

No. 715,670.

Patented Dec. 9, 1902.

M. W. KOUNS.  
AUTOMOBILE CRANE.

(Application filed Sept. 13, 1902.)

(No Model.)

4 Sheets—Sheet 1.

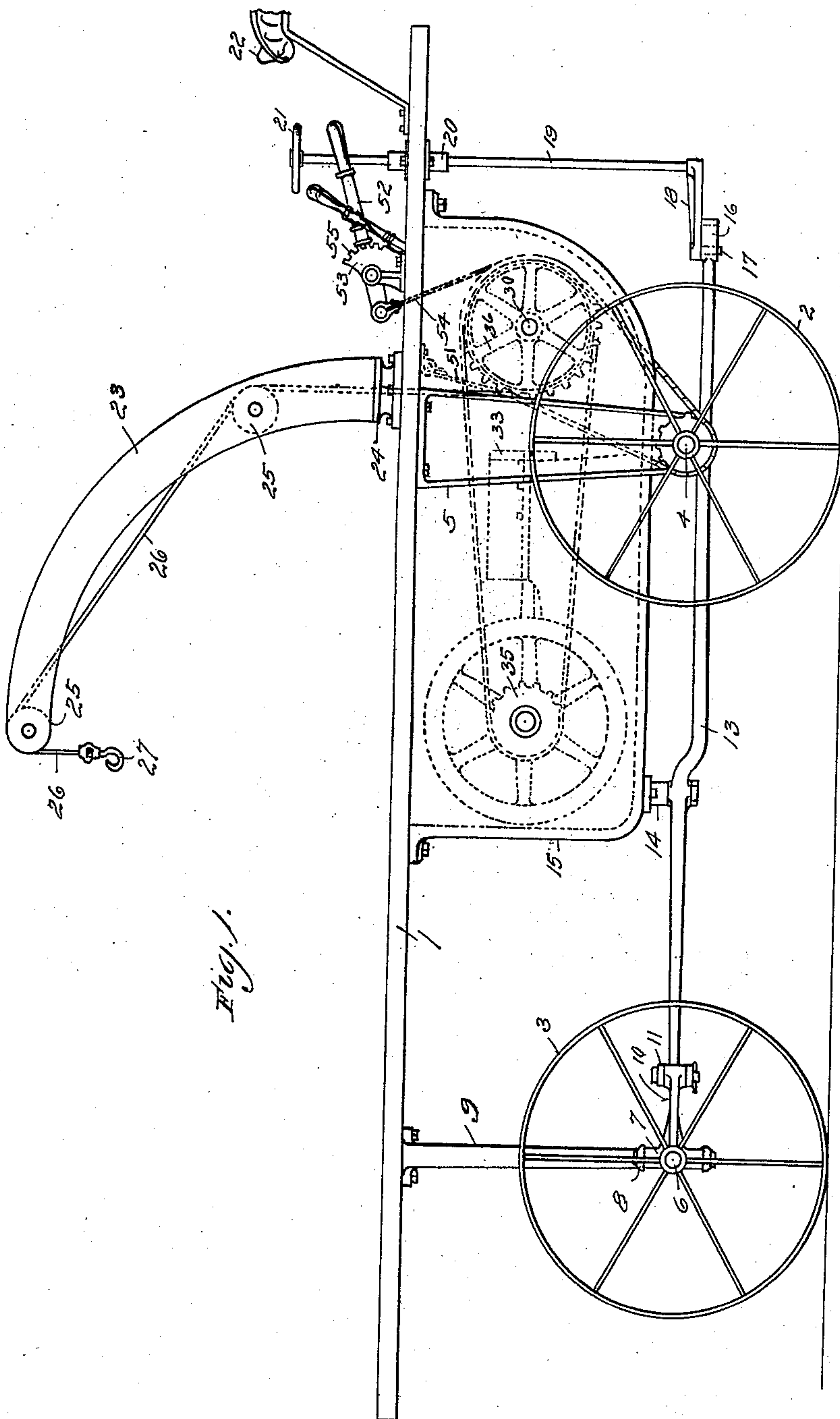


Fig. 1.

WITNESSES:

J. C. Dawley.  
Will O'Laughlin

INVENTOR  
M. W. Kouns  
BY J. A. Towler  
ATTORNEY

No. 715,670.

