

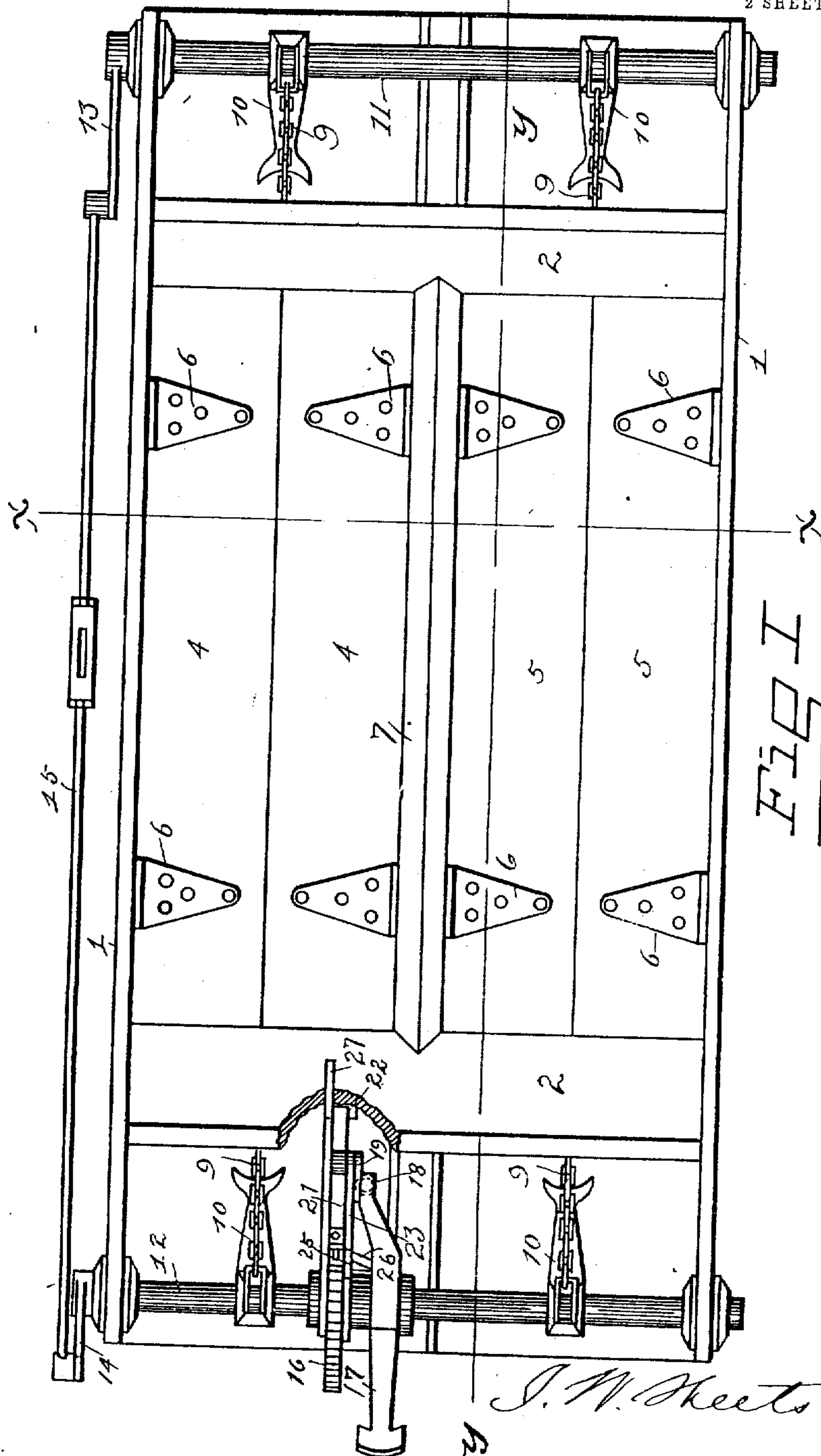
No. 834,329.

PATENTED OCT. 30, 1906.

J. W. SHEETS.  
DUMPING WAGON.

APPLICATION FILED APR. 2, 1906.

