(No Model.)

A. E. PEPPER.

GRAIN CAR DOOR.

No. 254,689. Patented Mar. 7, 1882.

Fig. 1

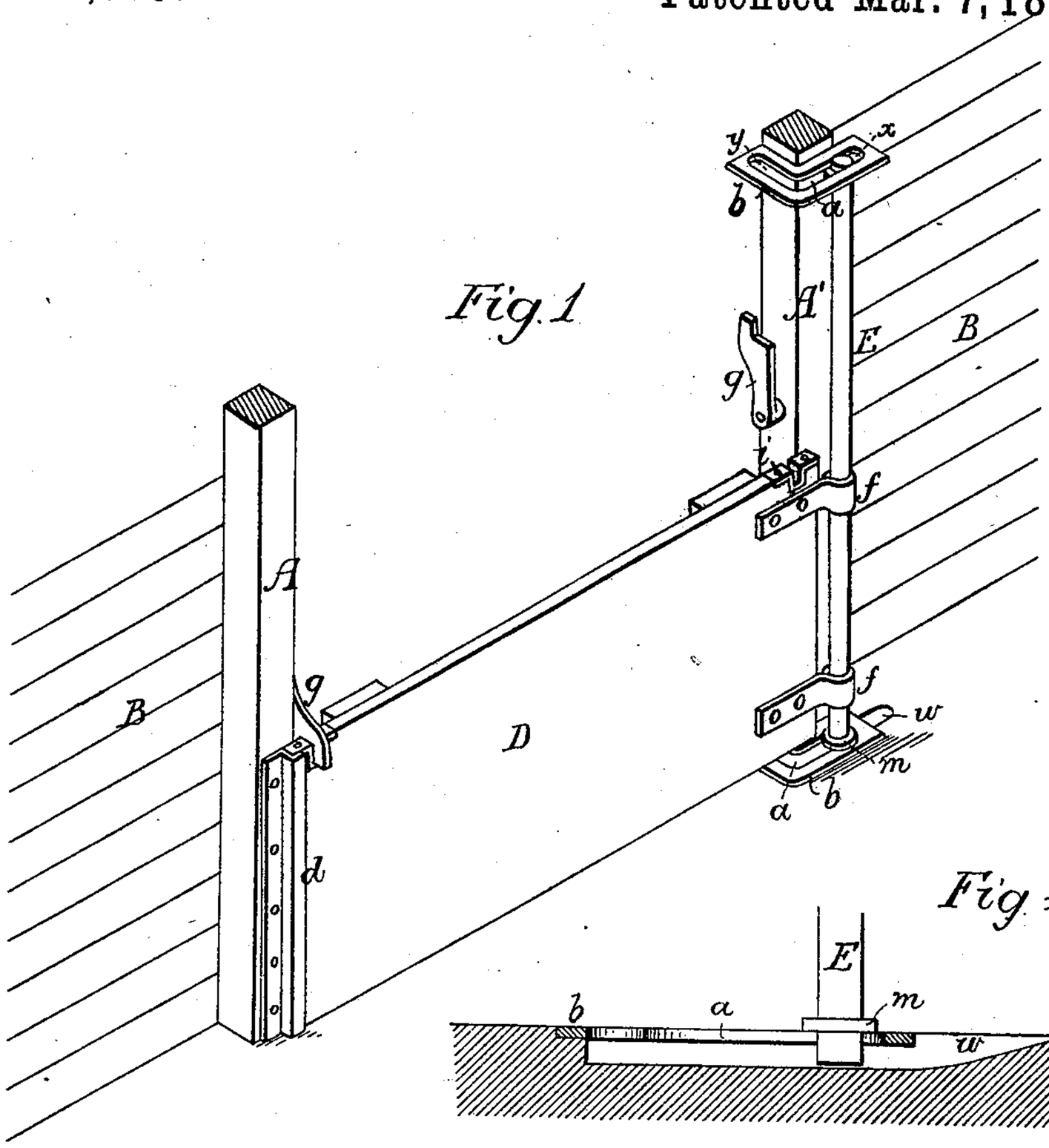


Fig. 4.

