June 22, 1926.

A. R. ROSSMAN

1,589,820

LADDER FOR SLEEPING CARS

Original Filed Nov. 13, 1924 2 Sheets-Sheet 1

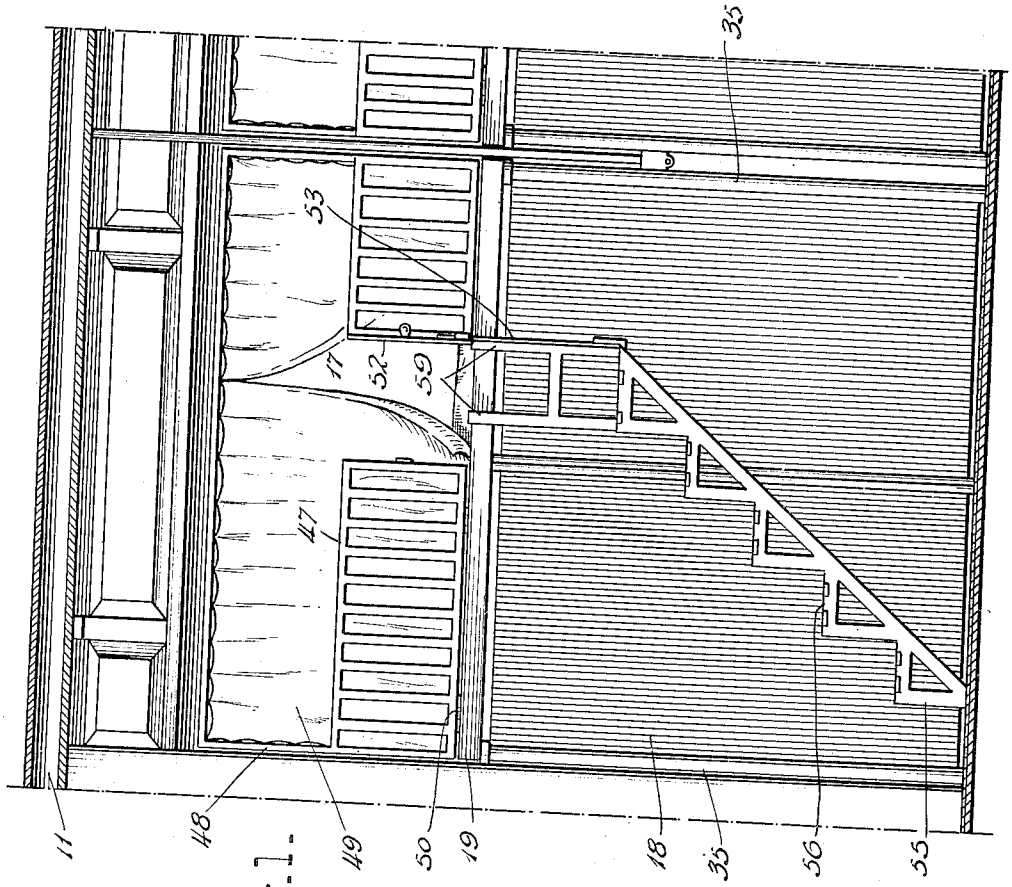


Fig. 1.

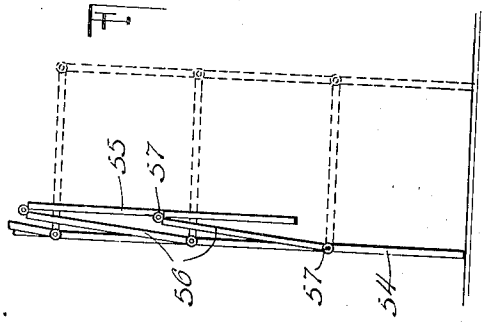


Fig. 4.

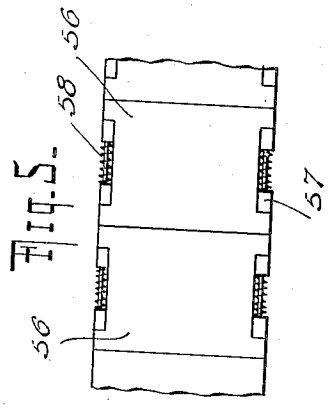


Fig. 5.

