

No. 622,702.

Patented Apr. 11, 1899.

J. B. MOWRY.
REFUSE WAGON.

(Application filed Oct. 24, 1898.)

(No Model.)

3 Sheets—Sheet 1.

Fig. 1.

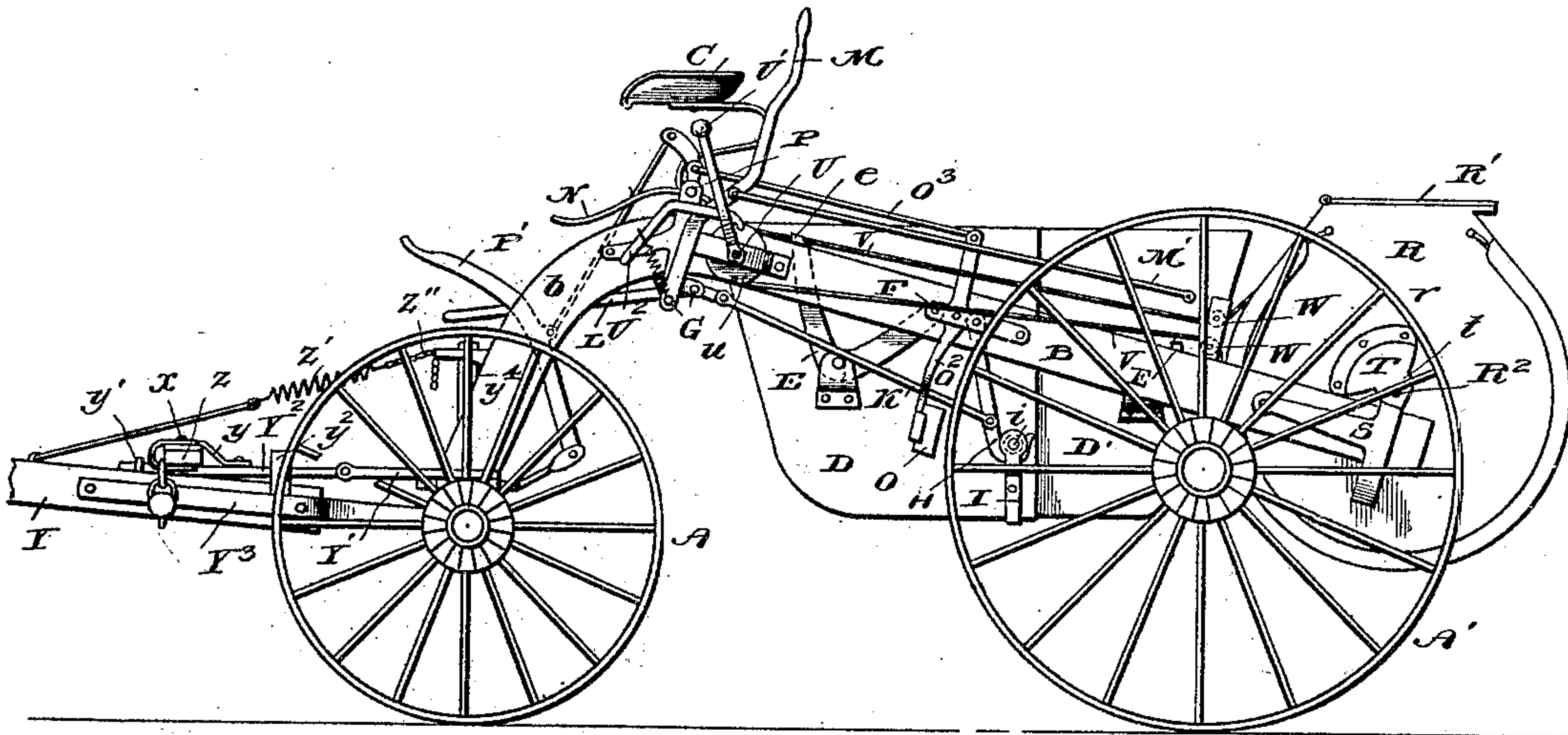
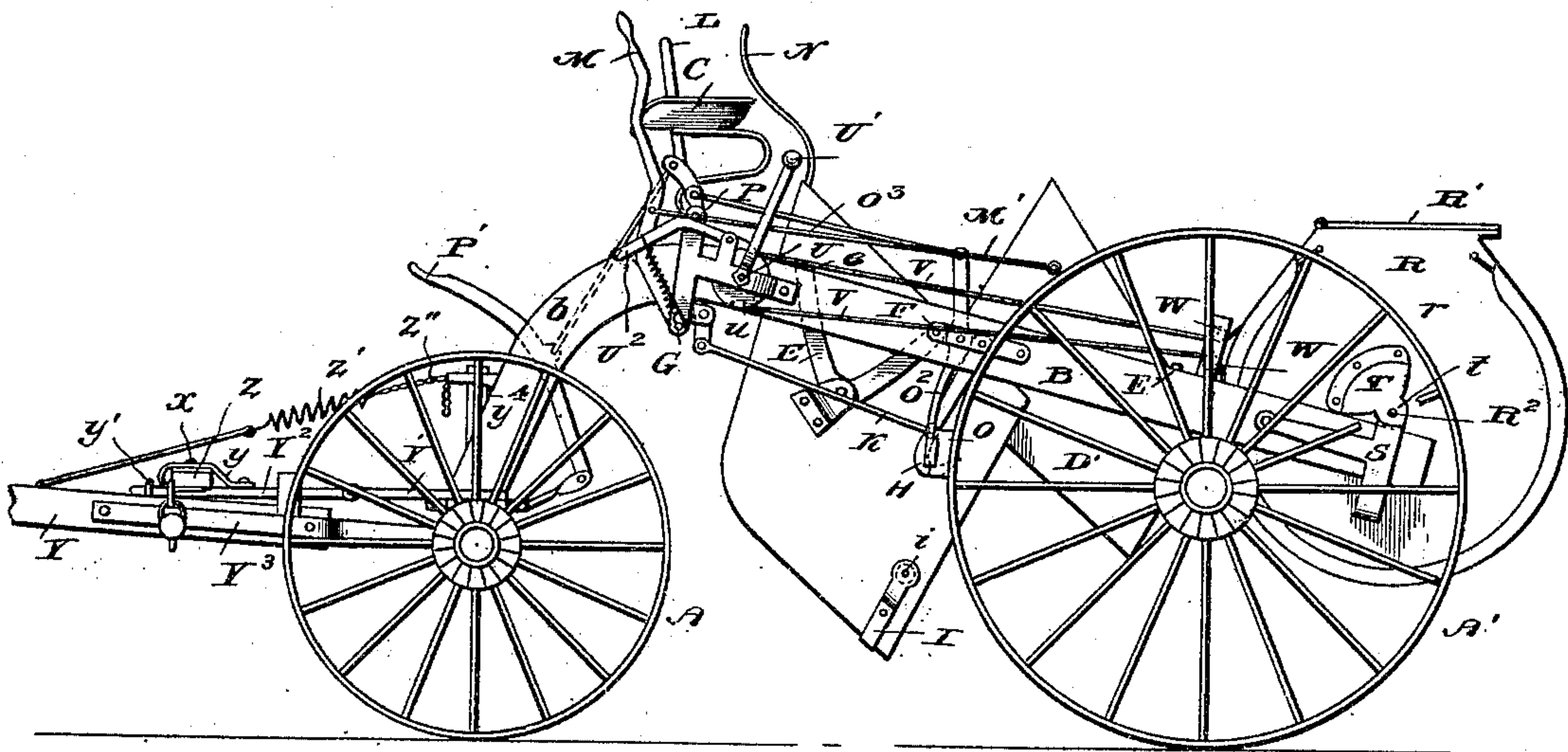


