

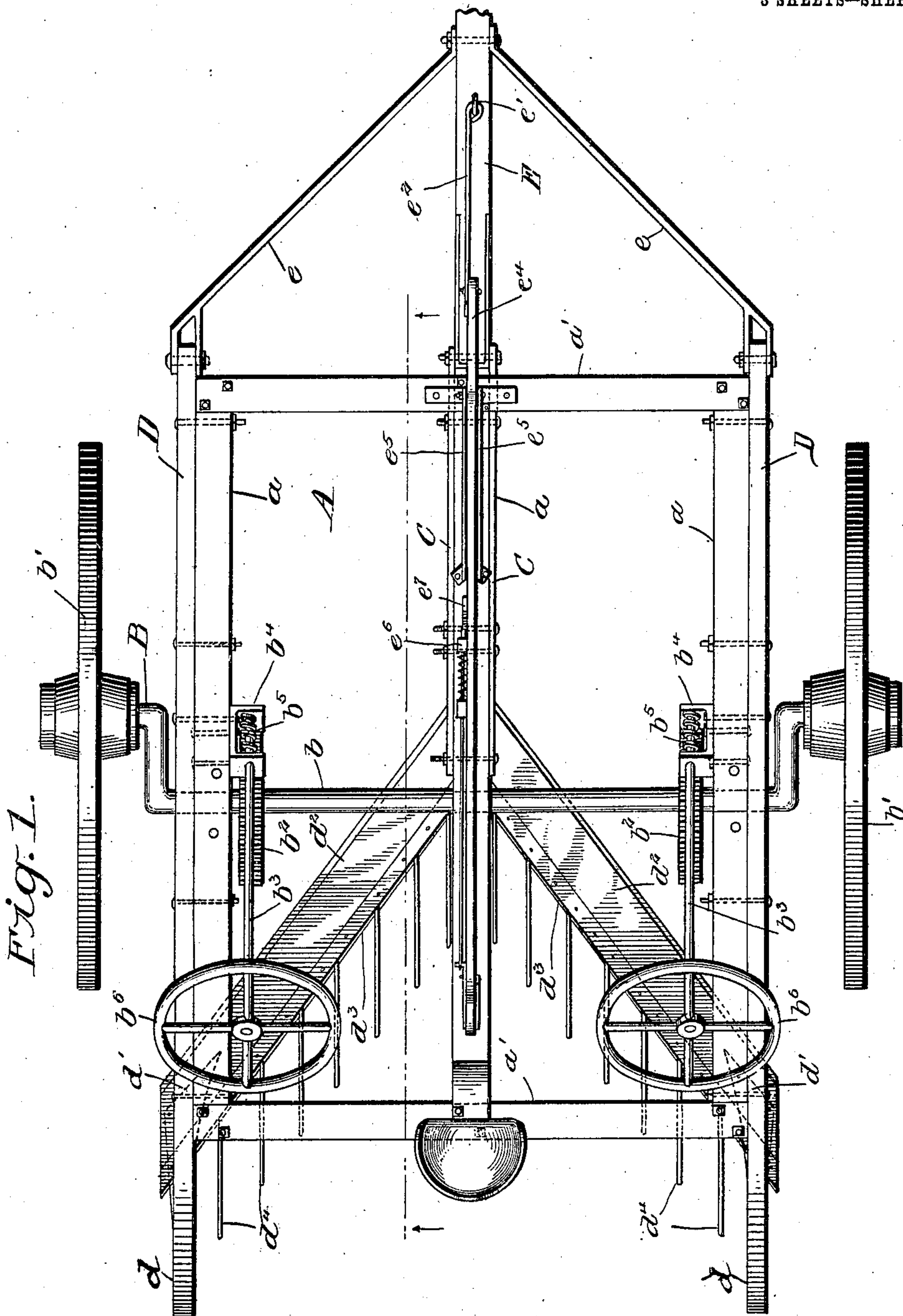
No. 847,125.

PATENTED MAR. 12, 1907.

R. W. STEELE.
WEED CUTTER.

APPLICATION FILED DEC. 14, 1905. RENEWED NOV. 3, 1906.

3 SHEETS—SHEET 1.



WITNESSES:

Samuel C. Wade

C. E. Trainor

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ROBERT W. STEELE.

