No. 873,397. PATENTED DEC. 10, 1907.

A. L. WARNER.

DUMPING WAGON.

APPLICATION FILED AUG. 3, 1907.

3 SHEETS—SHEET 1.

Fig. 1a.

Fig. 1.

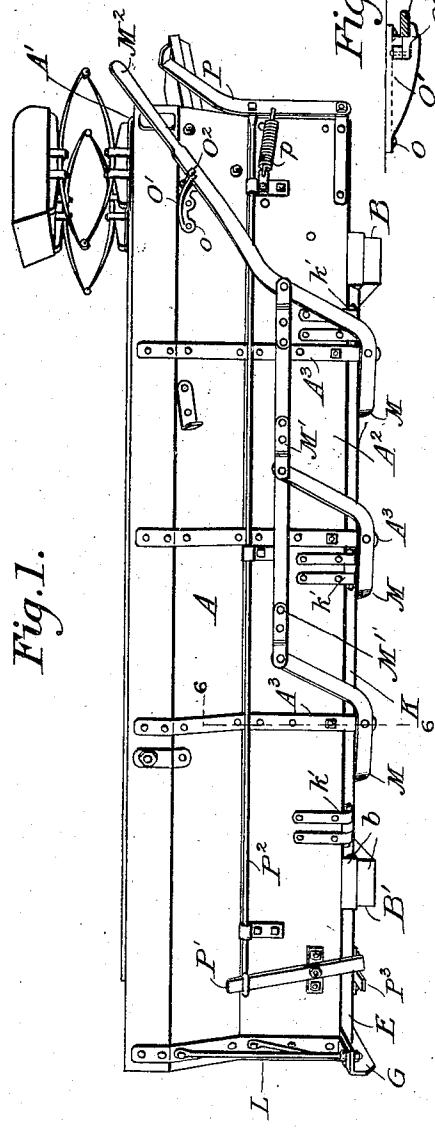
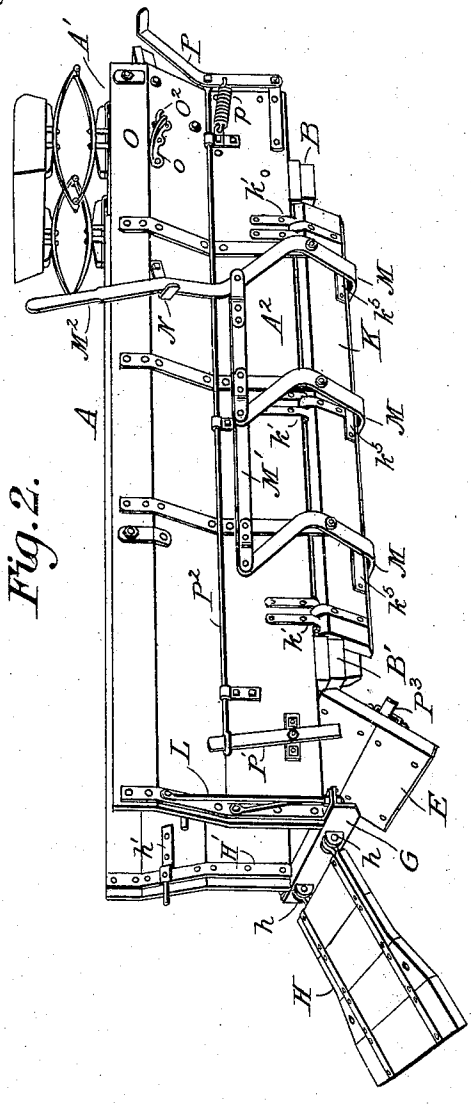


Fig. 2.



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3 SHEETS—SHEET 2.

