No. 851,050. PATENTED APR. 23, 1907.

A. L. YOUNG.

DUMPING APPARATUS FOR VEHICLES.

APPLICATION FILED SEPT. 6, 1906.

3 SHEETS—SHEET 1.

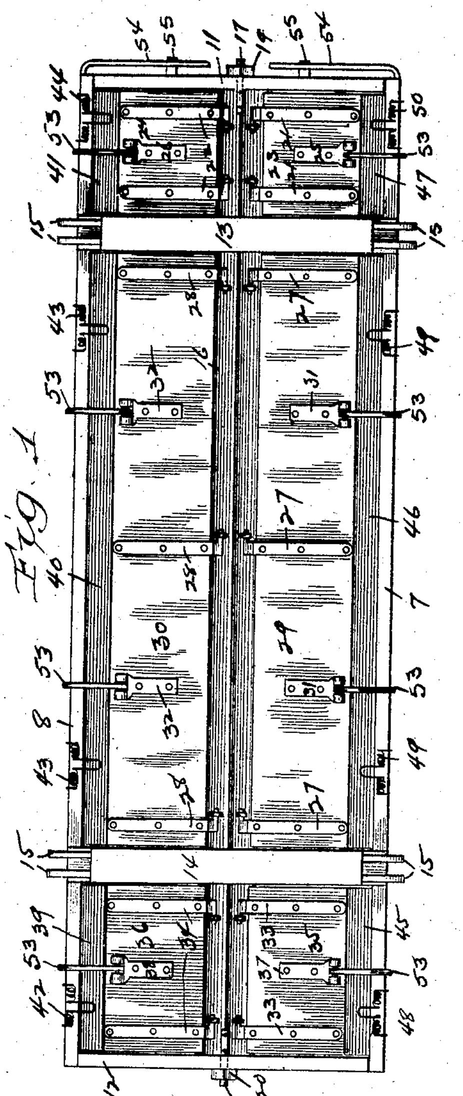

Fig. 1

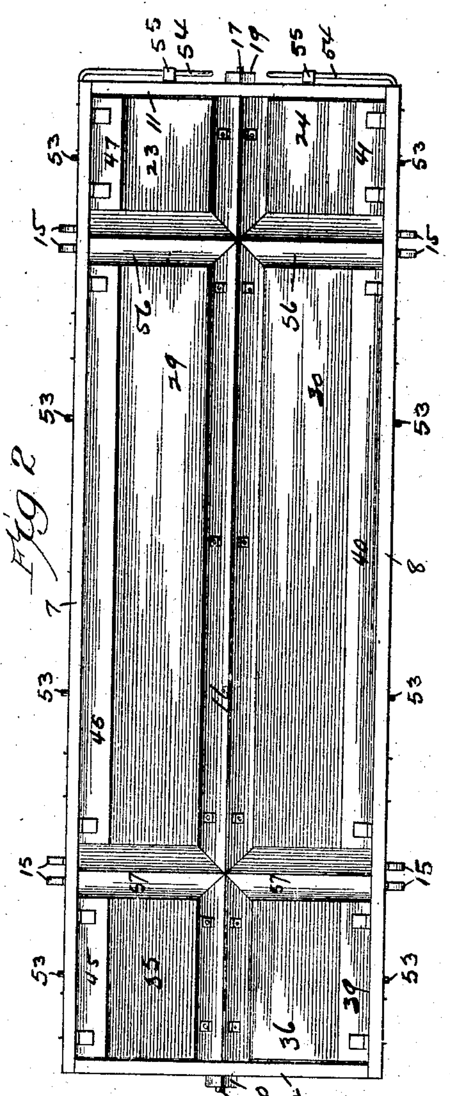

Fig. 2

Witnesses

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2 SHEETS—SHEET 2.

