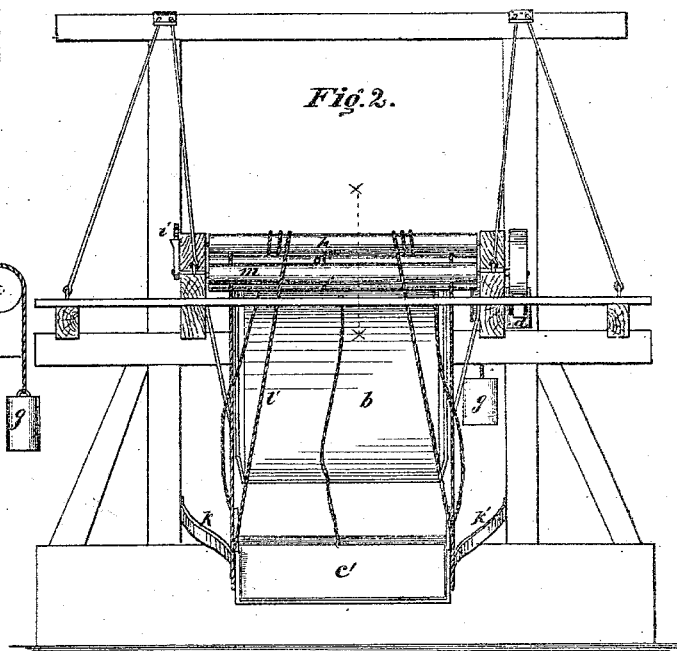
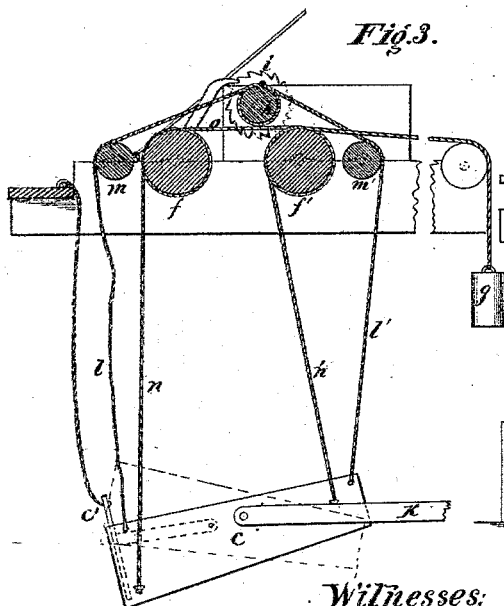
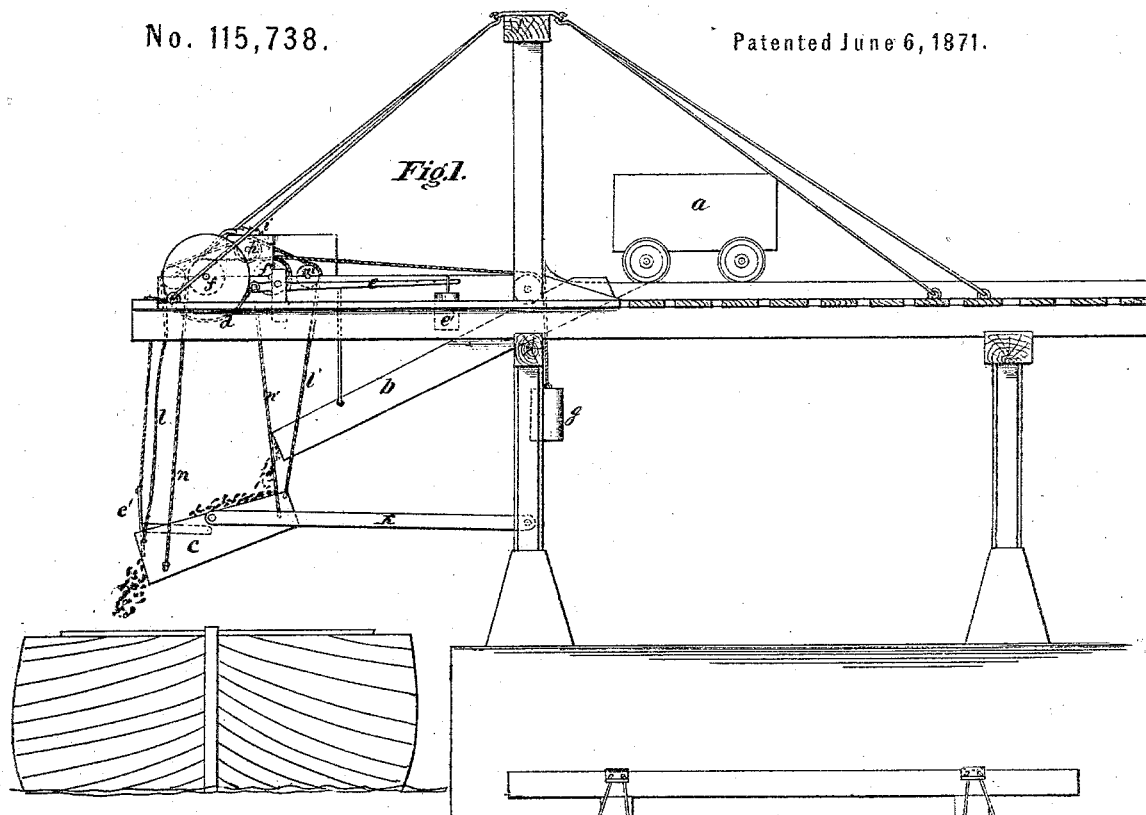


