

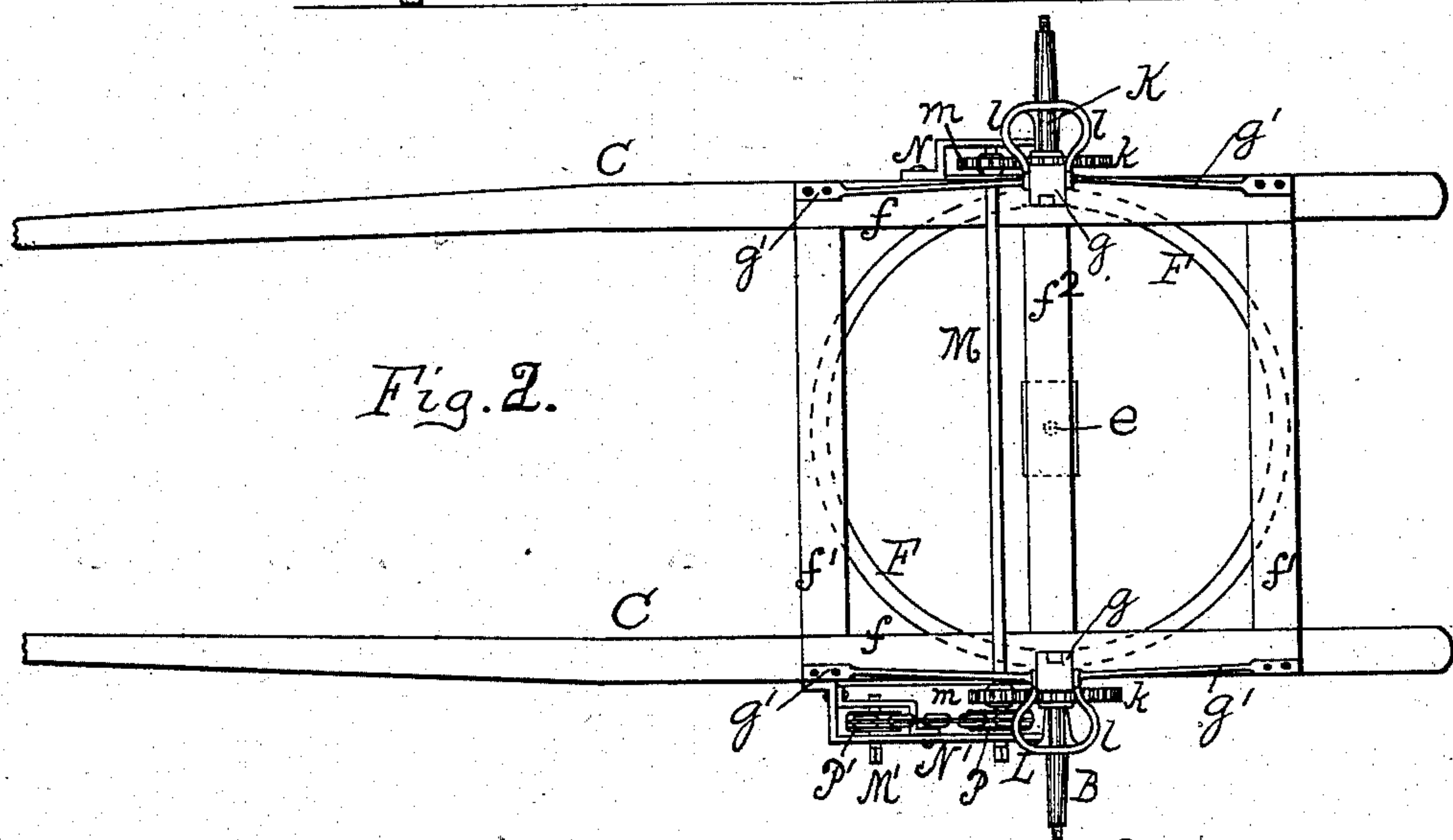