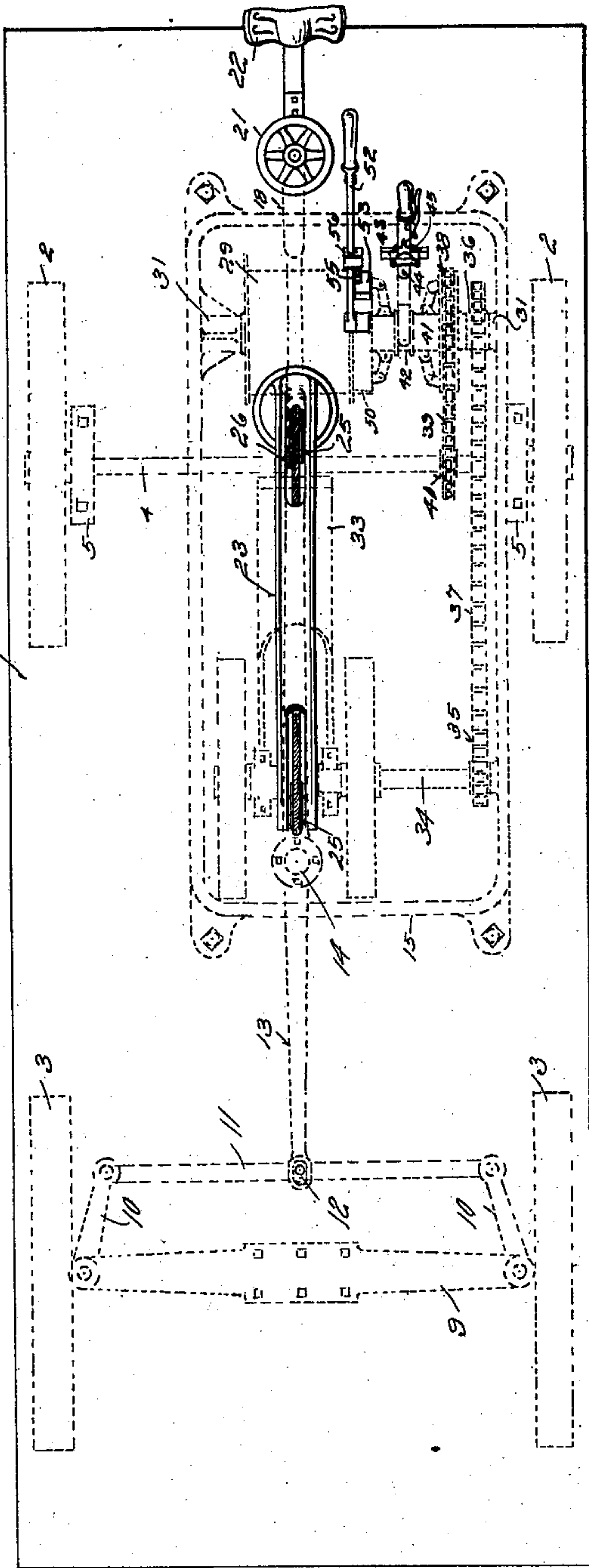
Patented Dec. 9, 1902.

M. W. KOUNS.  
AUTOMOBILE CRANE.

(Application filed Sept. 13, 1902.)

(No Model.)

4 Sheets—Sheet 2.



WITNESSES:

J. P. Dawley.

Will D. Laughlin

INVENTOR,

M. W. Kouns

BY H. A. Toulmin,

ATTORNEY.

No. 715,670.

