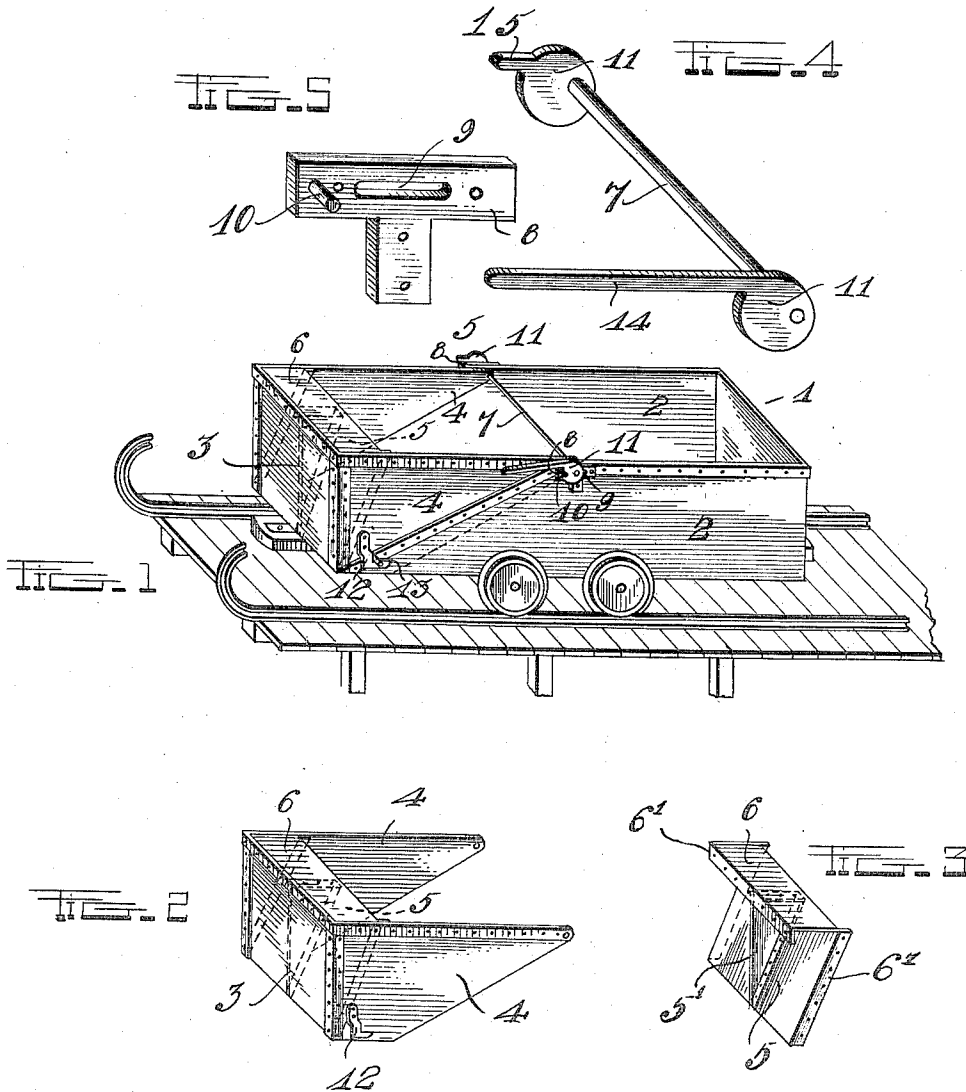


T. W. WEAVER.
DUMPING CAR.
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Witnesses

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DUMPING-CAR.

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To all whom it may concern:

Be it known that I, THOMAS WATKIN WEAVER, a citizen of the United States, residing at Tunnelton, in the county of Preston and State of West Virginia, have invented new and useful Improvements in Dumping-Cars, of which the following is a specification.

This invention relates to improvements in railway rolling stock, and more particularly to an improved dump car.

It is the object of this invention to provide a car for carrying a load over a track and then dumping at the end of travel, such as is particularly adapted for use in conveying coal from the interior of mines on a tramway and dumping the contents into a chute at the end of the tramway.

A dumping car constructed in accordance with this invention is particularly advantageous in use in mines, mills, quarries, railroads, and the like, on account of the simplicity of construction, the few parts reducing the liability of disorder, the positive locking means during travel, and the ease of operation for dumping.

While the preferred form of this invention is illustrated upon the accompanying sheets of drawing, yet it is to be understood that minor detail changes may be made without departing from the scope thereof.

Figure 1 is a view in perspective of a car constructed in conformity with this invention illustrated in position on track. Fig. 2 is a detail view in perspective of the swinging section. Fig. 3 is a view in perspective of a detail of the swinging section. Fig. 4 is an enlarged detail view in perspective of a part of the locking means. Fig. 5 is an enlarged detail view in perspective of the bearing members for the part illustrated in Fig. 4.

The car body 1 is of any known structure, preferably of steel, mounted upon wheels to travel upon a track or tramway and be dumped at the end of travel. One end of the car is open and the side walls 2 slope upward from the open end preferably to the center of the car body. A swinging section 3 is provided to close the open end and

form a continuation of the side walls. The side members 4 of the swinging section are received within the side walls of the car body and extend some distance therebelow. The end of the swinging section is provided with a wall 5 sloping upward and inward from the bottom, preferably at an angle of twenty degrees to the perpendicular end of the swinging section. The upper portion 6 of the end wall 5 is bent backward upon itself in line with the upper edges of the side members and is provided with flanges 6' for engaging the side members at each end of the wall and the top of the end member of the swinging section and is provided with a central vertical brace 5', as clearly illustrated in Fig. 3.

