

Jan. 10, 1928.

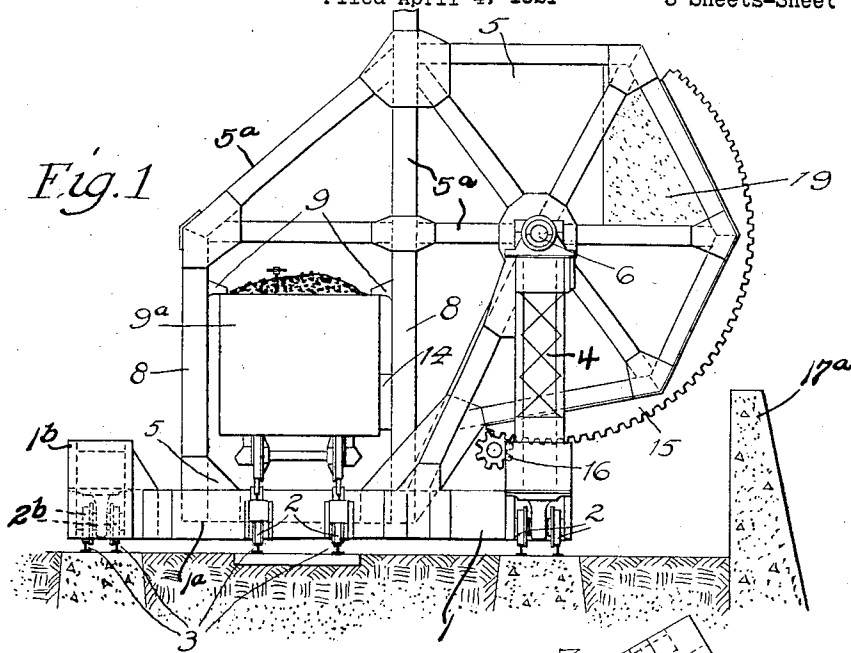
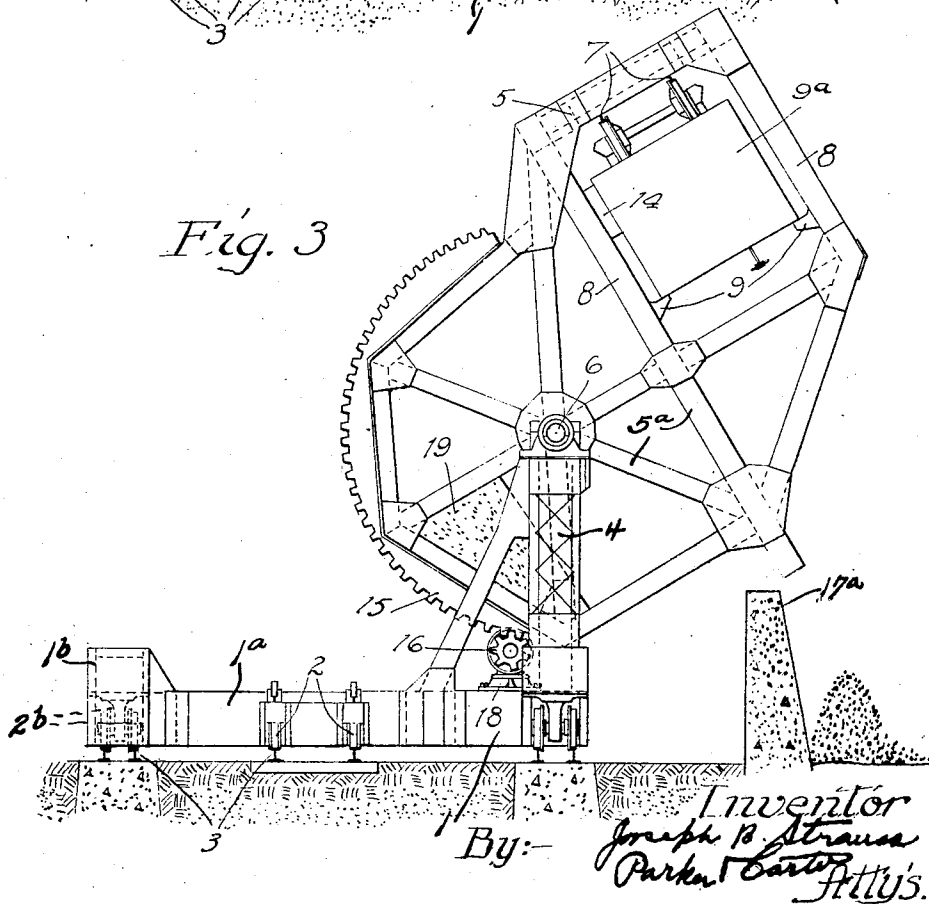
J. B. STRAUSS