BY *Munn & Co.*

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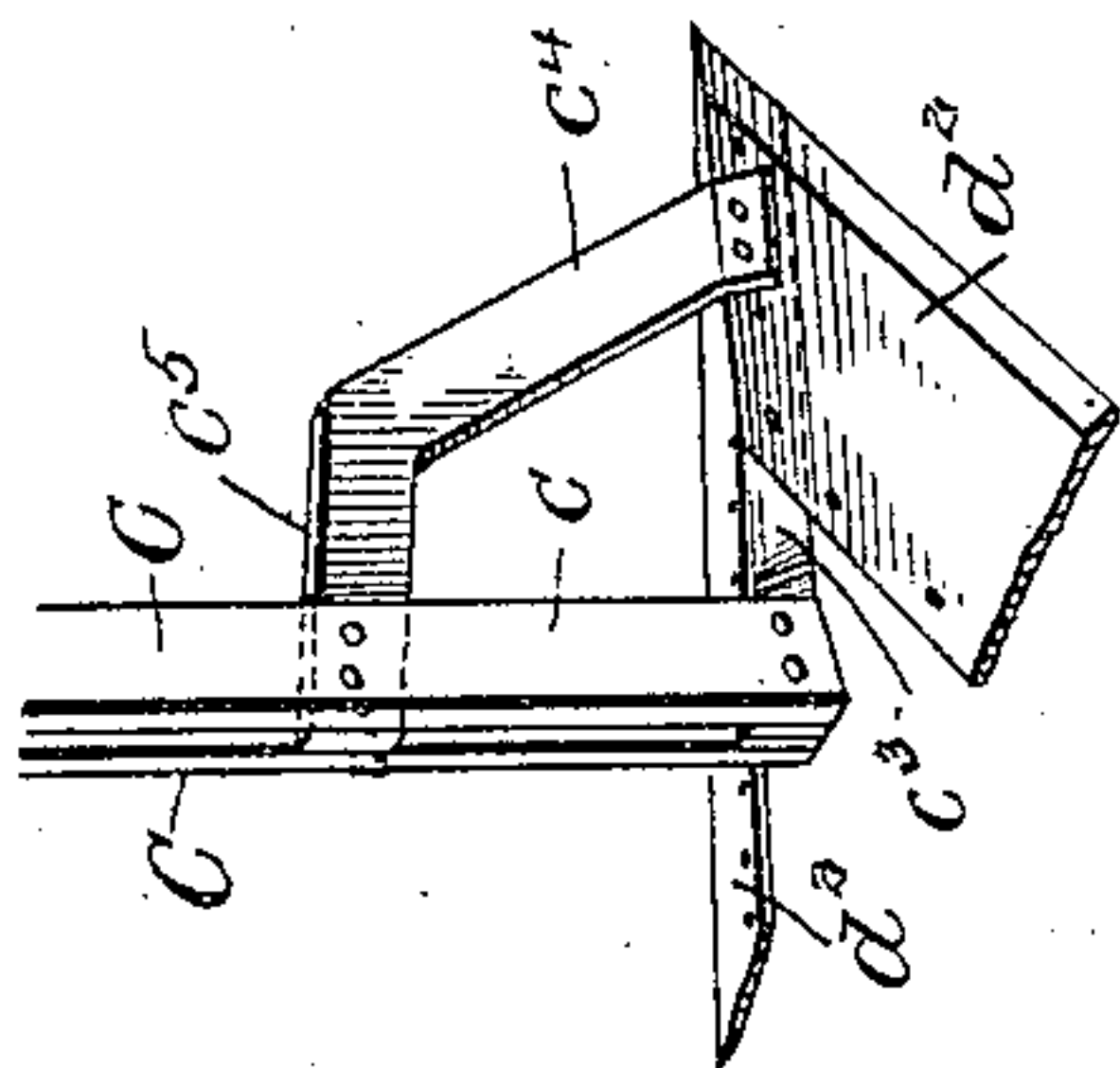
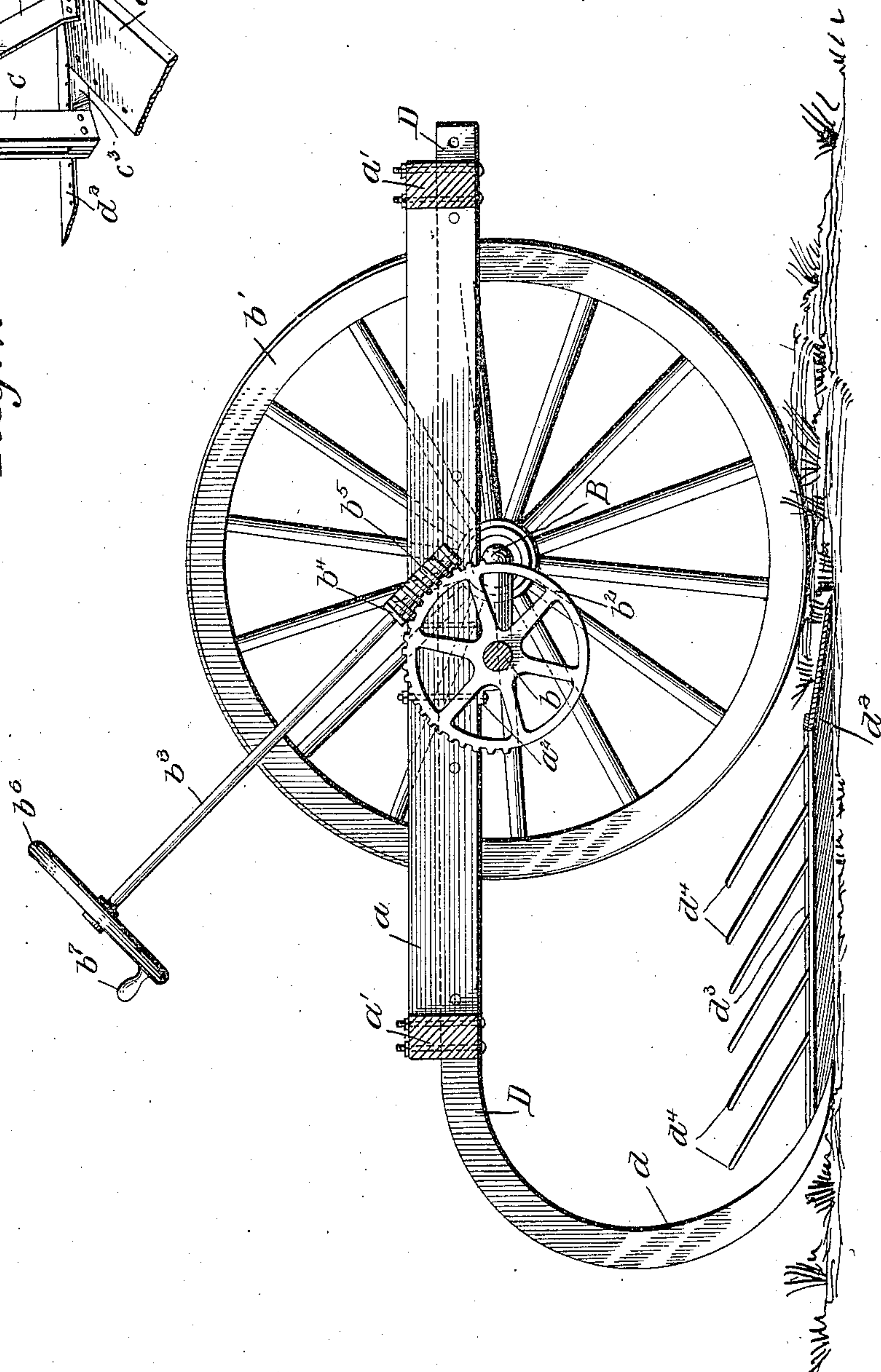


