

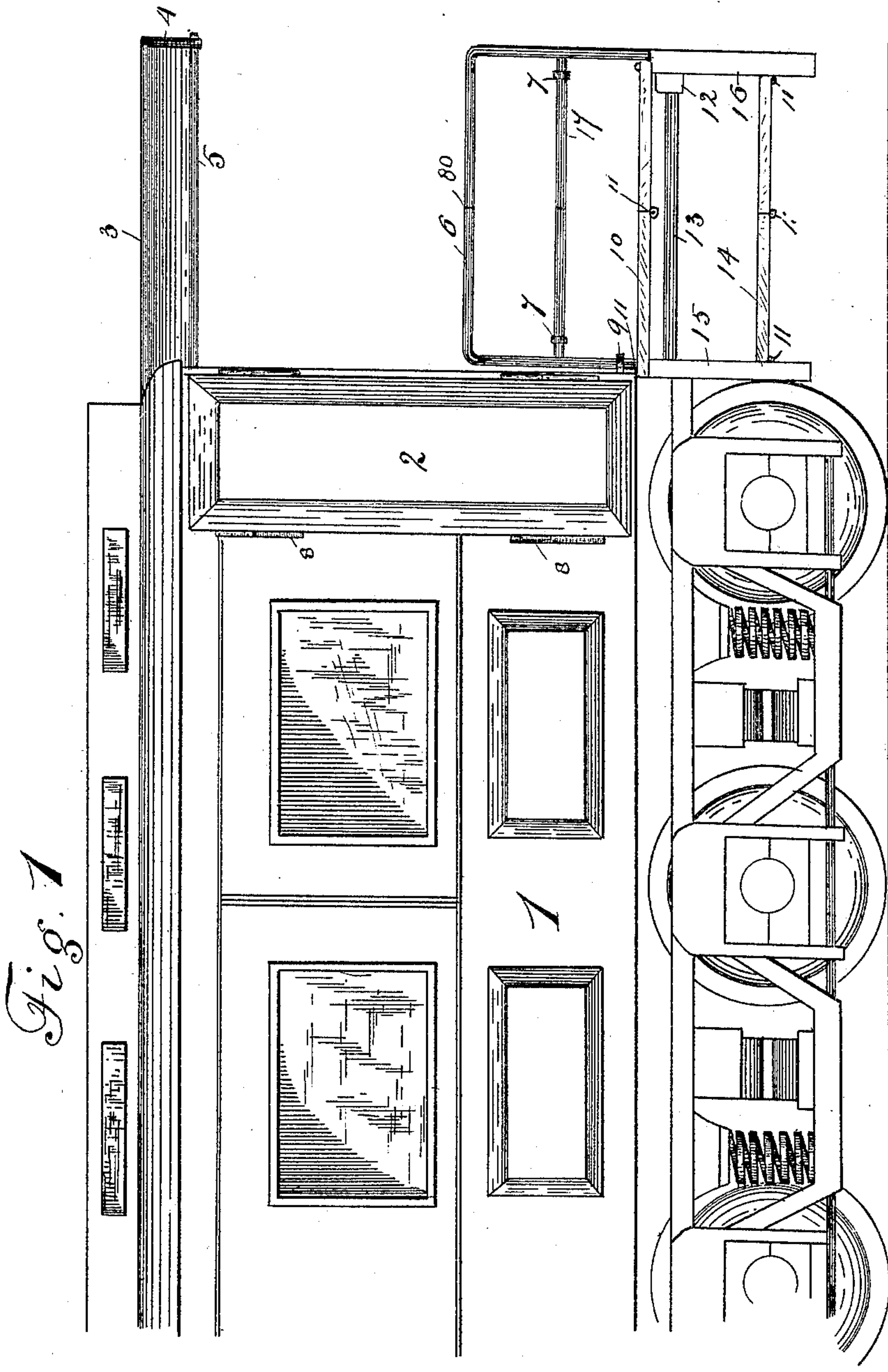
(No Model.)

