J. SIMPSON.

DOOR HANGER.

APPLICATION FILED AUG. 9, 1907.

912,192.

Patented Feb. 9, 1909.

Fig. 1

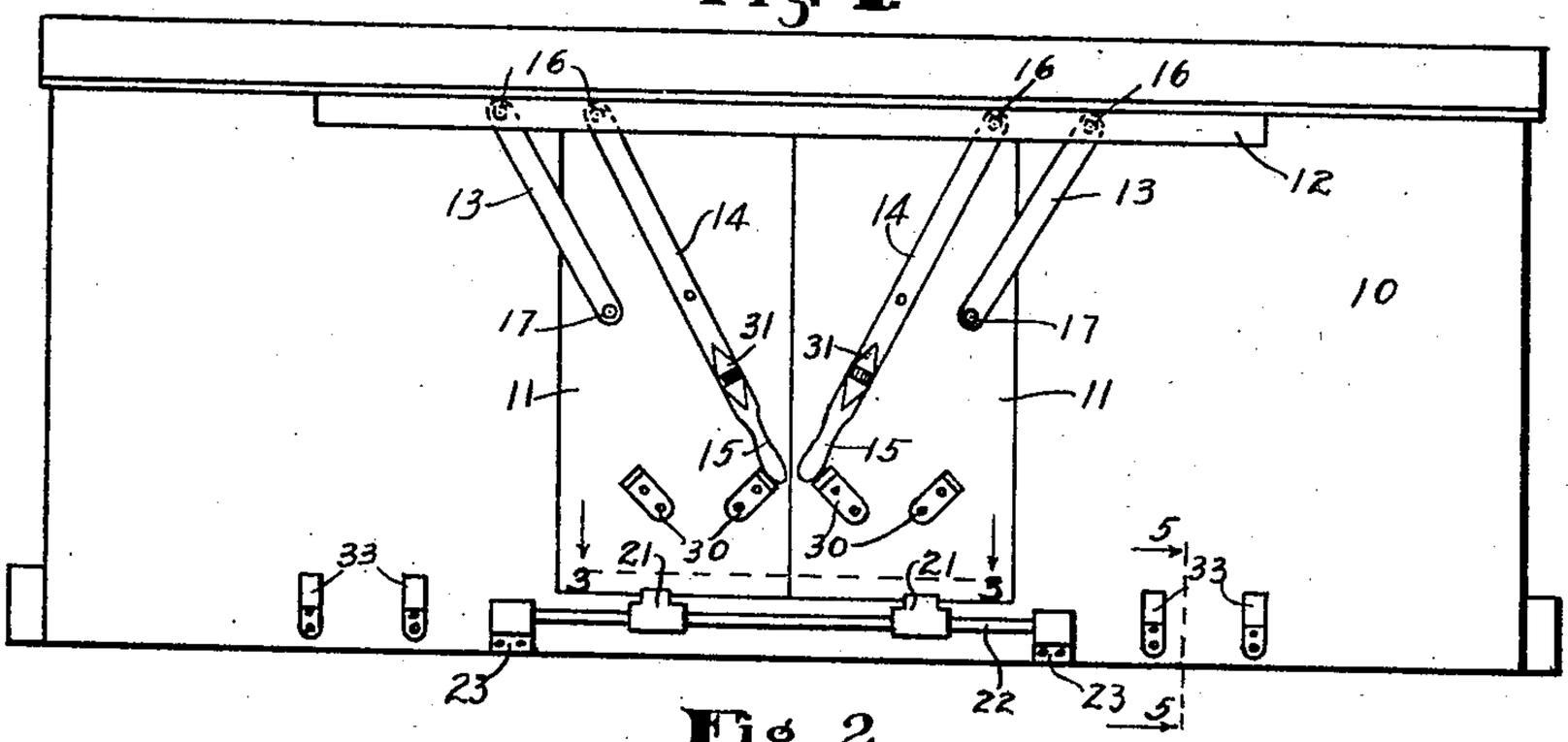


Fig. 2

