

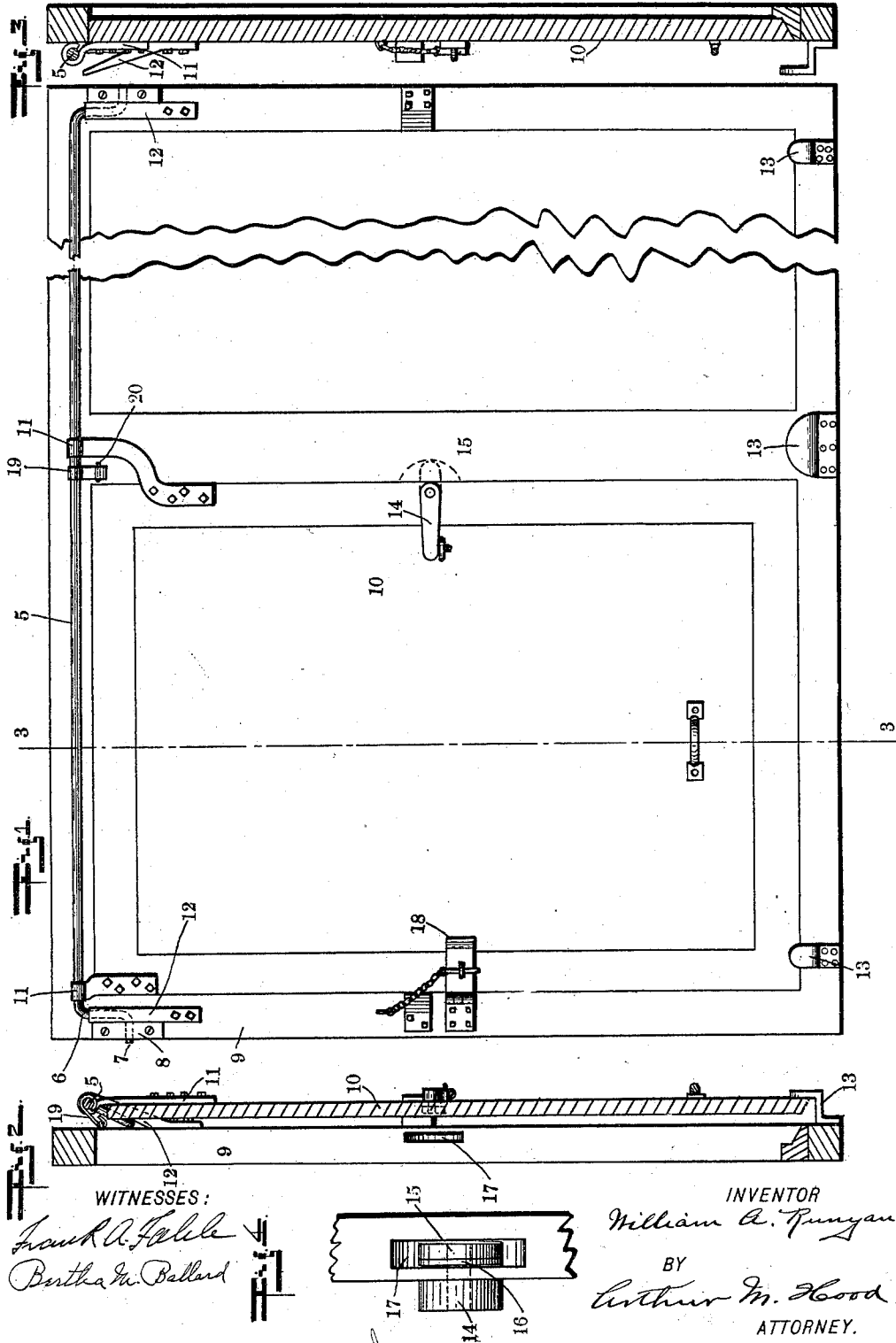
No. 647,526.

