

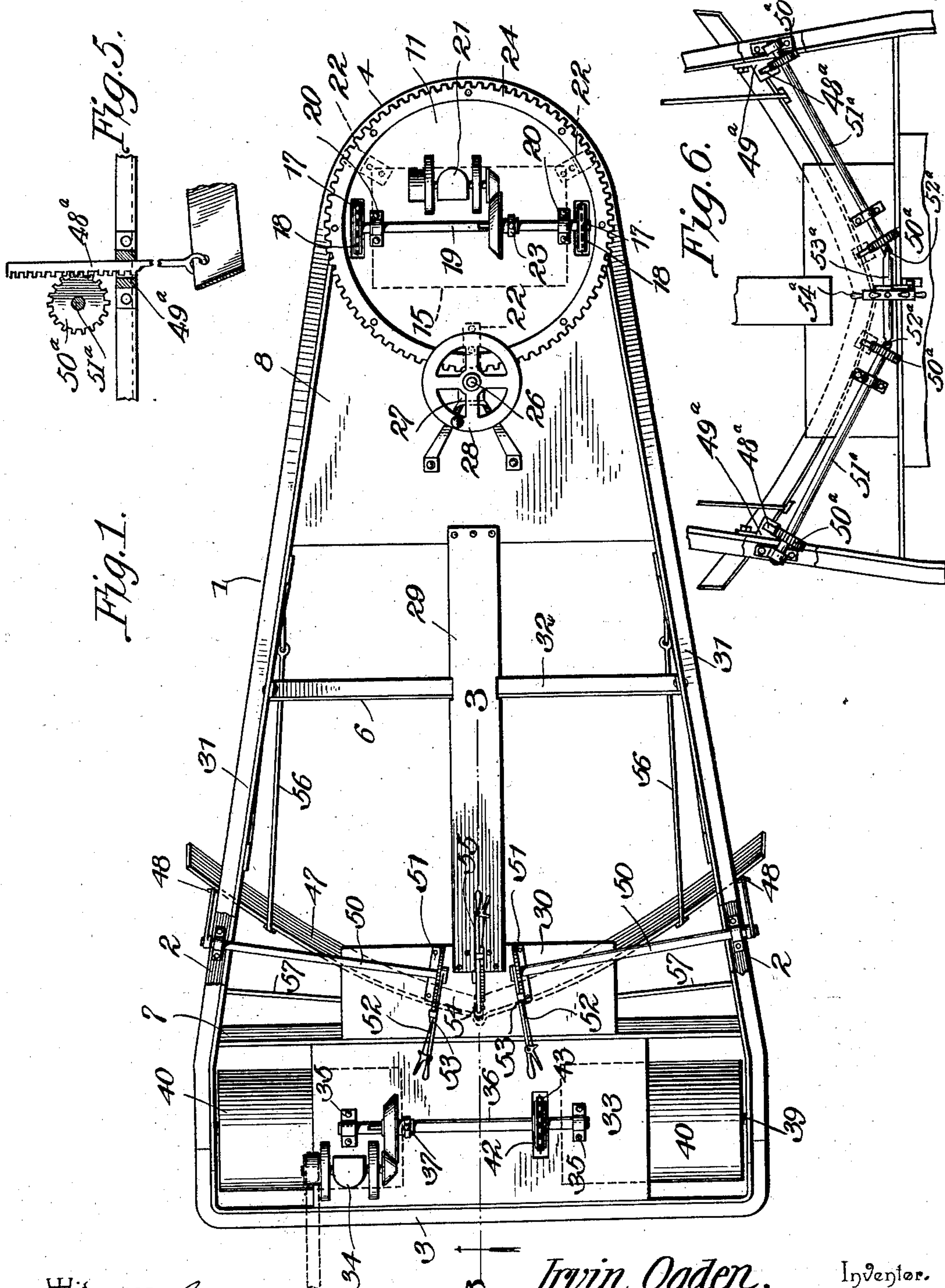
No. 750,482.

PATENTED JAN. 26, 1904.

I. OGDEN.  
ROAD MAKING MACHINE.  
APPLICATION FILED AUG. 15, 1903.

NO MODEL.