4 Sheets—Sheet 1.

H. M. JONES.  
VESTIBULE CAR.

No. 448,186.

Patented Mar. 10, 1891.



WITNESSES:

*G. J. Rollins*  
*Wm. McConnell*

INVENTOR

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BY *A. J. Green*  
his ATTORNEY.

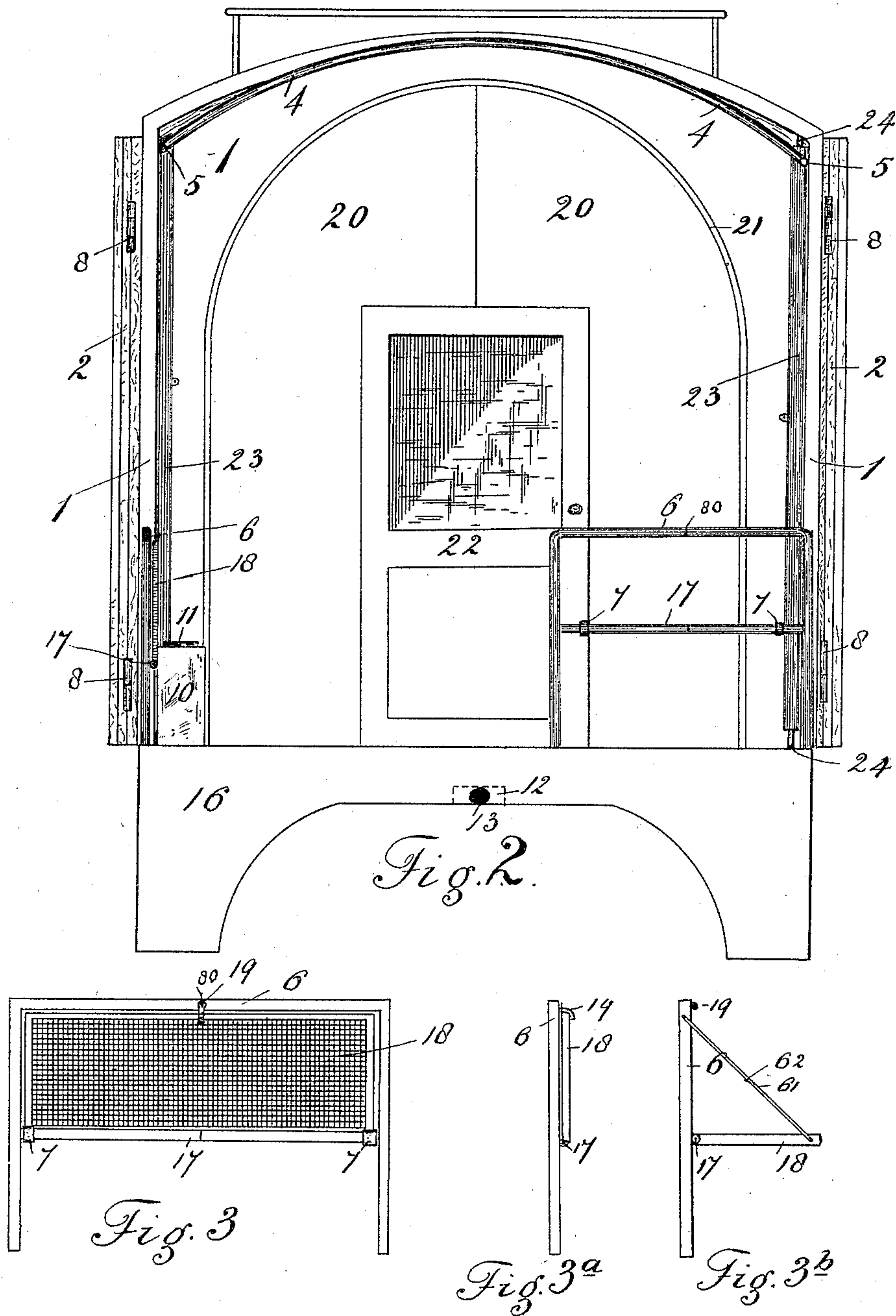
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4 Sheets—Sheet 2.

