

(No Model.)

D. J. RUSSELL.

DUMPING WAGON.

No. 276,475.

Patented Apr. 24, 1883.

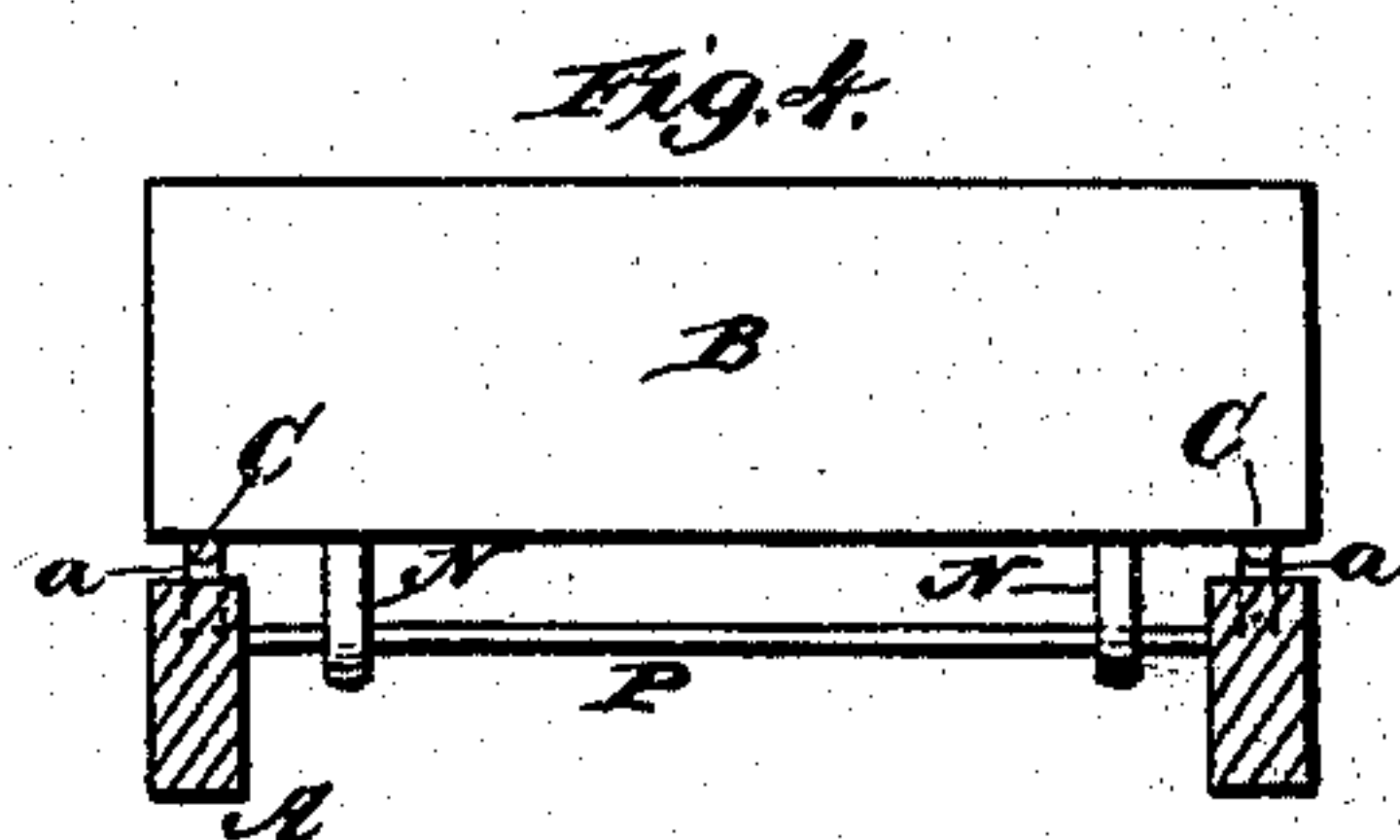
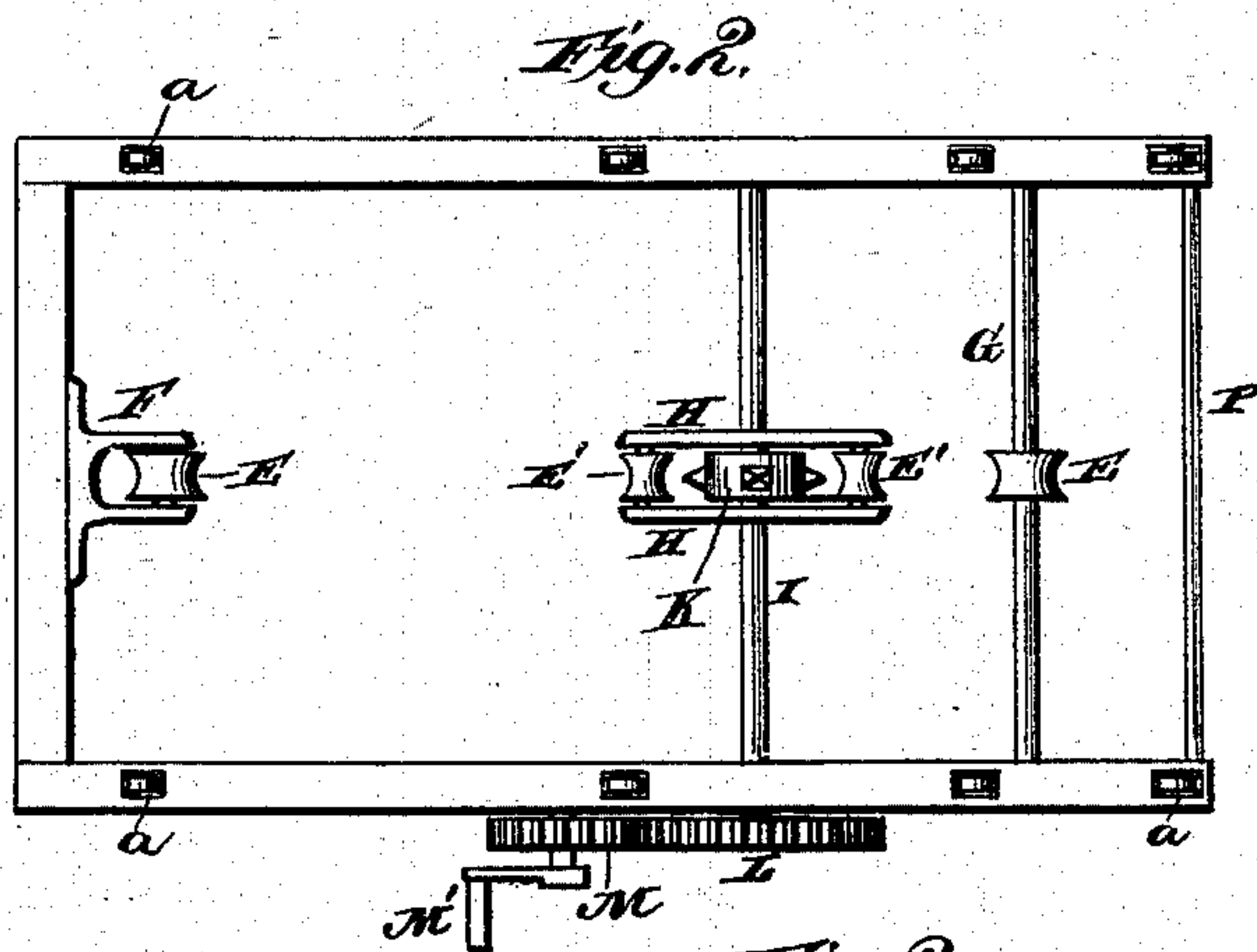
