

P. E. RICKER.
DUMPING WAGON BED.
APPLICATION FILED OCT. 5, 1908.

916,020.

Patented Mar. 23, 1909.

2 SHEETS—SHEET 1.

Fig. 1.

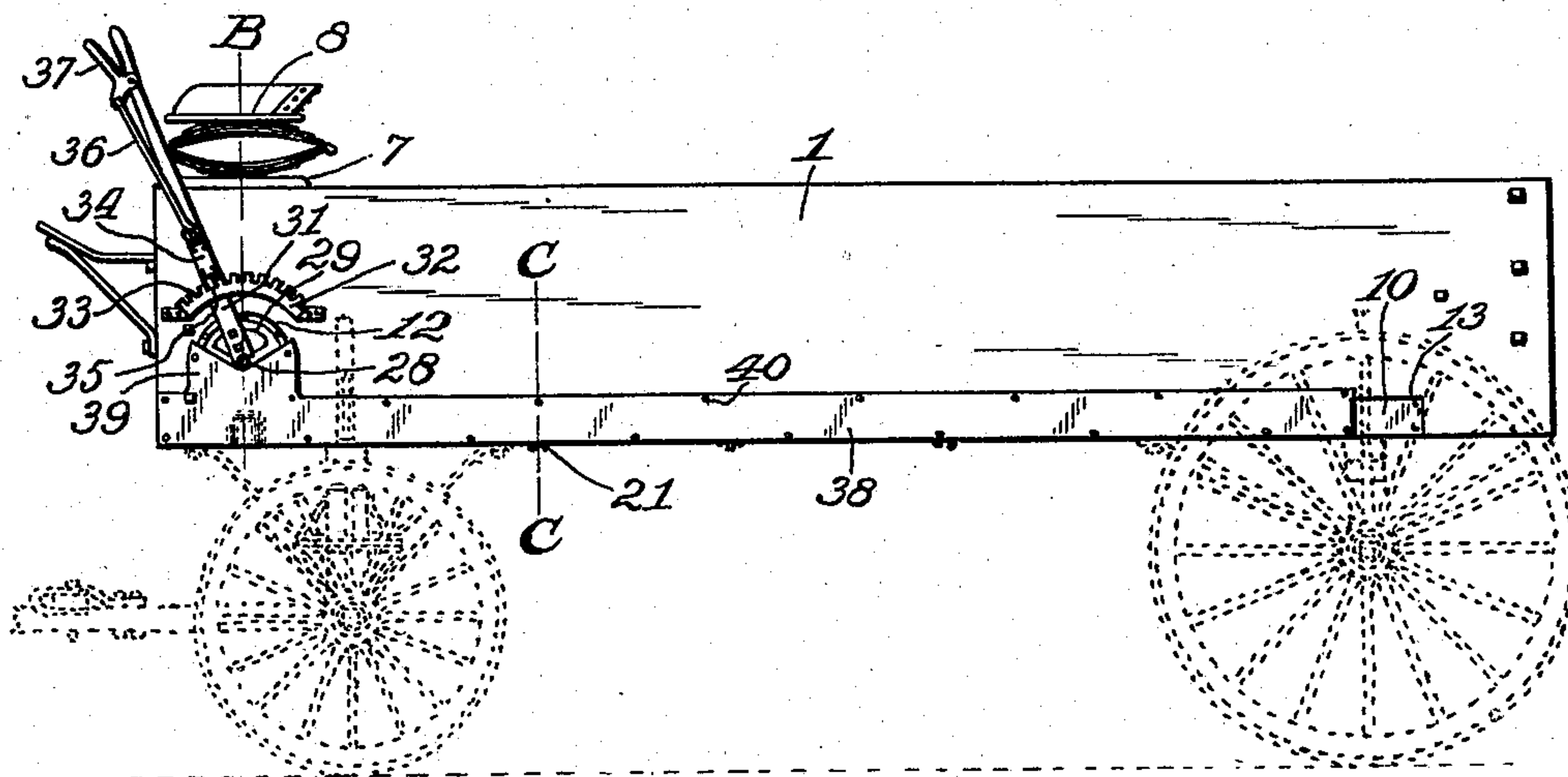


Fig. 2.

