June 1, 1926. 1,586,571

E. W. MIELKA

TOY DUMPING WAGON

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Fig. 1.

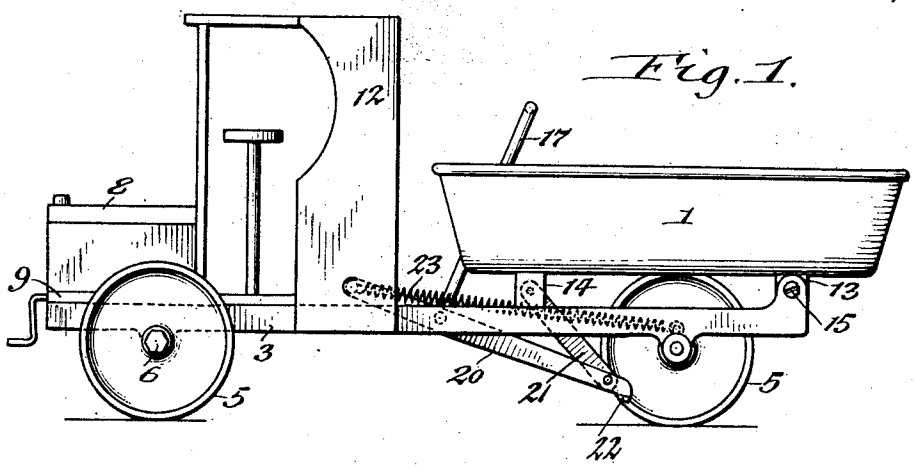
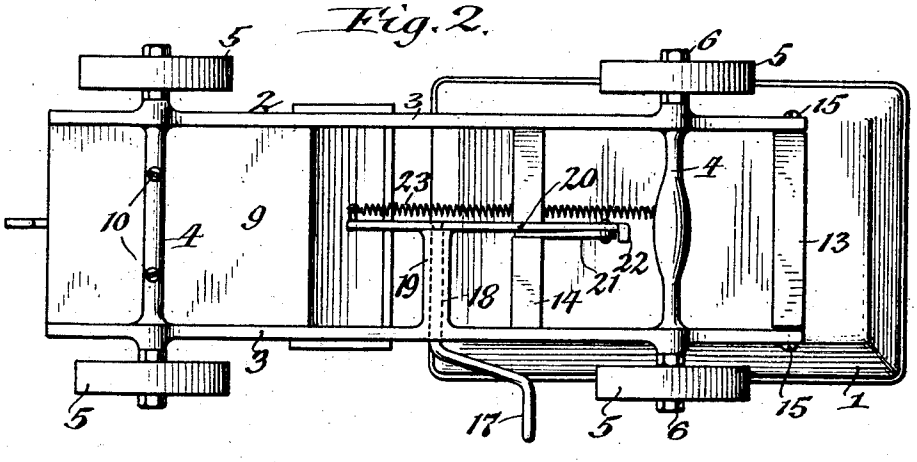


Fig. 2.



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Fig. 3.

