

No. 619,284.

Patented Feb. 14, 1899.

R. E. DEVLING.
WAGON BRAKE.

(Application filed Mar. 8, 1898.)

(No Model.)

Fig. 1.

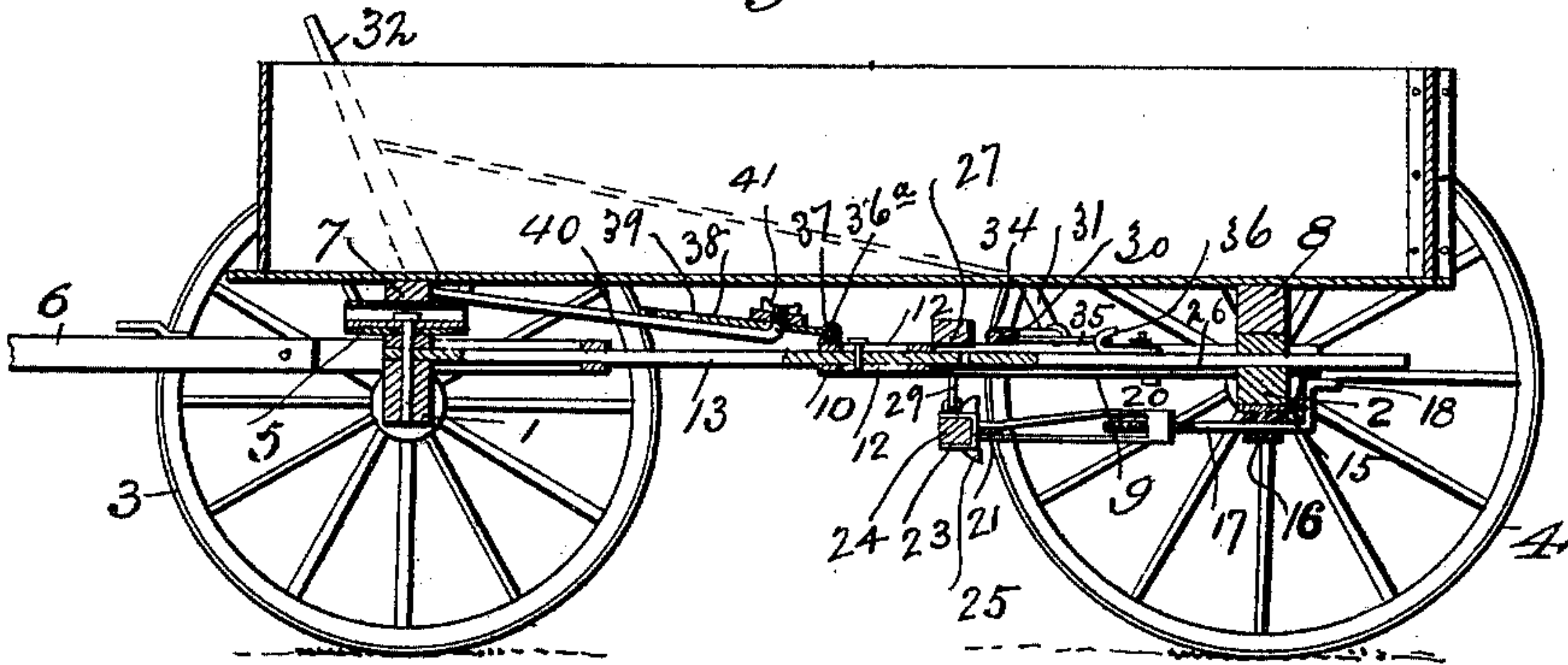


Fig. 2.