2 SHEETS—SHEET 1.



Witnesses  
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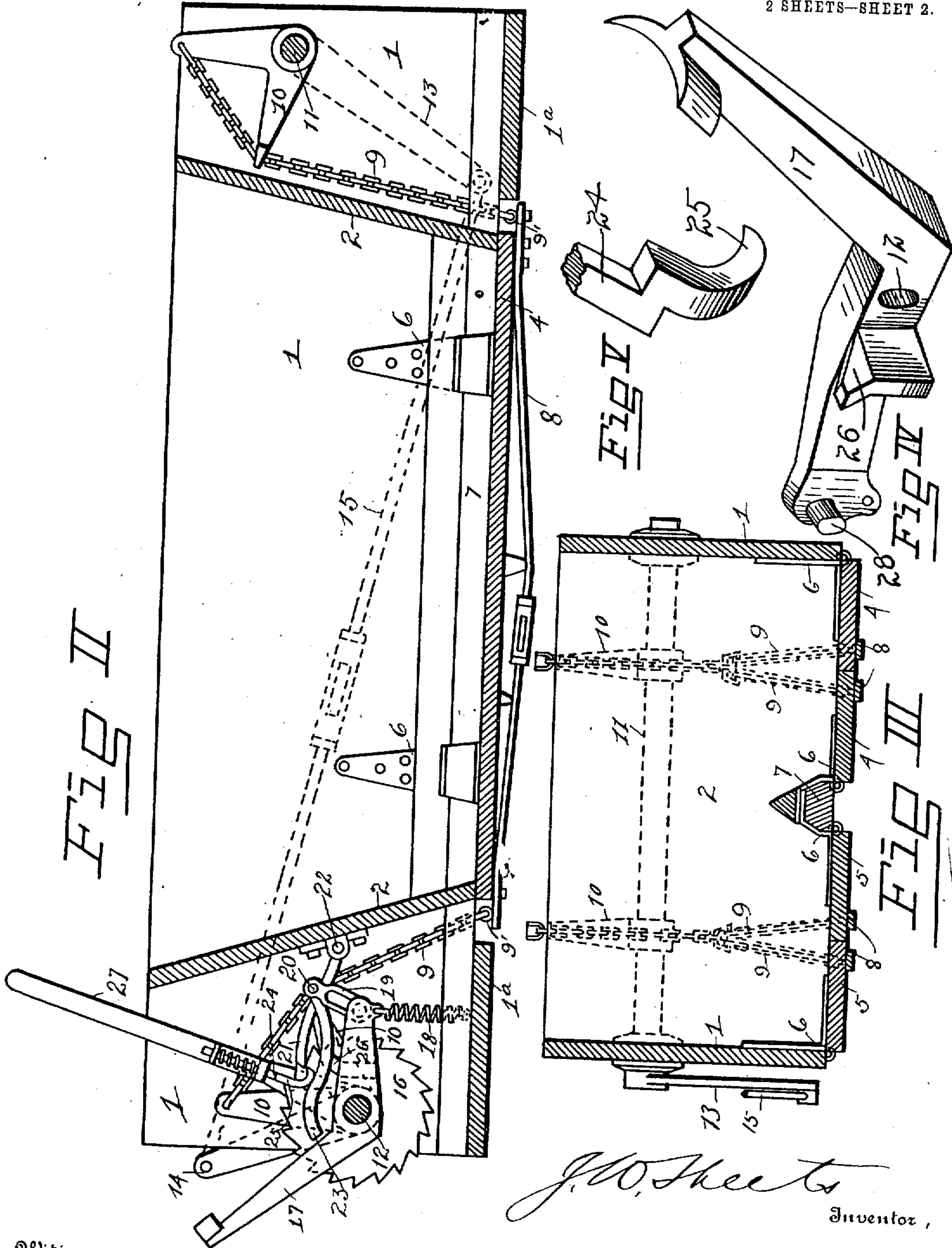
Attorney

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# UNITED STATES PATENT OFFICE.

JACOB W. SHEETS, OF DAYTON, OHIO.

## DUMPING-WAGON.

No. 834,329.

Specification of Letters Patent.

Patented Oct. 30, 1906.

Application filed April 2, 1906. Serial No. 309,336.