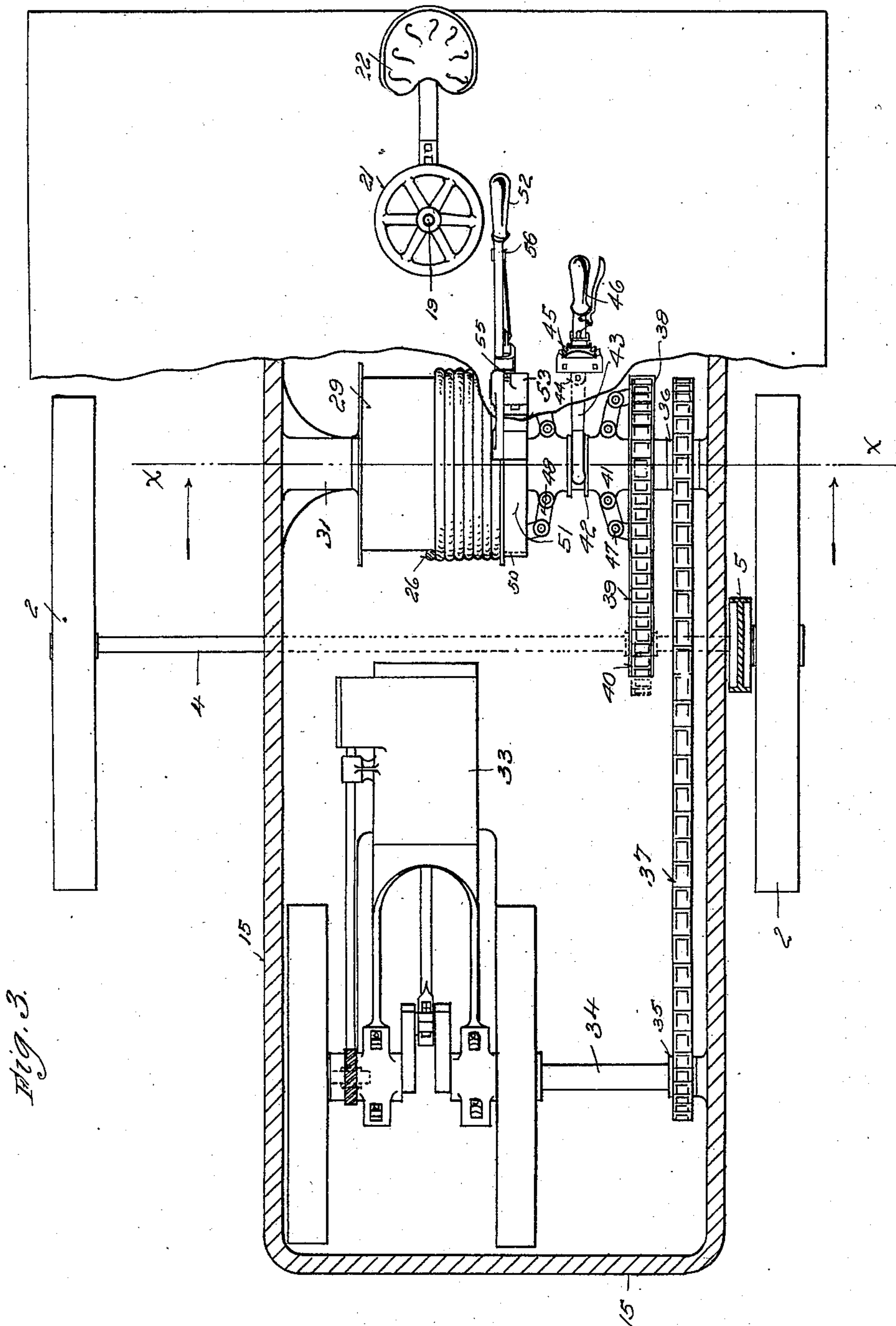
Patented Dec. 9, 1902.

M. W. KOUNS:  
AUTOMOBILE CRANE.

(Application filed Sept. 13, 1902.)

(No Model.)

4 Sheets—Sheet 3.



WITNESSES:

J. C. Dawley.  
Wm. O'Laughlin

INVENTOR,  
M. W. Kouns  
BY J. A. Foulmer,  
ATTORNEY



No. 715,670.

Patented Dec. 9, 1902.

M. W. KOUNS.  
AUTOMOBILE CRANE.

(Application filed Sept. 13, 1902.)

(No Model.)