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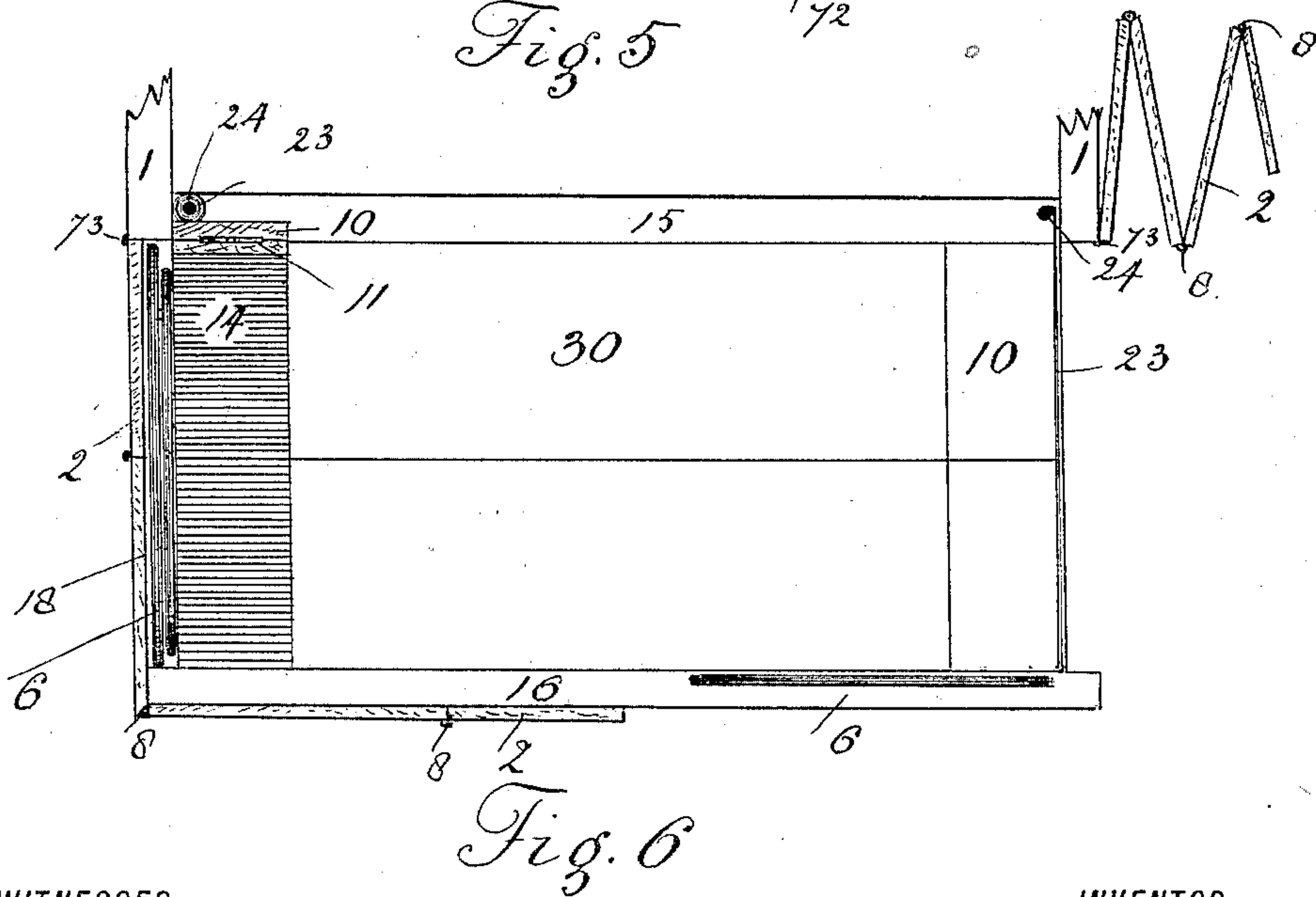
