

No. 840,248.

PATENTED JAN. 1, 1907.

J. S. PATES.
COAL TIPPLE.

APPLICATION FILED OCT. 11, 1906.

Fig. 1.

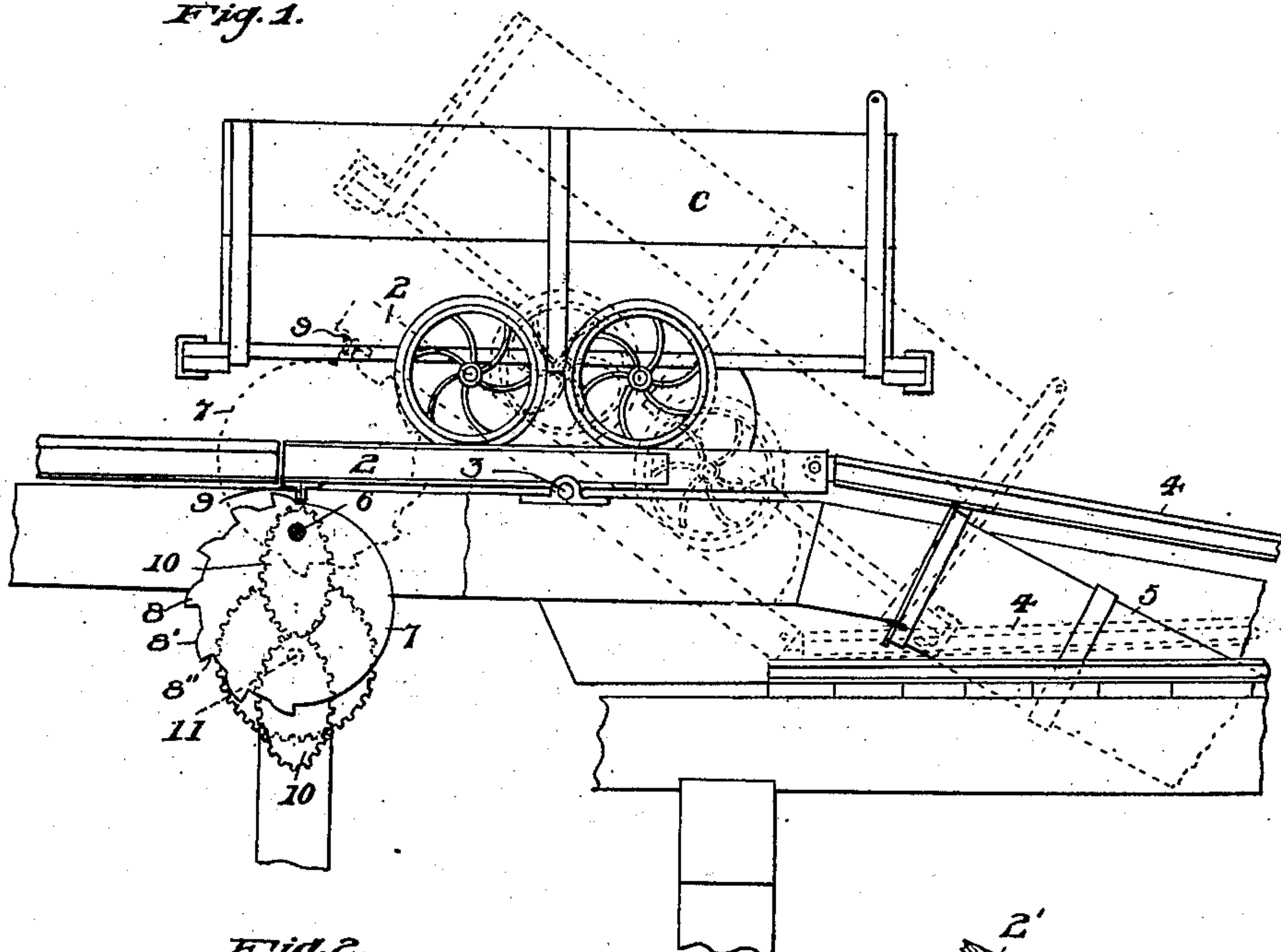


Fig. 2.