4 Sheets—Sheet 4.

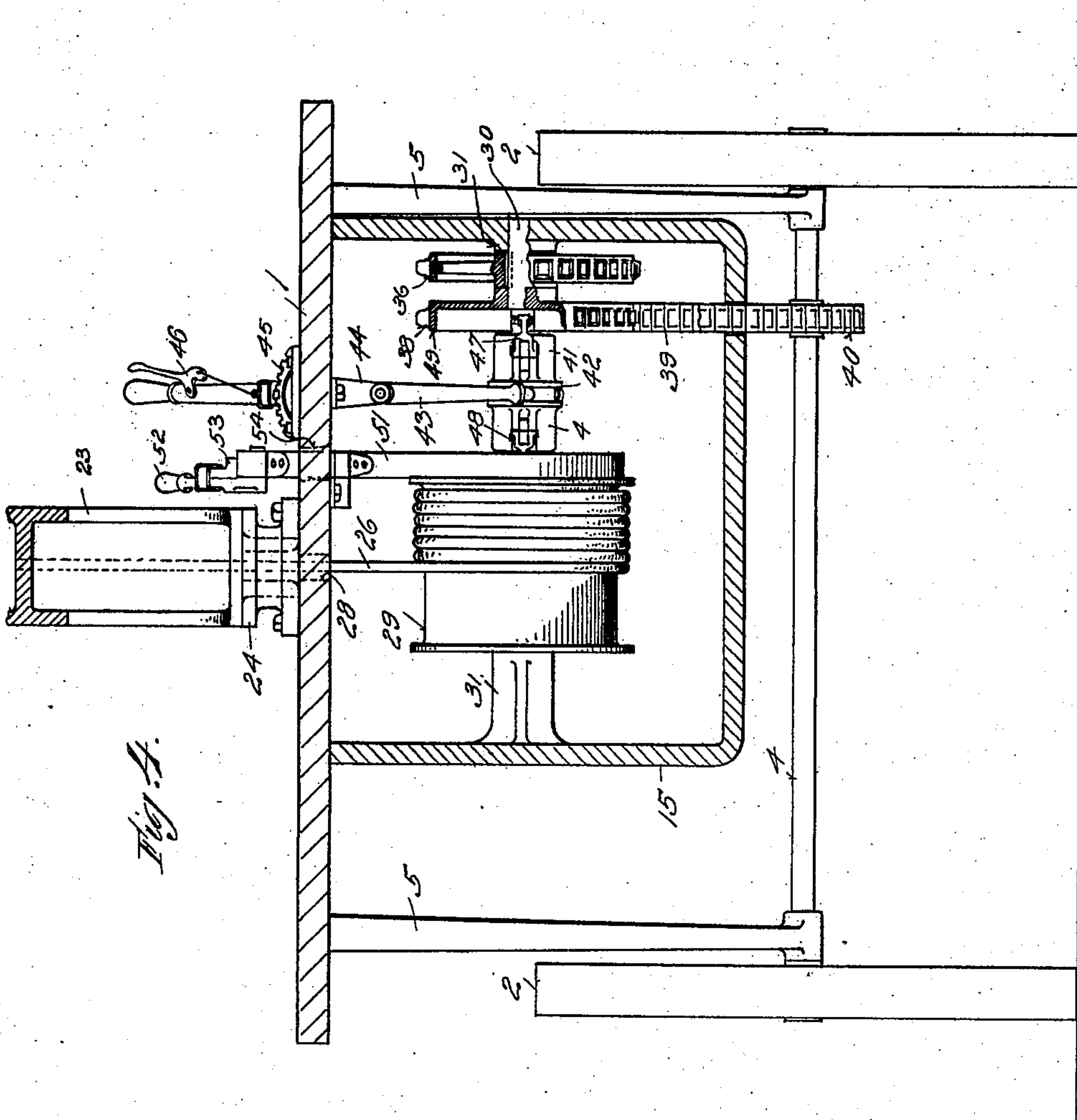


Fig. 4.

WITNESSES:

J. C. Dawley.  
W. W. Laughlin

INVENTOR,  
M. W. Kouns  
BY  
H. A. Gougeon,  
ATTORNEY



# UNITED STATES PATENT OFFICE.

MOSES W. KOUNS, OF WASHINGTON COURT-HOUSE, OHIO.

## AUTOMOBILE-CRANE.

SPECIFICATION forming part of Letters Patent No. 715,670, dated December 9, 1902.

Application filed September 13, 1902. Serial No. 123,239. (No model.)

*To all whom it may concern:*

Be it known that I, MOSES W. KOUNS, a citizen of the United States, residing at Washington Court-House, in the county of Fayette and State of Ohio, have invented certain new and useful Improvements in Automobile-Cranes, of which the following is a specification, reference being had therein to the accompanying drawings.

10 This invention relates to automobile-cranes, and has for its object to provide a self-propelling vehicle provided with a crane or similar hoisting apparatus operated by the same motor which furnishes the propelling force of the vehicle, said vehicle being also adapted to receive and transport articles of various kinds, constituting, in fact, a freight-automobile, and the crane in addition to its ordinary lifting functions serving as a means for loading and unloading the vehicle.

