W. J. ATZ.

LOADING GATE FOR CAR DOORS.

APPLICATION FILED JULY 13, 1909.

Patented Sept. 21, 1909.

934,496.

Fig. 1.

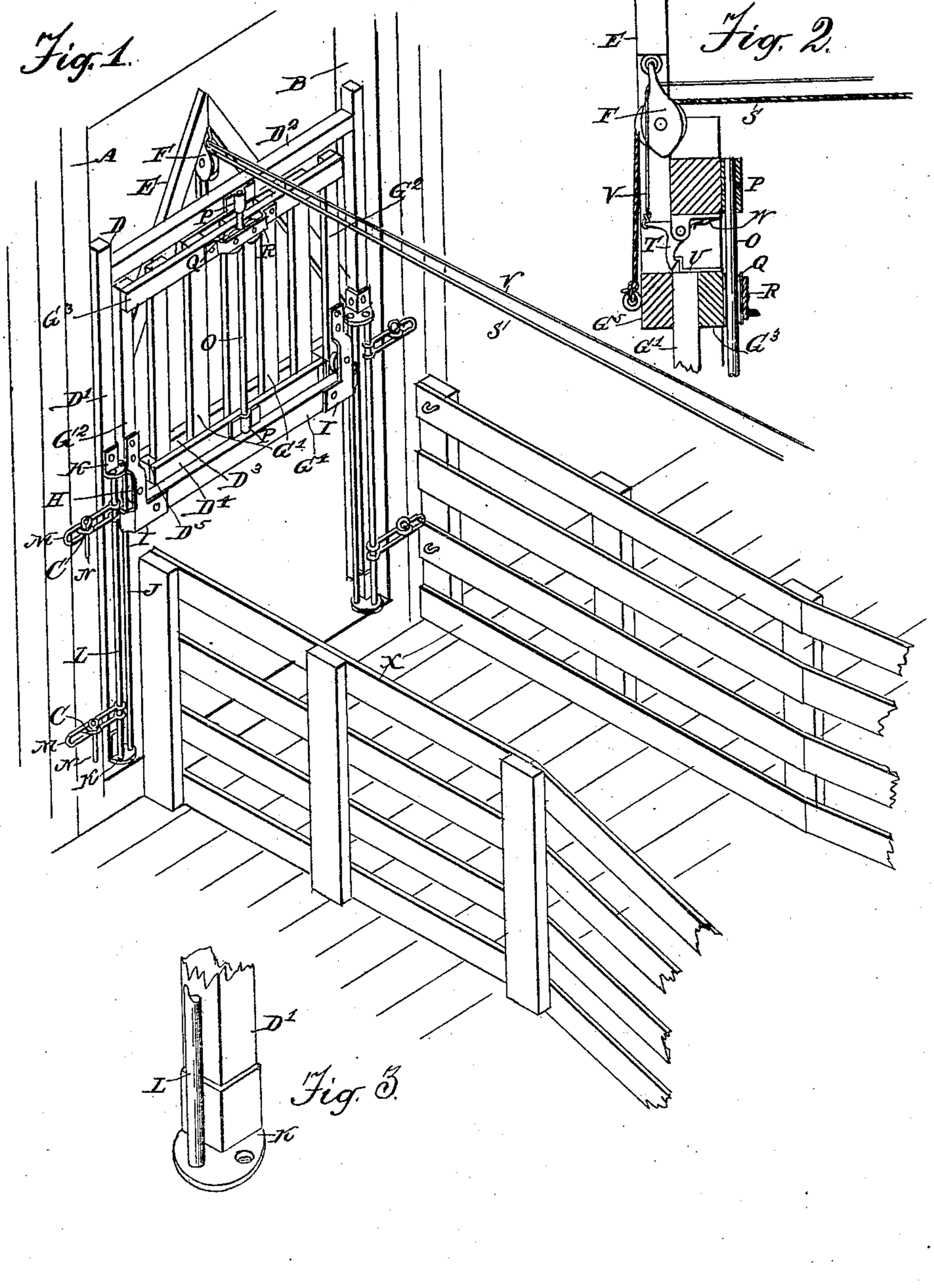

Fig. 2.

Fig. 3.

Witnesses:
Iva Andre.
Charles Estes

Inventor:
William J. Atz.
By J. M. St. John
Atty.

UNITED STATES PATENT OFFICE.