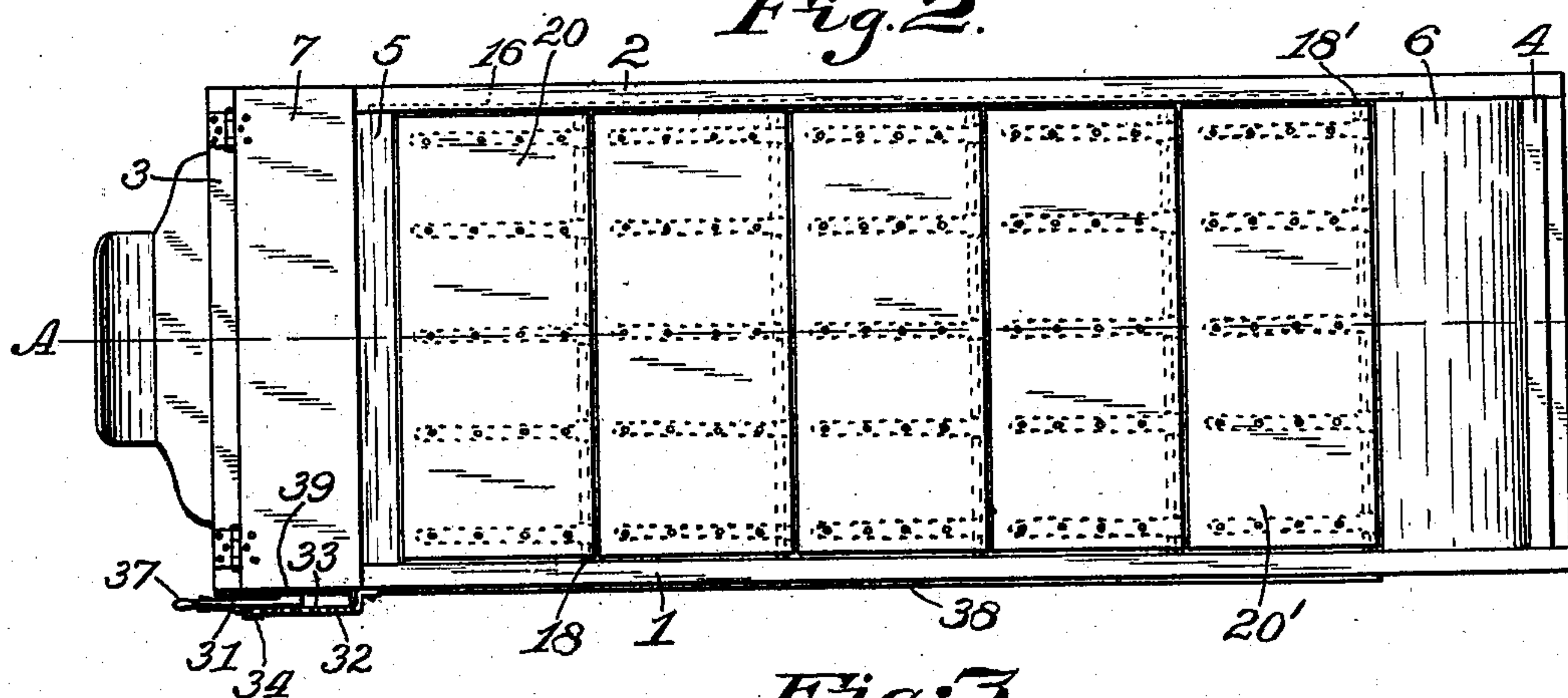
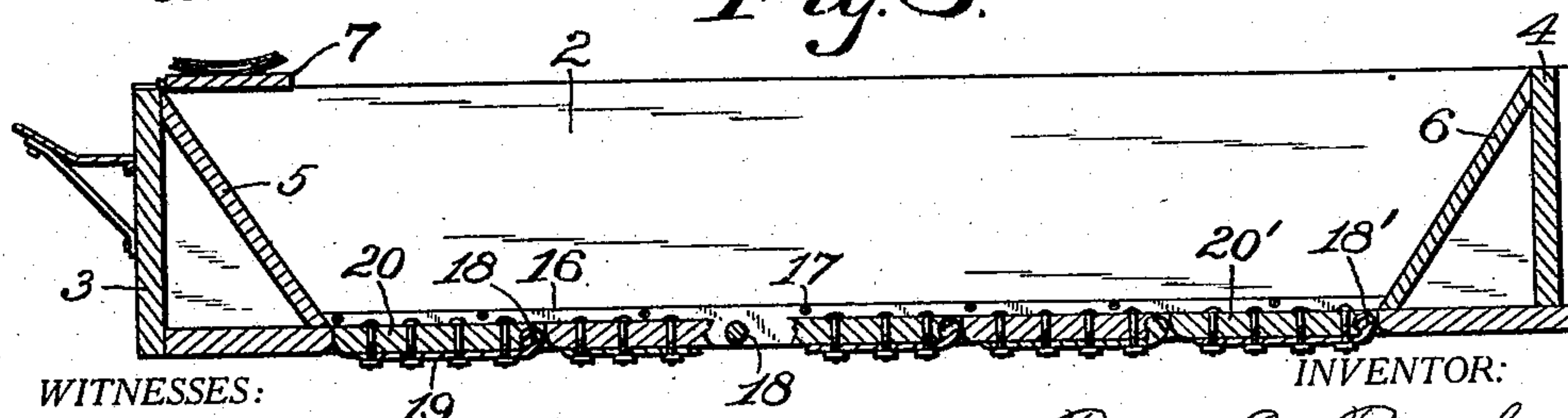


