

No. 763,206.

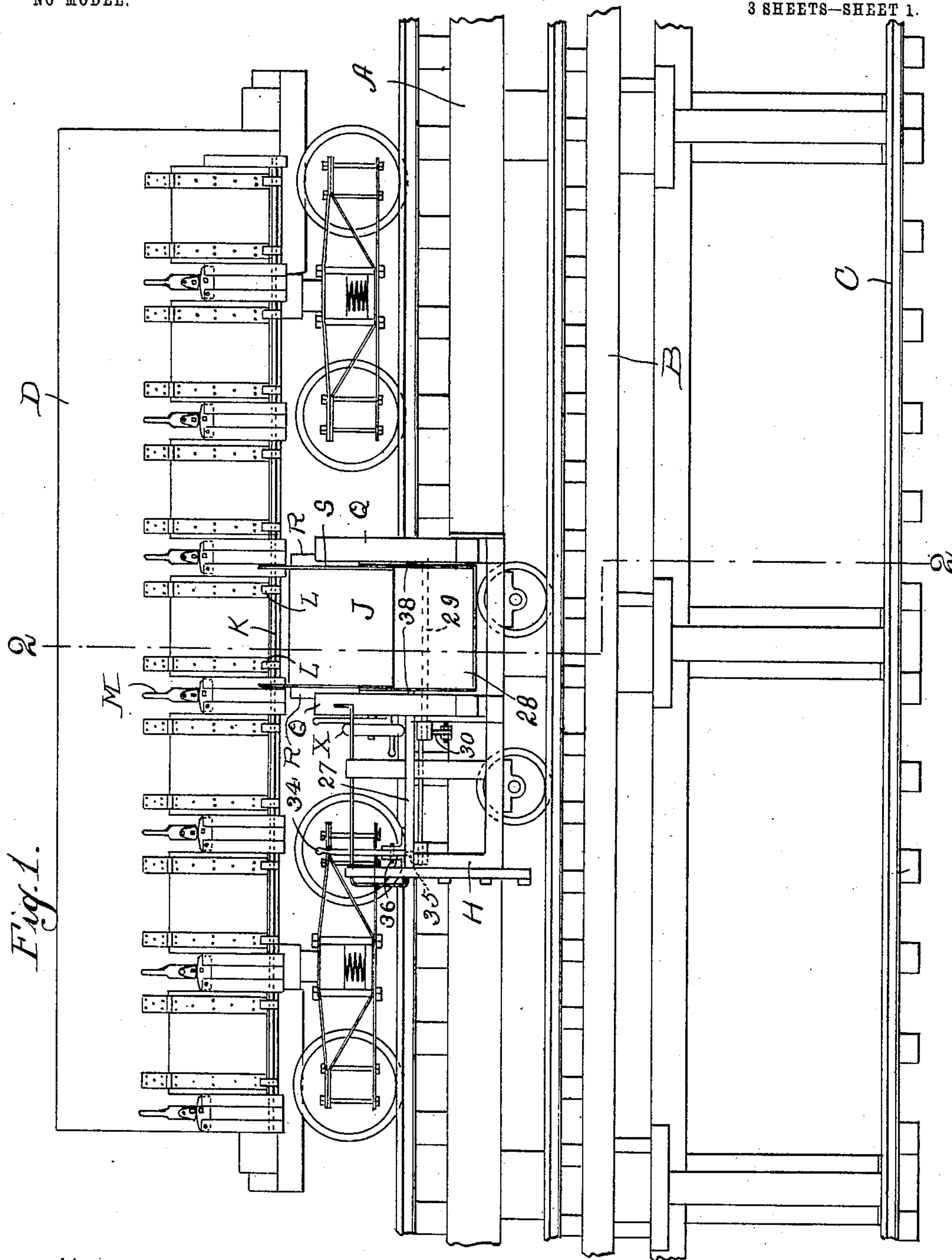
PATENTED JUNE 21, 1904.

E. A. RAASCH.  
RAILROAD COALING APPARATUS.

APPLICATION FILED JAN. 11, 1904.

NO MODEL.

