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PATENTED FEB. 25, 1908.

J. W. BAKER.

ROAD GRADER, LEVEE BUILDER, DIGGER, AND CONVEYER.

APPLICATION FILED OCT. 3, 1907.

3 SHEETS—SHEET 1.

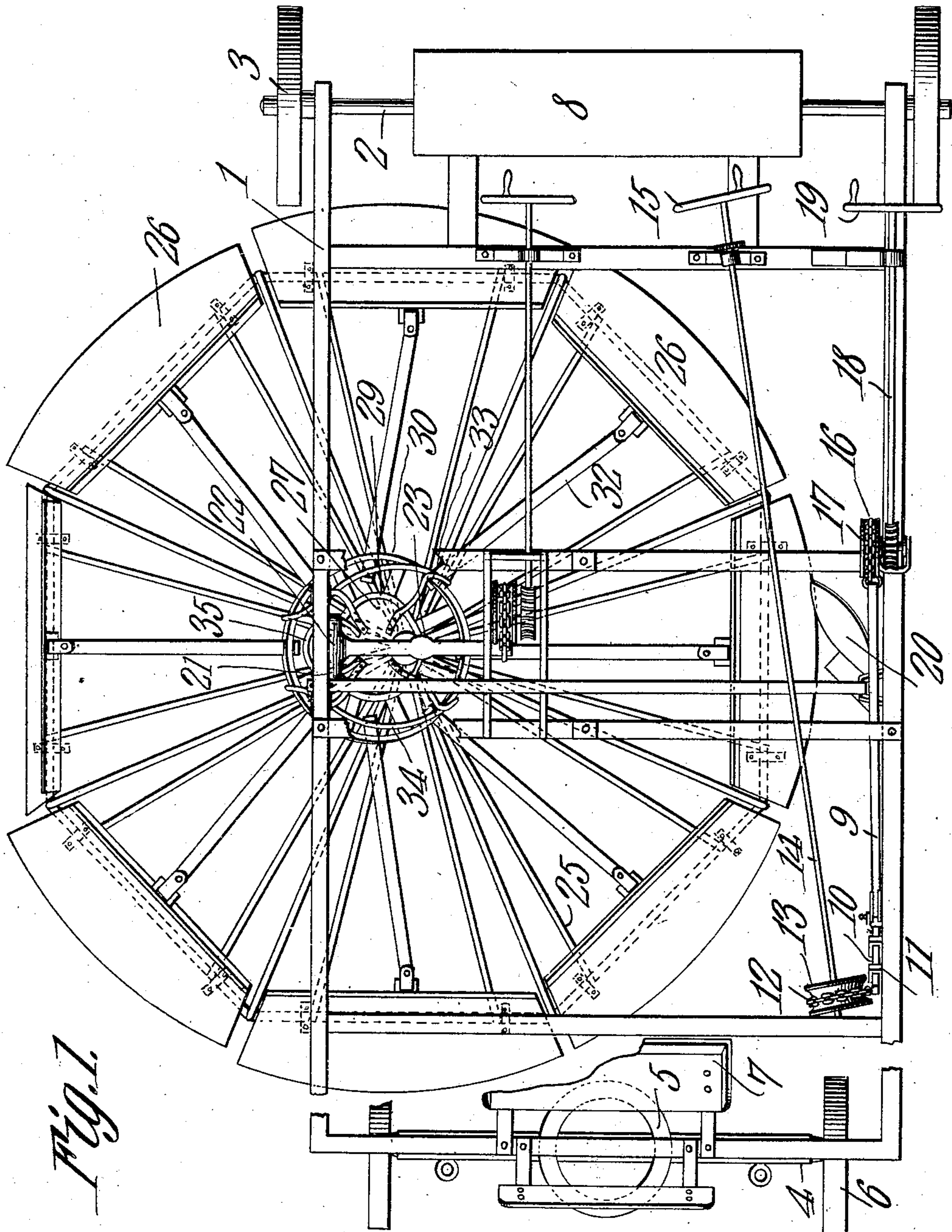


Fig. 1

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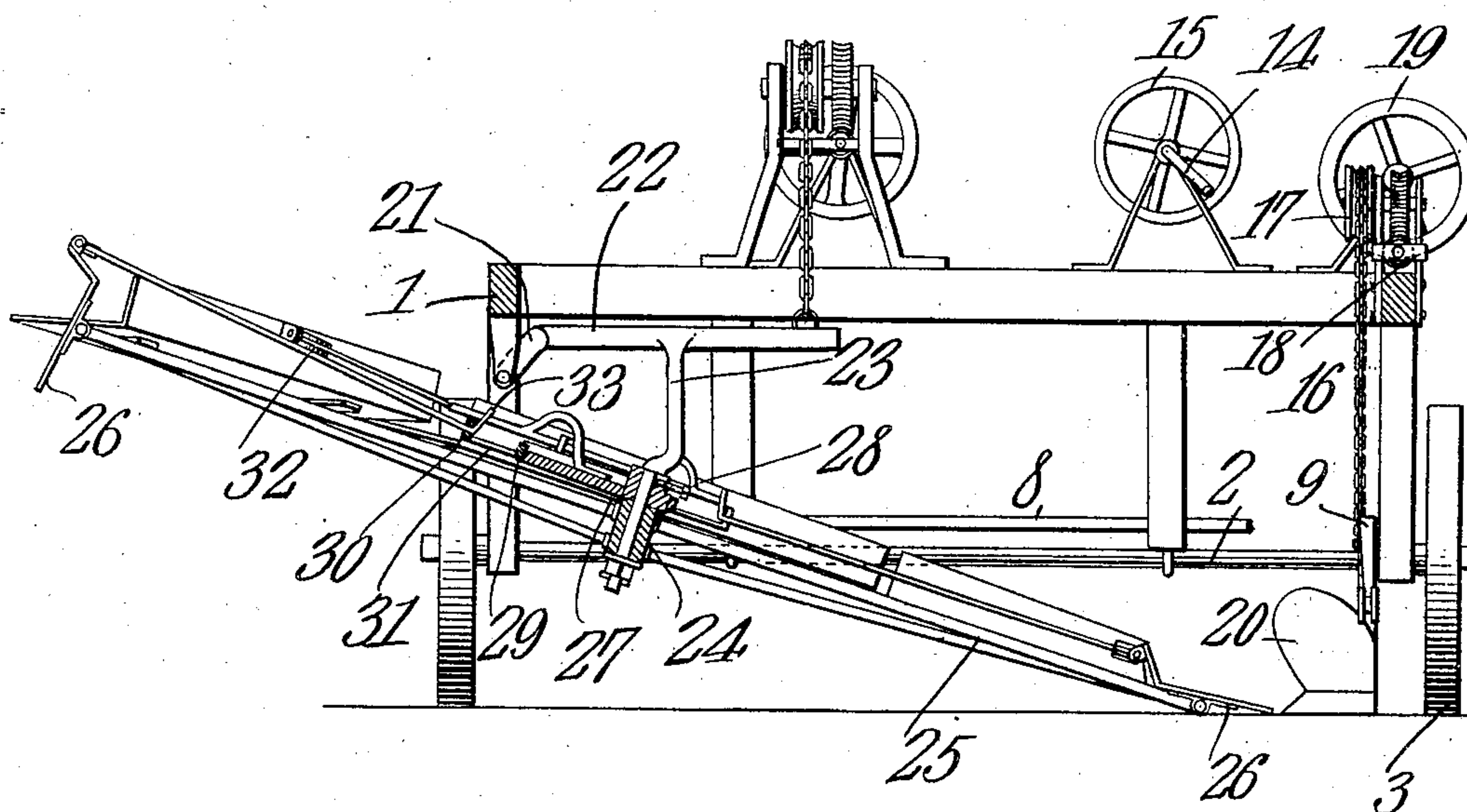
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3 SHEETS—SHEET 2.

