(No Model.)

2 Sheets—Sheet 1.

# J. J. LANE.

## COAL DUMP.

No. 522,840. Patented July 10, 1894.

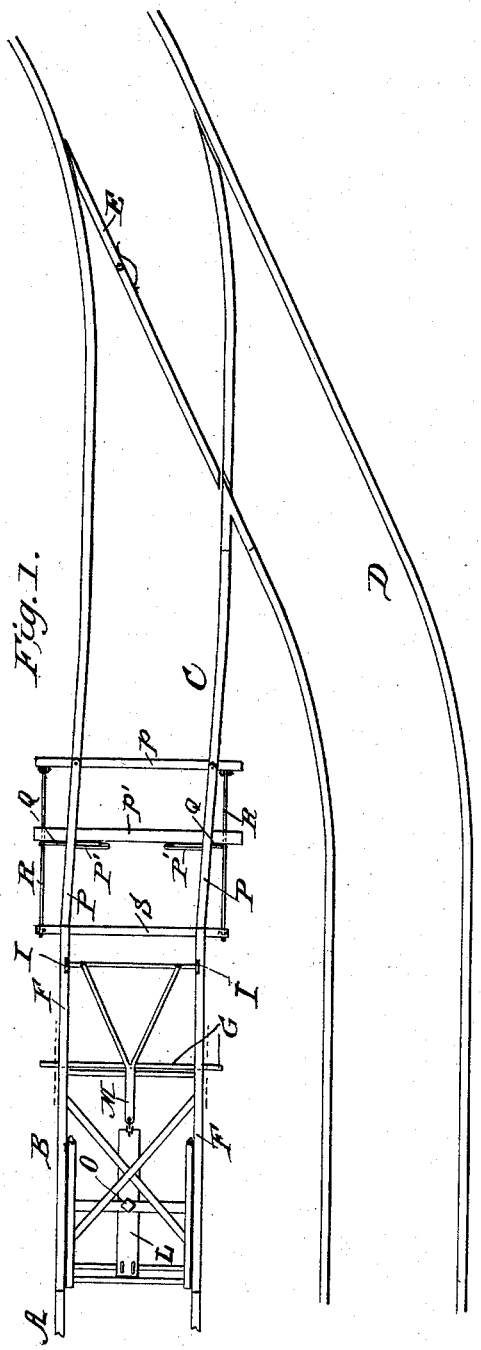

Fig. 1.

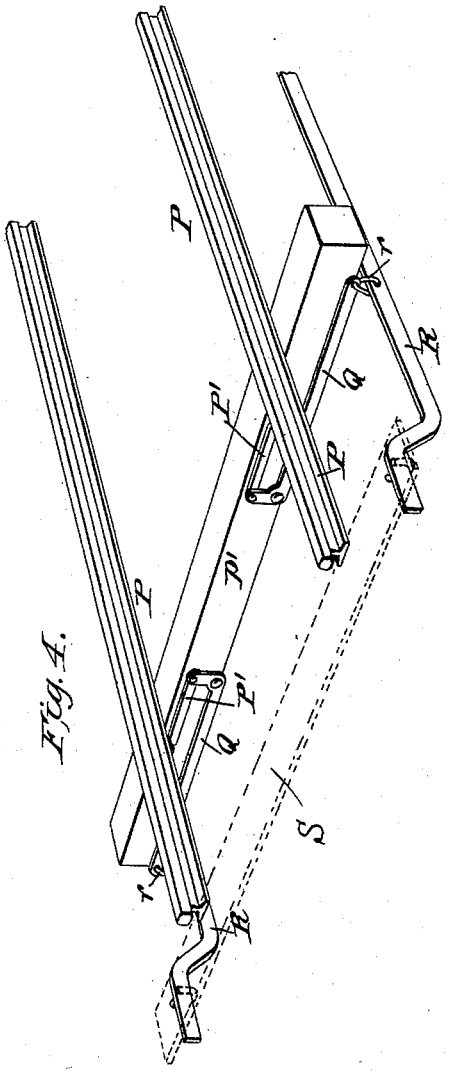

Fig. 4.

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(No Model.)

