

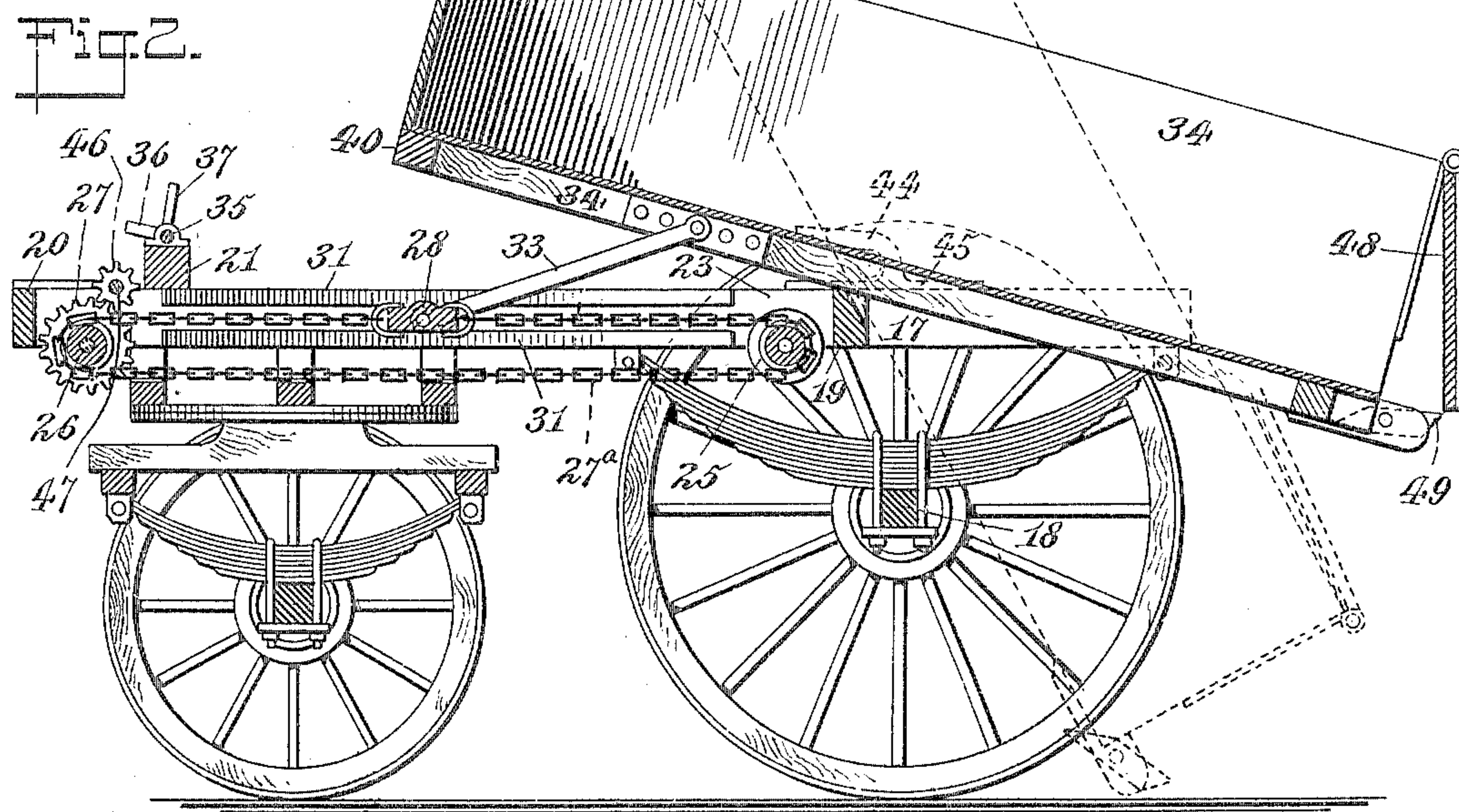
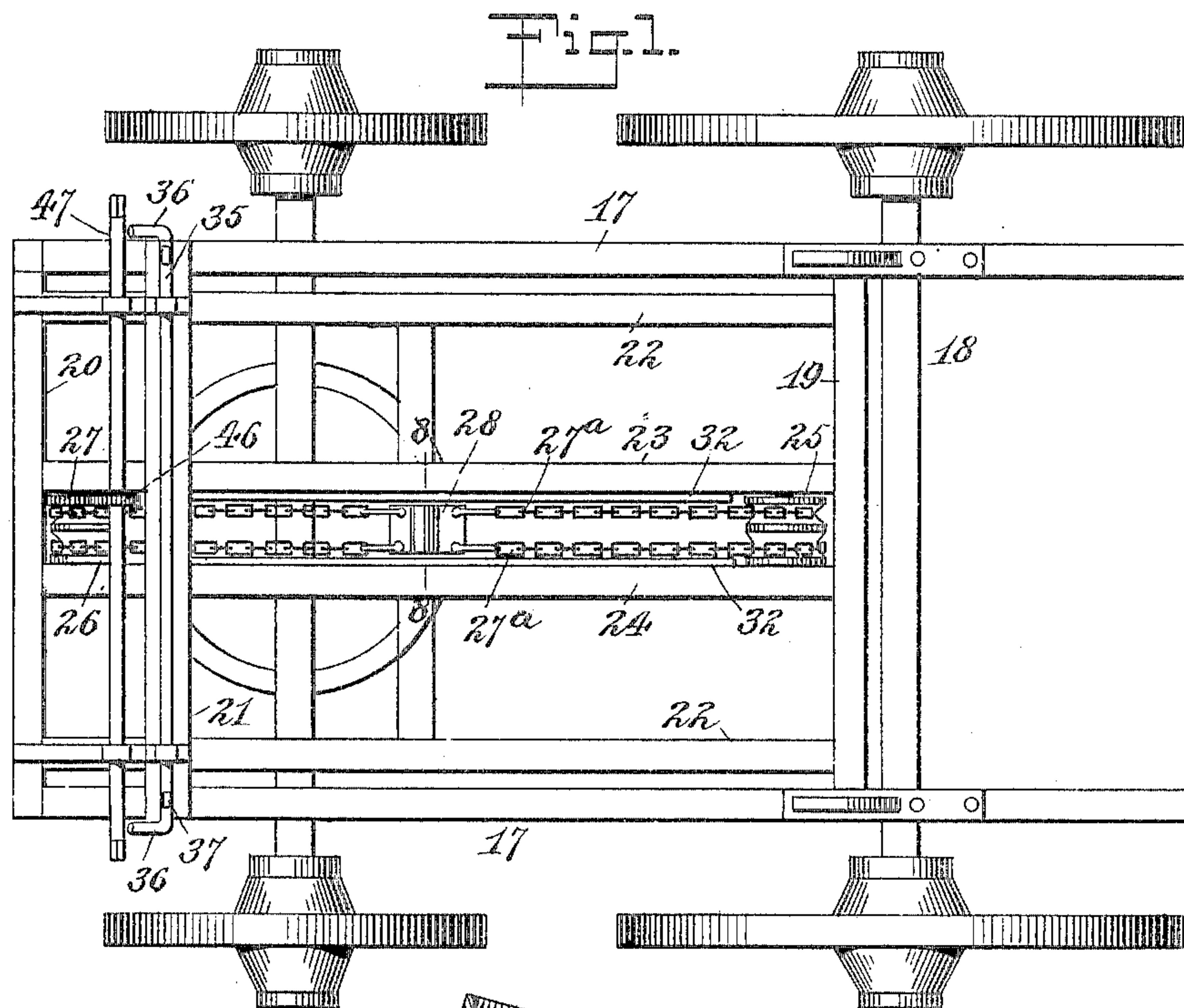
No. 804,439.

