

No. 614,727.

Patented Nov. 22, 1898.

C. L. KING.
WHEELED CULTIVATOR.

(Application filed Oct. 2, 1896.)

(No Model.)

2 Sheets—Sheet 1.

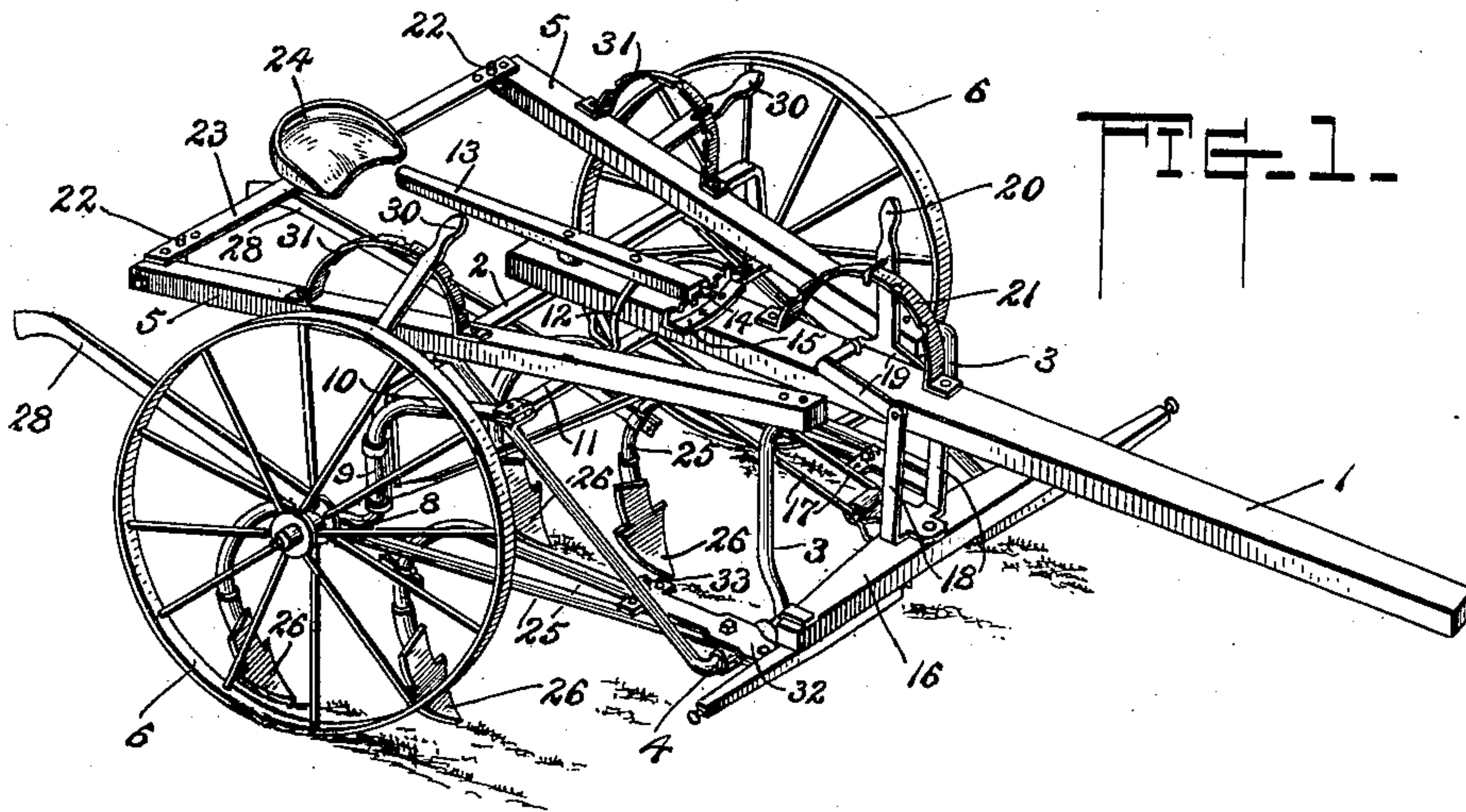


FIG. 1.