*Fig. 2.*



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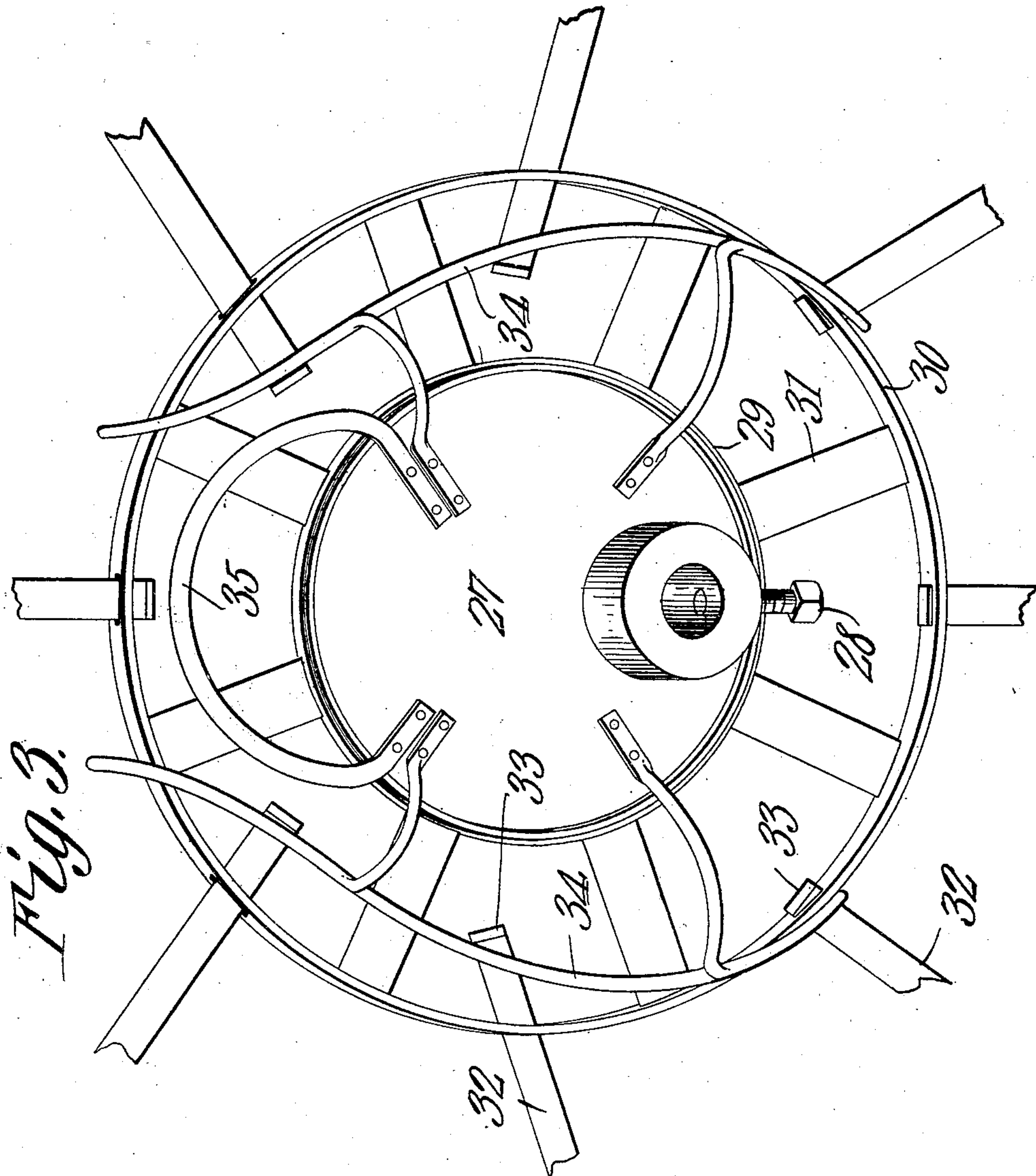
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3 SHEETS—SHEET 3.



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# UNITED STATES PATENT OFFICE.

JOSEPH W. BAKER, OF PHILLIPS BLUFF, LOUISIANA.

ROAD-GRADER, LEVEE-BUILDER, DIGGER, AND CONVEYER.

No. 880,268.

Specification of Letters Patent.

Patented Feb. 25, 1908.

Application filed October 3, 1907. Serial No. 395,704.

*To all whom it may concern:*

Be it known that I, JOSEPH W. BAKER, a citizen of the United States, residing at Phillips Bluff, in the parish of Calcasieu and State of Louisiana, have invented a new and useful Combined Road-Grader, Levee-Builder, Digger, and Conveyer, of which the following is a specification.

This invention has relation to combined road graders, levee builders, diggers and conveyers 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 machine of the character indicated which consists of a wheel mounted frame to which is attached a digging plow. A conveyer wheel is also supported by the said frame and is in the form of a polyhedron with tiltable buckets mounted at its periphery. The said buckets are counterbalanced upon the periphery of the wheel and a disk is supported upon the frame of the machine in eccentric relation with the center of the wheel. A spider is loosely mounted upon said disk and rods operatively connect the buckets with said spider. The said disk is adapted to be turned axially whereby the point at which the buckets will tilt upon the periphery of the wheel is regulated. Constricted side pieces are attached to the disk and a bowed piece is also attached to the bit and is interposed between the said side pieces. The said side pieces and bowed piece also co-act in operating upon the rods attached to the buckets for tilting the same.

In the accompanying drawings:—Figure 1 is a top plan view of the digger and conveyer. Fig. 2 is a transverse sectional view of the same, and Fig. 3 is a perspective view of a disk and spider used upon the machine.

The frame 1 is mounted upon the axle 2 which in turn is supported by the wheels 3. The forward portion of the said frame is mounted upon the axle 4 which is provided with a fifth wheel 5 and supporting wheels 6. The driver's seat 7 is located upon the forward portion of the frame 1 while the operator's platform 8 is located at the rear portion of said frame. The forward end of the plow beam 9 is attached to a bar 10 which passes through the guides 11. The lower end of the chain 12 is attached to the upper end of the bar 10 and the upper portion of the chain 12 winds upon the drum 13 which is mounted upon the shaft 14. The