PATENTED NOV. 14, 1905.

J. SOMERVILLE.
DUMP WAGON.

APPLICATION FILED DEC. 1, 1904.

2 SHEETS—SHEET 1.



Witnesses
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Inventor
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2 SHEETS—SHEET 2.

Fig. 3.

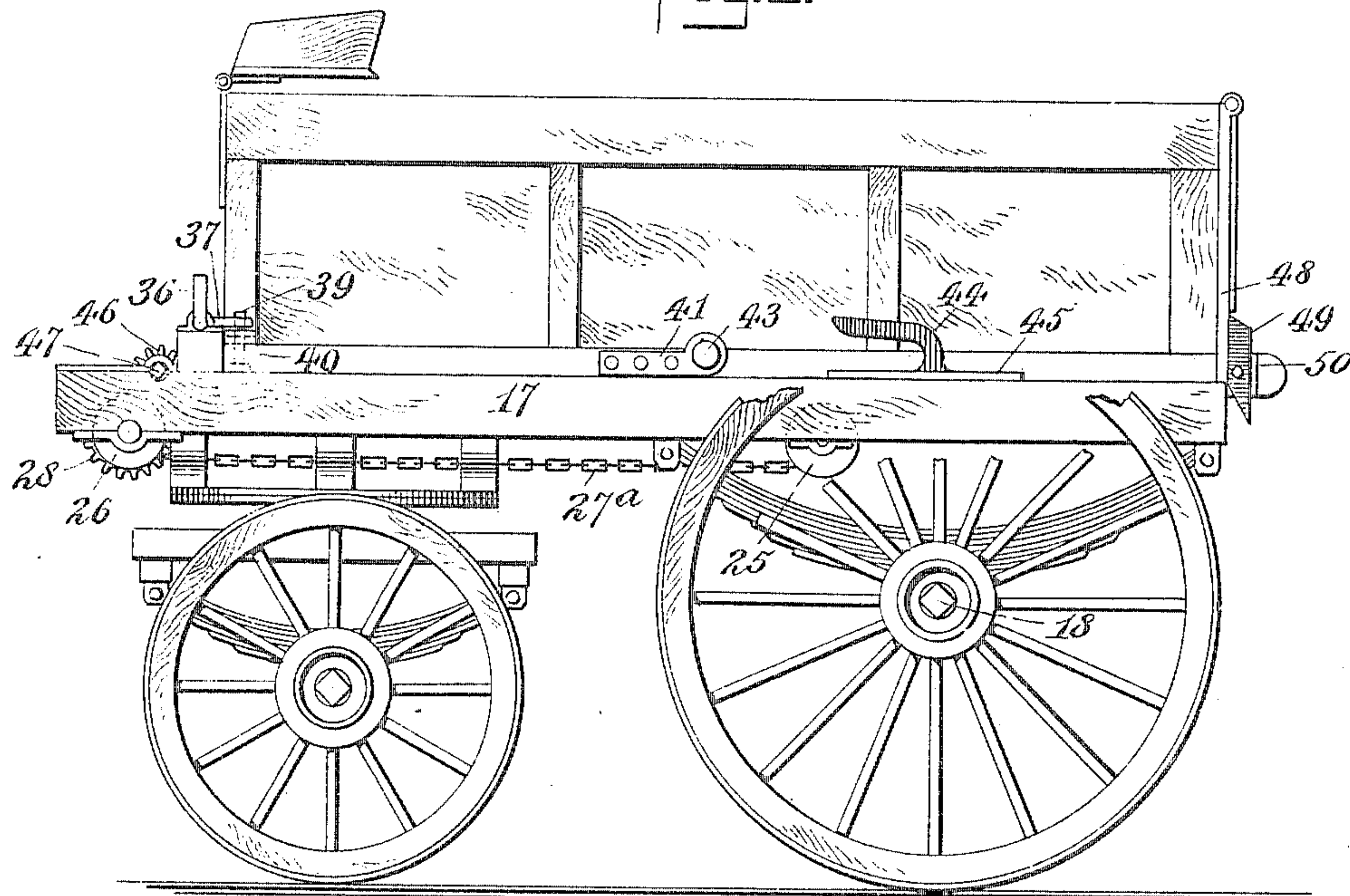


Fig. 11.

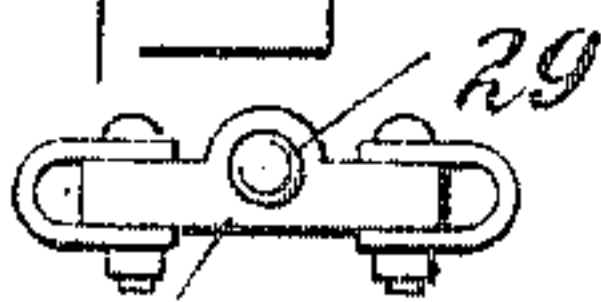


Fig. 4.