Fig. 2.

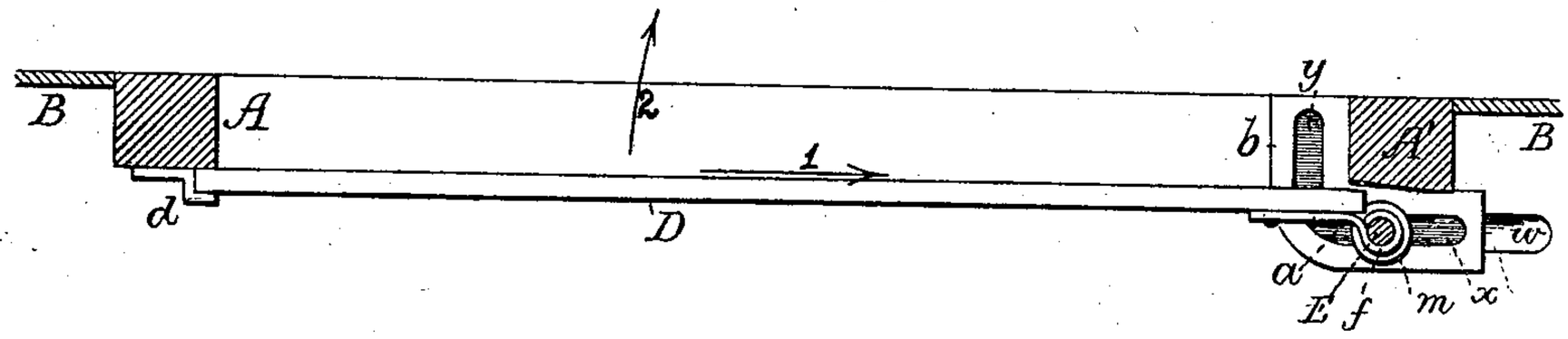
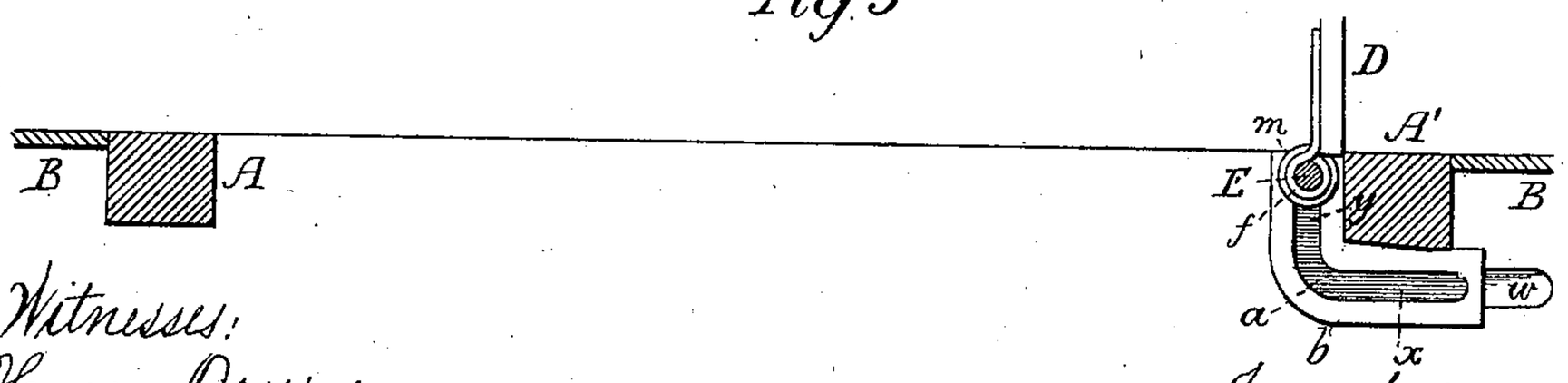


Fig. 3



Witnesses:
Harry Drury
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Inventor:
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UNITED STATES PATENT OFFICE.

ALBERT E. PEPPER, OF PHILADELPHIA, PENNSYLVANIA.