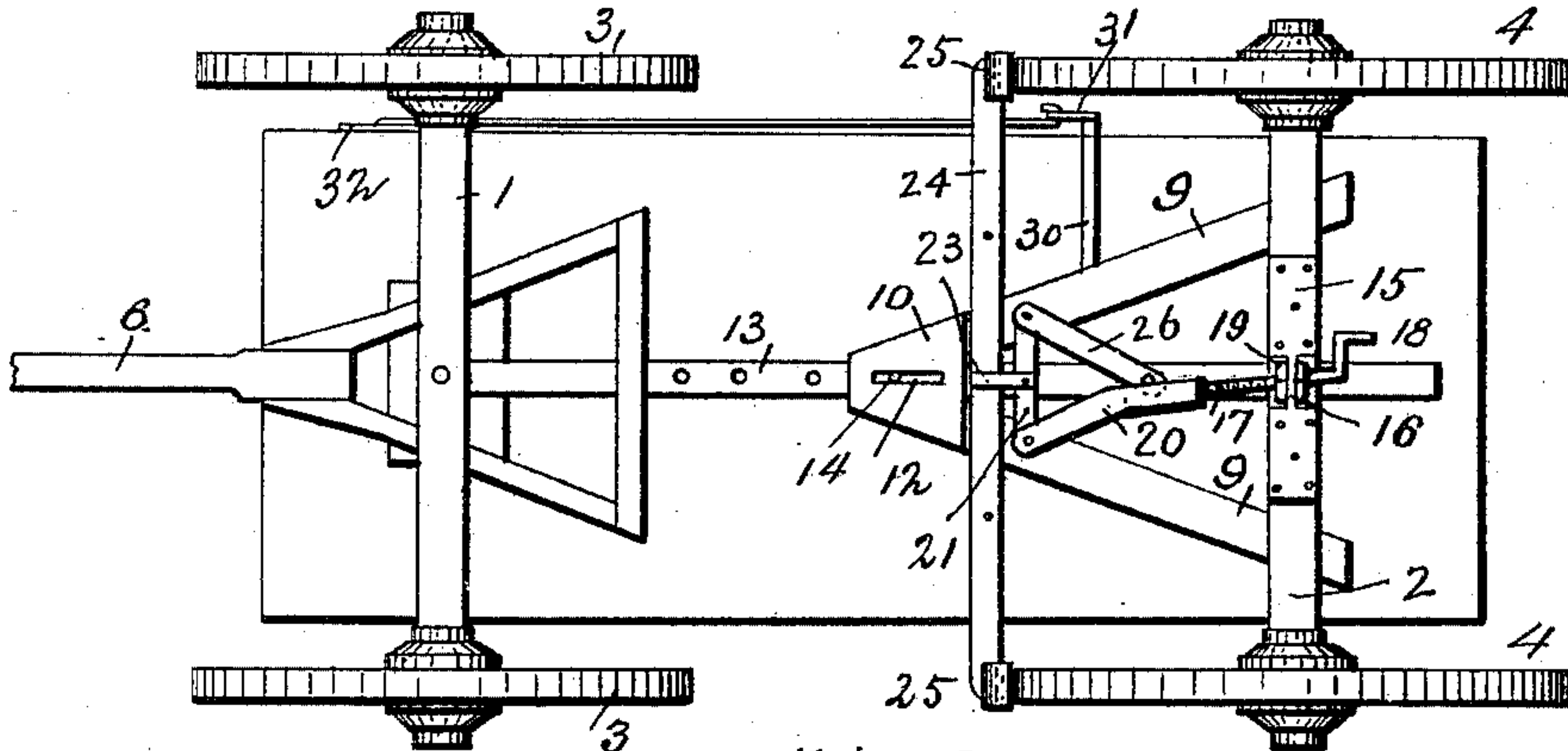


Fig. 3.