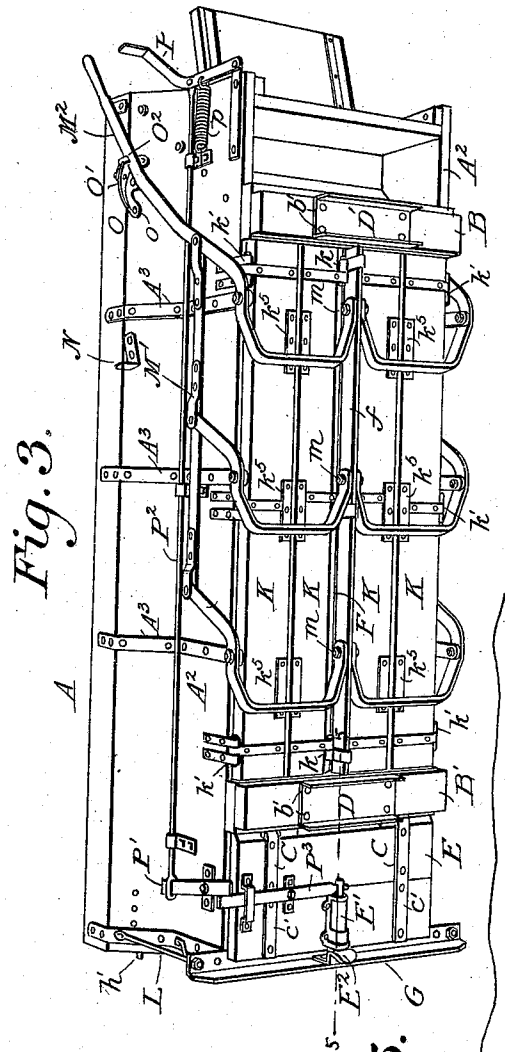

Fig. 3.

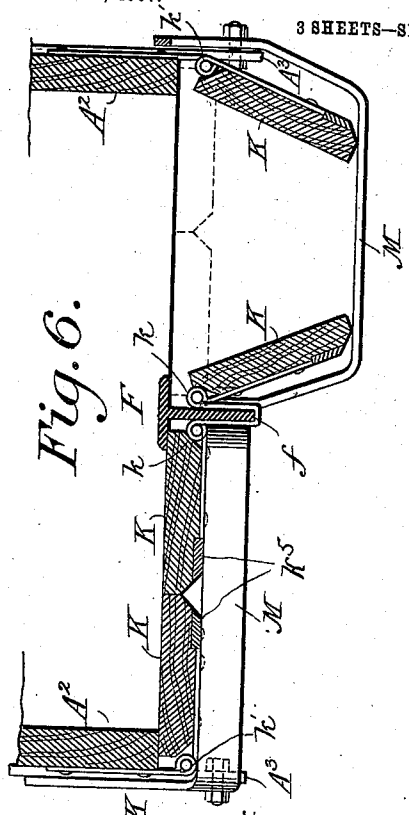

Fig. 6.

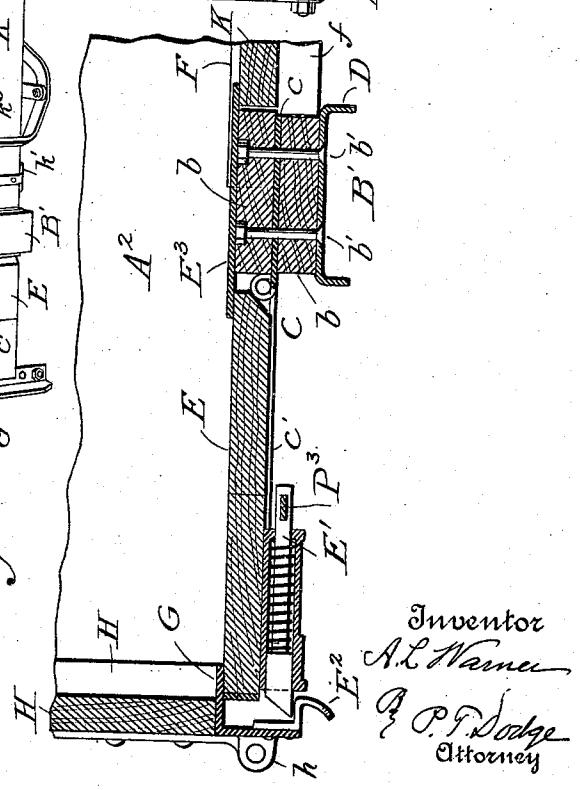

Fig. 5.

