

C. M. MILLER.
COALING DEVICE FOR MOVING TRAINS.
APPLICATION FILED APR. 1, 1910.

986,484.

Patented Mar. 14, 1911.

2 SHEETS—SHEET 1.

Fig. 1.

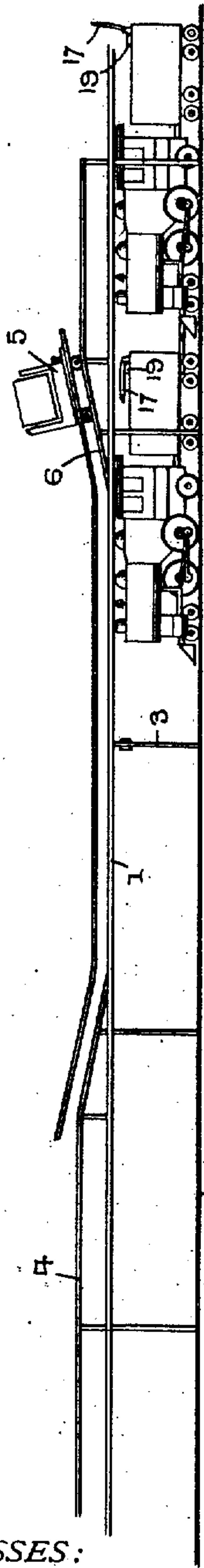


Fig. 2.

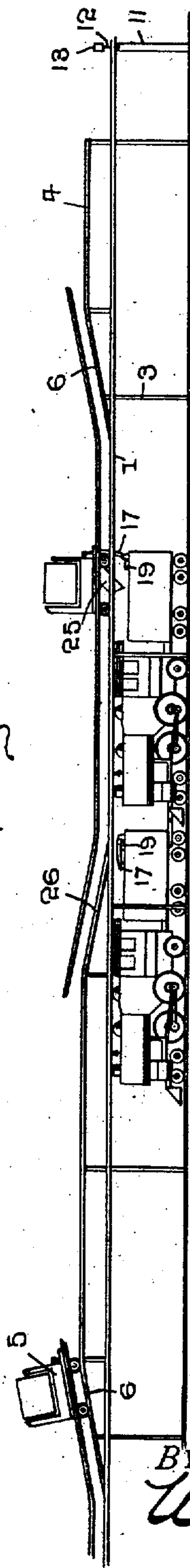
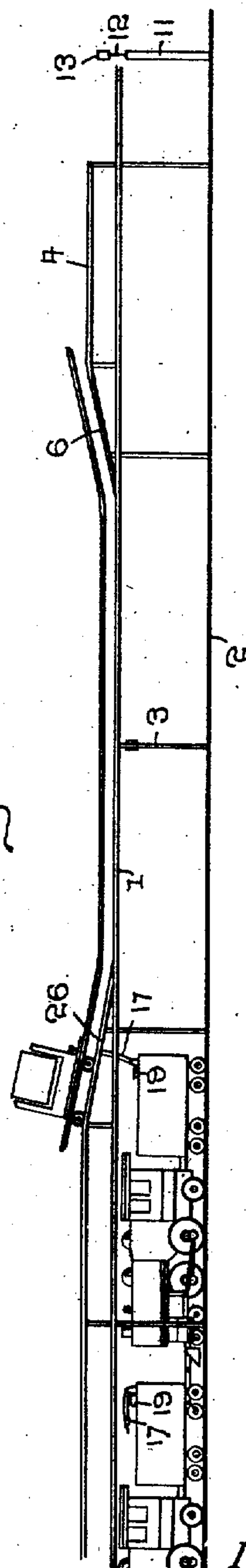


Fig. 3.



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2 SHEETS-SHEET 2.

Fig. 4.

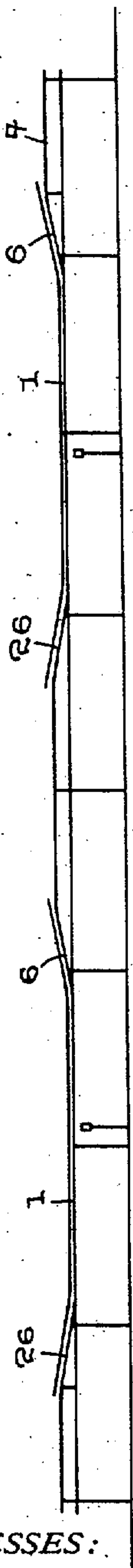


Fig. 5.