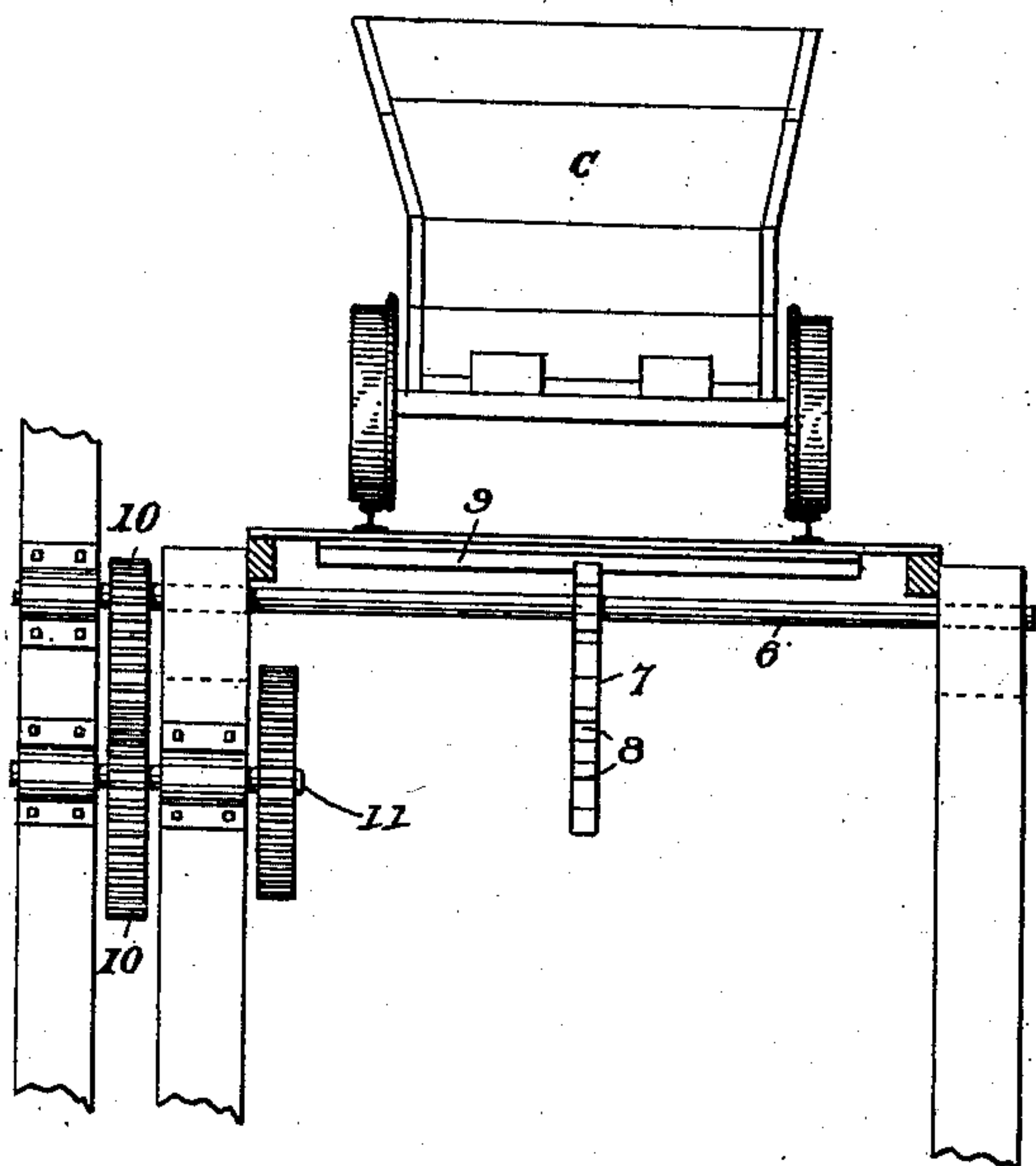
