

No. 616,611.

Patented Dec. 27, 1898.

L. GORDON.

APPARATUS FOR AUTOMATICALLY LOCKING RAILWAY WAGON DOORS.

(Application filed Jan. 20, 1898.)

(No Model.)

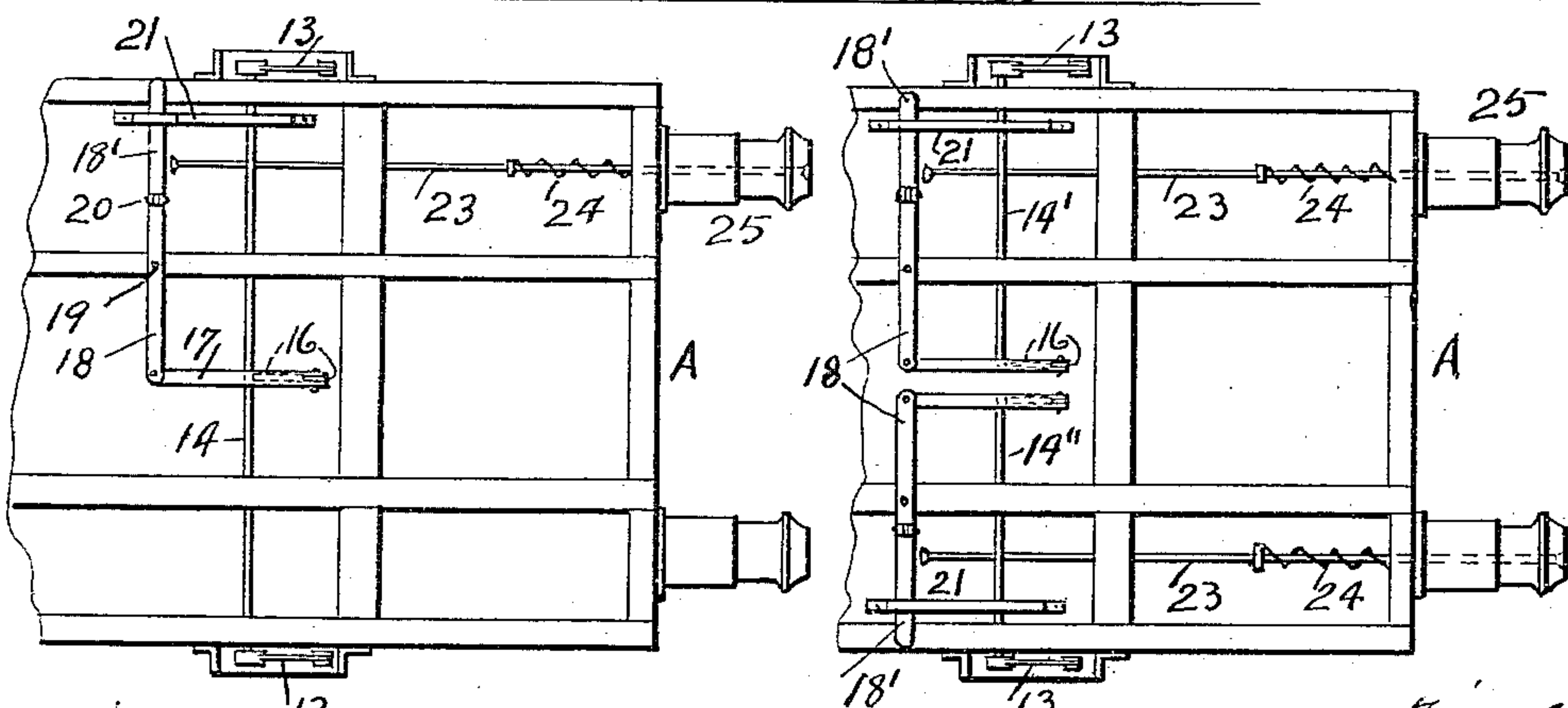
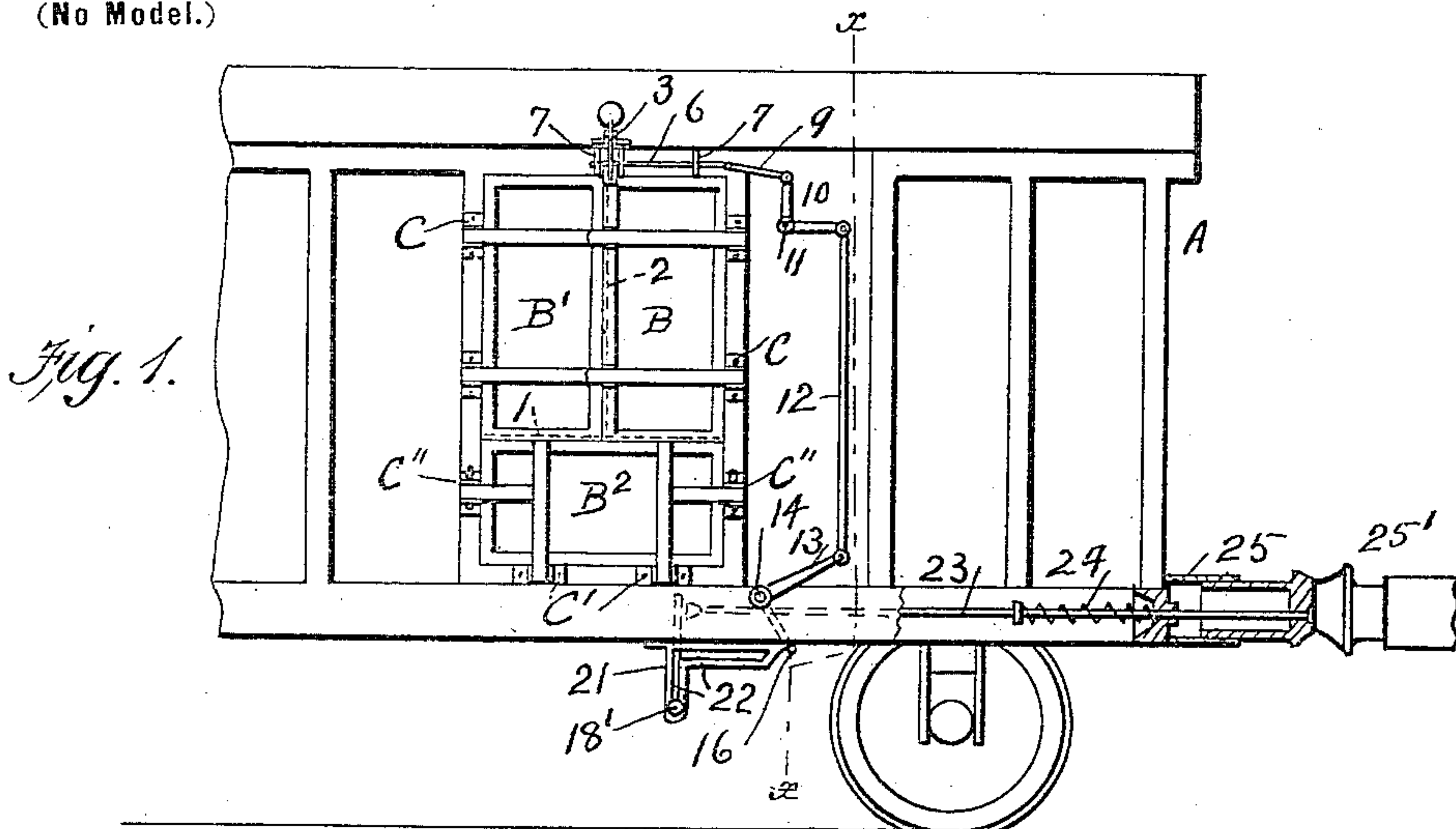