2 Sheets—Sheet 2.

# J. J. LANE.

## COAL DUMP.

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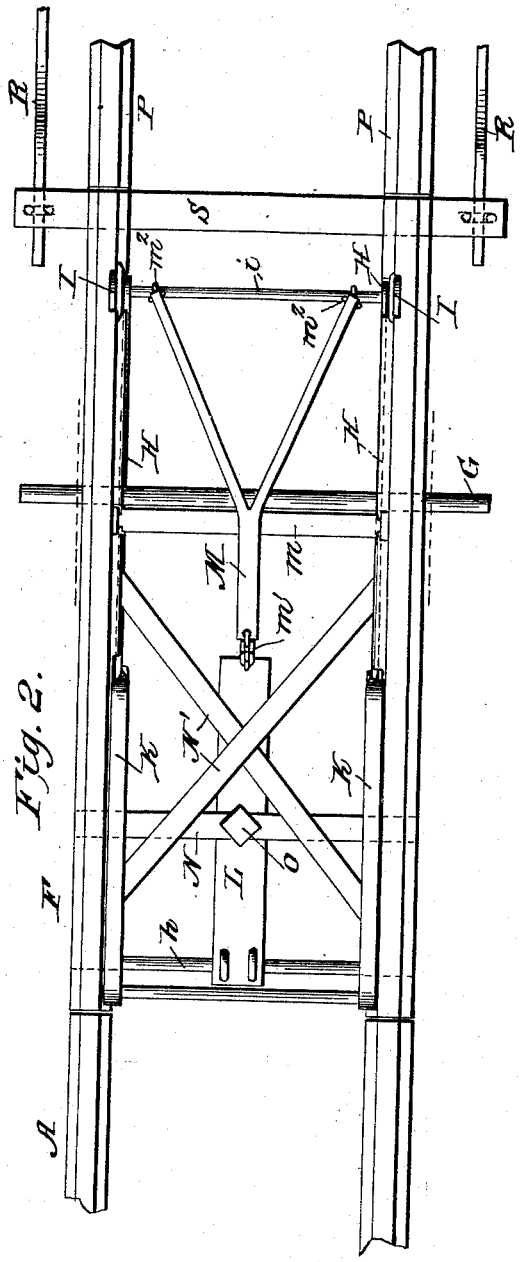

Fig. 2.

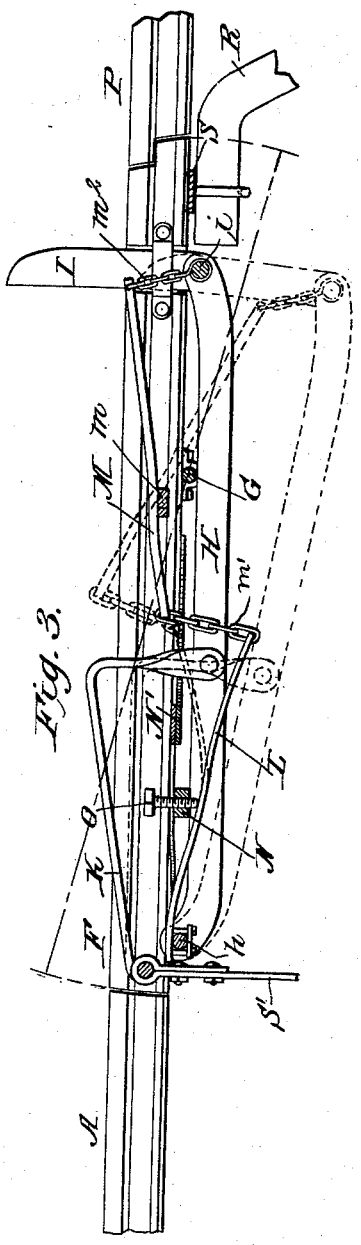

Fig. 3.

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# UNITED STATES PATENT OFFICE.

JOSEPH J. LANE, OF NELSONVILLE, OHIO.

## COAL-DUMP.

SPECIFICATION forming part of Letters Patent No. 522,840, dated July 10, 1894.

Application filed April 28, 1893. Serial No. 472,187. (No model.)

*To all whom it may concern:*

Be it known that I, JOSEPH J. LANE, of Nelsonville, in the county of Athens and State of Ohio, have invented a new and useful Improvement in Coal-Dumps, of which the following is a specification.

This invention relates to an improved tipple, or dumping device, and is particularly adapted for unloading or dumping cars laden with coal, ore, or similar material.

One object of my invention is to provide for holding the car upon the tipple during the operation of unloading.

Another object is to provide for automatically releasing the loaded car, from the tipple as soon as a second loaded car comes upon the tipple, and a still further object is to spread the rails adjacent to the end of tipple, whereby the dangers of clogging, &c., are avoided.