To these ends my invention consists in certain novel features, which I will now proceed to describe and will then particularly point out in the claims.

25 In the accompanying drawings, Figure 1 is a side elevation of a structure embodying my invention in one form. Fig. 2 is a plan view of the same. Fig. 3 is an enlarged plan view of the rear portion of the vehicle, with parts of the platform and housing broken away; and Fig. 4 is a detail sectional view taken on the line *x x* of Fig. 3 and looking in the direction of the arrows.

30 In the embodiment of my invention which I have chosen for purposes of illustration 1 indicates a deck or platform supported on driving-wheels 2 at the rear and steering-wheels 3 at the front. The driving-wheels 2 are secured on an axle 4, mounted in brackets 5, extending downward from the platform 1. The steering-wheels 3 are mounted on stub-axles 6, projecting outward from vertical sleeves 7, journaled in yokes 8 on the opposite ends of a bracket 9, secured to the under side of the platform 1, near the front thereof. Each sleeve 7 is provided with a rearwardly-extending arm 10, and these arms are connected by a cross bar or link 11, pivoted at its ends to the arms 10. The link 11 is centrally connected to the slotted forward end 12 of a lever 13, which lever is pivoted between its ends at 14 to the housing 15 of the

motor, said housing being secured to the under side of the platform 1. The rear end of the lever 13 is slotted, as indicated at 16, to receive a pin 17 on the end of a crank-arm 18, secured to the lower end of a vertical steering-shaft 19, extending up through the platform 1, near the rear end thereof. The platform is provided with a bearing 20, in which the steering-shaft 19 is mounted, and the steering-shaft is provided at its upper end with a hand-wheel 21 or other suitable means, whereby it may be manipulated. The platform 1 is provided at its rear end with a seat 22, the steering-wheel 21 being located adjacent to and preferably immediately in front of said seat.

On top of the platform 1 there is located, preferably rearward of the center thereof and about over the axle of the rear wheels, a crane consisting of a suitable jib 23, pivoted to a base 24, secured to the top of the platform so as to permit the crane to swing in the usual manner. I have shown a well-known form of curved jib; but it is obvious that any suitable form of crane may be employed. The crane is shown as provided with guide-pulleys 25, over which passes the hoisting-rope 26, provided at one end with a hook 27 or any other suitable device for grappling or suspending the articles to be raised or lowered. The other end of the hoisting-rope 26 passes down through an aperture 28 in the base 24 and platform 1 and is wound upon a drum 29, which drum is loosely mounted on a shaft 30, mounted in suitable bearings 31 within the housing 15. This housing, as already stated, is located below the platform 1, to the under side of which it is secured, and in said housing below the platform is located a motor 33, which in the present instance I have illustrated as an explosive-engine. The shaft 34 of this motor is connected with the shaft 30, which may be termed the "counter-shaft," so as to impart rotary movement to the same, and in the present instance I have shown for this purpose a sprocket-wheel 35 on the motor-shaft 34 and a sprocket-wheel 36 on the counter-shaft 40, the two being connected by a sprocket-chain 37. In this way the counter-shaft 30 is continuously rotated as long as the motor is in operation.

On the counter-shaft 30 is loosely mounted



a sprocket-wheel 38, connected by a sprocket-chain 39 with a sprocket-wheel 40 on the driving-axle 4.

On the counter-shaft 30, between the drum 29 and gear 38, with which the axle is connected, there is located a clutch-sleeve 41, splined on the shaft so as to rotate therewith and adapted to be connected with either the driving-gear 38 or drum 29 when moved in the proper direction or to be disconnected from both of them when in the central position shown. For the purpose of shifting this sleeve it is provided with a grooved collar 42, embraced by the lower end of a lever 43, pivoted on a bracket 44 and extending upward through a slot in the deck 1 to a point near the seat 22. The usual notched segment 45 and engaging device 46 are provided for securing the lever in any position to which it may be adjusted. The details of the clutch mechanism may be varied as desired; but I have shown a double friction-clutch, one member 47 of which is adapted to engage with the driving-gear 38, while the other member, 48, is adapted to engage with the drum 29. To this end the gear 38 is made cup-shaped, so as to have an overhanging flange 49 for the engagement of the shoes of the friction-clutch 47, and the drum is provided with an overhanging flange 50 for the engagement of the shoes of the clutch 48. The drum 29 is further provided with a brake for the purpose of lowering the load, and in the present instance I have shown a band-brake comprising a friction-band 51, bearing on the annular flange 50, secured at one end to the under side of the platform 1 and fastened at its other end to one end of a lever 52. The lever 52 is pivoted between its ends on a bracket 53, located on top of the deck 1, the friction-band passing through a suitable slot 54 in the deck. The rear end of the lever 52 extends into close proximity to the seat 22, and the bracket 53 is provided with a notched segment 55, while the lever has the usual engaging device 56, so as to lock it in any position to which it may be adjusted.