A pivot rod 7 passes through the upper inner ends of the side members of the swinging section and the upper edges of the side walls of the car body. A bearing member 8 is provided on the exterior of each side wall 2 having a longitudinal slot 9 through which the pivot rod passes and is adapted to slide. An outstanding lug 10 is provided on the side of each bearing member adjacent the swinging section. A cam 11 is provided on each end of the pivot rod adapted to engage lugs 10 and is so constructed that in one position of the cam the pivot rod may travel to the end of the slot adjacent the lug, thereby allowing the swinging section to become extended and to rotate about the pivot rod when the car is tilted in dumping period. The cams upon being rotated from this position engage the lugs and force the pivot rod in the opposite direction in the slot, thereby retracting the swinging section. The swinging section is provided on each side with hooks 12 adapted to engage outstanding pins 13 upon the side walls when the swinging section is in the retracted position, and to disengage the said pins when in the extended position. An operating lever 14 is provided upon one cam preferably extending in a horizontal position when the cam has retracted the swinging section, and the other cam is provided with a similar extension 15 but only of sufficient length to engage the lug 10 when in the retracted po-

sition of the swinging section. As the operating lever and corresponding projection upon the other cam extend from a point on the circumference slightly beyond the greatest distance from the pivot rod the cams will remain in locked position when the projection engages the outstanding lug, and thereby be prevented from rotating by jars or shocks.

As illustrated in Fig. 1, the swinging section is in retracted position and ready to receive a load. When the end of travel is reached and it is desired to dump the car the operating lever is thrown over releasing the cam from engagement with the lug and allowing a free forward movement of the pivot rod. The car body is then dumped, preferably at an angle of about forty-five degrees, and the weight of the load engaging the ends of the swinging section causes the section to move forward until the pivot rod engages the forward end of the slot in the bearing member, thereby releasing the hook upon the swinging section from the pin upon the side wall. The load resting upon the upwardly inclined wall in the end of the swinging section will cause the same to easily open and allow of the complete discharge of the load. The car is then righted and the operating lever thrown back into position as shown in Fig. 1. The circumferences of the cams engaging the outstanding lugs retract the end of the pivot rod in the slot in the bearing member thereby causing the retraction of the swinging section and insuring the engagement of the hook thereon with the pin upon the side wall.

What I claim is:

1. In a dump car, a car body having an open end and a swinging section forming a closure therefor mounted to slide bodily thereon, and means to retract said section.

2. In a dump car, a car body having an open end and a swinging section forming a closure therefor mounted to slide bodily thereon, means upon the section and body co-acting in the retracted position of the section to secure the section from swinging, and means to retract the section.

3. In a dump car, a car body having an open end and a swinging section forming a closure therefor mounted to slide bodily thereon, means upon the section and body co-acting in the retracted position to secure the section from swinging, and means to retract the section and hold it in locked position, said means adapted to free the section and the load in dumping position adapted to unlock and swing the section.

4. In a dump car, a car body having an open end and a swinging section forming a closure therefor, said section having a pivot rod mounted to slide upon the body, members upon the section to secure the section from swinging and body co-acting in the re-

tracted position of the section, and means engaging the pivot rod to retract and lock the section.

5. In a dump car, a car body having an open end and sloping side walls, a swinging section having sloping side members adapted to be received within the sloping walls and provided with a pivot rod passing through the inner ends of the side members, bearing members on the side walls having longitudinal slots adapted to receive the ends of the pivot rod and allow a sliding movement therein, means to slide the pivot rod in one direction and retract the section, means upon the section and body co-acting in retracted position to secure the section from swinging, said retracting means adapted to release the pivot rod and allow gravity to extend and unlock the section during the dumping movement.

6. In a dump car, a car body having side walls and an open end, a swinging section having side members forming a closure therefor, a pivot rod passing through the side members of the section, bearings in the side walls of the body having longitudinal slots through which the pivot rod passes, cams on the exterior ends of the pivot rod, lugs on the bearings adapted to be engaged by the cams and slide the rod in one direction, hooks upon the side members of the section and pins upon the side walls of the body adapted to engage in the retracted position of the section.

7. In a dump car, a car body having side walls and an open end, a swinging section having side members forming a closure therefor, a pivot rod passing through the inner ends of the side members and through the side walls, a bearing upon the side walls having longitudinal slots for receiving the pivot rod, cams on the ends of the pivot rod, lugs upon the bearings adapted to be engaged by the cams and cause the rod to slide in one direction within the longitudinal slots, projections on the cams engaging the lugs at the end of travel of the rod forming a lock therefor, hooks upon the side members and pins upon the side walls adapted to engage and prevent swinging movement of the section in the retracted position.

8. In a dump car, a car body having side walls and an open end, a swinging section having side members and an end member forming a closure therefor, releasable means for locking the section in closed position, the end member being inclined inward and upward to receive the weight of the load in dumping position and co-act therewith to swing the section for dumping.

9. In a dumping car, a car body having side walls and an open end, a swinging section mounted to move bodily thereon having side members and an upwardly and inwardly inclined end member forming a clo-

sure therefor, means to retract the section, means to secure the section from swinging in the closed position, said means adapted to be released and the weight of the load in dumping adapted to extend the section and unlock the securing means, the inclined end

member co-acting with the load to swing the section.

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Witnesses:

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