No. 756,400. PATENTED APR. 5, 1904.

A. F. OTTO.

DUMPING WAGON.

APPLICATION FILED SEPT. 14, 1903.

NO MODEL. 2 SHEETS—SHEET 1.

Fig. 1.

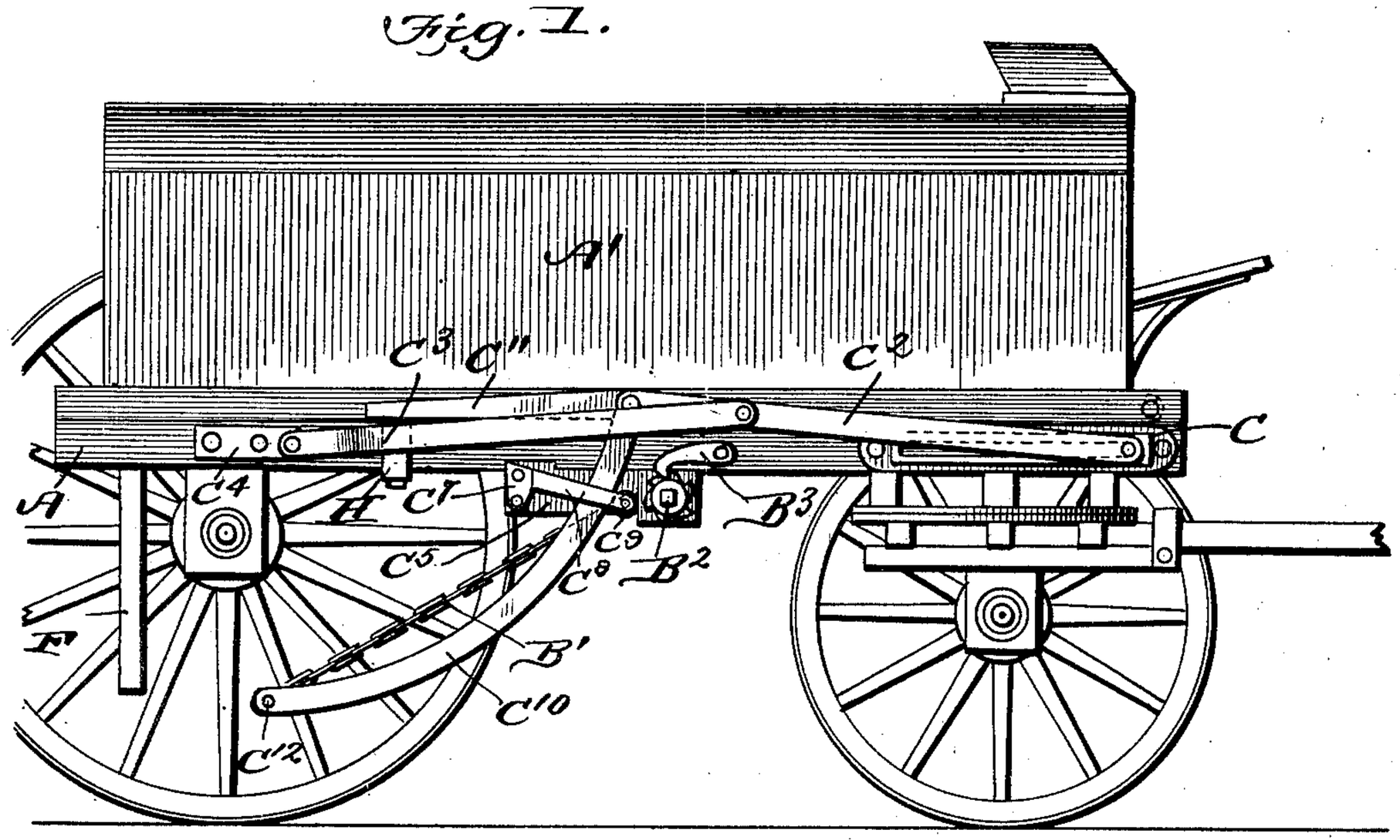
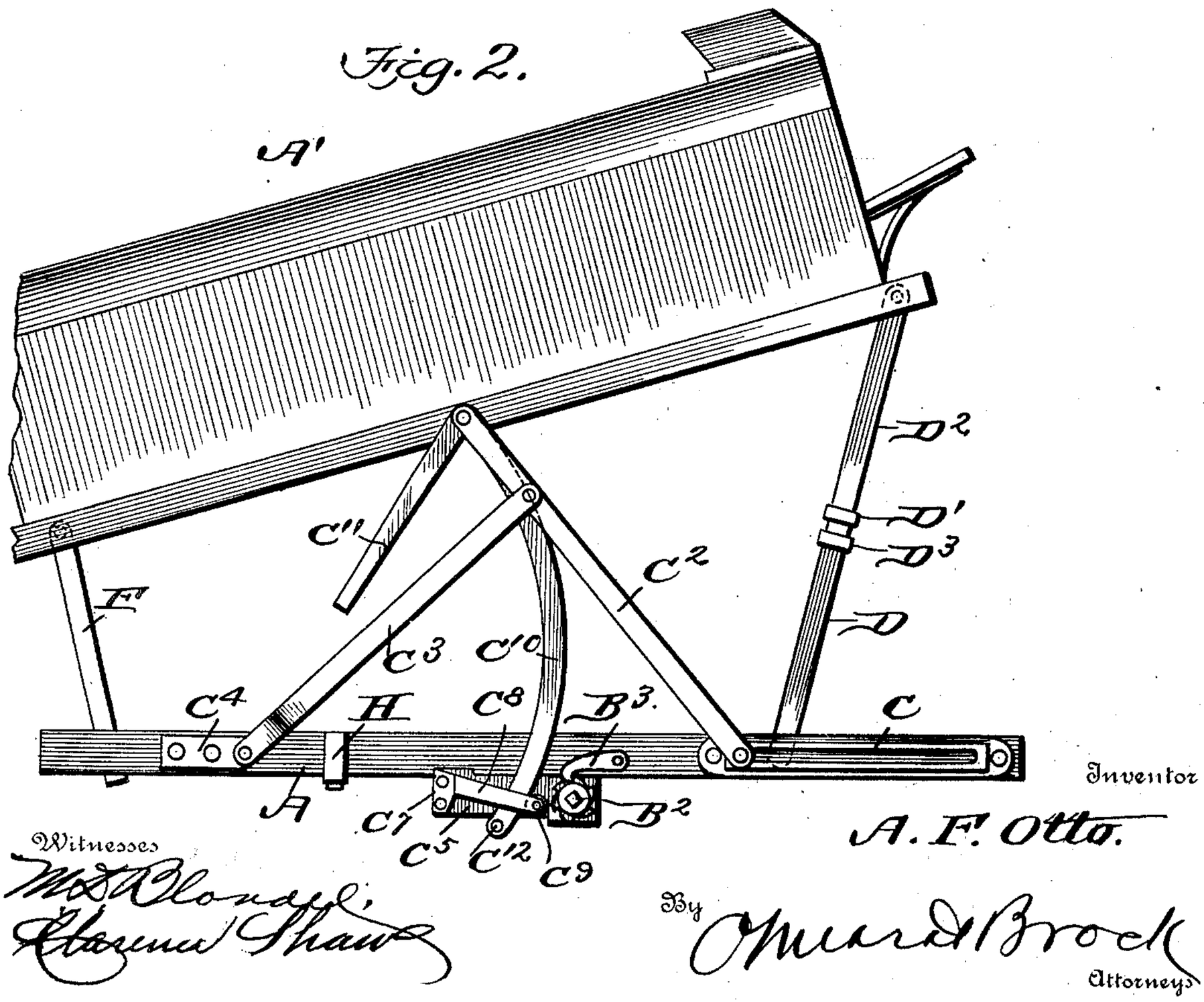


