

(No Model.)

3 Sheets—Sheet 1.

W. M. COLE.
RAILWAY CAR.

No. 577,596.

Patented Feb. 23, 1897.

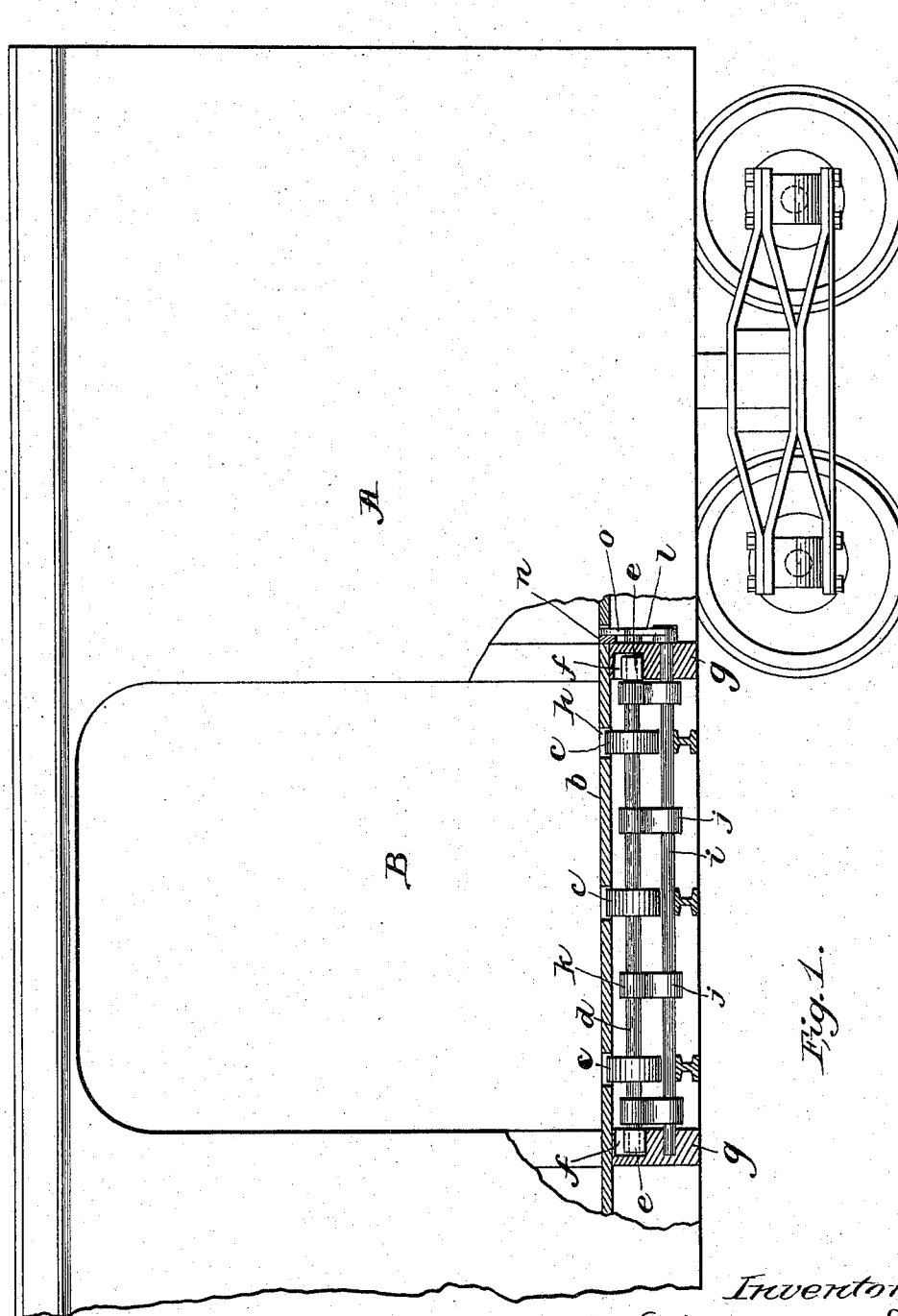


Fig. 1.

Witnesses:

Arthur F. Randall.
Ferry Howe.