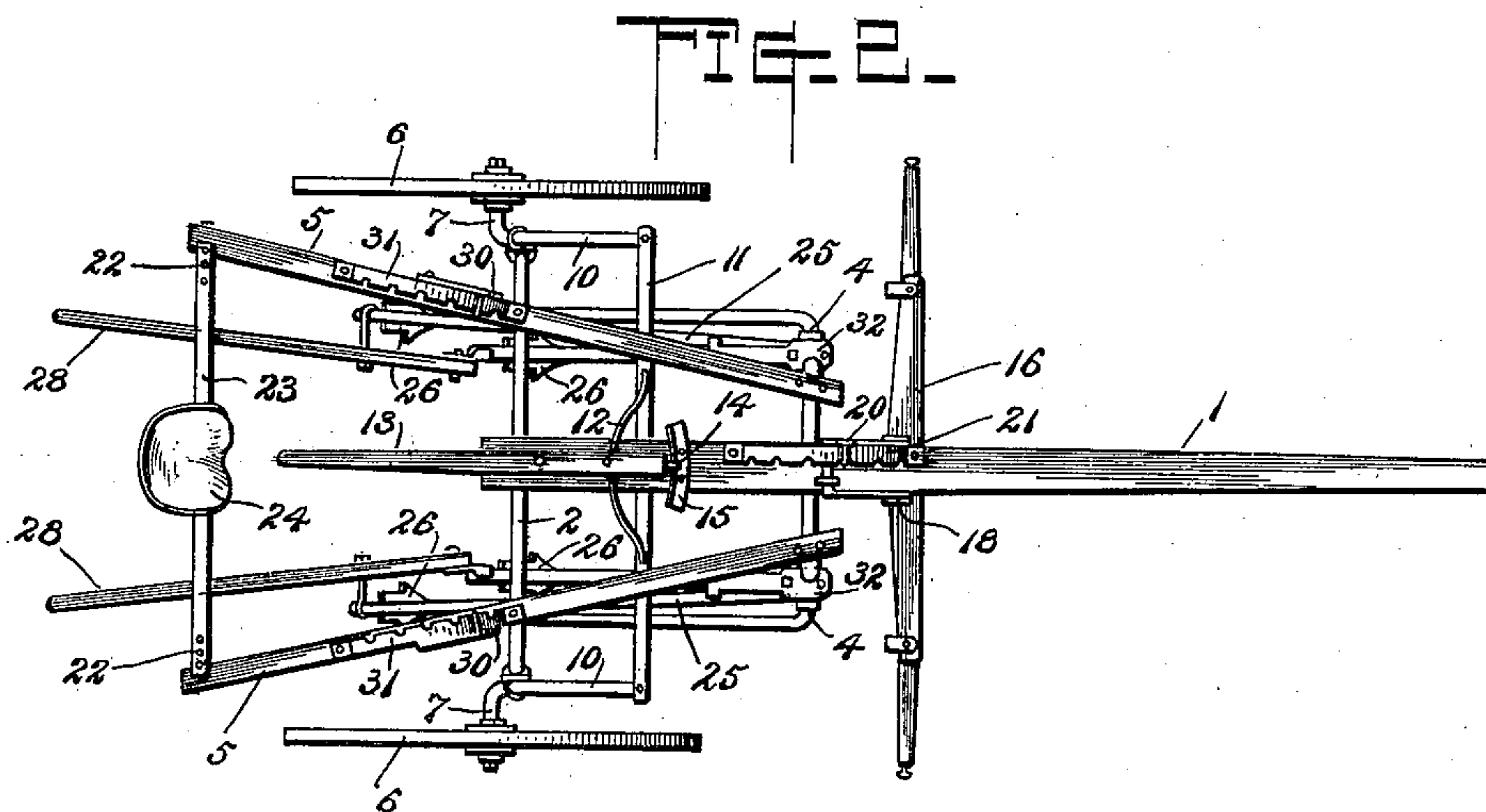


FIG. 2.