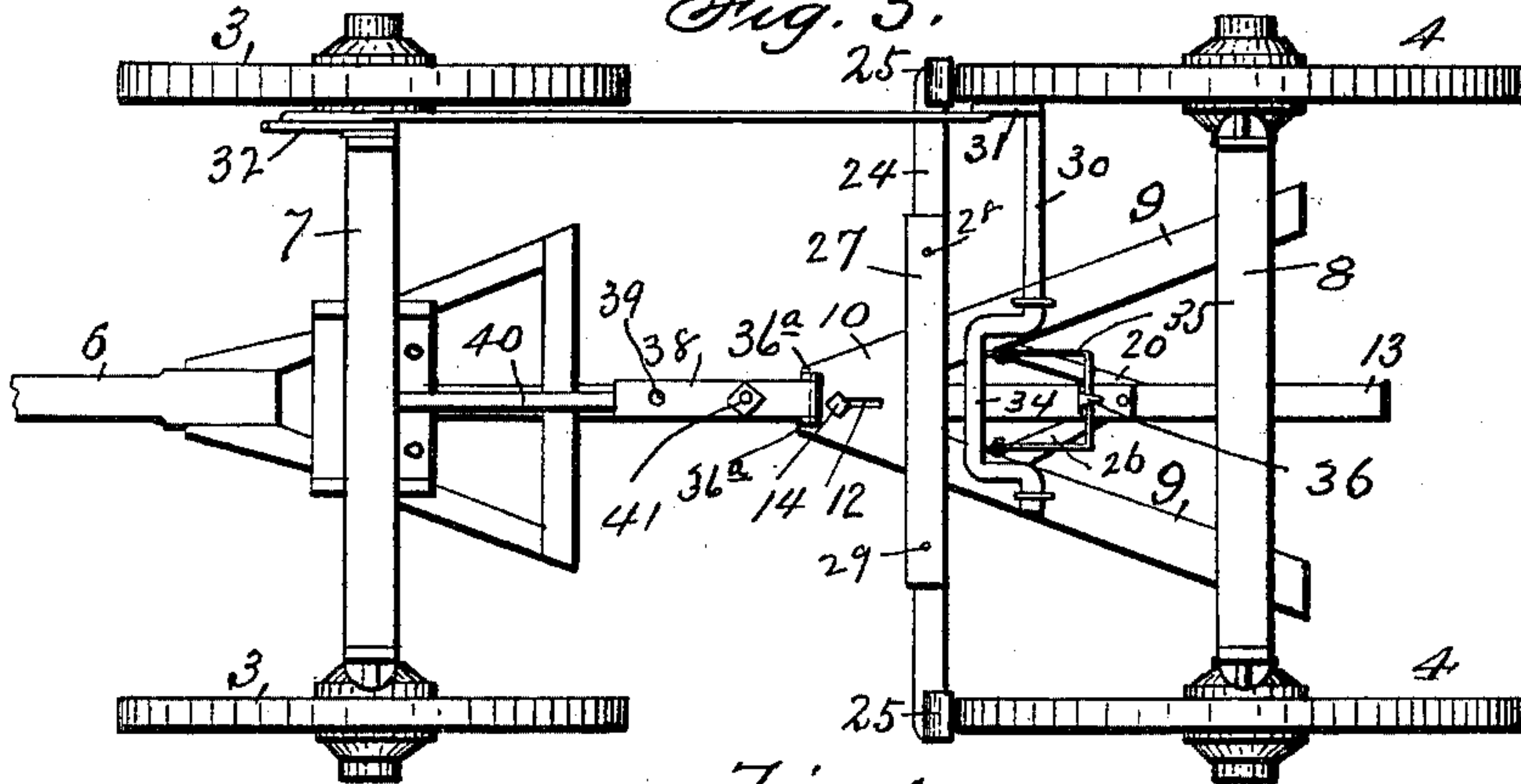
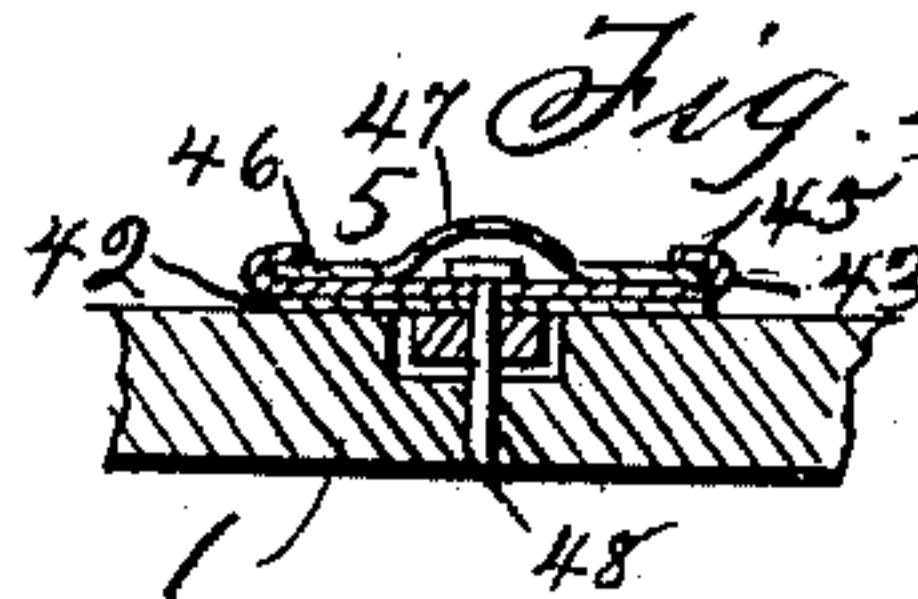