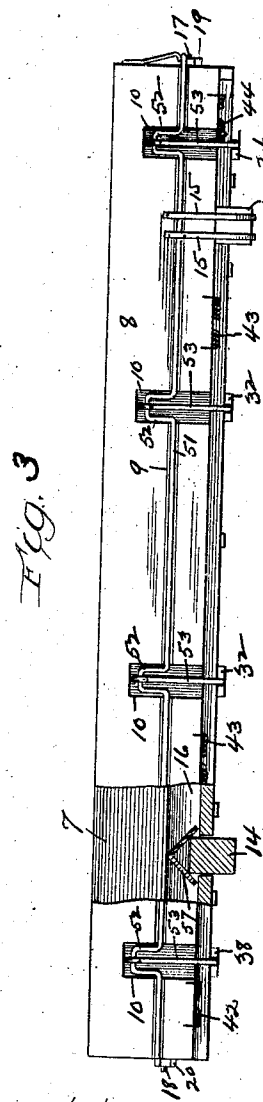

Fig. 3

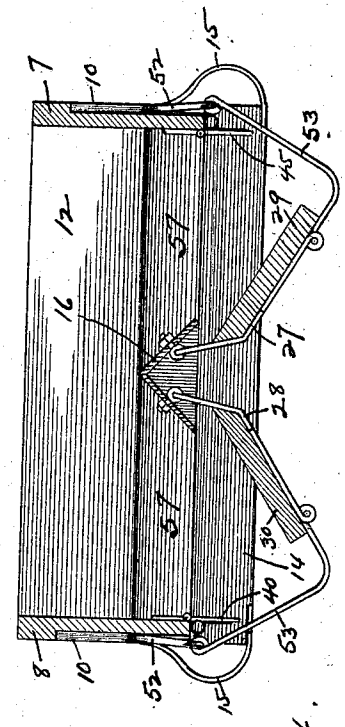

Fig. 6

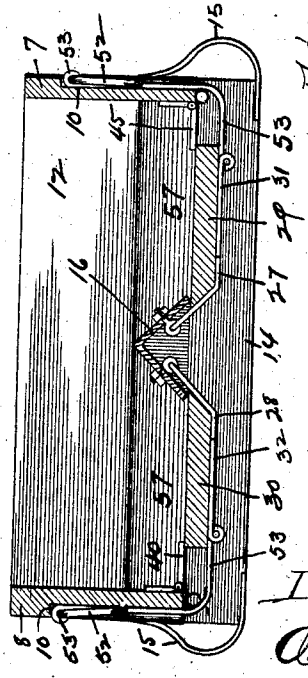

Fig. 5.

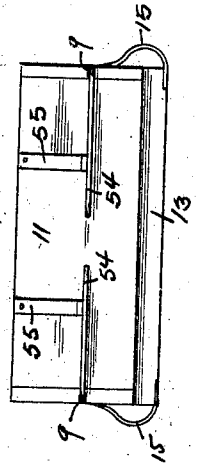

Fig. 4.

Witnesses

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UNITED STATES PATENT OFFICE.

ABRAHAM L. YOUNG, OF PARIS, ILLINOIS.

DUMPING APPARATUS FOR VEHICLES.

No. 851,050. Specification of Letters Patent. Patented April 23, 1907.

Application filed September 6, 1906. Serial No. 333,547.

To all whom it may concern:

Be it known that I, ABRAHAM L. YOUNG, a citizen of the United States, residing at Paris, in the county of Edgar and State of Illinois, have invented certain new and useful Improvements in Dumping Apparatus for Vehicles, of which the following is a specification.

My invention relates to improvements in dumping apparatus for vehicles, such as wagons, railway-cars, and the like; and the object of my improvements is to provide a construction giving a high efficiency at a moderate cost.

In the drawings, Figure 1 is a view of the under side of a wagon-box equipped with my dumping apparatus; Fig. 2, a top plan view of same; Fig. 3, a side elevation view of same; Fig. 4, a view of the right-hand end of Fig. 3; Fig. 5, a cross-sectional view of Fig. 3, and Fig. 6 the same section as Fig. 5 with the dumping apparatus in an open position.

Referring to the drawings in detail, the reference-numerals 7 and 8 represent the opposite sides of the wagon-box, each provided in its outer side with a longitudinal groove 9 and with four wide vertical grooves 10. Said wagon-box has a front end 11 and a rear end 12, both of which are permanently secured to the sides of the box by any suitable means.

Secured to the under side of the wagon-box by suitable means are two bolsters 13 and 14, which are adapted to be seated on the bolsters of the wagon. The further use of these bolsters will be later explained.

Secured to each end of each of the bolsters and to the sides of the wagon-box are two metal straps 15.

Mounted on the upper side of the bolsters 13 and 14 and extending lengthwise with the wagon-box is an angle-iron 16. Secured to the opposite ends of said angle-iron are two cleats 17 and 18, which extend through openings in the end of the wagon-box and are provided on their outer ends with nuts 19 and 20, respectively.

Hinged to opposite sides of the angle-iron 16 by means of hinges 21 and 22 between the bolster 13 and the front end of the box 11 are two shutters 23 and 24, respectively.

Secured to the under side of the shutters 33 and 24 are two cleats 25 and 26, respectively.

