T. E. WRIGHT.

DUMPING WAGON AND CART.

APPLICATION FILED JULY 31, 1918.

1,322,156.

Patented Nov. 18, 1919.

3 SHEETS—SHEET 1.

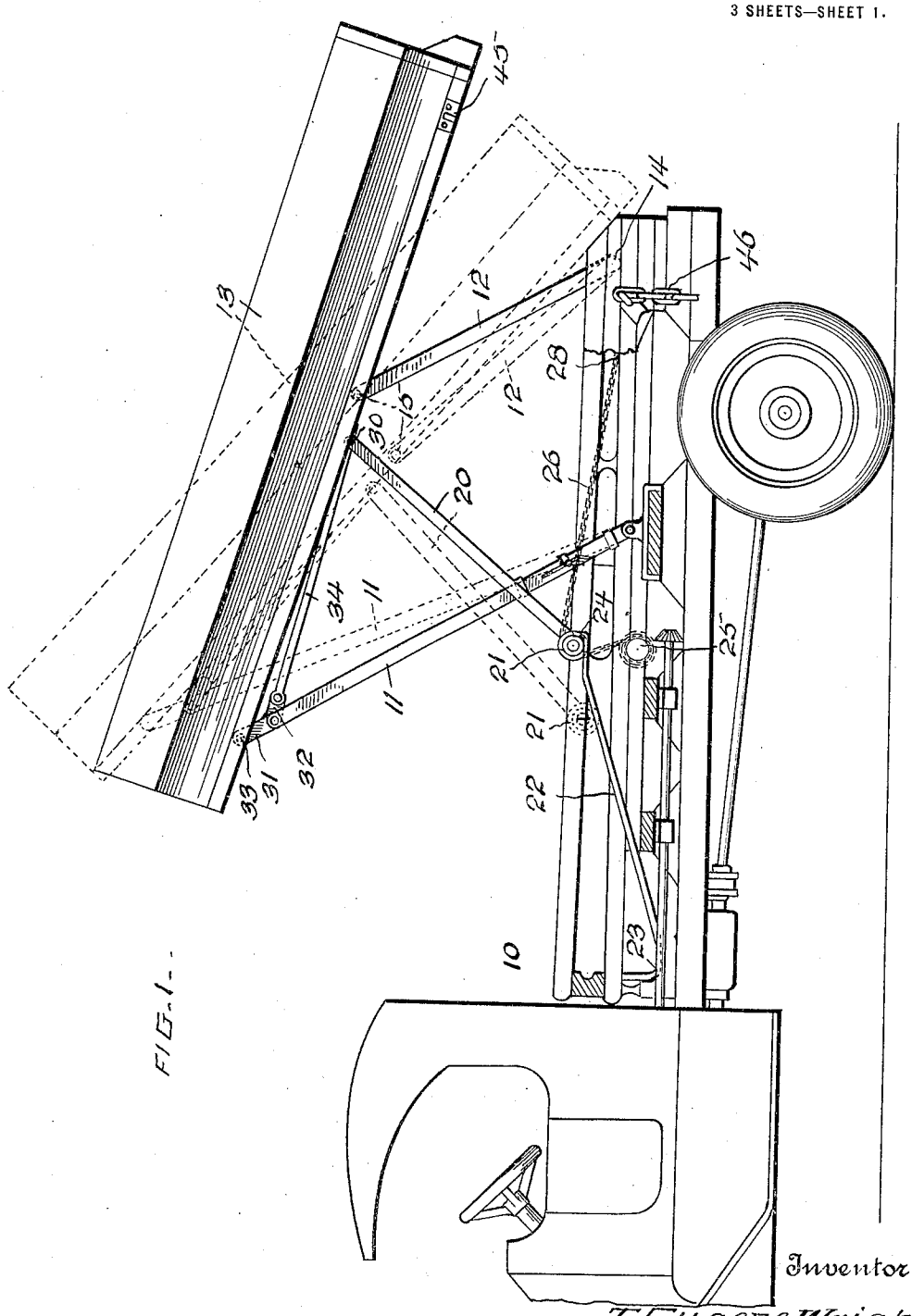


FIG. 1.

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3 SHEETS—SHEET 2.

