

H. H. BENNETT.
 DUMPING APPARATUS FOR COAL CARS.
 APPLICATION FILED NOV. 16, 1910.

1,002,628.

Patented Sept. 5, 1911.

3 SHEETS—SHEET 2.

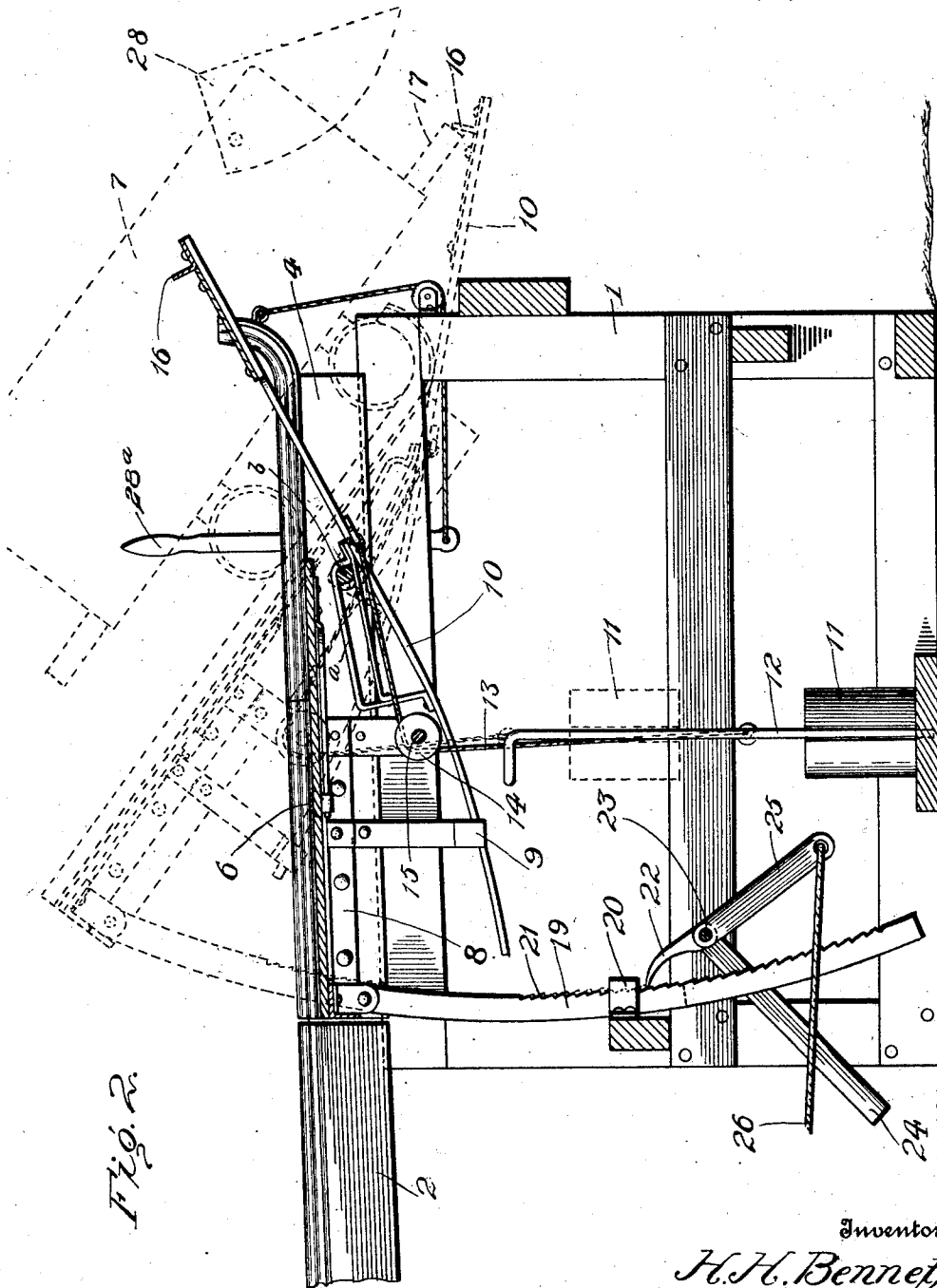


Fig. 2.

