

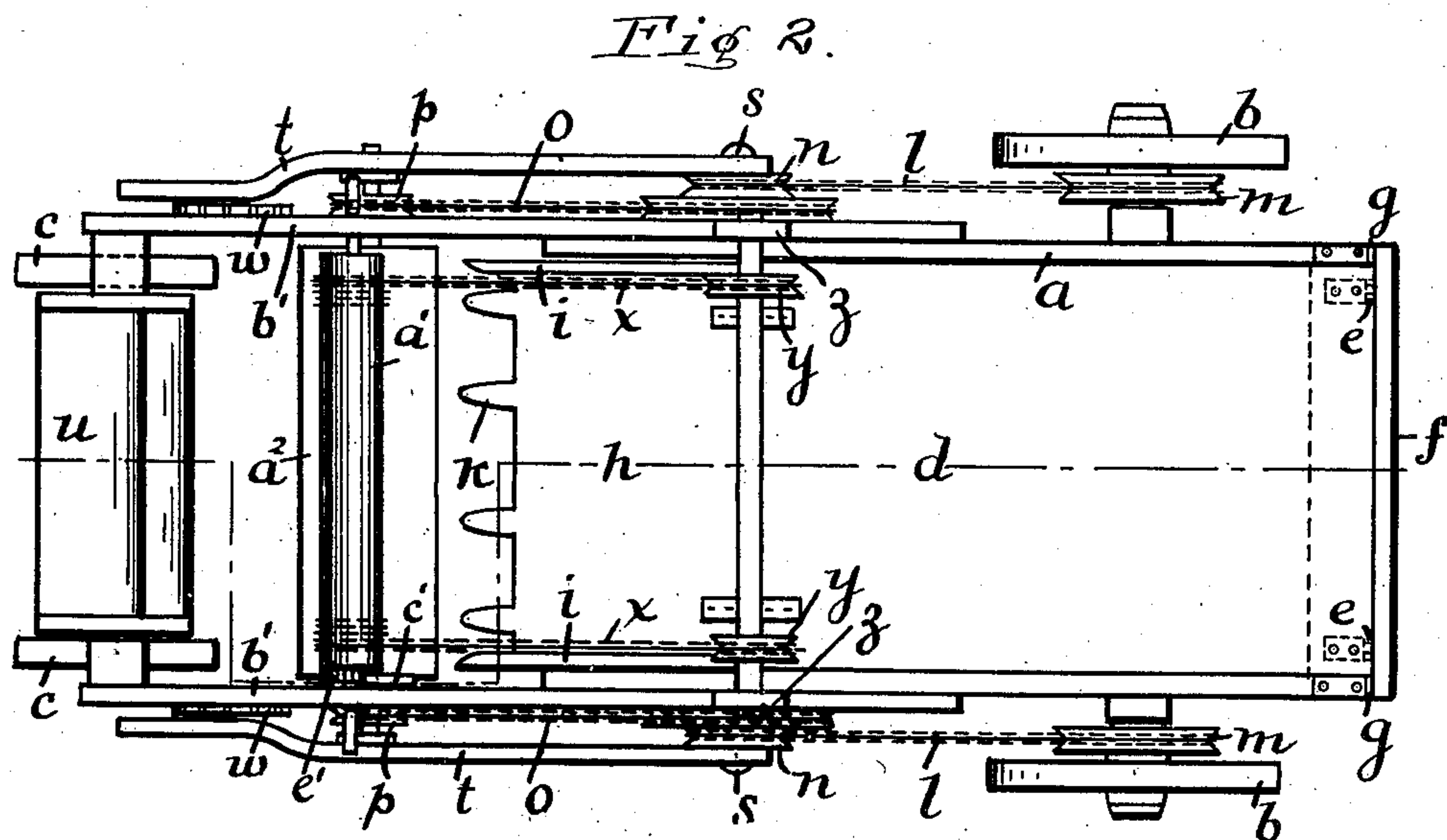