Fig. 4.



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UNITED STATES PATENT OFFICE.

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WAGON-BRAKE.

SPECIFICATION forming part of Letters Patent No. 619,284, dated February 14, 1899.

Application filed March 8, 1898. Serial No. 673,035. (No model.)

To all whom it may concern:

Be it known that I, ROBERT E. DEVLING, a citizen of the United States, and a resident of Sterling Run, in the county of Cameron and State of Pennsylvania, have invented certain new and useful Improvements in Wagon-Brakes; and I do hereby declare that the following is a full, clear, and exact description of the invention, which will enable others skilled in the art to which it appertains to make and use the same, reference being had to the accompanying drawings, which form a part of this specification.

My invention relates to wagon-brakes of that class or description which are set to lock the wheels by the back pull of the draft-animals.

The object of the invention is to provide an improved construction which shall possess superior advantages with respect to efficiency in operation.

The invention consists in the novel construction and combination of parts herein-after fully described and claimed.

In the accompanying drawings, Figure 1 is a central longitudinal section of a wagon with my improved brake mechanism. Fig. 2 is a bottom view of the same. Fig. 3 is a detail plan view. Fig. 4 is a detail longitudinal section of the front axle, the fifth-wheel, and connections.

In the said drawings the reference-numerals 1 and 2 designate the front and rear axles, respectively, and 3 and 4 the front and rear wheels.

The numeral 5 designates the fifth-wheel, 6 the tongue, and 7 and 8 the front and rear bolsters, all of which may be of any ordinary or suitable construction.

The numeral 9 designates the hounds, secured to the rear axle, connected together at their front ends by top and bottom plates 10, each formed with a slot 12. Passing between these plates is the reach 13, the front end of which is pivotally connected with the front axle, while the rear end passes loosely between the rear axle and bolster, which are formed with slots or recesses for such purpose.

The numeral 14 designates a headed bolt passing between the slots in the plates 10 and also through a hole in the reach.

Secured to the under side of the rear axle

is a metal plate 15, formed with an apertured lug 16, through which passes a screw-threaded rod 17, the rear end of which is bent into a crank 18 for turning the same. Nuts 19 hold this rod in place in the lug. The front end of this rod engages with a screw-threaded aperture or hole in the rear end of a bifurcated link 20, the front end of which is pivotally connected with a lever 21, pivoted to a bracket 23, secured to a transverse brake-beam 24, provided at each end with a brake-shoe 25, adapted to contact with the rear wheels. The other end of this lever is pivotally connected with an arm 26, the opposite end of which is pivoted to the under side of the reach. The brake-beam is suspended from a transverse bar 27, secured to the hounds by links and eyes 28 and 29.

Pivotally connected with the upper side of the hounds is a transverse rock-bar 30, having one end formed with a crank 31, which is connected with a hand-lever 32, within convenient reach of the driver. Said rock-bar is also formed with a crank 34, provided with a bail 35, adapted to engage with a hook 36 on the reach.