2 SHEETS—SHEET 1.



Witnesses  
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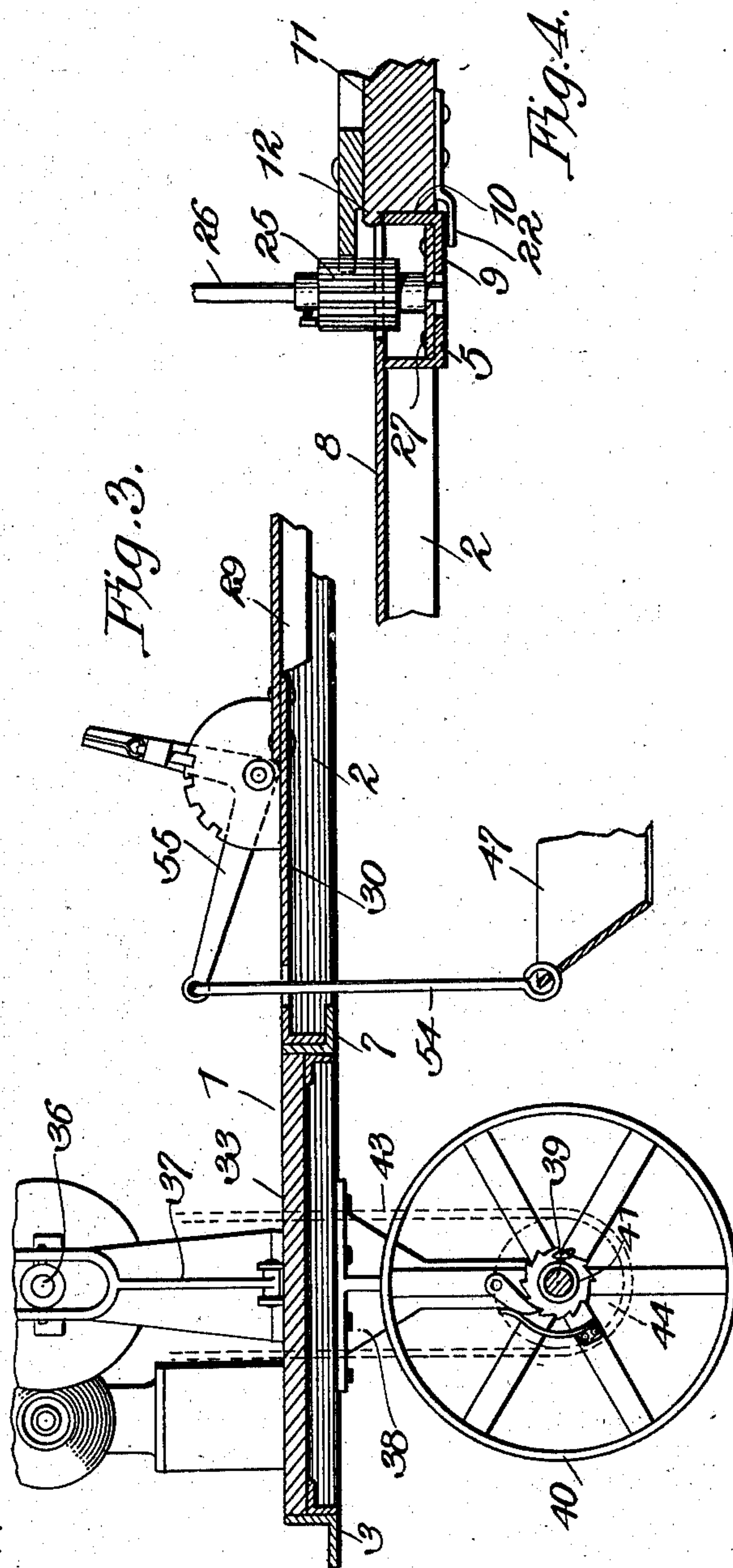
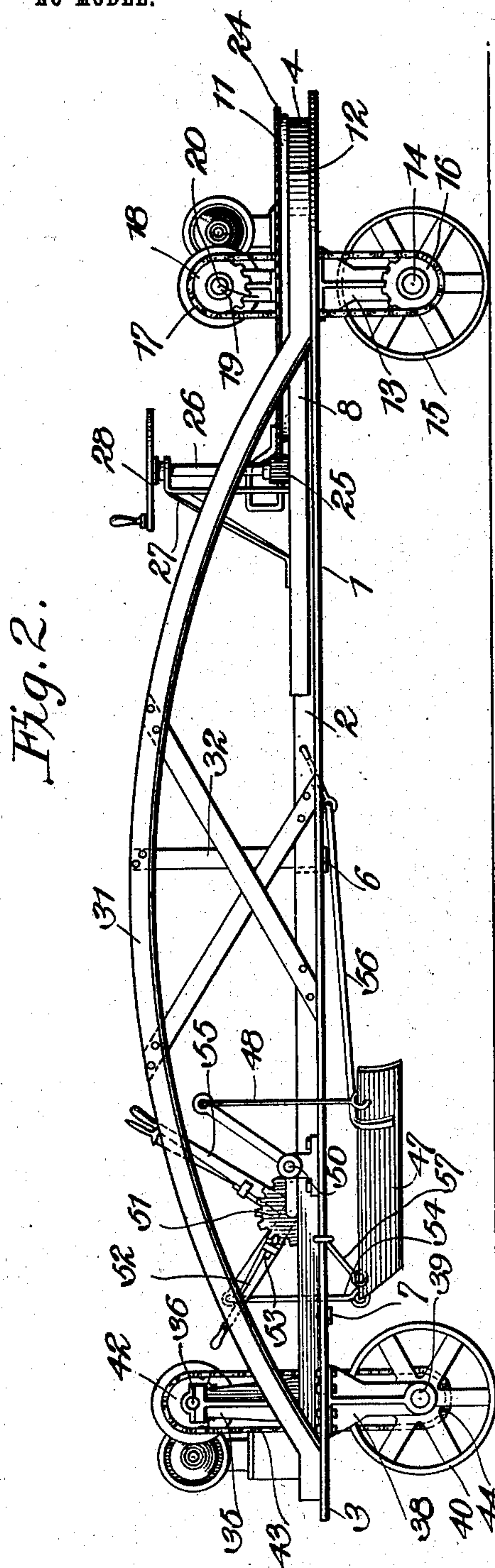
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# UNITED STATES PATENT OFFICE.