3 SHEETS—SHEET 1.



Witnesses:

C. F. Wilson  
F. Schlottfeld.

Inventor:

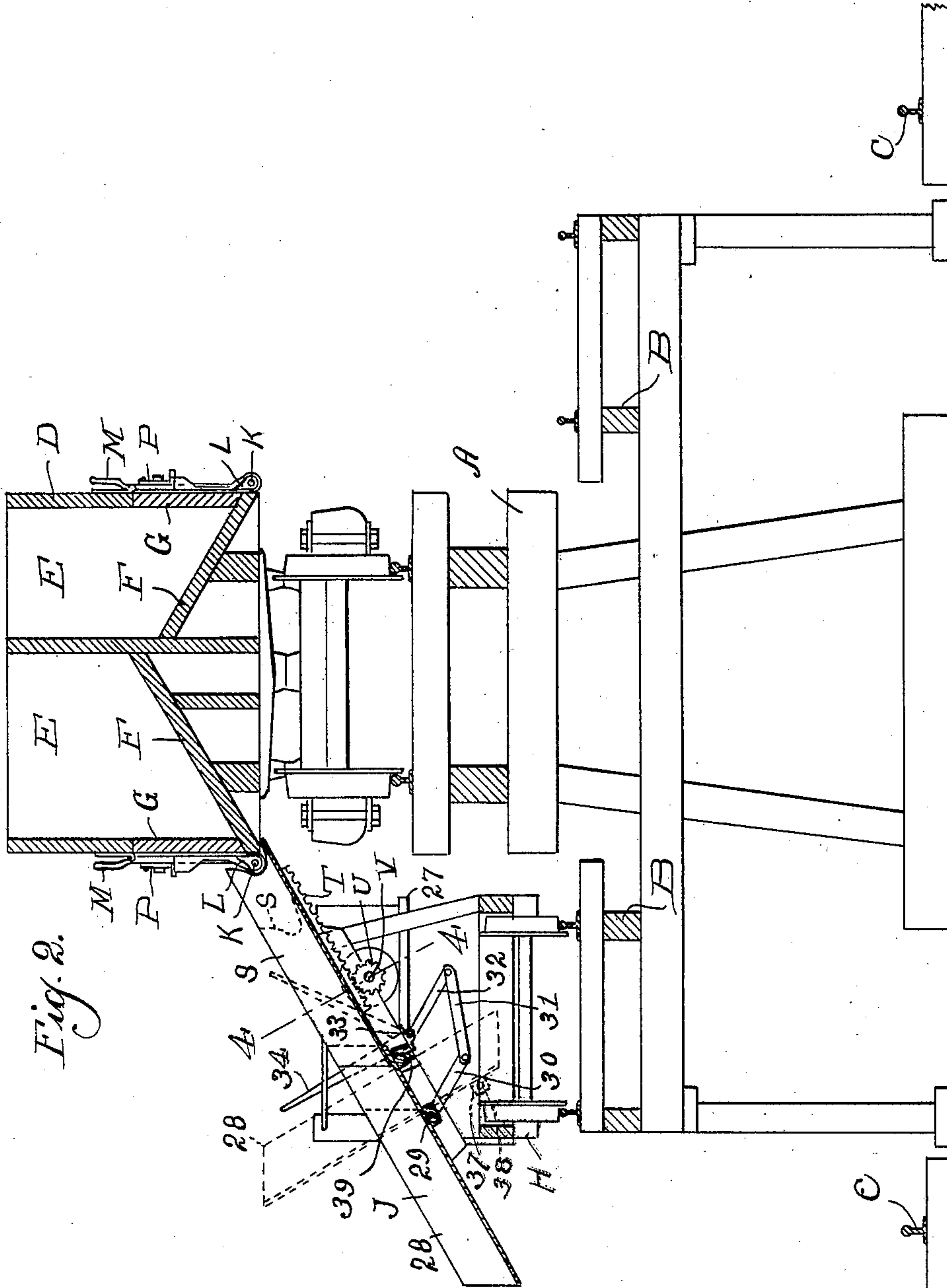
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3 SHEETS—SHEET 3.

Fig. 3.

