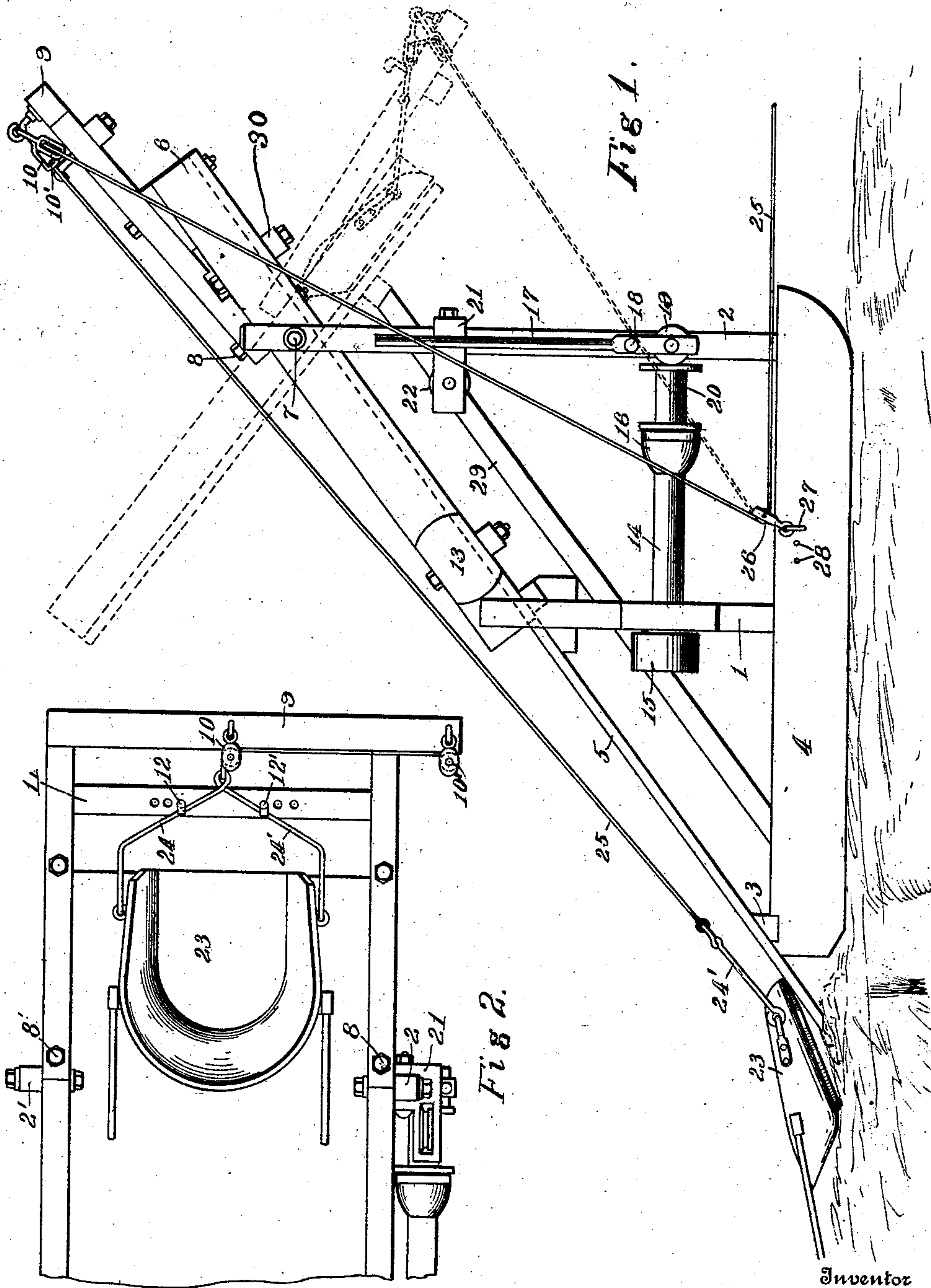


No. 850,083.

PATENTED APR. 9, 1907.

J. W. ATKISON.  
LOADING APPARATUS.  
APPLICATION FILED DEC. 27, 1906.



Witnesses  
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# UNITED STATES PATENT OFFICE.

JOHN W. ATKISON, OF PANA, ILLINOIS.

## LOADING APPARATUS.

No. 850,083.

Specification of Letters Patent.

Patented April 9, 1907.

Application filed December 27, 1906. Serial No. 349,639.

*To all whom it may concern:*

Be it known that I, JOHN W. ATKISON, a citizen of the United States, residing at Pana, in the county of Christian and State of Illinois, have invented certain new and useful Improvements in Loading Apparatus, of which the following is a specification.

My invention relates to improvements in apparatus for excavating and loading; and it consists in the constructions, combinations, and arrangement herein described and claimed.

The object of my invention is to provide improved means for excavating sand, gravel, &c., and loading the excavated material into wagons or other desired receptacles.