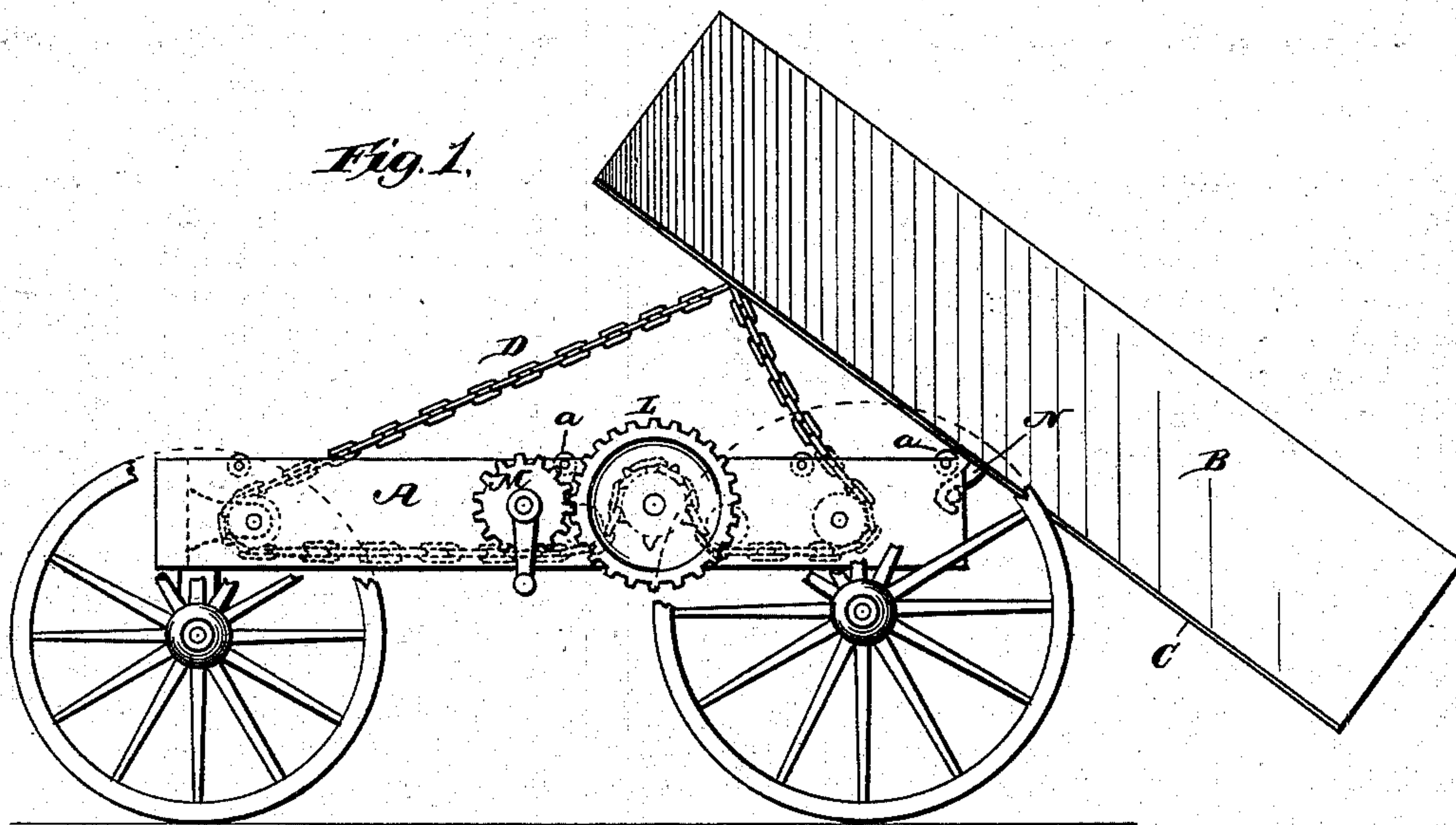
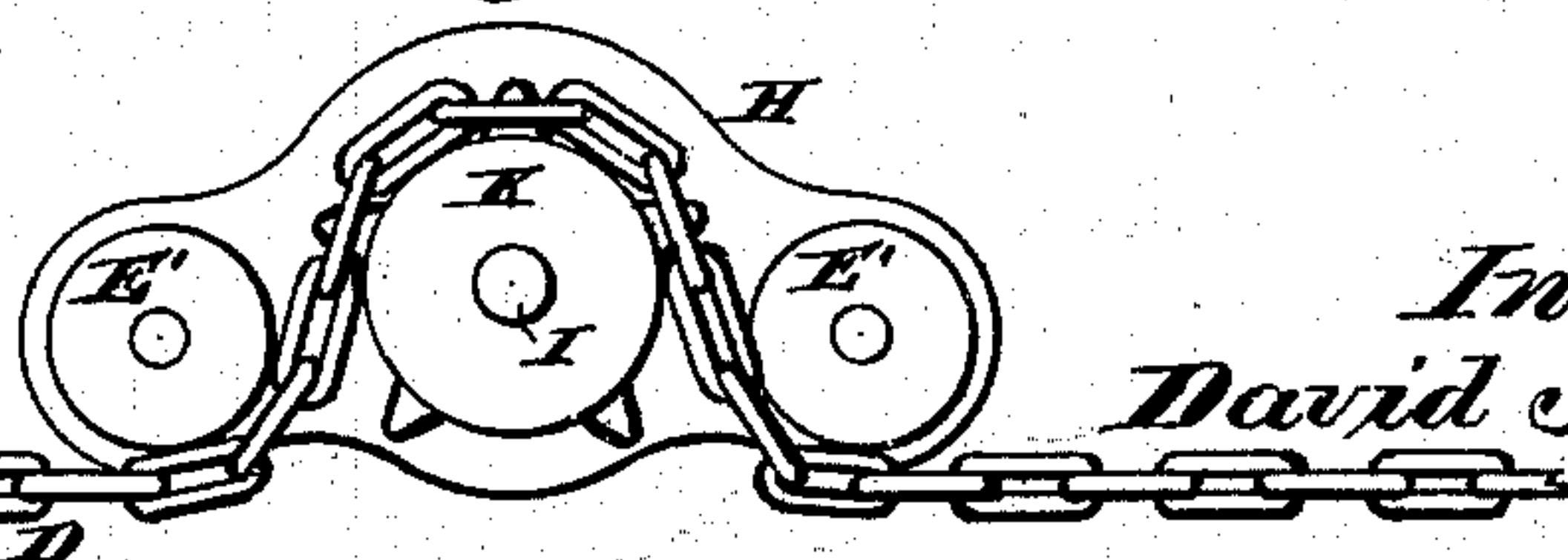