Fig. 2.



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NO MODEL. 2 SHEETS—SHEET 2.

Fig. 3.

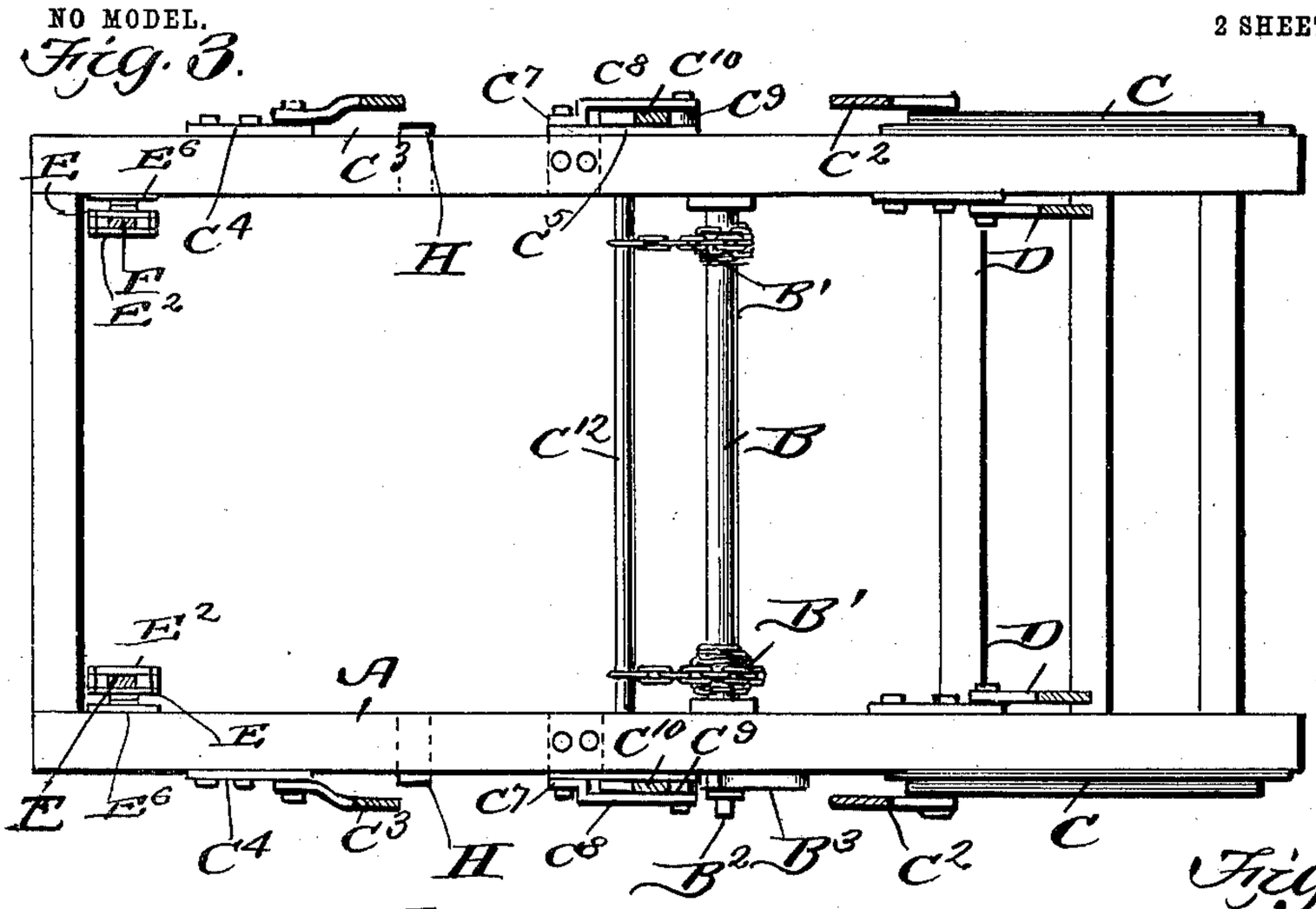


Fig. 4.

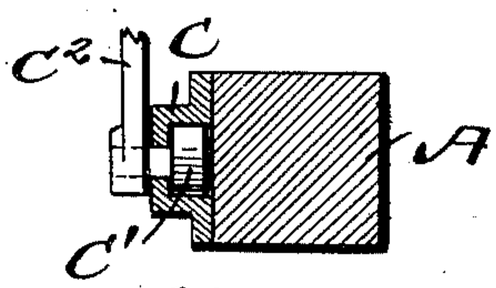


Fig. 5.

