W. G. NYMON.

BOX CAR DOOR.

APPLICATION FILED MAY 28, 1913.

1,104,129.

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Fig. 2.

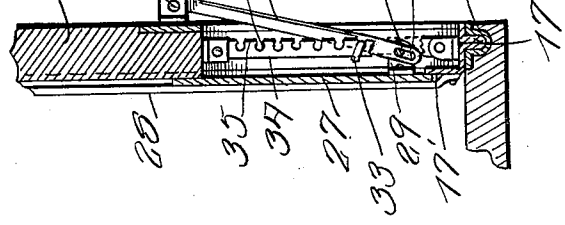
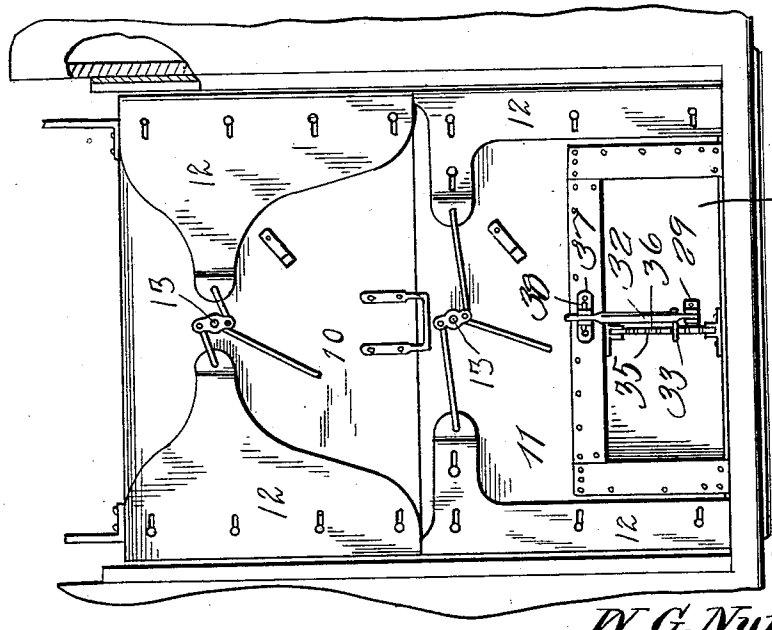


Fig. 1.



Witnesses

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BOX-CAR DOOR.

1,104,129. Specification of Letters Patent. Patented July 21, 1914.

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To all whom it may concern:

Be it known that I, WIGO G. NYMON, a citizen of the United States, residing at Argusville, in the county of Cass, State of North Dakota, have invented certain new and useful Improvements in Box-Car Doors; 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 new and useful improvements in grain car doors and is particularly directed to the provision of a wicket or relief door.

A further object of the invention resides in the provision of such a gate which will prevent the leakage of grain from a car to which my gate is applied.

Other objects and advantages, such as ease of operation, simplicity, durability in service, and cheapness in manufacture together with the general improvement of the art will become apparent during the course of the following description.

Reference is had to the accompanying drawings wherein similar characters of reference designate corresponding parts throughout the several views, and in which: Figure 1 is a side elevation of a grain car door having associated therewith the improved wicket or relief gate; Fig. 2 is a vertical sectional view through the relief gate.

Referring now more particularly to the accompanying drawings, 10 and 11 designate respectively the upper and lower sections of a grain car door provided at their ends with suitable members 12 for tightly closing the space between the edges of the door and the door frame, said members being actuated by suitable levers 13. Secured on the bottom edge of the door is a T-beam 17 which seats in a suitable channel 16 formed in the bottom of the door frame.

The T-beam 17 is preferably formed with an upstanding flange 17′ against which the lower edge portion of the vertically slidable wicket or relief gate 27 is seated, and this gate is preferably of sheet metal and is slidable within suitable guides or gibs 28 it being understood that the door section 11 between the gibs 28 is cutaway. A bracket 29 is secured at the lower edge of the gate and carries a pivot or bolt 30 which extends through a slot 31 in the lower end of a combined locking and operating lever 32, the latter being provided with a stud 33, and having an aperture in its upper end. A vertically disposed bar 34 is provided with a series of teeth 35 and notches 36, and the upper end of this bar is secured to the upper portion of the gateway which is closed by the gate 27, while the lower portion thereof is secured to the T-beam 17. A bracket 37 is secured to the door member 11 adjacent to the gateway, and this bracket member is provided with an aperture which registers with the aperture through the lever 32 when the gate is in its lowermost position, so that a locking bolt or other suitable sealing or securing member 38 may be passed through the registering apertures for securely locking said gate in its closed position.

In operation, assuming the car to be filled with grain which is to be unloaded, the operator first releases the upper end of the lever 32 from the bracket 37 and swings said lever downward, so that the stud 33 engages in the lowermost notch 36 and presses the gate upward a short distance. The lever is now pulled longitudinally, so that there is relative movement of the element 30 and the slot 31, thus allowing the stud 33 to be disengaged from the lower notch and engaged with the next higher notch, and the lever is again swung downward, so that, by repeatedly thus operating the lever 32, the gate is raised by degree against the pressure and consequent friction of the grain, which latter now flows through the gate into whatever receptacle has been provided therefor.

It is obvious that by reversing the action of the lever 32 as just described, the gate may be closed after a suitable quantity of grain has been withdrawn, so that when one vehicle has been filled, said gate may be closed while another vehicle or receptacle is being placed for the reception of the grain.

From the foregoing, it will be seen that I have provided a car door of this character which is fully capable of attaining the foregoing objects, in a thoroughly practical and effective manner.

I do not limit my invention to the exact details of construction, combination and arrangement of parts, as herewith illustrated

and described, but my invention may only be limited by a reasonable interpretation of the claims.

I claim:

1. In a car door having a gateway therethrough, a gate slidably mounted over the gateway, a notched bar disposed vertically within the gateway, a bracket adjacent to the gateway, a bracket on the gate, and a lever movably connected with the last said bracket and removably connected to the first said bracket for holding the gate closed, said lever being provided with means for engaging with the notched bar for raising the gate after said lever has been released from the first said bracket.

2. The combination in a vertically slidable gate, of a combined locking and lifting mechanism consisting of a vertically mounted notched bar, a bracket adjacent to the gateway, a bracket secured on the gate, a lever connected to the last said bracket and adapted for longitudinal and pivotal movement relative thereto and adapted for engagement with the first said bracket for holding the gate closed, and means carried by the lever for engaging the notches of said vertical bar and adapted to coact therewith for raising the gate.

3. The combination with a vertically slidable gate and a gateway, of combined locking and lifting mechanism comprising a vertically disposed bar secured to the gateway and provided in its outer edge with horizontal notches having their inner ends enlarged, a bracket adjacent the upper portion of the gateway, a bracket on the gate, a lever slidably pivoted to the second bracket and adapted for engagement with the first bracket to hold the gate closed and a lateral extension on the pivoted end portion of the lever adapted to engage in the notches whereby rocking movement of the lever will lift the gate.

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

WIGO G. NYMON.

Witnesses:
HENRY SOBERG,
MARTIN JOHNSON.

Copies of this patent may be obtained for five cents each, by addressing the "Commissioner of Patents, Washington, D. C."