Fig. 3.



Witnesses.

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DAVID J. RUSSELL, OF NEW BEDFORD, MASSACHUSETTS.

DUMPING-WAGON.

SPECIFICATION forming part of Letters Patent No. 276,475, dated April 24, 1883.

Application filed March 1, 1883. (No model.)

To all whom it may concern:

Be it known that I, DAVID J. RUSSELL, a citizen of the United States, residing at New Bedford, in the county of Bristol and State of Massachusetts, have invented certain new and useful Improvements in Dumping-Wagons, of which the following is a specification.

This invention relates to that class of dumping-wagons in which the box is adapted to be run back on the wagon-bed and tilted at the rear end of the latter for dumping, the box being run out and allowed to dump and then drawn back in place upon the bed by means of cords or chains.

The object of my improvement is to simplify the means employed for thus operating the slidable and tilting box, and to run the box backward and forward by means of one and the same chain; also, to provide improved means for actuating said chain in a positive and effective manner; also, to provide certain improved details of construction, all of which are hereinafter fully described, and clearly illustrated in the annexed drawings, in which—

Figure 1 is a side elevation of my improved dumping-wagon with the box run back and tilted for dumping. Fig. 2 is a top or plan view of the bed and devices for actuating and guiding the chain. Fig. 3 is an enlarged longitudinal sectional view, taken on a vertical plane through the frame in which the sprocket-wheel for actuating the chain is located. Fig. 4 is an end view of the box and the bed upon which the box is supported.

The wagon-bed A, which is supported upon wheels, as usual, is provided with a series of grooved anti-friction rollers, *a*, for the box to run on. These rollers are journaled in mortises that are formed in the top edges of the sides of the bed, and the slidable wagon-box B is provided upon its under side with a pair of parallel rails, C, which rest in the grooves of the anti-friction rollers, so as to guide and steady the box.