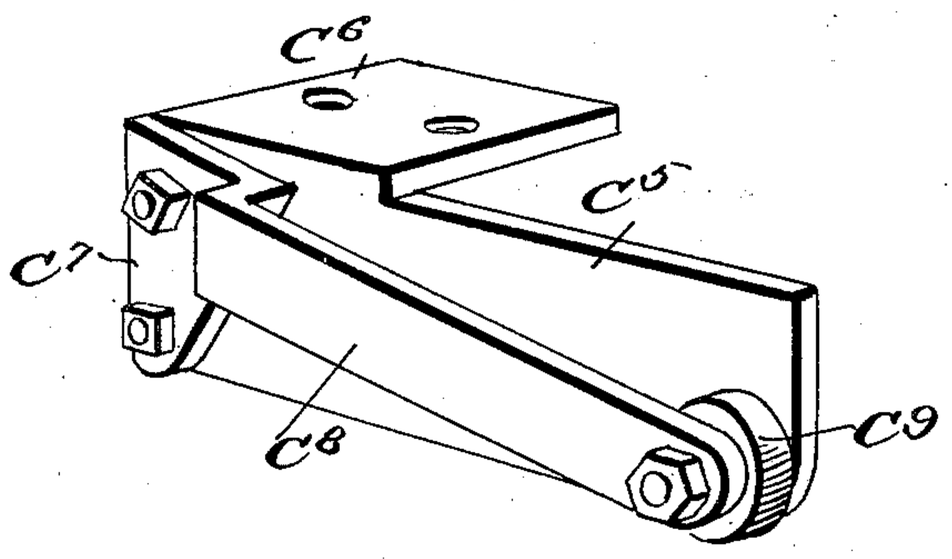


Fig. 6.

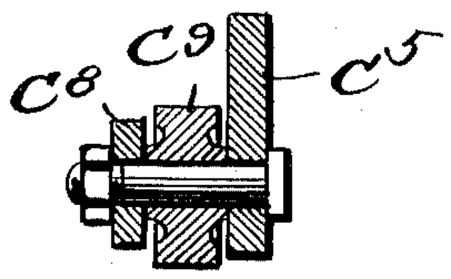


Fig. 7.

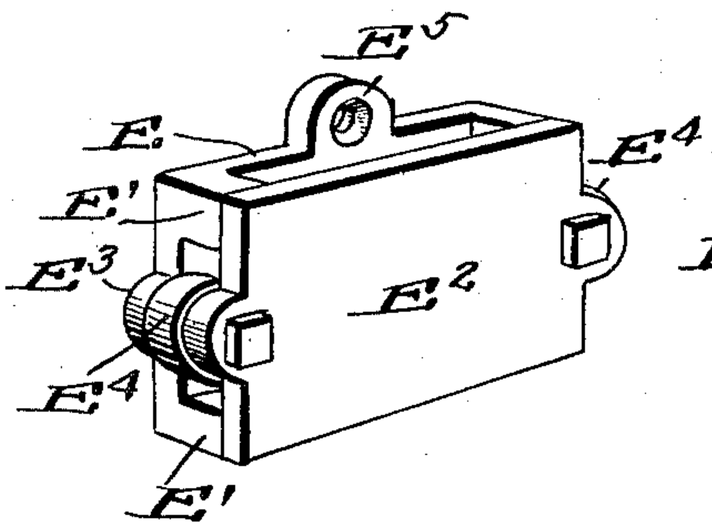


Fig. 8.

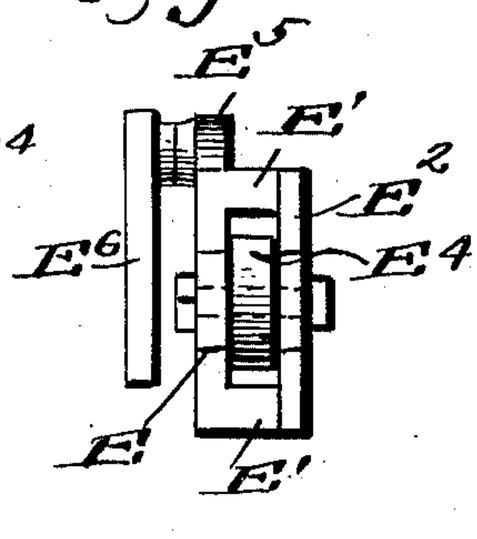
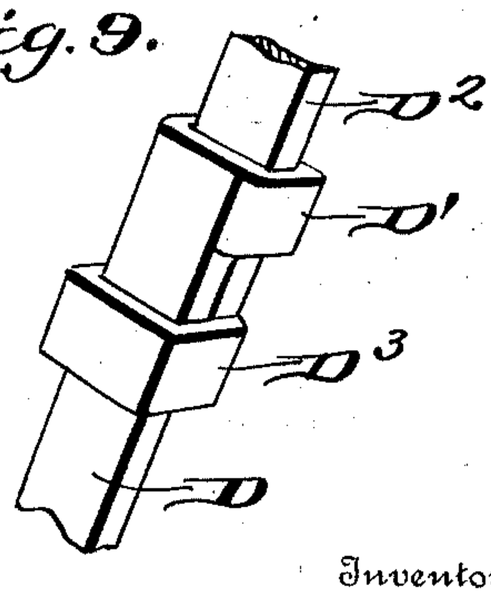


