2 Sheets--Sheet 1.

J. C. WISWELL & F. A. WISWELL.

Improvement in Dumping-Cars.

No. 116,127. Patented June 20, 1871.

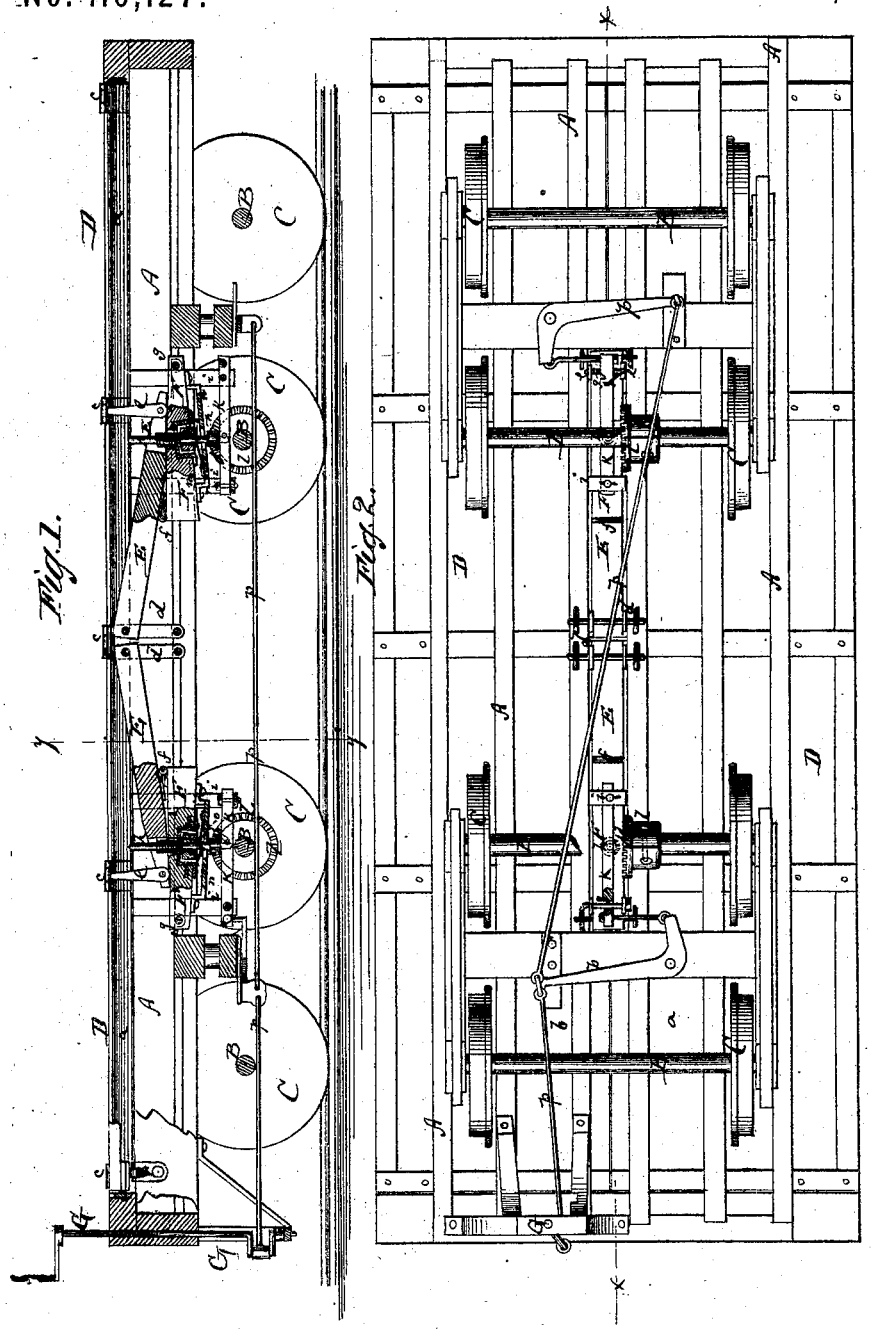

Fig. 1.

Fig. 2.

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2 Sheets--Sheet 2.

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Fig. 4.

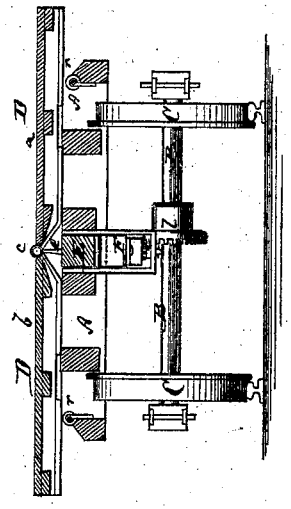
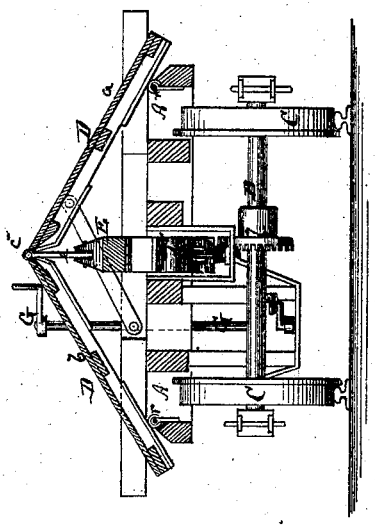


Fig. 3.