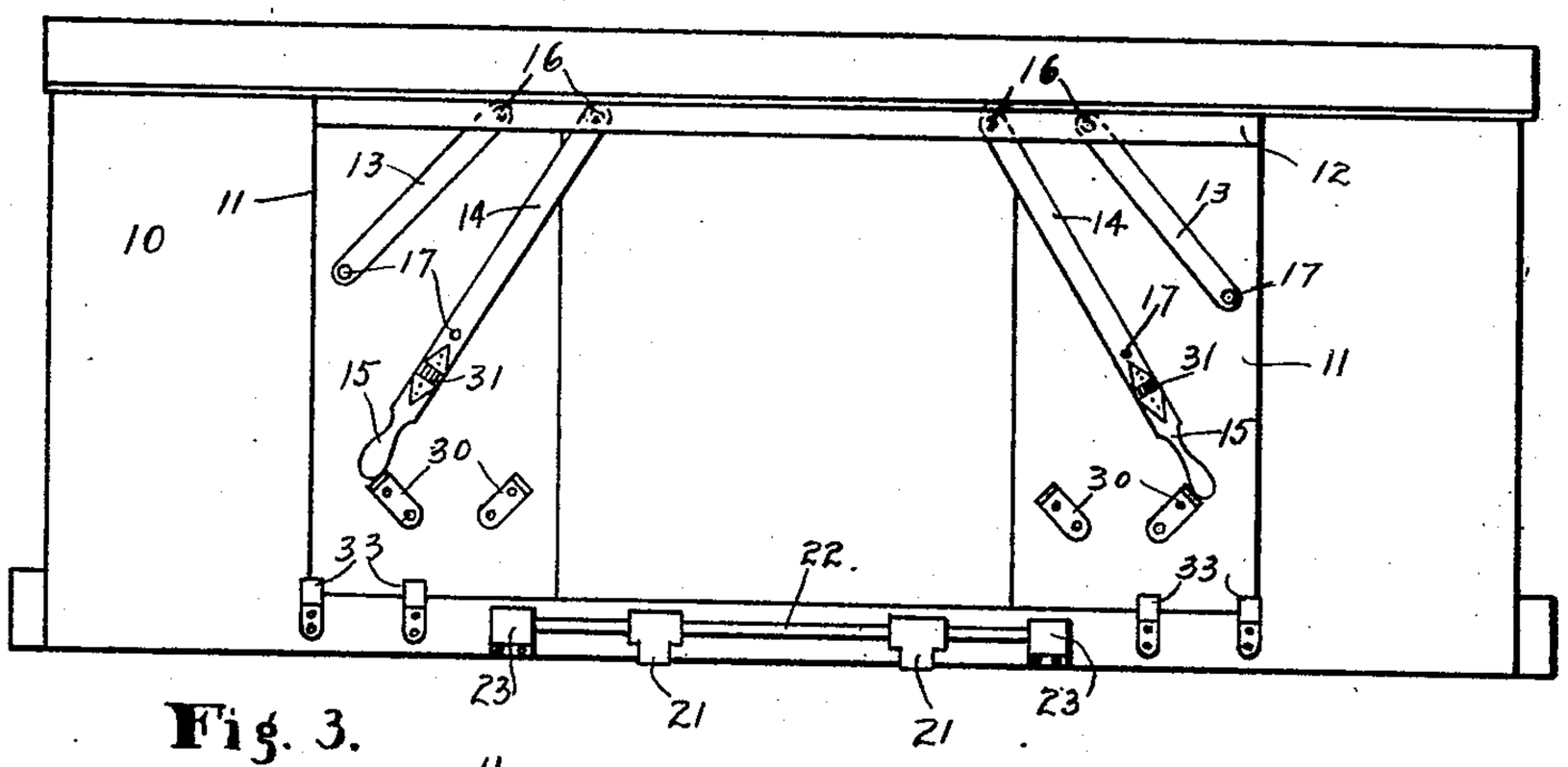


Fig. 3.

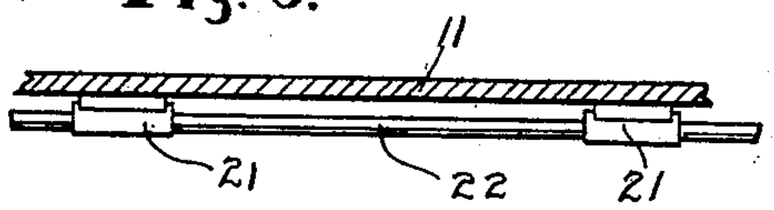


Fig. 4.

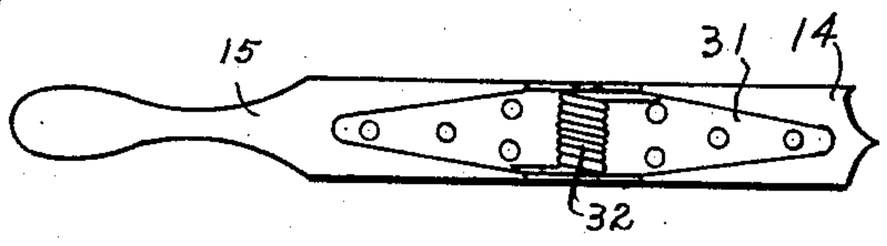


Fig. 5.

