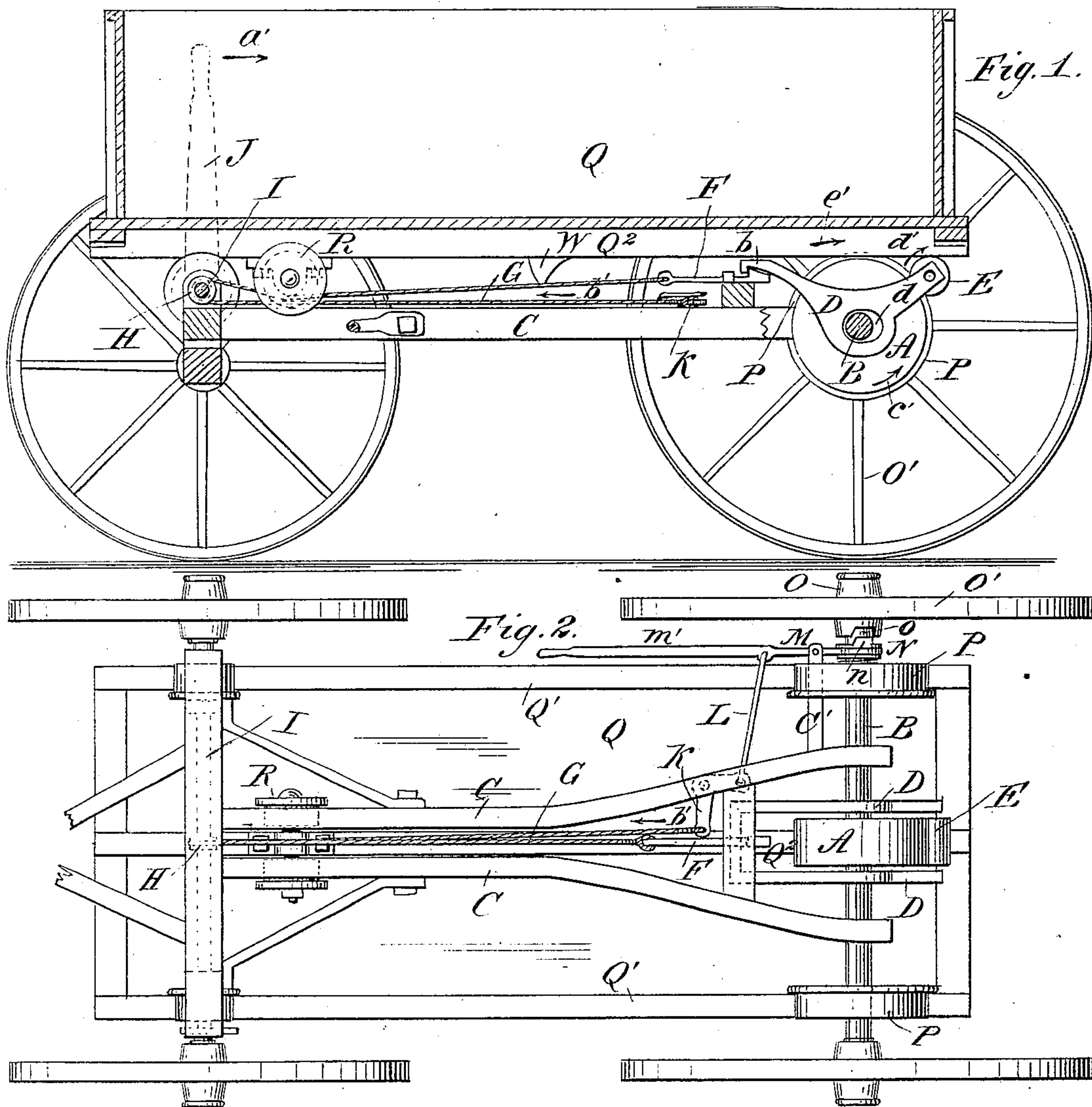


(No Model.)