Patented Apr. 17, 1900.

W. A. RUNYAN.  
FREIGHT CAR DOOR.

(Application filed June 26, 1899.)

(No Model.)



# UNITED STATES PATENT OFFICE.

WILLIAM ALLEN RUNYAN, OF NEWPORT, ARKANSAS.

## FREIGHT-CAR DOOR.

SPECIFICATION forming part of Letters Patent No. 647,526, dated April 17, 1900.

Application filed June 28, 1899. Serial No. 721,992. (No model.)

*To all whom it may concern:*

Be it known that I, WILLIAM ALLEN RUNYAN, a citizen of the United States, residing at Newport, in the county of Jackson, and in the State of Arkansas, have invented a new and useful Door Applicable for Freight, Cattle, or Similar Doors Used on Railroads or Barns, &c., of which the following is a specification.

My invention relates to an improvement in freight-car or other similar doors.

The object of my invention is to produce a door of the character described which shall be easy of operation and simple of construction.

The accompanying drawings illustrate my invention.

Figure 1 is a front elevation thereof. Fig. 2 is a transverse section with the door thrown out ready to be moved aside. Fig. 3 is a section on line 3 3 of Fig. 1. Fig. 4 is a detail.

In the drawings, 5 indicates a rod provided at each end with an arm 6, the outer end of which is provided with a short pivot portion 7, which is parallel to the portion 5 and which is pivotally supported in suitable bearing-blocks 8, secured to the door-casing 9. The door 10 is provided with suitable hangers 11, each of which is provided at its upper end with an eye adapted to receive and slide upon rod 5. In order to limit the outward downward movement of the rod 5, I provide a pair of stops 12, which are secured to the casing 9. Stops 12 are of such form as to limit the outward throw of rod 5 to a distance but little greater than the thickness of the door, so that said rod 5 cannot under any circumstances drop as low as said pivot. The outward movement of the lower end of the door is limited by suitable guides 13. In order to firmly set the door into its opening, I provide a latch 14, the arm 15 of which is beveled upon its outer face, as at 16, said beveled face cooperating with a similarly-beveled face of the recess 17, formed in the adjacent portion of the casing 9. In order to have the door fit tightly into its opening, the lower edge of said opening should be beveled, as shown in Figs.

2 and 3, to correspond with the beveled lower edge of the door. If desired, this beveled portion may be formed on a separate strip mounted in the opening, as shown. Any usual form of lock 18 may be provided, if desired. For the purpose of supporting the middle portion of the rod 5 a link 19 is provided, said link being pivoted at one end to the rod and at the other end to a staple 20, secured to the casing. In order to open the door, the operator turns the lock 14, so as to draw arm 15 thereof from recess 17. A slight outward pull upon the lower end of the door will then cause rod 15 to swing outward and downward upon its pivot portions 7, and thus throw the door outward and downward into the position shown in Fig. 2, the weight of the door being nearly sufficient to cause this movement as soon as the locks are released. In this position the door may be easily moved back and forth upon rod 5. To close the door, the operator exerts an inward and upward pressure of the door, thus swinging rod 5 back to its normal position, thus drawing the door inward and upward into its opening. The door may be drawn tightly into position by means of the action of arm 15 of latch 14.

I claim as my invention—

1. In a door, a supporting-rod, a pivotal support for said rod beneath the main portion thereof, hangers carried by the door and pivotally mounted upon said rod, and means for limiting the outward and downward swing of said rod so that it may not pass lower than its pivot.

2. In a door, the rod 5 provided with pivotal portions integral therewith, suitable supports for said pivotal portions beneath the main portion of the rod, suitable brackets for limiting the outward and downward swing of said rod so that it may not pass lower than its pivot, the door, and hangers carried by said door and pivotally mounted upon said rod.

WILLIAM ALLEN RUNYAN.

Witnesses:

CHAS. R. HITE,  
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