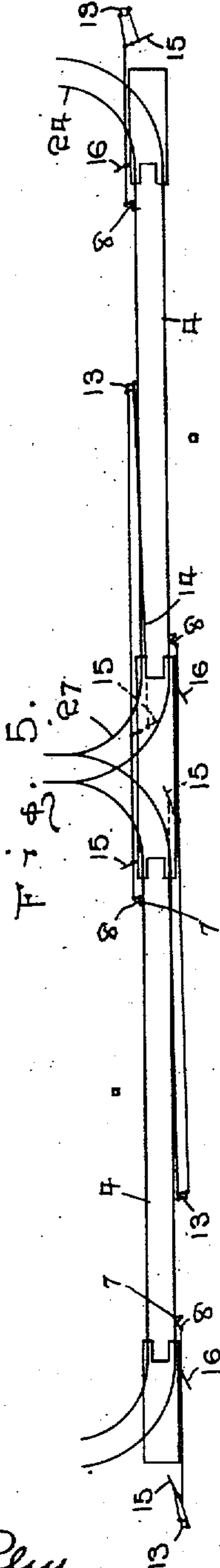


Fig. 6.

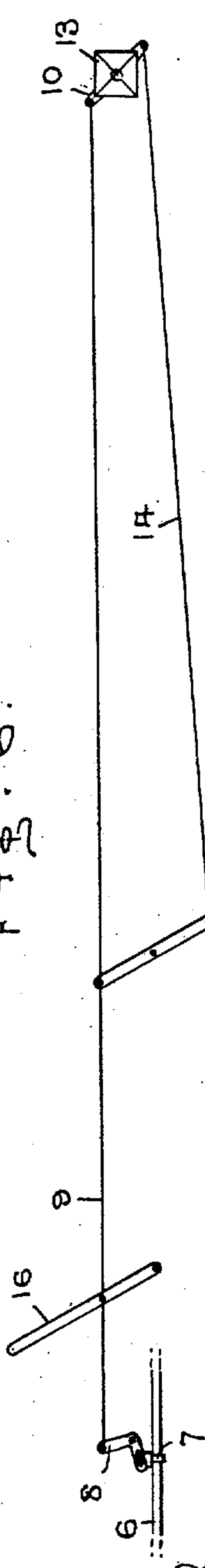
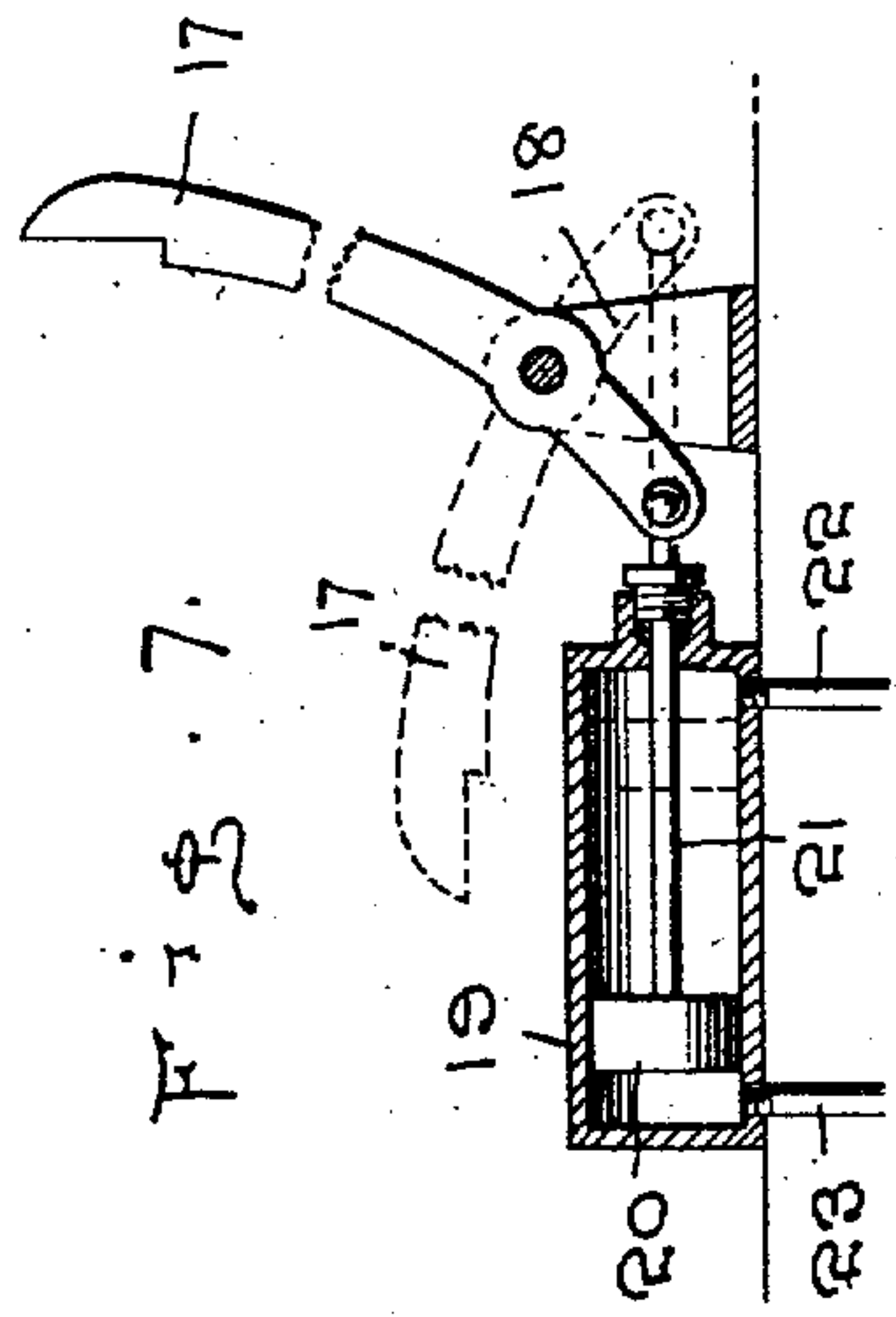