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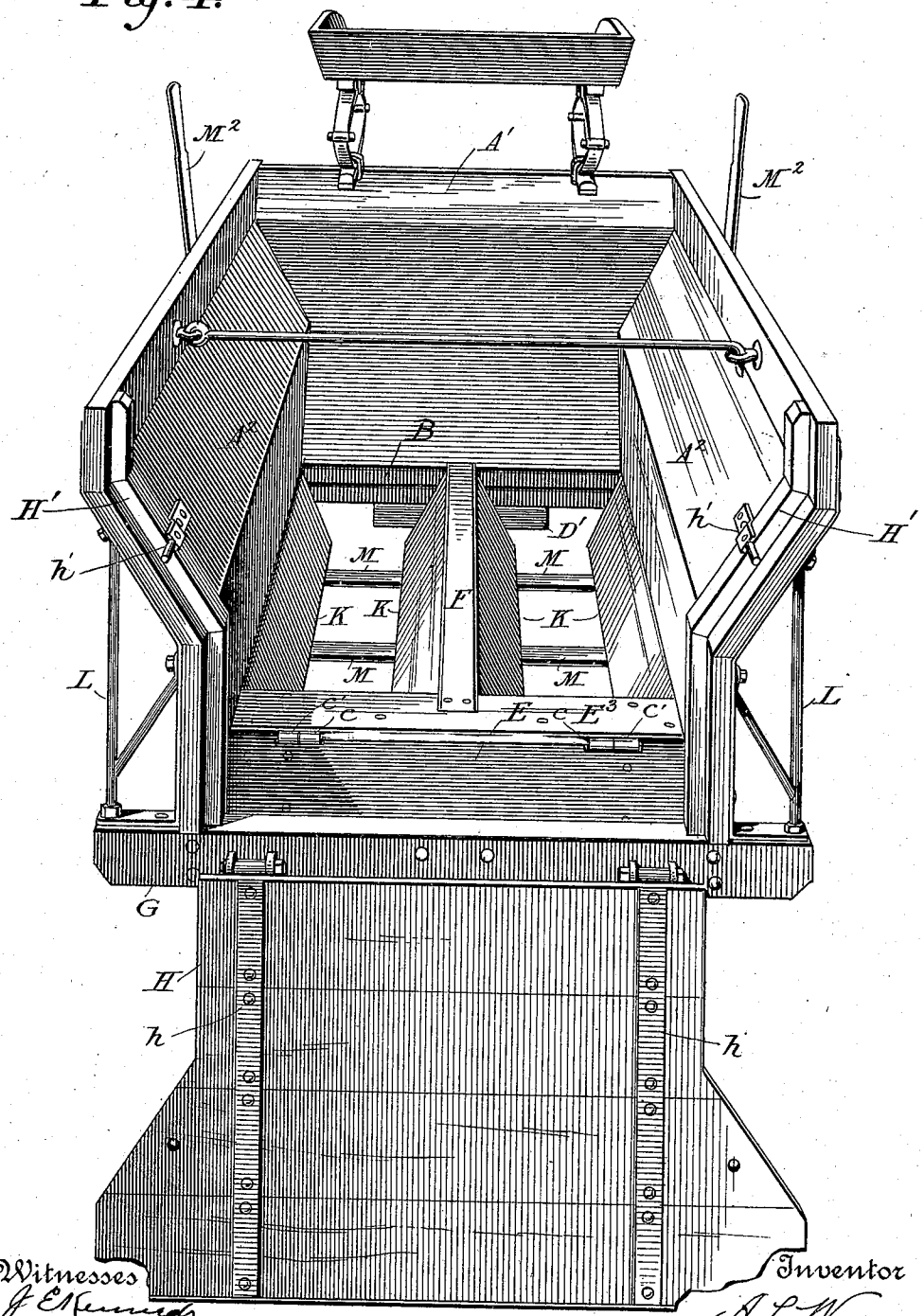
3 SHEETS—SHEET 3.

Fig. 4.



THE NORRIS PETERS CO., WASHINGTON, D. C.

UNITED STATES PATENT OFFICE.

ARTHUR L. WARNER, OF MOLINE, ILLINOIS, ASSIGNOR TO KOOB DUMPING WAGON COMPANY, A CORPORATION OF ILLINOIS.

DUMPING-WAGON.

No. 873,397. Specification of Letters Patent. Patented Dec. 10, 1907.

Application filed August 3, 1907. Serial No. 386,925.

To all whom it may concern:

Be it known that I, ARTHUR L. WARNER, of Moline, county of Rock Island, and State of Illinois, have invented a new and useful Improvement in Dumping-Wagons, of which the following is a specification.

This invention relates to improvements in the class of dumping wagons illustrated in Patent No. 739,325, dated Sept. 22, 1903.