Hinged to opposite sides of the angle-iron 16 by means of hinges 27 and 28 are two shutters 29 and 30, respectively.

Secured, respectively, to the under side of said shutters 29 and 30 are two pairs of cleats 31 and 32.

Hinged to opposite sides of the angle-iron 16 by means of hinges 33 and 34 are two shutters 35 and 36, carrying cleats 37 and 38, respectively.

Hinged to the lower inner edge of the side 8 of the wagon-box are three narrow metal shutters 39, 40, and 41, adapted to have their inner edge seated on the upper outer edge of the shutters 36, 30, and 24, respectively.

Secured to the lower edge of the side 8 of the wagon-box are four springs 42, 43, and 44, adapted, respectively, to engage the shutters 39, 40, and 41 and to cause the same to return to a horizontal position after the load of sand or the like has been dumped from the wagon-box.

Hinged to the lower inner edge of the side 7 of the wagon-box are three narrow metal shutters 45, 46, and 47, adapted when closed to have their free edges seated upon the outer edge of the shutters 35, 29, and 23, respectively.

Secured to the lower edge of the side 7 of the wagon-box are four springs 48, 49, and 50, adapted, respectively, to engage the shutters 45, 46, and 47 and to cause the latter to return to a horizontal position after the load has been dumped from the wagon-box.

Arranged in each of the longitudinal grooves 9 is a rod 51, having four loops 52, arranged in the vertical grooves 10.

The cleats 25, 31, 37, 26, 32, and 38 are connected by metal rods 53 with the loops 52.

Each of the rods 51 is provided at its front end with a lever 54, adapted to be held in a horizontal position by a spring-stop 55.

Mounted on the top of the bolsters 13 and 14 are two sections of angle-iron 56 and 57, respectively, having their outer edges overlapping the adjacent ends of the shutters. The purpose of the angle-irons 56 and 57 is to prevent the dirt or the like from collecting on the top of the bolsters 13 and 14.

The operation of my dumping apparatus is as follows: The wagon-box is mounted on a wagon with the bolsters 13 and 14 seated upon the bolsters of the wagon, the metal straps 15 being adapted to engage opposite sides of the wagon-standards. To dump a load of any material—such as sand, dirt, or the like—from the wagon-box, the driver strikes the spring-stops 55 with the heel of

his boot, thereby releasing the levers 54 and allowing the loops 52 to move outwardly and downwardly in such manner as to permit the shutters to drop downwardly, as shown in Fig. 6 of the drawings. As soon as the load of material has passed through the opening between the shutters the narrow metal shutters are thrown back to a horizontal position by means of the springs. The wide shutters are then closed by partially rotating the rods 51 by means of the levers 54 and securing the latter in a horizontal position by means of the spring-stops 55, after which the wagon-box is ready to be refilled.

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

1. In a dumping apparatus for vehicles, a box having fixed sides and ends, bolsters secured to the bottom of the sides of the box, an angle-iron mounted on the bolsters and having its ends connected with the ends of the box, dumping-shutters hinged to opposite sides of the angle-iron and forming a bottom for said box, and means for operating said shutters.

2. In a dumping apparatus for vehicles, a box having fixed sides and ends, bolsters secured to the bottom of the sides of the box, an angle-iron mounted on the bolsters and having its ends connected with the ends of the box, dumping-shutters hinged to opposite sides of the angle-iron, means for operating said shutters, and shutters hinged to the lower edge of each side of the wagon-box, said shutters forming a bottom for said box.

3. In a dumping apparatus for vehicles, a box having fixed sides and ends, two bolsters having their ends secured to opposite sides of the box, an angle-iron supported on and extending crosswise of the middle of the bolsters, dumping-shutters hinged to each side of said angle-iron, means for operating said shutters, and an angle-iron covering each end of each of said bolsters.

4. In dumping apparatus for vehicles, a box or receptacle having fixed sides and ends, two bolsters extending crosswise of and secured to the bottom of the box, an angle-iron mounted on the bolsters and having its ends secured to the opposite ends of the box, dumping-shutters hinged to opposite sides of the angle-iron, a revoluble rod mounted on each side of the said box and provided with loops and having at one end a lever for partially revolving it, means connecting the loops with the outer edge of the shutters, spring-stops secured to the end of the box for engagement with said levers, and shutters hinged to the lower edge of each side of said box for contact with said first-named shutters.

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

ABRAHAM L. YOUNG.

Witnesses:
O. K. TREGO,
W. O. ROOT.