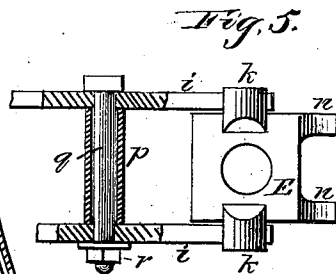
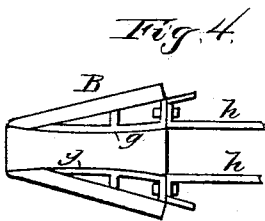
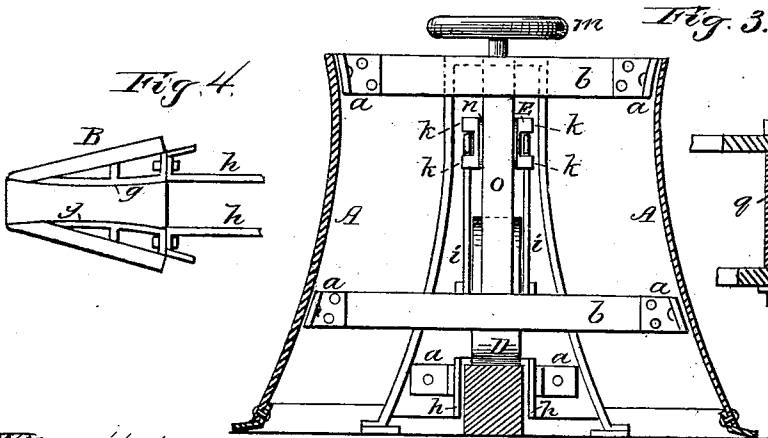
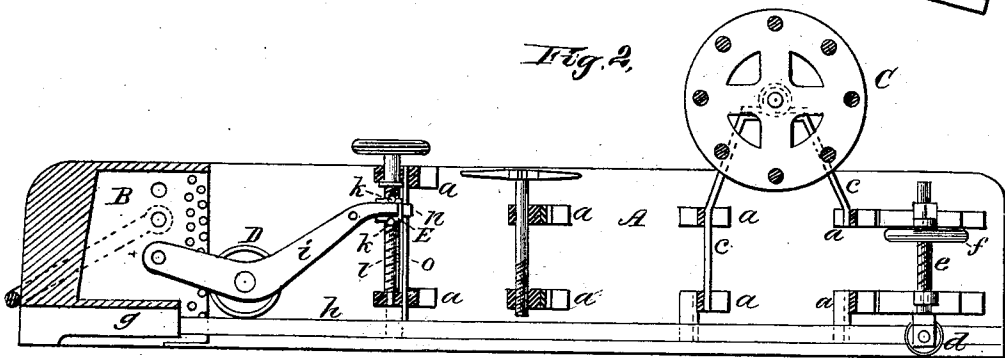
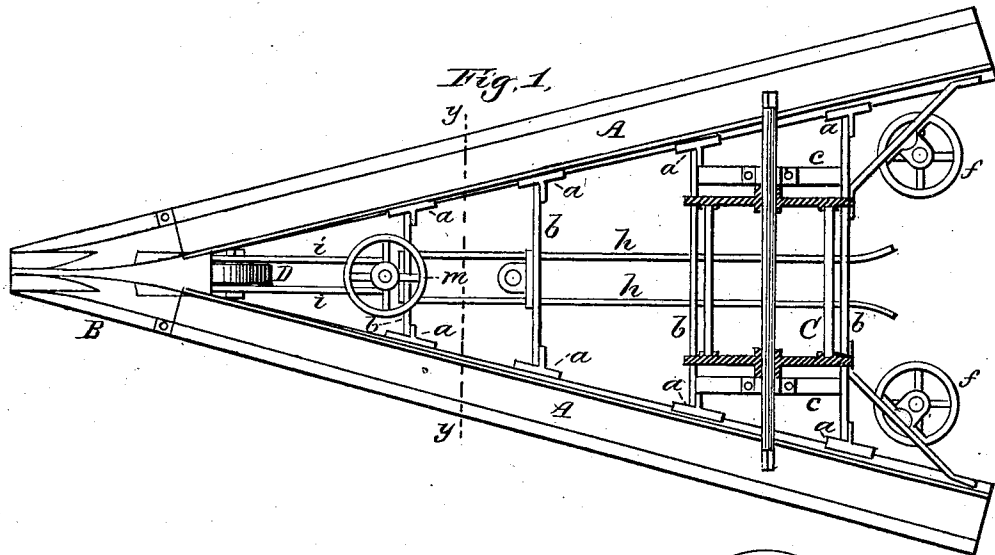


(No Model.)

G. P. MERRILL.
Device for Unloading Cars.

No. 243,388.

Patented June 28, 1881.



Witnesses:
H. C. Arthur,
Leona S. Miller.

Inventor:
George P. Merrill.

per Cha. H. Fowler,

Attorney.

UNITED STATES PATENT OFFICE.

GEORGE P. MERRILL, OF TOLEDO, OHIO, ASSIGNOR TO F. W. STEWART, OF SAME PLACE.

DEVICE FOR UNLOADING CARS.

SPECIFICATION forming part of Letters Patent No. 243,388, dated June 28, 1881.

Application filed April 28, 1881. (No model.)

To all whom it may concern:

Be it known that I, GEORGE P. MERRILL, a citizen of the United States, residing at Toledo, in the county of Lucas and State of Ohio, have invented certain new and useful Improvements in Devices for Unloading Cars; and I do hereby declare that the following is a full, clear, and exact description of the same, reference being had to the annexed drawings, making a part of this specification, and to the letters and figures of reference marked thereon.