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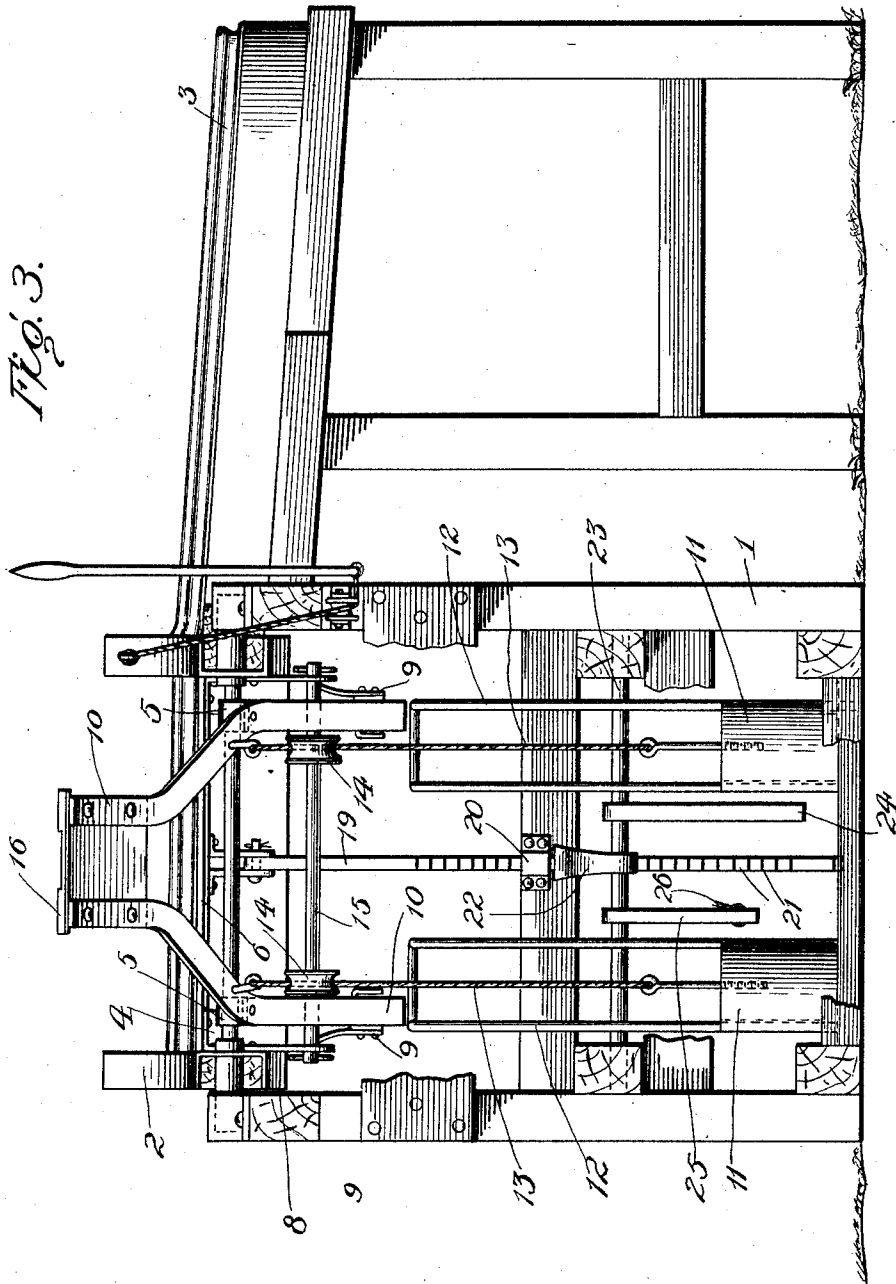


Fig. 3.

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UNITED STATES PATENT OFFICE.

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DUMPING APPARATUS FOR COAL-CARS.

1,002,628.

Specification of Letters Patent.

Patented Sept. 5, 1911.

Application filed November 16, 1910. Serial No. 592,637.

To all whom it may concern:

Be it known that I, HENDERSON H. BENNETT, a citizen of the United States, residing at Morley, in the county of Campbell and State of Tennessee, have invented certain new and useful Improvements in Dumping Apparatus for Coal-Cars; and I do hereby declare the following to be a full, clear, and exact description of the invention, such as will enable others skilled in the art to which it appertains to make and use the same.

This invention relates to new and useful improvements in dumping apparatus for coal cars or the like.

The object of this invention is the provision of a device of this character, whereby the car will be impelled by its own weight to a desired dumping point and automatically dump, and after which be returned automatically to the starting point.

A further object of this invention is the provision of a device of this character which will be comparatively simple and inexpensive to manufacture, reliable and efficient in use, and readily operated.

With the above and other objects in view this invention resides in the novel features of construction, formations, combinations and arrangements of parts to be hereinafter more particularly described, claimed and illustrated in the accompanying drawing, in which—

Figure 1 is a plan view of my dumping mechanism; Fig. 2 is a longitudinal sectional view taken on the line *a-a* of Fig. 1; Fig. 3 is an end view of Fig. 1, with parts broken away; and Fig. 4 is a side elevation of my invention.

Referring to the drawing by characters of reference, the letter A represents a point of excavation, or any other desired spot from which coal or the like is to be moved, and B the dumping point, or place to which the said coal or the like is to be conveyed and deposited.

My improved device is mounted upon a suitable trestle work 1, and comprises a main track 2, which slopes gradually downward from the point of excavation A to the dumping point B, and a side track 3, which slopes downward from the dumping point B back to the point of excavation A.