1,655,801

CAR DUMPER

Filed April 4, 1921

3 Sheets-Sheet 1



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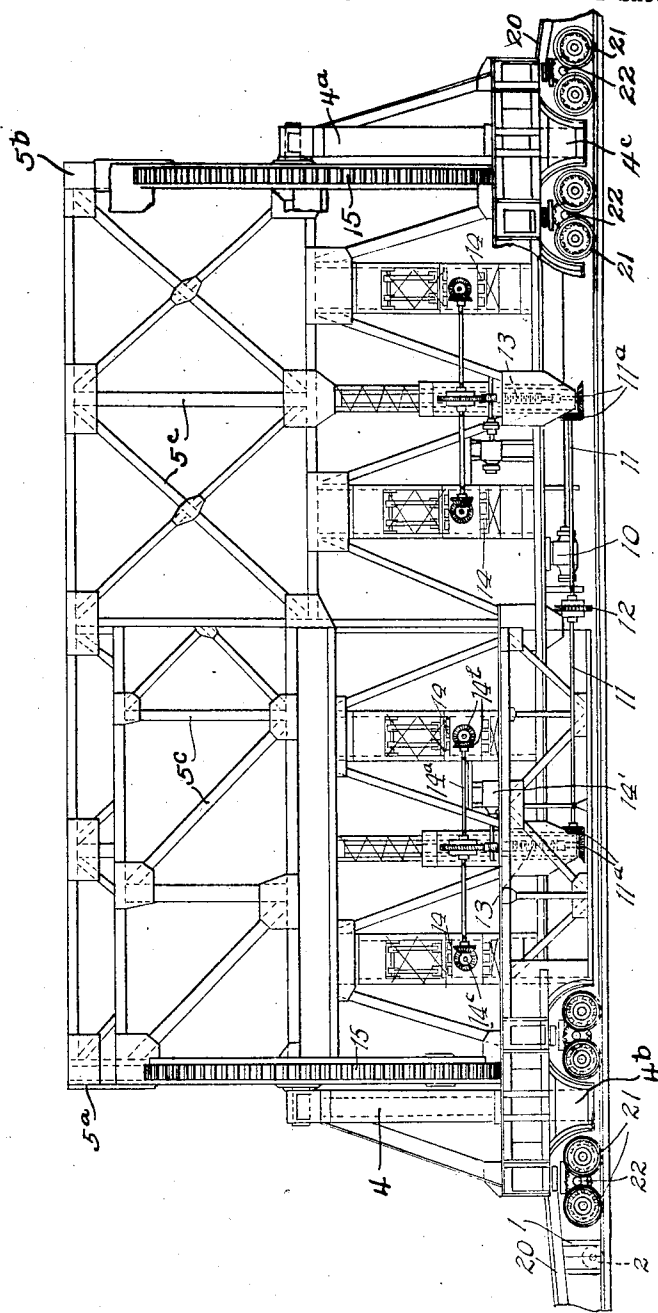
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3 Sheets-Sheet 2