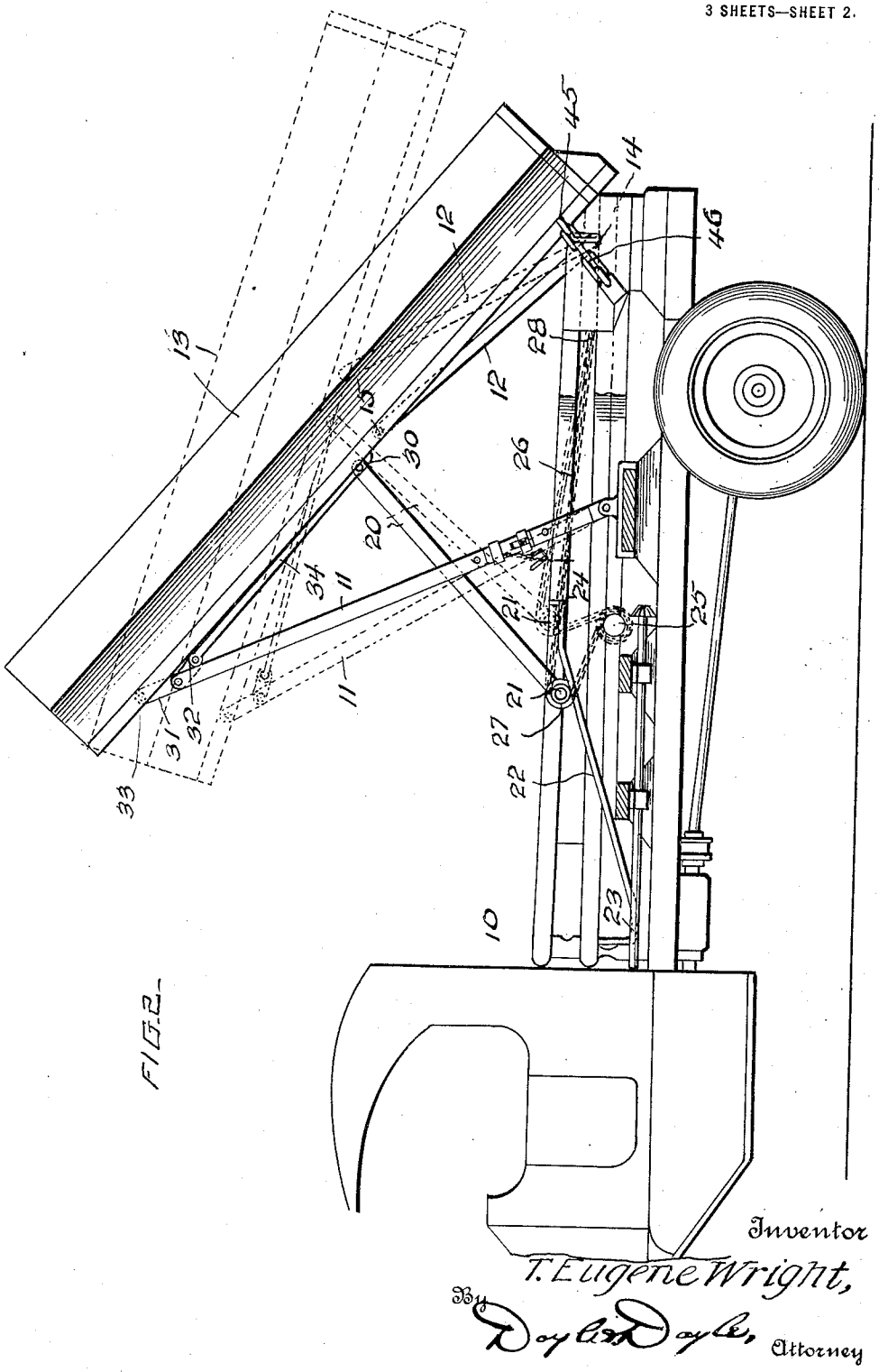


FIG. 2.

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3 SHEETS—SHEET 3.

FIG. 4.