Fig. 2.

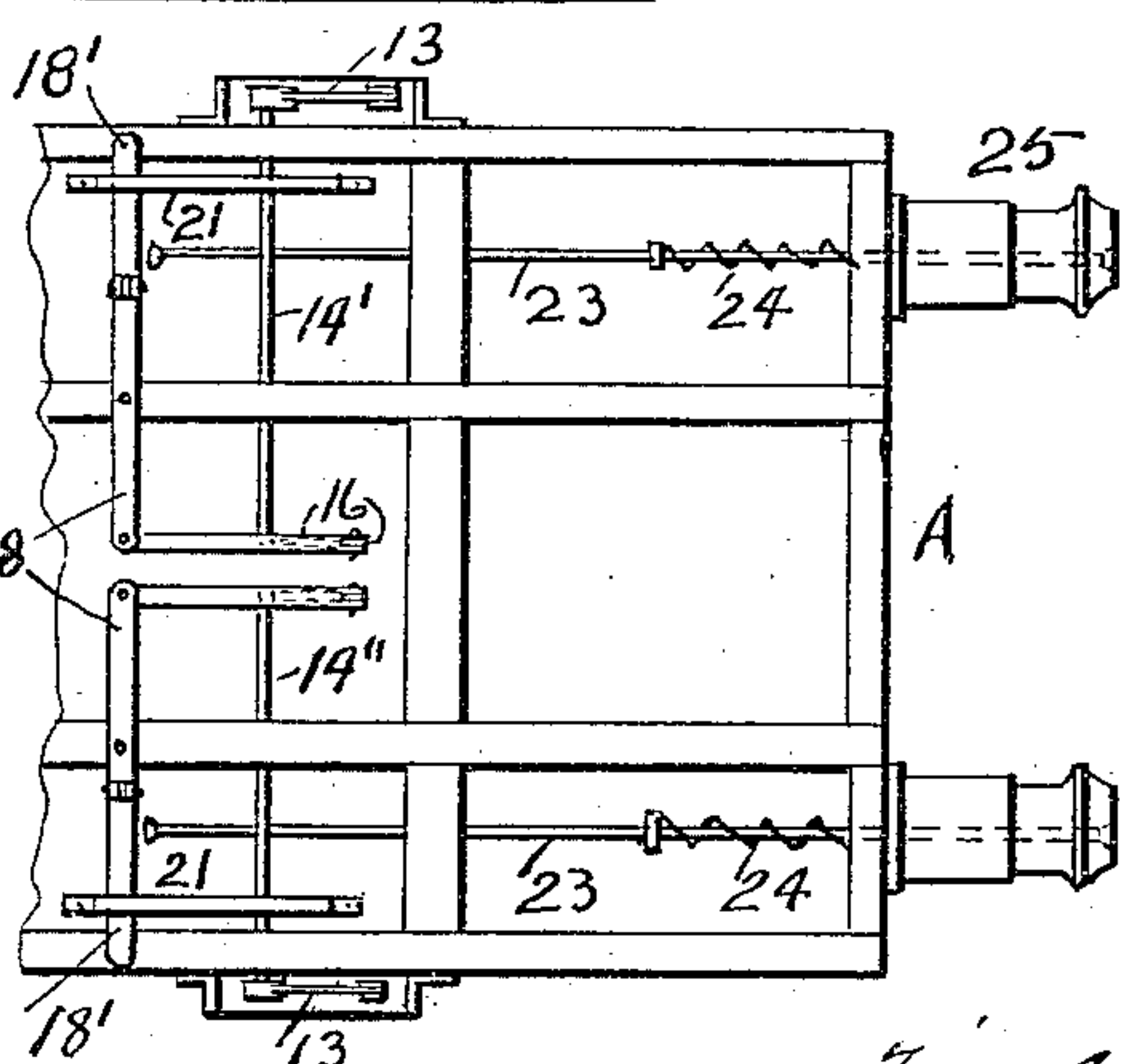