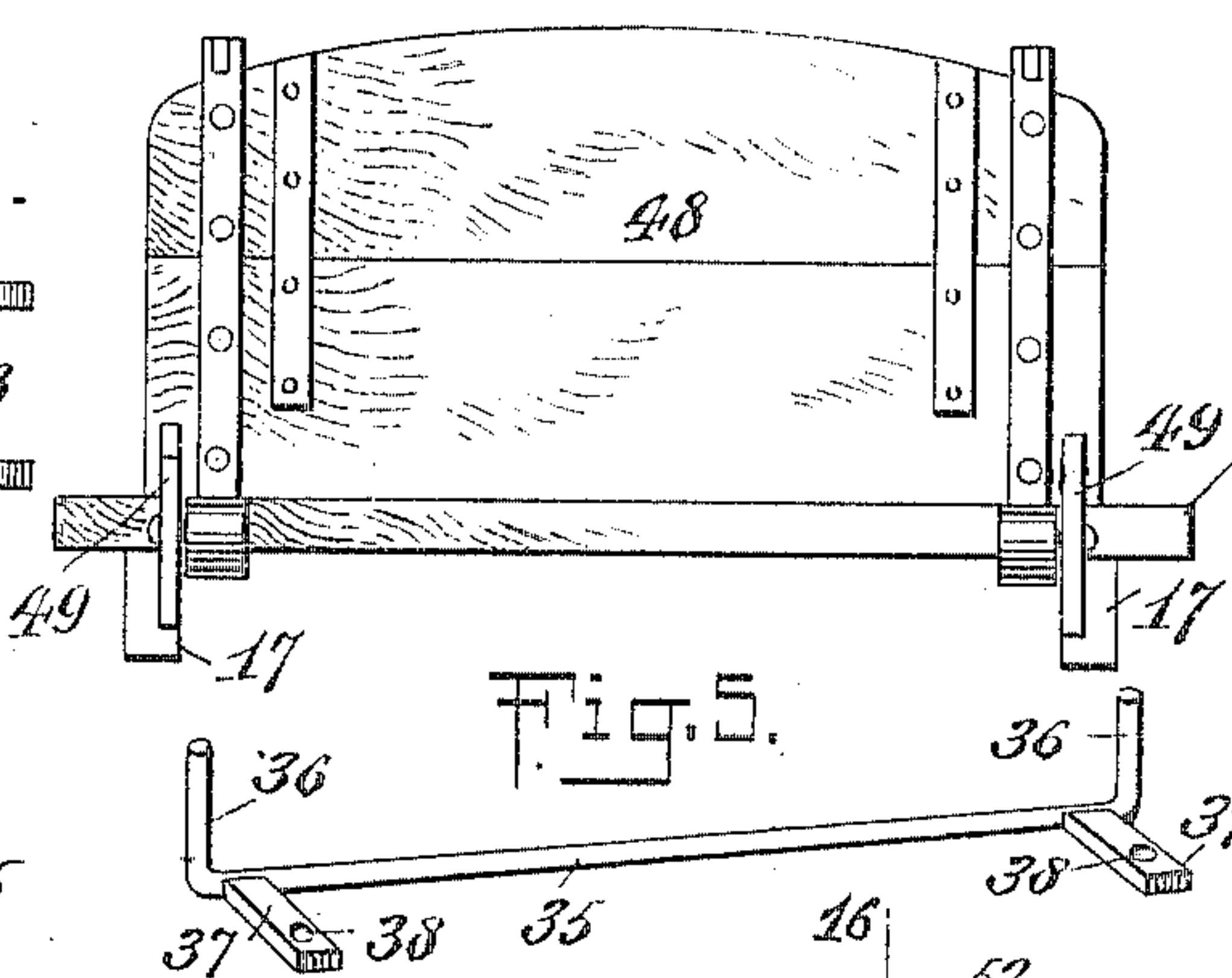


Fig. 9.

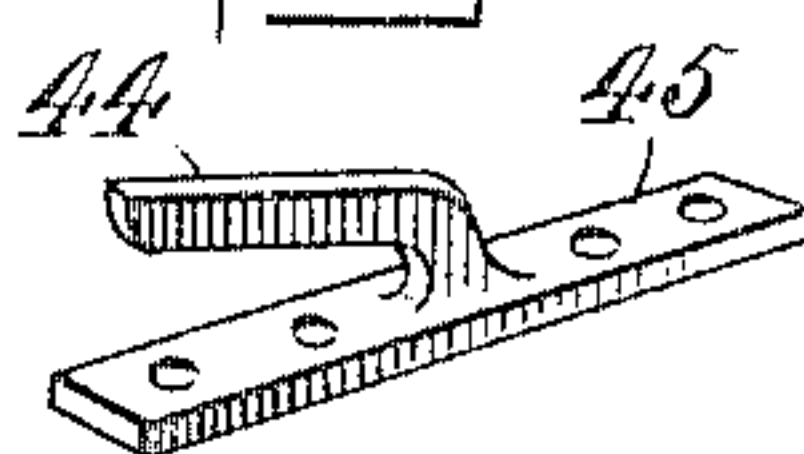


Fig. 12.