IRVIN OGDEN, OF WHATCHEER, IOWA.

## ROAD-MAKING MACHINE.

SPECIFICATION forming part of Letters Patent No. 750,482, dated January 26, 1904.

Application filed August 15, 1903. Serial No. 169,631. (No model.)

*To all whom it may concern:*

Be it known that I, IRVIN OGDEN, a citizen of the United States, residing at Whatcheer, in the county of Keokuk and State of Iowa, have  
5 invented a new and useful Road-Making Machine, of which the following is a specification.

This invention relates to road-making machines; and it has for its object to provide a  
10 device of this class which shall possess superior advantages in point of simplicity, durability, and general efficiency.

My invention primarily consists of a frame or platform mounted upon suitably-disposed  
15 rollers, the front and rear rollers being independently driven, so that the said device whenever it travels along a road shall serve to level the surface thereof and to compact the same.

The invention further consists in so constructing the frame and platform of the device that the latter may be used to furnish  
20 traction-power to and as a vehicle for carrying road-making machinery of various kinds—such as grader-blades, disks, plows, conveyers, &c.—which are used for preparing dirt roads.

A further object of my invention is to provide the machine itself with a grader-blade  
30 whereby it may be conveniently utilized as a grader.

My invention further consists in the improved construction, arrangement, and combination of parts, which will be hereinafter  
35 fully described, and particularly pointed out in the claims.

In the accompanying drawings, Figure 1 is a top plan view of a road-making machine constructed in accordance with my invention.  
40 Fig. 2 is a side elevation of the same. Fig. 3 is a longitudinal sectional view, on a larger scale, taken on the line 3 3 in Fig. 1. Fig. 4 is a sectional elevation in detail of the means for operating the turn-table. Fig. 5 is a detail side view illustrating a modified construction of the means for regulating the grader-blade. Fig. 6 is a detail plan view of said  
45 modification.

Corresponding parts in the several figures

are indicated by similar numerals of reference.