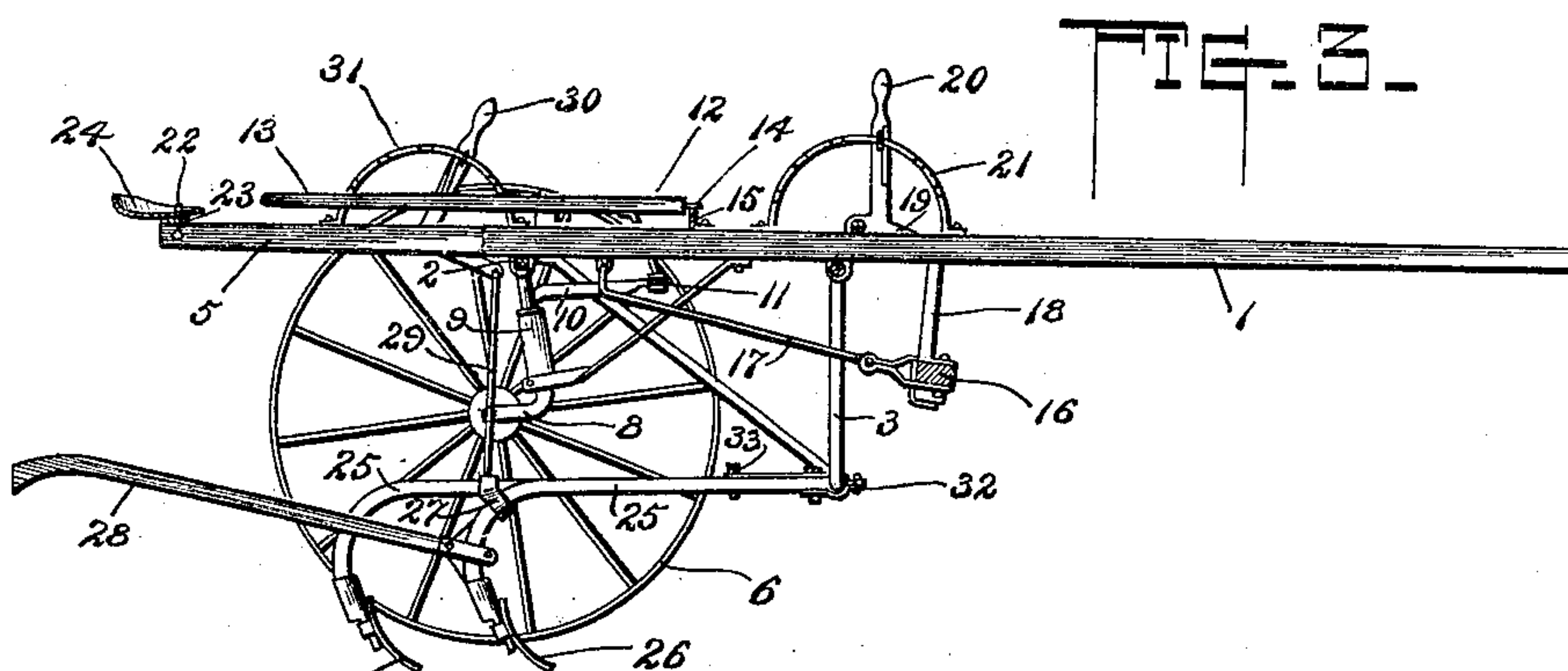


FIG. 3.

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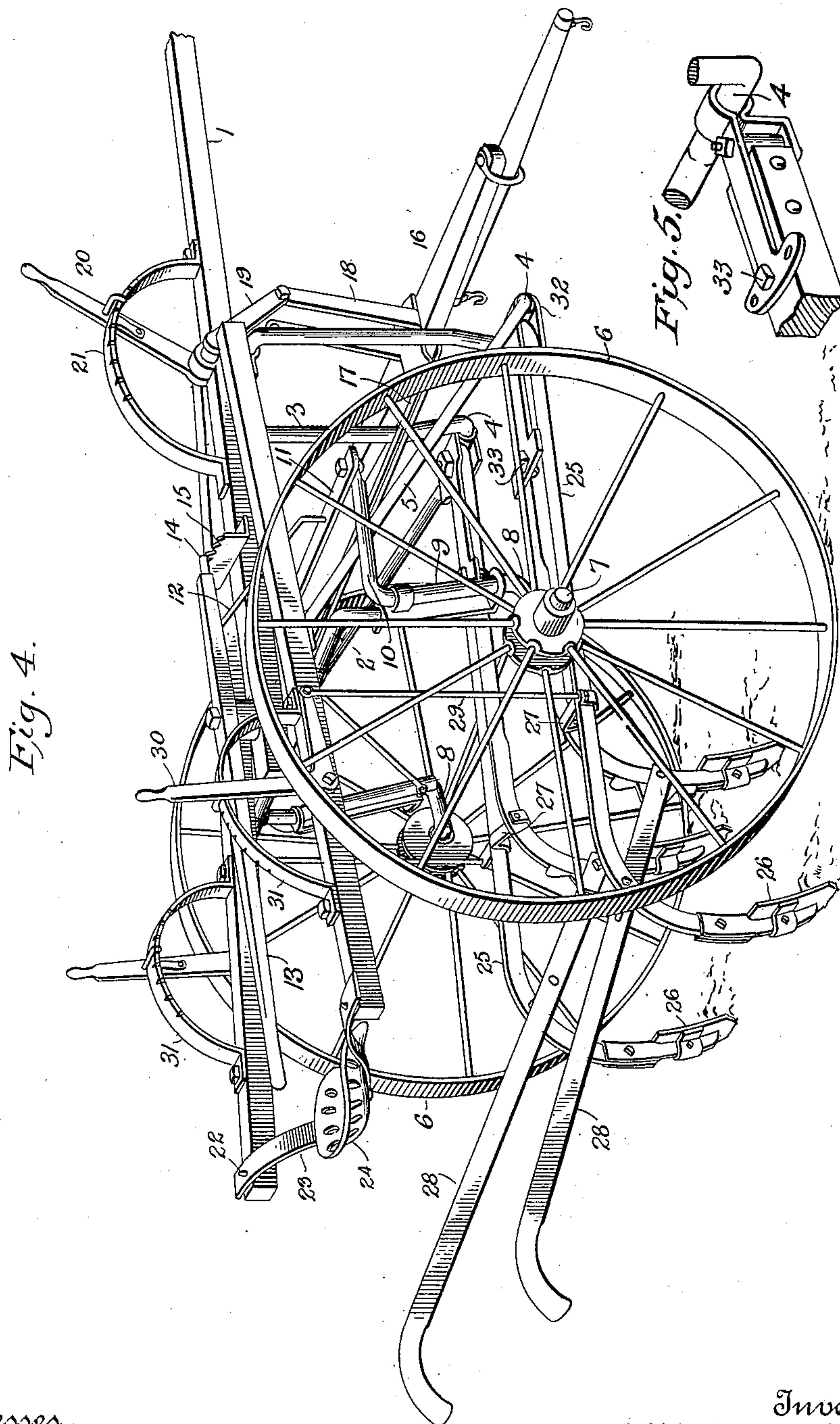
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UNITED STATES PATENT OFFICE.

