No. 722,031.

PATENTED MAR. 3, 1903.

E. A. MOORE.

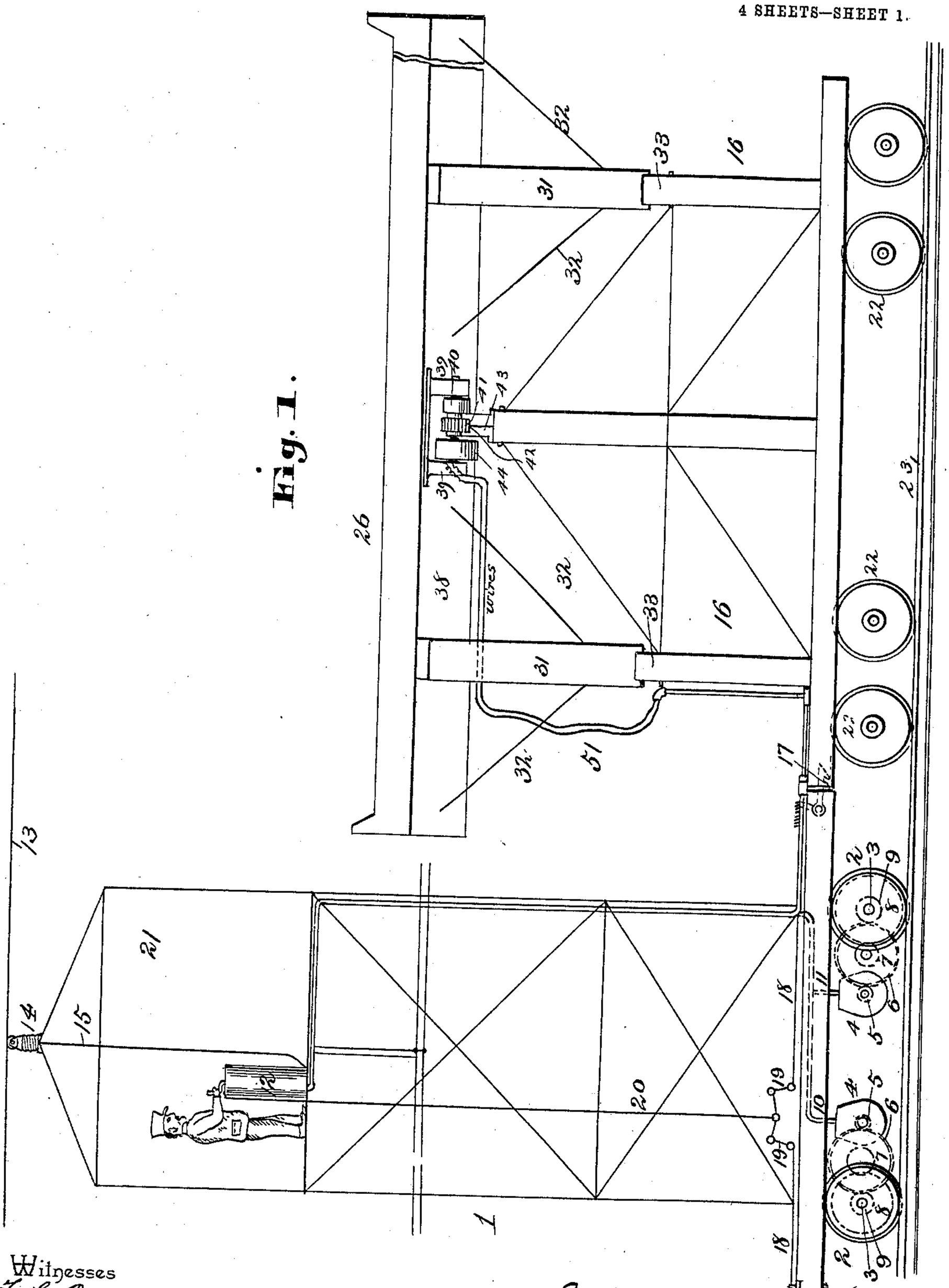
TRACTOR AND COKE LOADER.

APPLICATION FILED JUNE 5, 1902.

NO MODEL.

4 SHEETS—SHEET 1.

Fig. 1.



Witnesses
F. L. Ormand.
T. Parker Rinold

Inventor
Edwin A. Moore.
by
D. C. Reinhold
Attorney

No. 722,031. PATENTED MAR. 3, 1903.

E. A. MOORE.

TRACTOR AND COKE LOADER.

APPLICATION FILED JUNE 5, 1902.

NO MODEL. 4 SHEETS—SHEET 2.