Fig. 3.



WITNESSES:

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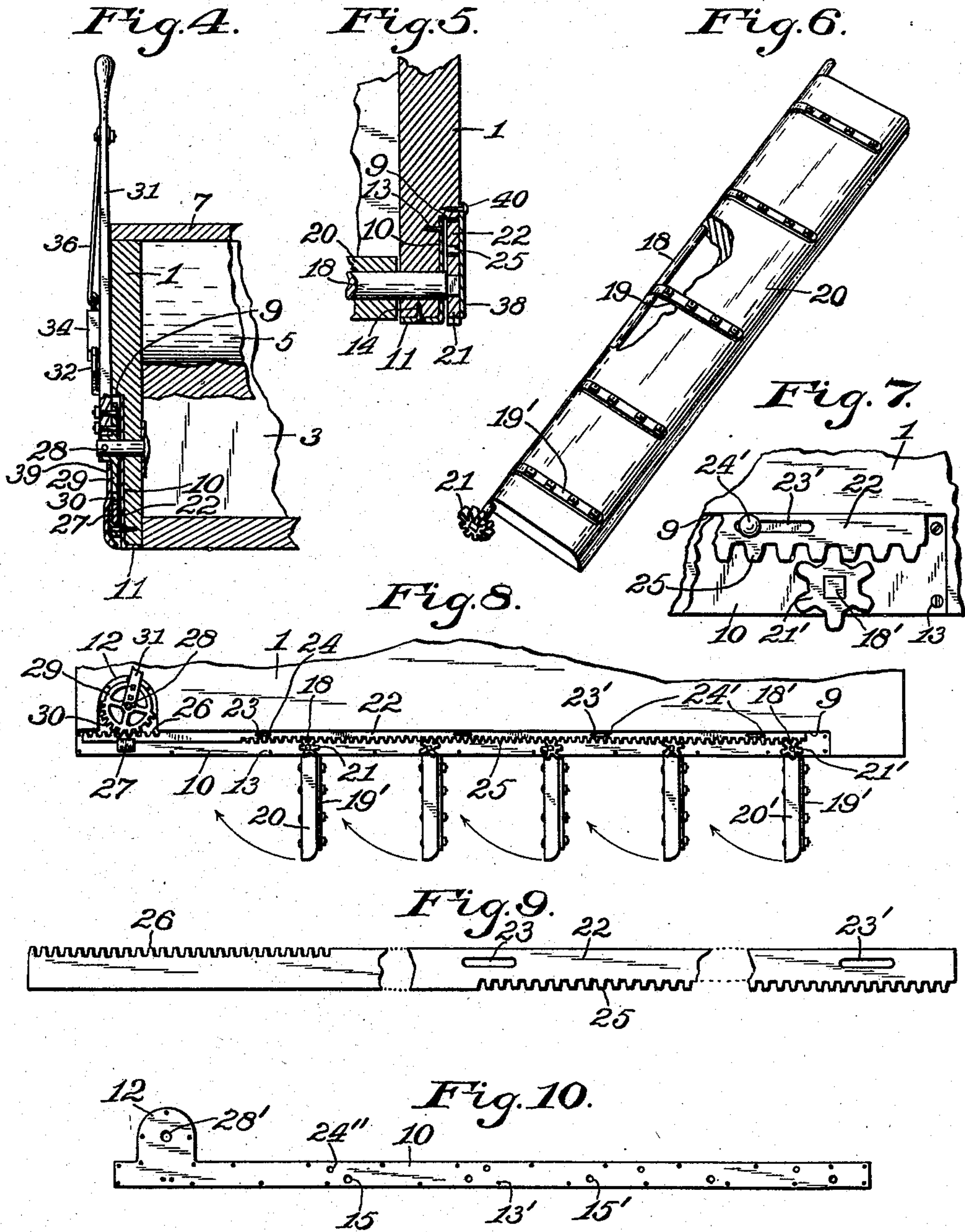
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2 SHEETS—SHEET 2.