The chain D, which is employed both to run out the box for dumping and to right and bring the box back upon the bed after it has dumped, is attached at its ends to the bottom of the box at a point near the front end of the latter. This chain passes around and is guided

by the two grooved pulleys E E, that are respectively located in the front and rear portions of the bed. One of these pulleys is mounted in a bracket, F, that is attached to the front end of the bed, while the remaining pulley is mounted upon a transverse shaft, G, that is supported in the sides of the bed, near the rear end of the structure. By thus spreading the chain over these two pulleys and connecting its ends, as indicated, its capability of action will, to a limited extent, be similar to that of an endless belt, so that if it is caused to travel over the pulleys in one direction, it will run the box to the rear, and if it is then made to travel in a reverse direction, it will draw the box back again upon the bed. The chain also passes under a pair of pulleys, E' E', that are respectively mounted in the two ends of a frame, H, located at or near the middle of the bed, as shown in Fig. 2. This frame H, which is supported by a rotary shaft, I, that extends transversely across the bed, is hung loosely upon said shaft, so that it will not partake of the rotary motion of the same.

The sprocket-wheel K, employed for operating the chain, is located within the said frame between the two pulleys E', and it is fixed upon the rotary shaft, so as to be revolved when an axial rotation is given to the latter. The chain which passes under the pulleys, carried by the frame H, also passes between the said sprocket-wheels and pulleys and also over the sprocket-wheel. In this way the chain is guided and maintained upon a proper proportion of the toothed perimeter of the sprocket-wheel, and by reason of the side walls of the frame it is further prevented from slipping off at the side of the wheel.

A gear-wheel, L, is fixed upon an end of the rotary shaft I, which extends out from one side of the bed, and a smaller gear-wheel, M, actuated by a crank, M', is mounted at said side of the bed in position to engage the larger gear. By this arrangement of devices the sprocket-wheel can be revolved and the chain caused to travel in either direction by turning the crank-handle M'.

The box is provided at its middle with a pair of downwardly-projecting hooks, N, which, as the box is run back and out for dumping, will

engage a horizontal bar, P, that is secured transversely at the rear end of the bed. This bar constitutes a stop, which, when engaged by the hooks, will check further back movement on the part of the box, the hooks turning upon the bar while the box is tilting.

The chain has sufficient slack to allow the box to tilt to the required extent after the box has been run out and its center of gravity shifted beyond the points of support at the rear end of the bed, as indicated in Fig. 1.

If desired, a suitable locking device can be employed for locking down the box when it is in its proper horizontal position upon the bed, although such locking device is by no means necessary.

Of course the sprocket-wheel, the frame H, the pulleys, and the chain could all be duplicated; but the arrangement herein shown will be found perfectly efficient for all practical purposes.

What I claim is—

1. The combination, with the wagon-bed and sliding and tilting box, of two pulleys supported respectively by the bed at the front and rear thereof, a chain extending longitudinally along the bed and around the pulleys and having its two ends connected with the forward part of the box, a sprocket-wheel engaging the chain at a point between the said pulleys and located on a transverse shaft supported by the bed, and mechanism for rotating the

sprocket-wheel to impel the longitudinal part of the chain both rearward and forward, substantially as and for the purpose described. 35

2. The combination, with the wagon-bed and sliding and tilting box, of two pulleys supported by the bed at the front and rear thereof, a chain extending longitudinally along the bed and around the pulleys, and having its two ends connected with the forward part of the box, a frame loosely hung on a shaft located at a point between the said pulleys and provided with two rollers, a sprocket-wheel mounted on the shaft between the said rollers, around which rollers and sprocket-wheel the chain passes, and mechanism for rotating the sprocket-wheel, substantially as described. 40 45

3. The combination, with the wagon-bed and the slidable and tilting box, of the chain D, for moving the box in both directions over the bed and bringing it into position for dumping, the stop-rod secured to the rear end of the bed, and a hook projecting downward and adapted to engage the stop-rod when the box is run out and ready to dump, substantially as described. 50 55

In testimony whereof I have hereunto set my hand in the presence of two witnesses.

DAVID J. RUSSELL.

Witnesses:

O. P. BRIGHTMAN,
T. M. JAMES.