Fig. 7.



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UNITED STATES PATENT OFFICE.

CHARLES M. MILLER, OF TYRONE, PENNSYLVANIA, ASSIGNOR, BY MESNE ASSIGNMENTS, TO TYRONE FINANCE COMPANY, OF TYRONE, PENNSYLVANIA, A CORPORATION OF DELAWARE.

COALING DEVICE FOR MOVING TRAINS.

986,484.

Specification of Letters Patent.

Patented Mar. 14, 1911.

Application filed April 1, 1910. Serial No. 552,848.

To all whom it may concern:

Be it known that I, CHARLES M. MILLER, a citizen of the United States, residing at Tyrone, in the county of Blair and State of Pennsylvania, have invented certain new and useful Improvements in Coaling Devices for Moving Trains; 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.

My invention relates to new and useful improvements in coaling devices for moving locomotives, and is more particularly an improvement over my former Patent No. 811,425, issued January 30, 1906, and my object is to provide means whereby two or more locomotives when operating in tandem, may be coaled at the same coaling station.

A further object is to provide means for operating the coal delivering devices while the locomotives are in motion at any speed.

A further object is to provide means for releasing the coal delivering cars by the mechanisms carried by the locomotives, and at a distance therefrom, and a further object is to provide means for setting the parts upon the engine employed for operating the coaling device by fluid pressure.

Other objects and advantages will be hereinafter described, and more fully set forth in the specification and claims.

Referring to the drawings which are made a part of this application, Figure 1 is an elevation of a frame-work or platform showing a single coal delivering car thereon, and in position to be released for traveling over the platform. Fig. 2 is a similar view showing two of the coal delivering cars on the platform, one of which is delivering the coal into one of the engines, and the other in position to be released for delivering coal into the other engine. Fig. 3 is a view similar to Fig. 1 showing the coal delivering car in position to be released from the engine. Fig. 4 is a diagrammatic view of the platform. Fig. 5 is a top plan view thereof. Fig. 6 is a detail elevation of the releasing mechanism for the coal delivering car, and Fig. 7 is a sectional view of the tripping mechanism carried by the locomotive for operating the releasing device, and the coal delivering car.