The frame 1 of my improved device is preferably constructed of angle-iron, and it is composed of the forwardly-converging sides 2 2, connected at their rear ends by the end piece  
5 3 and at their front ends by a segmental front piece 4. The sides 2 2 of the frame are connected by means of transverse braces 5, 6, and 7, which are likewise composed of angle-iron and the first of which, 5, is disposed near the  
10 front end of the frame, while the last one, 7, is disposed near the rear end of the frame. The front brace 5, together with the sides 2 of the frame, supports a platform 8, the front end of which is curved and concentric with  
15 the segmental front end of the frame. A segmentally-curved angle-iron 9 is connected with the inner sides of the frame-pieces and combines with the segmentally-curved front end 4 of the frame to form a circular opening  
20 in which is seated a turn-table 11, the upper edge of which has a flange 12, whereby it is supported in operative position. The turn-table 11 is provided with downwardly-extending brackets 13, affording bearings for the  
25 shaft or axle 14 or a roller 15, which is outlined in dotted lines in Fig. 1 of the drawings. It will be seen that the roller, in conjunction with the turn-table, forms a revoluble front truck for the machine which is distinctively  
30 different from front supporting means which are in the nature of king-bolts or swiveled casters, said turn-table being of a diameter practically equal to the width of the front end of the machine and provided with a support-  
35 ing-roller which extends practically across the diameter of said turn-table. By this construction a degree of stiffness and rigidity is attained which is extremely desirable in a device of the class to which my invention be-  
40 longs, while at the same time the turn-table is capable of being entirely rotated in a horizontal plane, the advantage of which will be readily understood. The shaft 14 also carries sprocket-wheels 16, one at each end, said  
45 sprocket-wheels being connected, by means of chains 17, with corresponding sprocket-wheels 18, mounted upon a shaft 19, which is sup-  
50



ported in bearings 20 upon the upper side of the turn-table. The shaft 19 is suitably connected with the main shaft of a gasoline or other motor, which has been conventionally indicated at 21. It is obvious that by the mechanism described motion may readily be transmitted from the motor 21 to the roller 15. For the purpose of retaining the turn-table securely in position its under side is provided with a plurality of lugs 22, engaging under the angle-iron 9 and under the front end of the frame, which, in conjunction with said angle-iron, constitutes the track of said turn-table. The shaft 19 is to be provided with a friction-gear, (conventionally indicated at 23,) whereby it may be conveniently and instantaneously thrown into or out of gear with the motor 21.

Upon the upper side of the turn-table 11 is mounted an annular toothed flange 24, the teeth of which are in engagement with a pinion 25, disposed upon a vertical shaft 26, bearings for which are provided in suitable brackets 27, and the upper end of which has a hand-wheel 28, by means of which it may be conveniently manipulated. It will be observed that by this arrangement the turn-table is capable not only of being adjusted so as to guide the machine in the desired direction, but that the said turn-table may be completely reversed, so that, if desired, the machine may be driven backward without necessity for reversing the motor.

The brackets 27, which support the upright shaft 26, are mounted upon the platform 8, which also furnishes the station for the operator. The rear end of said platform is connected, by means of a longitudinal brace 29, with a shelf 30, projecting from the cross-brace 7 of the frame, said longitudinal brace being supported upon the central cross-brace of the frame. The sides of the latter are braced by means of trusses 31 of any suitable construction, and an auxiliary truss-rod, as 32, connects the central portions of the trusses 31 with the center of the cross-brace 6, thus insuring a stout and serviceable construction of the frame. The latter is provided between the rear cross-brace 7 and the rear piece 3 with a platform 33, which supports a gasoline or other motor, (conventionally indicated at 34.) The platform 33 is also provided with brackets 35, affording bearings for a shaft 36, which through the medium of a friction-gear 37 may be connected with or disconnected from the driving mechanism of the motor. The rear end of the frame is provided with downwardly-extending brackets 38, affording bearings for a shaft 39, upon which are mounted a pair of rollers 40, the inner ends of which are disposed at such a distance apart as to lap the track made by the front roller of the machine. One rear roller may be connected with the shaft or axle 39 by means of ratchet-clutches, (indicated at 41,) the object being to facilitate the turning of the machine. It is sufficient,

as stated, that one of the rear rollers be connected with the shaft by clutch mechanism, as described, while the other roller should be keyed tightly upon the shaft, so that it may be revolved backward by the motor, the roller keyed upon the shaft being controlled by the mechanism whereby the shaft 36 is connected with the motor mechanism, said shaft 36 being provided with sprocket-wheels 42, which are connected, by means of chains 43, with corresponding sprocket-wheels 44 upon the axle 39.

It will be observed that the motor mechanism supported upon the rear part of the frame is entirely independent of that supported upon the front truck or turn-table. The machine therefore may be driven by the conjoint action of the two motors or by either one of them alone, as may be required, according to the amount of weight carried by the frame, to the condition of the roads over which the machine is to pass, to the speed it may be desired to make, and other conditions.