CHARLES L. KING, OF STELLA, NEBRASKA, ASSIGNOR OF ONE-HALF TO
ARTHUR E. CAMBLIN AND ENOCH J. CAMBLIN, OF SAME PLACE.

WHEELED CULTIVATOR.

SPECIFICATION forming part of Letters Patent No. 614,727, dated November 22, 1898.

Application filed October 2, 1896. Serial No. 607,686. (No model.)

To all whom it may concern:

Be it known that I, CHARLES L. KING, a citizen of the United States, residing at Stella, in the county of Richardson and State of Nebraska, have invented certain new and useful Improvements in Wheeled Cultivators; and I do hereby declare the following to be a full, clear, and exact description of the invention, such as will enable others skilled in the art to which it appertains to make and use the same.

This invention has reference to a novel construction in a wheeled cultivator; and it consists in the features of construction and combinations of parts hereinafter fully described and specifically claimed.

In the accompanying drawings, illustrating this invention, Figure 1 is a perspective view. Fig. 2 is a top plan. Fig. 3 is a vertical longitudinal section. Fig. 4 is an enlarged perspective view of the cultivator, and Fig. 5 is a detail view illustrating the coupling between the beams.

Referring now to said drawings, 1 indicates the pole or tongue of the cultivator, which is connected at its rear end with the arch-frame 2. In front of the arch-frame 2 and connected with said tongue 1 is the frame 3 for the cultivator-beams. This frame 3 is made in one piece, its central portion being secured to the tongue, while it is bent downwardly on both sides thereof and then bent outwardly to form horizontal bearing portions 4 and then bent upwardly and rearwardly and connected with the side bars 5 of the frame. The forward ends of these side bars are also connected with the central portion of the frame 3.

The wheels 6 of the cultivator are fastened upon axles 7, that are connected with the lower bent end 8 of a spindle 9, that is mounted in bearings on the depending part of the arch-frame 2. The upper end of the spindle 9 is provided with a forwardly-projecting arm 10. These arms 10 on both sides of the machine are connected together by a bar 11, pivoted to each of the arms 10. This bar 11 is connected by means of a brace 12 with a lever 13, pivoted on the rear end of the tongue 1, having a lug 14 at its forward end adapted to engage a rack 15. The bar 11 acts as a spring to draw the lug 14 into the teeth of the rack 15, so that when it is desired to shift the bar

11 the rear end of the lever 13 must be pressed downwardly to release the lug from the rack. It will be noticed from the above that when the wheels are turned to guide the cultivator the entire frame of the machine moves to one side a few inches and even before the wheels move forward, while at the same time the wheels slant slightly in the direction they are guided, thus giving the wheels a double motion and moving the cultivator-frame to one side at the same time, so that I practically obtain three motions by shifting the lever 13.

