

No. 765,432.

PATENTED JULY 19, 1904.

J. C. LEHR.

ASH CART.

APPLICATION FILED MAR. 28, 1904.

NO MODEL.

2 SHEETS—SHEET 1.

Fig. 1

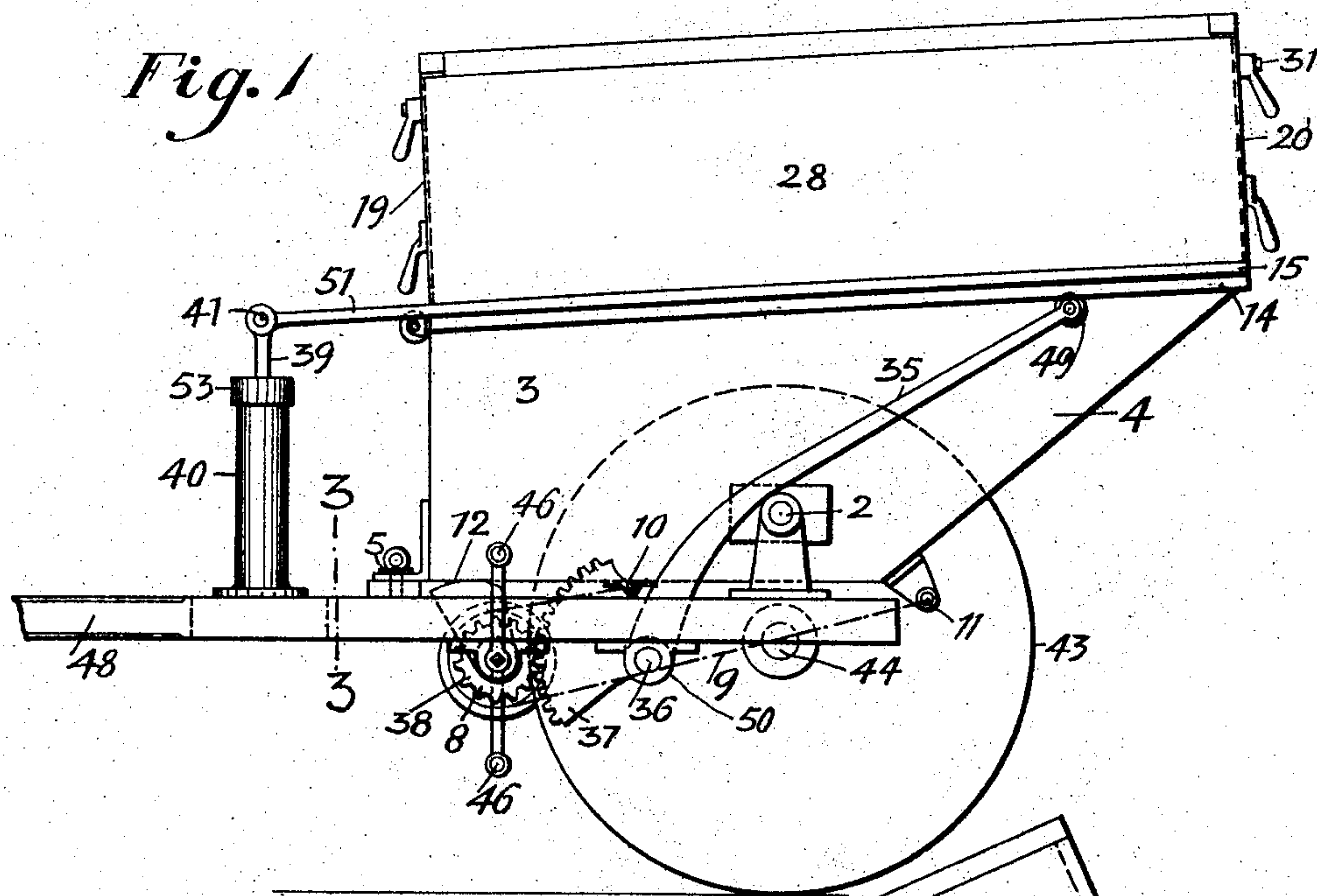
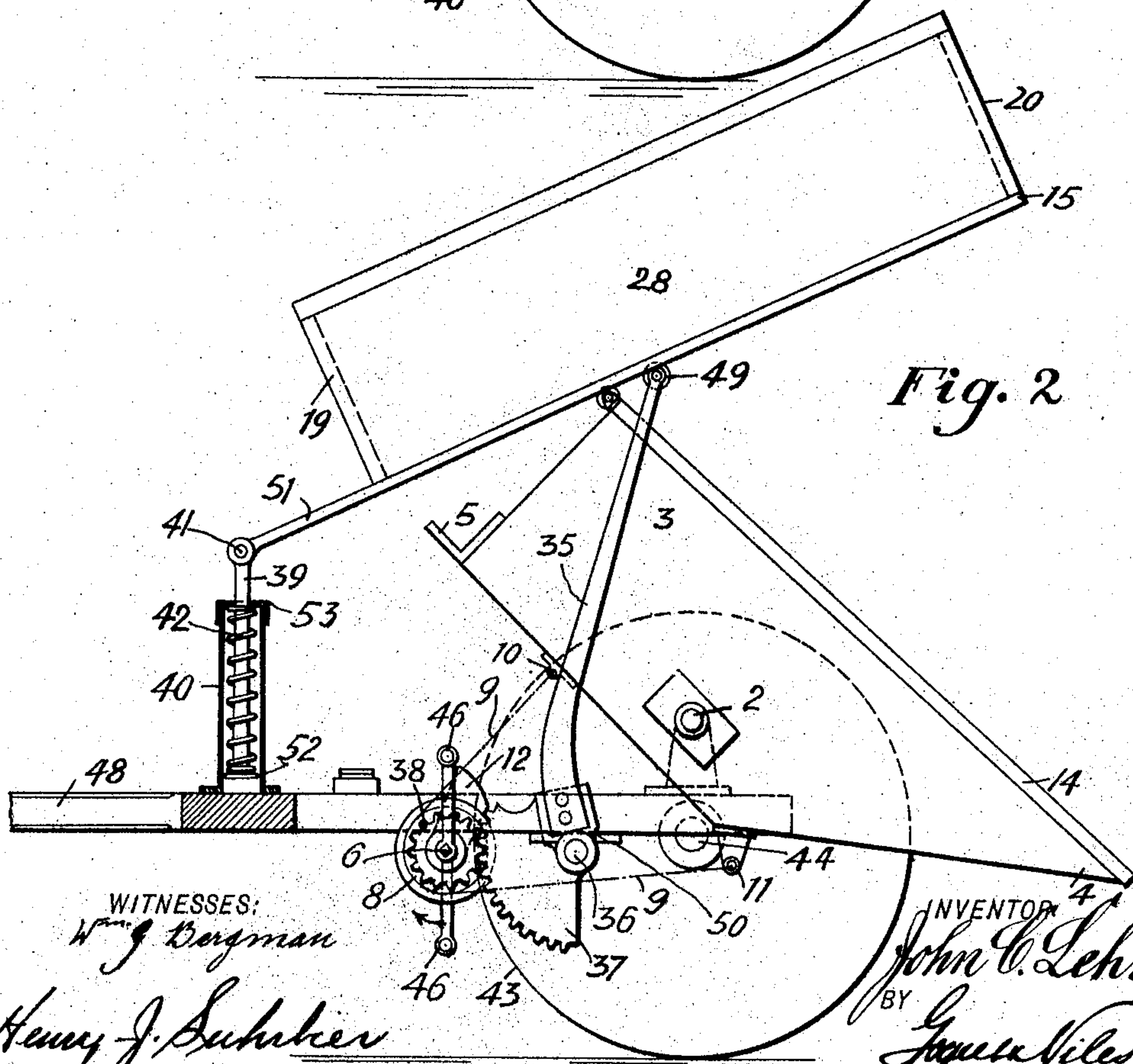