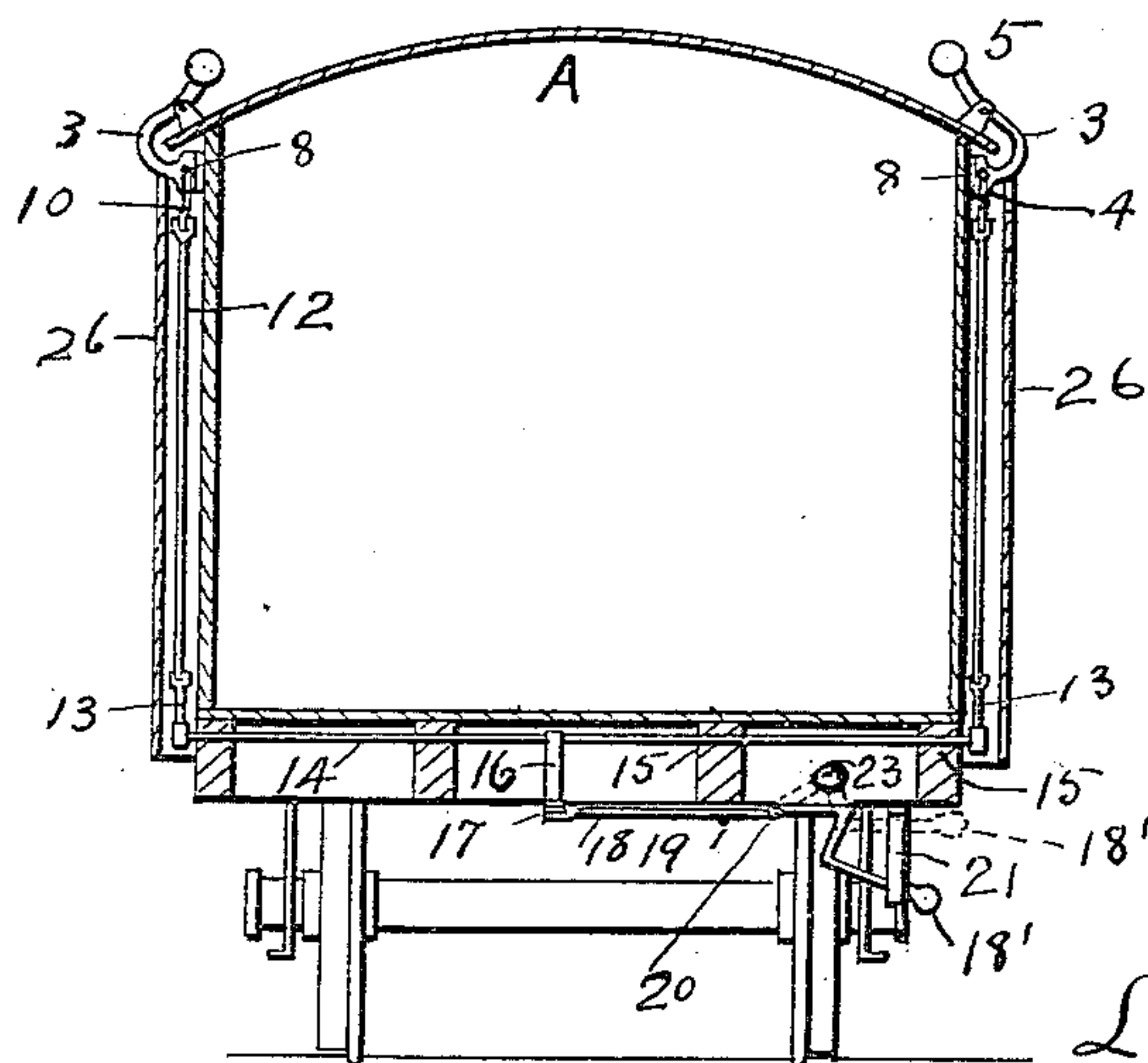