The objects of the invention are to provide a wagon of the type named, with a rear downwardly swinging bottom-section having a cover plate at its hinged edge to prevent waste at this point; to provide an improved means of hinging the longitudinal dumping bottom-sections; to provide improved pivotal connections for the operating loops of the said bottom-sections; to provide improved latching means for the hand lever of the operating loops and for the rear dumping bottom-section; to provide a strengthening cross bar of structural iron at the rear edge of the bottom; to provide depending U-shape clips on the front and rear bolsters to receive the upper edges of the bolsters or axles of the ordinary running gear of a wagon, so that the box or body may be applied to any of the ordinary running gears; also to provide a swinging end-gate for use when the contents are to be for any reason shoveled from the body and not dumped. These objects I accomplish by the construction shown in the drawings, in which

Figure 1 is a side elevation of a wagon body containing my improvements. Fig. 1ª is a view of a detail. Fig. 2 is a perspective view of the same, with the bottom-sections and end-gate open. Fig. 3 is a bottom perspective with the bottom-sections and end-gate in closed position. Fig. 4 is a rear perspective view on an enlarged scale. Fig. 5 is a longitudinal section on the line 5—5 of Fig. 3. Fig. 6 is a transverse section on line 6—6 of Fig. 1.

Referring to the drawings:—A designates the wagon body, which may be of any desired shape and material according to the use to which it is to be put. The front A′ is closed, and the rear end and bottom are left open.

B is the front bolster secured to the lower edges of the sides A^2, near their forward ends, and B′ is the rear bolster secured to the lower edges of the sides A^2 some distance in advance of their rear ends. The rear bolster is formed of two beams *b b*, secured together by bolts *b′ b′*, which bolts also pass through the forward straps or members *c c* of the strap hinges C to the rear members *c′ c′* of which is secured, the rear dumping bottom-section E. These bolts *b′ b′* also secure the rear inverted U-shape or channel-iron clip-plate D to the under side of the bolster B′. The front clip-plate D′ is secured in like manner to the front bolster B.

F is a longitudinal central beam having a depending longitudinal rib *f*, and it is preferably formed of a T-iron secured at its ends to the upper sides of the two bolsters B B′, its ribs *f* being cut away at its ends to allow the top horizontal portion to overlap said bolsters.

Across the extreme rear lower portion of the body is secured an angle iron G, to the vertical member of which the lower edge of the end-gate H is hinged, as at *h h*, and under the horizontal member of which the free edge of the rear bottom-section E swings, and is locked by a spring latch E′ which engages a catch E^2 secured to the angle iron G, as shown in Fig. 2.

The joint between the bolster B′ and the hinged edge of the rear bottom-section E is covered and protected by plate E^3 which projects beyond the bolster at both edges, one edge covering the hinged edge of bottom-section E, as just described, and the other or forward edge covering the rear end edges of the forward longitudinal bottom-sections K. These bottom-sections K are four in number, the two inner sections being hinged at their adjacent edges to the T-iron beam F by the strap hinges *k*, to swing down as in Fig. 6, the joint being covered by the horizontal flange of the T-beam; and the two outer sections K are hinged at their outer edges to the sides A^2, as at *k′*.

The outer edges of the outer longitudinal bottom-sections K and the end edge of the rear bottom-section E underlie the lower edges of the sides A^2 of the body, in order to prevent the joints from allowing the dropping through of the material being hauled.

The rear side straps A^3 of the body are bent out at their lower ends and are there bolted to the ends of the angle-iron G, and these parts are further secured together by the forked braces L.

H′ are the cleats for the end gate H to rest against in its closed position, and *h′ h′* are the

apertured fastening pins which pass through openings in the end-gate, which is then secured by cotters or keys.

M represents three pairs of U-shaped loops or levers, the adjacent ends of each pair being pivoted to the rib *f* of the T-beam F, see Fig. 3, by the same bolt *m*, the opposite portions of the loops being pivoted to the depending ends of side straps A^3, so that three loops swing under each pair of bottom-sections K. The outer portions of the loops or levers are extended up at opposite sides of the body, and are connected by rods M′, the forward loop or lever at each side being carried up to form operating handles or levers M^2 within reach of the driver. The rearward throw of the operating handles M^2 is limited by stops N, and these handles are locked when thrown forward to close the bottom-sections K, by means of latches O. These latches comprise a curved cam shape member O′ widest at its forward edge and provided with an attaching flange *o*. In its forward throw the hand lever M^2 will ride up this cam or incline and then snap inwardly over its wide forward edge, where it will be locked by a small angle latch O^2 pivoted to the upper side of the cam or incline.

P is a foot lever pivoted at its lower end at the front end of one side of the body, and connected between its ends to the upper end of a second lever P′ at the rear of the body, by a connecting rod P^2. The lower end of lever P′ engages the forward edge of the outer end of a latch-actuating lever P^3, pivoted between its ends to the under side of rear bottom-section E, with its inner end engaging the rear end of latch bolt E′.