Referring to the drawings in which similar reference numerals designate corresponding parts throughout the several views, 1 indicates a platform or frame-work which may be constructed in any preferred manner, said platform being positioned above the railway tracks 2, by means of supporting posts 3, the height of the platform 1 being such as to permit a railway train to readily pass thereunder. Positioned upon the platform 1, are track rails 4, upon which is adapted to travel a coal delivering car 5, said coal delivering car being adapted to move over said track rails at a speed coincident to the travel of the locomotives passing beneath the delivery cars.

The delivery car 5 is positioned when not in motion upon an inclined track 6, so that when the delivery car is released, it will at once attain momentum and pass onto the track rails 4 of the platform. The delivery car is held in position upon the inclined track by means of a chock or pin 7, which pin projects over the face of one of the inclined rails 6 and in position to pass in front of one of the wheels of the delivery car and hold said car against descending. The pin 7 is moved out of the path of the car by attaching to the outer end thereof one arm of a bell crank lever 8, while to the opposite arm of said lever is attached a cable 9 so that when a pull is made on said cable, the bell crank lever will be rocked and the chock moved out of the path of the wheels of the delivering car. The opposite end of the cable 9 is attached to one end of a bar 10, which bar is pivotally mounted upon a supporting post 11, and to the upper end of the shaft 12, to which the bar 10 is secured, is any suitable form of signal 13, which signal is set by the swinging movement of the bar. Attached to the opposite end of the bar 10, is an auxiliary cable 14, the opposite end of said auxiliary cable being attached to the lever 15, and as said lever is pivotally mounted, the swinging movement of one end thereof will operate the bar 10, which in turn will operate the bell crank lever and chock, through the medium of the cable 9.

The auxiliary cable 14 engages the lever 15 at one side of its pivotal point, while the opposite end of the lever which is an equal distance beyond the pivot point of the lever,

is preferably attached to the cable 9 by which construction the lever will operate upon the cable 9 to move the same lengthwise, as well as the swinging movement of the bar 10. The cable 9 is also attached to a hand lever 16, one end of which is pivoted to parts of the frame-work whereby the chock may be operated manually if desired. The lever 15 is operated to release the chock pin 7 by a suitable movable device shown as a trip lever 17 carried by parts of a locomotive, said lever being pivotally mounted in a bracket 18, which bracket is preferably positioned upon the tender of the locomotive. One end of the trip lever 17 is adapted to be extended into the path of the lever 15 when it is desired to obtain coal for the locomotive, while at other times the trip lever is swung to a lowered position, as shown by dotted lines in Fig. 7, and to accomplish this result, a cylinder 19 is positioned upon the tender of the locomotive, in which cylinder is positioned a piston 20, the piston rod 21 extending through one end of the cylinder 19 where it is pivotally secured to the lower end of the trip lever 17.

Air or steam is introduced into the opposite ends of the cylinder 19 through pipes 22 and 23, so that when motive fluid is entered through the pipe 22 the trip lever 17 will be swung to its elevated position, and when introduced through the pipe 23, the trip lever will be moved to its lowered position, thereby placing said trip lever under control of the operator upon the engine.

The prime object of my present invention is to provide means whereby one or more engines attached to one train may be supplied with coal at the same station, and to this end a number of inclined trackways are provided upon the one platform, and an equal number of tripping mechanisms supplied therefor.

