

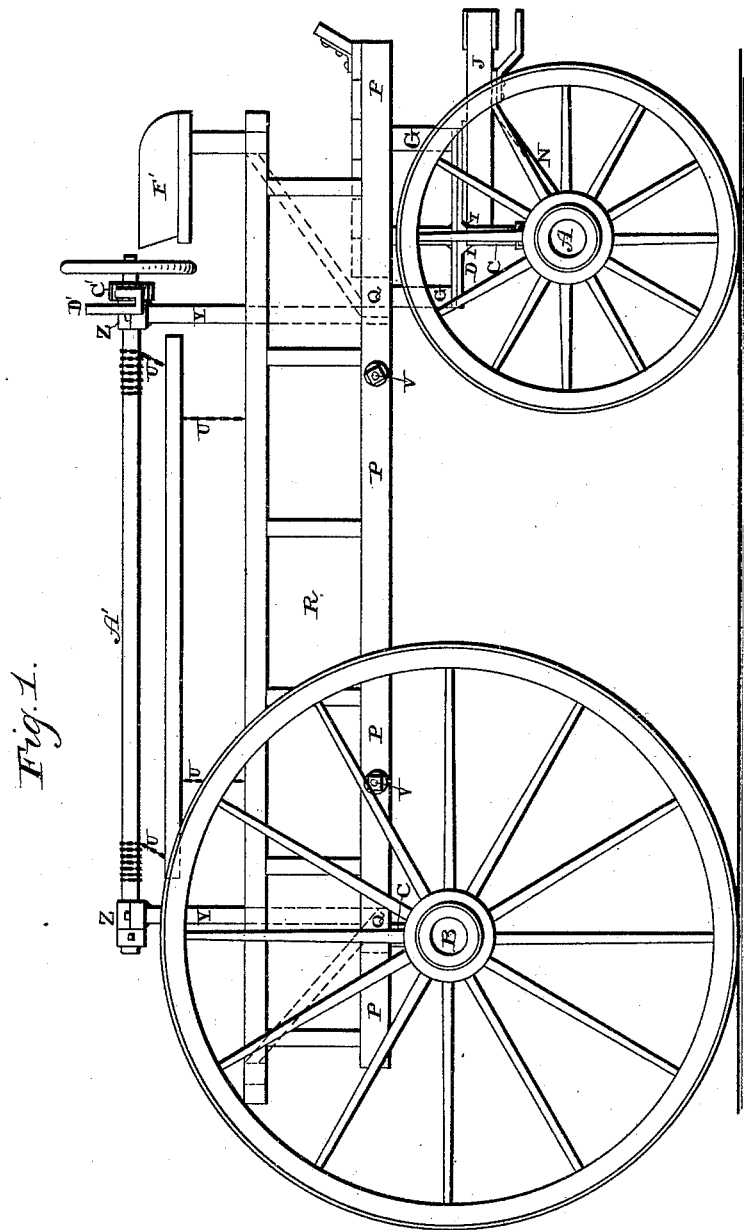
(No Model.)

3 Sheets—Sheet 1.

A. C. McEWEN.
DUMPING WAGON.

No. 422,822.

Patented Mar. 4, 1890



Witnesses:

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J. M. Nesbitt

Inventor:

A. C. McEwen,
per F. A. Lehmann, atty.

(No Model.)

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Fig. 3.