*To all whom it may concern:*

Be it known that I, JACOB W. SHEETS, a citizen of the United States, residing at Dayton, in the county of Montgomery and State of Ohio, have invented certain new and useful Improvements in Dumping-Wagons; and I do 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, reference being had to the accompanying drawings, and to the figures of reference marked thereon, which form a part of this specification.

This invention relates to improvements in dumping-wagons in which the body of the wagon is provided with four downwardly-swinging bottom sections or doors which are hinged to the upright sides of the body and to a longitudinal beam which extends throughout the length of the wagon-body.

The object of the invention, primarily speaking, is to provide a dump-rigging which may be applied to any of the well-known and common forms of wagons without necessitating any changes in the structural features thereof.

A further object of the invention is to provide a dump-rigging which is easy of operation and substantial in all essential particulars.

The particular and essential characteristics of the invention will be hereinafter more particularly described in the specification and pointed out in the claims, reference being first made to the drawings, in which—

Figure I is a top plan view showing the interior side of the wagon-body and the mechanism or rigging for dumping the same. Fig. II is a longitudinal sectional view on the line *y y* of Fig. I. Fig. III is a cross-sectional view on the line *x x* of Fig. I. Fig. IV is a detached view of the foot-lever; Fig. V, an enlarged detail of the lower portion of the ratchet-pawl.

In a detail description of the invention similar reference characters indicate corresponding parts.

As hereinbefore stated, the body of the wagon requires no special construction over and above the upright sides 1 1 with the front and rear inclosing ends 2 2, the said sides 1 1 projecting the usual distance beyond the front and rear end walls 2 2 to provide suitable space for the location of the dumping-rigging placed therein. Through

the center of the body and extending longitudinally thereof is a beam 7, which is united at its ends to the stationary bottom portions 1 of the body. The swinging sections 4 and 5, forming the bottom of the wagon-body, are hinged, respectively, to this longitudinal beam 7 and to the upright sides 1 1 by means of a suitable number of hinges 6.

As seen in Fig. III, the bottom of the wagon consists of four of these swinging sections, two of which are hinged to the beam 7 and open downwardly from said beam and the other two of which are hinged to the upright sides 1 and likewise open downwardly therefrom.

8 designates a series of four truss-rods extending longitudinally of the swinging sections 4 and 5, of which there is one for each of said swinging sections. These truss-rods are rigidly secured to the under sides of said sections, with their ends projected a sufficient distance to afford a connection with the actuating-chains 9, which are secured thereto at the ends in any suitable way—such, for example, as by means of an eye 9', fixed to the ends of said truss-rods. The chains thus connected to the swinging sections pass upwardly at the ends of the body and connect with double rocker-arms 10, which are fixed to the rear and front shafts 11 and 12. Projecting downwardly from the rear shaft 11 and upwardly from the front shaft 12 are rigid arms 13 and 14, which are connected to the exterior of one side of the body by means of a truss-rod 15. This forms the operating connection between the front and rear rigging, which is operated from the front shaft 12 by the following mechanism: A ratchet-wheel 16 is pinned to a central portion of the shaft 12 and is engaged by an angular pawl 24, carried upon an operating-lever 27, which is loose upon said shaft 12. By this means the shaft 12 is actuated to elevate the swinging sections through the arms 10, 13, and 14, which, as before stated, are rigidly secured to the shafts 11 and 12.

21 designates a retaining-pawl which drops into the teeth of the ratchet-wheel 16 and holds said wheel and the shaft 12 in the position to which they are moved through the pawl 24. The primary pivot of this retaining-pawl 21 is at 22 on the exterior side of the front end wall of the wagon-body, and it has a further pivotal connection at 20 to a slotted link 19, the latter being engaged by the rearward angle of the foot-lever 17.