Fig. 4.



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LINCOLN GORDON, OF LUCKNOW, INDIA.

APPARATUS FOR AUTOMATICALLY LOCKING RAILWAY-WAGON DOORS.

SPECIFICATION forming part of Letters Patent No. 616,611, dated December 27, 1898.

Application filed January 20, 1898. Serial No. 667,509. (No model.)

To all whom it may concern:

Be it known that I, LINCOLN GORDON, a British subject, residing at Lucknow, in British India, have invented certain new and useful Improvements in Apparatus for Automatically Locking Railway-Wagon Doors, (for which I have made application for Letters Patent in Great Britain, No. 15,464, filed June 29, 1897, and in Canada, No. 58,918, filed January 20, 1898;) 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.

This invention relates to means for securing car-doors, and especially for preventing such doors being opened while the cars are in transit or while they are connected up in trains.

In the drawings, Figure 1 is a side view, partly in section, of a portion of a car. Fig. 2 is a bottom plan view of the same. Fig. 3 is a section on line *xx* of Fig. 1, and Fig. 4 is a bottom plan of a modification.

A indicates a freight-car having doors B B', hinged at C to swing horizontally, and a door B², hinged at C' to swing downward. These doors are so arranged that doors B B' overlap door B² when closed, as indicated by the dotted line 1, and door B overlaps door B', as indicated by dotted line 2, so that locking door B locks the other doors also; but I do not limit myself to this arrangement of doors.