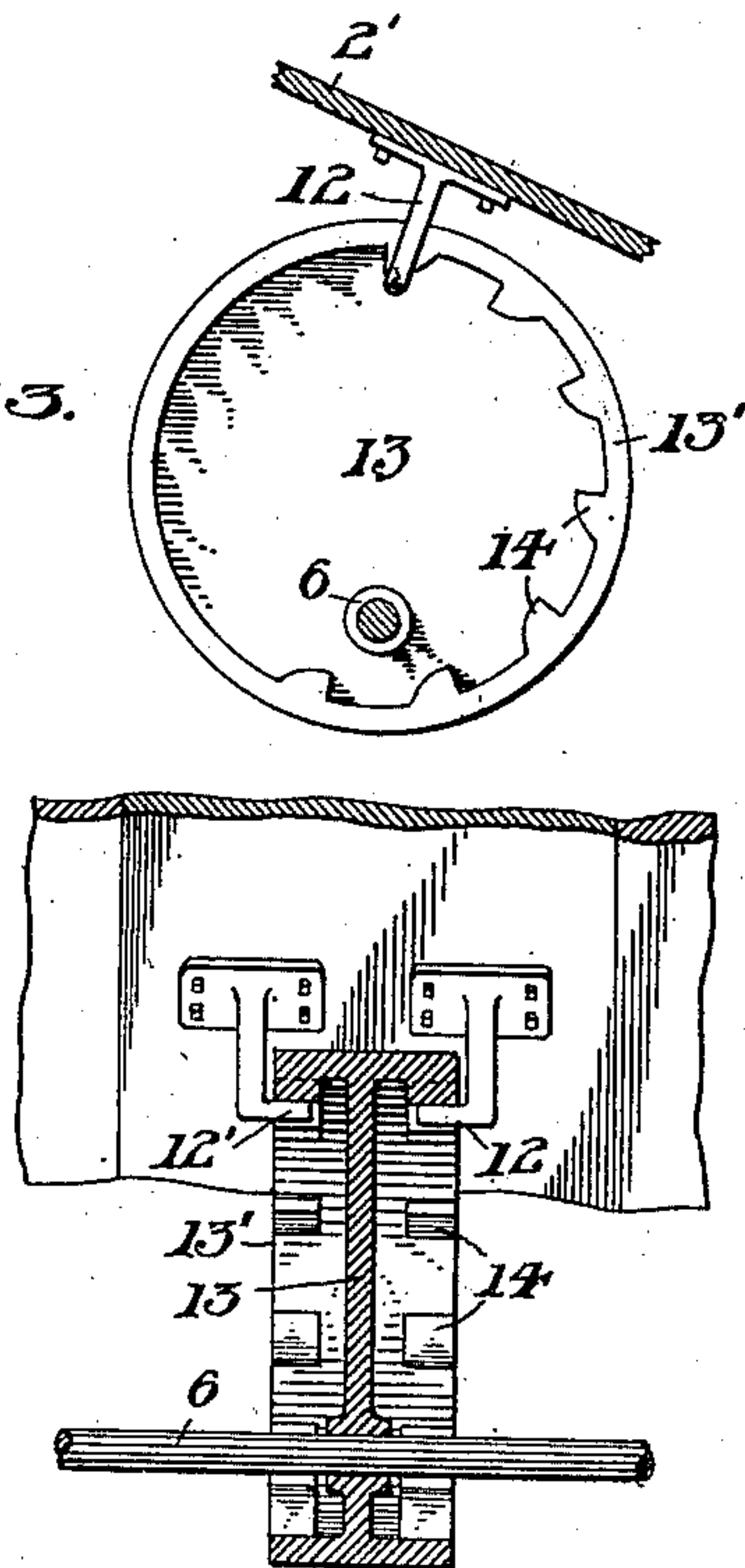


