

E. B. FITZGERALD.

CULTIVATOR.

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935,008.

Patented Sept. 28, 1909.

2 SHEETS—SHEET 1.

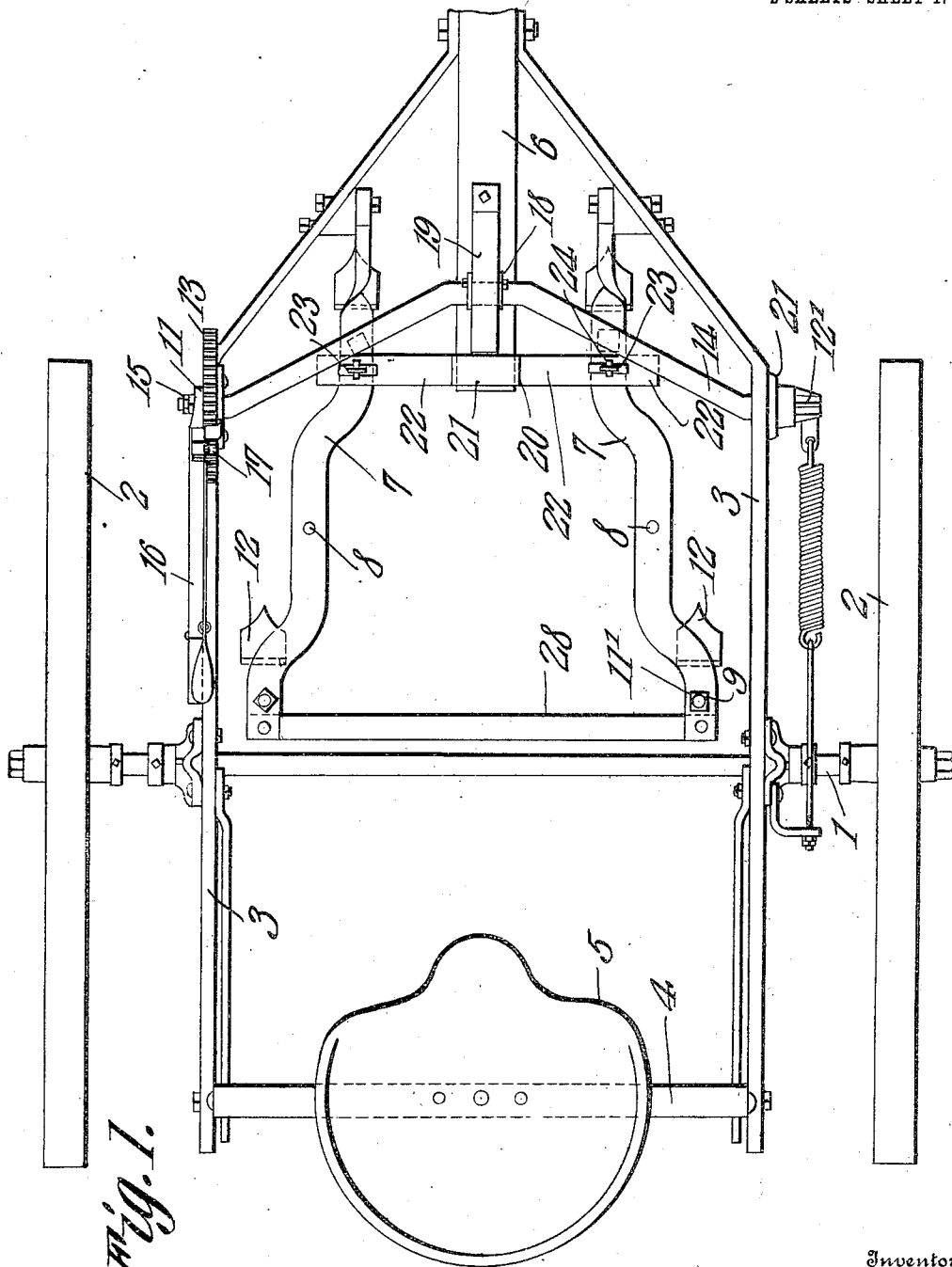


Fig. 1.