Fig. 7.

Fig. 2.



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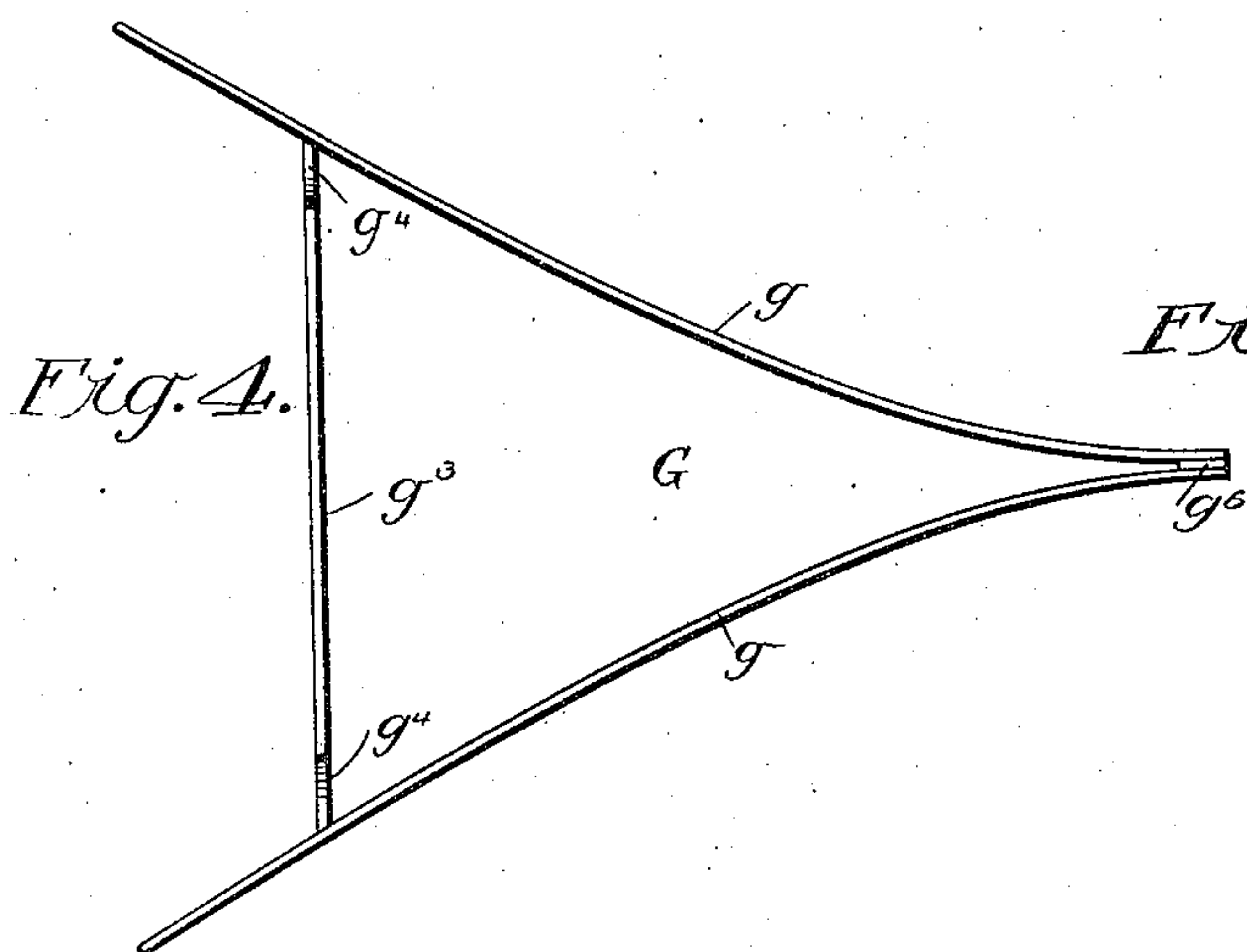
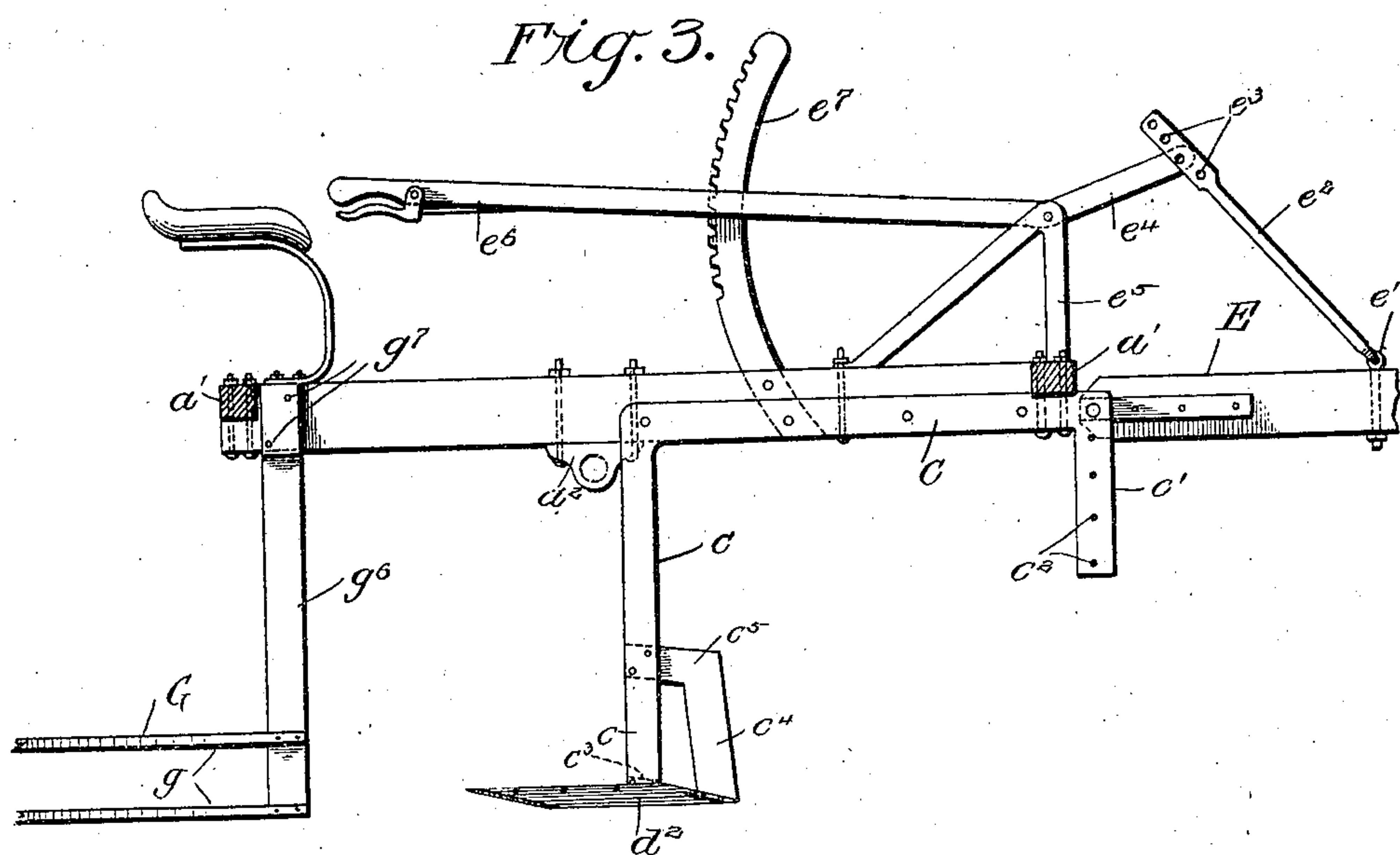


Fig. 6.