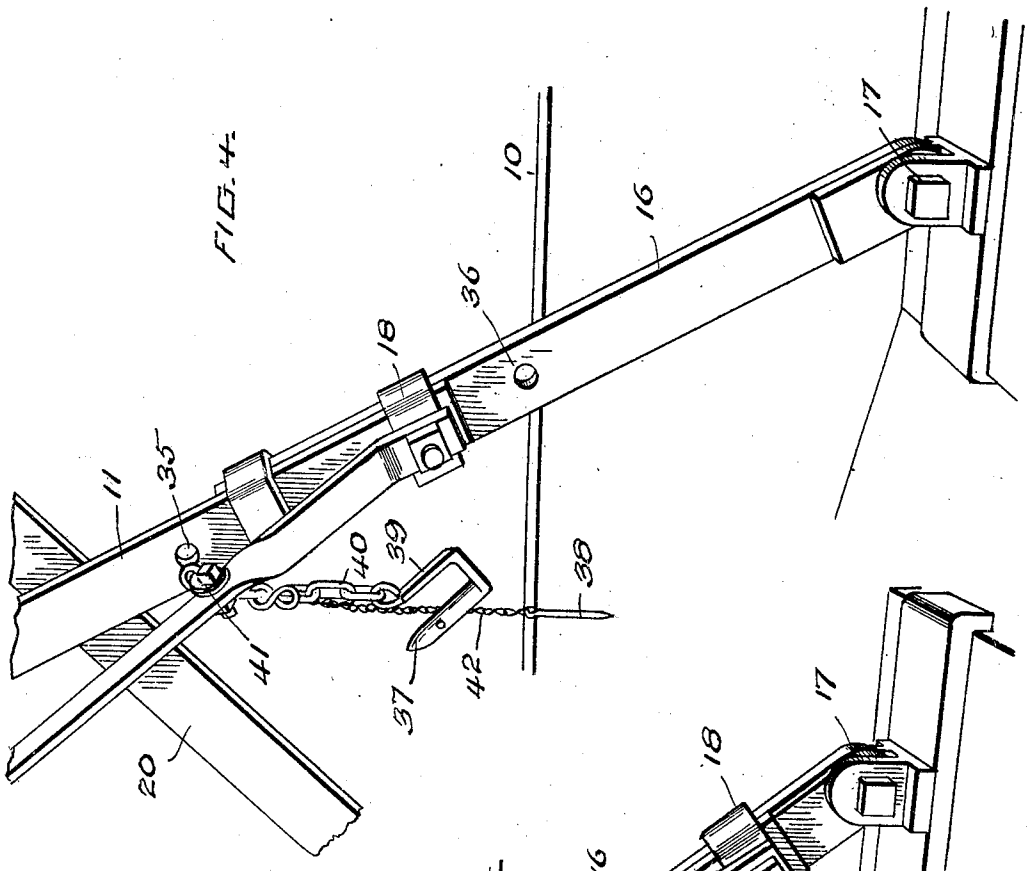
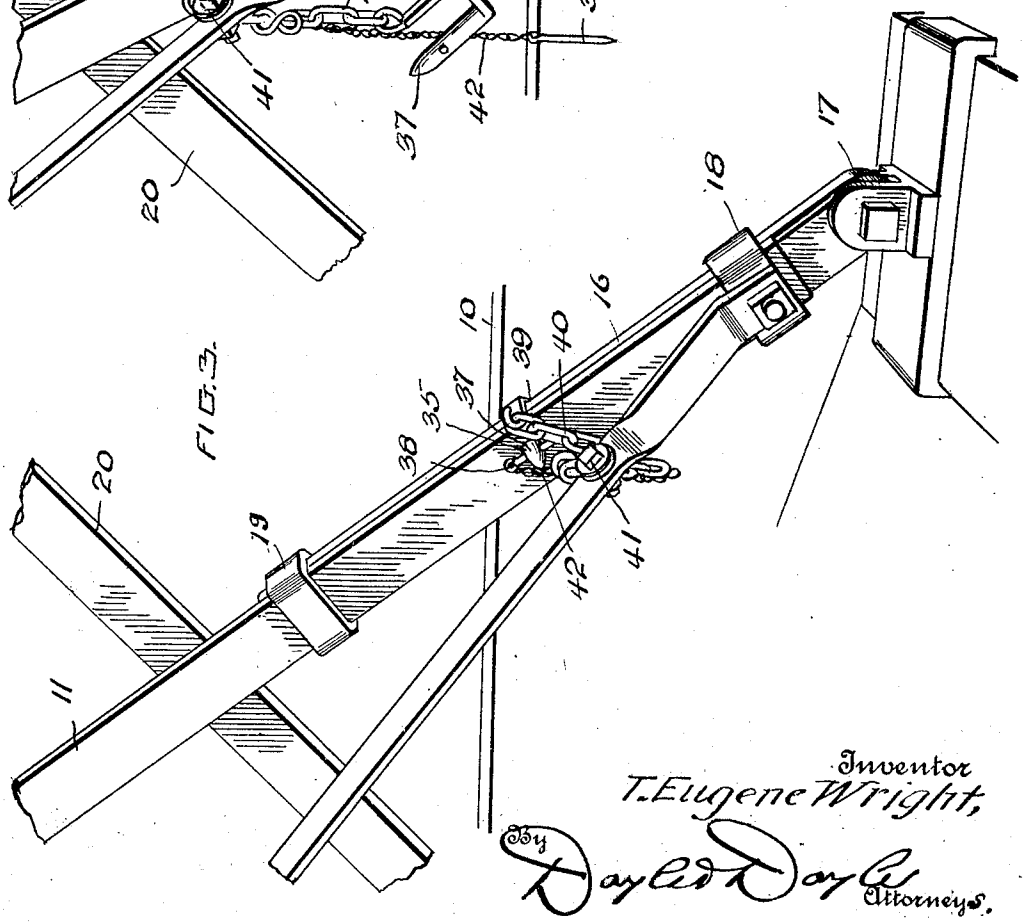