The lever P is pulled rearward by a spring *p* so that the lever P′ will be held normally away from the latch actuating lever P^3. The adjacent edges of the pairs of bottom-sections are beveled, as shown in Fig. 2, to facilitate their operation, and these sections where engaged by the operating loops M, are protected by wear plates k^5.

It will be seen that upon releasing levers M^2 and throwing them rearward, the loops M will be swung down, and the bottom-sections K released to discharge the load. One or both levers M^2 may be operated so as to release one pair or both pairs of sections K. To close the sections K, simply throw levers M^2 forward.

The rear section E will be released by pressing forwardly with the foot on lever P, and this section is preferably closed by hand.

Having thus described my invention, what I claim is:—

1. A dumping wagon body having an open bottom, front and rear bolsters or cross pieces, a central longitudinal beam having a depending flange, a pair of longitudinal bottom-sections at each side of the beam, the adjacent edges of the inner bottom-sections being hinged to said depending flange, and shielded by the horizontal member of the beam, and the outer edges of the outer bottom-sections being hinged to the lower edges of the sides of the body, and means for operating said sections.

2. A dumping wagon body having front and rear bolsters or cross pieces, a central longitudinal T-beam having a depending flange, a pair of longitudinal bottom-sections at each side of the beam, the adjacent edges of the inner bottom-sections being hinged to said depending flange and shielded by the horizontal member of the beam, and the outer edges of the outer bottom-sections being hinged to the lower edges of the sides of the body, means for operating said sections, a rear bottom-section hinged to the rear bolster or cross bar, a plate or shield on the upper side of said rear bolster projecting over the hinged edge of said rear section, and means for holding said rear section closed.

3. In a dumping wagon body, a rear bolster, a downwardly swinging rear bottom-section hinged thereto, a plate on the upper side of the bolster projecting over the hinged edge of the said section, and an angle iron across the body in rear of the bolster and under which the free edge of said section swings, and a latch for the bottom-section.

4. In a dumping wagon body, a front and rear bolster, a downwardly swinging rear bottom-section hinged to the rear bolster, a central longitudinal T-beam connecting the two bolsters, downwardly swinging longitudinal bottom-sections hinged at their adjacent edges to the depending rib of said T-beam, other similar sections hinged at their outer edges to the sides of the body, a plate on the rear bolster overlapping the hinged edge of the rear bottom-section and the rear ends of the four longitudinal sections, and means for locking and releasing said bottom-sections.

5. In a dumping wagon body, a rear angle iron, a downwardly swinging rear bottom-section closing at its free edge under said angle iron and having means for latching it thereto, and a swinging end-gate hinged at its lower end to the said angle iron.

6. In a dumping wagon body, a rear angle iron, side bars and braces securing the projecting ends of the angle iron to the rear end of the body, a downwardly swinging rear bottom-section, a rear bolster to which said bottom-section is hinged, and means for latching the free end of the bottom-section to the angle iron, and means for operating the latch from the forward end of the body.

7. In a dumping wagon, a central longitudinal T-beam, downwardly swinging longitudinal bottom-sections hinged at their adjacent edges to the beam, similar outer longitudinal bottom-sections hinged to the sides of the body, pairs of loops pivoted at their

inner ends on common pivots to the depending flange of the T-beam, and pivoted at their outer ends to the side of the body, rods pivotally connecting the loops at opposite sides of the body, hand levers extending up from the forward loops, cams engaged by the levers, and latches at the forward ends of the cams to hold the levers locked after the loops have raised the bottom-sections to their closed positions.

8. In a dumping wagon body, a rear bolster formed of two beams or bars bolted together, a rear dumping bottom-section, strap hinges connecting the said bottom-section and bolster and held between the two bolster members by their connecting bolts, and a plate on the upper side of the bolster projecting over the hinged edge of said bottom-section.

9. In a dumping wagon body, front and rear bolsters, front and rear dumping bottom-sections having means for locking and releasing them, and inverted channel irons on tht under sides of the bolsters to fit on the fron- and rear bolsters or axles of a running gear.

10. The hand lever latch comprising the cam or incline widest at its front end, and a latch pivoted at the forward wide end of said cam to lock the lever against lateral movement.

In testimony whereof I hereunto set my hand this sixth day of July, 1907, in the presence of two attesting witnesses.

ARTHUR L. WARNER.

Witnesses:
HARRY AINSWORTH,
M. L. PADEN.