J. G. COBURN.  
DUMPING WAGON.

No. 270,391.

Patented Jan. 9, 1883.



WITNESSES:

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# UNITED STATES PATENT OFFICE.

JOHN G. COBURN, OF SOUTH CARTHAGE, ASSIGNOR TO HIMSELF AND  
GEORGE B. STAPLES, OF CARTHAGE, MAINE.

## DUMPING-WAGON.

SPECIFICATION forming part of Letters Patent No. 270,391, dated January 9, 1883.

Application filed July 12, 1882. (No model.)

*To all whom it may concern:*

Be it known that I, JOHN G. COBURN, of South Carthage, in the county of Franklin and State of Maine, have invented a new and Improved Dumping-Wagon, of which the following is a full, clear, and exact description.

The object of my invention is to facilitate the dumping of a wagon.

The invention consists in a friction-wheel mounted on an axle, on which one of the driving-wheels can be locked to cause the friction-wheel to rotate with the driving-wheel, between which friction-wheel and the bottom of the wagon-box a smaller friction-wheel can be jammed, this smaller friction-wheel being journaled in the ends of adjustable hangers loosely mounted on the sides of the large friction-wheel. The wheel is locked on the axle by means of a clutch-ring operated by a rope or chain extending to the front end of the wagon and running over a pulley on a rocking shaft on the front axle, which rocking shaft can be operated by a suitable handle-lever. This rope, rocking shaft, and handle-lever are also used to adjust the hangers of the small friction-wheel in position. The box runs on suitable flanged wheels running on the wagon-frame.

Reference is to be had to the drawings forming part of this specification, in which similar letters of reference indicate corresponding parts in the figures.

Figure 1 is a longitudinal sectional elevation of my improved dumping-wagon. Fig. 2 is a plan view of the under side of the same.

A large friction-pulley, A, is rigidly mounted on the rear axle, B, which is journaled in the wagon-frame at the rear end of the tongues C. Two hangers, D, provided with slots *d*, through which the axle B passes, are loosely mounted on the axle at the sides of the pulley A, and in the rear ends of these hangers a small friction pulley or wheel, E, is journaled. Hook projections *b* are formed on the front ends of the hangers D, or on a cross-bar connecting these hangers, which hooks *b* are adapted to engage with a hook, F, adjusted to slide in the direction of the length of the wagon. A rope or chain, G, is attached to this hook F, and from there passes over a pulley, H, on a rocking shaft, I, over the front axle, which shaft I

is provided with a handle-lever, J, at one end. From this pulley H the rope or chain G passes to an elbow or bell-crank lever, K, pivoted in the horizontal plane on one of the tongues, to one end of which lever K this rope is attached. The other end of the lever K is pivoted to a rod, L, pivoted to one end of a forked rod, M, pivoted to one end of a cross-bar, O', of the wagon-frame, near one of the rear wheels. A clutch-ring, N, provided with one or more teeth, *n*, is held loosely to turn in the fork of the rod M, which clutch-ring N is adapted to move longitudinally and to turn with the axle B. The hub O of one of the rear wheels, O', is provided in its inner end with one or more recesses, *o*, adapted to receive the tooth of the clutch-ring N.

Flanged wheels P are loosely mounted on the axle B, directly below the side bars, Q', of the box Q, which side bars, Q', rest on the wheels P. Two flanged wheels, R, are pivoted to the bottom of the wagon-box at the front end, which wheels rest on the tongues C, on which they are adapted to run. The side bars, Q', are provided at or near the middle with check blocks or pins W, which strike against the wheels P when the wagon-box has been moved back sufficiently. The forked rod M is provided with an elongation, M', which extends beyond the rim of the wheel, and which forms a handle-lever for locking the wheel to and unlocking it from the axle.