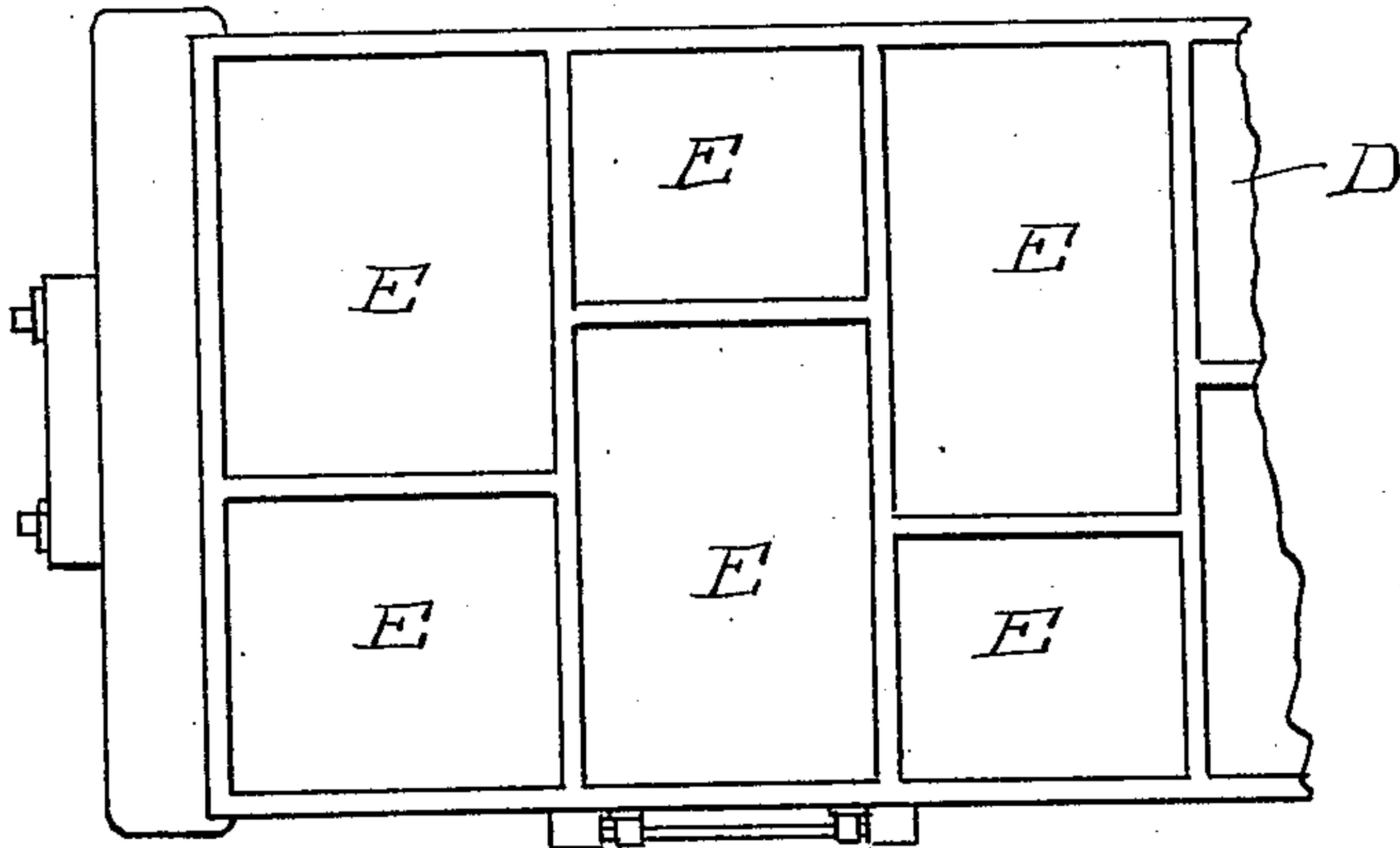


Fig. 4.

