 45, secured to said runners 1 1, having pulleys 48 48 mounted in their upper ends, chains 49 49, secured to said plow-beams and passing through slots

in the said curved uprights over the pulleys 48 48, and levers 50 50, to which the said chains are attached to lift the plow-beams, substantially as described.

5 7. In a cultivator, the combination of the runners adjustably secured together, having lateral arms, and the plow-beams pivoted at their forward ends to said arms, each of said beams formed of two separate plow-beams 26
10 and 27, having plows at their rear ends, with detachable plow-beams 40 40, which may be secured to one of the beams 26 or 27 or to the runners 1 1, said beams 40 40 having
15 plows at their rear ends, and suitable mechanism for raising and lowering the plow-beams, substantially as described.

8. In a cultivator, the combination of the runners adjustably secured together, having lateral arms, and the plow-beams pivoted at
20 their forward ends to the said arms, each of said beams formed of two separate plow-beams 26 and 27, having plows at their rear ends, curved connecting-beams 82 82 for connecting the rear ends of the beams 40 40 with
25 one of the beams 26 or 27, and suitable mechanism for raising and lowering the plow-beams, substantially as described.

9. In a cultivator, the combination of the plow-beams, brackets 31 upon the sides of said
30 plow-beams, pieces 35, pivoted to the lower ends of the plow-beams below the brackets

31, the upper ends of which pieces 35 are adjustably secured under the said brackets 31, and blades 32, having shanks 33, which are adjustably secured to the pieces 35, substantially as described.

10. In a cultivator, the combination, with the runners 1 1, being cut away, as at 60, and having the fenders 61 61 and the knives 65 65, the standards 6 6 and 9 9 upon the runners 1 1, adjustably connected together by the L-shaped pieces 8 8 and 10 10, the standards 9 9, having the arms 13 13, upon which are the sleeves 21 21, the L-shaped braces 15 15, the runners 70 70, pivoted to the runners 1 1
45 and provided with handles for lifting the same, of the sets of plow-beams secured to the sleeves 21 by means of the brackets 22, said plow-beams having blades adjustably secured to their rear ends, springs arranged
50 to support a part of the weight of the said plow-beams, means for raising and lowering the said beams, and the draft-rods secured to the said brackets 22, substantially as and for the purpose set forth. 55

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

SAMUEL H. PERRY.

Witnesses:

GEORGE COUPLAND,
H. O. EGGLESTON.