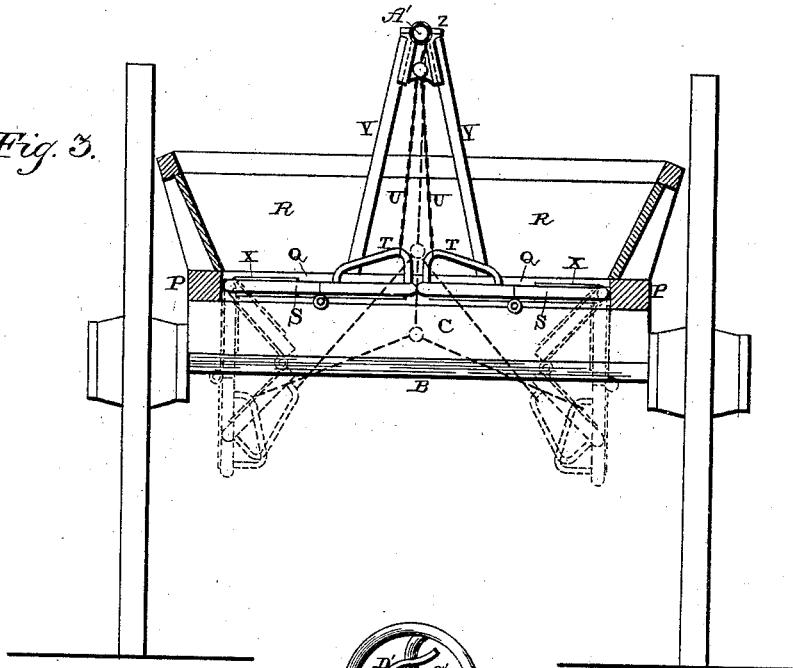
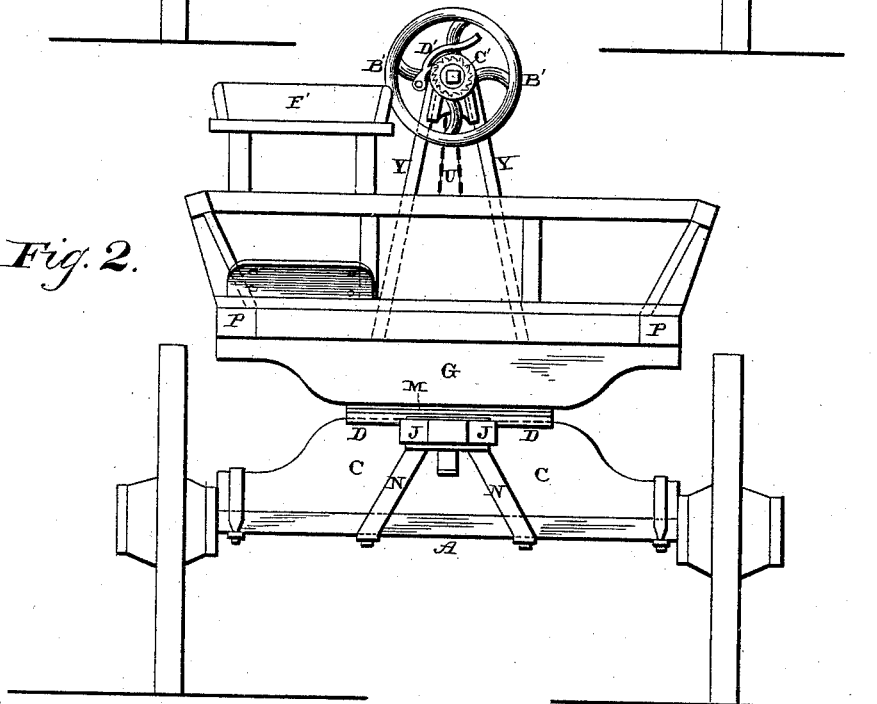


Fig. 2.



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Fig. 4.

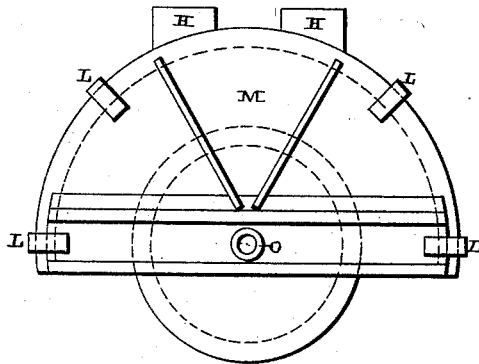


Fig. 5.

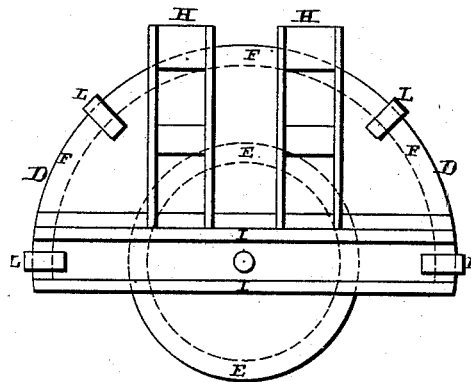


Fig. 6.