C'' are devices for holding door B² closed when doors B B' are open, if desired.

3 are pivoted locking-levers for the doors. The lower ends of the levers, as shown, when in locking position rest against door B. The upper ends of the levers have means, as weights 5, tending to turn the levers on their pivots, thus raising ends 4 and unlocking the doors.

6 are sliding pins or bolts supported in brackets 7 and adapted to be moved into and withdrawn from holes 8 in the lower ends of lever 3 when the latter are in locking position. These bolts when in said holes hold levers 3 against the doors, as shown. Bolts 6 are connected by arms 9 to a bell-crank lever 10, pivoted at 11, the lower arm being connected by rod 12 to arm 13, fixed on the

pivot 14, which preferably extends across the car, as in Figs. 2 and 3, and has bearings 15 in the frame of the car.

16 is an arm fixed to pivot 14 and connected by link 17 to handle 18, pivoted at 19. The handle is in two parts, the outer part 18' being connected to the inner part by a pivot 20, which allows part 18' to swing in a vertical plane, but which holds part 18' rigid with the other part of the handle transversely.

21 is a fixed bracket having an L-shaped slot 22, through which the handle end 18' projects, normally resting at the bottom of the vertical arm of the slot, as in Figs. 1 and 3. When it is desired to unlock the doors, the handle end 18' is swung up into line with the horizontal part of the slot and then moved transversely in the slot, which through arm 16 and connected parts withdraws bolts 6 and liberates the locking devices 3.

One important feature of my invention consists in means for preventing the unlocking of the car-doors while the cars are connected in a train. Said means consists in a rod 23, normally pressed inward by a spring 24, Figs. 1 and 2, and placed so as to be in line with part 18' when the latter is swung up, as indicated in dotted lines in Fig. 3. The other end of rod 23 projects beyond the end of the car, preferably through a buffer 25, so as to be in position to be met and held from outward movement by an abutting part of the next car of a train. In Fig. 1 such abutting part is indicated by the buffer 25'. With this construction the car-doors can only be opened after the car to be opened is detached from the adjoining car which blocks rod 23, for only then can rod 23 be moved outward beyond the buffer by the handle 18. Spring 24 returns the handle to the left when the hand is taken therefrom after having been moved to unlock the door.

In the construction above described the levers 3 on both sides of the car are simultaneously dropped by movement of the handle. In the modification, Fig. 4, instead of having a pivot 14 extending entirely across the car and operating bolts 6 on each side of the car by single handles I provide two handles 18, each with a pivoted end 18', and two slotted brackets 21, one for each handle; also, I provide two rods 23, one for each side of the

car. With this construction bolt 6 can be pulled on one side of the car by using the handle on that side, while the similar bolt on the opposite side will remain in engagement with its lever 3, holding the doors on that side closed, though not positively locking such door, as is done when the car is connected to an adjoining car.

The bolts 6 and the operating levers will generally be placed back of an outer sheeting 26 of the car, as shown in Fig. 3.

I claim—

1. The combination with a car adapted to be connected in a train, said car having a door, of a locking device for the door, and means controlled by the adjoining car of a train preventing the unlocking of said device until the cars are disconnected.

2. The combination with the door of a car, of a pivoted lever 3 adapted to engage and to release said door, a bolt 6 adapted to engage and be disengaged from lever 3, a pivoted handle 18 on the bottom of the car, means between the handle and bolt 6 for mov-

ing the latter, said handle having an outer part 18' pivoted to the other part of the handle so as to swing in a vertical plane, and bracket 21 having an L-shaped slot for the handle.

3. The combination with the door of a car, of a pivoted lever 3 adapted to engage and to release said door, a bolt 6 adapted to engage and be disengaged from lever 3, a pivoted handle 18 on the bottom of the car, means between the handle and bolt 6 for moving the latter, said handle having an outer part 18' pivoted to the other part of the handle so as to swing in a vertical plane, and bracket 21 having an L-shaped slot for the handle, and means controlled by the adjoining car, when more than one car are connected, to prevent withdrawal of bolt 6 by said handle.

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

LINCOLN GORDON.

Witnesses:

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