rear end of the shaft 14 is provided with a hand wheel 15 which is located in the vicinity of the platform 8. The lower end of the chain 16 is attached to the rear portion of the plow beam 9. Said chain 16 winds upon the drum 17 which is in turn rotated by a worm shaft 18 having a hand wheel 19. The plow 20 is carried by the beam 9. The crank shaft 21 is journaled at one side of the frame 1 and the laterally disposed arm 22 is connected with the crank of the shaft 21. The arm 22 is provided with a depending member 23 to the lower end of which is journaled a hub 24 of the wheel 25. The periphery of the wheel 25 is in the form of a polyhedron and the buckets 26 are counterbalanced upon the straight sections of the periphery of the said wheel. The disk 27 is attached to the depending member 23 and is provided with a set screw 28 whereby the said disk may be adjusted axially on the depending member 23. A spider surrounds the disk 27 and consists of the inner band 29 and the outer band 30, which bands are connected together by the radially disposed arms 31. The rods 32 are pivotally connected at their outer ends to the buckets 26 and at their inner ends pass through openings provided in the ring 30 and terminate in the hooked ends 33. The said rods 32 may move longitudinally in the openings in the ring 30. The constricted side pieces 34 are mounted upon the disk 27 and the bowed piece 35 is also mounted upon the disk 27 and is located between the side pieces 34. The side pieces 34 and the bowed piece 35 are adapted to be engaged by the hooked ends 33 of the rods 32 as the wheel 25 rotates and the said constricted side pieces, together with the spider and the bowed piece coöperate with each other in moving the said rods 32 so that the buckets 26 will be tilted into dumping position at one point in the revolutions of the wheel 25 and will be held into load-receiving positions at a diametrical opposite point, while at points in between the first said points, the buckets will be slightly moved upon their hinge connections with the wheel 25 so as to assume substantially level positions whereby they will retain the earth previously loaded upon the same.

In operation, as the machine is drawn along the surface of the ground, the plow will turn the earth and deposit the same upon the adjacent buckets 26 of the wheel



25. Under the weight of the load just deposited upon the wheel it is held in frictional contact with the ground and rotates in the same direction in which the machine is  
5 traveling. As the wheel 25 rotates the buckets 26 are moved upon their hinge supports in the manner as above described, whereby, the earth is elevated to one side of the ditch and dumped.

10 Having described my invention what I claim as new and desire to secure by Letters-Patent is:—

1. A machine of the character described, a plow, an elevator consisting of a wheel in the  
15 form of a polyhedron and tiltable buckets mounted upon the angularly disposed sides of the wheel.

2. A machine of the character described comprising a plow, a wheel in the form of a  
20 polyhedron having tiltable buckets counter-balanced upon the angularly disposed sides of the wheel.

3. A machine of the character described comprising a plow, a wheel in the form of a  
25 polyhedron with tiltable buckets mounted thereon, said wheel lying in an inclined plane and having means for gradually tilting the buckets so as to maintain them level.

— 4. In a machine of the character indicated,  
30 a plow, a wheel supported in inclined position with relation to the digger and having tiltable buckets, an eccentric mechanism located at the center of the wheel and operating rods connecting the buckets with the ec-  
35 centric mechanism.

5. A machine of the character indicated comprising a wheel mounted frame, a plow attached to the frame, a conveyer wheel sup-  
40 porting the frame, said conveyer wheel having tiltable buckets and means for tilting the buckets as the wheel rotates and means for moving the conveyer wheel toward and away from the digger.

6. A machine of the character indicated  
45 comprising a wheel mounted frame, a con-

veyer wheel supported by the frame, said conveyer wheel having tiltable buckets, a disk supported eccentrically with relation to the wheel, a spider loosely mounted upon  
50 said disk and rods attached to the buckets and coöperating with the said spider for tilting the buckets.

7. In a machine as described, a wheel mounted frame, a plow attached to the frame, a conveyer wheel supported by the  
55 frame and having tiltable buckets, a disk supported eccentrically with relation to said wheel, a spider loosely mounted upon said disk and having constricted side pieces, and rods attached to the buckets and being oppo-  
60 sitely connected with said spider.

8. A machine of the character indicated comprising a wheel mounted frame, a plow attached to the frame, a conveyer wheel sup-  
65 ported by the frame and having tiltable buckets, a disk supported eccentrically with relation to the wheel, a spider loosely mounted upon said disk and having constricted side pieces with a bowed portion interposed between said pieces and rods operatively  
70 connecting the buckets with the spider.

9. In combination with a wheel mounted frame, a plow attached to the frame, a crank shaft mounted upon the frame and having a  
75 laterally disposed arm with a depending portion, means for raising and lowering the free end of said arm, a wheel journaled upon the depending portion of said arm and having tiltable buckets, a disk mounted upon the arm in eccentric relation to the wheel, a  
80 spider loosely mounted upon said disk and arms operatively connecting the bucket with the spider.

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

JOSEPH W. BAKER.

Witnesses:

J. N. BAKER,

ARSAN LE BLEU, Jr.