Fig. 9.



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No. 756,400. Patented April 5, 1904.

UNITED STATES PATENT OFFICE.

AUGUST F. OTTO, OF PHILADELPHIA, PENNSYLVANIA.

DUMPING-WAGON.

SPECIFICATION forming part of Letters Patent No. 756,400, dated April 5, 1904.

Application filed September 14, 1903. Serial No. 173,164. (No model.)

To all whom it may concern:

Be it known that I, AUGUST F. OTTO, a citizen of the United States, residing in Philadelphia, in the county of Philadelphia and State of Pennsylvania, have invented a new and useful Dumping-Wagon, of which the following is a specification.

My invention relates to means for dumping a wagon by elevating the forward portion of the body of the wagon, and while not limited in use to is especially designed for wagons used in the delivery of coal.

Instead of dumping the coal upon the street as formerly it is now customary to elevate the entire wagon-body above the truck upon which it is mounted and to give a greater elevation to the forward portion of the body, dumping the coal into a chute which leads from the rear of the wagon-body to the coal-bins or cellar. The chute itself forms no part of my present invention, and my device can be used independent of a chute.

The object of my invention is to simplify the means for giving the required elevation to the wagon-body and to eliminate useless gearing and other parts and do away with unnecessary friction, thereby rendering the device easier to operate.

My invention consists in the novel features of construction and combination of parts hereinafter described, particularly pointed out in the claims, and shown in the accompanying drawings, in which—

Figure 1 is a side elevation of a wagon equipped with my device. Fig. 2 is a similar view showing the wagon-body elevated. Fig. 3 is a plan view of the truck-frame, parts being shown in section. Fig. 4 is a detail sectional view of construction. Fig. 5 is a perspective view of a guide-plate. Fig. 6 is a vertical transverse section through the guide-plate and the roller carried thereby. Fig. 7 is a perspective view of still another guide-plate. Fig. 8 is an end elevation of the plate shown in Fig. 7 and showing also the plate to which it is attached. Fig. 9 is a perspective detail view of construction.

In the drawings, A represents a wheeled truck of any suitable kind, and A′ a wagon-body mounted on but not directly fastened to the truck A. Journaled transversely in the sides of the truck and about midway its ends is a windlass or drum B, and the end of a chain B′ is secured to this drum adjacent the inner face of each side of the truck. At one end the drum-shaft is squared and projects beyond the side of the truck, as at B^2, and this squared portion is adapted to be turned by a cranked wrench, as is common with such drums. Ratchet-teeth are formed on the drum-shaft adjacent the squared portion, and the said teeth are engaged by the usual pawl B^3. With one exception the parts to be hereinafter described are fitted either to the sides of the truck or wagon-body, and the parts secured on one side are duplicated upon the opposite side, and it will be sufficient, therefore, to describe in detail the parts arranged on but one side. These parts consist of a flanged plate C, longitudinally slotted and bolted to the outer face of the side of the truck adjacent its forward end. Between the flanges of this plate runs a roller C′, having a stem projecting through the longitudinal slot, and to this stem is pivoted the forward and lower end of a bar C^2. Pivoted to the bar C^2, adjacent the rear end of the said bar, is the forward end of a bar C^3, the rear end of the latter bar being pivoted to a plate C^4, arranged on the side and near the rear end of the truck-frame. Intermediate the flanged plate C and the plate C^4 is arranged a plate C^5, which plate has the integral horizontally-extending plate C^6 formed on it, the latter plate being fastened to the under side of the truck-frame, the plate C^5 being arranged vertically. To the rear end of the plate C^5 is bolted a triangular-shaped plate C^7, which plate carries an offset forwardly and downwardly extending arm C^8, and loosely journaled between the forward end of this arm and the plate C^5 is a roller C^9. A curved bar C^{10} is pivoted at its upper end to the rear and upper end of the bar C^2 and also to the wagon-body A′. From this pivoted end of the curved bar C^{10} extends rearwardly a straight guide-bar C^{11}, formed integral with the curved bar C^{10}. It will be noted that the bar C^3 is offset adjacent the plate C^4. A stop H is secured to the frame A adjacent the plate C^4, and the offset in bar C^3 enables the bar to clear the