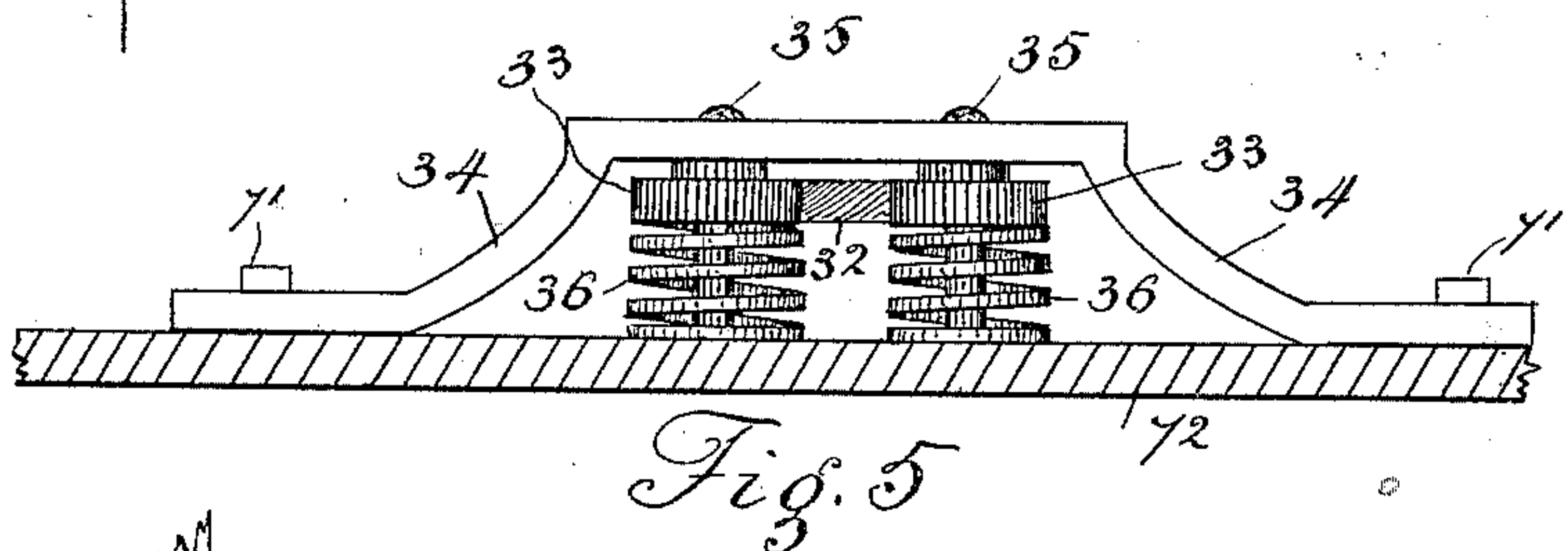
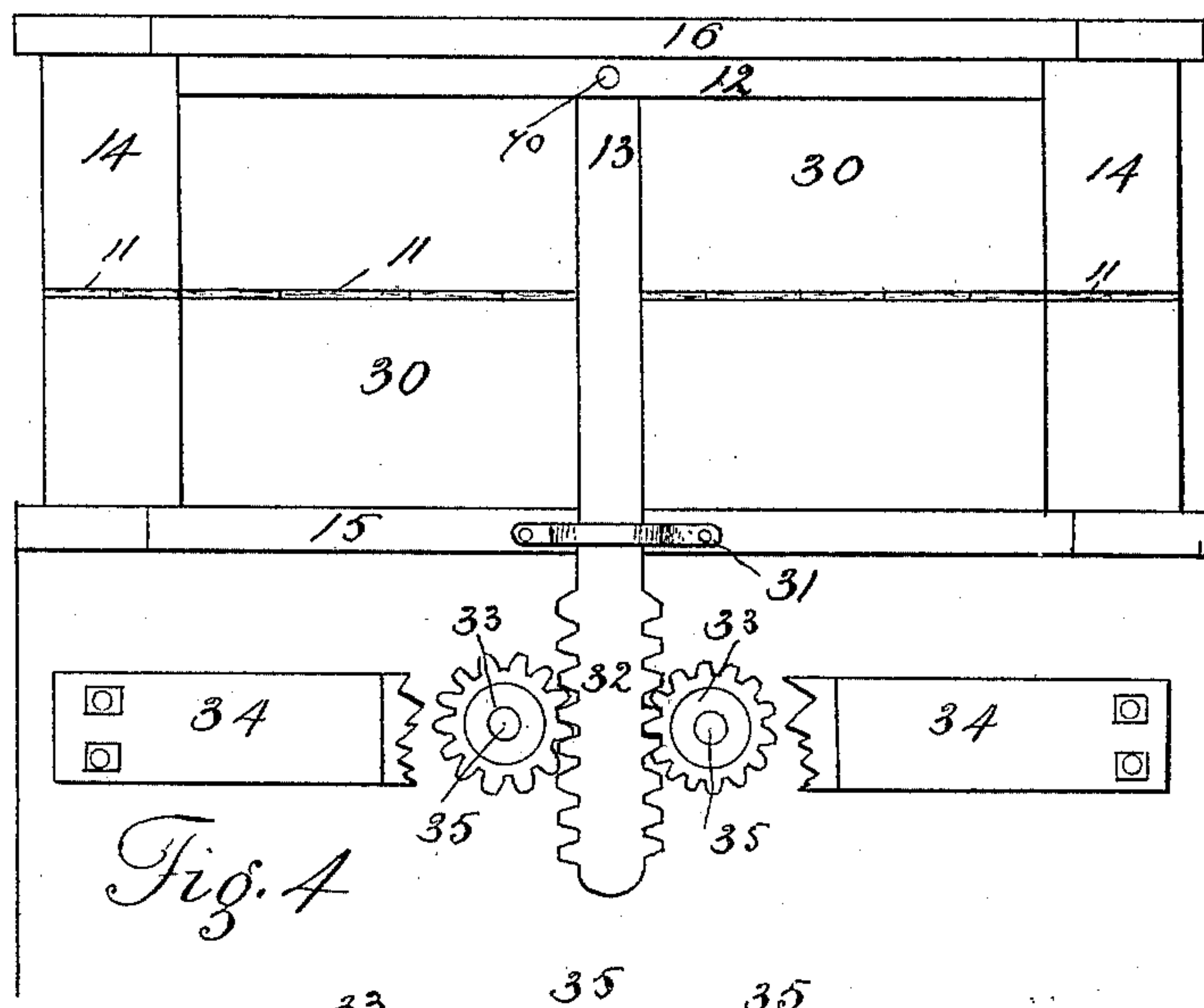
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~~WITNESSES:~~