In operation, each coal delivering car is filled with the coal, at any suitable point, and moved over the usual form of trackway, 24, which communicates with the inclined track 6, and by extending the chock pin 7 in the path of the wheels of the delivering car, the further movement of said car will be stopped until such time as the chock pin has been removed. If there are two engines attached to the train, the second engine is preferably provided with the coal first, and the first engine will be filled from the second car upon the platform. This is done to prevent the accidental releasing of the second car should the attendant of the first locomotive fail to lower the trip lever in time to miss the second car, but by operating the first car from the second locomotive, and the second car from the first locomotive this objectionable feature is overcome. The incline on which the receptacle is supported is so designed that the receptacle will by gravi-

tating upon it attain its maximum speed at a certain definite portion of its travel, and subsequently the receptacle will decrease in speed until overtaken by the train. The distance between the trip lever 15 and the receptacle, likewise, will be so determined that the time required for a train running at maximum speed to reach the receptacle will correspond to the time required for the receptacle to start from its stationary position and attain its maximum speed. If therefore, the train be running at any slower speed the greater time it requires to make the run from the said lever 15 will determine the corresponding rate of speed at which the receptacle will be running when overtaken.

As the trip lever 17 moves into engagement with certain parts of the delivering car 5, a chute 25 is released, and delivers the coal from the car into the tender of the engine, but as the parts engaged by said trip lever are set forth and claimed in my former patent, it is not deemed necessary to show and describe the same in the present instance. The trip lever 17 remains in engagement with the car 5 until said car is moved up an incline trackway 26 which will again elevate the delivering car to a plane above the trip lever 17 when said car may be removed from the platform over a track 27 and again refilled with coal. As soon as the lever 17 is released from the car, motive-fluid is entered into the cylinder 19, through the pipe 23 which will immediately lower said trip lever. The lever 17 on the forward engine may be raised as soon as the first lever 15 is passed, whereupon said trip lever 17 will engage the second delivering car. Delivering cars and releasing mechanisms therefor may be so arranged as to provide a coal supply for locomotives moving in either direction.

It will thus be seen that I have provided means whereby one or more locomotives may be supplied with material irrespective of the speed of said locomotives, and it will further be seen that by operating the trip lever carried by the locomotive through the medium of the piston and cylinder, said trip lever will be more quickly and positively operated than in the manner shown in my former patent.

What I claim is:

1. In a coaling device for locomotives, the combination with an elevated platform having trackways thereon, portions of said trackways being inclined, of delivering cars adapted to travel over said trackways, means to hold each delivering car on the inclined portion of its trackway, a releasing mechanism for said holding means, a trip device adapted to be raised into the path of said releasing mechanism, compression operated means for raising or lower-

ing said trip device, and additional means for manually operating said releasing mechanism.

2. In a coaling device for locomotives, the combination with delivering cars, of a trip device adapted to engage said cars and release the contents thereof, a cylinder, a piston mounted in said cylinder, a shaft attached to said piston and engaged with said trip device, and means to introduce propelling medium into either end of said cylinder whereby the trip device will be raised or lowered.

3. In an appliance for delivering material to a plurality of railway locomotives running tandem, the combination of an elevated platform having a plurality of inclines over the railway track, a receptacle on each of said inclines, means to normally hold such receptacles when charged at an elevated part of the inclines, means carried by the locomotives adapted to engage and release any of said holding means and carried normally in operative position, and means to

bring such engaging means into operative position.

4. In appliances for supplying material to a plurality of railway locomotives running tandem, the combination of an elevated platform having a plurality of inclines, a receptacle normally located when charged on each incline, releasable means to hold each receptacle on an elevated part of its incline, a movable trip device carried by each locomotive in a normally inoperative position, and means controllable from each locomotive whereby its trip device may be quickly brought into operative position to release any one of said receptacles in advance of the arrival of the locomotive to be supplied.

In testimony whereof I have signed my name to this specification in the presence of two subscribing witnesses.

CHARLES M. MILLER.

Witnesses:

C. S. FRYE,

C. E. FETZER.

Copies of this patent may be obtained for five cents each, by addressing the "Commissioner of Patents, Washington, D. C."

It is hereby certified that in Letters Patent No. 986,484, granted March 14, 1911, upon the application of Charles M. Miller, of Tyrone, Pennsylvania, for an improvement in "Coaling Devices for Moving Trains," an error appears in the printed specification requiring correction as follows: Page 3, line 24, the word "operative" should read *inoperative*; and that the said Letters Patent should be read with this correction therein that the same may conform to the record of the case in the Patent Office.

Signed and sealed this 11th day of April, A. D., 1911.

[SEAL.]

C. C. BILLINGS,
Acting Commissioner of Patents.