Fig. 2.



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Fig. 3.

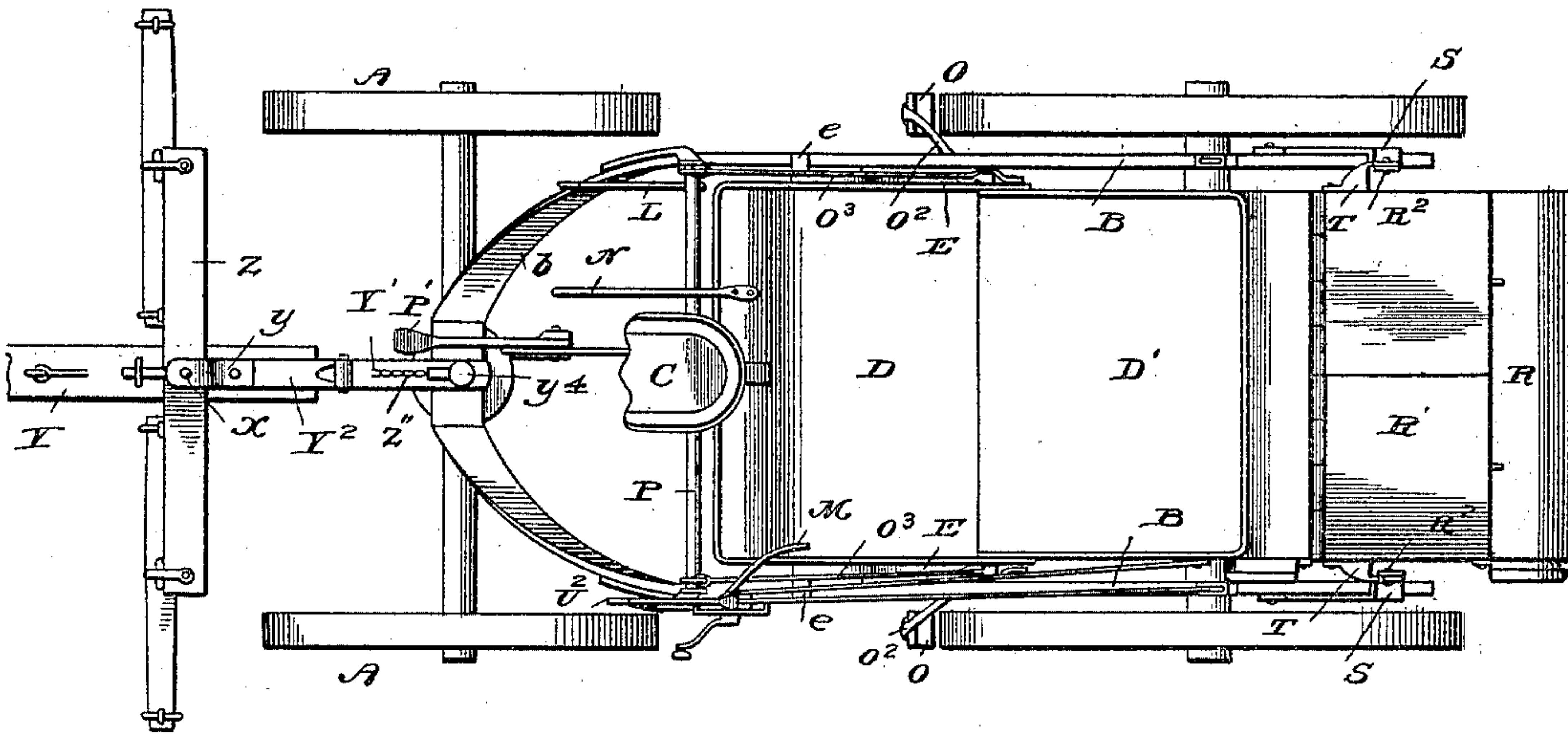
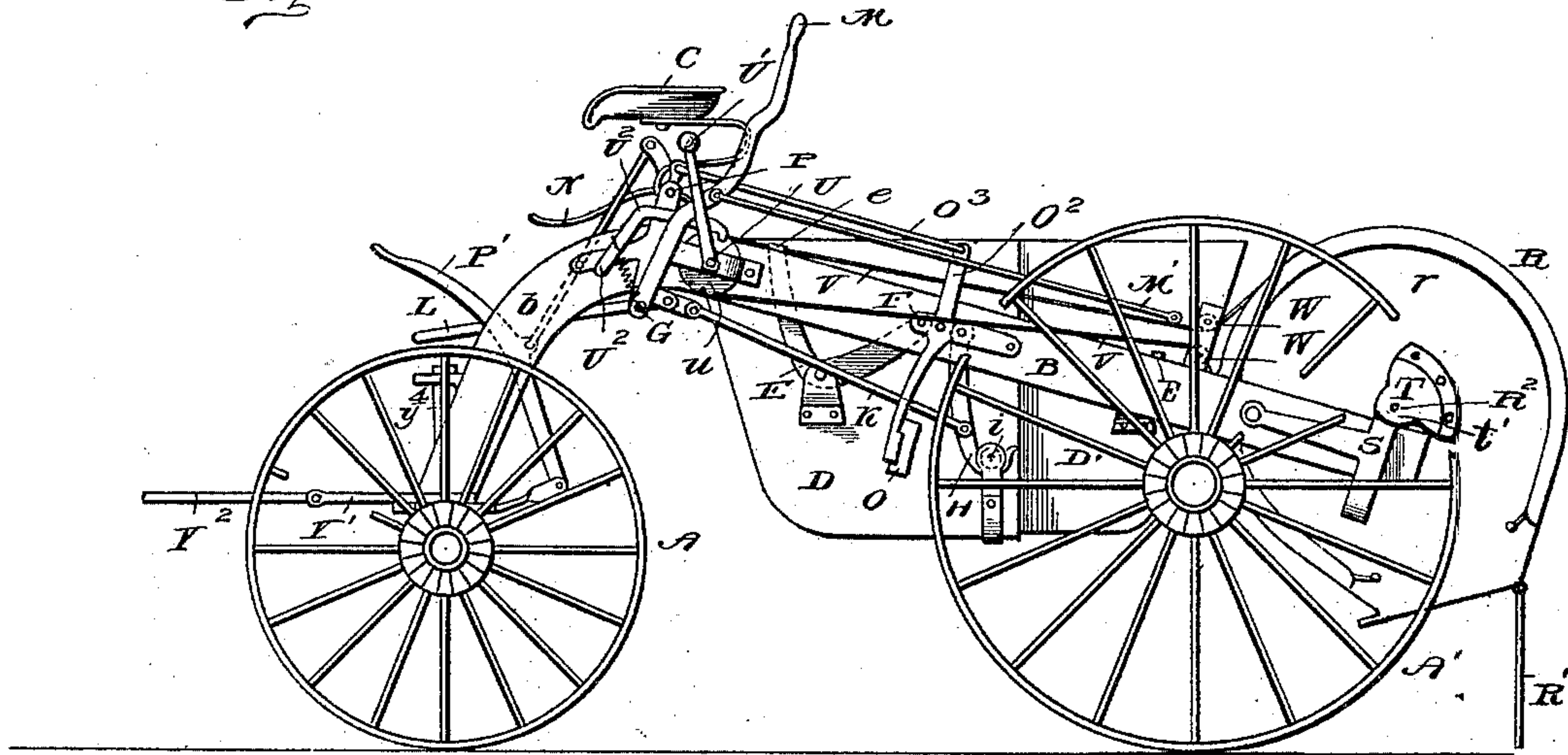