Witnesses

E. B. Fitzgerald
C. Davis

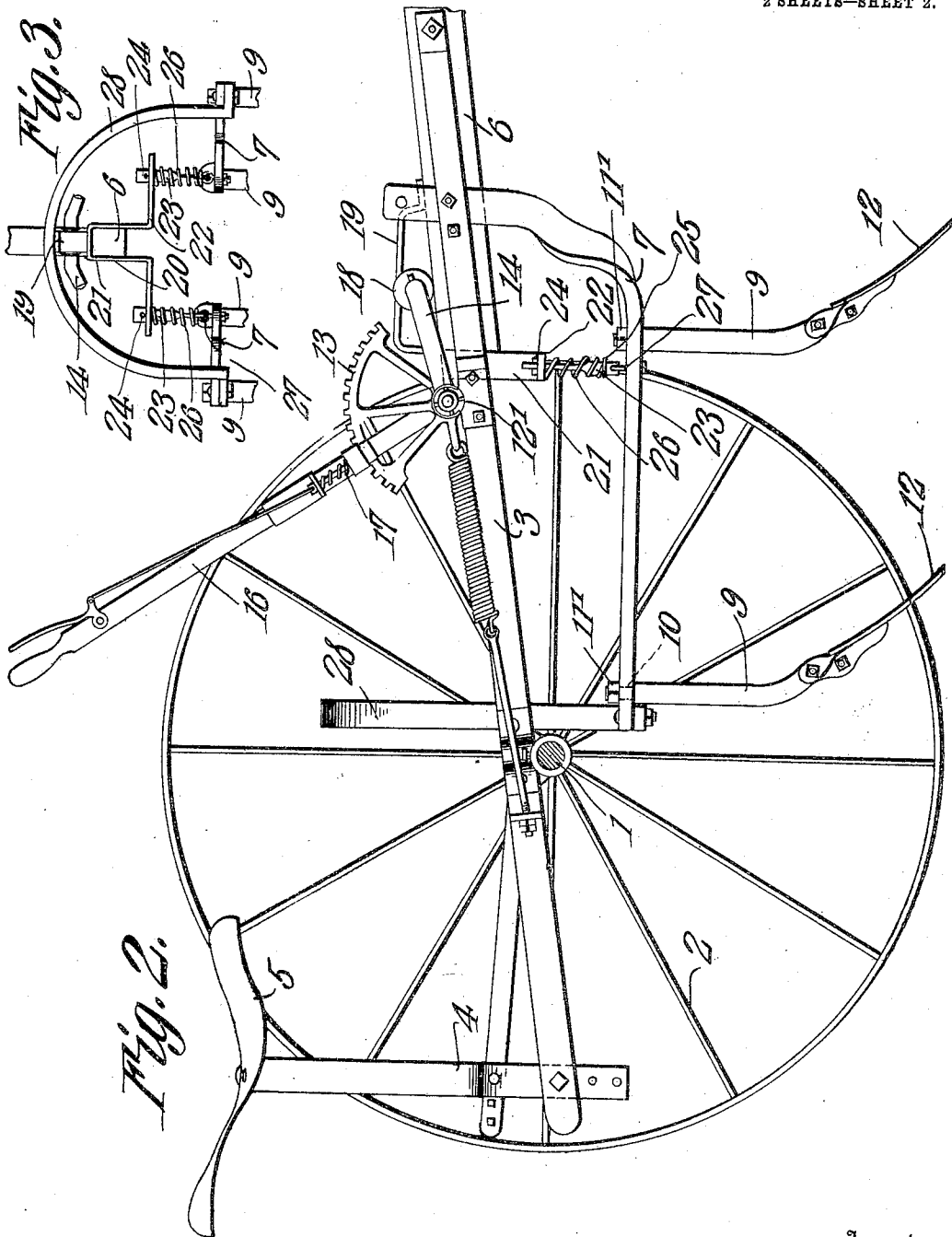
Inventor

Edmond B. Fitzgerald.

33

C. Snow & Co.
Attorneys

2 SHEETS—SHEET 2.



Witnesses

E. H. Stuart
C. Davis

Edmond B. Fitzgerald. ^{Inventor}

Wm. C. Knowlton
Attorneys

UNITED STATES PATENT OFFICE.

EDMOND B. FITZGERALD, OF ROSEDALE, MISSISSIPPI.

CULTIVATOR.

935,008.

Specification of Letters Patent. Patented Sept. 28, 1909.

Application filed February 8, 1909. Serial No. 476,726.

To all whom it may concern:

Be it known that I, EDMOND B. FITZGERALD, a citizen of the United States, residing at Rosedale, in the county of Bolivar and State of Mississippi, have invented a new and useful Cultivator, of which the following is a specification.

This invention has relation to cultivators, and it consists in the novel construction and arrangement of its parts, as hereinafter shown and described.

The object of the invention is to provide a simple and an effective cultivator in which the cultivator beams are of peculiar configuration, and means is provided for adjusting the same vertically, whereby the shovels may be caused to operate at any desired distance below the surface of the soil. The means for adjusting the beams vertically is of peculiar configuration and the shovels carried by the cultivator are held against their work under spring tension, which springs are also mounted in a peculiar and an effective manner, as will hereinafter appear.

In the accompanying drawings:—Figure 1 is a top plan view of the cultivator. Fig. 2 is a side elevation of the same. Fig. 3 is an end elevation of a portion of the cultivator.

The cultivator consists of the axle 1, which is mounted at its ends upon the supporting wheels 2. A frame 3 is mounted upon the axle 1, and the seat support 4 is mounted at the rear portion of the said frame. A seat 5 is mounted upon the said seat support. A tongue 6 is pivoted at its rear end portion to the forward portion of the frame 3.