Fig. 2



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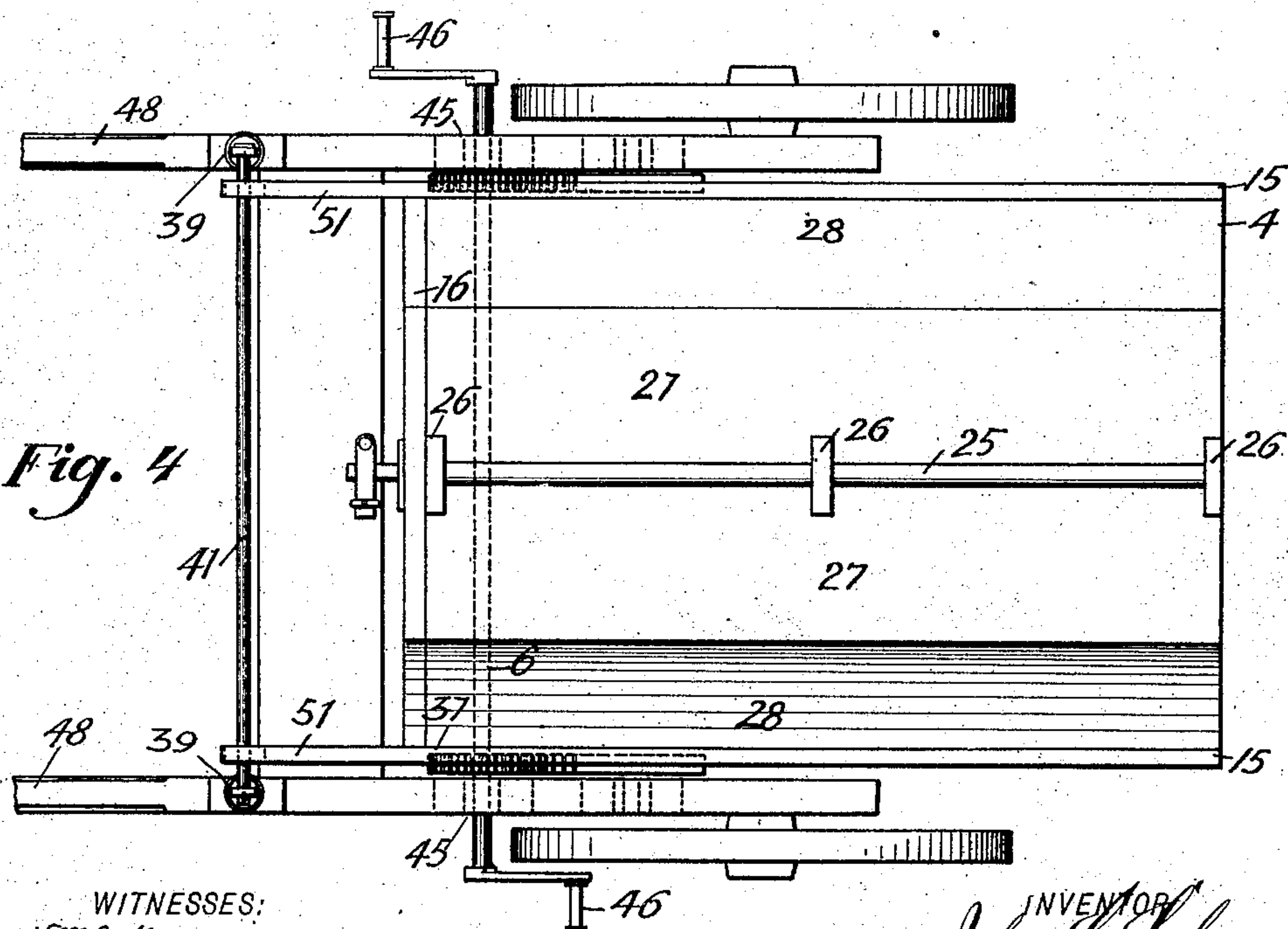
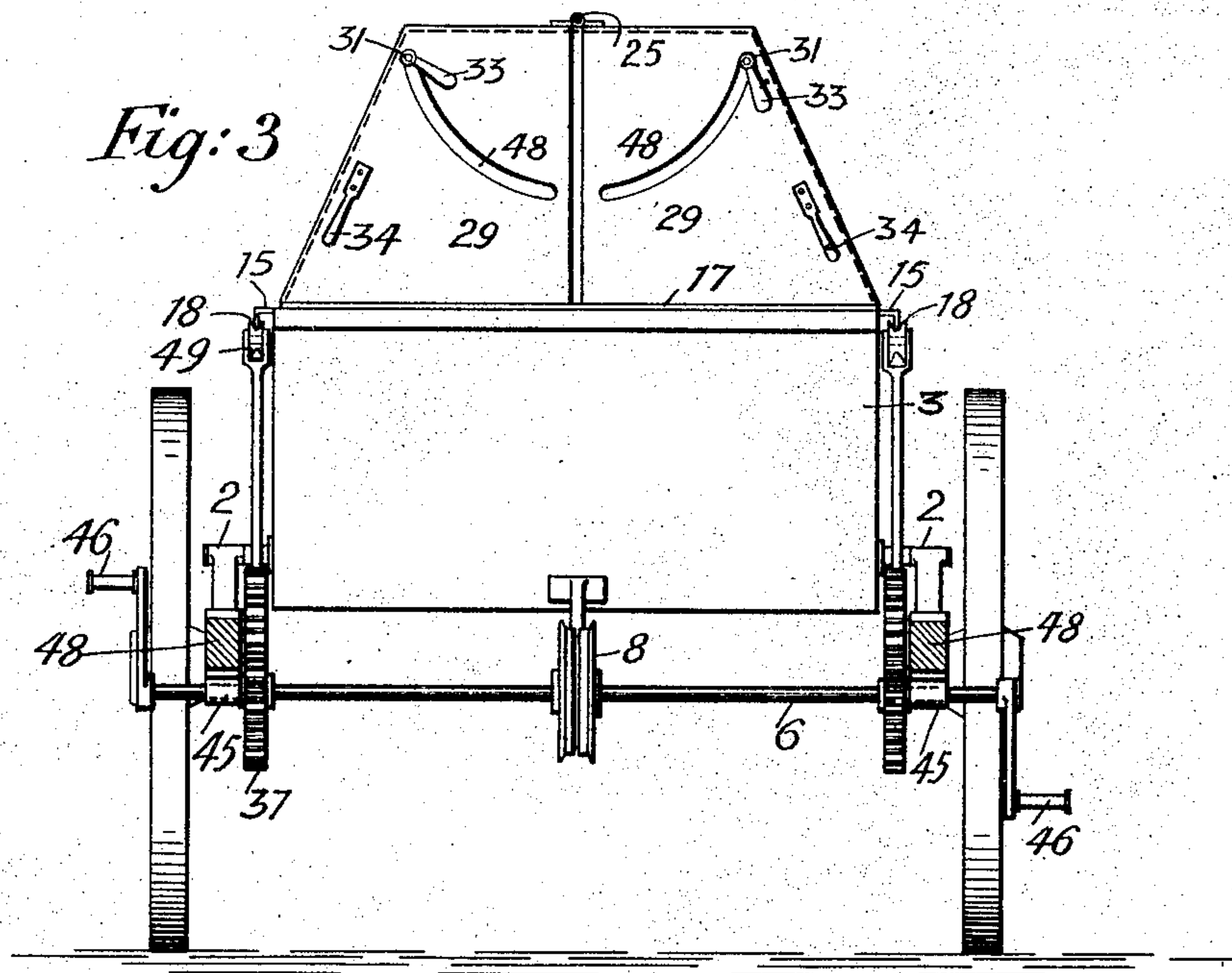
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ASH-CART.