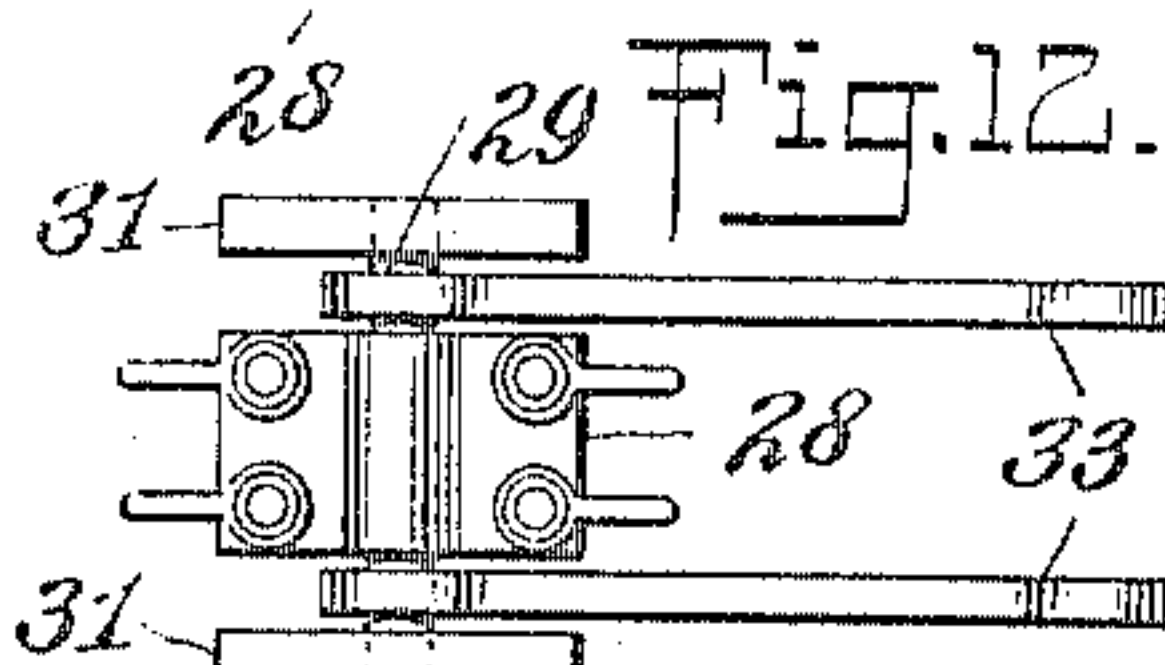


Fig. 10.

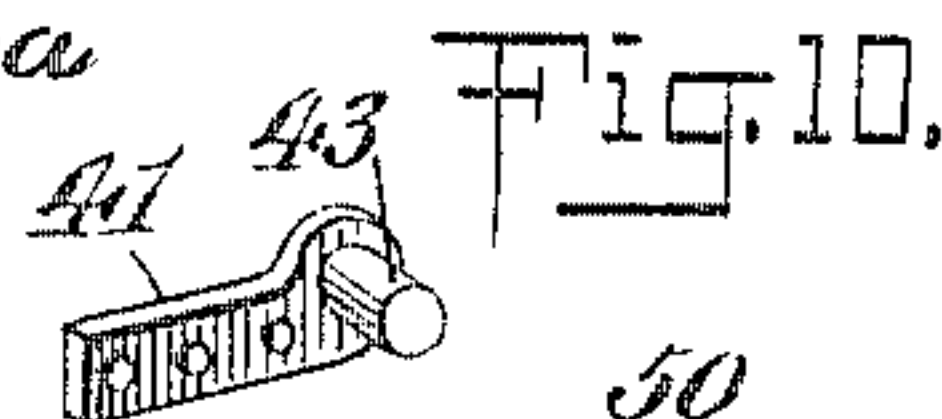


Fig. 13.

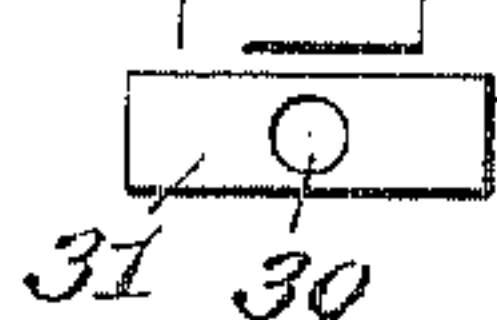


Fig. 5.

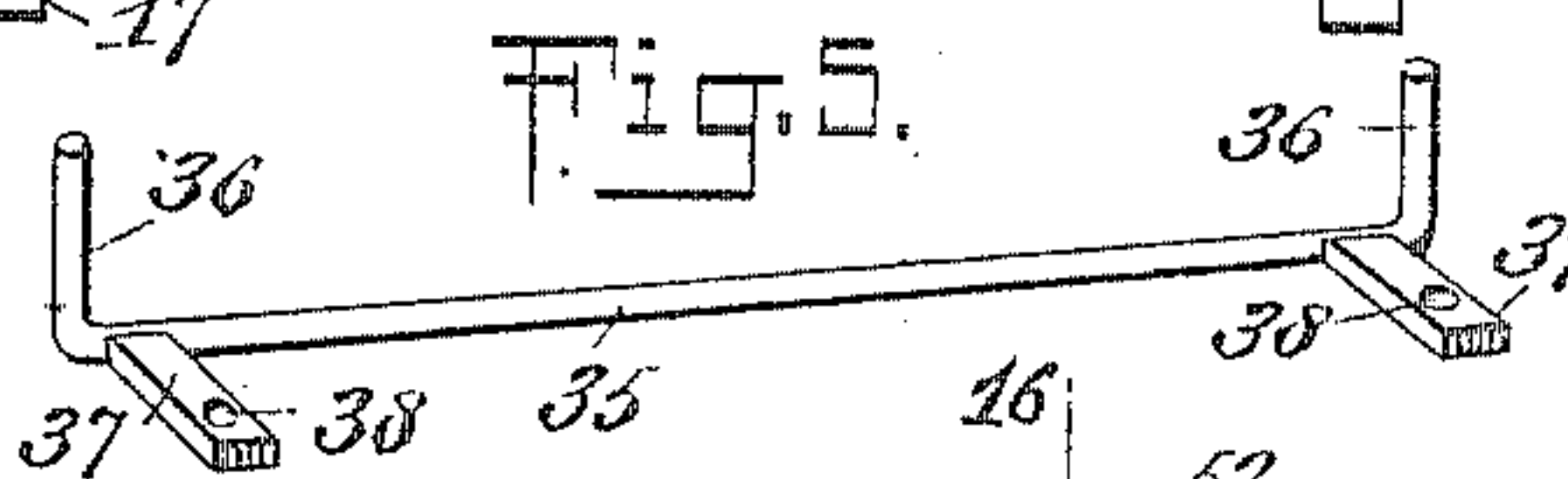


Fig. 7.

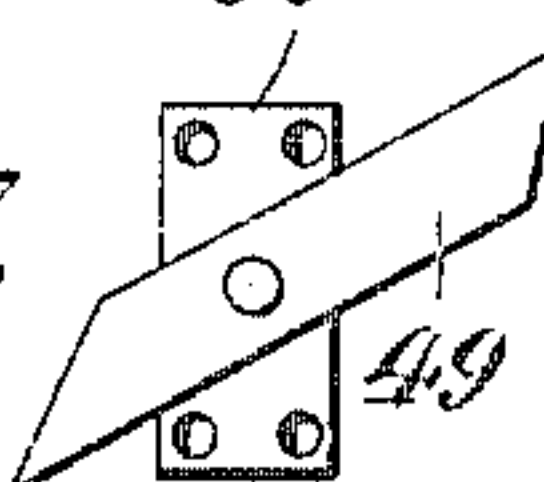


Fig. 16.