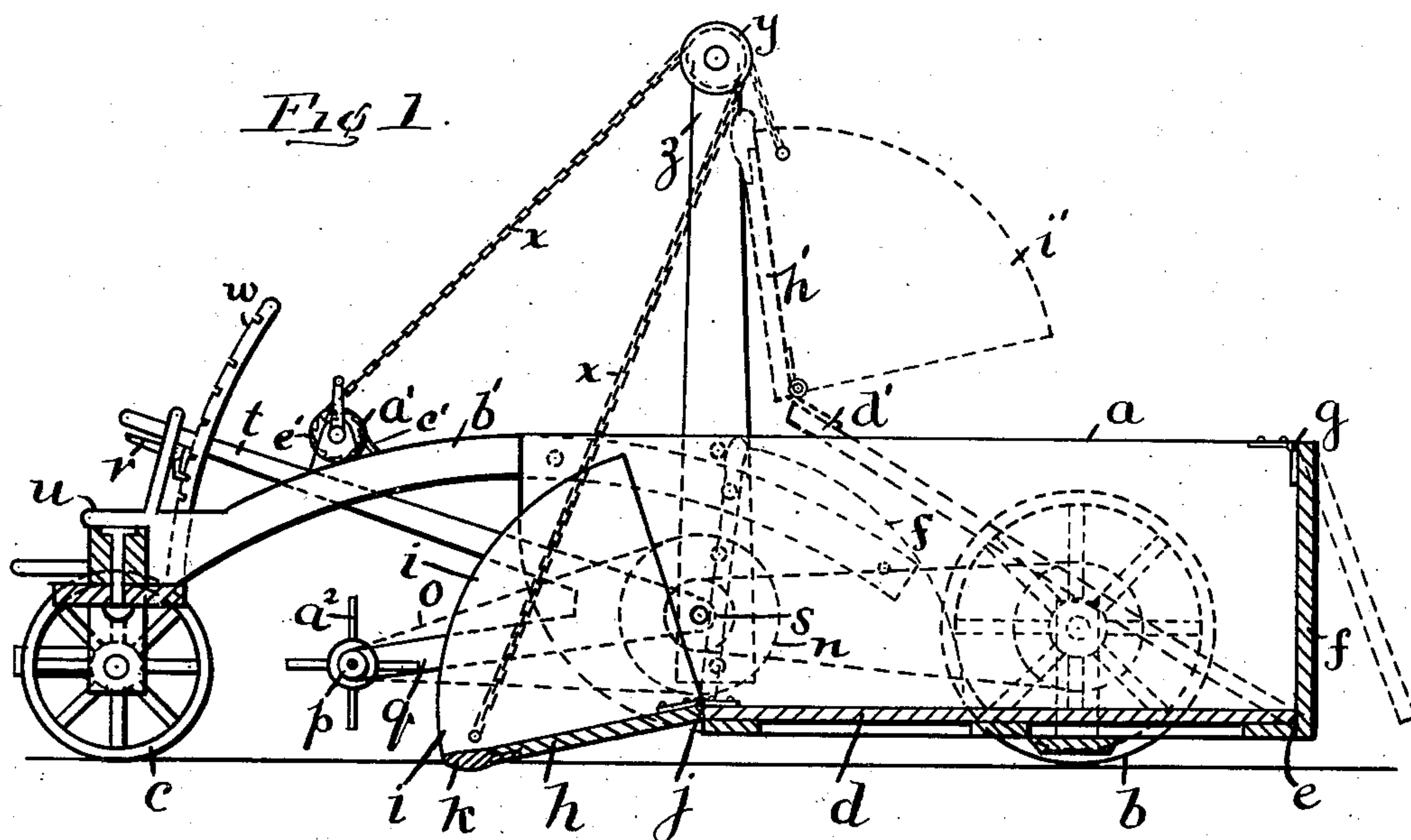
(No Model.)