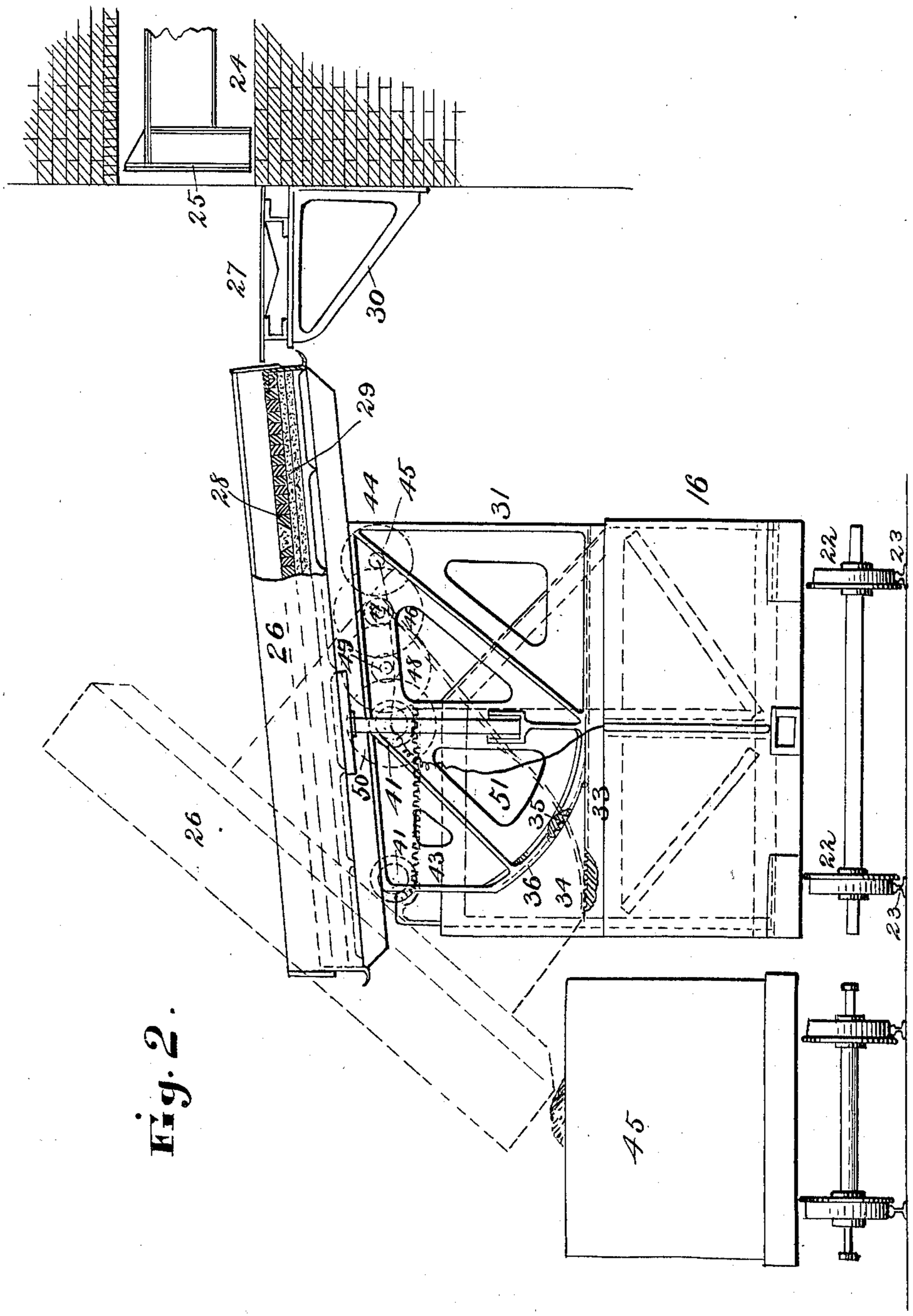


Fig. 2.

Witnesses
F. L. Ourand
M. Parker Reinhold

Inventor
by Edwin A. Moore,
D. E. Reinhold
Attorney

No. 722,031. PATENTED MAR. 3, 1903.