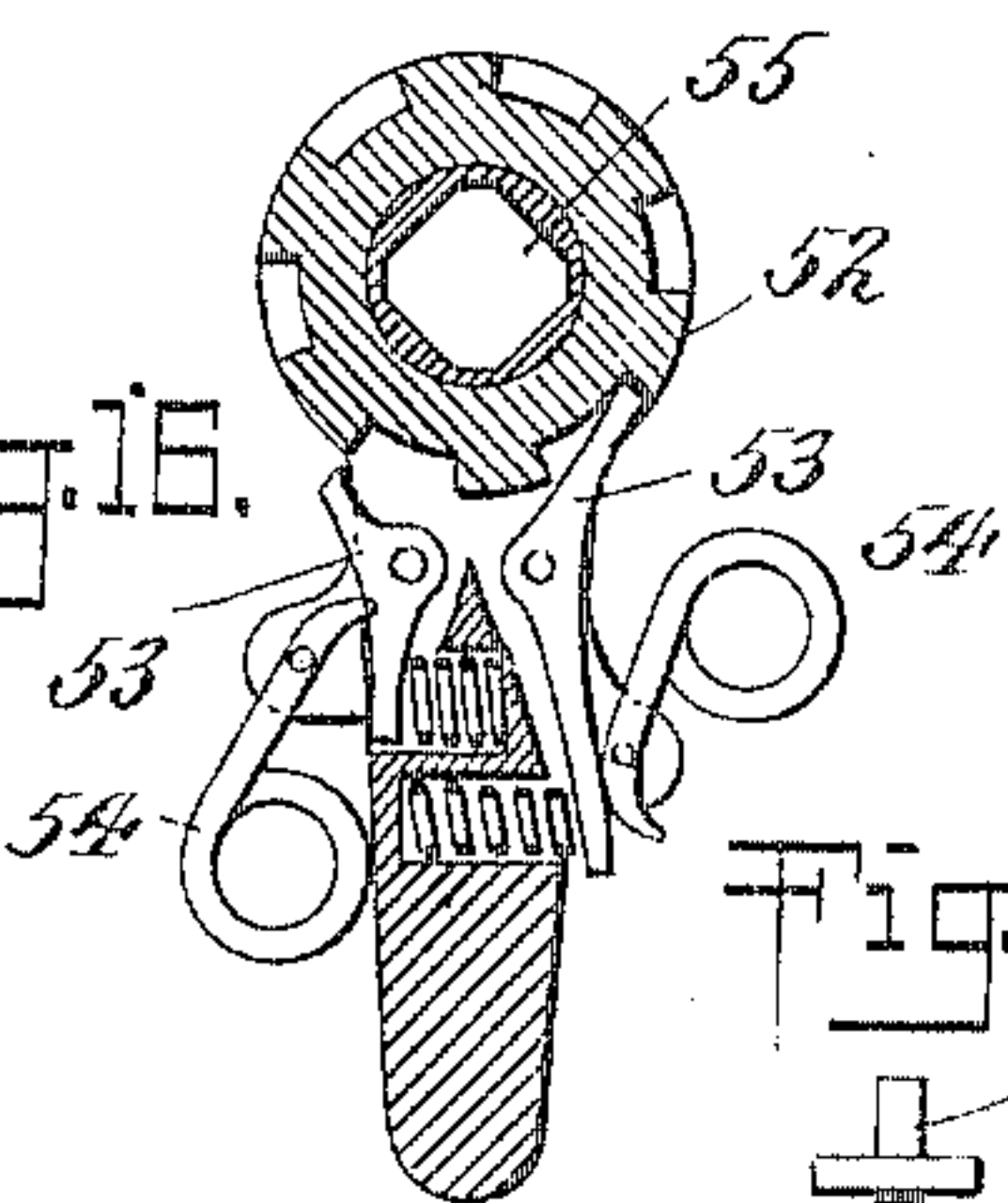


Fig. 14.