GRAIN-CAR DOOR.

SPECIFICATION forming part of Letters Patent No. 254,689, dated March 7, 1882.

Application filed November 21, 1881. (No model.)

To all whom it may concern:

Be it known that I, ALBERT E. PEPPER, a citizen of the United States, residing in Philadelphia, Pennsylvania, have invented certain Improvements in Grain-Car Doors, of which the following is a specification.

The object of my invention is to construct a grain-car door which can be readily opened and closed, and when closed will be securely retained in position; and this object I attain in the manner which I will now proceed to describe, reference being had to the accompanying drawings, in which—

Figure 1 is a perspective view of my improved grain-car door; Fig. 2, a plan view of the same closed; Fig. 3, a plan view showing the door open; and Fig. 4, a sectional view, on an enlarged scale, of part of the car.

A A′ represent the opposite end posts of the doorway of the car, and B the car-side. D is the door, which is of a length somewhat greater than the width of the doorway, and of any desired height. One end of the door is attached to a vertical rod, E, the opposite ends of which are adapted to slots *a*, formed in plates *b*, one of the latter being secured to the floor of the car and the other to the roof, or to the post A′ near the roof. Each slot *a* comprises two portions, *x* and *y*, communicating with each other, the portion *x* being at right angles to the portion *y*.

To the post A is secured a flanged bar, *d*, which is adapted for the reception of the front end of the door when the latter is closed, the said front end of the door in the latter case slightly overlapping the post A. When the door is closed the rod E occupies a position in the portions *x* of the slots *a*, and these portions of the slots are of sufficient length to permit the door to be moved in the direction of the arrow 1, Fig. 2, until the front end of the door is clear of the post A, the door being then free to swing outward, as shown by the arrow 2. As the door swings outward the rod E is caused to traverse the slots *a*, passing from the portions *x* to the portions *y* of the same, so that the post A′ does not interfere with the opening of the door to its full extent, as shown in Fig. 3. The door is secured to the rod E by eyes *f*, so that it is free to be moved vertically on the rod when it becomes necessary to get the door out of the way by swinging it round inside the car when in an elevated position. Vertical movement of the rod E is prevented by means of collars *m*, the lower of which is secured to the rod at a short distance from its lower end, and bears on the lower plate *b*, the upper collar being secured to the rod in such a position as to bear against the under side of the upper plate *b*.

When the door is closed it is secured against either vertical or longitudinal movement by means of suitable catches or turn-buckles, *g*, pivoted to the posts A A′, and adapted to recessed plates *i* on the upper edge of the door D. Catches on both of the posts A A′ are shown in the drawings; but a single catch only may in some cases be used, and curved slots in the plates *b* may in some cases take the place of the right-angled slots shown.

To prevent the jamming of grain between the pivot-rod E and the end of the slot *a* in the lower plate, I form in the floor of the car an inclined passage, *w*, communicating with the chamber beneath the plate, and extending beyond the end of the same, so that as the rod E is moved toward the end of the slot *a* the grain can escape through this passage and will not be trapped and crushed.

I claim as my invention—

1. The combination of the door D and its pivot-rod E with the plates *b*, having curved or angular slots *a*, to which the ends of said pivot-rod are adapted, and in which they can slide, as set forth.

2. The combination of the door D, the plates *b*, having curved or angular slots *a*, and the pivot-rod E, on which the door is free to slide vertically, as set forth.

3. The combination of the door D, having a notched plate, *i*, with a pivoted retaining-catch adapted to said notched plate, as described, whereby the door is retained in position both vertically and longitudinally, as specified.

4. The combination of the door D, the pivot-rod E, the plates *b*, with curved or angular slots *a*, and the retaining-plate *d*, as set forth.

5. The combination of the pivot-rod E of the door, the lower slotted plate *b*, and the floor of the car, having an inclined passage, *w*, at the end of the plate, as set forth.

In testimony whereof I have signed my name to this specification in the presence of two subscribing witnesses.

ALBERT E. PEPPER.

Witnesses:
HARRY DRURY,
HARRY SMITH.