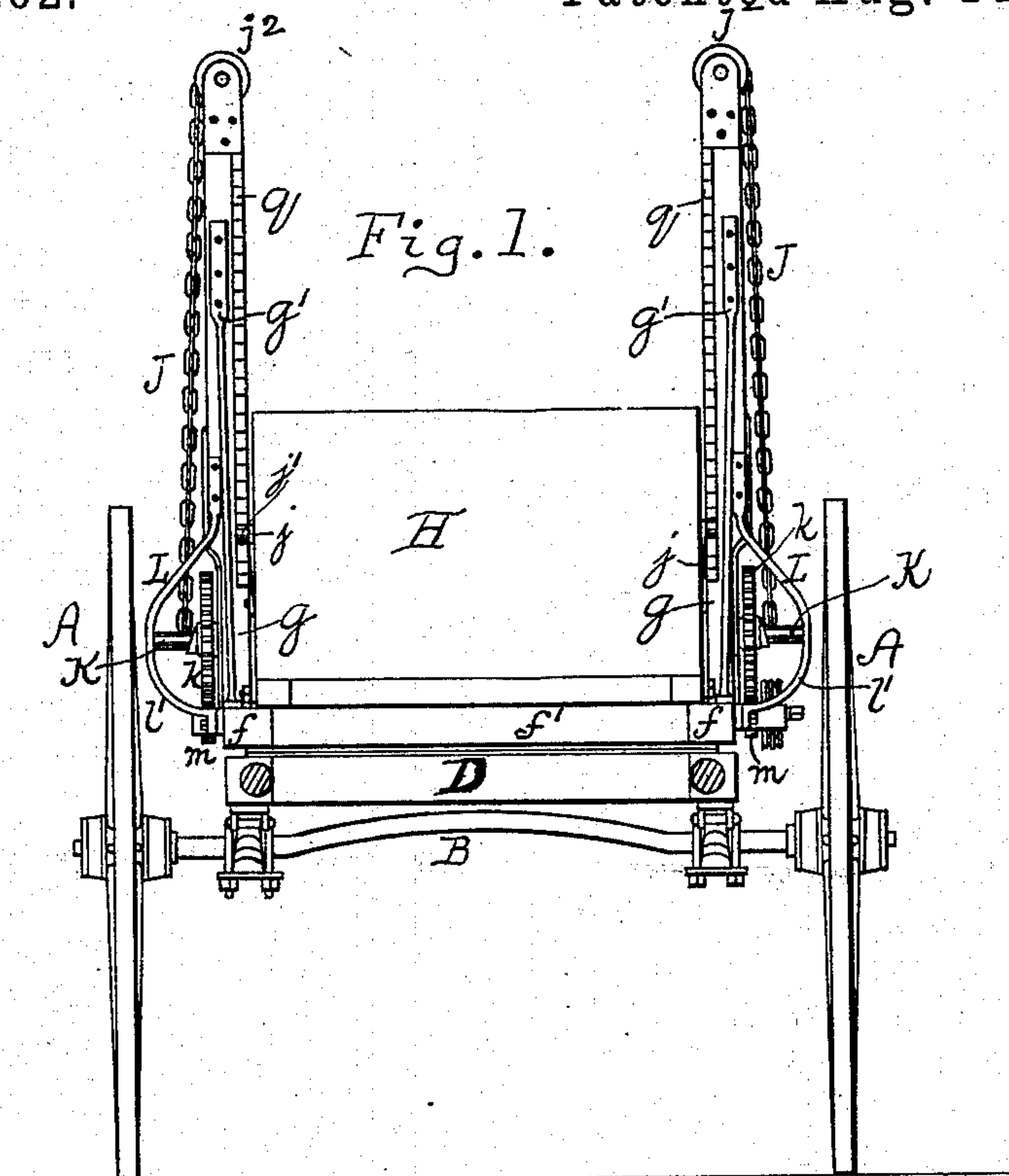
(No Model.)