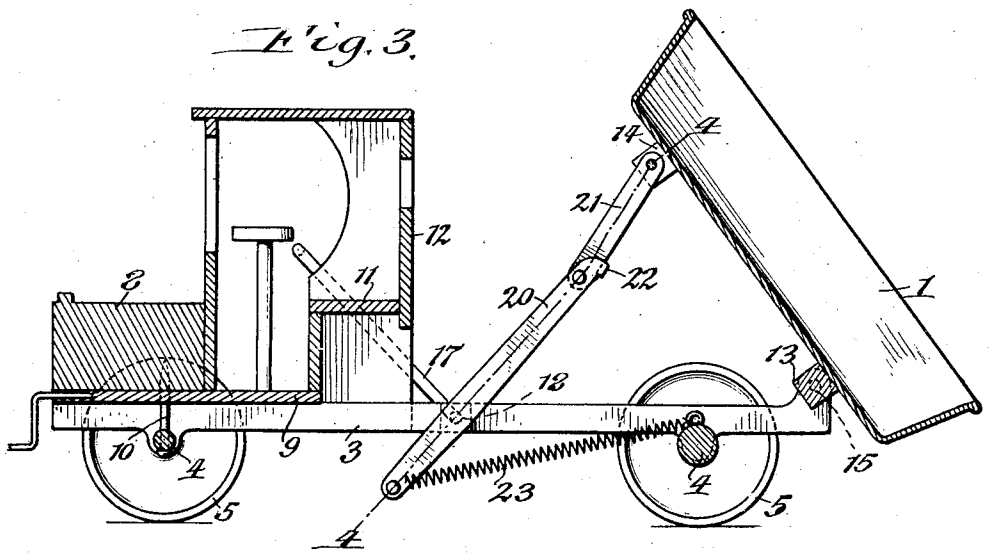
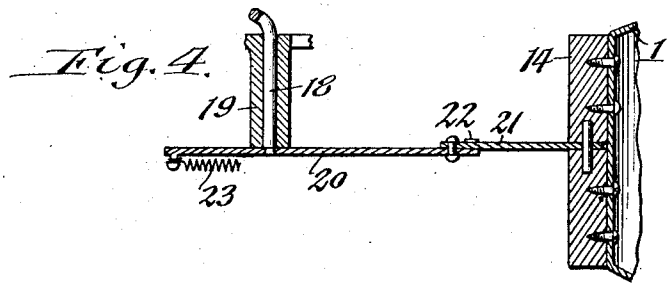


Fig. 4.



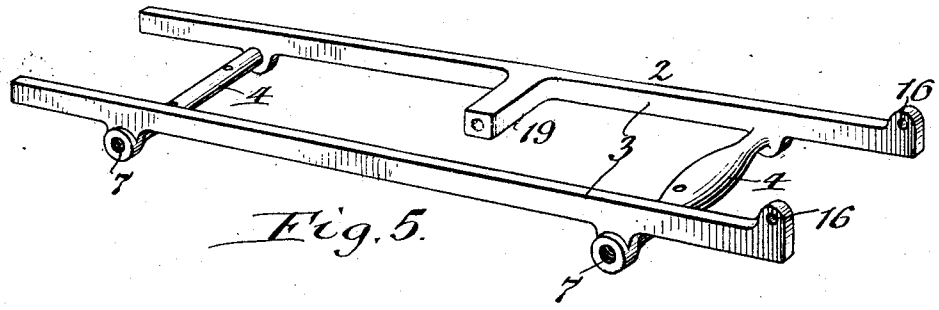


Fig. 5.

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UNITED STATES PATENT OFFICE.

EMIL W. MIELKA, OF BUFFALO, NEW YORK.

TOY DUMPING WAGON.

Application filed January 6, 1923. Serial No. 611,053.

This invention relates to improvements in toy dumping wagons, proposing a construction which includes an endwise tiltable load carrying element or body and operating mechanism therefor, the body having a normal horizontal position and a longitudinally inclined dumping or discharging position and the operating mechanism being available to move the body into either of said positions.

The invention particularly relates to the construction of the body operating mechanism and to the relation of the parts of such mechanism to one another, to the body and to other parts of the wagon, the invention consisting in novel features of structure and arrangement which will be pointed out as the description proceeds and which serve the objects of strength and sturdiness, enabling the wagon to withstand rough or careless usage, of ease, quickness and positiveness of operation, of the certain and secure retention of the wagon body in either of its operative positions and of avoiding any interference with the movement of the wagon upon its supporting wheels.

A toy wagon in which the features of the invention are incorporated is shown in the accompanying drawings, wherein:

Figure 1 is a side elevation, a rear wheel being removed.

Figure 2 is a bottom plan view.

Figure 3 is a longitudinal sectional view, the body being in dumping position.

Figure 4 is a section on the line 4—4 of Figure 3.

Figure 5 is a perspective view of the wagon frame.