SPECIFICATION forming part of Letters Patent No. 765,432, dated July 19, 1904.

Application filed March 28, 1904. Serial No. 200,278. (No model.)

To all whom it may concern:

Be it known that I, JOHN C. LEHR, a citizen of the United States, residing in New York, borough of Manhattan, in the State of New York, have invented certain new and useful Improvements in Ash-Carts, of which the following is a specification.

This invention relates to certain improvements in that type of ash-carts shown in Letters Patent No. 739,012, which were granted to me heretofore under date of September 15, 1903.

Practical tests made with that type of ash-cart above referred to have shown that it was impossible to lift the cover of said cart with the required facility by the action of the cart-body on the cover when the cart-body was dumped. As this defect in my prior patented ash-cart forms a considerable objection to its adoption or usefulness, it has been necessary to design an independent and more effectual lifting device for the cart-cover, so that the said cover can be raised independently of the action of the cart-body and so that the latter can then be dumped with great facility to discharge its contents, while at the same time the desired lifting of the cart-cover is effected with facility; and for this purpose the invention consists of an ash-cart comprising a running-gear, a dumping-body mounted thereon, a cover supported on said body, and means for lifting the cover independently of the dumping-body, said means being operated by a suitable hand-crank and supplementary motion-transmitting devices supported on a shaft and intermediate mechanism.

The invention consists, further, of an ash-cart comprising a running-gear having shafts connected thereto, a dumping-body mounted thereon, a cover on said dumping-body provided with a horizontally-extending base-frame pivoted at its front extended end portions to spring-cushioned rods guided in upright pillars on the shafts of the cart, and means for lifting the cover independently of the dumping-body; and the invention consists, lastly, of certain details of construction of the parts of my improved ash-cart, which will be fully described hereinafter and finally pointed out in the claims.