2 Sheets—Sheet 1.

W. & J. H. LEONHARDT.
DUMPING WAGON.

No. 283,262.

Patented Aug. 14, 1883.



Witnesses
Geo. H. Fietel
W. J. Brashears

W^m LEONHARDT } Inventors
J. H. LEONHARDT }
per *Brashears & Williams*
Attorneys

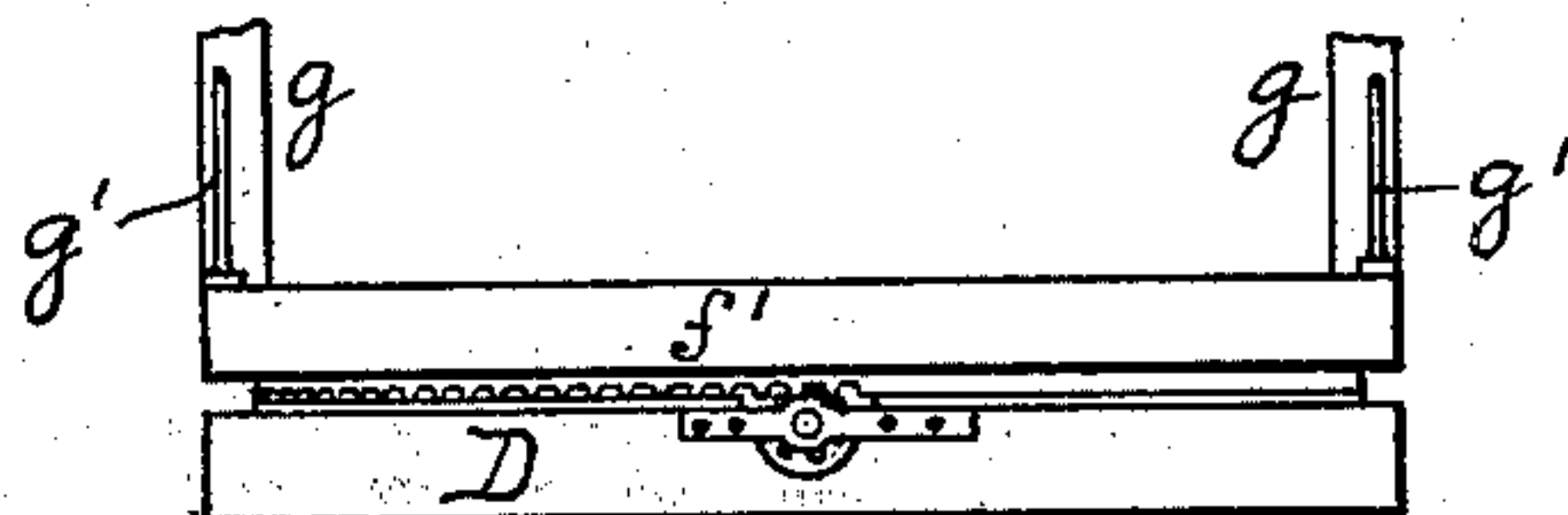
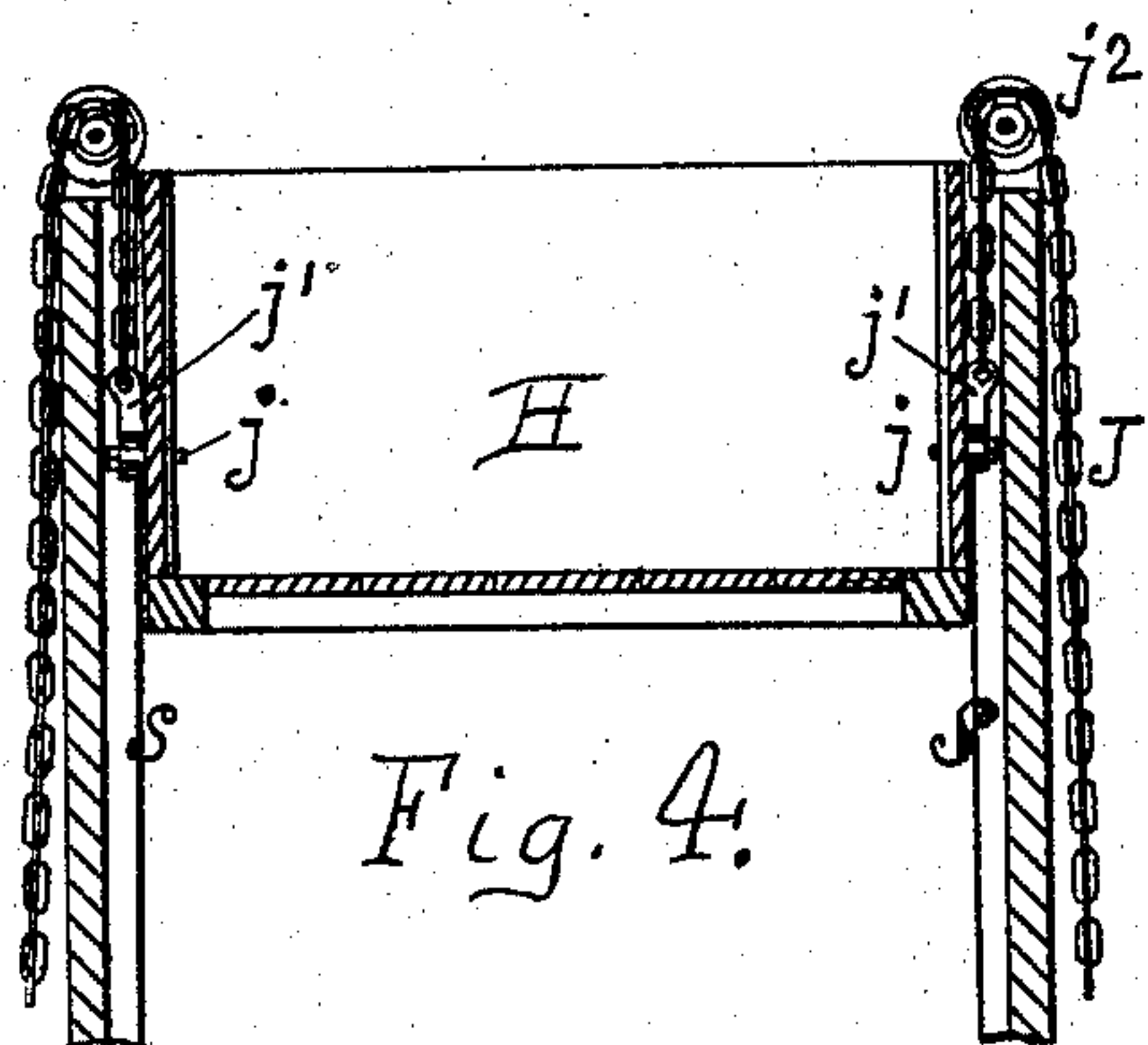
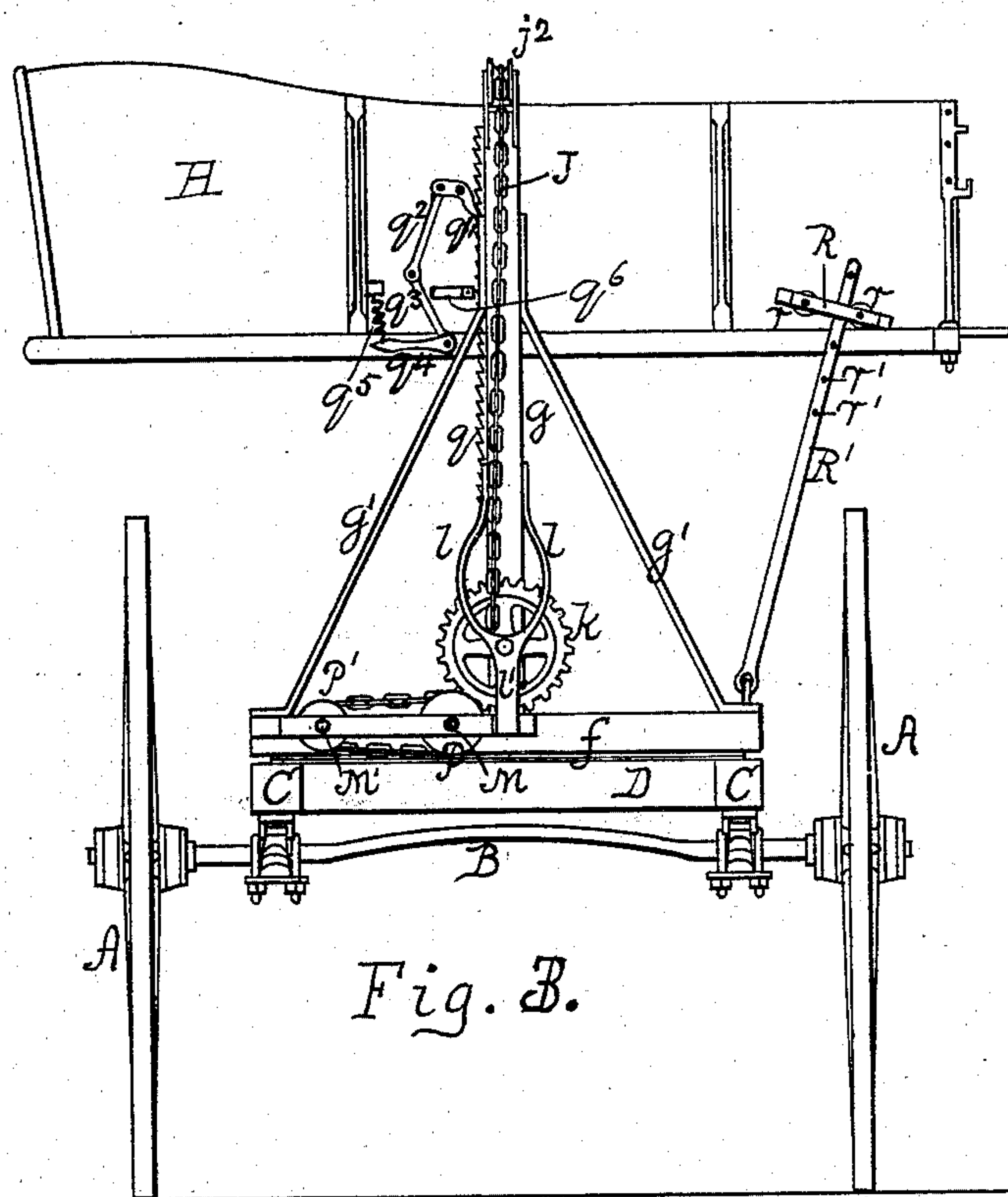
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WM LEONHARDT