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UNITED STATES PATENT OFFICE.

JACOB C. WISWELL, OF LENNOXVILLE, CANADA, AND FREDERICK A. WISWELL, OF BEEBE PLAIN, VERMONT.

IMPROVEMENT IN DUMPING-CARS.

Specification forming part of Letters Patent No. 116,127, dated June 20, 1871.

To all whom it may concern:

Be it known that we, JACOB C. WISWELL, of Lennoxville, in the county of Compton, Province of Quebec and Dominion of Canada, and FREDERICK A. WISWELL, of Beebe Plain, in the county of Orleans and State of Vermont, have invented a new and useful Improvement in Railroad Ballast-Cars; and we do hereby declare that the following is a full, clear, and exact description thereof, which will enable others skilled in the art to make and use the same, reference being had to the accompanying drawing forming part of this specification, in which—

Figure 1 represents a vertical longitudinal section of our improved balance-car, the plane of section being indicated by the line *x x*, Fig. 2. Fig. 2 is an inverted plan view of the same. Figs. 3 and 4 are vertical transverse sections of the same taken on the plane of the line *y y*, Fig. 1, showing it in the positions of unloading and loading, respectively.

Similar letters of reference indicate corresponding parts.

The object of this invention is to provide a railroad car with a jointed top or platform, which can be raised in the middle and lowered at the sides, to form inclined planes, from which its load will be spontaneously discharged. The labor of unloading sand and ballast from the cars is thus avoided, and the process carried out much more rapidly than by manual labor. The invention consists, first, in making the car-platform of two longitudinal sections, which are hinged together, so that they can be raised in the middle to discharge whatever has been placed upon them. The invention also consists in the use of new mechanism for raising or lowering the middle part of the platform by means of the rolling gear of the car.

A in the drawing represents the frame of the car, the truck-axles B and wheels C being of suitable or ordinary construction. D is the car-platform or top, extending from end to end of the frame. This car-top is made in two longitudinal leaves or halves, *a* and *b*, which are united at their contiguous edges by means of hinges *c c*, as is clearly shown in Figs. 3 and 4. E E are two levers, which are, at their inner ends, in the middle of the car, pivoted to straps or links *d*, that project from the frame A, as shown in Fig. 1. The outer ends of the levers E are, by links *e e*, connected with some of the hinges *c*, which unite the leaves *a b*, as is clearly shown in Fig. 1. To the under side of each lever E is hinged or pivoted, at *f*, one end of a lever, F, the other end of which is, at *g*, pivoted to the car-frame. Each lever F embraces a vertical screw, *h*, which rests on a horizontal lever, *k*, that is pivoted to the lower part of a pendent frame, *i*, of the frame A. The lower end of each screw *h* carries a pinion, *j*, which can, by swinging the lever *k*, be brought into gear with a gear-wheel, *l*, on one of the axles B. There is the same arrangement near each lever F—that is to say, near each end of the car. Each lever F carries a nut, *m*, which embraces and fits the screw *h*, and is held in a cavity of the lever above a strap, *n*, of the same, so as to have a slight upright play in the lever. A spring, *o*, on the strap tends to elevate the nut in the lever. When the levers *k* are swung by suitable lever-connections *p p*, by the turning of an upright shaft, G, at one end of the car, so as to carry the pinions *j* in gear with the wheels *l*, the apparatus is in motion. The screws *h* will then be revolved, so as to raise the nut *m*, and thereby also the levers F, which cause the levers E to be elevated at their outer ends. This movement of the levers E causes the contiguous parts of the leaves *a b* to be elevated, while their outer parts are lowered, so that the car-top will become roof-shaped, as in Fig. 3. The motion of the leaves on the outer part of the car-frame is facilitated by means of friction-rollers *r r*, placed under said leaves, as shown. When the leaves are thus swung up it is evident that they will discharge from their surfaces all earth or matter that had been placed upon them. When the nuts have been raised to their greatest height they run off the threaded portions of the screws *h*, and will, as said screws are still revolved, be alternately raised and lowered on the end of the thread; this causes an up-and-down play and a shaking of the leaves, which will entirely free them from their load. When the car is moved in the opposite direction the nuts are screwed down to lower the leaves, until they form a flat top, as in Fig. 4. When quite low the nuts leave the threaded portions of the screws, and are crowded against the

springs *o*, to be again taken up when the screws are turned in the other direction.

Having thus described our invention, we claim as new and desire to secure by Letters Patent—

1. In combination with the railroad car, a platform, D, made in two longitudinal sections, *a b*, hinged together at *c c*, and applied as and for the purpose specified.

2. The levers E E F F, combined with the hinged leaves *a b* and with the nuts *m* and screws *h*, to operate substantially as herein shown and described.

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