The upper plate 10, connecting the hounds, is formed with lugs 36^a, through which passes a bolt 37, to which is journaled a forwardly-extending bar 38, formed with holes 39, with which is adapted to engage a rearwardly-extending hook 40, secured to the front bolster. This rod at the hooked end is screw-threaded to receive a holding-nut 41.

The numeral 42 designates the lower member of the fifth-wheel, consisting of a rectangular plate secured to the front axle. Superimposed upon this plate is a movable plate 43, having its sides turned inwardly, forming flanges 45, which engage with the edges of a plate 46, secured to the front bolster and formed with a central upwardly-curved projecting portion 47.

The numeral 48 designates the king-bolt, passing through the plates 42 and 43, the reach, and the axle, the head of the bolt working in the curved portion 47. By this construction when the horses back the axle, the reach, and the plates 42 and 43 will also move backward, so as to operate the brake.

The operation is as follows: When the draft-animals pull back on the tongue, the reach

will be forced backwardly, when the arm 26 will actuate the lever 21, pulling one end thereof backwardly, the link 20 serving as a fulcrum and causing the brake-beam also to
 5 be forced backwardly and the shoes to be brought into contact with the rear wheels, braking or locking the same. This device will be especially useful in going downhill, as the pressure of the brake-shoes is regulated by the grade of the road and the weight
 10 of the load, as the greater the incline and load the greater will be the pressure of the brake-shoes on the wheels.

The purpose of the cranked rock-bar 30 is
 15 to lock the reach when the brake is not to be used. In this case the bail 35 engages with the hook 36, when the hand-lever 32 is operated, as seen in Fig. 3, thus preventing movement of reach. A reverse movement of lever
 20 32 will disengage the bail, so that the reach can move.

By means of the screw-threaded link 20 and connections the brake-beam can be adjusted or moved toward the wheels to compensate
 25 for wear of the brake-shoes.

By means of the hooked rod secured to the front bolster and the apertured bar connected with the hounds the distance between the front and rear wheels may be varied without affecting the brake mechanism.
 30

A brake constructed as above will be very efficient in use, as the brake always remains set until the team again begins to pull. It may also be readily removed from and re-
 35 placed on the wagon when desired.

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

1. The combination with the front and rear axles, the hounds, the connecting-plates
 40 formed with slots, the reach pivotally connected with the front axle, and the bolt passing therethrough, and through said slots, of the brackets secured to the rear axle, the link connected therewith, the lever pivoted to said
 45 link, the brake-beam to which said lever is pivotally connected, and the arm pivotally

connected with the other end of said lever, and with the reach, substantially as described.

2. The combination with the front and rear axles, the hounds, the connecting-plates
 50 formed with slots, the reach pivotally connected with the front axle and the bolt passing therethrough and through said slots, of the bracket secured to the rear axle, the apertured lug, the screw-threaded rod passing
 55 through said lug, the nuts, the link having a screw-threaded pole with which said rod engages, the lever pivoted to said link, the brake to which said lever is pivoted and the arm pivotally connected with said lever and
 60 the reach, substantially as described.

3. The combination with the front and rear axles, the bolsters, the hounds, the upper and lower connecting-plates formed with slots, the forwardly-extending bar pivoted to said
 65 upper plate, the hooked rod secured to the front bolster, the reach pivoted to the front bolster, and the bolt passing therethrough, and through said plates of the bracket secured to the rear axle, the link connected
 70 therewith, the lever, the brake-beam to which said lever is pivotally connected, and the arm connected with said lever, and with the reach, substantially as described.

4. The combination with the front and rear
 75 axles, the hounds, the movable reach pivoted to the front axle, the bracket secured to the rear axle, the link connected therewith, the lever, the brake-beam, and the arm connected with the said lever and with the reach, of the
 80 cranked rock-bar pivoted to the hounds, the connecting-rod and lever, the bail pivoted to said rock-bar, and the hook on the reach, substantially as described.

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

ROBERT E. DEVLING.

Witnesses:

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 JOHN D. LOGAN.