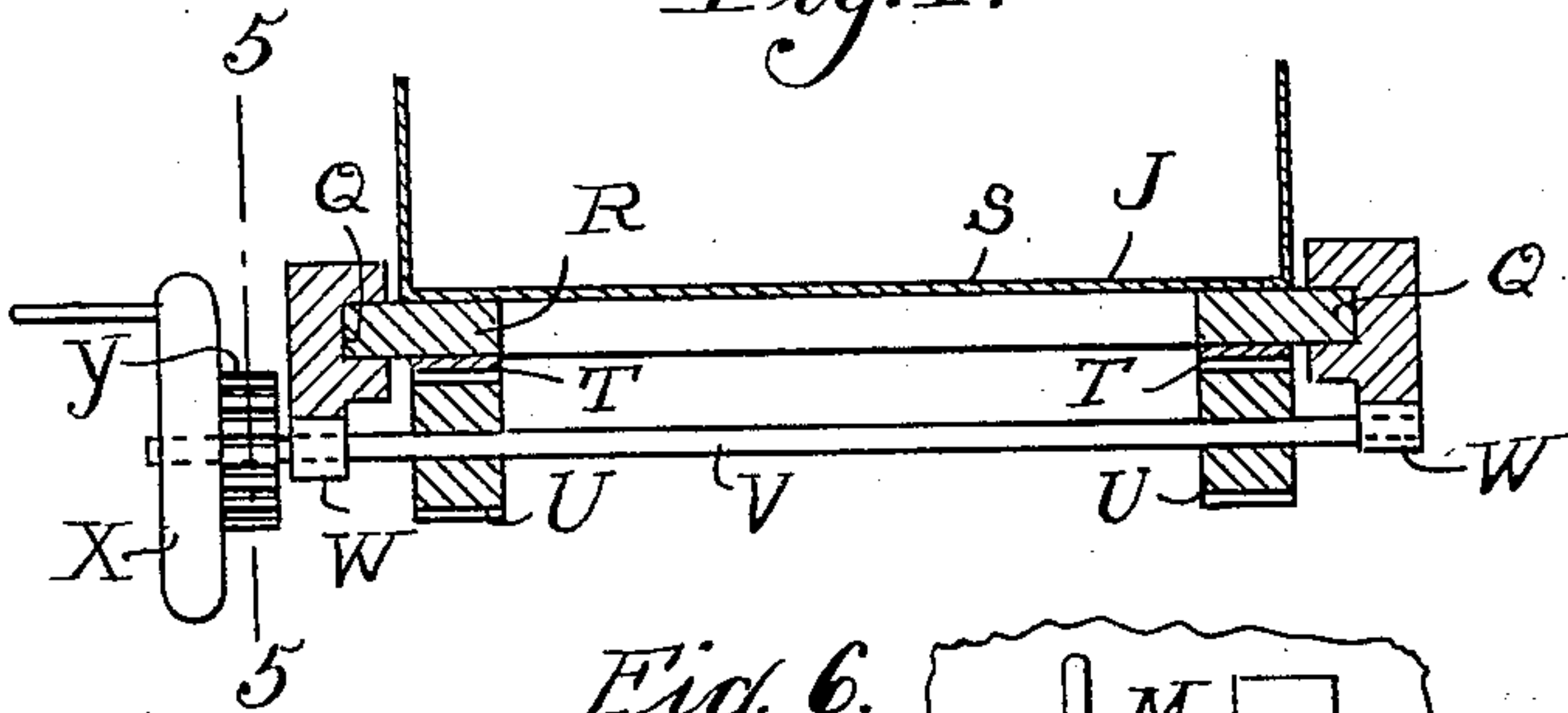


Fig. 5.