Inventor:

William Mase Cole
by H. Bellamy
Att'y

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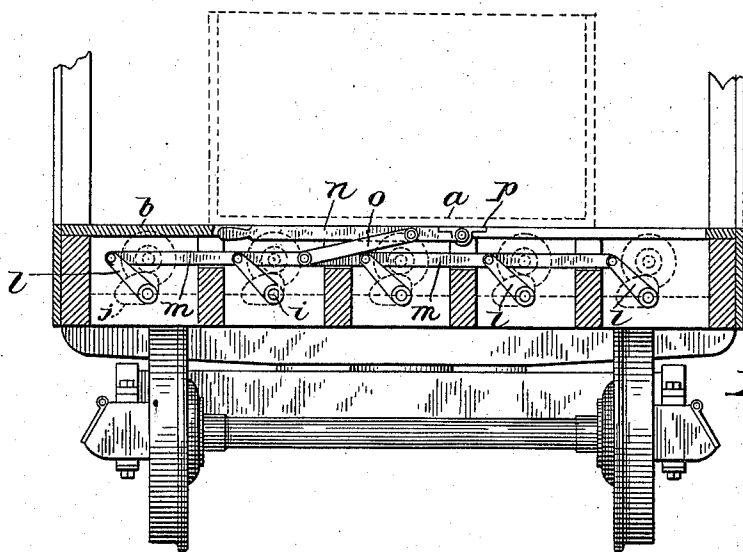


Fig. 2.

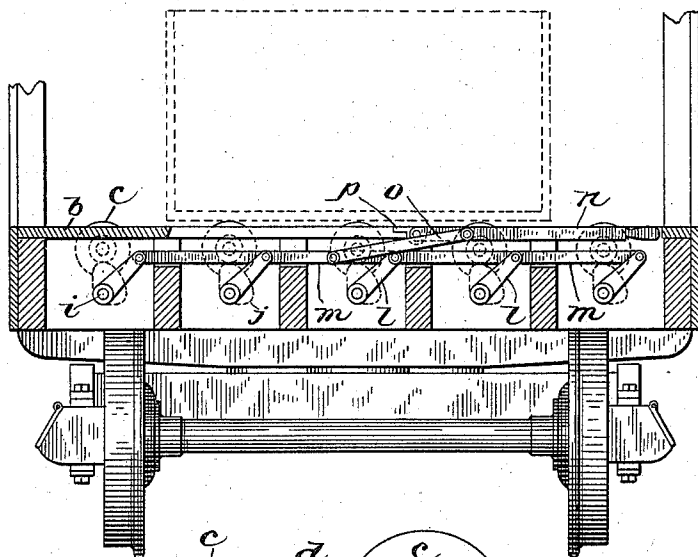


Fig. 3.

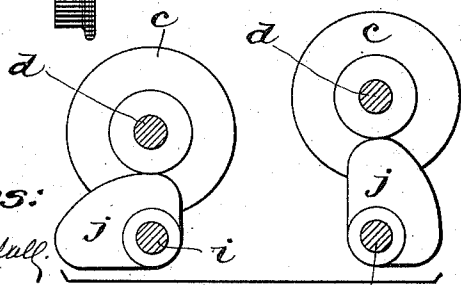


Fig. 5.

Witnesses:

Arthur A. Randall.

Percy C. Howe.

Inventor:

William M. Cole

by W. B. May
Atty.

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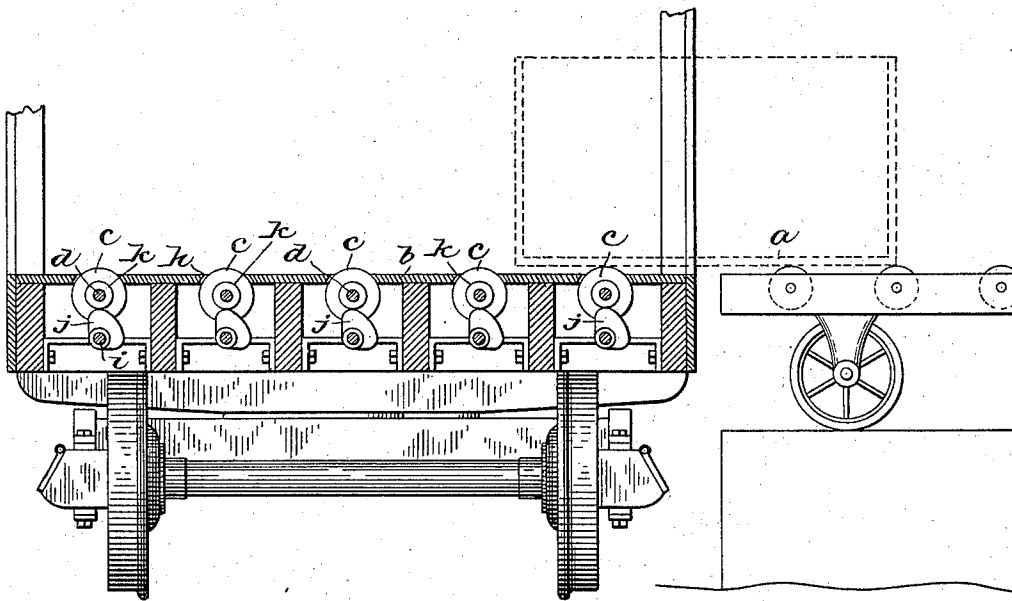


Fig. 4.