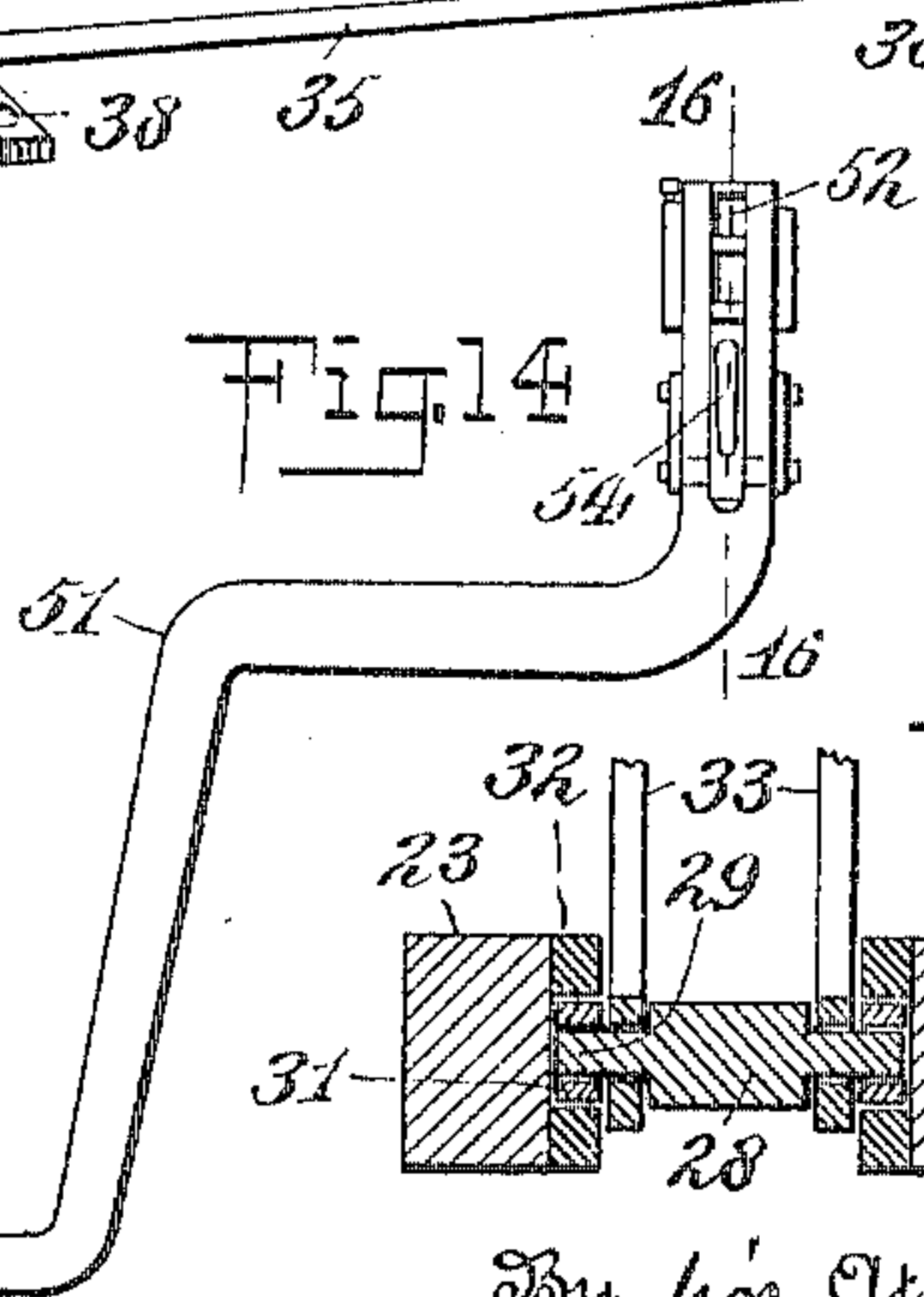


Fig. 15.

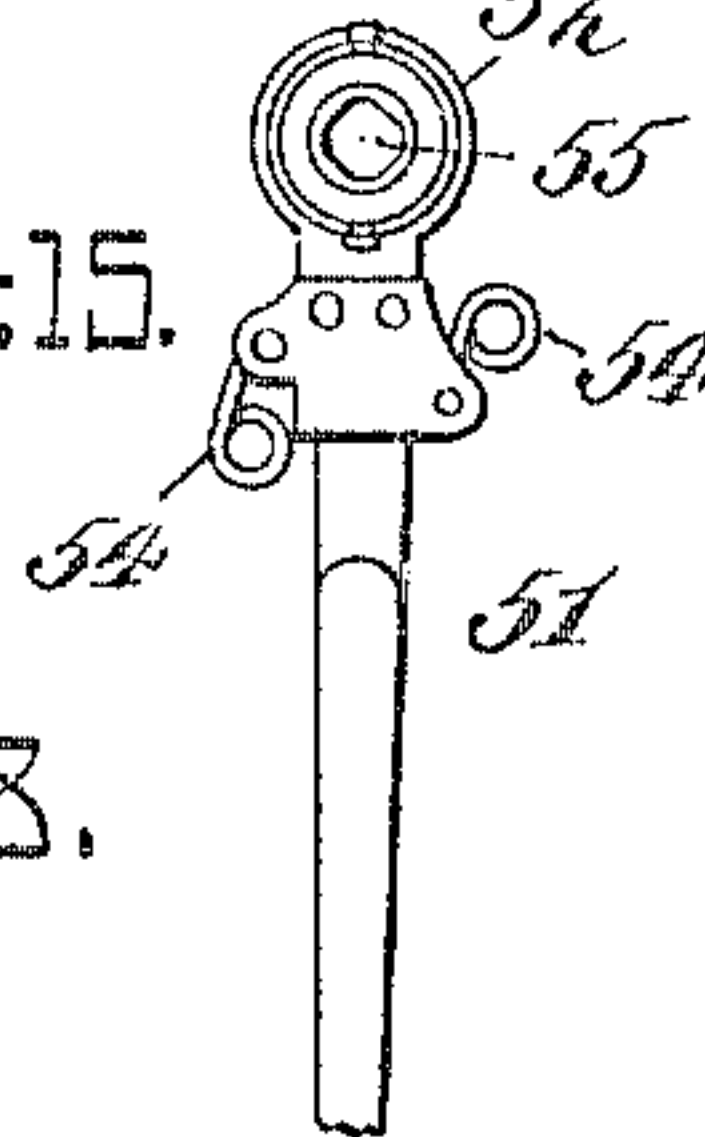


Fig. 6.

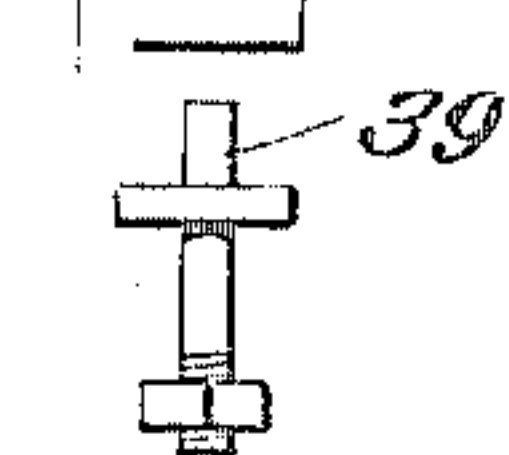
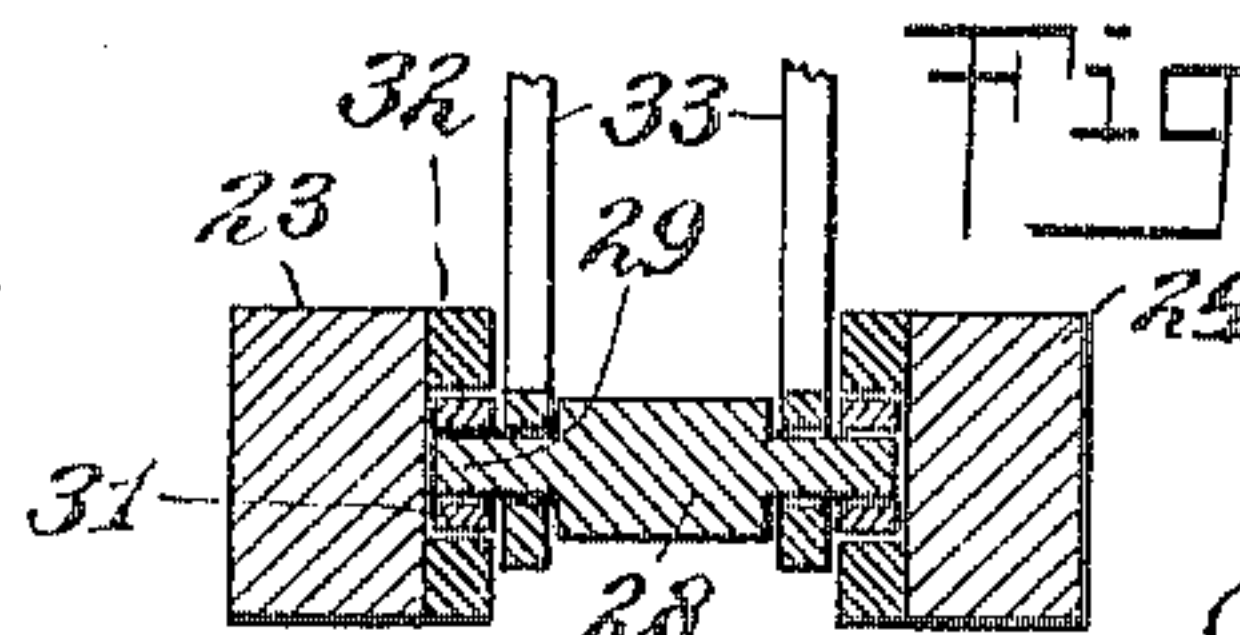


