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R. P. EVANS & W. P. FLYNN.

GRAIN CAR DOOR FASTENER.

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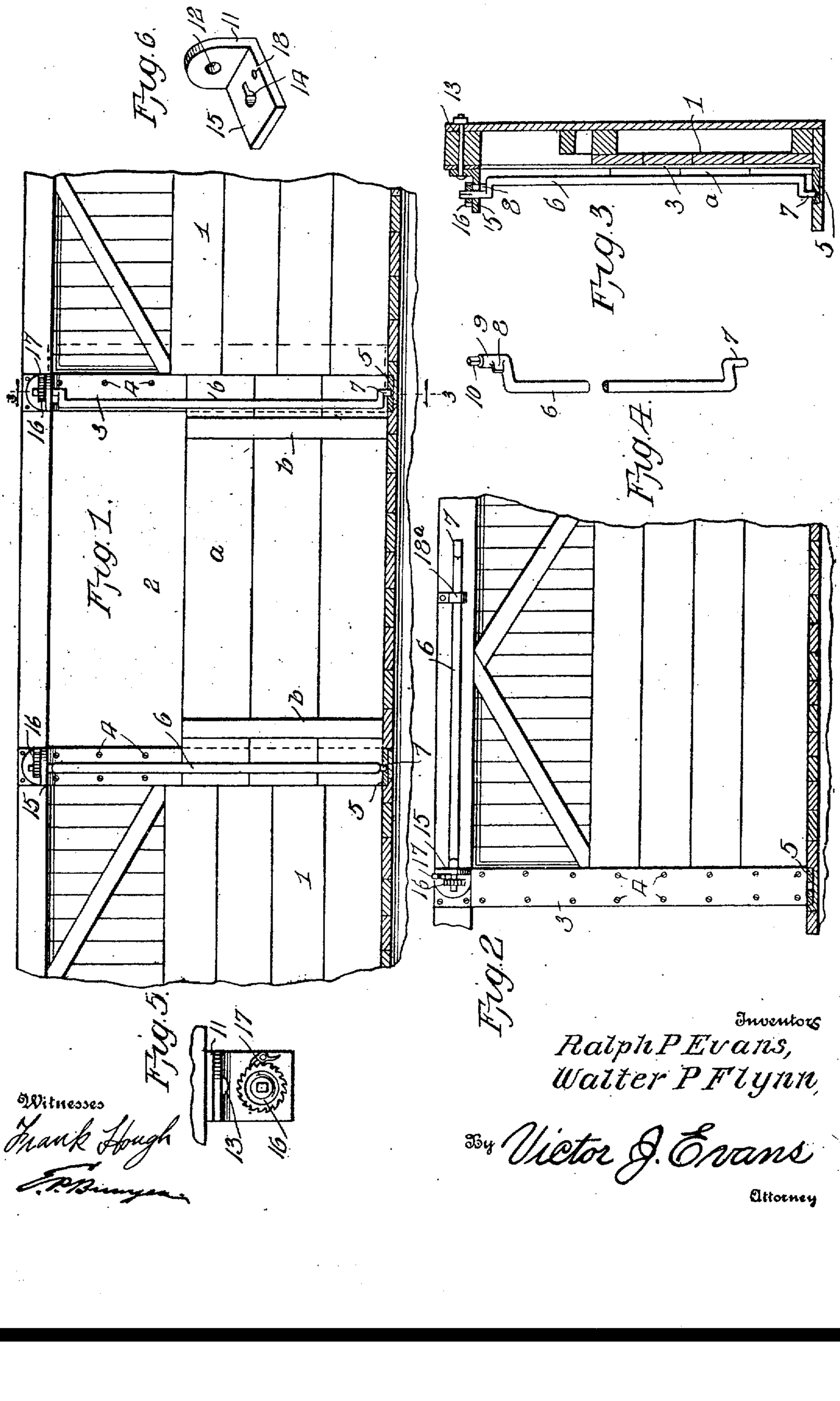

Fig. 1.

Fig. 3.

Fig. 4.

Fig. 2.

Fig. 5.

Witnesses

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GRAIN-CAR-DOOR FASTENER.

No. 868,539. Specification of Letters Patent. Patented Oct. 15, 1907.

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To all whom it may concern:

Be it known that we, RALPH P. EVANS and WALTER P. FLYNN, citizens of the United States of America, residing at Ulysses, in the county of Butler and State of Nebraska, have invented new and useful Improvements in Grain-Car-Door Fasteners, of which the following is a specification.

This invention relates to grain car door fasteners, and one of the objects of the same is to improve and simplify the construction of devices of the character.

Another object of the invention is to provide means which can be quickly operated to clamp a sliding grain car door and to hold the same securely in place, means being provided whereby the door may be readily released to slide upward when it is desired to unload the car.

Still another object of the invention is to provide means for clamping the door in place, and to permit the clamping devices to be thrown up out of the way when not in use.