FIG. 3.



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UNITED STATES PATENT OFFICE.

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DUMPING WAGON AND CART.

1,322,156. Specification of Letters Patent. Patented Nov. 18, 1919.

Application filed July 31, 1918. Serial No. 247,597.

To all whom it may concern:

Be it known that I, THOMAS EUGENE WRIGHT, a citizen of the United States, residing at Jersey City, in the county of Hudson and State of New Jersey, have invented certain new and useful Improvements in Dumping Wagons and Carts, of which the following is a specification.

The object of the invention is to provide means for elevating and controlling the position of a wagon body whereby a maximum elevation and slight inclination thereof may be secured when it is desired to deliver material, such as coal, to a chute for conveying the same for a considerable distance, and whereby an increased inclination of the body may be secured when discharging material which flow less readily than coal or similar materials.

Further objects and advantages of the invention will appear in the course of the following description, it being understood that changes in form, proportion and details of construction may be resorted to within the scope of the appended claim and without departing from the spirit of the invention.

In the drawings illustrating one embodiment of the invention:—

Figure 1 is a side elevation partly broken away of a vehicle equipped with the body elevating and positioning mechanism showing the body in its elevated position, the full lines indicating its maximum elevation and dotted lines the maximum inclination.

Fig. 2 is a similar view, the full lines indicating the maximum inclination and the dotted lines the maximum elevation.

Fig. 3 is an enlarged detail of parts of the elevating mechanism in position to give the body its maximum elevation.

Fig. 4 is a similar view with the parts in the position to give the body its maximum inclination.

The body elevating device of the present invention is shown in connection with a motor operated truck 10 of any suitable type and construction with which are connected the fore and aft supporting members 11 and 12 having connection at their upper ends with the body 13 which is adapted to be elevated and inclined as required to secure the dumping action. The aft or rear supporting member may consist as illustrated of bars pivotally connected terminally to the truck and body as shown respectively at 14 and 15. The forward supporting members preferably consist of bars of which the lower ends are slidably connected with extension elements 16 pivotally mounted as at 17 upon the truck. Keepers 18 mounted at the lower ends of members 11, slidably receive the member 16 and keepers 19 mounted at the upper ends of extension elements 16 slidably receive the members 11, thereby providing an extensible connection between the members 11 and 16.

The thrust member 20 by which the body is elevated preferably consists of bars connected with the body and provided at their lower ends with runners such as antifriction rolls 21 to ride on guides 22 secured to the truck and inclined upwardly toward the rear of the truck, substantially horizontal seats or rests 23 and 24 being provided respectively at the forward and rear ends thereof to receive the runners respectively when the body is lowered and elevated.

Any suitable means for advancing the runners at the lower ends of the elements of the thrust member upon said elevated guides may be employed such as a drum 25 to which is secured one end of a cable or plurality of cables 26 extending around a roller 27 mounted axially with reference to the runners and terminally secured to the truck at 28. The revolution of the drum to secure the winding or unwinding of the cable or chain may be accomplished in any suitable manner either manual or by motor, not shown.