The load carrying element 1 may be of any suitable form but as shown and preferred is in the form of a body having a floor and vertical or approximately vertical walls. The body 1 and the operating parts to be later described are mounted on a frame 2 which includes side bars 3 and cross bars or axles 4, the side bars being preferably extended at each end for a suitable distance beyond the cross bars. The wagon is suitably supported, as by wheels 5, although other supports such as runners could be employed. As shown the wheels 5 are secured by screws 6 which extend through central openings in said wheels and are engaged in threaded recesses 7 at the ends of the bars 4.

The wagon may, of course, be made to simulate any standard industrial vehicle and is shown in the form of a motor truck wherein a block 8 is fashioned to represent the hood which encloses the engine and is mounted on a floor plate 9 and secured by screws 10 to the front bar 4. The plate 9 also carries the driver's seat 11 and vestibule 12, the body 1 being located behind such vestibule.

The body 1 is provided on its under side with transverse cleats 13 and 14 and is pivoted at or near its rear end to the rear ends of the bars 3, as at 15, the pivot pins (preferably in the form of screws) being fitted axially in the ends of the cleat 13 and engaged in bearings 16 provided on the bars 3.

The operating mechanism is actuated by a crank 17, located at one side of the body and having a rock-shaft extension 18 which is journalled in a bearing 19 projecting laterally inward from one of the side bars 3. The mechanism includes a two-armed lever 20 which is fixedly mounted at a point between its ends upon the rock-shaft 18. A link 21 serves as a connection between the lever 20 and the wagon body, said link being pivoted to the lever 20 at or near the rear end thereof and to the wagon body suitably near the front end thereof. As shown and preferred, the link is pivoted to the cleat 14. The lever 20 has a normal rearward and downward inclination and the link 21 a normal forward and upward inclination from which it follows that the crank 17 is moved clockwise in order to shift the body 1 to dumping position, the upward movement of the portion of the lever 20 behind the shaft 18 being transmitted by the link 21 to the front portion of the body 1 which is thus moved about its pivot 15 to the rearwardly and downwardly inclined position shown in Figure 3. To restore the body 1 to its normal horizontal position the crank 17 is moved counterclockwise, the connected parts moving in the reverse directions.

The relation of the parts is preferably such that when the body 1 is in dumping position the rock shaft 18 and the pivots

of the link 21 are along dead centers, or substantially so, as shown in Figure 3, whereby the lever 20 and link 21 furnish stable and unyielding support for the wagon body; and in order to prevent continued movement of the body 1 beyond such position, the lever 20 is formed at its rear end with a stop lug 22 which comes into engagement with the under edge of the link 21.

The manipulation of the crank 18 may be aided by the employment of a tension spring 23 for the use of which the lever 20 is made two-armed as above described. The spring 23 is connected to the front end of the lever 20 and to a fixed part of the wagon, preferably the rear cross bar 4 and is arranged to extend above the axis of the shaft 18 and the pivotal connection of the lever 20 and link 21 when the wagon body is in normal position and to extend below said axis and pivotal connection when the wagon body is in dumping position, these relations being shown in Figures 1 and 3 respectively. It will be apparent that the spring 23 completes the final stage of the movement of the parts in either direction and in either position of the wagon body and holds the same and the connected parts against loose play or accidental displacement.

Having fully described my invention, I claim:

A dump wagon comprising a frame having two longitudinal side bars, front and rear cross bars connecting the front and rear parts of said side bars, pivot lugs projecting upwardly from the rear ends of said side bars, an intermediate bearing projecting transversely inward from one of said side bars between the front and rear cross bars and terminating midway between said side bars, said side bars, cross bars, pivot lugs and bearing being formed integrally, a vertically swinging box provided on the rear part of its under-side with a depending block which is arranged between said pivot lugs and pivotally connected therewith, a rock shaft journaled in said bearing and provided at its outer end with a crank, a lever connected with the inner end of said shaft and having front and rear arms and a stop lug on said rear arm, a link connecting the rear arm of said lever and the front part of said box and adapted to engage its lower part with said lug, and a spring connecting the front arm of said lever with said rear cross bar and adapted to yieldingly hold said box in its lowered or elevated positions.

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