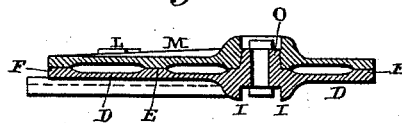
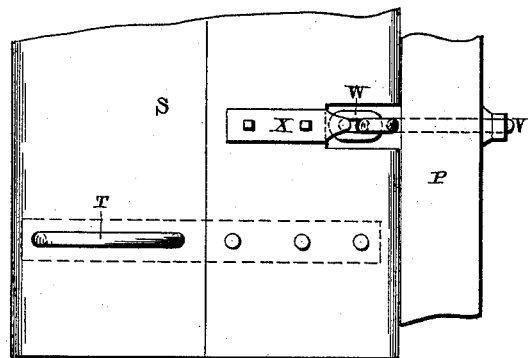


Fig. 7.



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UNITED STATES PATENT OFFICE.

ADDISON C. McEWEN, OF JERSEY CITY, NEW JERSEY.

DUMPING-WAGON.

SPECIFICATION forming part of Letters Patent No. 422,822, dated March 4, 1890.

Application filed January 21, 1890. Serial No. 337,617. (No model.)

To all whom it may concern:

Be it known that I, ADDISON C. McEWEN, of Jersey City, in the county of Hudson and State of New Jersey, have invented certain new and useful Improvements in Dumping-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 pertains to make and use it, reference being had to the accompanying drawings, which form part of this specification.

My invention relates to an improvement in dumping-wagons; and it consists in, first, a fifth-wheel formed of two disks or plates bolted together, the under one being provided with sockets or recesses on its under side to receive the rear ends of the hounds, and which has formed upon its top a circle which forms the center plate, and a segment of a circle upon its outer edge to form the fifth-wheel; second, a wagon-body provided with two hinged doors, each of which is made of two sections which are hinged together, elevating-chains, and a shaft for operating the chains and doors; third, the combination of the side sills, eyebolts, links connected to the eyebolts, and U-shaped plates secured to the doors, all of which will be more fully described hereinafter.

The object of my invention is to produce a dumping-wagon in which the side sills extend from one axle to the other and thus act as reaches, so as to do away with an under gear, which would interfere with the free discharge of the load through doors in the bottom of the wagon-body; to connect the doors together in sections and connect each of the doors to a side sill in such a manner that the closing of the doors cannot be interfered with, and to produce a cheap, simple, and durable fifth-wheel, which is especially intended for wagons of this kind.

Figure 1 is a side elevation of a wagon which embodies my invention. Fig. 2 is a front view of the same. Fig. 3 is a vertical cross-section taken through the wagon-bed, looking toward its rear end. Figs. 4 and 5 are top and bottom views of the fifth-wheel. Fig. 6 is a vertical section of the same. Fig.

7 is a plan view of a portion of one of the doors under the bottom of the wagon-bed.

A B represent the two axles, upon which the wheels are placed in the usual manner. Mounted upon the top of each of these axles and secured thereto in any suitable manner are the bolsters C. The front bolster is made much higher at its center than the rear one, and upon the top of this front bolster is secured the lower plate D of the fifth-wheel. This plate D is shaped as shown in Figs. 4 and 5, and has formed upon its top two flanges, the inner or smaller one E of which forms a complete circle and serves as the center plate, while the outer or larger one F forms slightly more than half a circle and serves as a fifth-wheel. This portion F projects a suitable distance backward of the bolster C and forms a support for the cross-timber G. On the under side of this plate D are formed the flanges I, which catch over the top edges of the bolster C and the flanges H, projecting at right angles thereto, and which catch over the tops of the hounds J, to which the plate D is secured in any suitable manner. Secured to the outer edges of this plate D are a suitable number of guards L, which catch over the top edges of the circular plate or disk M, and thus hold the two parts in contact without in any way interfering with the turning movement of the front axle. To the under side of the hounds J are secured the supporting-braces N near their front ends, so as to support them at this point. Projecting from the center of the plate D is the circular flange O, which projects up into the corresponding opening made in the disk M, and these two parts are then held together by a short plug-bolt, which passes through the disks only, the wearing strain coming on the flange O only. The web between the flanges E F is to prevent the dirt or grease from accumulating on the surface and to do away with all back timbers and bracing otherwise necessary to the truck-bolster, and which would interfere with the action of the body-doors.

The two side sills P are secured directly to the bolster C at their rear ends and to the cross-timbers G at their front ends, and these

sills P form the reaches, leaving a clear space under the wagon-bed for the load to be discharged. These sills P project beyond the front of the wagon-bed, so as to form a support for the driver's platform, as shown. The two sills are connected together by the cross-timbers Q, which are placed at the front and rear ends of the bottom of the wagon-bed R, as shown in dotted lines in Fig. 1. All four of the sides of the wagon-bed R incline inward, so as to insure a certain and easy dumping of the load.