The said foot-lever 17 is loose upon shaft 12 and carries a roll, stud, or pin 28, which enters the slot in the link 19. The rearward angle of the lever 17 is engaged by a spring 18, which holds it normally in the position shown in Fig. II, wherein the stud or pin 28 is in the lower end of the slotted link 19. Also pivoted to this slotted link 19 at the point 20 is a lifting-pawl 23, which rests upon a projection 26, extending from the rearward angle of the foot-lever 17. Engaging the upper side of this lifting-pawl 23 is an extended portion 25 of the ratchet-pawl 24. The purpose of the lifting-pawl 23 is to disengage the pawl 24 from the ratchet-wheel 26, which is done when pressure is exerted on the foot-lever 17, thereby causing the rear angle of said foot-lever to engage and raise said lifting-pawl. Simultaneously therewith the pin 28 travels to the upper end of the link 19 and elevates the retaining-pawl 21 from engagement with the ratchet-wheel 16. The said ratchet-wheel is thus simultaneously freed from engagement with said pawls 24 and 21 and is given over to the influence of the weight upon the swinging sections, which causes the shafts 11 and 12 to rock in the direction of each other through the arms 10, 13, and 14, thereby permitting the dumping of the contents of the wagon-body. When pressure is removed from the foot-lever 17, the spring 18 returns it to its normal position, together with the pawls 21 and 23, and the rigging is ready for operation to raise the hinged sections.

I claim—

1. In a dumping-wagon, four bottom-sections hinged respectively, to a central body-beam and to the sides of the wagon-body, a primary and a secondary actuating-shaft arranged respectively at the front and rear ends of the wagon-body, a double rocker-arm fixed to each of said shafts, chain connections between the rear rocker-arm and the rear ends of the hinged body-sections, chain connections between the forward rocker-arm and the forward ends of said hinged bottom-sections, oppositely-extended arms rigidly connected to said shafts, a connection between said arms, ratchet devices for actuating the primary shaft to impart similar movements to the double rocker-arms to raise the four hinged bottom-sections, a foot-lever, and means controlled thereby for releasing the ratchet devices to permit said hinged bottom-sections to drop.

2. In a dumping-wagon, four bottom-sections hinged respectively, to a longitudinal central beam and to the sides of the wagon-body, a primary and a secondary actuating-shaft arranged respectively at the front and rear ends of the wagon-body, a rocker-arm fixed to each of said shafts, chain connections

between the rear rocker-arm and the rear ends of said hinged bottom-sections, chain connections between the forward rocker-arm and the forward ends of said hinged bottom-sections, arms extending in opposite directions from said shafts, a connection between said arms, ratchet devices for actuating the primary shaft to impart similar movements to the rocker-arms to raise the four hinged bottom-sections, a foot-lever having a rearwardly-extended portion, a ratchet-detent, a lifting-pawl adapted to separate the actuating-ratchets of the primary shaft, a link to which said detent and said lifting-pawl are pivoted, and a loose connection between said link and the rear end of the foot-lever.

3. In a dumping-wagon, four bottom-sections hinged respectively, to a longitudinal body-beam and to the sides of the wagon-body, a front actuating-shaft and a rear shaft, suitable connections between the front ends of the four hinged sections and the front actuating-shaft, and between the rearward ends of the four hinged bottom-sections and the rear shaft, a direct connection between the front actuating-shaft and the rear shaft, a ratchet-wheel fixed to said actuating-shaft, a pawl, and lever cooperating with said ratchet-wheel to impart movement to the said shaft to elevate the four hinged sections, a detent for said ratchet-wheel, a lifting member engaging the actuating-pawl of said ratchet-wheel, a foot-lever loose upon said front actuating-shaft, and connections between said foot-lever and said detent and said lifting member, whereby the detent and the ratchet-pawl are disengaged from the ratchet-wheel when the foot-lever is depressed.

4. In a dumping-wagon, the combination of an actuating-shaft, a rear shaft connected to said actuating-shaft, hinged sections forming the bottom of the wagon-body, rocker-arms on the actuating-shaft and the rear shaft, chain connections between the rocker-arms and said hinged sections, a ratchet-wheel fixed to the actuating-shaft, a driving ratchet-pawl engaging said wheel, a foot-lever loose upon said actuating-shaft, a retaining-pawl, a lifting-pawl and a link having a common pivotal connection, and said link having a sliding connection with the foot-lever, the retaining-pawl engaging the ratchet-wheel, the lifting-pawl engaging the driving ratchet-pawl, and the foot-lever engaging said lifting-pawl, as herein shown and described.

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

JACOB W. SHEETS.

Witnesses:

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