R. JENKINS & T. WOODS.

Improvement in Apparatus for Dumping Coal.

No. 115,738.

Patented June 6, 1871.



Witnesses:

H. L. Prime.
Jno. D. Patten

Inventör.

Robert Jenkins
Theo. Woods.

My dear Mr. Kerben
atty.

UNITED STATES PATENT OFFICE.

ROBERT JENKINS AND THEODORE WOODS, OF ALLEGHENY COUNTY, PA.

IMPROVEMENT IN APPARATUS FOR DUMPING COAL.

Specification forming part of Letters Patent No. 115,733, dated June 6, 1871.

To all whom it may concern:

Be it known that we, ROBERT JENKINS and THEODORE WOODS, of Allegheny county, in the State of Pennsylvania, have jointly invented a new and valuable Improvement in Coal-Tipples, or apparatus for dumping coal from cars into barges or vessels on a lower level; and we do hereby declare that the following is a full and exact description of the construction and operation of the same, reference being had to the annexed drawing making a part of this specification, and to the letters and figures marked thereon.

Figure 1 is a side view of our coal-tipple. Fig. 2 is a front view. Fig. 3 is a section through the line *x x*, Fig. 2.

The object of our invention is to provide a means of dumping coal from the pit-wagon into boats, barges, cars, &c., without breaking the coal into small pieces, or packing it so tightly that it cannot be unloaded afterward without great difficulty and further breakage.

To effect this we use a box, *c*, or detached section of the chute *b*, with a combination of lines, drums, brake-band, lever, and counter-weight. The drums rest on timbers projected from the end of the track and supported by strong frame-work. These timbers also rest on scales in the ordinary manner, the scales not being represented in the drawing. The coal is dumped from the pit-wagon *a*, Fig. 1, into the chute *b*, and, passing over the screen, is caught in the box *c* or detached section of the chute, when, after being weighed, it is gradually lowered into the boat or other receptacle by means of the drums and lines. The rapidity of the descent of the box *c* is controlled by the brake-band *d* and lever and weight *e e'*. The chute is provided with a door or gate, *c'*, in the outer end, to which is attached a line that serves to raise it at the proper moment and allows the coal to slide out gradually. This line can be graduated to any length required. The box *c* is suspended by lines attached to the drums *f f'*, and these two drums are connected by another line, *o*, so as to secure simultaneous action and the

regular and even descent of the box. By means of the drop counter-weight *g* the detached section of the chute or box is brought back to its position at the mouth of the chute as soon as unloaded. Lines *l l'* are also attached to each end of the box *c*, and a roller, *h*, provided with pawl and ratchet *i*. These lines are wound around the roller in opposite directions, so that when one is wound the other is unwound. The outer line being tightened and held fast by means of the ratchet and pawl, the box *c* descends with a reversed inclination, and deposits the coal on the inner side of the boat when desired, thus avoiding the necessity of first loading one side and then turning the boat to load the other. The small rollers *m m'* serve as friction-rollers and guides for the lines *l l'*. The box *c* is also provided with pivoted arms *k k* attached to the frame-work. All the lines can be so arranged as to load the coal at any elevation or stage of water.

By our method there is effected a saving of at least ten per cent. of large coal over the usual modes of handling.

What we claim as our invention, and desire to secure by Letters Patent, is—

1. The drums *f f'* attached together by the line *o*, in combination with the brake-band *d* and lever *e*, as described, and for the purposes set forth.
2. The roller *h* with pawl and ratchet *i*, in combination with the small rollers *m m'*, and lines *l l'*, and box *c* with pivoted arms *k k'*, substantially as shown and described, and for the purposes designated.
3. The combination of box *c* with gate *c'* and drums *f f'*, and lines *n n'* with roller *h* and lines *l l'* and pivoted arms *k k'*, arranged as described, and for the purposes set forth.

In testimony that we claim the above we have hereunto subscribed our names in the presence of two witnesses.

ROBERT JENKINS.
THEO. WOODS.
Witnesses:
FRANK PATTERSON,
JAMES H. BERRY.