The bottom of the bed is formed of two doors S, each one of which is composed of two sections which are hinged together at their inner edges, as shown in Figs. 3 and 7, and which are provided with the loops T, to which the elevating-chains U are secured. Passed through each of the side sills P are a suitable number of eyebolts V, and connected to the inner end of each bolt is a short link W, and the outer end of the link is attached to the U-shaped plate X, which is secured to the outer end of the outer section of each door. The object of this loose hinge is to prevent the particles from lodging on the edge of the door and prevent its ready closing. These loose hinges allow these particles to drop to the ground at the back as the doors are closing, and then when the door is near a horizontal position the link slides up, as the eyebolt allows the edge of the door to come close to the side sill and make the bottom tight, a small recess being cut in the edge of the door to allow the free movement of this link. The two center sections of the doors are held together by strap-hinges placed on the under sides of the door, the back half of each hinge being bolted through the door and the front half held in position by the loop T, the strap of the hinge serving as a washer for the loop T.

Rising from the cross-timbers Q are suitable standards or supports Y, which are suitably braced together at their upper ends and upon the tops of which are placed the boxes Z, in which the shaft A' is journaled. To this shaft the elevating chains or ropes U are fastened. To the front of the shaft are secured a hand-wheel B' and the ratchet-wheel C'. Pivoted upon the front box or bearing is a dog D', which is provided with a curved or bent handle which extends up over the top of the shaft, so that its weight will hold the pawl in contact with the ratchet. By means of this handle the dog is more readily operated by the driver, and the ratchet is prevented from working loose from the wheel from the shaking motion of the wagon.

On the top front rail of the body-frame is placed the driver's seat F', which is placed to one side of the shaft A', so that the driver, while sitting upon the seat, can open and close the doors S without having to dismount or to let go of the reins.

In order to dump the load, the driver has only to disengage the dog from the ratchet-wheel, when the weight of the doors S and the load upon them will cause the chains U to unwind and allow the doors to drop downward, as shown in Fig. 3. By holding on to the wheel B' the driver can regulate the speed at which the doors shall drop. The load is discharged under the center of the body without coming in contact with any part of the running-gear. To return the doors to position, the driver has only to turn the wheel B', and the shaft A' will cause the chains U to wrap thereon until the doors reach a horizontal position.

The object of making the doors in sections and attaching the angular staples T to these inner sections of the doors is to prevent the doors from catching against some materials which form piles under the wagon after they have been dumped, and which prevent the rigid doors from closing unless the wagon is drawn ahead, so as to allow the doors to close. When the load is discharged, the rings on the lower ends of the chains pass from the highest to the lowest point of the angular staples. In closing the doors, if there is no obstruction, the rings slip back as the driver unwinds the chains on the shaft; but if the doors are obstructed in closing the under sections of the doors double back and the rings remain at the lowest points of the angular staples until the obstruction is passed, when they slowly move upward on the staples, bringing the outer sections of the doors up at the same time. After these sections have reached their proper places the inner sections are raised into position. This is done by the driver without leaving his platform or seat.

Having thus described my invention, I claim—

1. The combination of the disk or plate D, provided with means for the attachment of the hounds at its under side and secured directly to the bolster, with the plate or disk M, plate D being provided with a flange O to catch in the plate M, and the two parts being secured together by a bolt, substantially as shown.

2. In a dumping-wagon, the combination of the body, a bottom hinged therein, which consists of two doors, each of which is composed of an inner and outer section, the outer section hinged to the wagon and the inner section to the outer section, and elevating-chains connected to the said outer sections for raising the said doors, substantially as described.

3. In a dumping-wagon, the combination, with the body, of doors hinged in the bottom thereof, each door composed of an inner and outer section, which are hinged together, elevating-loops secured to the outer hinged sections, and elevating-chains loosely secured to

the loops, whereby they slide thereon when the doors are being closed, substantially as shown.

5 4. In a hinge for dumping-wagon bottoms, the combination of the sills, securing-eyes fastened, respectively, to the said bottoms and sills, and links which connect the said eyes, whereby the meeting edges of the doors

and sills are allowed to separate when they are lowered, for the purpose set forth. 10

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

ADDISON C. MCEWEN.

Witnesses:

NORMAN D. MOODY,
JAMES O. HESSE.