Fig. 3.



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COAL-TIPPLE.

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Specification of Letters Patent.

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To all whom it may concern:

Be it known that I, JAMES S. PATES, of Monongahela, in the county of Washington and State of Pennsylvania, have invented certain new and useful Improvements in Coal-Tipples, of which the following is a specification.

The primary object of this invention is to provide efficient mechanism of simple construction for controlling the tilting movement of the car-supporting elements of a coal or other tippie and to so construct said mechanism as to impart a series of jolts to the support during the tilting movement for the purpose of shaking or agitating the contents of the car, and thereby cause the same to discharge gradually as soon as the car begins to tilt, thereby preventing the material from sliding from the car *en masse*. By thus distributing the flow the screens are not overtaxed and are enabled to perform their proper function, none of the finer material which should pass therethrough being carried over.

A further purpose of the invention is to provide means for varying the speed of the tilting mechanism without interrupting the speed of the prime mover.

In the accompanying drawings, Figure 1 is a side elevation of a portion of the coal-tippie with the improved mechanism applied thereto. Fig. 2 is a rear elevation. Figs. 3 and 4 illustrate a modified adaptation of the invention.

Referring to the drawings, 2 designates the tilting car support or platform of a coal-tippie, 3 being the axis thereof. 4 represents the rails hinged to the outer end of the supporter 2, and 5 the screen. The parts thus far referred to are of well-known construction and may be variously arranged or modified, as they form no part of my invention, excepting as they, or at least the car-support, may cooperate with the improved mechanism for effecting the tilting operation.

Beneath the rear end of the platform 2 is a transverse shaft 6, and mounted thereon eccentrically is a circular head or wheel 7, having its periphery formed with teeth-like projections 8. Depending from platform 2 is a bar 9, which rides on the face of wheel or head 7, and being in the path of teeth 8 it rides thereover as the wheel rotates, thus subjecting support 2 to a succession of jolts. The eccentrically-mounted wheel or head operates to raise the car-support, as indicated in dotted lines in Fig. 1, thus so inclining car

as to cause its contents to discharge. While raising from horizontal position the car-support is subjected to the jolting action above described, and thus as soon as the car leaves its horizontal position it is so shaken as to cause its contents to discharge onto screen 5 in a substantially even stream, the discharge beginning much sooner than it would if the car were inclined by an even or steady movement. Thus the coal or other material is prevented from moving from the car in a bulky mass, which obviously would overtax the screen and permit considerable material to pass thereover which should drop through. The faces of teeth 8, which approach bar 9, are curved or sloping, as indicated at 8', so that they will readily pass beneath and elevate the bar, while the opposite faces of the teeth are straight or abrupt, as indicated at 8'', so that the bar will drop therefrom suddenly and impart the desired jolt.

Shaft 6 is connected by elliptical gears 10 with power-shaft 11, and thus the speed of shaft 6 is varied without varying the rotation of the power-shaft. The gears are so arranged that the slower movement is imparted to shaft 6 during the raising of support 2 and the more rapid movement when the support is returning to horizontal position.

The mechanism above described is the preferred embodiment of the invention for that type of tippie wherein the car-support is tilted by power and returned by gravity.

In Figs. 3 and 4 I have shown the invention arranged for controlling the movement of a gravity-tilted and power-returned car-support, the normal tendency of which is to rise or assume a tilted position and which therefore must be returned by power to normal or horizontal position. In this adaptation car-support 2' is provided on its under side with separated hook-like projections 12, which underhang rim 13' of a circular wheel or head 13, mounted eccentrically on shaft 6 the same as wheel 7. The under face of rim 13 is formed with the tooth-like projections 14, which override the intumed extremities 12' of parts 12, and thus as wheel 13 rotates projections 14 are carried over extremities 12', and owing to the upward pull of support 2' a jerking or jolting upward movement results.

In both adaptations the arrangement is preferably such that the car-support is jolted or shaken only during its upward

movement, the jolt-impairing teeth or projections being omitted from those portions of the circular wheels or heads in engagement with the car-support during the downward or returning movements.

I claim—

1. A tilting car-support, in combination with an eccentrically-mounted wheel for controlling the tilting movement of the support, and means for jolting the support during the tilting movement.

2. A tilting car-support, in combination with an eccentrically-mounted wheel for controlling the tilting movement of the support, and a series of projections on the wheel adapted to jolt the support during the tilting movement.

3. A tilting car-support, and a device carried by the support, in combination with an eccentrically-mounted wheel for controlling the tilting movement of the support, and a series of projections on the wheel adapted to cooperate with the device carried by the support for imparting to the latter a series of jolts during the tilting movement.

4. A tilting car-support, in combination with an eccentrically-mounted wheel for tilting same, and a series of projections on the wheel adapted to jolt the support while tilting.

5. A tilting car-support, in combination

with an eccentrically-mounted wheel beneath and adapted to raise one end of the support, and a series of projections on the wheel adapted to jolt the support while tilting.

6. A tilting car-support in combination with an eccentrically-mounted wheel beneath and adapted to raise one end of the support, and a series of projections on the periphery of the wheel adapted to engage and jolt the support while tilting.

7. A tilting car-support having a depending part, in combination with an eccentrically-mounted wheel beneath and having its periphery in engagement with said depending part, and a series of projections on the wheel periphery adapted to pass beneath the depending part and jolt the support while tilting.

8. A tilting car-support, in combination with a shaft, a wheel mounted eccentrically on the shaft and adapted to control the tilting movement of the support, and elliptical driving-gearing for said shaft for the purpose described.

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

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