The doubletree 16 is pivoted at the forward end of a movable arm 17, that is attached at one end to the lower face of the pole 1, and the said doubletree is provided with upright guides 18, situated on opposite sides of the pole 1 and connected at their upper ends with the arms 19 of a lever 20, carrying a suitable detent to engage a rack 21 on the tongue to hold the lever in any adjustable position. It will be seen that by turning the lever 20 on its pivot the doubletree is raised or depressed, so as to adjust the draft according to the work to be accomplished. For instance, when the cultivator is used as a walking-cultivator the doubletree is turned to the lower limit of its movement.

The seat for the driver is preferably supported by the ends of the side bars 5, as shown in the drawings. The side bars are provided with lugs 22, which engage a spring 23, carrying the seat 24.

The cultivator-beams 25 are two in number and are pivoted at their front ends to the bearing portion 4 of the frame 3. These cultivator-beams carry the shovels 26 at their rear ends. The cultivator-beams are suitably braced together by braces 27, which are connected rigidly with the outside beam and adjustable with the inner or short beam. The outer beams 25 are each provided with a handle 28, by means of which the cultivator can be used as a walking-cultivator. Connected with each of the outside beams 25 is an upright rod 29, connected at its upper end with a lever 30, pivoted to the side bar 5 of the machine, by means of which the beams can be raised or lowered, said lever 30 being held in any adjusted position by a circular rack 31, and it will be seen in this manner the

beams can be raised or lowered, as desired. The cultivator-beam is pivotally connected at its forward ends with a coupling 32 and can be allowed to act loosely or can be made
 5 rigid with relation to the coupling by the insertion of a loop-bolt 33 in the rear end of the forward coupling 32, as best shown in Fig. 5.

It will be seen that the construction for supporting and guiding the wheels is compact, easily operated, responds quickly to the
 10 operating-lever, and includes a construction of connecting-bar which operates as a spring for actuating the detent devices by which the guiding mechanism is held in any desired adjustment.
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Having thus described my invention, what I claim as new, and desire to secure by Letters Patent, is—

1. In a cultivator, the combination with a
 20 frame, having an arch 2, of upright and rearwardly-inclined spindles mounted in bearings upon the end portions of said arch, outwardly-extending axles at the lower ends of said spindles, and carrying wheels, forwardly-extending arms upon the upper ends of said
 25 spindles, a spring-bar connected with said arms, and a lever connected with said spring-bar and having a lug adapted to engage a toothed rack 15.

30 2. In a cultivator, the tongue, side bars, wheels and shovel-beams, in combination with a frame 3, having a forward horizontal portion connected with said tongue, and side bars, depending portions at the outer ends of
 35 said horizontal portion having bearing portions 4 at their lower ends upon which the shovel-beams are supported, and upwardly and rearwardly extending end portions connected at their upper ends with said side
 40 bars, substantially as described.

3. In a cultivator the combination with a frame from which the cultivator-beams are supported, of the cultivator-beam 25, a coupling-plate on said beam and embracing the
 45 frame, a pivot-pin for said beam, and an adjusting-pin upon said plate to engage said beam, substantially as described.

4. A cultivator substantially as described comprising the wheels, their guiding-supports comprising upright shaft portions suitably
 50 journaled and provided with the upper crank-arms and with the lower crank-arms and with the spindles on the latter, the bar connected directly with the upper crank-arms whereby it connects the opposite wheel-supports and
 55 may positively move the same and means for adjusting the said parts to effect a guiding movement of the wheels and the arch to which the upright shaft portions are journaled substantially as shown and described.
 60

5. The improvement in cultivators substantially as herein described comprising the framing, the arch having upright side portions provided with bearings, the wheels, the wheel-guiding supports comprising upper and
 65 lower crank-arms and the intermediate upright portions journaled between the end cranks to the bearings of the uprights of the arch, the wheel-spindles on the lower crank-arms, the spring-bar connecting the upper
 70 crank-arms, the lever, the rack for engagement by said lever and the connection between the lever and the spring-plate, the latter actuating the lever normally into engagement with the rack all substantially as shown
 75 and described.

6. The improvement in cultivators comprising a supporting-frame, wheel-guiding supports having journaled upright portions inclined to the vertical substantially as described, crank-arms at the lower ends of said
 80 upright portions and extending normally in the direction of motion of the implement, lateral spindles on said crank portions and wheels on said spindles, substantially as set
 85 forth.

In testimony whereof I have signed this specification in the presence of two subscribing witnesses.

CHARLES L. KING.

Witnesses:

A. E. CAMBLIN,
 L. F. GILBERT.