Fig. 8.



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UNITED STATES PATENT OFFICE.

JAMES SOMERVILLE, OF NEW YORK, N. Y.

DUMP-WAGON.

No. 804,439.

Specification of Letters Patent.

Patented Nov. 14, 1905.

Application filed December 1, 1904. Serial No. 235,086.

To all whom it may concern:

Be it known that I, JAMES SOMERVILLE, a citizen of the United States, residing in the city of New York, in the county and State of New York, have invented a new and useful Improvement in Dump-Wagons, of which the following is a specification.

My invention relates to an improvement in dump-wagons, and more particularly improvements on the wagon patented to me on the 26th day of November, 1901, numbered 687,277, the object being to overcome certain objections made against that shown and described in said Letters Patent and to provide dumping mechanism so constructed and arranged as to work quickly, with perfect safety to the operator, and with but little labor.

A further object of my invention is to provide a bottom, frame, or bed having its two sides so extended as to permit of the use of substantial springs on the rear part of the wagon, forming a solid support for the rear part of the body and overcoming the objection made against the former structures employing much smaller springs.

With these and other ends in view the invention consists in certain novel features of construction and combinations of parts, as will be hereinafter fully described, and pointed out in the claims.

In the accompanying drawings, Figure 1 is a plan view of my improved wagon, the body being removed for the sake of clearness. Fig. 2 is a sectional view thereof, showing the body in an inclined position ready to be dumped. Fig. 3 is a view in side elevation, the body being shown in the carrying position. Fig. 4 is a rear end view of the body. Fig. 5 is a view in perspective of a locking bar or device for employment on the forward part of the wagon. Fig. 6 is a view of the spud for employment with the locking device. Fig. 7 is a detached view of the locking device for the tail-board. Fig. 8 is a sectional view taken on the line 8 8 of Fig. 1. Fig. 9 is a view in perspective of the dump-hook. Fig. 10 is a perspective view of the dump-stop. Fig. 11 is a side view of the guide-block, and Fig. 12 is a top plan view of the same. Fig. 13 is a view of one of the slides. Fig. 14 is a detached side view of the handle for operating the dumping-body, and Fig. 15 is a face view thereof. Fig. 16 is a sectional view taken on the line 16 16 of Fig. 14.

Referring to the drawings, it will be seen that the frame consists of the side pieces 17,

extended a considerable distance back of the rear axle 18, and cross-piece 19, front piece 20, cross-bar 21, inner side pieces 22, and the center pieces 23 24, mortised or otherwise secured together. Between the center pieces 23 24 and at the rear end of the same is secured the double roller 25, and between the same at their forward ends is secured the double sprocket 26, having formed on one end thereof the gear 27. Around the double roller 25 and the double sprocket 26 pass the endless chains 27^a, the ends being connected to the guide-block, 28, the latter, as illustrated in Figs. 8, 11, 12, and 13, consisting of the block proper, 28, the reduced ends 29 of which fit in openings 30, formed in the guide-plates 31, said guide-plates being adapted to travel longitudinally between the metal plates 32, secured to the inner sides of the center pieces 23 24. The reduced ends 29 of the block 28 also pass through the lower ends of the lifting bars or rods 33, which at their upper ends are pivoted to the base of the wagon-body 34 toward the forward end thereof. This wagon-body is made of a suitable length and of such width as will allow it to be tilted or inclined between the extended ends of the side pieces 17 of the frame, as illustrated in Fig. 2, the cross-piece 17^a, Fig. 4, of the wagon-body, however, resting on the side pieces 17 of the frame when the body is in its carrying position. In order to retain the body in its proper carrying position upon the frame, as illustrated in Fig. 3, I pivotally secure to the cross-piece 21 of the frame a locking-bar, as illustrated in Fig. 5, consisting of a bar 35, having its ends bent upwardly to form handles 36 and having formed on or secured thereto the plates 37, provided with openings 38, through which openings extend pins or spuds 39, extending upwardly from the cross-piece 40 of the body. When the wagon-body is in its carrying position upon the frame of the wagon, the handles 36 are turned upwardly, in which position the plates 37 will lie flat, with the spuds 39 projecting through the openings 38, preventing the body 34 from sliding or moving backwardly upon the frame. When, however, it is desired to dump the wagon, the handles 36 are turned downwardly, as illustrated in Fig. 2, thereby raising the plates 37 out of engagement with the pins or spuds 39 and leaving the body free to be moved rearwardly upon the frame.

To the sides of the wagon-body are secured stops consisting, as illustrated in Fig. 10, of

the plates 41, having formed thereon or secured thereto the outwardly-extending pins or lugs 43, which when the body is moved rearwardly to a certain extent engage with the hooks 44, formed on or secured to the plates 45, bolted or otherwise fastened to the side pieces 17 of the frame.