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UNITED STATES PATENT OFFICE.

PERRY E. RICKER, OF ALEXANDRIA, INDIANA.

DUMPING-WAGON BED.

No. 916,020.

Specification of Letters Patent.

Patented March 23, 1909.

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To all whom it may concern:

Be it known that I, PERRY E. RICKER, a citizen of the United States, residing at Alexandria, in the county of Madison and State of Indiana, have invented certain new and useful Improvements in Dumping-Wagon Beds; and I do declare the following to be a full, clear, and exact description of the invention, 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 the type of dumping wagon-beds that have bottoms comprising hinged floor sections adapted to dump the loads; the invention relating particularly to the construction of the floor sections and means for supporting and operating them, the object of the invention being to improve the various parts of dumping wagons of the above mentioned character to the end that the parts may be cheaply constructed, and be strong, reliable, and be durable and economical in use.

With the above mentioned and other objects in view the invention consists in certain novel features of construction in dumping wagon-beds comprising floor sections having hinged rods provided with pinions, a rack bar engaging the pinions for supporting the sections and movable for operating the sections, and means for controlling the rack-bar; and the invention consists further in the parts, and combinations and arrangements of parts, as hereinafter particularly described and defined in the appended claims.

Referring to the drawings, Figure 1 is a side elevation of a dumping wagon-bed constructed substantially in accordance with the invention and represented as mounted on running gear shown by broken lines; Fig. 2, a top plan of the improved wagon-bed omitting the driver's seat; Fig. 3, a longitudinal vertical sectional view on the line A in Fig. 2; Fig. 4, a fragmentary transverse vertical sectional view on the line B in Fig. 1; Fig. 5, a fragmentary transverse vertical sectional view on the line C C in Fig. 1; Fig. 6, an inverted perspective view of one of the floor sections; Fig. 7, a fragmentary side elevation of details relating to the mechanism for holding and operating the floor sections; Fig. 8, a fragmentary side elevation of the wagon-bed showing the floor sections dropped as when discharging

a load, the casing of the operating mechanism being omitted; Fig. 9, a fragmentary side elevation of the rack-bar; and Fig. 10 a side elevation of the main frame bar forming a part of the wagon-bed for supporting the floor sections and operating mechanism.

Similar reference characters in the different figures of the drawings indicate like parts or features of construction referred to herein.

The improved wagon-bed as will be seen is designed to be carried on four wheels and comprises two side-boards 1 and 2 which may be metallic, but preferably are composed of wood and are connected by a front end board 3 and the tail-board 4, there being an inclined board or plate 5 at the front board and an inclined plate or board 6 at the tail-board, the inclined plates or boards serving as sides of a hopper. A seat-board 7 is mounted on the forward ends of the side-boards and preferably has a seat 8 mounted thereon.

The lower outer side of the side-board 1 has a rabbet 9 forming a recess in which a main frame bar 10 is placed against the side-board 1, the frame bar preferably having a flange 11 that extends under the side-board 1 to provide lateral stiffness. The frame bar is of suitable length so as to bear on the wagon bolsters, and it extends forward nearly to the front end of the side 1 and has an upward extending projection 12, the frame bar being secured to the side-board 1 by screws or bolts 13, and the flange 11 secured by screws 14. The frame bar 10 has a suitable number of journal bearings therein, as 15 or 15' that are arranged in the lower portion thereof to receive and support the nearer ends of the hinge-rods of the floor sections. The side-board 2 has a frame-bar 16 secured by screws or bolts 17 to the lower inner side thereof, the frame bar being preferably set in flush with the inner side of the side-board and extending from one bolster to the other, and thus relieve the side-board 2 of the principal strains incident to carrying the load. A suitable number of hinge-rods as 18 or 18' are mounted in the frame bars, and each hinge-rod has a suitable number of arms thereon, as 19 and 19', preferably forged on the rod or cast integrally therewith. A floor section as 20 or 20' composed either of metal or wood is suitably secured to the arms of each hinge-rod, the sections collectively forming a drop floor or bottom for the wagon-bed. The