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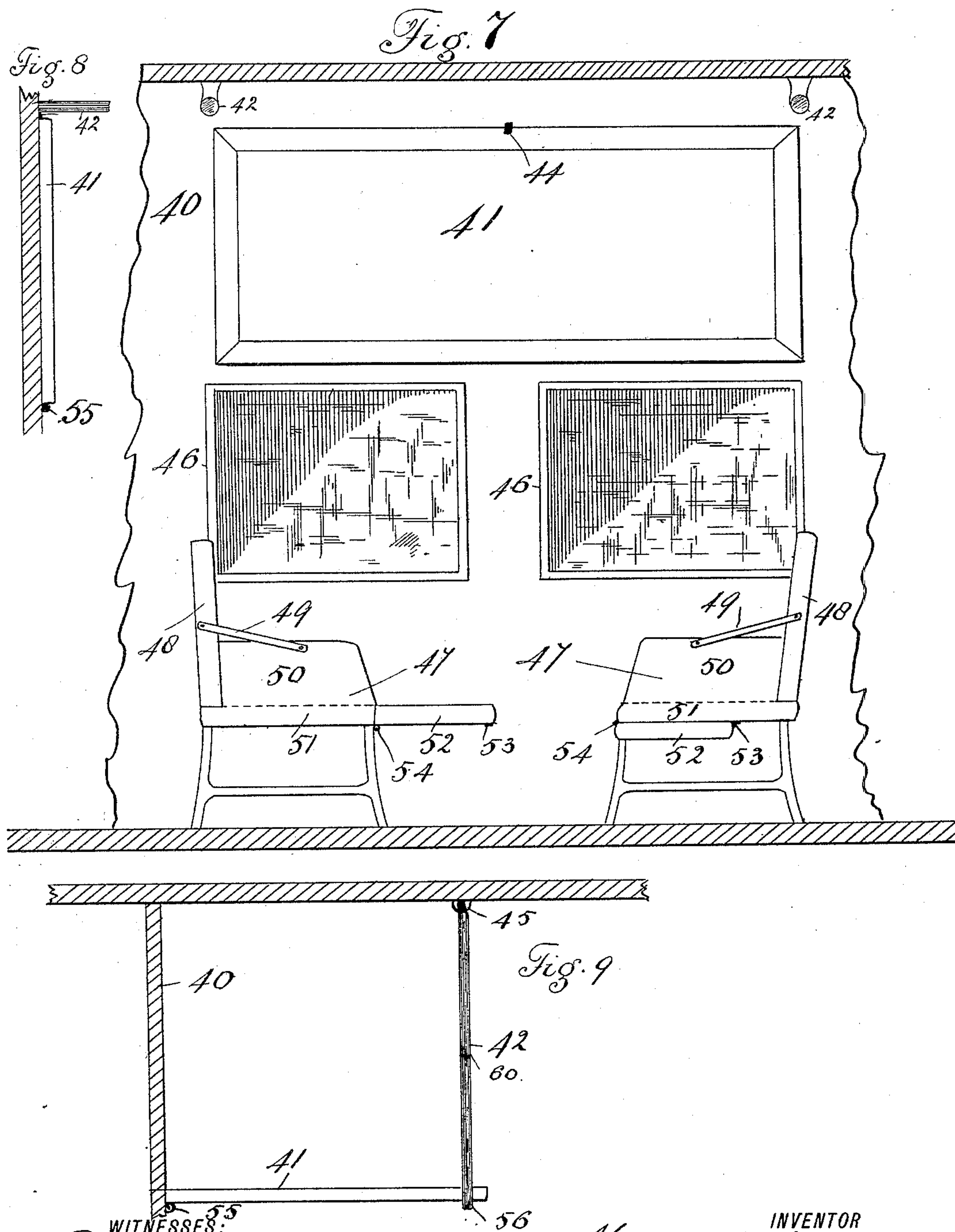
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4 Sheets—Sheet 4.