J.H. LEONHARDT

Per

Inventors

Brashears & Williams

Attorneys

Witnesses

Geo. A. Pistol

W. J. Brashears

UNITED STATES PATENT OFFICE.

WILLIAM LEONHARDT AND JOHN H. LEONHARDT, OF BALTIMORE
COUNTY, MARYLAND.

DUMPING-WAGON.

SPECIFICATION forming part of Letters Patent No. 283,262, dated August 14, 1883.

Application filed June 15, 1883. (No model.)

To all whom it may concern:

Be it known that we, WILLIAM LEONHARDT and JOHN H. LEONHARDT, of Baltimore county, Maryland, have invented certain new and useful Improvements in Dumping Carts or Wagons, of which the following is a specification, reference being had to the accompanying drawings, forming part hereof, in which—

Figure 1 is a rear view of the cart or wagon with the body lowered. Fig. 2 is a plan view with the body removed. Fig. 3 is a rear view with the body raised above the wheels and turned ready to be dumped at right angles thereto. Figs. 4 and 5 are detail views, Fig. 4 being a partial section showing the body, the uprights, and raising-chains; and Fig. 5, a fragmentary view, showing means which we sometimes use in turning the body and its supporting-frame or turn-table.

Like letters of reference mark the same parts in all the figures.

Our invention relates to that class of wagons and carts in which the body is raised and dumped, allowing the contents to run out through a chute, and which are generally used to pass coal directly into buildings without the necessity of dumping on the sidewalk and then shoveling it in, and has for its object to furnish an improved cart or wagon, the body of which may be raised above the wheels, turned at an angle thereto, and emptied, the object being to permit of the dumping through the chute in narrow streets and alleys, and between car-tracks and the sidewalk, in an expeditious manner; and to this end our invention consists of certain improved constructions, arrangements, and combinations of devices, which will be first fully described hereinafter, and then pointed out in the claims.

Referring to the drawings by letter, A A are the wheels, B the axle, and C C the shafts of a cart, which parts have no peculiarity in their construction.

The shafts are joined by cross-pieces D D, which make with the shafts a rigid frame-work, upon which rests a turn-table arranged to rotate on a central point, *e*, and moving on a fifth-wheel, F. This turn-table may be rotated by hand or by any suitable mechanism—

as, for instance, by means of a rack and pin-

ion and crank, as shown in Fig. 5, and may slide around as does the ordinary fifth-wheel of a wagon; or, if necessary, anti-friction rolls may be interposed to facilitate the movement.

The turn-table is composed of a square frame whose sides are equal in length with the width of the shaft-frame, the four sides being marked, respectively, *f f* and *f' f'*. A central cross-piece, *f²*, is also provided, to which the pivot *e*, upon which the turn-table rotates, is attached. This central beam or cross-piece is directly over the axle when the parts are in the position shown in Figs. 1 and 2. An upright, *g*, rises from each of the sides *f f* of the turn-table, which are properly stayed by braces *g'*, extending to the sides *f f*.

H is the body of the cart or wagon. It is provided with bearings for pivots *j*, attached to the ends of chains J by means of links *j'*. These bearings are centrally placed longitudinally of the body, and serve as the points of suspension when the body is raised, as will be now explained. The chains J extend from the pivots upward over pulleys *j²*, journaled in the upper ends of the uprights *g*, and from thence downward on the outside of said uprights to drums or shafts K. These drums are mounted at their inner ends in the uprights *g*, and their outer ends in brackets L, which brackets consist of two arms, *l*, secured to the sides of the uprights *g*, which arms extend downward and outward, and, joining together near their mid-length, form a single arm, *l'*, which is secured to the side bars of the turn-table and contain the bearings for the outer ends of the shafts or drums K, as aforesaid. The division of the upper ends of these brackets into two arms permits of the chains passing directly down from the upper ends of the uprights to the shafts or drums between these arms. The shafts K carry gear-wheels *k*, which mesh with pinions *m* on a shaft M, which is mounted in the frame-work of the turn-table and in bracket-bearings N N', secured to the outside thereof. The bracket N' contains also bearings for two chain-wheels, P P', the former of which is on the shaft M and the latter on a short shaft, M', which is provided at its outer end with a squared portion to receive a crank for the purpose of turning it.