Fig. 2



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3 Sheets-Sheet 3

Fig. 4

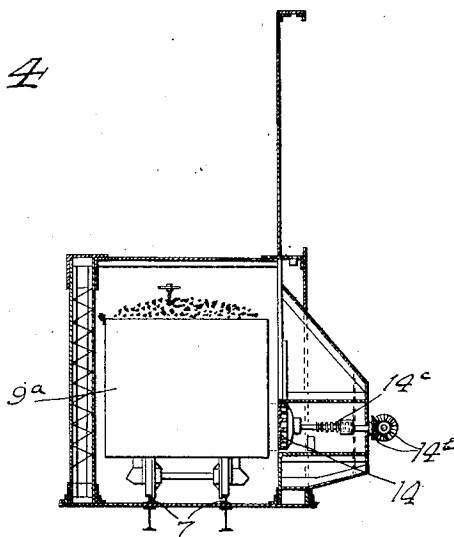
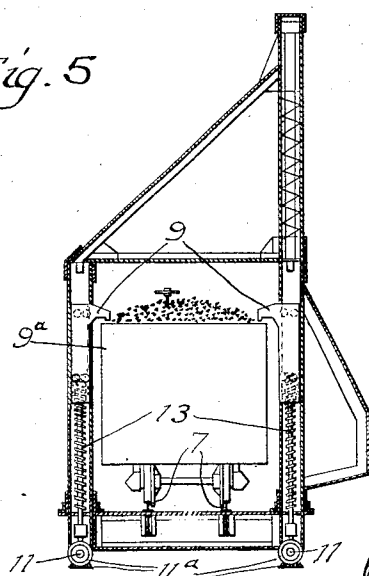


Fig. 5



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UNITED STATES PATENT OFFICE.

JOSEPH B. STRAUSS, OF CHICAGO, ILLINOIS.

CAR DUMPER.

Application filed April 4, 1921. Serial No. 458,516.

This invention relates to car dumpers and has for its object to provide a new and improved device of this description. The invention is illustrated in the accompanying drawings, wherein

Fig. 1 is an end view of one form of device embodying the invention;

Fig. 2 is a side elevation of the device shown in Fig. 1;

Fig. 3 is a view similar to Fig. 1 showing the car in its dumping position;

Fig. 4 is a view showing a detail of the side clamp;

Fig. 5 is a detailed view of the top clamp.

Like numerals refer to like parts throughout the several figures.

In carrying out my invention I provide a support 1, having wheels 2, which are adapted to run upon tracks 3. This support is provided with upstanding members. Pivoted to these upstanding members 4, is a moving frame 5, the frame being mounted upon the pivots or trunnions 6. The members 4 form two stiff upright frames and the moving frame 5 has transverse end frames 5^a and 5^b and connecting longitudinal trusses 5^c. The trunnions 6 are cantilevered in these transverse end frames 5^a and 5^b and rotate in bearings in the end frames 4 and 4^a. This frame is provided at one side of the upstanding members with the track 7 and the side members 8. The car 9^a to be dumped is run in upon this track. The side members 8 are provided with clamps 9 which are moved in position to clamp the car as illustrated in Fig. 1. The clamps 9 are operated by any desired mechanism. As herein shown a motor 10 is provided which is connected with a shaft 11 having the equalizing gears 12. The clamps 9 are provided with the screws 13, which are operatively connected with the shaft 11 so as to be rotated thereby. It will thus be seen that the clamps may be raised or lowered to clamp or release the car.

The connection between the screws 13 and the clamps 9 and the shaft 11 is by means of beveled gears 11^a. There are two shafts 11, one on each side of the car so that both sets of clamps 9 can be simultaneously moved. There are also side clamps 14 which engage the side of the car. These side clamps are operated by means of the motors 14' which drive the shafts 14^a, these shafts by means of beveled gears 14^b driving the screw threaded shafts 14^c with

which the side clamps 14 are connected. When the screw threaded shafts 14^c are rotated in one direction, the clamps are brought tightly against the side of the car, and when rotated in the other direction are released from the car.