The operation is as follows: If the box Q is to be dumped, the handle-lever J is turned in the direction of the arrow *a'*, Fig. 1. By the friction of the pulley H on the chain or rope that part of the rope or chain attached to the lever K will be moved in the direction of the arrow *b'*, and will draw on the lever K, which is slightly turned on its pivot, and the tooth *n* of the clutch-ring will pass into the recess *o* in the hub O, whereby the axle B will be caused to rotate with the wheel O'. The handle-lever J is then thrown in the inverse direction of the arrow *a'*, whereby the hook F will be drawn in the direction of the arrow *b'*, and will pull the hangers D in the like direction. The friction-wheel E is thus jammed between the wheel A and the central bottom rail, Q<sup>2</sup>, of the box. If, now, the wagon is pulled



forward, the wheel  $O'$  turns in the direction of the arrow  $c'$ , as does also the friction-wheel A. This rotates the friction-wheel E in the direction of the arrow  $d'$ , and as the rear end of the middle rail,  $Q^2$ , of the bottom of the box rests on this wheel the box will be moved beyond the wagon-frame in the direction of the arrow  $e'$ , the box running on the wheels P and R. The box runs over the rear end of the wagon-frame until it projects sufficiently to dump, and when the box dumps it presses down the wheel E, and the hook  $b$  is disengaged from the hook F. To draw the box on the wagon-frame again, the wagon need only be drawn forward, whereby the wheel  $O'$  will be rotated in the direction of the arrow  $c'$ , and as the middle rail,  $Q^2$ , then rests directly on the friction-wheel A the wagon-box Q will be moved in the inverse direction of the arrow  $e'$ —that is, it will run on the wagon-frame again, and engages the hooks  $b$  and F again.

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

1. The combination, with the lever J, of the pulley H, the lever K, connected thereto by rope or chain, the clutch-ring having tooth  $n$ , and the hub O, having recess  $o$ , whereby the axle B will be caused to rotate with the wheel  $O'$ , as and for the purpose described.

2. The combination, with the lever J, of the hangers D, loose on rear axle and carrying end wheel, E, whereby the wheel E may be jammed between the wheel A and rail  $Q^2$ , as described.

3. In a dumping-wagon, the combination, with the frame and box, of a friction-wheel mounted rigidly on the axle, devices for locking one of the driving-wheels on the axle, adjustable hangers loosely mounted on the axle at the sides of the friction-wheel, an additional smaller friction-wheel journaled in the hangers, and of devices for adjusting the position of

the hangers, substantially as herein shown and described, and for the purpose set forth.

4. In a dumping-wagon, the combination, with the frame and box, of a friction-wheel mounted rigidly on the axle, devices for locking one of the driving-wheels on the axle, and of wheels or rollers on which the wagon-box can run, substantially as herein shown and described, and for the purpose set forth.

5. In a dumping-wagon, the combination, with the frame and box, of the friction-wheel A, mounted rigidly on the axle B, the hangers D, provided with hooks  $b$ , the friction-wheel E, journaled in the hangers D, the sliding hook F, the rope or chain G, and devices for pulling the rope or chain G toward the front end of the wagon, substantially as herein shown and described, and for the purpose set forth.

6. In a dumping-wagon, the combination, with the frame and box, of the friction-wheel A, mounted rigidly on the axle B, the tongues D, the friction-wheel E, the sliding hook F, the rope or chain G, the rocking shaft I on the front axle, the pulley H on the shaft I, and the handle-lever J, substantially as herein shown and described, and for the purpose set forth.

7. In a dumping-wagon, the combination, with the frame and box, of the friction-wheel A, mounted rigidly on the axle B, the hangers D, the friction-wheel E, the sliding hook F, the rope or chain G, the rocking shaft I on the front axle, the pulley H on the shaft I, the handle-lever J, the elbow or bell-crank lever K, the rod L, the forked rod M, the clutch-ring N, and the wheel-hub O, provided with a notch,  $o$ , in its inner end, substantially as herein shown and described, and for the purpose set forth.

JOHN G. COBURN.

Witnesses:

INGERSON B. STAPLES,  
CORA V. BROWN.