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# UNITED STATES PATENT OFFICE.

HENRY M. JONES, OF DENVER, COLORADO.

## VESTIBULE-CAR.

SPECIFICATION forming part of Letters Patent No. 448,186, dated March 10, 1891.

Application filed March 24, 1890. Serial No. 345,149. (No model.)

*To all whom it may concern:*

Be it known that I, HENRY M. JONES, a citizen of the United States, residing at Denver, in the county of Arapahoe and State of Colorado, have invented certain new and useful Improvements in Vestibule Sleeping-Cars; and I do declare the following to be a full, clear, and exact description of the invention, such as will enable others skilled in the art to which it appertains to make and use the same, reference being had to the accompanying drawings, and to the figures of reference marked thereon, which form a part of this specification.

My invention relates to improvements in vestibule sleeping-cars, and therefore pertains chiefly to the platform and its surroundings on the outside of the car, and to the berths on the inside of the same; and the object of my invention is to provide a platform of such construction that the jolt, shake, and concussion between the cars forming the train shall be reduced to a minimum, and possessing also other features which add greatly to the benefit and enjoyment of the passengers.

To these ends my invention consists of the features, arrangements, and combinations hereinafter described and claimed.

In the drawings is illustrated an embodiment of the invention, in which—

Figure 1 is a side view or elevation of a car provided with my vestibule improvements. Fig. 2 is an end view of the same. Figs. 3, 3<sup>a</sup>, and 3<sup>b</sup> are detail views of an adjustable settee or seat with which my improved platform is provided. Fig. 4 is an underneath view of the platform, illustrating the means whereby it yields when brought suddenly in contact with another car, and also the means whereby it automatically regains its normal position after yielding to such abnormal pressure. Fig. 5 is an end elevation of the same. Fig. 6 is a top view of the platform. Fig. 7 is an interior view of a car illustrating the part of my improvement pertaining to the berths. Figs. 8 and 9 are detail views of the same.

In these views let the reference-numeral 1 designate the sides of a car. The numeral 30 designates the platform of this car, the platform being hinged through its center, as shown at 11, and provided with plates 15 and

16, supporting the top portion of the platform, which is secured to said plates by suitable hinges 11. The extremities of these plates project downward and support the ends of the steps 14 leading up to the platform. These steps are hinged to the projecting extremities of plates 15 and 16 and also in the center, these hinges being designated in each case by the numeral 11. The steps 14 are covered at the top by a centrally-hinged adjustable part 10, located at each end of the platform and hinged at its inner extremity to the cross plate or bar 15, and may be folded up, as shown at the left in Fig. 6, when desirable, as during the getting on and off of the passengers. When extended, as shown at the right in Fig. 6, part 10 forms a continuation of the platform and covers the steps, at the same time enlarging the platform to the extent of the area of said parts.

Extending underneath the central portions of the platform crosswise of its length is a bar 13, securely bolted at 70 to an auxiliary bar 12, secured to plate 16 below the top of the platform, said bar being supported and guided at the rear of the platform by a strap 31, and terminating underneath the car in a cogged portion 32, having a row of teeth or notches on its parallel opposite edges. The cogged edges of part 33 of this bar engage the small cog-wheels 33, one on each side, journaled on short shafts 35.

34 is a bar made fast at its extremities to the car-bottom 72, as shown at 71, and branching upward over the cog-wheels 33. Shafts or pins 35 extend through the upraised portion of plate 34 and terminate in the bottom of the car. Surrounding each shaft 35, between its corresponding cog-wheel and the bottom of the car, is a spiral spring 36, secured at one extremity to the cog-wheel and at the opposite extremity to the bottom of the car, so that as the wheels 33 turn in one direction the springs tighten, and as soon as the pressure which turns the wheels ceases to act the springs reverse the action of the wheels. This mechanism is designed to permit the platform of the car to yield to sudden pressure from the platform of the opposite car and obviate the concussion, shock, or jar usually resulting under such circumstances.

The platform, together with the connections,



being hinged, as heretofore described, is free to yield by springing upward in the center sufficiently to break the force of the ordinary shocks and jars experienced while riding in railway-cars. As the platform yields to this pressure, bar 13 moves backward, its cogged portion engaging and turning the wheels 33 and tightening or increasing the tension of the springs 36. As soon as the abnormal pressure upon the platform ceases, the action of these springs upon bar 13, through the medium of wheels 33, returns the platform to its normal or level position.

The platform of the car is provided with seats. (Illustrated in Figs. 3, 3<sup>a</sup>, and 3<sup>b</sup>.) These seats are adjustably secured to the platform, and their backs, designated by the numeral 6, may form a railing therearound, as shown in Figs. 1 and 2, backs 6 being hinged at 80 to permit them to yield in harmony with the other parts of the platform when they are placed transversely across the same. The bottom or seat proper of these seats is designated by the numeral 18, and is secured to a cross-bar 17 of the back by the use of suitable hinges 7. Seat 18, when in the position shown in Fig. 3<sup>b</sup>, is supported by arms 61, having one extremity secured to the back near its top and the opposite extremity to the end of the seat 18 at a point well removed from the back. Arm 61 is jointed or hinged at 62.