With these objects in view my invention consists first, of a tilting tipple provided at one end with vertical movable spring actuated stop pieces which project in the path of the car wheels, and hold the car upon the tipple during the operation of unloading; secondly in connecting these stop pieces with track levers near the opposite end of the tipple, the construction being such that when a car is rolled over the track levers, the stop pieces will be depressed, but will spring up again as soon as the track levers are passed, so that when one car is upon the tipple and another one passes thereon, the stop pieces which hold the first car will be depressed by the second one, thus permitting the first car to escape, but spring up again in time to stop the second car.

My invention consists also in certain details hereinafter to be described.

In the drawings forming a part of this specification—Figure 1 is a diagrammatic plan view showing the tipple mechanism for spreading the rails, and the inclined and switch back tracks. Fig. 2 is a detail top plan view of the tipple. Fig. 3 is a longitudinal sectional view of the tipple and Fig. 4 is a detail perspective view showing the mechanism for spreading the rails.

Referring to the drawings A indicates the track leading to my improved tipple B which tipple is mounted upon a rock shaft G, supported in any suitable manner over the point of deposit. The tipple B consists of the rails F F, which register with the rails A, leading to the tipple and also with the rails C, leading from the tipple said rails C being inclined from the tipple so that the cars after being released from the tipple will move over the same by gravity.

The tipple B is tilted by means of a bar S′ connected to the rear end of the same, and in order to hold a car upon said tipple while in an inclined position I provide the vertical stop pieces I I said pieces being arranged adjacent to the track at the forward end of the tipple and in the path of the car wheels. These stop pieces are also connected to the levers H H arranged beneath the track and pivotally connected at their rear ends to the cross bar *h*.

Track levers K K are connected to the levers H H near their rear ends, said levers K, being arranged adjacent to the rails F F so that as a car moves on said rails the flanges of the wheels will press upon the track levers which in turn will press the levers H H down and withdraw the stop pieces I I as shown in dotted lines in Fig. 3. The moment the wheel passes over the lever K, however, the stops will be forced up into their normal positions, so that the first car that moves upon the tipple will be stopped. In order to force these stops up I provide a spring L which is secured to the cross bar *h* at its rear end and is connected at its forward end, to a rocking lever M by means of a chain *m′*. The lever M is pivoted upon a transverse bar *m* and is bifurcated at its forward end, in order to distribute the force, each member being connected by means of a chain $m^2$ to the cross bar *i* which connects the stop pieces I.

N indicates a transverse brace bar and N′ diagonal bracing bars. A regulator screw O passes through the bar N, and bears upon the spring L and by means of this screw the tension of the spring is easily regulated. The rails adjacent to the forward end of the tipple are pivoted to spread and for the sake of clearness I designate these rails as P P to distinguish them from the rest of the inclined track C. These rails P are pivoted upon a cross tie *p* and rest upon a tie *p′*. Pitmen P′ P′ are attached to said rails, and operating

said pitmen are the elbow levers Q Q, pivoted upon the side face of the cross tie $p'$. Levers R R are pivoted to the under face of the cross tie $p$ and at their opposite ends are connected with a cross bar S, attached to the forward end of the tipple. These levers R R are also connected with the elbow levers Q Q by means of links $r$ $r$ so that when the tipple is tilted the bar S is thrown down, likewise the levers R, and this operating the levers Q will spread the rails.

When the tipple is returned to its normal position the rails P P assume their regular positions and the car can move from the tipple over said rails to the track C. From the track C it passes to the track D and at the junction of tracks C and D is arranged a spring switch E. The track D is inclined to the track C so that a car after passing the switch E will stop and then come back by way of the track D to its loading place.

In operation, a car is moved up to the tipple and dumped. Another car is then run up and as the second car, moves upon the track levers K the stops I are depressed and the first car is pushed off the tipple to the inclined track. The second car is then dumped and as a third one is run on the tipple this second one is released, and so on.

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

1. In a tipple, the combination with the swinging rails of the vertically movable spring actuated stops, and the track levers for operating the same substantially as shown and described.

2. In a tipple, the combination with the swinging rails, of the levers carrying vertically movable stops, the treadles connected therewith and the springs for raising the stops substantially as shown and described.

3. In a tipple, the combination with the swinging rails of the levers connected therewith and carrying vertically movable stops of the treadles connected with the levers, the spring and rocking levers connecting the spring and stop levers, substantially as shown and described.

4. The combination with the tipple of the spreading rails, the vertically swinging levers connected to the tipple the elbow levers connected with said vertically swinging levers, and the pitmen attached to the spreading rails and connected with the elbow levers, substantially as shown and described.

JOSEPH J. LANE.

Witnesses:
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