Figure 1 of the drawings is a top-plan view of my invention. Fig. 2 is a longitudinal vertical section thereof. Fig. 3 is a cross-section, on an enlarged scale, taken on line *yy* of Fig. 1. Fig. 4 is an under-side plan view of the nose-casting; and Fig. 5 is a detail view, showing the manner of connecting the angle-arms together and to the carrier.

The present invention has relation to that class of devices for unloading dirt or gravel from railroad-cars which is constructed in the form of a plow adapted to be drawn forward over the platform of the car by attaching it to the engine and drawn back by means of a windlass, such devices being usually termed "center ballast-unloaders," as they discharge the dirt simultaneously from both sides of the car. The details of construction, however, of my invention in several particulars may be equally applicable to the class of unloaders for which a patent was granted to me November 30, 1880, No. 234,883, this form of unloader being especially adapted for discharging the dirt, gravel, or other material from one side only of the car, while in the present case the material is discharged from both sides simultaneously, the special construction thereof being fully shown in the drawings, and hereinafter described.

In the accompanying drawings, A represents the sides or wings of the plow or scraper, arranged at an acute angle with each other, and at the apex of the angle thus formed the ends of the wings are bolted or otherwise connected to a nose-casting, B.

To the inner sides of the wings A are secured angle-irons *a*, to which are riveted or bolted the cross-braces *b*, thus forming a very simple and easily-constructed, as well as strong and durable, system of braces for the wings.

The plow or scraper is provided with a suitable windlass, C, the axle or journals of which are supported in a frame-work, *c*, of any desirable form and construction. To the rear of this windlass are rollers *d*, journaled upon the ends of adjustable screw-rods *e*, operated by hand-wheels *f*, the rollers being raised or lowered to regulate the height of the plow or scraper at that end.

The nose-casting B, to which the ends of the wings A are connected, is formed upon its under side with guides *g*, to fit over and upon the rail connected to the platform of the car. These guides *g*, at both their ends, flare outwardly, so as to increase the space between them at the forward and rear ends of the nose-casting, the object being to give to the plow or scraper the required amount of lateral play when sliding over a series of car-platforms standing on a curve.

To the rear of the nose-casting B are connected, by bolts or other suitable means, guides *h*, said guides forming a continuation of the guides *g*, and extending back to the rear of the plow or scraper, and being fastened to the several cross-braces *b*. The guides *g* are decreased in height at their rear portion, so as to prevent any unnecessary friction from the entire length of the guides coming in contact with the surface of the car-platform.

The forward or front portion of the plow or scraper is raised or lowered by the vertical adjustment of a roller, D, which is held between angle-arms *i*, the journals or axle of said roller having its bearings or otherwise connected to the arms at a point where the angles diverge. The forward ends of these arms *i* are pivoted to the inner sides of the nose-casting B, while the rear ends are disposed between lugs *k*, projecting from each side of a carrier, E. This carrier has a screw-threaded opening, through which passes a screw-rod, *l*, having connected to its upper end a suitable hand-wheel, *m*.

Unlike the rollers *d*, which bear upon the car-platform, the roller C rides or bears on the rail, and is raised or lowered by turning the screw-rod *l*, which causes the carrier to move up and down thereon, the lugs *k* serving to press down or elevate the ends of the arms *i*, located between them, which, in turn, adjust the height of the roller C and raise or lower the front end

of the plow or scraper. Upon the rear end of the carrier D are shoulders *n*, which pass upon each side of an upright, *o*, so as to prevent the carrier from turning on the screw-rod.

5 Between the arms *i* is located a hollow cylinder, *p*, through which passes a bolt, *q*, and also through the arms, a nut, *r*, engaging with the screw-threaded end of the bolt drawing the arms against the ends of the cylinder and
10 firmly holding them there, thus forming a complete brace and stay for the arms, to hold them the required distance apart and prevent them from being forced out laterally and disengaging themselves with the lugs *k*.

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

1. A device for unloading cars, provided with a nose-casting having upon its under side
20 guides which flare outwardly at their ends, to increase the space between them at those points, substantially as and for the purpose set forth.

2. In a device for unloading cars, the combination, with a nose-casting having guides
25 that flare outwardly at their ends, of guides connected to the nose-casting and extending back to the rear end of the device, substantially as and for the purpose specified.

30 3. In a device for unloading cars, a nose-casting provided with guides the rear portions of which are cut away or decreased in height,

so that the forward ends only will rest upon the surface of the car-platform, substantially as and for the purpose described. 35

4. In a device for unloading cars, a roller adapted to bear upon the rail of the car-platform and held between two angle-arms pivoted at their forward ends, in combination with means, substantially as shown and described, for raising and lowering said arms,
40 for the purpose set forth.

5. In a device for unloading cars, a roller held between angle-arms which are pivoted at their front ends to the device, in combination
45 with a carrier formed with lugs, between which the rear ends of the angle-arms are located, said carrier adapted to traverse up and down upon a screw-rod when the latter is turned, substantially as and for the purpose described. 50

6. In a device for unloading cars, the combination, with angle-irons secured to the inner sides of the wings thereof, of cross braces or stays connected to said angle-irons to form together a trestle-work and system of braces,
55 substantially as and for the purpose set forth.

In testimony that I claim the above I have hereunto subscribed my name in the presence of two witnesses.

GEO. P. MERRILL.

Witnesses:

J. R. OSBORN,
SYLVESTER LAMB.