It will be noted that the structure which I have devised is a self-propelling vehicle adapted for use on ordinary roads and having a load-platform which adapts it for the transportation of freight, farm produce, or any articles which it may be desired to convey from one point to another. This load-platform is free and unobstructed except for the crane and the driver's seat, operating-levers, and steering mechanism located immediately adjacent to the crane and occupying but a small portion of the deck. The motor, driving-gear, hoisting-drum, and all those portions of the apparatus except the crane and the controlling devices are located below the platform, so that not only is the surface of this latter unobstructed, so as to give a maximum capacity for loading, but the center of gravity is also lowered, so as to increase the stability of the apparatus. The same motor

which provides the propelling force of the vehicle also actuates the crane for the purpose of hoisting the loads or drawing them from a distance to the vehicle and then hoisting them, and the motive power may be readily connected either with the propelling-gear or the hoisting-gear or disconnected from both at will, the arrangement being such that the controlling devices are all within easy reach of the operator.

An apparatus of this description is obviously advantageous, for the reason that it can travel from point to point over ordinary roads, may gather and lift its load and receive and transport the load to any other desired point and there discharge the same, all of the work being accomplished by the power developed by the apparatus itself, which is self-contained.

I do not wish to be understood as limiting myself to the precise details of construction hereinbefore described, and shown in the accompanying drawings, as it is obvious that these details may be modified without departing from the principle of my invention.

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

1. A motor-vehicle for ordinary roads, comprising a load-platform, driving and steering wheels on which said platform is supported, a crane mounted on said platform, a motor, and means for connecting said motor at will either with the driving-wheels or with the hoisting mechanism of the crane, substantially as described.

2. A motor-vehicle for ordinary roads, comprising a load-platform, driving and steering wheels on which said platform is supported, a crane mounted on the upper side of said platform, and a motor and hoisting-drum mounted below said platform, and means for connecting said motor at will with either the driving-wheels or the hoisting-drum, substantially as described.

3. In a motor-vehicle for ordinary roads, the combination, with an unobstructed load-platform and a crane pivotally mounted on the upper side thereof, of driving and steering wheels on which said platform is supported, a motor and counter-shaft located below said platform and operatively connected, a hoisting-drum and driving-gear loosely mounted on said counter-shaft, the latter in operative connection with the driving-wheels, a clutch-sleeve splined on said counter-shaft between the drum and driving-gear, and means for moving said clutch-sleeve longitudinally of the shaft to engage either said drum or driving-gear or to disengage it from both of them, substantially as described.

4. In a motor-vehicle for ordinary roads, the combination, with a platform, of a driving-axle provided with driving-wheels supporting the rear of said platform, steering-wheels supporting the front of said platform, a driver's seat located at the rear of the platform, a steer-



ing device located adjacent to the driver's seat and operatively connected with the steering-wheels, a crane pivotally mounted on the platform over the driving-axle, a housing located underneath the platform, a motor mounted in said housing, a counter-shaft also mounted in said housing and operatively connected with the motor, a driving-gear and hoisting-drum loosely mounted on said counter-shaft, said driving-gear being operatively connected with the driving-axle, a sleeve splined on said counter-shaft between the driving-gear and drum and provided with

friction-clutch devices to respectively engage said gear and drum, a lever engaging said sleeve and extending to a point adjacent to the seat, and a band-brake engaging the hoisting-drum and provided with an operating-lever located adjacent to the seat, substantially as described.

In testimony whereof I affix my signature in presence of two witnesses.

MOSES W. KOUNS.

Witnesses:

LEE RANKIN,  
D. I. WORTHINGTON.