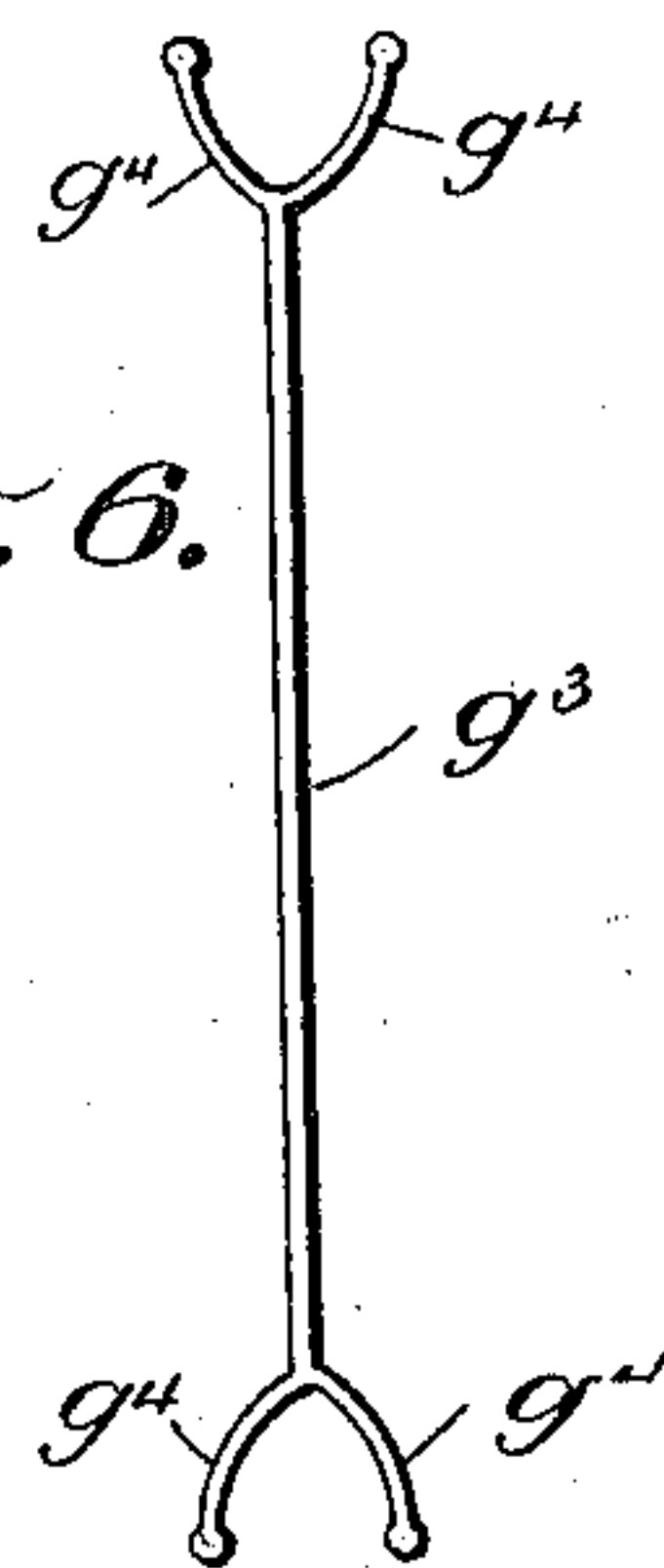
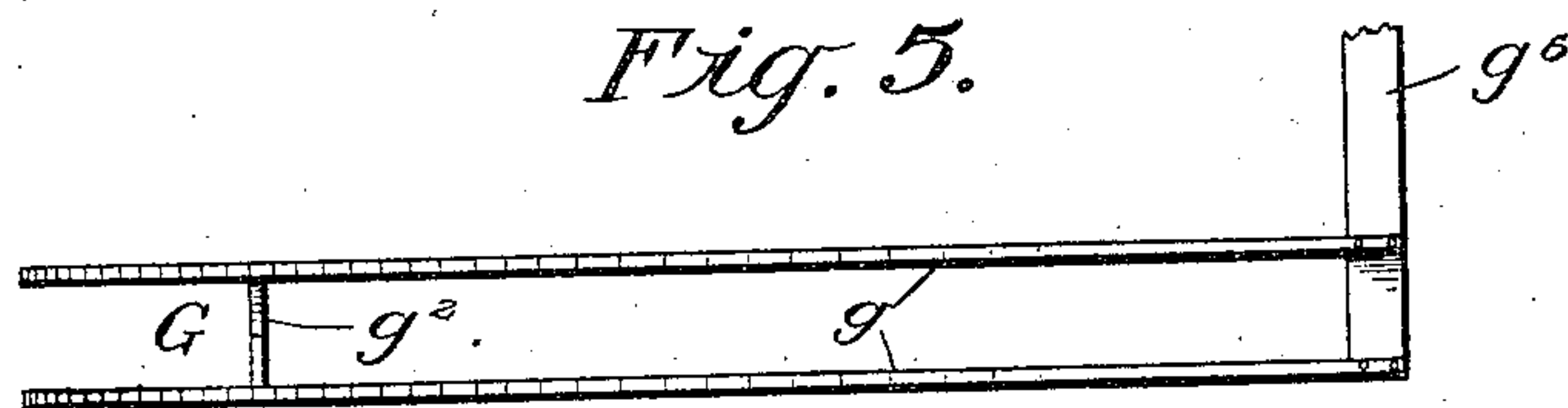