Fig. 4.

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3 Sheets—Sheet 3.

Fig. 5.

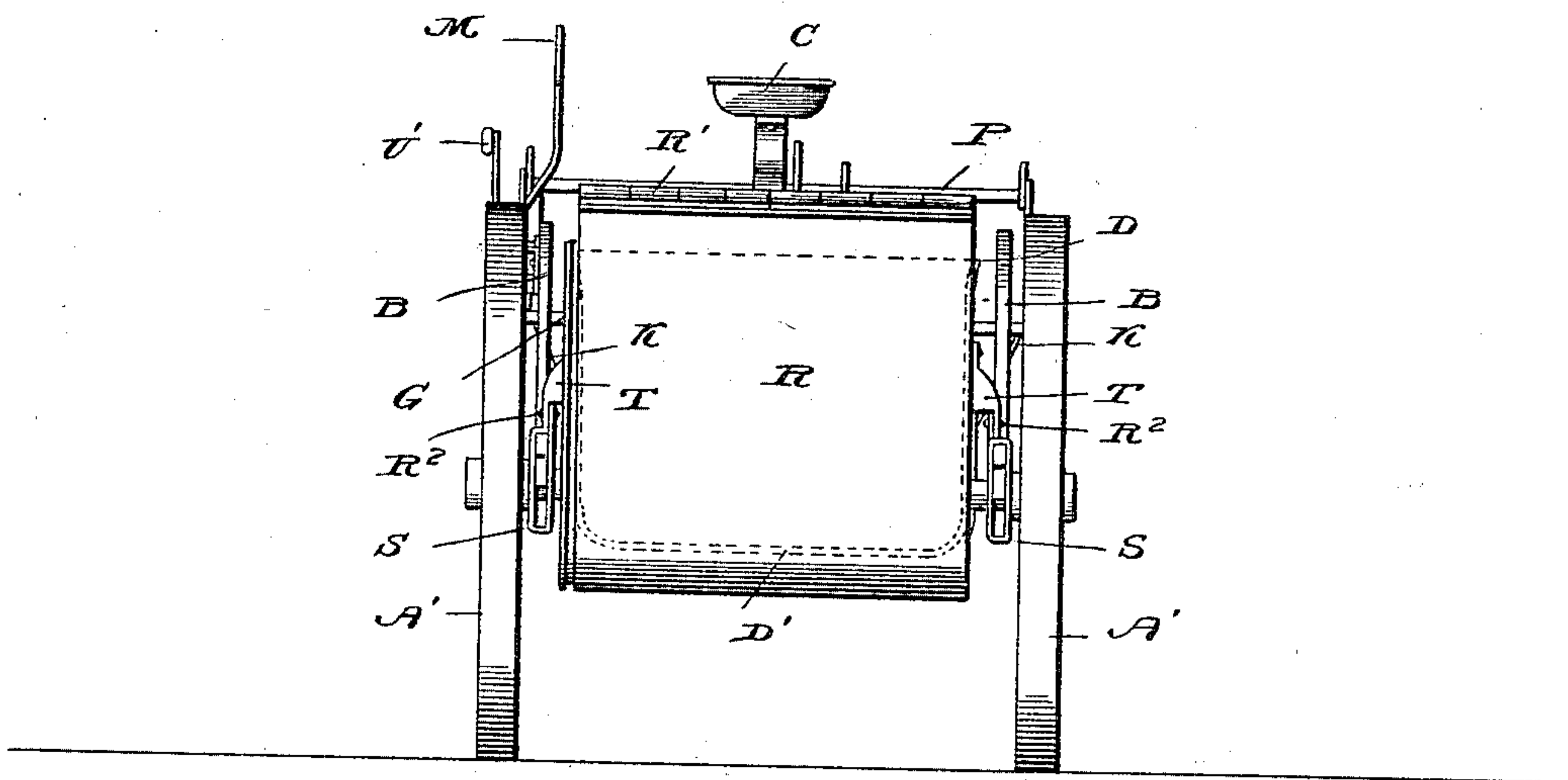
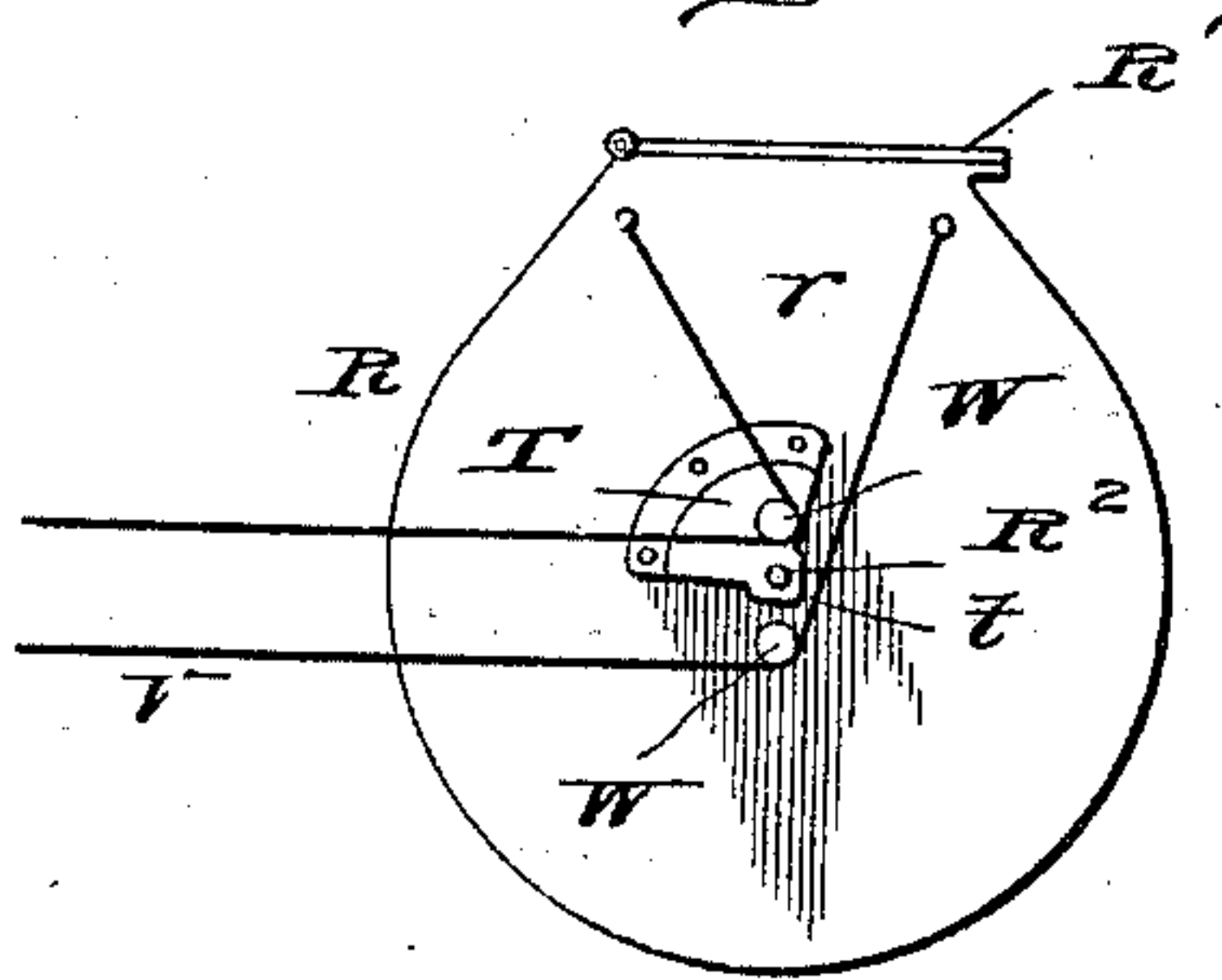


Fig. 6.



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UNITED STATES PATENT OFFICE.

JOSEPH B. MOWRY, OF MANSFIELD, OHIO.

REFUSE-WAGON.

SPECIFICATION forming part of Letters Patent No. 622,702, dated April 11, 1899.

Application filed October 24, 1898. Serial No. 694,452. (No model.)

To all whom it may concern:

Be it known that I, JOSEPH B. MOWRY, a citizen of the United States, residing at Mansfield, in the county of Richland and State of Ohio, have invented certain new and useful Improvements in Refuse-Wagons; and I do hereby declare the following to be a full, clear, and exact description of the invention, such as will enable others skilled in the art to which it appertains to make and use the same.