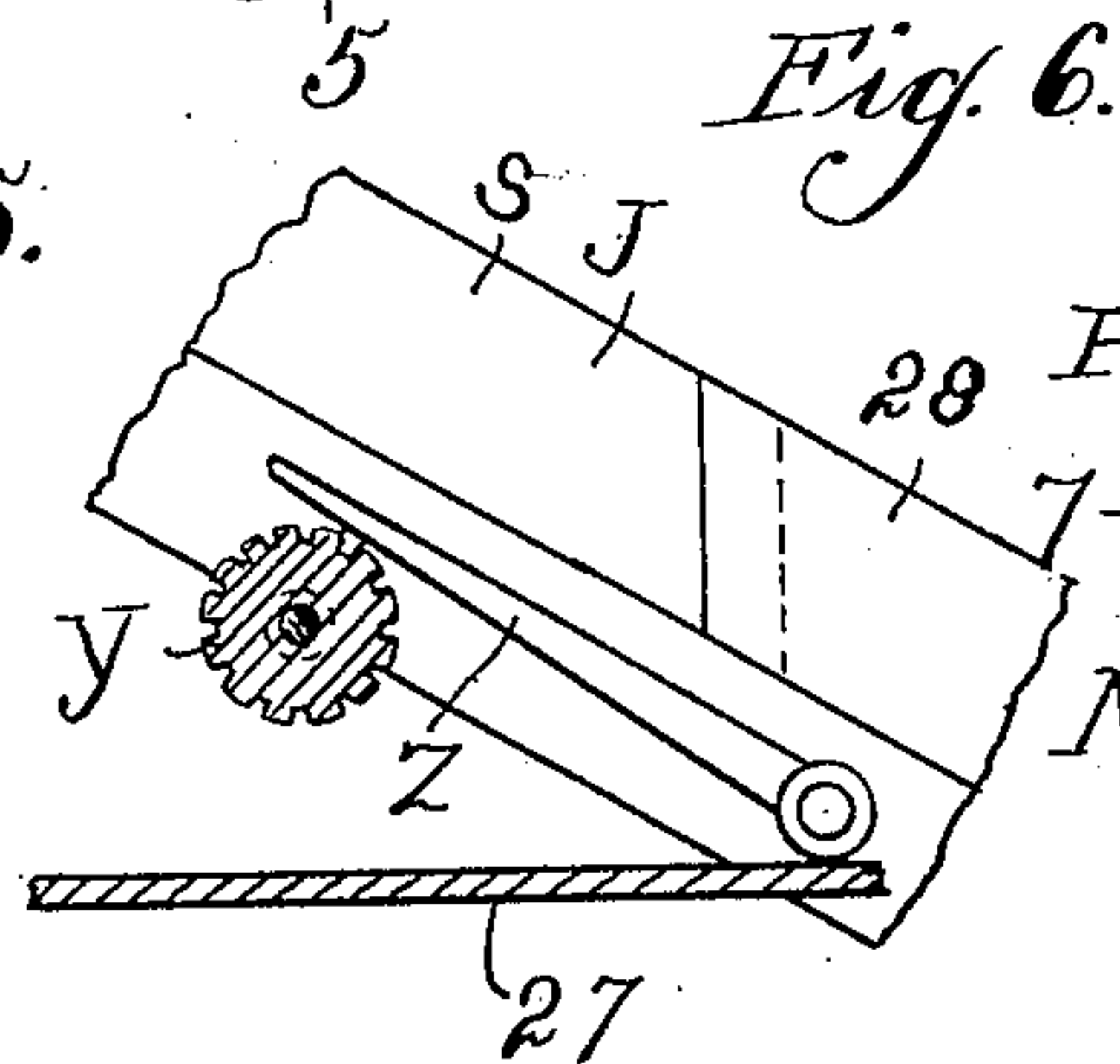


Fig. 6.