Fig. 5.



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UNITED STATES PATENT OFFICE.

ROBERT W. STEELE, OF TWIN FALLS, IDAHO.

WEED-CUTTER.

No. 847,125.

Specification of Letters Patent.

Patented March 12, 1907.

Application filed December 14, 1905. Renewed November 3, 1906. Serial No. 341,944.

To all whom it may concern:

Be it known that I, ROBERT W. STEELE, a citizen of the United States, and a resident of Twin Falls, in the county of Cassia and State of Idaho, have invented certain new and useful Improvements in Weed-Cutters, of which the following is a specification.

My invention is an improvement in weed-cutters, and consists in certain novel constructions and combinations of parts hereinafter described and claimed.

Referring to the drawings forming a part hereof, Figure 1 is a plan view of my improved weed-cutter with the windrow attachment removed. Fig. 2 is a side elevation of Fig. 1. Fig. 3 is a detail side view of the frame and the means for varying the angle of the tongue thereto. Fig. 4 is a top plan view of the mechanism for arranging the weeds in windrows. Fig. 5 is a side view of the same. Fig. 6 is a detail of the brace connected therewith. Fig. 7 is a detail perspective view of the connection of the knives with each other at their front end and with the frame.

In the practical application of my invention I provide a frame A, composed of three longitudinal bars a , connected at their ends by the cross-bars a' . Upon the lower face of the longitudinal bars are arranged bearings a^2 , in which are journaled the cranked portion b of a shaft B, having upon its outer ends the wheels b' . Gear-wheels b^2 are keyed to the cranked portion of the shaft within the outer longitudinal bars, and upon said bars, adjacent to the gear-wheels, is a bracket b^4 , having journaled therein a shaft b^3 , whose lower end is provided with a worm b^5 , meshing with the gear-wheel b^2 , the upper end of the shaft being provided with a hand-wheel b^6 , having secured to the rim thereof a handle b^7 .

By rotating the hand-wheel b^6 the gear-wheel is rotated, thus rotating the shaft and bringing the cranked portion into different positions with respect to the supporting-wheels b' for elevating and depressing the frame with respect to the wheels.

Side plates C are secured to the sides of the central longitudinal bar, the said side plates having rear depending portions c and front depending portions c' , the latter portions being

provided with series of alined perforations c^2 , the uppermost perforation for receiving the pivot-pin of the tongue E and the lower perforation for receiving the doubletrees. (Not shown.)

Side plates D are secured to the outer side of the outer longitudinal bars, the said plates having a curved depending portion d at their rear end and projecting beyond the side bars at their front end. Braces e connect the tongue with the projecting portion of the latter-named side bars.

An eyebolt e' traverses the tongue vertically at a suitable distance from its pivot, and attached to the eyebolt is a bar e^2 , having in its upper end a series of perforations e^3 , in one of which is pivoted a lever e^4 , pivotally mounted in brackets e^5 , secured to the upper face of the central longitudinal bar, the lever being provided with a spring-actuated catch e^6 for engaging a toothed quadrant e^7 , projecting forwardly from the central longitudinal bar.

The last-described mechanism is for varying the angle of the tongue with the frame and for securing the members in their adjusted position. By depressing the free end of the lever the angle of the tongue with the frame is decreased, while by elevating the free end of the handle the angle is increased. By this mechanism the frame can be leveled with respect to the ground when elevated or depressed without reference to the position of the tongue.

