T. R. McKnight.

Brake for Dump Wagons.

Application filed Nov. 2, 1905.

Witnesses:

[Signatures]

Inventor:

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Attest:

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To all whom it may concern:

Be it known that I, THOMAS R. McKnight, a citizen of the United States, residing at Aurora, county of Kane, State of Illinois, have invented certain new and useful Improvements in Brakes for Dump-Wagons, of which the following is a full and complete specification, reference being had to the accompanying drawings.

This invention relates to dump wagons, and particularly to devices for applying brakes to the rear wheels thereof.

The object of my invention is to provide devices by which brakes can be applied simultaneously to both of the rear wheels and at the same time avoid the necessity of connecting the braking devices by a rod or bar running transversely of the wagon-body, which arrangement of transverse connecting-bar, while satisfactory in ordinary vehicles, is impracticable in connection with dump wagons having hinged bottom boards, for such rod or bar obviously cannot pass beneath such bottom boards, and to pass the same through the wagon-body would subject it to bending or breaking by the mass of material in the wagon-body, or such load by packing around the rod or bar would prevent the brakes being applied only with the greatest difficulty.

I attain the stated object of my invention by the means shown in the drawings and hereinafter specifically described.

That which I believe to be new will be pointed out in the claims.

In the accompanying drawings, Figure 1 is a side elevation of an ordinary dump wagon with my improved brake-operating device applied thereto. Fig. 2 is a plan view of the same. Fig. 3 is a detail showing one of the brackets in which the rock-shaft at the front end of the wagon is journaled. Fig. 4 is a detail, being a front elevation of the part shown in Fig. 3. Fig. 5 is a detail, partly in section, showing the devices by which one of the brake-shoes is supported. Fig. 6 is a side elevation of one of the brake-shoe-supporting devices and showing also the spring employed for keeping the brake-shoe normally away from the wheel.

In the several figures of the drawings, in which corresponding parts are indicated by the same reference characters, A B indicate the sides of a dump wagon of ordinary construction, and C D the front and rear end boards, which, as usual in dump wagons of this class, slope downward toward the center of the body.

E E indicate bottom boards running longitudinally of the wagon-body and hinged to the side boards, as usual. These bottom boards are to be raised and lowered by chains or cables arranged in the usual manner, which lifting devices, however, are not shown, as it is not necessary for the understanding of my invention.

F F indicate the front wheels, and G G the rear wheels of the wagon.

7 indicates a bracket, one for each side of the wagon, which bracket consists of two diagonal portions and an intermediate straight bearing portion, the ends of the diagonal portions being bolted to the outer face of one of the sides A B.

8 indicates a sleeve, which in the form of construction shown is formed integral with the bracket 7. At its inner end it is provided with a plate 13, that bears against the side of the wagon-body, through which plate bolts or screws can be passed into the side of the wagon-body.

9 indicates a brake lever carrying on its lower end, which is suitably bent, a brake-shoe 10, said brake-shoe being retained in place on the bent end of the lever by a pin 11 or in any other suitable manner.

12 indicates a short cylindrical arm journaled in the sleeve 8 and provided on its inner end with a reduced portion that passes through a suitable opening in the plate 13, on the end of which reduced portion is a head 90 located in a shallow recess cut in the sideboard of the wagon. By this construction the arm is prevented from endwise movement, but is free to rock in the sleeve. This cylindrical arm 12 is attached to the inner face of the lever 9 and forms the journal on which said lever turns. In the construction shown the arm 12 and lever 9 are formed integrally; but they could of course be separately formed and suitably secured together.

15 indicates a rod extending forward from each of the brake levers 9, each rod being pivotally attached to the upper end of one of such brake levers. In the construction
shown the rear end of the rod 15 is forked, and a pin 16 passes through the fork and the brake-lever 9 to hold the parts together.

17 indicates a rock-shaft at the forward end of the wagon, such rock-shaft in the construction shown lying just beneath the floor of the forward extension of the wagon. Each end of the rock-shaft 17 is provided with a crank 18, to which the forward end of one of the rods 15 is attached, such forward end being in the construction shown forked as at the rear end to embrace the crank, the parts being secured together by a suitable pin 19.

20 indicates brackets secured upon the outer faces of the forward extensions of the sides of the wagon-body and serve as bearings for the rock-shaft 17. In the construction shown a foot-lever is attached to this rock-shaft 17, such foot-lever being indicated by 21 and being shown as projecting through a suitable opening 22 in the floor of the forward extension of the wagon and in position to be operated by the foot of the driver mounted on the seat 23. It is evident, however, that a lever adapted for use by the hand of the operator could be employed in place of the foot-lever, if desired.

24 indicates coiled springs, one being employed at each side of the wagon. Each spring is secured at one end to one of the sides of the wagon in rear of the brake-lever at that side and at its forward end is secured to the upper end of such brake-lever. The springs normally act to keep the brake-shoes slightly removed from the faces of the wheels.

In operation the turning of the rock-shaft 17 through the lever connected thereto will through the cranks 18 and rods 15 cause the brake-levers to be turned on their respective journals or arms 12 and set the brakes against the wheels, and upon the pressure upon the operating-lever being removed the springs 24 will immediately throw the brakes away from the wheels, as will be readily understood.

By my construction I provide a very efficient brake mechanism by which both brakes are simultaneously operated and at the same time obviate the necessity of directly connecting the brakes or levers that carry the brakes by means of a transverse rod or bar passing through the wagon-body.

What I claim as new, and desire to secure by Letters Patent is—

1. The combination with a wagon-body of a bracket secured to the outer face of each side thereof, each bracket consisting of two diagonal arms and an intermediate straight portion, a sleeve carried by each bracket and adapted to bear at its inner end against one of the sides of the wagon-body, two levers each having an arm journaled in one of said sleeves, a brake-shoe at the lower end of each lever, and means for turning said levers on their journals, substantially as specified.

2. The combination with a wagon-body of a bracket secured to the outer face of each side thereof, each bracket consisting of two diagonal arms, an inwardly-projecting sleeve carried by each of said brackets adapted to bear at its inner end on one of the sides of the wagon-body, two levers each having an arm journaled in one of said sleeves, a brake-shoe at the lower end of each lever, and means for turning said levers on their journals, substantially as specified.

3. The combination with a wagon-body of a bracket secured to the outer face of each side thereof, two sleeves each supported at its outer end by one of said brackets and at its inner end by the wagon-body, two levers each having an arm journaled in one of said sleeves, means for securing said arms against endwise movement in said sleeves, a brake-shoe at the lower end of each lever, and means for turning said levers on their journals, substantially as specified.

4. The combination with a dump-wagon of a bracket secured at its ends to the wagon-body and having its central portion extended away from said body, a sleeve supported at its outer end by said bracket and at its inner end by said wagon-body, a lever having a laterally-extended arm journaled in said sleeve, a brake-shoe carried by said lever, and means for operating said lever, substantially as specified.

5. The combination with a dump-wagon, of a bracket secured to the wagon-body, said bracket comprising a horizontal sleeve and a diagonal bracing-arm, a lever arranged opposite the outer end of said sleeve and connected therewith, a brake-shoe carried by said lever, and means for operating said lever, substantially as specified.

6. The combination with a dump-wagon, of a bracket secured to the wagon-body, said bracket comprising a horizontal sleeve and a diagonal bracing-arm, a lever arranged opposite the outer end of said sleeve and connected therewith, a brake-shoe carried by said lever, means for operating said lever, and a spring connected to said lever and to the wagon-body and adapted to hold the brake-shoe out of operative position.

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Witnesses:

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