The beams 7 are pivotally connected at their forward ends with the forward portion of the frame 6 at a point behind that point thereof with which the tongue 3 connects. The forward ends of the beams 7 are upwardly curved, and the said beams are preferably made from sheet metal, which are twisted from horizontal planes at their rear portions into vertical planes at their forward ends, which forward end portions are pivoted, as above stated, to the frame, and are located against the sides of the same. The rear ends of the beams 7 diverge away from each other, and are provided, at suitable intervals, with perforations 8. The standards 9 are provided at their upper ends with the shanks 10, which pass through the

perforations 8, and which are secured therein by means of the nuts 11', screw-threaded upon the upper ends of the said shanks. Shovel-points 12, of the usual configuration, are attached to the lower portions of the standards 9. The bearings 11 and 12' are fixed to the forward portion of the frame 3, and are located at opposite sides of the same. The bearing 11 is provided with a gear segment 13. A crank shaft 14 is journaled at its end portions in the bearings 11 and 12, and is provided adjacent that portion which is journaled in the bearing 11 with a squared extremity 15. A lever 16 is fixed to the squared portion 15 of the shaft 14 and is provided with a spring-actuated pawl 17, adapted to engage the teeth of the segment 13. The shaft 14 is provided at the middle of its crank portion with the spaced flanges 18, which lie upon opposite sides of the guide 19, which is mounted upon the rear portion of the tongue 6. The said guide 19 is approximately U-shaped and is secured at its ends to the said tongue, and is spaced at its intermediate portion from the upper side of the tongue. It is through this space that the intermediate portion of the crank of the shaft 14 passes. The rear end portion of the intermediate portion of the guide 19 is spaced at a greater distance from the upper side of the tongue 6 than the forward end portion of the intermediate portion of the said guide is spaced, in order that the parts may not bind or have a tendency to bind, as the crank portion of the shaft 14 is moved under the said guide, as will be hereinafter explained.

A yoke 20 is mounted at the rear end of the tongue 6 and is provided with an intermediate U-shaped portion 21, which lies against the sides and over the upper edge of the tongue, and is provided with the outstanding extremities 22. Bolts 23, at their upper end portions, pass vertically through the extremities 22 of the yoke 20, and are adjustably secured therein by means of the pins 24, which are provided upon the upper end portions of the said bolts 23, and which bear against the upper sides of the extremities 22. Collars 25 are mounted upon the lower portions of the bolts 23, and the coil springs 26 are interposed between the under sides of the extremities 22 of the yoke 20, and the said collars 25. The lower ends of the bolts 23 are linked into the eyes 27,

which, in turn, are fixedly mounted upon the beams 7. An arch bar 28 is attached at its ends to the rear ends of the beams 7, and is substantially vertically disposed and lies in front of the intermediate portion of the axle 1.

From the above description it is obvious that when the lever 16 is swung that the shaft 14 will be partially rotated, and, inasmuch as the intermediate portion of the said shaft is in contact with the guide 19, the frame 3 which is pivotally connected at its forward end with the tongue 6, will be swung vertically. As the crank portion of the shaft 15 is swung in a rearward direction it is by reason of the fact that the intermediate portion of the guide 19 is inclined that there is no tendency to bind between the crank portion of the shaft and the intermediate portion of the said guide. Thus means is provided for raising and lowering the rear end portion of the tongue 6, with relation to the frame, or conversely, for raising and lowering the rear end portion of the frame with relation to the tongue. As the implement is drawn along the surface of the ground the rear ends of the beams 7 are held down under the tension of the springs 26, and, inasmuch as the forward ends of the said beams are pivotally attached to the forward portion of the frame 3, the said beams may swing vertically at their rear end portions against the tension of the said springs 26. Thus, should the shovels carried by the standards mounted upon the beams encounter obstructions in the soil, they may ride over the same against the tension of the said springs, but, as soon as the said obstructions have been passed by the implement, the tension of the springs 26 comes into play and forces the beams 7 down in their normal position.

Having described my invention, what I

claim as new, and desire to secure by Letters Patent, is:—

1. A cultivator comprising a wheel mounted frame, a tongue pivotally connected thereto, a crank shaft journaled upon the frame, a guide mounted upon the tongue and receiving the intermediate portion of the crank shaft, beams pivotally attached to the frame, a yoke mounted upon the tongue, resilient connections between the yoke and the beam, and an arch member connecting the rear end portions of the beams together.

2. A cultivator comprising a wheel mounted frame, a tongue pivotally attached thereto, a shaft journaled upon the frame and having a crank portion which lies over the tongue, a guide mounted upon the tongue and receiving the crank of said shaft, beams pivotally attached to the frame, a yoke mounted upon the tongue, resilient means interposed between said yoke and the beams, and an arch member connecting the rear end portions of the said beams together.

3. A cultivator comprising a wheel mounted frame, a tongue pivotally attached thereto, a guide having an inclined intermediate portion attached to the tongue, a crank shaft journaled to the frame and having its crank lying under the inclined portion of the said guide, beams pivotally attached to the frame, a yoke carried by the tongue, resilient means interposed between the yoke and the beams, and an arch member connecting the rear end portions of the beams together.

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

EDMOND B. FITZGERALD.

Witnesses:

F. W. NERRY,
B. BRILL.