My invention relates to improvements in garbage or refuse wagons.

The object of the invention is to provide a light and durable wagon adapted to hold or convey both such refuse as ashes, street-sweepings, &c., and garbage with means by which either receptacle or compartment thereof may be quickly moved to such a position as to automatically discharge its contents and readily returned to its former position.

I have illustrated one embodiment of my invention in the accompanying drawings, in which—

Figure 1 is a side elevation of a refuse-wagon embodying my improvements, the parts being arranged in the positions occupied when the wagon is in use. Fig. 2 is a similar view showing the parts arranged to dump the contents of the forward compartment of the wagon. Fig. 3 is a view similar to Fig. 1, but showing the tank or garbage-receptacle at the rear of the wagon in the position assumed when discharging its contents. Fig. 4 is a plan view, the parts being arranged as in Fig. 1. Fig. 5 is a rear elevation. Fig. 6 illustrates a slight modification in the arrangement of the cable for adjusting the garbage-tank.

In the drawings, wherein like letters of reference designate corresponding parts in the several figures, A A' designate, respectively, the front and rear ground-wheels of my improved wagon. These wheels are mounted on suitable axles, which are connected with the main frame, consisting of two longitudinally-extending metallic bars B. These frame-bars B are preferably made in the form shown, being bowed or curved upwardly near their front ends, as at *b*, and then extending downwardly toward the rear of the wagon. By this arrangement the driver's seat C, which is mounted on a cross bar or plate connecting

said frame side bars near their highest points, is elevated sufficiently to bring it above the body of the wagon and into such a position that the driver sitting thereon can control the levers by which the forward compartment or receptacle of the wagon is caused to discharge its load and also can adjust or vary the position of the rear garbage-receptacle, as may be desired.

The wagon comprises two receptacles, a forward open sectional one adapted to receive such material as ashes, street-sweepings, and other relatively dry refuse and a rear tank provided with a hinged cover and specially intended for the reception of garbage.

The forward receptacle consists of two sections, each independently pivoted to the main-frame bars B, the forward end of the rear section D' of this receptacle being adapted to extend slightly within the rear end of the forward section D when the parts are in position to receive or carry a load. The sections D D' are not pivoted directly to the bars B, but are carried by angle plates or bars E. These bars are riveted or otherwise secured to the sides of the section of the receptacle which they are to support, and one arm of each is pivoted to the adjacent frame-bar B, as at F. The other end of each of said angle-bars E is bent outwardly to form a flange or lip *e*, which extends across the upper edge or side of the adjacent carrying-bar B, and when the sections are in working position such flanges contact with the upper sides of the said carrying-bars B, and thus relieve the pivots F of the strain and weight of the load placed in the receptacle formed by said sections.

The sections D D' are retained and securely locked in their working positions and relations by means of locking devices mounted on the side bars B of the frame and adapted to engage with the forward section D. In the embodiment of the invention herein illustrated this locking is effected by means of two pivotally-mounted hook-shaped locks (one arranged on each side of the section D) and both connected with a rock-shaft G, mounted in bearings arranged beneath the curved portions *b* of the side frame-bars. Each of these hooks H is pivoted at its upper end to one of the bars B, and its lower hooked free end is adapted to engage with a stud or

lug projecting laterally from the section D near its rear end. Preferably the projection on the section is made in the form of a roller arranged to move about an axis at *i* and situated between the body of the section D and a reinforcing strap or band I. To the hook H, at an intermediate point of its length, is connected one end of a rod or link K, the forward end of which is connected to the afore-said rock-shaft G. To the latter is connected an operating lever or arm L, which extends forward beyond the driver's seat C, as shown. When the hooks H are disengaged from the section D through the operation of the shaft G, the rear section D' can be positively rocked about its pivotal connection with the frame-bars B by means of a lever M. This lever is shown as arranged at the right-hand side of the wagon, being pivoted or fulcrumed on a lug or plate extending downwardly from the frame-bar B on that side. M' designates a rod which is connected at its forward end to said lever M and at its rear end is connected to the side of the rear section D' of the forward receptacle of the wagon. As will be seen, the point of connection of the link M' with the section D' is considerably above the axis about which said section is adapted to rock, so that but a relatively short movement of the lever M is sufficient to adjust the said section in such manner that all of the material theretofore supported thereby will escape.

To assist in adjusting the forward section D about its pivotal supports, use may be made of an arm or handpiece N, which is securely fastened to the front wall of such section and projects forward therefrom, so as to be accessible to the driver while in the seat C.