In the accompanying drawings, Figure 1 represents a side elevation of my improved ash-cart, showing the parts of the same in normal position for receiving or carrying a load. Fig. 2 is a similar view, partly in section, but showing the parts of the cart in position for dumping or discharging the contents of the cart-body. Fig. 3 is a front elevation of my improved ash-cart, partly in vertical section, on line 3-3, Fig. 1; and Fig. 4 is a plan view of the ash-cart, showing the dumping device, the arrangement of the shafts, and hinges holding the hoods.

Similar numerals of reference indicate corresponding parts.

Upon a running-gear 1, which consists of the horizontal shafts 44 and the supporting axle and wheels 43 of the cart, and which parts may be of any suitable construction, is pivoted at 2 a cart-body or dumping-body 3, the rear end 4 of which cart-body has the form of a chute, so as to facilitate the dumping operation of the cart. The cart-body or dumping-body 3 is normally secured in carrying position at its front end by the usual hasp or lock 5, attached to the frame on the running-gear, as shown in Fig. 1.

The dumping or discharging of the contents from the cart-body 3 may be effected in any desirable manner, preferably by means of a shaft 6, which is movably journaled transversely in suitable bearings 45 on the under side of the shafts of the running-gear 43, the shaft 6 being square at its ends to receive and hold the hand-crank 46. The shaft 6 carries on its middle portion a sprocket-wheel 8, over which runs a sprocket-chain 9, one end of which sprocket-chain is connected to the dumping-body of the cart at 10 forwardly of the pivot 2, while the opposite or rear end of the said sprocket-chain is attached to a short arm or lug 11, projecting downwardly from the inclined or dumping end of the cart-body, so that by giving the shaft 6 a motion in one direction, as shown by the arrow in Fig. 2, the chain is given motion in one direction and the cart-body by its action is dumped, while by reversing the rotation of the sprocket-wheel, and thus moving the chain in the opposite direction, the cart-body is re-

turned to its original normal position on the running-gear for receiving a new load. Immediately of the cranks on the shaft 6 is fixed a cam 12, which projects in upward direction from the said shaft toward the base of the cart-body, and the upper rounded end portion of which said cam bears against the under side of the bottom of the cart-body 3, so that when said shaft is rotated to the right the said cam is forced against the said cart-body and produces an efficient lifting action upon the cart-body preparatory to the dumping of the same.

A reinforcing angle-iron 14 is extended all around the upper edge of the dumping cart-body, and upon said reinforcing angle-iron rests an open rectangular frame consisting of side bars 15 and front and rear end bars 16 and 17, respectively, each of said bars forming the rectangular frame being of angle-irons having a downwardly-depending flange 18, as shown clearly in Fig. 3. Upon the front bars 16 and rear bars 17 of the frame 15 are supported end walls 19 and 20, preferably formed with inclined side edges, as shown in Fig. 3. At the top these end walls are centrally connected by a rod 25, running lengthwise of the cart-cover, which rod serves as a pintle, upon which are mounted by hinges 26 a pair of angular hoods 47, one covering one half the top of the cart-body and the other the other half. Each one or both of the said hoods may be swung upon the rod 25 into a position up above the hinge connection 26 on the said rod, such position of the hoods permitting the loading of the cart-body from either one or both sides, as required. Each hood consists of a top 27, which is hinged to the rod 25, an inclined side 28, and ends 29, integral with said top hinged portion, the ends 29 inclosing the end walls 20 of the cover-frame, as shown in Fig. 3, when the hoods are down in closed position. The end walls of each hood cooperate with the end walls 19 and 20 of the cover-frame to shield the contents of the cart-body from the blowing and disturbing action of the wind thereon. The end walls 20 of the cover are provided with threaded studs 31, (shown in Fig. 3,) which project through arc-shaped slots 48, formed in the ends 29 of the hoods, said slots 48 being concentric with the pintle-rod 25. Handle-nuts 33 are fitted upon the studs and may be screwed upon said studs and caused to bear upon the hood ends 29 and clamp them firmly to any position to which they may be set. Handholds 34 below the handle-nuts 33 may be provided at each end of the hood ends to furnish a grip whereby the hoods may be lifted.

The dumping mechanism and the construction of the hoods forming the cover of the cart are of the same construction as that shown in the prior patent referred to.