Witnesses:

Arthur J. Randall
Percy C. Howe

Inventor:

William Morse Cole
by
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UNITED STATES PATENT OFFICE.

WILLIAM MORSE COLE, OF CONCORD, MASSACHUSETTS.

RAILWAY-CAR.

SPECIFICATION forming part of Letters Patent No. 577,596, dated February 23, 1897.

Application filed June 22, 1896. Serial No. 596,384. (No model.)

To all whom it may concern:

Be it known that I, WILLIAM MORSE COLE, of Concord, in the county of Middlesex and State of Massachusetts, have invented certain new and useful Improvements in Railway-Cars, of which the following, taken in connection with the accompanying drawings, is a specification.

This invention relates to improvements in railway-cars or other vehicles and is designed for several objects.

Where railway-trains are run through thickly-settled parts of the country, numerous stops are generally made to take on and let off passengers and to receive and discharge baggage and freight. It generally happens where passenger-trains are equipped with baggage and mail cars that the train is greatly delayed in starting from a station by reason of the time taken to unload the baggage and mail and to take on the same, this discharging and unloading taking a much longer time than the taking on and letting off of passengers requires. Hence if some means were employed for quickly discharging baggage and mail it would be possible for the trains to travel between their termini in a much shorter time than is now required, and consequently mail-matter, as well as baggage and passengers, could be more expeditiously transferred from one place to another.

I have ascertained that if some means were provided for the discharging at one time of all various articles of baggage and mail that would have to be left at a particular station instead of discharging each article separately such discharging and unloading would consume but a minimum of time. Therefore the object of my invention is to provide a device with which baggage or mail cars may be equipped and upon which the baggage and mail could be loaded *en route* to be discharged and unloaded by removing the whole device, with the articles piled on it, as soon as the station is reached.

To these ends, therefore, my invention consists of a movable tray or platform adapted to be placed upon the floor of a baggage or mail car or other vehicle in front of the door on the side thereof, in combination with roll-

ers or wheels normally below the floor of the car, so that the tray may rest upon the floor, and means for elevating the wheels or rollers simultaneously above the surface of the car, so that the platform or tray, which has been piled full of the baggage or mail to be unloaded *en route*, may be moved upon them to a truck or other device near the car-door to receive it, thereby discharging at once the entire amount of baggage and mail to be left at the station at which the train stops.

The invention consists in other improvements of greater or less importance incident to the foregoing, as I shall now proceed to describe in detail, and point out with more particularity in the claims hereto appended.

Reference is to be had to the annexed drawings, and to the letters marked thereon, forming a part of this specification, the same letters designating the same parts or features, as the case may be, wherever they occur.

Of the drawings, Figure 1 shows in side elevation a portion of a car, a part thereof being in section, so as to illustrate my invention as applied thereto. Fig. 2 is a cross-section of the same on the line 2 2 of Fig. 1, showing the movable wheels or rollers depressed below the level of the car-floor. Fig. 3 is a similar section showing the rollers elevated so as to have the movable platform or tray rest upon them. Fig. 4 shows in section a car with that load to be discharged at a particular station being delivered on the platform upon the truck which stands ready to receive it. Fig. 5 shows one of the cams which are employed for raising and lowering the rollers.

In carrying out my invention, which, while it is more particularly adapted for use on baggage and mail cars, may be employed on freight-cars, wagons, &c., as well, I employ a movable platform *a*, which is of a width slightly less than the width of the car-door *B* in the car *A*.

The platform *a* rests normally upon the floor *b* of the car and may be moved in and out of the door freely. Upon the tray or platform may be piled, when the train is running from one station to another, all the baggage and matter that is to be delivered at the next station, so that when that station is

reached the platform may be moved out from the car-door and a fresh one inserted in its place for the next immediate station.

In order to expedite the removal of the platform, I employ a series of rollers or wheels *c*, having their axes in a line longitudinal with the car to permit the platform to be slid transversely thereof. The wheels are all loosely mounted on a shaft *d*, having its ends journaled in boxes *e*, which boxes may be moved up and down in slots *f* in the brackets *g*, which are arranged beneath the car-floor. There are as many shafts *d* as may be desired, five or more serving for the purpose.