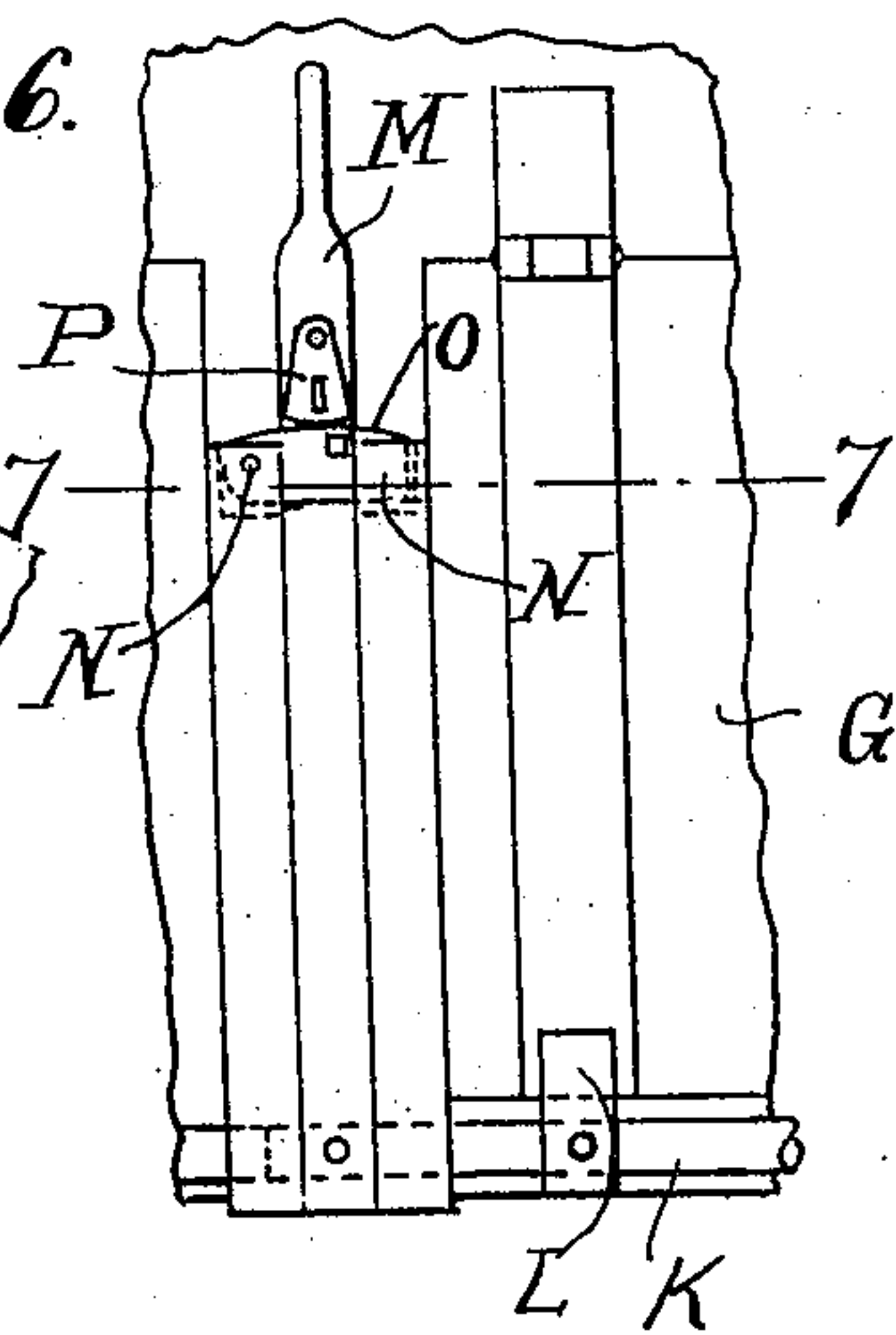
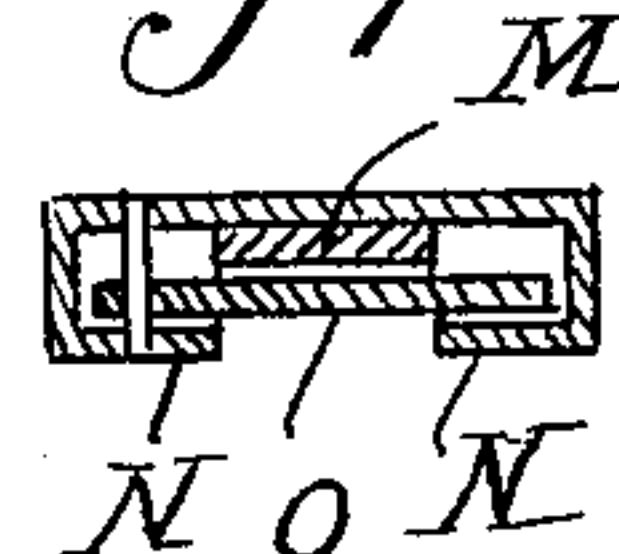


Fig. 7.



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# UNITED STATES PATENT OFFICE.

EMIL A. RAASCH, OF KANKAKEE, ILLINOIS.

## RAILROAD COALING APPARATUS.

SPECIFICATION forming part of Letters Patent No. 763,206, dated June 21, 1904.

Application filed January 11, 1904. Serial No. 188,607. (No model.)

*To all whom it may concern:*

Be it known that I, EMIL A. RAASCH, a citizen of the United States, residing at Kankakee, in the county of Kankakee and State of Illinois, have invented certain new and useful Improvements in Railroad Coaling Apparatus; 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 a novel coaling apparatus for railroads, the object being to provide simple and efficient means for feeding coal in desired quantities to tenders of locomotives at less expense of handling and with greater ease than present methods and apparatus permit; and it consists in the features of construction and combinations of parts hereinafter fully described and claimed.

In the accompanying drawings, illustrating my invention, Figure 1 is a side elevation showing apparatus constructed and arranged in accordance with my invention. Fig. 2 is a vertical transverse section on the line 2 2 of Fig. 1. Fig. 3 is a fragmentary top plan view of a coal-reservoir car forming part of my apparatus. Fig. 4 is a detail section on the line 4 4 of Fig. 2. Fig. 5 is a detail section on the line 5 5 of Fig. 4. Fig. 6 is a fragmentary detail side elevation showing the devices for releasing the discharge-gates of the pockets of the coal-car. Fig. 7 is a detail section on the line 7 7 of Fig. 6.