These and other objects may be attained by means of the construction illustrated in the accompanying drawing, in which:

Figure 1 is an elevation of the inner side of a car provided with our invention, the floor of the car being shown in section. Fig. 2 is a similar view of a portion of the side wall of the car, and showing our door clamping means swung upward in a position when not in use. Fig. 3 is a vertical section on the line 3—3, Fig. 1, looking in the direction indicated by the arrows. Fig. 4 is a perspective view of one of our door clamping rods, said rod being shown broken away intermediate its ends. Fig. 5 is a plan view of a pivoted bracket to which the clamping rod is connected at its upper end. Fig. 6 is a perspective view of the pivoted bracket.

Referring to the drawing for a more particular description of our invention, the numeral 1 designates the side wall of a grain car, and 2 is the opening therein for loading and unloading the car. Secured to each side of the door opening 2 is a metal plate 3 forming a door post, said plate being secured in place by means of bolts or screws 4. Secured to the floor of the car in line with the plate 3 are bearing plates 5, said plates being set into the floor of the car with their upper surfaces flush with the top surface of the floor, and each of said plates having a hole or socket formed therein for the clamping rods 6. Each clamping rod 6 is in the form of a double crank, the lower end of which is provided with a projecting pintle 7 pivotally mounted in the plate 5, and the upper end of said clamping rod is provided with a key 8, a circular portion 9 above the key and a terminal squared portion 10 designed for the engagement of a wrench in turning the clamping rods. The upper ends of the clamping rods are mounted in pivoted brackets 11, each provided with a hole 12 through which a pivot pin or bolt 13 is passed, said bolt extending through the hole 12 and through the plate 3 and the timbers of the car, as shown more particularly in Fig. 3. A keyhole slot 14 is formed in the angular member 15 of the bracket. The rounded portion 9 of the clamping rod is seated in the enlarged portion of the keyhole slot 14 with the squared end 10 projecting through the same. Fitted upon the squared end 10 is a ratchet wheel 16, and a pawl 17 pivoted upon a pin passing through the hole 18, is adapted to engage said ratchet wheel. The squared end 10 of the clamping rod 6 projects above the ratchet wheel to accommodate a wrench for turning the clamping rod. A suitable keeper 18^a is secured to the inner side of the car as shown in Fig. 2, and one of the clamping bars 6 is engaged with said keeper when it is desired to swing said bar out of the way. A similar keeper may be utilized for the other clamping bar or rod. The sliding door *a* is provided with uprights *b*, and is clamped between the plates 3, and the crank portions of the clamping rod 6.

From the foregoing the operation of our car door fastener may be readily understood. When it is desired to clamp the door *a* in place, a wrench is applied to the squared upper ends of the clamping rods, and said rods are turned until the crank portions bear against the door, and clamp it between said rods and the plates 3 forming the door posts, the ratchet wheel 16 serving to hold the clamping rods in position. When it is required to remove the door *a* the wrench is again applied to the squared portion 10, and the pawl is disengaged from the ratchet wheel 16, the rod 6 then being turned until the key 8 coincides with the recess in the keyhole slot 14, when said rod may be raised to remove the pintle 7 from the plate 5, said rod then being swung up into the position shown in Fig. 2 and engaged by the keeper 18^a.

Our invention is of simple construction, can be quickly operated, cannot readily get out of order, is inclosed within the car, and can be readily swung out of the way when not in use.

Having thus described the invention, what I claim is:

1. A car door fastener comprising a pair of clamping rods each being pivotally mounted at its lower end, and its upper end connected to a pivoted bracket, said bracket being provided with a keyhole therein, a key on the clamping rod adapted to engage said keyhole, a ratchet wheel on said clamping rod, and a squared portion for a wrench, and a keeper for holding said clamping rods in position out of use.

2. A car door fastener comprising metal plates secured to the upright posts upon opposite sides of the door opening of a car, clamping rods pivotally mounted at their lower ends in bearing plates secured to the car floor, pivoted brackets through which the upper ends of said clamping rods are passed, ratchet wheels mounted upon said

clamping rods, pawls for engaging said ratchet wheels, and a squared portion upon said clamping rod for turning the same, and means for sustaining said clamping rods in position when not required for use.

3. A car door fastener comprising clamping rods pivotally mounted at their lower ends said rods being removable from the bearing plates at their lower ends and connected at their upper ends to pivotally mounted brackets, means for rotating said clamping rods, and means for sustaining said clamping rods in inoperative positions.

4. In a car door fastener, clamping rods pivotally mounted at their lower ends at opposite sides of the door opening, said rods being removable from the bearing plates at their lower ends, pivoted brackets through which the upper ends of said clamping rods are passed, means for holding said clamping rods in adjusted position for clamping the door, and means for holding said clamping rods in a horizontal position when not required for use.

In testimony whereof. we affix our signatures in presence of two witnesses.

RALPH P. EVANS.
WALTER P. FLYNN.

Witnesses:
JOHN BURKY,
W. H. MODLIN.