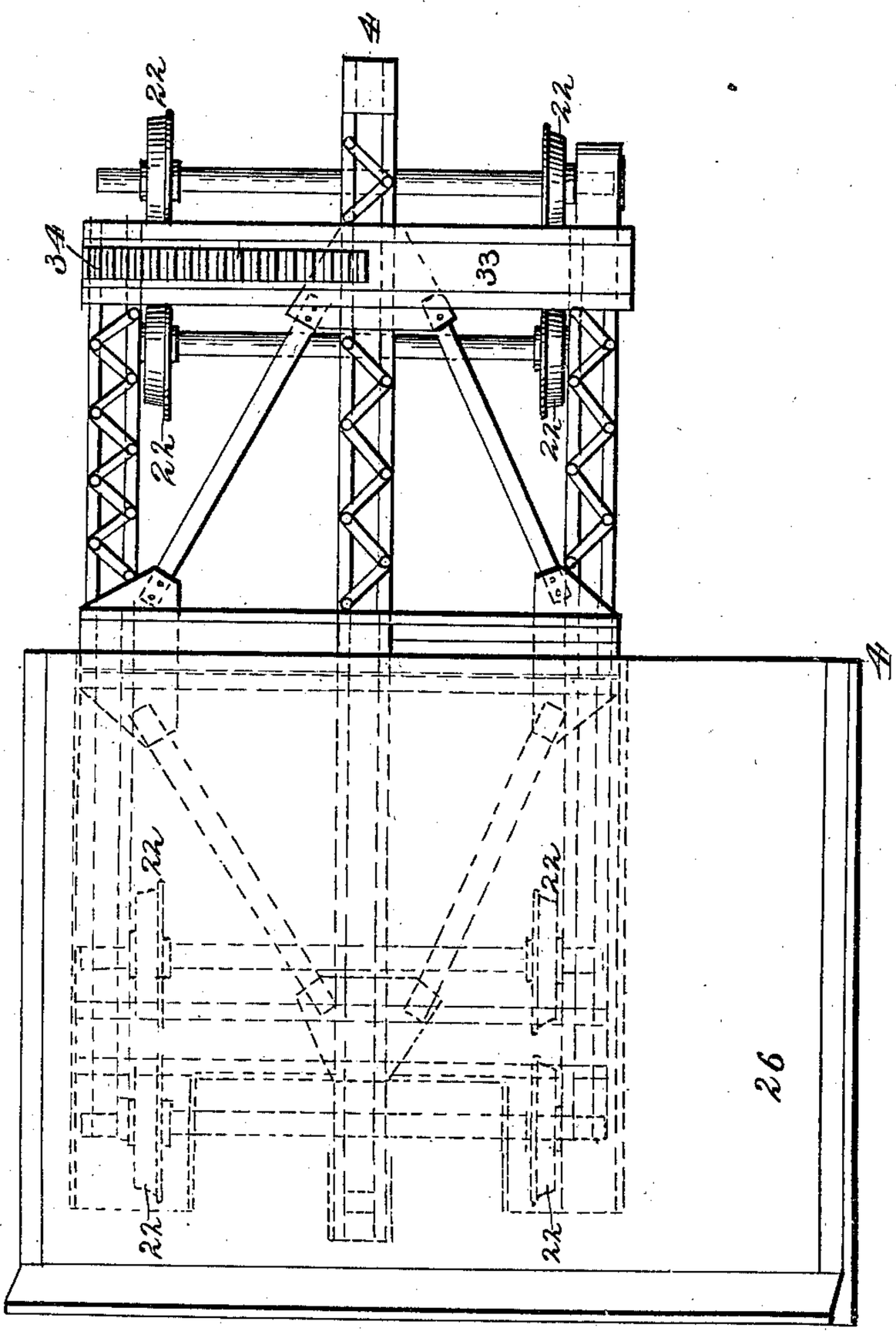
E. A. MOORE.

TRACTOR AND COKE LOADER.

APPLICATION FILED JUNE 5, 1902.

NO MODEL. 4 SHEETS—SHEET 3.

Fig. 3.



Witnesses
F. L. Ourand.
N. Parker Reinold

Inventor
by Edwin A. Moore.
D. P. Reinold
Attorney

No. 722,031. PATENTED MAR. 3, 1903.