In the accompanying drawings, forming a part of this application, and in which similar reference symbols indicate corresponding parts in the several views, Figure 1 is a side elevation illustrating one embodiment of my invention, and Fig. 2 is a detail top plan view of part of the construction shown in Fig. 1.

Referring to the drawings, a frame or base, comprising uprights 1 and 2 2' and cross members 3 is mounted on suitable traction devices, such as runners 4. Resting upon this base and secured to it is an inclined way consisting of two parts—a lower portion 5, extending from the ground to the upright member 1, and an upper portion 6, which is pivoted at 7 on the member 2. In normal position the upper portion forms a lineal extension of the lower portion.

Attached to the pivoted member 6 by bolts 8 and 8' is a forwardly-extending brace 9, provided with the pulley-blocks 10 and 10'. The said brace 9 also bears a cross-piece 11, provided with a series of holes into which may be inserted pins or stops 12 and 12'. The lower end of the pivoted portion of the way is provided with a counterweight 13.

Secured in the frame in any suitable manner is a shaft 14, bearing a pulley 15.

A friction-clutch 16 is operated by means of a lever 17, pivoted at 18 to the upright part 2 through the medium of a cam-wheel 19, carried in the lower part of said lever.

A drum 20 is provided on the shaft 14.

Secured to the upright member 2 is a laterally-extending arm 21, carrying a guide-wheel 22.

The carrier or scraper 23 is provided with the usual handles and with bails 24 24', inclined to each other.

A rope or cable 25 is attached to the bails

and passes through the blocks 10 and 10' on the brace 9, thence to another block 26, secured to the side piece 4 by means of an eye-bolt 27.

The pulley-block 26 may be adjusted to different positions along the side member 4, a series of holes 28 being provided for that purpose.

An inclined member 29 receives the impact of the buffer 30, secured to the pivoted portion of the way, when the scraper is dumped.

The operation of my device is as follows:

Power is applied at the free end of the rope 25. The scraper is filled and is drawn up the way 5 until the bails on the scraper contact with the stops 12 and 12' on the pivoted section 6. A continued strain on the rope, combined with the weight of the load, tends to overbalance the pivoted portion of the way and the outer end descends, discharging the contents of the carrier. The impact of the buffer 30 against the member 29 insures the complete ejection of any material that would otherwise tend to adhere to the scraper. By reference to the drawings it will be seen that in spite of the jarring action caused by the impact of the buffer on the resisting member 29 the scraper is positively held in place by the downward thrust of the bails 24 24' at the moment it is being emptied. By adjusting the stops 12 and 12' the scraper may be dumped at different points in its ascent, or if a larger scraper is used and its load is correspondingly heavier the overbalancing effect of the excess load may be overcome by limiting the travel of the scraper by means of the adjustable stops. Furthermore, by adjusting the block 26 the leverage of the stress of the cable relative to the pivotal support 7 may be increased or decreased at will. Thus it is readily seen that by these two adjustments the dumping action of the device may be rendered practically uniform through great ranges of load. When the rope 25 is slackened, the counterweight 13 causes the pivoted portion of the way to return to its normal position.

The device may be operated by mechanical power by passing the rope 25 over the guide-wheel 22 and around the drum 20 and applying the power to the pulley 15.

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

1. In an excavating and loading apparatus, the combination of a base, an inclined

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way carried thereby, an upper section pivoted on said base and constituting a continuation of said inclined way, a scraper, bails on said scraper, a cable secured to said bails, stops supported by said pivoted section for engaging said bails, and guiding means on said pivoted section for receiving said cable, substantially as described

2. In an excavating and loading apparatus, the combination of a base, an inclined way carried thereby, an upper section pivoted on said base and constituting a continuation of said inclined way, a scraper, bails on said scraper, a cable secured to said bails, stops carried by said pivoted section for engaging said bails, guiding means on said pivoted section for receiving said cable, and buffers carried by said base for engaging said pivoted section upon its swing to discharging position, substantially as described,

3. In an excavating and loading apparatus, the combination of a base, an inclined way carried thereby, an upper section pivoted on said base and constituting a continuation of said inclined way, a scraper, bails on said scraper, a cable secured to said bails, braces inclined upwardly from said pivoted section, stops supported by said braces for

engaging said bails, and guiding means carried by said braces for receiving said cable, substantially as described.

4. In an excavating and loading apparatus, the combination of a base, an inclined way carried thereby, an upper section pivoted on said base and constituting a continuation of said way, a scraper, bails on said scraper, means for drawing said scraper upwardly along said way, stops supported by said pivoted section for engaging said bails, and means for adjusting said stops to shift the point of such engagement in the travel of said scraper at various predetermined points in the upward travel of said scraper.

5. In an excavating and loading apparatus, the combination of a base, an inclined way carried thereby, an upper section pivoted on said base and constituting a continuation of said way, means for tilting said pivoted section, and means for adjusting the leverage of said tilting means.

In testimony whereof I affix my signature in presence of two witnesses.

JOHN W. ATKISON.

Witnesses:

E. H. PARKINS,  
G. AYRES.