stop H. When the wagon-body is lowered, the free end portion of the bar C^{11} rests on and is supported by the stop H. This stop and the bar C^{11} prevent the pivoted curved bar C^{10} from accidentally swinging forward under the wagon-body when the body is lowered and touching the ground. The lower ends of these curved bars are connected by a shaft C^{12}, this shaft being the exception or part not duplicated, above referred to, and to this shaft are attached the chains B′.

To the truck-frame there is pivoted adjacent the plate C, but on the inner side of the frame, the bar D, having a lateral loop formed at its free end, as shown at D′. A similar bar D^2, having a loop portion D^3, is pivoted to the wagon-body A′, and each of these bars slides in the loop carried by the other bar. When drawn out, these bars serve to steady the forward portion of the wagon-body.

In the inner rear corners of the truck-frame are arranged guide-boxes comprising each a plate E, having at its corners outwardly-projecting lugs E′, against which the plate E^2 bears, the lugs serving to space the two plates apart. Ears E^3 are formed at each end of both of these plates, and between the ears are journaled rollers E^4. A lug E^5 is formed on the top edge of the plate E and is perforated and beveled to receive a countersunk screw. The plate E^6 is secured to the truck-frame and has formed on it a boss perforated and alining with the lug E^5, any suitable screw or bolt holding the plates E and E^6 together. Through this guide-block works the guide-bar F, pivoted at its upper end to the wagon-body and traveling on the rollers E^4.

It will be obvious that by the rotation of the drum by means of a crank fitting the squared end B^2 the chains will be wound thereon and the shaft C^{12} will be drawn toward the shaft B, lifting the curved bar C^{10}, which bar slides between the plate C^5 and the bar or arm C^8. The upward movement of this curved bar will lift the wagon-body and also the brace-bars C^2 and C^3. It will be noted that the bar C^2 carries at its lower end the roller C′, which rolls on the lower flange of the slotted plate C, and it will also be noted that the curved bar works on the roller C^9 and that the friction due to the movement of the lifting parts is reduced to a minimum. The bars D, D^2, and F serve to hold the wagon-body steady and prevent lateral swaying motion when the body is in an elevated position.

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

1. The combination with a truck-frame and wagon-body, of a drum carried by said frame, guide-plates secured to the sides of the frame, offset arms carried by said plates, rollers journaled between said arms and plates, parallel curved bars pivoted at their upper ends to the wagon-body and adapted to move vertically between the arms and the plates and bear on said rollers, a shaft parallel to the drum and connecting the curved bars, means for drawing the shaft to the drum when the latter is rotated, and means for rotating the drum.

2. The combination with a truck-frame and wagon-body, of a longitudinally-slotted and flanged guide-plate secured to the side of the truck-frame, a roller adapted to travel therein and having a stem projecting through the slot, a bar pivoted at its forward end to the stem of the roller, a bar pivoted at its rear end on the side of the truck and at its forward end to the first-mentioned bar, a curved bar pivoted at its upper end to the wagon-body and to the first-mentioned bar, means for imparting vertical movement to the curved bar, and means carried by the frame for guiding said curved bar.

3. The combination with a wagon-body and truck-frame, of a curved bar pivoted at its upper end to said wagon-body, a guide-plate arranged on the truck-frame, a roller carried by said plate adapted to guide the curved bar, means carried by the truck-frame adapted to lift said curved bar, a bar pivoted at its rear end to the upper end of the curved bar, a roller carried at the forward end of the pivoted bar, a guide-plate adapted to receive said roller and permit horizontal travel of the roller on said plate, a bar pivoted to the truck in the rear of the curved bar and to the roller-carrying bar in advance of the curved bar, and means carried by the truck-frame and wagon-body adapted to steady the latter when elevated by the curved bar.

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