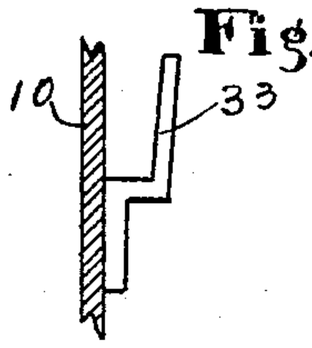
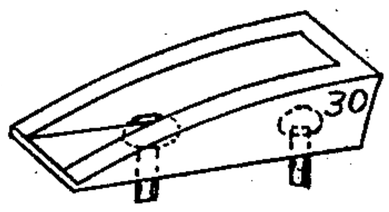


Fig. 6.



WITNESSES:

J. H. Swan.

C. M. Greener.

INVENTOR

James Simpson.

BY

F. H. Fosdick

ATTORNEY

UNITED STATES PATENT OFFICE.

JAMES SIMPSON, OF VEEDERSBURG, INDIANA.

DOOR-HANGER.

No. 912,192. Specification of Letters Patent. Patented Feb. 9, 1909.

Application filed August 9, 1907. Serial No. 387,852.

To all whom it may concern:

Be it known that I, JAMES SIMPSON, of Veedersburg, county of Fountain, and State of Indiana, have invented a certain new and useful Door-Hanger; and I do hereby declare that the following is a full, clear, and exact description thereof, reference being had to the accompanying drawings, in which like numerals refer to like parts.

The object of this invention is to provide a simple, durable and economical means for opening and closing car doors and the like.

The nature of the invention will be understood from the accompanying drawings and the following description and claims:

In the drawings Figure 1 is a side elevation of a portion of a railway car provided with my sliding door construction, the doors being shown closed. Fig. 2 is the same with the doors open. Fig. 3 is a horizontal section on the line 3—3 of Fig. 1. Fig. 4 is an enlarged elevation of the lower end of an actuating lever. Fig. 5 is a section on the line 5—5 of Fig. 1. Fig. 6 is a perspective view of one of the hand lever holders.

In detail an ordinary railway box car 10 is shown provided with two sliding doors 11, the upper ends of which slide behind a guard plate 12. Each door is suspended by two bars 13 and 14, the latter having a handle 15 as a continuation of the lower end thereof. These bars 13 and 14 are fulcrumed at their upper ends at 16 within or behind the guard plate 12 and to said guard plate, the upper pivotal points of said bars being to one side of a vertical line of the lower pivots 17 thereon, when the door is closed, as seen in Fig. 1, and to the other side when the door is open, as shown in Fig. 2.

When closed, the lower ends of the doors are held against the car by the plates 20 and 21 secured on the rod or rock-shaft 22 mounted in bearings 23 secured to the side of the car on a lower level than the door.

When it is desired to open the doors, the handle 15 is grasped and disengaged from the inner catch 30 and the door moved laterally to the open position shown in Fig. 2, where the handle 15 is moved behind the outer catch 30. The handle 15, as seen in Fig. 4, is secured to the bar 14 by a hinge 31 having a spring 32 that tends to hold the handle 15 straight and in alinement with the bar 14 but enables a person to pull the handle 15 out of engagement with the holder 30 when it is desired to move the door edgewise. In their open positions the upper ends of the doors are still held from outward movement by the guard plate 12 and the lower ends of the doors are held from outward movement by the brackets 33, which are secured to the car and extend up above the lower edge of the door. Hence, these sliding doors are suspended doors. The points of suspension above being about midway between the extreme closing and opening movements of the door so that in both the closing and opening positions suspension bars 13 and 14 hold the doors up with the upper ends thereof behind the guard plate 12. The spring handle 14 will be held by the spring rod tightly against the door and behind the holder 30, so that the door cannot move from either of its positions excepting when the handle is released. There are two of the brackets 33. The inner one of them should be placed low enough so as not to engage the lower end of the door while it is being swung.

What I claim as my invention and desire to secure by Letters Patent is:

1. The combination with a structure having an opening, of an edgewise movable door, a pair of bars pivoted to the door at their lower ends and to the structure at their upper ends with points to one side of a vertical line through the lower pivots, a handle on one of said suspension bars, and means on the door for engaging the handle in the open and closed positions for holding the door in place.

2. The combination with a structure having an opening, of an edgewise movable door, a pair of bars pivoted to the door at their lower ends and to the structure at their upper ends with points to one side of a vertical line through the lower pivots, a handle that is a continuation of one of said suspension bars, a spring hinge for securing the handle to the bar so as to hold the handle normally against the door, and holding blocks secured to the door in positions for engaging and holding said handle when the door is closed and when the door is open.

In witness whereof I have hereunto affixed my signature in the presence of the witnesses herein named.

JAMES SIMPSON.

Witnesses:
N. ALLEMONG,
OLIVE BREEDEN.