In the construction illustrated the upper extremities of the elements of the thrust member are provided with guides 30 on the body and are connected with the elements of a rocker 31 consisting of links to the intermediate portions of which are pivoted the upper extremities of the elements of the forward supporting member 11, as shown at 32, the upper extremities of said rocker elements being pivoted as at 33 to the body while to the lower extremities thereof are connected the links 34 which extend to the upper ends of the elements of the thrust member. The result of this arrangement of parts, in operation, is that as the lower end of the thrust member is moved rearwardly upon the truck guide 22 the body is elevated upon the substantially fore and aft supporting members, but an increased upward movement is imparted to the front end of the body due to the action of the rocker operating through the links 34 as the upper ends

of the thrust member move rearwardly in the body guides 30. The full line illustration in Fig. 1 shows the position of the body at a maximum elevation as when it is desired to deliver coal into a chute located at a considerable distance from the point of discharge and enabling the operator to convey the coal from a wagon in the street or roadway to a comparatively distant point, such as the coal-hole of a dwelling or building located for example inside of the line of the pavement.

When it is desired to deliver material from the body where a greater inclination of the latter is necessary, the locking means for the extension 16 may be removed to permit the elongation of the forward supporting member, as shown in full lines in Fig. 2, whereby a further upward movement of the fore part of the body is permitted. To secure the members of the extension supporting members 11 in their extended or retracted position to bring about the different positions of the body upon its elevation, the member 11 is provided with a perforation 35. The member 16 is provided with a perforation 36 in such a position as to register with perforation 35 when the parts are in their retracted position as shown in Fig. 3 and Fig. 1, or when the body is to be given its maximum elevation. When in this position a locking bar 37 is inserted through the perforations 35 and 36; a pin 38 may be inserted in an opening provided in said locking bar 37 to prevent its withdrawal.

The locking member 37 may be of any preferred form, but as shown is provided at its rear end with an extension 39 adapted to partly encircle the members 11 and 16 and is provided with a connection 40 mounted on one of the braces as shown at 41 to prevent loss when not in use. The pin 38 may also be secured in any preferred manner as by chain 42 to prevent loss of same.

To insure the proper results when it is desired to tilt the body into the position in which it assumes its maximum inclination, retaining means are provided in the event that the greater weight of the body is forward of its center, to hold the rear end of the body down on the truck, and consists of hook 45 mounted on the body and a few links of chain as shown at 46, mounted on the truck for engagement with the hook to insure the proper position of the body when the thrust bars are operated.

In operation, if it is desired to use the wagon as shown in Fig. 1 wherein the contents of the body of the wagon are to be delivered at a distance therefrom, the parts of the supporting members 11 are locked in their retracted position or shortened position as shown in Figs. 1 and 3 of the drawings.

With the relative length of the supporting members as above described, the body necessarily assumes the full line position of Fig. 1 when same is elevated by thrust bar 20.

If however, the members or supports 11 are permitted to assume their extended position as shown in Fig. 4 without a corresponding extension of supports 12, and the rear end of the body is anchored down to the truck, the body will necessarily assume the full line position seen in Fig. 2. Thus the wagon or cart is adapted for the handling of various kinds of materials and for securing the prompt and satisfactory discharge thereof regardless of the angle of rest thereof, the adaptation of the vehicle to the peculiarities of the different materials being accomplished merely by securing or releasing the extension element which thereby is either permitted to act in conjunction with or as an extension of the forward supporting member or is rendered inactive to permit the forward supporting member to operate independently thereof.

Having described the invention what is claimed is:

The combination with a truck and a body normally supported thereon, of rear supporting members connecting the rear end portion of the truck to an intermediate portion of the body, front supporting members pivotally connected to the truck, each front member including slidably connected upper and lower portions, rockers connected at intermediate points to the upper ends of the front members and at their upper ends to the front portion of the body, a thrust member, connections between the thrust member and the lower ends of the rockers, means for actuating the thrust member to elevate the front portion of the body and means to maintain the rear end of the body in lowered position upon the rear portion of the truck, and means for fastening the upper and lower portions of the front members together against relative movement thereby to restrain the front portion of the body during the elevation thereof and lift the rear portion of the body from the truck.

This specification signed and witnessed this 28 day of June 1918.

T. EUGENE WRIGHT.

Witnesses:

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