Present railroad coaling apparatus include, as far as I am informed, a raised trestle or similar structure upon which the coal-cars are drawn and on one or both sides of which a series of pockets or hoppers are arranged into which the coal is shoveled from the cars. The said pockets or hoppers are mounted either directly over a main track or siding or are movable on inclined ways the lower ends of which are adjacent the main track or siding, so that each pocket may be let down to the end of such way and discharges into the tender. The objection to this system resides, primarily, in cost of construction, and, secondly, in cost of handling in transferring the coal from the cars into the pockets, and where movable

pockets are used the expense is even greater by reason of the necessary power appliances required to raise and lower said pockets. My present invention is designed to overcome these objections by greatly reducing both the cost of installation of the system or apparatus and the cost of handling the coal. To this end I provide a raised trestle A, on one or both sides of which is a lower trestle B, the latter being at a certain level above the main track or siding C. I further provide a coal-reservoir car D, the box of which is divided into a plurality of pockets E, each having an inclined bottom F and adapted to contain a given quantity of coal. In the outer walls of the box of the car or the pockets E, I provide depending pivoted gates G, the lower ends of which are preferably flush with the lower ends of the inclined bottoms F of said pockets. The said gates G are normally locked by suitable devices, hereinafter described, and when released are opened by the pressure of the coal against the same. The said car D is drawn upon the trestle A, and on the trestle B, I provide a light car H, carrying an inclined chute J, said car H being adapted to be moved so that the chute J will register with any pocket E of the car D the contents of which are to be transferred to the tender of a locomotive, the latter of course taking the required relative position on the track C. The said car H remains always upon said trestle B, and the chute J thereof must be capable of being shifted, so as to remain out of the path of the locomotive-cab on the one hand and projecting portion of the car D on the other hand, so that when not in use the said car H and parts carried thereby will be out of the path of passing trains and the cars D should the latter be removed and replaced.

My invention resides, essentially, in the foregoing arrangement and likewise in the details of construction of the cars D and H in particular, the specific constructions of the latter forming part of the general combination by which a new and useful result is obtained. The gates G of said car D are locked by means of shafts K, journaled in bearings below the lower ends of said gates and which are provided with arms or projections L, adapted to



be turned into the path of the gate. At one end of each of said shafts K is a lever M, by means of which said shafts are each independently operated, said levers M and arms L being relatively so arranged that the latter bear upon the free ends of the gates when said levers M assume a vertical position. To hold said levers M in such vertical position, I provide locking devices comprising a plate having overhanging ends N, between which the lever M is received. A cross-bar O is pivoted in one end of said plate and prevents said lever from being swung outwardly when said cross-bar is turned, so that its free end enters the other overhanging end of said plate. On said lever M is a pivoted arm P, which is turned to bear upon said cross-bar O to prevent the latter from leaving its socket. On said car H are inclined guideways Q, in which a frame R, carrying the member S of the chute J, is mounted. The latter carries two rack-bars T, which mesh with pinions U on a shaft V, journaled in bearings W in said guides Q, said shaft being provided at one end with a crank-wheel X, by means of which said shaft V is turned. Adjacent said wheel X is a toothed pinion Y, adapted to receive a projection on a lever Z, pivotally secured to one of said guides and by means of which said shaft V is locked against rotation. At one end of said car H, I provide a platform 27 for the operator. The said wheel X projects over said platform 27, so as to be in a convenient position for operation. The member 28 of said chute J is mounted on a shaft 29, journaled in bearings in the lower end portions of said guides Q, and is slightly wider than the member S, so as to receive the latter telescopically. On said shaft 29 is an arm 30, which is connected, by means of a link 31, with the arm 32 at one end of a shaft 33, suitably journaled in bearings and extending underneath the platform 27. Adjacent its other end said shaft 33 carries a lever 34, passing through a slot 35 in the platform 27, and on each side of said slot 35 I provide vertical plates provided adjacent their ends with perforations adapted to receive a pin 36, by means of which said lever 34 may be locked at either limit of its movement. When said lever 34 is in the position shown in full lines in Fig. 2, the said member 28 of said chute J extends parallel with and forms an extension of said member S thereof, and when turned to the position shown in dotted lines in Fig. 2 said member 28 is turned out of operative position and out of the path of trains on the track C. The said member S of said chute J is raised so that its upper end projects underneath the car D when it is desired to discharge the contents of one of the pockets thereof into a tender; but while moving said car H from a position opposite one pocket to a point opposite another the said member S is lowered out of the path of the projecting portions of