With the gear 27 meshes the gear 46, secured to the shaft 47, mounted on the side pieces 22 of the wagon-frame, the ends of which bar or rod 47 are squared in order to receive a crank or handle, as hereinafter described. When the gear 46, meshing with the gear 27, is rotated, the wagon-body 34, by means of the endless chains 27^a and rods 33, will be moved backwardly and rearwardly upon the frame until the stops 43 engage with the hooks 44, whereupon by continuing to rotate the gear 46 the rods 33 will cause the forward portion of the wagon-body to lift or raise, as shown in full lines, Fig. 2, until such time as the body becomes overbalanced, whereupon it will assume the dumping position, as illustrated in dotted lines, Fig. 2, the body resting upon the cross-piece 19 of the frame, said body inclining, as described, between the extended ends of the side pieces 17 of the frame. By turning the gear 46 in the opposite direction the rods 33 will gradually return the body to its inclined position, as illustrated in Fig. 2, and finally into its carrying position, as illustrated in Fig. 3, whereupon the handles 36 of the locking-bar 35 may be raised, causing the plates 37 to engage with the pins or spuds 39 and hold the parts in their normal positions.

To the rear end of the wagon-body is hinged or pivotally secured the upper part of the tail-board 48, the lower free end of which is held in position by means of the stop 49, which, as illustrated in Fig. 10, consists of the metal plate 49, pivoted near its lower end to the plate 50, the latter being bolted or otherwise secured to the wagon-body 34. When the body is in its carrying position, as illustrated in Fig. 3, the lower end of the pivoted stop or plate 49 will strike the extended end of the side piece 17 of the frame, causing the upper end of said plate or stop 49 to rest against the lower free end of the tail-board 48, keeping the latter in its closed position. When, however, the body 34 is moved rearwardly, the upper heavier end of the stop 49 will drop out of engagement with the lower end of said tail-board, allowing the latter to open, as illustrated in Fig. 2, this construction and arrangement of parts causing the tail-board to be opened and closed automatically and overcoming the necessity of releasing the same, as has heretofore been required.

In Figs. 14, 15, and 16 I have illustrated the crank or handle 51, which I have employed with good results in rotating the bar 47, with its attached gear 46, to lift and dump

the wagon-body, said crank or handle being provided with the spring-actuated ratchet 52 on the end thereof, said ratchet being adapted to operate in either direction by means of the dogs or pawls 53, maintained in their proper relative positions by means of the springs 54, said ratchet being provided with the central squared opening 55 to contain the squared ends of said bar or rod 47. When it is desired to dump the wagon, it is simply necessary to place said ratchet-handle 51 upon either end of said rod 47 and by turning the same cause the body to raise and dump, as heretofore described, the ratchet allowing the gears to turn and the body to dump while the handle remains stationary. When it is desired to return the wagon-body to its normal position, the opposite dog or pawl 53 is thrown into engagement with the ratchet 52 and the handle again turned as before, whereby the body is brought back to its normal position without the trouble of disengaging the crank from the shaft. Further, by the use of such a handle or crank the operator is protected from being struck, as is often the case when the ordinary crank or handle is employed.

It will be understood from the foregoing that the wagon is of simple but substantial construction, may be easily, readily, and safely operated, and that by extending the side pieces of the frame with sufficient distance between them to allow of the body to incline between them when in the dumping position the rearward travel of said body is comparatively short, said extensions at the same time affording a solid support for the rear end of the body by reason of the extension of the rod 17^a, which rests upon said extended ends when said body is in the carrying position.

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

1. A wagon of the character described, constructed with a frame and movable body, said frame being provided with extended side pieces and two central pieces, a roller carried by said center pieces at their rear ends, and a sprocket-wheel at their forward ends, a guide-block traveling between said center pieces, an endless chain secured to said guide-block and passing around said roller and sprocket-wheel, a rod pivoted to said guide-block and to the forward part of said body, means for moving chains and guide-block, whereby the body is moved into and out of the dumping position, and means for locking the body in its carrying position, said last-named means including pins fixed to the wagon-body and a transverse locking-rod mounted on the frame and provided with plates to engage with said pins, substantially as described.

2. A wagon of the character described, constructed with a movable body and a frame, the latter being provided with extended side

pieces between the ends of which said body fits when in the dumping position, and also with two center pieces, a roller carried between said center pieces at their rear ends, a sprocket-wheel located between said center pieces at their forward ends, an endless chain passing around said roller and sprocket-wheel, a guide-block secured to said chain and between said center pieces, a rod pivoted to said guide-block and to the forward end of said body, means for moving said chain, whereby the body is moved into and out of the dumping position, and means for locking the body in its carrying position, said last-named means including pins fixed to the wagon-body and a transverse locking-rod mounted on the frame and provided with plates to engage with said pins, substantially as described.

3. A wagon of the character described, constructed with a movable body and a frame, the latter consisting of extended side pieces between the ends of which said body fits when in the dumping position, center pieces forming part of said frame, a roller carried between said center pieces at their rear ends, a sprocket-wheel having a gear-wheel provided thereon, an endless chain passing around said roller and said sprocket-wheel, a guide-block secured to said chain and traveling between said center pieces, a rod pivoted to said guide-block and to the forward part of said body, a horizontally-extending rod mounted on said frame and provided with a gear meshing with said former gears, said rod having an extended end adapted to receive a wrench for turning said rod whereby the guide-block is caused to travel between said center pieces and move said body, substantially as described.

4. A wagon of the character described, constructed with a movable body and a frame, said frame being provided with extended side pieces between the ends of which said body

fits when in the dumping position, means for moving said body on said frame, stops secured to said body, hooks secured to said extended side pieces, and with which engage said stops when said body is moved rearwardly, and means for locking the body in its carrying position said last-named means including pins on the wagon-body and a vertically-oscillating member having means for hooking into engagement with said pins, substantially as described.

5. A wagon of the character described, constructed with a frame and a movable body, of pins secured to said wagon-body, and a transverse locking-rod mounted on said wagon-frame and provided with perforated plates adapted to engage with said pins on said wagon-body when the latter is in the carrying position, substantially as described.

6. A wagon of the character described, constructed with a frame and a movable body, said frame having extended side pieces and said body being provided with a pivoted tail-board, and an automatic lock for said tail-board, said lock consisting of a vertically-disposed plate pivoted to said body near its lower end and adapted to engage with the extended side pieces of said wagon-frame, whereby said pivoted plate is raised to its vertical position said plate having the upper end heavier than the lower portion whereby it is overbalanced to release the tail-gate when the body is moved to carry the plate out of engagement with said side pieces when the body is in its carrying position, substantially as described.

In testimony that I claim the foregoing specification I have hereunto set my hand this 30th day of November, 1904.

JAMES SOMERVILLE.

In presence of—

JOHN SITTLER,
JOSEPH McCARTHY.