Suitably supported under the frame of the machine is a grader-blade 47, which is supported by means of links 48, flexibly connected with arms or cranks at the ends of shafts 50, the outer ends of which have bearings upon the sides of the frame, while the inner bearings of said shafts are in rack-segments 51, supported upon the shelf 30. The shafts 50 are provided with operating-levers 52, having spring-actuated dogs 53, which by engaging the rack-segments serve to support the shafts in any desired position, and consequently the grader-blade at any desired elevation. The central portion of the grader-blade is independently connected by means of a link 54 with a bell-crank lever 55, mounted upon the shelf 30 and having a lock-dog engaging a rack-segment, in which it is pivoted. Drag-links 56 connect the ends of the grader-blade with the sides of the frame, and a brace-link 57 likewise connects the middle portion of the grader-blade with one of the sides of the frame, as shown.

I desire it to be understood that the grader-blade herein shown and described is not intended to be the sole attachment used in connection with or forming an auxiliary to my improved road-making machine, inasmuch as numerous other attachments—such as plows, elevating devices, and the like—may be used in connection with and driven by the motive power of my improved machine. It is also obvious that the motive power may be disconnected from the roller-carrying shafts or axles and utilized for the purpose of driving auxiliary machinery of any kind.

From the foregoing description, taken in connection with the drawings hereto annexed, the operation and advantages of my invention will be readily understood. The machine is useful for all purposes to which a traction-engine may be applied, and owing to its rotatable front truck and the special means for ap-



plying motive power to the wheels of said front truck the machine is easily dirigible. The facility with which the power of the motors may be applied to other purposes besides that of driving the machine is also obvious.

While I have in the foregoing described a simple and preferred construction of my invention, I desire it to be understood that I do not limit myself to the precise structural details herein described, but reserve the right to any changes and modifications that may be resorted to within the scope of my invention and without departing from the spirit or sacrificing the utility of the same.

Having thus described my invention, I claim—

1. In a machine of the class described, an independent, revoluble turn-table, and a roller supporting the same.

2. In a machine of the class described, an independent, revoluble front truck comprising a turn-table, brackets upon the under sides of said turn-table, an axle journaled in said brackets, and a roller mounted upon said axle.

3. In a machine of the class described, an independent, revoluble front truck comprising a turn-table, and rotary supporting means for the same, in combination with a motor supported upon said revoluble front truck.

4. In a machine of the class described, an independent, revoluble front truck comprising a turn-table, brackets upon the under sides of the same, a shaft journaled in said brackets, and a roller mounted upon said shaft, in combination with a motor supported upon said front truck, and means for transmitting motion from said motor to the shaft carrying the roller.

5. In a machine of the class described, an independent, revoluble front truck, rotary supporting means for the same, a motor supported upon said front truck, and means for transmitting motion from said motor to the rotary supporting means of the truck.

6. In a machine of the class described, the combination with a frame, of an independently-revoluble front truck comprising a turn-table, rotary supporting means for the same, a motor supported upon said turn-table, means for transmitting motion from said motor to

the rotary supporting means, and means for rotating the turn-table.

7. In a machine of the class described, the combination with a frame, of a front truck comprising a revoluble turn-table, rotary supporting means for the same, a motor supported upon said turn-table, means for transmitting motion from said motor to the revoluble supporting means, an annular toothed ring upon the turn-table, a pinion engaging said toothed ring, and means for manipulating said pinion to effect, when desired, the complete rotation of the turn-table.

8. In a machine of the class described, a frame, brackets depending from the rear end of the same, a shaft journaled in said brackets, rollers mounted upon said shaft, a platform supported by the rear end of the frame, a motor upon said platform, means for transmitting motion from said motor to the roller-carrying shaft, an independently-revoluble front truck, rotary supporting means for the latter, and independent motive power for said rotary supporting means.

9. In a machine of the class described, a frame, rotary supporting means for the rear end of said frame, an independently-revoluble turn-table constituting a front truck, rotary supporting means for the latter, and independent motors for imparting motion to the rear rotary supporting means and to the rotary supporting means of the front truck.

10. In a machine of the class described, a frame having side, front and rear members and transverse braces, trusses for the side members of said frame, an independent transverse truss connecting the trusses of the side members with the central transverse brace, rotary supporting means for the front and rear ends of said frame, and means for independently operating said front and rear rotary supporting means.

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

IRVIN OGDEN.

Witnesses:

C. L. SLACK,  
RAY GILLFOY.