hinge-rods extend through the frame bar 10 and have pinions or toothed wheels as 21 or 21' suitably secured thereto and arranged at the outer side of the frame-bar. A rack bar 22 is arranged horizontally at the outer side of the frame-bar 10 above the pinions and has a suitable number of guide-ways as 23 or 23' therein, and guides as 24 or 24' are attached to the frame bar 10 and extend through the guide-ways, the guides being adapted to hold the rack bar close to the frame bar 10 and permit the rack-bar to move longitudinally, the lower side or edge of the rack-bar having gear-teeth 25 thereon that engage the pinions. The forward portion of the upper side or edge of the rack-bar has gear-teeth 26 thereon and is supported by a guide 27 that is secured to the frame-bar 10. A pivot 28 is mounted on the projection 12 of the frame-bar 10 and preferably extends through a bearing aperture 28' and through the side-board 1, the pivot being arranged above the guide 27. A wheel 29 is mounted rotatively on the pivot, and a portion of the periphery of the pivot has gear teeth 30 thereon that engage the teeth 26. A lever 32 is secured to the wheel 29 and extends upward at the outer side of the side-board 1 conveniently near the driver's seat. A curved latch-bar 32 is mounted on the outer side of the side-board 1 and has notches 33 in the top thereof. The lever 31 is provided with a latch-guide 34 in which a latch 35 is mounted and normally enters one of the notches 33, the latch being connected by an operating-rod 36 that is connected to a handle 37 mounted on the lever.

In order to protect the operating mechanism from the dirt or foreign substances when the wagon is being loaded a casing 38 having an upward extension 39 is secured by screws or bolts 40 to the outer side of the side-board 1 above the rabbeted portion, and extends down to the plane of the bottom of the frame-bar 10, the extension 39 covering a portion of the front of the wheel 29.

When the lever 31 is in its forward position, as shown, the rack-bar 22 is in its rearward position, and by means of the pinions connected therewith, holds the floor sections up in a common plane in their normal positions for carrying a load, and as will be apparent when the lever is moved rearward it will cause the rack-bar to be moved forward and permit the floor sections to swing down, and therefore permit the load to drop out through the openings thus made in the floor of the bed.

In practical use the lever 31 being securely latched will prevent the floor sections from dropping, and when it is desired to discharge

the load the driver may easily and quickly unlatch the lever and permit the weight of the load to force the floor sections down, the operation being practically instantaneous, and after the load is discharged the driver may quickly and with but little effort draw the floor sections up to normal positions by a reverse movement of the lever.

Having thus described the invention, what is claimed as new, is—

1. A dumping wagon-bed comprising two side-boards, a plurality of floor sections having each a hinge-rod connecting it to the side-boards, each hinge-rod having a pinion secured thereto, a rack-bar mounted on one of the side-boards above the pinions and in engagement therewith, a gear-wheel mounted on said one of the side-boards and engaging the rack-bar, a lever attached to the gear-wheel, and a latch for the lever.

2. A dumping wagon-bed comprising two side-boards, a frame bar secured to the outer side of one of the side-boards and provided with a plurality of guides, a rack-bar mounted on the guides to move horizontally, a plurality of hinge-rods mounted rotatively in the side-boards and extending through the frame-bar, each hinge-rod having a pinion secured thereto that is in engagement with the rack-bar, arms rigid on the hinge-rods, floor sections attached to the arms, a lever mounted on the said one of the side-boards for operating the rack-bar, and a latch for the lever.

3. A dumping wagon-bed comprising two side-boards, a frame-bar secured to the outer side of one of the side-boards and having an upward-extending projection, guides secured to the frame-bar, a rack-bar mounted on the guides to move horizontally, a plurality of hinge-rods mounted rotatively in the side-boards and extending through the frame-bar, each hinge-rod having a pinion secured thereto that is in engagement with the rack-bar, arms rigid on the hinge-rods, floor sections attached to the arms, a toothed wheel mounted on the projection of the frame-bar and engaging the rack-bar, a lever attached to the toothed wheel, a latch for the lever, and a casing attached to said one of the side-boards and extending over the outer sides of the rack-bar and the pinions, the casing having an upward extension covering a portion of the toothed-wheel.

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

PERRY E. RICKER.

Witnesses:

THOMAS V. SLEETH,
JOSEPH EDER, Jr.