Instead of automatically lifting the cover-frame, with its hoods 47, by the dumping opera-

tion of the cart-body 3 a separate improved mechanism independent of the cart-body is arranged for the purpose of raising the cover. This improved lifting mechanism consists of two arms 35, which extend from the horizontal shafts 48 to the rear end of the cover-frame, said arms being provided at their upper ends with antifriction-rollers 49, that are adapted to engage the bottom angle-irons 15 of the cover, as shown in Fig. 1. The lower ends of the arms 35 are supported on short shafts 36, journaled in bearings 50, attached to the under side of the horizontal shafts or arms 48 of the running-gear. Said short shafts 36, with the arms 35, each carries at its outer end a gear-segment 37, that meshes with a pinion 38. The pinions 38 are preferably placed on the crank-shaft 6, by which the cart-body 3 is dumped, so that by the turning of the crank and shaft the pinions 38 mesh with the segmental gears 37, impart motion to the arms 35, and produce thereby a tilting or lifting of the body of the cover away from the upper edge of the cart-body and the simultaneous tilting of the dumping cart-body by the dumping mechanism before described. The base-frame 51 of the cover is extended in forward direction beyond the end walls 19 and 20 of the cover-frame and pivotally connected to upright rods 39, that are guided in hollow tubular pillars 40. Between a collar 52 at the lower end of each rod 39 within the tubular pillar and the top cap 53 of each said pillars are interposed helical springs 42, which by their pressing action on said rods 39 assist the arms 35 in lifting the cover and hoods from the cart-body when the dumping operation is being performed, but which springs are compressed and set to tension between the collars 52 and caps 53 of the pillars 40 when the cart-body is lowered into carrying position, and thus permit of the lowering of the cover and hoods into place thereon. The ends 51 of the cover-frame are connected by a transverse rod 41, as shown in Fig. 4, while the lower ends of the pillars 40 are attached to the running-gear shafts 48. The spring-cushioned rods 39 serve for two purposes: first, for holding the cover in proper relation to the dumping cart-body, and, secondly, for facilitating the easy and convenient lifting of the cover away from the cart while the latter is being tilted and dumped. As the cover is lifted by the action of the arms 35 and spring-cushioned rods 39 entirely independent of the cart-body, the cart-body may be dumped with great facility, while the cover is held by the supporting-arms in raised position, as shown in Fig. 3, so as to readily assume its normal position on the cart-body 3 when the latter is returned by its tilting mechanism into its initial normal carrying position on the running-gear.

My improved lifting mechanism for the cover relieves the dumping cart-body from

all strain or pressure consequent upon the operation of lifting the cover while dumping and improves to a great extent the operation of the ash-cart heretofore patented by me and
5 results in giving greatly-increased usefulness to this type of ash-cart.

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

10 1. An ash-cart, comprising a running-gear, a cart-body pivoted thereon, and provided with longitudinal side rails, means for dumping or tilting the cart-body, a cover supported on said cart-body, and pivotally connected at its front end with the running-gear, and means
15 independent of the cart-body adapted to act on the side rails of the cover for lifting the latter while the cart-body is being dumped, substantially as set forth.

20 2. An ash-cart, comprising a running-gear provided with shafts, a cart-body pivoted thereon, means for dumping or tilting said cart-body, a cover for said body, the frame of which is pivotally connected at its front end with said shafts, arms acting on the sides of
25 the cover, and means for oscillating said arms so as to lift the cover independently of the cart-body while the latter is being dumped, substantially as set forth.

30 3. An ash-cart comprising a running-gear provided with shafts, a cart-body pivoted thereon, means for dumping or tilting said

cart-body, a cover supported on said cart-body, and pivotally connected at its forward end on the shafts of the cart-body, hollow tubular pillars supported on the running-gear
35 in front of the cart-body, spring-cushioned rods guided in said pillars and pivoted to the front ends of the cover-frame, and means independent of the cart-body cooperating with the spring-cushioned rods pivoted in front of
40 the cover for raising the same, substantially as set forth.

4. An ash-cart comprising a running-gear, a cart-body pivoted thereon, and provided with longitudinal side rails, means for dump-
45 ing said cart-body, a cover resting on said cart-body, arms pivoted to the shafts of the cart-body and provided with antifriction-rollers engaging the side rails of the bottom frame of the cover, segments on the pivots of the
50 arms, a crank-shaft, and pinions on said crank-shaft meshing with said segments for oscillating the lifting-arms and raising or lowering the cover while the cart-body is being dumped,
55 substantially as set forth.

In testimony that I claim the foregoing as my invention I have signed my name in presence of two subscribing witnesses.

JOHN C. LEHR.

Witnesses:

PAUL GOEPEL,

HENRY J. SUHRBIER.