Apertures *h* are cut in the car-floor to permit of the wheels *c*, which normally lie below the surface of the floor, to be moved up above the surface. This moving of the wheels or rollers is accomplished by means of a series of shafts *i*, which are mounted in the brackets *g* directly below the shafts *d*. Upon the shafts *i* are cams *j*, bearing against rollers *k* on the shafts *d*. When the shafts *i* are rocked, the cams carry up the rollers *c* above the surface of the floor of the car. For the rocking of the shafts *i* I provide them with crank-arms *l*, connected together by links *m*, the latter being connected to a crank-lever *n* by a rod *o*. The lever *n* is pivoted or fulcrumed in a bracket *p* and lies in a slot in the car-floor with its edge flush with the surface of the floor.

By referring to Fig. 2 it will be seen that when the lever *n* is thrown to the left the rod *o* and the links *m* throw the cams *j* down to allow the rollers *c* to be depressed below the surface of the car, and by referring to Fig. 3 it will be observed that when the lever is rocked through a distance of one hundred and eighty degrees the cams are oscillated to lift the rollers up into engagement with the platform, so that the latter will be easily moved out of the car.

In practice, as I have before stated, the baggage and matter to be delivered at a particular station are piled upon the platform when the latter rests upon the floor of the car, as shown in Fig. 2. Then when the station is reached the lever *n* is rocked from the position it assumes in Fig. 2 into the position shown in Fig. 3, throwing the rollers up until the platform rests upon them, and then the door being opened the platform may be easily slid out from the car and upon a truck or other vehicle ready to receive it. At the same station an empty platform will be put in the car to replace the one just taken out.

By examining Fig. 5 it will be observed that the cams are so shaped and arranged relatively to the rollers *k* that when the lever is in the position shown in Fig. 3 the rollers will tend to hold the lever in that position by their weight, inasmuch as they will be slightly off the center of the cam, as is clearly shown. Hence no locking means is necessary to main-

tain the lever *n* in either of the two positions into which it may be moved.

From the foregoing it will be seen that by my invention the time taken by trains to pass from one point to another may be greatly shortened, since the time for delivering baggage at any station is reduced to a minimum.

It will be understood that I do not limit myself to the particular features and form of the invention shown and described, as many changes may be made in the same without departing from the spirit and nature of the invention.

Having thus explained the nature of the invention and described a way of constructing and using the same, though without attempting to set forth all of the forms in which it may be made or all of the modes of its use, it is declared that what I claim is—

1. In a car or similar vehicle, the combination with a movable platform, adapted to rest normally on the car-floor, a series of parallel shafts arranged longitudinally of the car, and a series of cams on each shaft, of a series of shafts parallel to the aforesaid shafts and arranged directly above the same, said last-mentioned series of shafts being vertically movable in their bearings and being each equipped with rollers resting on the said cams, a series of wheels on each of said last-mentioned shafts arranged to extend into slots in the floor of the car, and means for rocking said cam-supporting shafts, to rock said cams, thereby elevating the series of wheels until the platform is lifted from the floor of the car.

2. In a car or similar vehicle, the combination with a movable platform, a series of parallel shafts beneath the floor of the car, and wheels or rollers on each shaft, of cam-supporting shafts for elevating said shafts simultaneously to lift the platform from the floor, a horizontally-pivoted lever for rocking the cam-supporting shafts, and cams on the cam-supporting shafts, so shaped that the lever will remain in either of its two positions for elevating or depressing the roller-supporting shafts.

3. A freight or baggage railway-car having a door intermediate of its ends, interior compartments on either side of the door for the reception of baggage, a series of shafts arranged longitudinally of the car beneath the floor thereof and in front of the door, rollers or wheels on the shafts normally lying beneath the surface of the car-floor but adapted to be elevated in slots in the car-floor so as to have their peripheries project above the surface of the car-floor, a lever arranged in a slot in the car-floor for elevating the shafts simultaneously, and a movable platform of a width less than that of the door and resting normally on the car-floor but adapted to be raised therefrom by the rollers on the shafts, all for the purposes set forth.

4. The combination with a movable plat-

form, of a series of vertically-movable horizontally-arranged shafts, rollers or wheels on said shafts, a vertically stationary shaft under each of the first said shafts, cams on the
5 vertically stationary shafts adapted to act upon the first said shafts, cranks on the cam-shafts, and a lever pivoted to the floor of the car and connecting with the said cranks for oscillating the cams, for the purpose set forth.

In testimony whereof I have signed my name to this specification, in the presence of two subscribing witnesses, on this 22d day of June, A. D. 1896.

WILLIAM MORSE COLE.

Witnesses:

J. S. BARKER,
CHARLES E. RIORDON.