WILLIAM J. ATZ, OF MARION, IOWA.

LOADING-GATE FOR CAR-DOORS.

934,496. Specification of Letters Patent. Patented Sept. 21, 1909.

Application filed July 13, 1909. Serial No. 507,454.

To all whom it may concern:

Be it known that I, WILLIAM J. ATZ, a citizen of the United States, residing at Marion, in the county of Linn and State of Iowa, have invented certain new and useful Improvements in Loading-Gates for Car-Doors, of which the following is a specification.

This invention relates to gates, more particularly such as are used in connection with the chutes or runways through which hogs are conducted in loading them in cars.

In the shipping of hogs one of the most troublesome features is the difficulty of keeping hogs once loaded from coming back out of the car while others are being driven forward.

The object of this invention is to provide a gate which may be opened and closed by the person driving the hogs, and at a distance from the car, so that the bunch once loaded may be kept intact while another bunch is got into the runway and headed toward the car door.

The nature of the invention is fully disclosed in the description and claims following, reference being had to the accompanying drawing, in which—

Figure 1 is a view in perspective illustrating my improved gate as in use, the gate being elevated, so as to permit hogs to pass into the car. Fig. 2 is a sectional detail, showing the gate-lifting, latching and releasing mechanism. Fig. 3 shows a fragment of the gate-frame and a bracket for the attachment of the guide and fastening rods thereto.

In the drawing A denotes a car, and B the door opening therein.

C C are staples, or the like, with which cars are provided for the fastening of the ordinary door. These are of familiar construction.

In the doorway is set a removable gate-frame D, comprising uprights D^1 and cross-bars D^2 and D^3, suitably braced by converging diagonal bars E E. The latter form a support for a pulley-block F hung under the angle, as shown. To the cross-bar D^3 is attached a shorter bar D^4, separated from the former by space-blocks D^5. This space admits slidably the vertical slats G^1 of a gate. These, together with a pair of outer slats G^2 are connected by cross-bars G^3 and G^4. At the lower corners the gate is provided with grooved travelers H mounted in brackets I. These are mounted to run along vertical guide-rods J secured to brackets K attached to the vertical posts of the main frame. The same brackets also carry rods L, on which are loosely mounted loops M to engage the staples in the side of the car, as above mentioned. The loops are held in position, thus securing the gate frame in place, by pins N. Another guide-rod O, attached to brackets P, is secured to the cross-bars D^2 and D^4, and to the upper cross-bar of the gate is mounted a pair of grooved travelers Q in a suitable bracket R. It is to be understood that these grooved travelers are employed, rather than simple bearings, in order to give as little friction as possible to the gate in its movement up or down. To a block G^5 at the top of the gate is attached a rope S led over the pulley in the pulley-block, and which may extend to any distance desired.

Under the top cross-bar of the gate-frame is mounted a latch-hook T adapted to engage a catch-plate U on the top of the gate, when the gate is elevated. The latch is operated to release by a cord V, led through the ring of the pulley-block and is actuated to engage the catch by a spring W.

It will be evident that a single person may now load a car of hogs without inconvenience, driving them in larger or smaller bunches through the runway X communicating with the car door, and dropping the gate behind them as fast as loaded. Then when another bunch has been driven up to the closed gate, he lifts the gate by pulling the lift-rope, and in the same manner, by pulling the trip-cord, drops the gate behind them. As the operation is usually performed, one or more persons are required to keep the loaded hogs from running back out of the car.

Having thus described my invention, I claim:

1. A car-door gate, comprising a gate frame provided with vertical gate guides, laterally and vertically adjustable fastening devices adapted to secure the said frame in a car door opening, and a pulley-block near the top of said frame; a gate mounted to slide up and down on said guides, a latch to hold the gate in suspended position, a rope passing over the pulley and connecting with the gate, and a trip-cord connecting with

said latch, whereby the operator may elevate or depress the gate from a distance, as described.

2. A car-gate, comprising a frame adapted to stand in the door opening, lateral and vertical fastening devices to connect the frame with the car, vertical guide-rods attached to the frame, a gate provided with grooved travelers engaging said guide-rods, a pulley-block mounted over the gate near the top of the frame, a pull-rope attached to the gate and running over the pulley, a latch to hold the gate suspended, and a trip-cord to disengage said latch.

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

WILLIAM J. ATZ.

Witnesses:
J. M. St. John,
E. J. Christie.