Seat 18 may be folded up when not in use, as shown in Figs. 3 and 3<sup>a</sup>, and secured in place by a hook or button 19. This seat may be adjusted from the end to the side, or, in fact, may be placed in any desired position upon the platform, the legs thereof being secured in suitable sockets formed in the top of the platform.

Hinged to the side of the car at 73 are the folding doors 2, hinged to each other at 8, and adapted to be extended around the platform from the side of the car, as shown at the left of Fig. 6, thereby inclosing the platform on all sides when it is desired so to do; or when it is not desired to close the folding parts 8, curtains 23 may be drawn across the ends of the platform, as shown at the right in Fig. 6. These curtains are wound up and operated by a roller 24, occupying a vertical position.

The reference-numeral 3 designates an arched canopy connected with the top of the car and stretched above the platform. This canopy is composed of some suitable flexible fabric provided with a suitable frame 4 5 secured to its edges.

My improved vestibule-car, besides being provided with the ordinary door 22 in the end of the car, is also provided with the large doors 20 20, which open inwardly and take up nearly the entire end of the car.

The portions of my improvement pertaining to the interior of the car relate to both the upper and the lower berths.

In the drawings let the reference-numeral 50 designate the seats, two of which, when made up, constitute the lower berth. The numeral 48 designates the back of these seats. 49 is an arm connecting the back with the side 47.

51 designates the upholstered portion of each seat, formed with extension 52, hinged to the main part at 54. Parts 52 of any two opposite seats are provided at their extremities with hooks or catches 53, or one with a hook and the other with a corresponding eye, so that the two parts may be connected, and when so connected will remain in the elevated position, forming a support between the seats for the bedding used in making up the berth.

My improved upper berth consists of the bottom portion 41, hinged at its lower edge to the wall of the car and pivoted at its upper or outer edge to one extremity of a suspension-rod 42, hinged to the top of the car at 45, and hanging in a vertical position when the berth is let down, as shown in Fig. 9. Rods 42 are jointed at 60 to permit part 41 to be folded against the sides of the car without disconnecting it from rod 42.

Having thus described my invention, what I claim is—

1. A railway passenger-coach provided with a platform having a plate 15 secured to the frame-work of the car and across the end thereof, a similar outer plate 16, the two plates being connected by the top 30, hinged in the center and to the plates 15 and 16, these plates being provided with downward projections, the steps 14 being hinged in the center and to the projections of plates 15 and 16, the hinged parts of the platform all yielding in harmony when subjected to sudden pressure or contact from the opposite car, substantially as described.

2. The combination, with a hinged platform all parts of which are adapted to yield in harmony to abnormal or sudden pressure, of a bar 13, secured to the front of the platform, passing backward underneath the same, and terminating in a part 32, having cogs or teeth on its opposite edges, cog-wheels 33, one on each side, engaging the cogs in the bar, coiled springs 36, located between the cog-wheels and the platform of the car and so connected with the said wheels that as the platform yields and bar 13 moves backward under pressure and turns the cog-wheels the tension of the springs 36 increases, so that as soon as the pressure on the platform ceases the hinged parts thereof will return to their normal position by virtue of the action of the springs 36 upon the bar 13, substantially as described.

3. A platform for railway passenger-coaches provided with suitable seats or settees, the seat portion proper being adjustable and the backs being high enough to form a railing for the platform, substantially as described.



4. A railway passenger-coach having fold-  
ing doors 3 hinged to its sides at each end  
of the platform and adapted to fold around  
and completely inclose the platform, substan-  
5 tially as described.

5. A railway passenger-coach provided with  
end doors 20 on each side of the usual cen-  
tral door and meeting above said central

door, the doors 20 being adapted to open in-  
wardly, substantially as described. 10

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

HENRY M. JONES.

Witnesses:

ISHAM R. HOWZE,  
WM. McCONNELL.