Brake-shoes O are provided for engaging with the rear supporting-wheels A', each of said shoes being carried by a lever-arm O², which is pivoted at or near its middle to the adjacent side frame-bar B. The upper ends of the levers O² are connected by means of links O³ with a rock-shaft P, mounted in bearings extending upward from the side bars B. A foot-lever P' is provided for actuating the shaft P and applying the brakes O.

R designates the garbage receptacle or compartment of my improved wagon. This is preferably made of sheet metal and of the form shown, it having the curved bottom formed integral with the front and back walls, which are inclined toward each other from their lower toward their upper ends, the end pieces *r*, and the hinged cover R'. The tank-like receptacle thus formed is pivotally supported upon the frame-bars B, and suitable means are provided by which it can be held at either of several adjusted positions. As shown, the receptacle R is not pivoted directly to the bars B, but to castings S, which are secured to and arranged to extend across both the inner and outer faces of said side bars. Nor are the pivots R², about which the garbage-receptacle is adapted to vibrate, secured directly to the end walls *r*. Instead

pivot-plates T are secured to said end walls, such plates being of the form shown and having a reduced portion *t*, which extends across and is pivoted to the upwardly-projecting lugs of the adjacent casting S. The plates T are of such form as to engage with or contact against the side frame-bars B, and they thereby act or serve as stops to limit the movement of the receptacle R about its pivots.

U designates a winding shaft or spool which is mounted in suitable bearings formed on the outer side of one of the side frame-bars B. A crank or handle U' is provided for turning this spool, and it is also provided with a peripherally toothed or notched locking-disk *u*. A spring-controlled pawl or dog U² is provided for engaging with the wheel or disk *u* and holding it stationary.

V designates a cable which is wound about the spool U and has its ends connected to the garbage-receptacle R on opposite sides of the pivot-axis thereof. As shown, the cord or cable V extends between suitable guide-rollers W, mounted on the side frame-bar B.

By turning the crank U' in one direction the tank R will be rocked or vibrated about its axis to bring its top into a substantially horizontal position, as indicated in Fig. 2, and by turning the said crank U' in the opposite direction the receptacle R will be moved into the position shown in Fig. 3 and its contents automatically discharged. While being loaded, the receptacle is arranged in a preferably inclined position, as shown in Fig. 1.

By reference to Figs. 2 and 3 it will be seen that the castings S at the ends of the garbage-receptacle are of such shape as to contact with the upper edges or sides of the frame-bars B both when the said receptacle is in its loaded vertical position and when it is in position to discharge its load.

In Fig. 6 of the drawings I have illustrated a slightly-modified arrangement, in which the cable guide-rollers W' are arranged adjacent to the ends *r* of the garbage-receptacle instead of at a point between such receptacle and that composed of the sections D D'.

The manner of using my improvements has been hereinbefore described, and the advantages possessed by such a construction and arrangement as I have invented will be apparent.

It will be seen that the weight of the wagon is reduced to the minimum, that a covered readily-adjustable garbage-receptacle is provided, and that either receptacle may be emptied or adjusted without disturbing or affecting the other.

If desired, the garbage-receptacle may be quickly removed from the bars B by simply releasing the fastenings by which the castings S are attached to said bars, (a single bolt being sufficient for each casting,) when said castings and the receptacle R can be slid longitudinally off the rear ends of the bars B.

By reference to the drawings it will be

seen that I have also provided a novel construction of draft device, the tongue or pole Y being used solely for guiding, and all of the draft of the horses being exerted directly on the doubletree and frame of the machine.

Y' designates a short bar, which is provided with a passage for the king-bolt y^4 and projects forward from the frame of the wagon. At its forward end it is hinged to a bar Y^2 , to which the doubletree Z is secured. As shown, the doubletree is connected to said bar Y^2 by means of a pin x and is arranged between said bar and a keeper y . The pole Y is arranged between braces Y^3 , which extend forward from the front axle, and on the upper side of the pole is arranged an eye y' , through which the forward end of the bar Y^2 extends. Near its rear end the pole or tongue Y is provided with a guide-loop y^2 , through which the bar Y^2 extends. A spring Z' is connected with the tongue Y, and at its rear end is provided with a chain Z'', by means of which it is connected to the frame of the machine. By connecting different links of the chain Z'' with the frame the tension of the spring Z can be varied and the pole Y held at the desired angle.

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

1. In a wagon of the character described, the combination of a wheeled supporting-frame, two receptacles connected to said frame, and means extending to points adjacent to and adapted to be operated from the driver's seat for adjusting either of said receptacles, independently of any movement of the other, substantially as set forth.

2. In a refuse or garbage wagon, the combination of a wheeled supporting-frame, a receptacle consisting of two mutually-engaging sections, independently pivoted to the supporting-frame, means under the control of the driver for locking said sections against movement relative to the supporting-frame, and means, under the control of the driver, for positively adjusting either of said sections about its pivot connection with the frame when the locking means are in an inactive position, independently of any movement of the other section, substantially as set forth.