The moving frame 5 is provided with a rack 15 which is engaged by a pinion 16 on a shaft operated by a motor 18. The moving frame is provided with a counterweight 19. The support 1 is provided with inclined approaches 20 which are connected with the frame so as to move therewith, and the cars pass along these inclined approaches in moving to and from the dumper. When it is desired to use the device the car is moved in upon the tracks 7. The clamps 9 and 14 are then operated to clamp the car in position, and the motor 18 is then set in operation so as to revolve the pinion 16, and thus rotate the moving frame about this trunnion 6. This carries the car around to the position shown in Fig. 2, and the material therein is then dumped at the point desired. A suitable stop 17^a is provided for engaging the moving frame 5 after the car has been moved to its dumped position so as to prevent the frame being moved too far. The entire car dumper can be moved along from place to place wherever it is desired to use it. This movement is done by means of the propelling trucks 21 which are operated by suitable motors 22. The support or movable frame 1 has a laterally extending part 1^a (see Figs. 1 and 3) to which the wheels 2 are connected and which has the projecting part 1^b having the wheels 2^b. It will be noted that the upstanding parts 4 and 4^a are single posts as it were and it will further be noted that parts thereof 4^b and 4^c project down between the two propelling trucks (see Fig. 2). The entire structure including the approaches is moved as a unit when it is desired to move the car dumper from place to place. It will further be noted that the counterweight 19 is within the outline of the rotating frame 5 and that the operating mechanism therefore is between the upstanding supports and the compartment into which the car is received. It will further be noted that the trunnions 6 are substantially in a horizontal plane with the top of the car compartment.

I have described in detail a particular construction embodying the invention but it is of course evident that the parts may be

varied in many particulars without departing from the spirit of the invention as embodied in the claims hereto appended, and I therefore do not limit myself to the particular construction shown.

The counterweight is arranged for the average load on the moving frame and the operating machinery is arranged to take care of the unbalanced loads. This car dumper it will be seen comprises two stiff upright end frames, and a stiff moving frame intermediate the upright end frames and rotatably mounted thereon, the stiff moving frame being provided with transverse end frames and connecting longitudinal trusses, the trunnions for the stiff moving frame being cantilevered in the longitudinal trusses, and rotating in bearings on the end frame, there being overhanging members connected with the moving frame and carrying railway tracks so that the car can be carried therein. The counterweight is connected with the moving frame on the side opposite the railway track and the racks are similarly located, the driving pinions engaging the racks to rotate the moving frame upon the upright frames to dump the car, there being motors and gearing to operate the clamping devices for the car and the driving pinions.

I claim:

1. A car dumper comprising a movable frame, upstanding members connected therewith and located at one side of said frame, wheels for said frame in substantial vertical alignment with said upstanding members, a moving frame pivotally mounted upon said upstanding members, said frame provided with a car receiving part for re-

ceiving the car to be dumped, means for clamping the car in said car receiving part, additional wheels connected with said movable frame and located under said car receiving part when it is in its car receiving position, a portion of said movable frame projecting to one side of the car receiving part, and supporting wheels connected therewith, and operating mechanism for moving the moving frame about its pivots to move the car to its dumping position, and means for moving the entire device from place to place.

2. A car dumper comprising a movable frame, driving trucks for said frame by means of which it is moved from place to place, upstanding members on said frame, a portion of said upstanding members projecting between said trucks, a moving support rotatably mounted on said upstanding members, said moving support being provided at one side with a compartment for the car to be dumped.

3. A car dumper comprising a moving frame, supports upon which said frame is movably mounted, said moving frame provided with a compartment for the car to be dumped, top clamps on each side of said compartment, supports for said clamps, motor for operating said clamps so as to move them to engage the top of the car, and side clamps on one side of said car, and motor for operating said side clamps to cause them to engage said car and a stop for limiting the movement of the moving frame.

Signed at Chicago, county of Cook and State of Illinois, this 23 day of March, 1921.

JOSEPH B. STRAUSS.