One side of each of the uprights g is provided with a ratchet, q , with upward-pointed teeth, to engage a pawl, q' , pivoted to the side of the body, and being connected beyond the pivot with the upper end of a link, q^2 , whose lower end is connected to the arm q^3 of an elbow-lever pivoted at its angle to the body, the other arm, q^4 , extending horizontally, and is held normally in its lowest position, to keep the pawl normally engaged with the ratchet by a spring, q^5 . When raised to disengage the pawl, the elbow-lever engages, by friction, with the spring q^6 , and is held in such position until returned by hand.

On the side of the body, near its rear end, is a loop, R , (carrying roller r ,) through which passes a bar, R' , perforated at intervals, as at r' , to receive a pin to regulate the angle to which the body shall be dumped, said bar being pivoted at its lower end to the frame of the turn-table.

It will be observed that all tendency of the body to swing longitudinally is prevented by means of grooves in the inside of the uprights, in which the pivots move. These grooves may be lined or faced with metal, if desired, to prevent wear, and rollers may be attached to the body to prevent binding by reason of any giving of the uprights toward each other.

The upper portion of the uprights which carry the body may be hinged to lie down on the body, if desired, so that the vehicle may pass under any obstruction that might interfere with it were this not the case, and in this construction a slip-bolt will be used to stiffen the uprights when raised.

The operation of our device is as follows, viz: The body being loaded and in its lowest position, and it being desired to dump it in, it is raised by turning the crank and winding the chains on the drums until the proper height is reached, the pawl and ratchet being always in engagement and preventing a descent should the chain or any of the shafts or gear break, when the angle of the body is fixed by the regulating-bar and the coal or other load is allowed to run out into a chute in a manner well known. Should the position of the cart or wagon be such—as, for instance, in a narrow alley, or in a street between the car-tracks and the curb—that it is impossible to dump the load in the rear, the mode of procedure will be changed in this respect, viz: When the body has been raised sufficiently high to clear the wheels, the turn-table will be turned within the wheels, carrying with it, above the wheels, the loaded body, until the body is at the desired angle, and then the angle is fixed and

the load allowed to pass out as before. It will be seen that the only part which projects beyond the wheels is the body, all the turning mechanism being entirely within them, and that all the mechanism for raising and turning is simple and strong and not liable to break or get out of order. The advantage of being able to dump at an angle need not be more than mentioned, being obvious.

Having thus fully described the construction and operation of our invention, what we claim as new, and desire to secure by Letters Patent, is—

1. The combination, in a dumping-wagon, of the body, a turn-table provided with a standard on each side, raising mechanism, substantially as described, carried by said turn-table, and the main frame upon which said turn-table is pivoted, the turn-table and raising mechanism operating entirely between the wheels, as set forth.

2. In combination with the main frame of a dumping-wagon, a frame thereon and having an upright at each side, carrying a grooved wheel at its upper end, the body, a pivot journaled in each side thereof, a chain attached to each pivot and passing over the grooved wheel, and means, substantially as described, for winding up the chain and thereby raising the body, as set forth.

3. The combination, with the main frame carrying the uprights and groove-pulleys, the body, its pivots, the chains, and its winding mechanism, of mechanism, substantially as described, for retaining the body at any height to which it may be raised, as set forth.

4. The combination, with the main frame, the body, and its raising mechanism, of the pawl-and-ratchet mechanism described, for the purpose set forth.

5. The combination, with the main frame, the turn-table, the uprights and their pulleys, the body, its pivots, the chains, and their winding mechanism, of mechanism, substantially as described, attached to the turn-table and engaging with the body, whereby the angle of the body in dumping may be regulated without regard to the angle to which it is turned, as set forth.

In witness that we claim the foregoing we have signed our names to this specification in the presence of two witnesses.

WILLIAM LEONHARDT.
JOHN H. LEONHARDT.

Witnesses:

SHIPLEY BRASHEARS,
GEO. H. PISTEL.