3. In a dumping-wagon, the combination of a wheeled supporting-frame, having two longitudinally-extending bars, B, a hopper-like body, consisting of two independently-movable sections each arranged between and pivoted to said bars, the rear, open, end of the forward section being adapted to receive the forward, open, end of the rear section, when said sections are in a substantially horizontal position, a pivoted lock-hook mounted on the supporting-frame and adapted to engage with and maintain the forward section in such substantially horizontal position, means adjacent to the driver's seat for disengaging said hook from the body-section, and means extending to points adjacent to the driver's

seat for positively tilting the said body-sections about their pivots, to separate the adjacent open ends thereof, substantially as set forth.

4. In a dumping-wagon, the combination of a wheeled supporting-frame having two longitudinally-extending bars, B, a hopper-like body arranged between said bars, plates or hangers secured to opposite walls of said body and each having one end pivoted to one of said frame-bars, B, and its other end bent outwardly to extend over the upper side of said bar, and means for positively locking the body to the supporting-frame and preventing movement thereof about its pivots, substantially as set forth.

5. In a dumping-wagon, the combination of a wheeled supporting-frame, having two longitudinally-extending bars, a hopper-like body arranged to fit between said bars, hangers connected at an intermediate point of their length to the sides of said body, each hanger having two upwardly-extending arms, one of which is pivoted to the adjacent side frame-bar, B, and supports the body therefrom, and the other arm having a stop adapted to engage with said frame-bar when the body is in position to receive or carry a load, and means for rocking said body about its pivots, substantially as set forth.

6. In a dumping-wagon, the combination of a wheeled supporting-frame, a body consisting of two sections, each open at one end, independently fitted to the supporting-frame, the open end of one of said sections being adapted to receive the open end of the other section and form a single hopper-like receptacle, lock-hooks mounted on the supporting-frame and adapted to engage with suitable projections on the outer body-section, a rock-shaft, a lever on said shaft accessible from the driver's seat, and rods connecting said shaft and said locking-hooks, whereby the latter can be withdrawn from engagement with the body and the open ends of the sections allowed to separate, substantially as set forth.

7. In a garbage-wagon, the combination of a wheeled supporting-frame, a tank-like receptacle connected with the supporting-frame by horizontal pivots, stops carried by said receptacle for engaging with the supporting-frame and limiting the movement of said receptacle about said pivots, and means for vibrating said receptacle either forward or back about its pivots, and holding it in any adjusted position, substantially as set forth.

8. In a garbage-wagon, the combination of a wheeled supporting-frame, mounted tank-like receptacle arranged between and pivotally connected with two bars on said frame, means for vibrating said receptacle about its pivots, and a stop-plate secured to said receptacle and adapted to contact with one of said frame-bars at both the forward and rearward limit of movement of said receptacle about its said pivots, substantially as set forth.

9. In a garbage-wagon, the combination of

a wheeled supporting-frame, a tank-like receptacle, plates or supporting-arms rigidly connected to the ends of said tank and pivotally connected with said supporting-frame, 5 a portion of one of said arms or tank-supports being so shaped and positioned as to contact with the supporting-frame at one side of the pivotal connection of the receptacle with said frame when the tank is in its loaded 10 position or in position to discharge its load, and means for adjusting said tank about its pivots and maintaining it in such adjusted position, substantially as set forth.

10. In a garbage-wagon, the combination of 15 a wheeled supporting-frame, a tank-like receptacle, pivot-plates rigidly connected with the ends of said tank, pivots connecting said plates with the supporting-frame, one of said plates being of such size as to have one edge 20 contact with the supporting-frame in advance of its pivotal connection with said frame when the tank is in its loaded position and have its opposite edge contact with the supporting-frame in rear of said connection with 25 the frame when the tank is in position to discharge its load, and means connected with the tank for adjusting it about its pivots to various positions intermediate of those afore-

said and maintaining it in such adjusted position, substantially as set forth. 30

11. In a wagon of the character described, the combination of a wheeled supporting-frame having two longitudinally-extending side bars, B, which are curved or bowed upwardly near their forward ends and inclined 35 downwardly toward the rear, an open-topped hopper-like receptacle pivotally mounted between said bars, and consisting of two independently-movable sections, another receptacle, provided with a cover, pivotally mounted 40 between said side bars, B, in rear of the said hopper-like receptacle, a driver's seat arranged above the bowed portion of said side bars, and means connected with each of said receptacles and extending forward there- 45 from to points adjacent to said seat for vibrating either receptacle about its pivots and into position to discharge its load, substantially as set forth.

In testimony whereof I affix my signature 50 in presence of two witnesses.

JOSEPH B. MOWRY.

Witnesses:

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J. S. DONNELL.