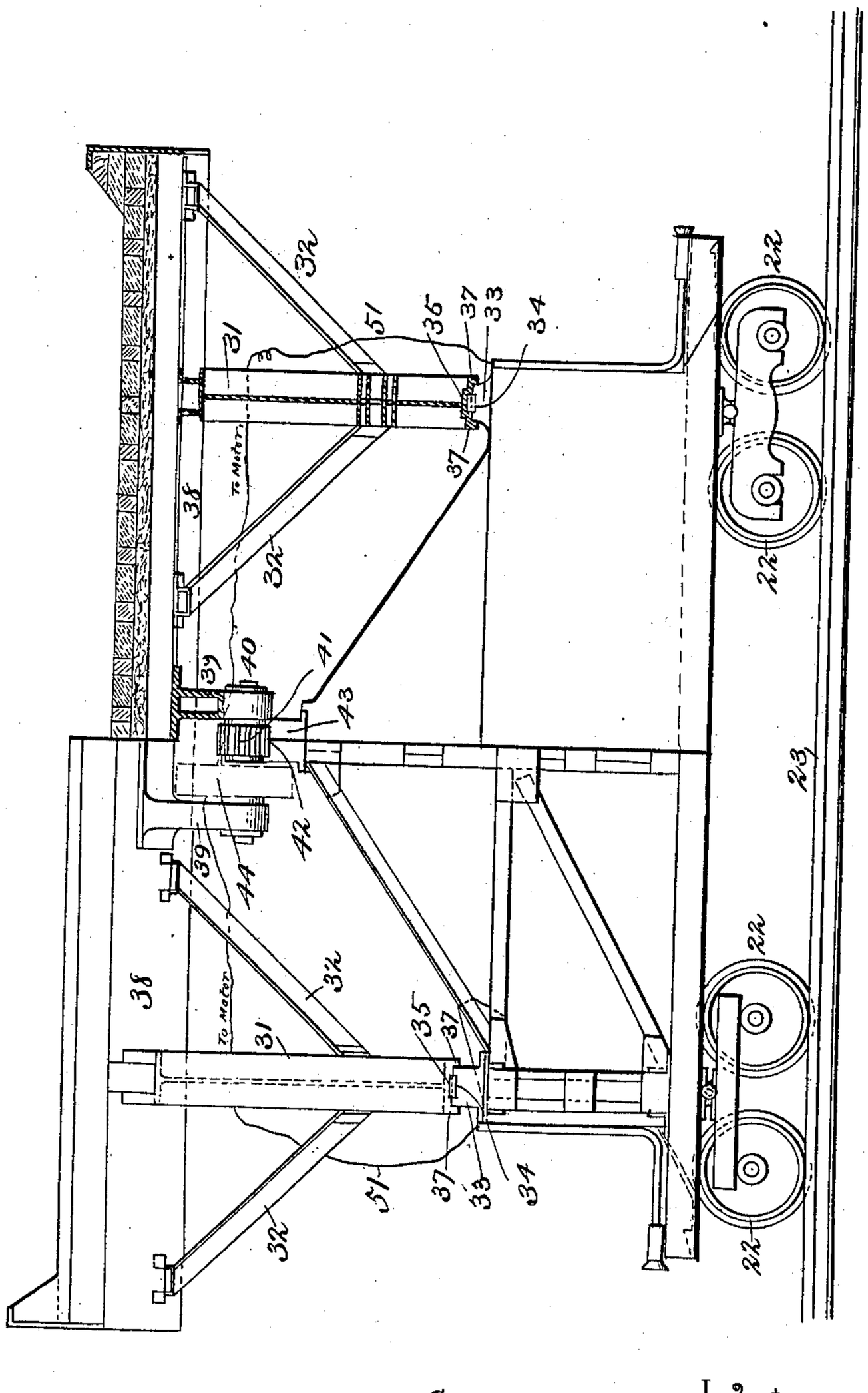
E. A. MOORE.

TRACTOR AND COKE LOADER.

APPLICATION FILED JUNE 5, 1902.

NO MODEL. 4 SHEETS—SHEET 4.

Fig. 4.



Witnesses
F. L. Ormand
N. Parker Reinohl

Inventor
by Edwin A. Moore.
D. C. Reinohl
Attorney

UNITED STATES PATENT OFFICE.

EDWIN A. MOORE, OF PHILADELPHIA, PENNSYLVANIA.

TRACTOR AND COKE-LOADER.

SPECIFICATION forming part of Letters Patent No. 722,031, dated March 3, 1903.

Application filed June 5, 1902. Serial No. 110,379. (No model.)

To all whom it may concern:

Be it known that I, EDWIN A. MOORE, a citizen of the United States, residing at Philadelphia, in the county of Philadelphia and State of Pennsylvania, have invented certain new and useful Improvements in Tractors and Coke-Loaders; and I do hereby declare the following to be a full, clear, and exact description of the invention, such as will enable others skilled in the art to which it appertains to make and use the same.

My invention relates, primarily, to coke-ovens, has especial reference to means for receiving coke as it is pushed out of the ovens, and discharging the coke after it has been cooled into railway-cars; and the invention consists in certain improvements in construction which will be fully disclosed in the following specification and claims.

In the accompanying drawings, which form part of this specification, Figure 1 represents a side elevation of a tractor and a loader; Fig. 2, an end view, partly in section, showing the loader in position to receive coke from an oven in full lines and the body of the loader elevated to discharge coke in dotted lines; Fig. 3, a top plan of the loader with part of the body removed; and Fig. 4, a side elevation, partly in section, on line 4 4, Fig. 3.