the car or cars D on said trestle A. In the event that only one trestle B is used the contents of the pockets on one side of the car D only can be discharged, and after the latter have been exhausted said car is transferred to a turn-table or other equivalent device and returned to said trestle. The pockets of said car D may be variously arranged without departing from the spirit of my invention. In the instance illustrated said pockets are arranged to hold two, three, and four tons. As said cars D are filled at the mines, it will be obvious that I avoid the necessity of transferring the same at the coaling-station to the usual hoppers provided therefor, and thereby save not only the cost of labor required, but likewise the waste occasioned by such transfer. The cost of construction of my apparatus is also very much less than that of devices at present in general use. As the pivot-bar 29 of said chute 28 is located nearer the upper end than the lower end of same, a balance-weight 37 is secured to the lower face of the shorter end portion of said chute, adjacent its upper end, so that said chute may be easily turned from one position to the other. The coal in passing down said chute 28 would tend to further depress its lower end, and to prevent this pins 38 are provided on the ends of said balance-weight 37, adapted to be received in recesses 39 in the inner faces of said guides Q.

I claim as my invention—

1. A railroad coaling apparatus comprising a row of raised bins or pockets having discharge-gates, a movable carriage disposed lower than said bins and higher than the tracks, inclined guideways on said carriage, a chute movable longitudinally in said guideways, means for adjusting the position of said chute to project same into or out of position relatively to said discharge-gates to receive the discharged contents, a second chute pivotally mounted on said carriage and adapted to be turned relatively to said first chute to form an extension thereof and project to a point below the normal height of cars on the tracks, said pivoted member being adapted to be turned out of the path of passing trains when not in use.

2. A railroad coaling apparatus comprising two stepped trestles, cars having their bodies divided into a plurality of pockets forming bins adapted to be received on the uppermost trestle, discharge-gates on said pockets, a carriage movable on the lower trestle, and an inclined chute mounted on said carriage and adapted to be caused to register with any desired pocket of a car or cars on the upper trestle to receive the contents thereof and guide same to a tender on the tracks.

3. In a railroad coaling apparatus, the combination with the main track or siding, and a raised trestle extending parallel therewith, of cars having their body portions divided into



pockets or bins, inclined bottoms on said bins, discharge-gates on said pockets, a movable carriage disposed below said trestle and between the latter and said main track or siding, and a chute mounted on said carriage, said chute being adapted to be brought into alignment with any one of the pockets or bins of the cars on said trestle to receive the contents thereof and guide the same to a tender on said main track or siding.

4. In a railroad coaling apparatus, the combination with a row of raised pockets or bins adapted to contain coal, of a carriage disposed below said pockets or bins and between the latter and the main track or siding, inclined guides on said carriage, a chute mounted in said guides and longitudinally movable therein, and means for adjusting the position of said chute relatively to said pockets or bins to receive the contents thereof and guide same to a tender on the main track or siding.

5. In a railroad coaling apparatus, the combination with a row of raised pockets or bins adapted to contain coal, of a carriage disposed below said pockets or bins and between the latter and the main track or siding, inclined guides on said carriage, a chute comprising two relatively movable members one of which is longitudinally movable in said guides, piv-

otal connection between the other member and a part of said carriage, and devices mounted on said carriage for adjusting the positions of said members relatively to each other and to the pockets or bins to receive the contents of the latter and guide same to a tender on the main track or siding.

6. In a railroad coaling apparatus, the combination with a row of raised pockets or bins adapted to contain coal, of a carriage disposed below said pockets or bins and between the latter and the main track or siding, inclined guides on said carriage, a chute comprising two members one of which is longitudinally movable in said guides and the other of which is pivotally mounted on said carriage, a platform for an operator on said carriage, and devices projecting over said platform and connected with both said members for operating same to adjust their position relatively to each other and to said pockets or bins to receive the contents of the latter and guide same to a tender on the main track or siding.

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

EMIL A. RAASCH.

Witnesses:

CHARLS. A. K. AXEN,  
THEODORE RIMAS.