C. G. OTTERSTEN.

SNOW OR DIRT COLLECTING AND DUMPING MACHINE.

No. 572,213.

Patented Dec. 1, 1896.



Witnesses.

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# UNITED STATES PATENT OFFICE.

CARL G. OTTERSTEN, OF BROOKLYN, NEW YORK.

## SNOW OR DIRT COLLECTING AND DUMPING MACHINE.

SPECIFICATION forming part of Letters Patent No. 572,213, dated December 1, 1896.

Application filed April 5, 1895. Serial No. 544,540. (No model.)

*To all whom it may concern:*

Be it known that I, CARL GUSTAF OTTERSTEN, a citizen of the United States, and a resident of Brooklyn, in the county of Kings and State of New York, have invented certain new and useful Improvements in Snow or Dirt Collecting and Dumping Machines, of which the following is a specification.

My invention consists of improvements in apparatus to be moved along the street on wheels or runners and having a scraping-scoop and a rotary brush at the front for collecting snow or dirt into a box behind the scraper and also having means for dumping the loaded box at the hind end, said scraper being adapted for closing the front end of the box when loaded, all as hereinafter fully described, reference being made to the accompanying drawings, in which—

Figure 1 is a longitudinal sectional elevation of my improved machine, and Fig. 2 is a plan view.

I mount a receiving and dumping box *a* on suitable wheels, as *b* and *c*, or it may be on runners, said box having the bottom *d* pivoted at the hind end, as indicated at *e*, or in any approved way, and otherwise arranged to be raised at the front end, as indicated in dotted lines *d'*, for dumping out through the hind end, whereof the tail-board *f* is pivoted at *g* for opening suitably therefor. To the front end of the bottom *d* a scraper or scoop is attached, consisting of the bottom plate *h* and sides *i*, said scoop being pivoted to the bottom *d* at *j*, suitably to be raised up with the front end of bottom *d*, as indicated by the dotted lines *h' i'*.

The front edge of the bottom plate *h* is preferably armed with strong points *k* for penetrating and breaking up frozen or hard-packed cakes of snow and dirt.

In front of the scoop is a rotary brush *a*<sup>2</sup> or other form of rotary device adapted to brush or otherwise force accumulations of material on the front of the scoop back into the box, said brush or beater being in this instance geared by belts and pulleys with the wheels *b* for being rotated thereby, but in case runners are used instead of wheels some other motor will be employed to rotate the brush. In this example I represent the brush as geared with both hind wheels for insuring

powerful action in case of deep and heavy snows or other conditions causing powerful resistance. To obtain requisite speed of the fan from the slow-moving wheels *b*, the primary belts *l* are geared from the pulleys *m* on the wheels *b* onto the multiplying-pulleys *n*, from which other belts *o* connect with small pulleys *p* on the brush-shaft. Any well-known provision may be made for differentiation of the pulleys when turning from a straight course.

The brush is mounted in the extremities of arms *q*, pivoted in the axis *s* of the multiplying-pulleys *n* and rigidly connected with levers *t*, reaching forward in proximity to the driver's seat *u*, suitably to be shifted for raising or lowering the brush, as may be required, and provided with latches *v* and notched bars *w* for setting it in position. For raising the scoop and the bottom of the box, chains *x* are connected with the front end of the scoop and rigged over pulleys *y*, supported on standards *z*, attached to the sides of the box and extending upward a suitable height, and therefrom the chains extend to a windlass *a'*, mounted on the supporting-arms *b'*, attached to the front portion of the box and reaching forward to the front gear of the truck, which may be of any approved kind.

The windlass has a ratchet *e'* and a pawl *c'* to set it for holding the front end high or low, as required, and particularly for holding it in the position indicated by the dotted lines *f'* to retain the front portion of the load while being conveyed to the dumping place; also, to hold the scoop and the bottom *d* in the higher position, if need be, while dumping.

I claim—

1. The combination of the receiving-box open at the front end and having means for moving it along the ground, also having the bottom and the tail-board adapted for dumping at the hind end, the scraper or scoop hinged to the front end of the bottom and adapted for the front end to run along the ground, the vertically-adjustable rotating brush or beater at the front end of the box, and means for raising the scoop for closing the front end of the box for retaining the load substantially as described.

2. The combination of the receiving-box open at the front end, and having the bottom

and the tail-board adapted for dumping at the hind end, the scraper or scoop hinged at the front end of the bottom and adapted for the front end to run along the surface of the ground, the vertically-adjustable rotary brush or beater at the front end of the box, and means for raising the scoop and the bottom of the box for dumping the load at the hind end substantially as described.

10 3. The combination of the receiving-box open at the front end and having means for moving it along the ground, also having the bottom and the tail-board adapted for dumping at the hind end; the scoop or scraper  
15 hinged at the front end of the bottom and

adapted for the front end to run along the ground, the vertically-adjustable rotary brush or beater at the front end of the box, and the windlass, chains and chain-carrying pulleys connected with the scoop for raising it and the bottom of the box substantially as described. 20

Signed at New York city, in the county and State of New York, this 9th day of February, A. D. 1895.

CARL G. OTTERSTEN.

Witnesses:

W. J. MORGAN,  
S. H. MORGAN.