Reference being had to the drawings and the numerals thereon, 1 indicates a tractor suitably mounted upon wheels 2 2, whose axles 3 are connected to electric motors 4 4 by a train of gearing comprising wheels 5, 6, 7, 8, and 9, as shown in Fig. 1, or by other suitable motor and connections, and to which motors 4 an electric current is supplied through wires 10 and 11 from a controller 12, which is connected to a trolley-wire 13 by a trolley-wheel 14 and wire 15, the whole structure thus far described being so arranged that an operator on the tractor has full control of the tractor and the loader.

The tractor is connected to the loader 16 by suitable couplings, as 17, also operated from the tractor-cab through rods 18 18, bell-crank levers 19 19, and rod 20, extending to the cab 21.

The loader 16 is supported upon wheels 22, which, with the wheels 2 of the tractor, engage suitable rails 23 of a track over which the tractor and the loader are propelled to place the loader opposite the ovens 24 of a battery of ovens from which coke is to be discharged by a pusher 25, as shown in Fig. 2, and the body 26 of the loader is brought into position adjacent to or alongside of the coke-platform 27, which extends along the entire battery of ovens, with the upper surface of the supplemental bottom 28 of the body about in line with the platform, so that coke discharged from an oven will pass across the platform upon the bottom 28 of the body of the car. The body 26 is constructed of metal, known as "expanded" metal, and the supplemental bottom or lining 28 is formed of cement 29, preferably in strata, and brick to resist wear of the coke and the deteriorating effect of the water used for cooling the coke as it lies upon the bottom of the body of the loader.

The coke-platform 27 is supported upon suitable brackets 30, and the body 26 is supported upon brackets 31, which are provided with suitable braces 32, engaging the body, and the brackets are in turn supported upon a track 33, having teeth 34 on its upper surface, which are engaged by teeth 35 on the lower surface of the curved portion 36 of the bracket, as shown in Fig. 2, and the lower surface of said bracket is provided with extensions 37 37, which engage the track 33 and prevent lateral displacement of the bracket on the track.

To the primary metallic bottom 38 of the body 26 are secured hangers 39 39, which support a shaft 40, having secured thereto a gear-wheel 41, which engages the teeth 42 on a track 43, and on the same shaft is a motor 44, preferably an electric motor, by which said shaft and gear-wheel are revolved, the latter in engagement with the toothed track 43 to move the body 26 outward, tilt or dump the body, and discharge the coke directly into a car 45 on a track adjacent to the loader and to return the body to its normal position. The motor 44 is connected to the gear-wheel 41 by a train of gear-wheels 46, 47, 48, 49, and 50 to reduce the high speed of the motor to the proper speed for moving the body 26, and the motor is supplied with electric energy through wires 51 and is controlled by the operator in the cab of the tractor.

The hot coke after having been pushed out

of an oven into or upon the body 26 of the loader is cooled with water, the water flowing off freely from the bottom 28 thereof by virtue of the normally inclined position in which the body is supported, as shown in Fig. 2, and the coke requires no manual labor to be applied thereto in transferring it from an oven to a car ready for transportation.

Having thus fully described my invention, what I claim is—

1. The combination of a tractor, and a loader having a body normally inclined, a motor for moving the tractor and the loader in the same direction, and a motor for tilting or dumping the body of the loader, substantially as described.

2. A coke-loader mounted on wheels and having a body normally inclined, and provided with means for moving said body laterally and tilting the body; in combination with a tractor for moving the loader.

3. A coke-loader mounted on wheels and having a body normally inclined, and provided with a motor for moving said body laterally and tilting the body; in combination with a tractor detachably connected to the loader, and a connection between the motor on the loader and the tractor.

4. A portable coke-loader having a body normally inclined, and having a non-metallic supplemental bottom, and provided with means for moving the body laterally and tilting the body; in combination with a tractor connected to the loader.

5. A portable coke-loader having a body normally inclined and supported upon brackets provided with teeth on their curved surfaces, toothed tracks engaged by said brackets, and means for moving said body laterally and tilting the body.

6. A coke-loader mounted upon wheels and having a body normally inclined and supported upon brackets having curved surfaces provided with teeth, toothed tracks engaged by said brackets, a toothed track between said brackets, a gear-wheel engaging said track, and means for revolving said gear-wheel to move and tilt said body.

7. A portable coke-loader having a metallic body provided with a supplemental bottom of cement and brick.

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

EDWIN A. MOORE.

Witnesses:
D. C. REINOHL,
C. W. METCALFE.