The rear curved ends d of the side bars D are broadened horizontally, as at d' , and to such broadened portions are secured the outer ends of knives d^2 , arranged at an angle to each other and converging at a point somewhat to the front of the line connecting the center of the supporting-wheels. The knives d^2 are of suitable breadth and are arranged at a slight angle to the horizontal, the two knives forming approximately the letter A and with the point to the front.

The converging ends of the knives d^2 are connected by an angle-plate c^3 , secured to the rear depending portions c of the side plates C, and at the junction of the knives I arrange a vertical cutter c^4 , secured at its lower end to one of the knives and at its upper end having an angular portion c^5 for attachment to

the rear depending portion *c* of the side plates *C*.

Finger-bars *d*³ are attached to the rear edges of the knives and are provided with upwardly and backwardly inclined fingers *d*⁴, the said fingers being for the purpose of loosening the weeds from the soil after they are cut by the knives.

In Figs. 4 and 5 I have shown an attachment *G* for arranging the weeds in windrows at either side of the cutter, the said attachment comprising a plurality of curved pairs of vertically-spaced bars *g*, connected at their front end and diverging at their rear end, the individual members of the bars being connected by vertical braces *g*², while the rear ends of the bars are connected by a cross-brace *g*³, provided at either end with diverging arms *g*⁴ for engaging the respective members of the bars at each end of the brace. A vertical plate *g*⁶ is arranged between the attached ends of the bars, and the said plate is removably attached to the central longitudinal bar of the frame by means of bolts and nuts *g*⁷.

The above-described attachment is especially intended for use in cutting sage-brush and obviates the necessity for going over the ground with a rake when it is desired to pile the brush. It is apparent, however, that it might with equal facility be used with heavy weeds as well as in the sage-brush.

In operation my improved weed-cutter is drawn through the field with the knives lowered into the ground a suitable distance—say from one to four inches. The weeds are cut off beneath the surface of the ground, and the action of the fingers loosens them from the soil and leaves them in such condition that the attachment behind the finger-bar may easily pile them into windrows on either side of the cutter. By means of the frame-elevating mechanism the knives may be set to cut at any desired depth, and by means of the leveling attachment the frame may be leveled to a horizontal plane regardless of the position of the tongue. By arranging the knives in the described manner one acts as a landside for the other, thus preventing all side draft and providing a light and easy running machine.

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

1. In a weed-cutter and in combination a frame comprising a plurality of longitudinal bars and cross-bars connecting the ends of the longitudinal bars, bearings on the lower faces of the longitudinal bars, a shaft having a cranked portion journaled on the bars, wheels on the outer ends of the shaft, gear-wheels on the cranked portion adjacent to the outer longitudinal bars, brackets secured to the said longitudinal bars, shafts

journaled in the brackets and provided with worms engaging the gear-wheels, a hand-wheel for manipulating the shaft, side plates on the central longitudinal bar and provided at their front and rear ends with depending portions, the front depending portions being provided with a plurality of aligned perforations and projecting beyond the longitudinal bars, a doubletree connected to sundry of the perforations, side plates on the outer longitudinal bars projecting beyond the front ends thereof and having a curved depending portion at their rear ends, a tongue pivoted in the upper perforations of the first-named side plates, means for varying the angle of the frame and tongue, means for fixing the parts in their adjusted position, knives connected at one end to the curved depending portions of the side plates on the outer longitudinal bars and at their other end to the side plates on the rear depending portions of the central longitudinal bar and arranged at an acute angle with respect to each other, a vertical cutter secured to the rear depending portions of the side plates on the central longitudinal bar at the junction of the knives, finger-bars between the knives, and upwardly and backwardly inclined fingers on the longitudinal bars.

2. In a weed-cutter and in combination, a frame comprising a plurality of longitudinal bars, and cross-bars connecting the ends of the longitudinal bars, bearings on the lower faces of the longitudinal bars, a shaft having a cranked portion journaled on the bars, wheels on the outer ends of the shaft, means engaging the cranked portion of the shaft for raising and lowering the frame with respect to the wheels, side plates on the central longitudinal bar and provided at their front and rear ends with depending portions, the front depending portions being provided with a plurality of aligned perforations projecting beyond the longitudinal bar, a doubletree engaging sundry of the perforations, side plates on the outer longitudinal bars and projecting beyond the front ends thereof, and having a curved depending portion at their rear ends, a tongue pivoted in the upper perforations of the first-named side plates, braces connecting the tongue with the projecting portions of the last-named side plates, an eyebolt on the tongue, a bar connected with the eyebolt and provided at its outer end with a plurality of perforations, brackets secured to the central longitudinal bar of the frame, a lever pivoted in the brackets and having one of its ends engaging the perforations in the bar, a toothed quadrant on the longitudinal bar of the frame, a spring-actuated catch on the lever for engaging the quadrant, knives connected at one end to the curved depending portions of the side plates on the outer longitudinal bars and at their

front end to the rear depending portions of the side plates on the central longitudinal bar, and arranged at an acute angle with respect to each other, a vertical cutter secured to the rear depending portions of the side plates on the central longitudinal bar at the junction of the knives, finger-bars behind the knives, and upwardly and backwardly inclined fingers on the finger-bars.