A hinged platform 4 having a vertical swinging movement, is mounted in suitable bearings 5, adjacent the previously mentioned dumping point B, and has mounted

thereon the terminals or switch points of the main track 2, which are connected by a suitable bar 6, and normally pressed by means of a spring 7^a in a direction so as to admit the dump car 7 to be transferred to the side track 3 upon its return. A frame 8 is secured to the lower face of the swinging platform 4, and is provided with depending guides 9, adapted to receive the swinging extremities of a substantially U-shaped returning member 10, provided upon its upper inwardly extending arms with suitable guides *a*, adapted to engage a shaft *b*, and permit of the outwardly and inwardly sliding movement of the said member 10, and adapted to slide longitudinally of the said platform 4, the same being normally held in its innermost position through the medium of weights 11, mounted in suitable guides 12 carried by the trestle work and connected to the said returning member by cables 13, passing over pulleys 14, mounted on a transverse bar or rod 15, connecting the opposite sides of the said frame 8. The intermediate portion of the U-shaped member is curved upwardly and provided with a vertical extension 16, adapted to engage the stop 17, projecting forwardly from the front end of the dump car 7.

The main track 2 is provided at its juncture with the siding with a single switch point 18, which is normally held out of engagement with the alining track, but which will be normally swung into engagement by the weight of the car in passing over the same, while the terminals of the said track adjacent the dumping point are curved upwardly to provide stops, which limit the movement of the car in the direction of the said dumping point.

A forwardly curved bar 19 is secured to the forward end of the platform 4, passes through a guide 20, located in one of the cross beams of the trestle work, and has formed upon one edge thereof a series of teeth 21, adapted to engage the upper end of a locking pawl 22, mounted upon a swinging bar 23, provided with a weight 24, adapted to normally force the said pawl into engagement with the said teeth. A depending trip arm 25 is formed integrally upon the swinging bar, and connected through the medium of a cable 26 to an upwardly extending trip arm 27, pivoted at its intermediate portion to the trestle work at a place adjacent the excavation point A.

The front of the car 7 is provided with a hinged closure 28, adapted to swing upward as the car is tilted and permit the contents thereof to be dumped.

5 The operation of the device is as follows: After the car has been loaded it will be impelled by its own weight, after the brakes have been released, down the main track to the swinging platform 4, obviously en-
 10 gaging the vertical extension 16 formed upon the U-shaped member, moving the same to its outward position and permitting the wheels to move in advance of the switch points and allowing them to return to a
 15 position which will permit the car to ride upon the siding. A lever 28^a is secured to the frame work for manually tipping the platform. The curved bar carried by the forward end of the platform will obviously be
 20 raised, while the teeth on its rear edge will be engaged by the pawl, retaining the platform in its tilted position. The next car, upon descending to the dumping point will manifestly release the pawl through the medium of the previously mentioned trip arms
 25 25 and 27, allowing the platform to return to its horizontal or normal position, and the U-shaped member to slide inwardly to its normal position by means of the weights 11,
 30 which operation will start the empty car on to the siding in the direction of the starting point. As the second mentioned car reaches the platform 4, the said platform will be tilted in the previously described manner,
 35 and upon the descent of the next car the operation will be continued as before.

From the foregoing disclosure it will be manifest that a dumping mechanism is provided for which will fulfil all the necessary
 40 requirements of such a device.

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

1. The combination with a main track
 45 and a siding, of a platform mounted thereon, the said platform adapted to be tilted by the weight of a car, a curved bar mounted on said platform and adapted to engage a pawl mounted therebelow and retain the
 50 platform in its tilted position, and a sliding member mounted upon the tilted platform

and adapted to return the car over the siding upon the release of the platform by an advancing car in passing over the main track.

2. The combination in a device of the class described, of a main track and a siding, a tilting platform hinged at the juncture of the main track and the siding, a longitudinally slidable member mounted
 60 upon the tilting platform, means for tilting the platform and retaining the same in its tilted position, and means for releasing the platform and simultaneously sliding the longitudinally movable member upon the re-
 65 lease thereof, for the purpose of returning a car over the siding.

3. The combination with a main track and a siding, of a tilting platform hinged at the juncture of the said main track and siding,
 70 the said platform adapted to be tilted by the advance of a car upon said platform, a slidable member mounted upon the platform, said member adapted to slide rearwardly upon the approach of a car, and to
 75 allow the wheels of the same to move to the rear of a switch point carried by said platform, whereby the car may be returned over the siding upon the release of the platform by the action of the slidable member thereon,
 80 weights secured to the sliding member for returning the same upon the release of the platform, a toothed bar secured to the platform, a pawl mounted below the said platform and adapted to engage the toothed
 85 depending bar and retain the said platform in its raised position, and a trip arm mounted upon the main track and connected through the medium of a cable to the pawl,
 90 whereby the said platform may be released by the contact of a car against the said arm, and the sliding member swung inwardly for the purpose of returning the car which is upon the tilting platform over the
 95 siding, substantially as and for the purposes hereinbefore described.

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

HENDERSON H. BENNETT.

Witnesses:

W. B. CAMPBELL,
 J. F. WHITE.