3. In a weed-cutter and in combination, a frame comprising a plurality of longitudinal bars and cross-bars connecting the ends of the longitudinal bars, bearings on the lower faces of the longitudinal bars, a shaft having a cranked portion journaled in the bar, wheels on the outer ends of the shaft, gear-wheels on the cranked portions adjacent the outside longitudinal bars, brackets secured to said longitudinal bars, shafts journaled in the brackets and provided with worms engaging the gear-wheels, hand-wheels for manipulating the shafts, a tongue pivoted to the front of the frame, braces connecting the tongue with the sides of the frame, an eyebolt on the tongue, a bar connected with the eyebolt and provided at its outer end with a plurality of perforations, brackets secured to the central longitudinal bar of the frame, a lever pivoted in the brackets and having one of its ends engaging the perforations in the bar, a toothed quadrant on the frame, a spring-actuated catch on the lever for engaging the quadrant, a plurality of substantially horizontal knives connected at their front ends and diverging rearwardly and supported below the frame, a vertical cutter at the junction of the knives, and means behind the knives for loosening the weeds from the soil.

4. In a weed-cutter and in combination, a plurality of longitudinal bars, and cross-bars connecting the ends of the longitudinal bars, bearings on the lower faces of the longitudinal bars, a shaft having a cranked portion journaled in the bearings, wheels on the outer ends of the shaft, gear-wheels on the cranked portion adjacent the outside longitudinal bars, brackets secured to said longitudinal bars, shafts journaled in the brackets and provided with worms engaging the gear-wheels, hand-wheels for manipulating the shafts, a tongue pivoted to the front of the frame, means for varying the angle of the tongue with the frame, means for fixing the parts in their adjusted position, a plurality of substantially horizontal knives connected at their front ends and diverging rearwardly, supported below the frame, a vertical cutter at the junction of the knives, and means behind the knives for loosening the weeds from the soil.

5. In a weed-cutter and in combination, a frame, wheels for supporting the frame, means for raising and lowering the frame

with respect to the wheels, a tongue pivoted to the front of the frame, means for varying the angle of the tongue with the frame, means for fixing the parts in their adjusted position, a plurality of substantially horizontal knives connected at their front ends and diverging rearwardly and arranged below the frame, a vertical cutter at the junction of the knives, and means behind the knives for loosening the weeds from the soil.

6. In a weed-cutter and in combination, a frame, wheels for supporting the frame, means for raising and lowering the frame with respect to the wheels, a tongue pivoted to the front of the frame, means for varying the angle of the tongue with the frame, means for fixing the parts in their adjusted position, a plurality of substantially horizontal knives connected at their free ends and diverging rearwardly and supported below the frame, and means behind the knives for loosening the weeds from the soil.

7. In a weed-cutter and in combination, a frame, wheels for supporting the frame, means for raising and lowering the frame, a tongue pivoted to the frame, means whereby to fix the frame and the tongue at various inclinations with respect to each other, a plurality of substantially horizontal knives connected at their front ends and diverging rearwardly arranged below the frame and connected therewith, a vertical cutter at the junction of the knives, and means behind the knives for loosening the cut weeds from the ground.

8. In a weed-cutter and in combination, a frame, wheels for supporting the frame, means for raising and lowering the frame, a tongue pivoted to the frame, means whereby to fix the frame and tongue at various inclinations with respect to each other, a plurality of substantially horizontal knives connected by their front ends and diverging rearwardly and arranged below the frame, a vertical cutter at the junction of the knives, and means between the knives for loosening the cut weeds from the ground.

9. In a weed-cutter and in combination, a frame, wheels for supporting the frame, means for raising and lowering the frame, a tongue pivoted to the frame, means for varying the angle of the tongue to the frame, means for fixing the tongue and the frame in their adjusted position, a plurality of substantially horizontal knives connected at their front ends, a vertical cutter at the junction of the knives, and means behind the knives for loosening the weeds from the soil.

10. In a weed-cutter and in combination, means for cutting the weeds, a frame for supporting the cutting means, means for elevating and depressing the cutting means with respect to the frame, and means for throwing the weeds into windrows comprising a sub-

stantially triangular frame supported behind the cutting means with its apex adjacent thereto.

11. In a weed-cutter and in combination,
5 means for cutting the weeds, means for supporting the cutting means, means for elevating and depressing the cutting means with

respect to the supporting means, and means behind the cutting means for throwing the weeds into windrows.

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Witnesses:

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C. D. THOMAS.