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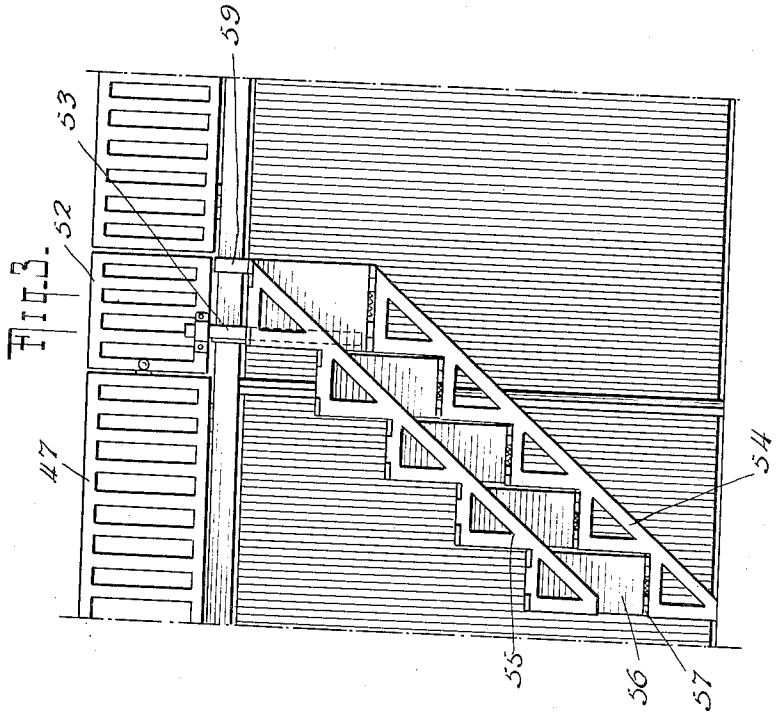


Fig. 3.

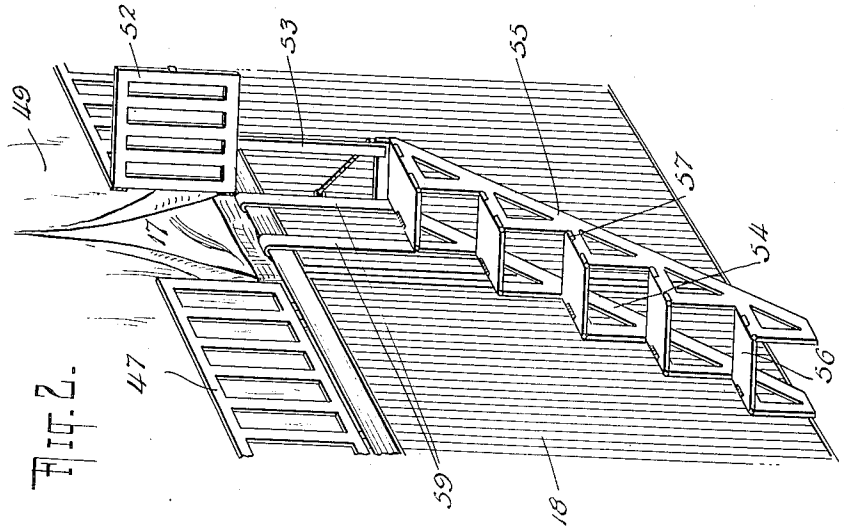


Fig. 2.

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UNITED STATES PATENT OFFICE.

AGNES R. ROSSMAN, OF SCOTCH PLAINS, NEW JERSEY.

LADDER FOR SLEEPING CARS.

Original application filed November 13, 1924, Serial No. 749,577, now Patent No. 1,543,298, dated June 23, 1925. Divided and this application filed June 20, 1925. Serial No. 38,489.

This invention relates to improvements in railway car constructions, and has particular reference to a ladder for sleeping cars, the present invention being a division of my application Serial No. 749,577 filed November 13, 1924, now Patent No. 1,543,298, dated June 23, 1925.

An object of the invention is to afford easy and convenient access to and from an upper berth or other elevation, such as a platform, by means of a ladder which, when not in use, will fold to a position wherein the same will not obstruct the passage alongside of said berth or platform.

Another object is to suspend the ladder from the berth in such manner that the opening of the gate of a guard rail for said berth will effect the movement of the ladder from a normally closed position to an open or extended position.

The above and other objects will appear more clearly from the following detailed description, when taken in connection with the accompanying drawings, which illustrate a preferred embodiment of the inventive idea.

In the drawings—

Figure 1 is a fragmentary longitudinal section through a railway car showing in side elevation one set of berths made up for occupancy;

Figure 2 is a fragmentary perspective view illustrating the means affording access to and exit from the upper berth with said means in its operative position;

Figure 3 is a side elevation showing the means of Figure 2 in its inoperative position;

Figure 4 is an enlarged fragmentary edge elevation of the ladder constituting the means above mentioned; and

Figure 5 is a fragmentary plan view of said ladder.

The invention is shown in connection with a railway sleeping car, but it is to be understood that the ladder and its operating means may be employed with equal facility for affording access to and from any elevation such as a platform or balcony.

Referring more particularly to the drawings, the numeral 11 indicates generally the body of the car which is constructed as described in detail in the above mentioned patent and which includes sets of berths arranged on opposite sides of the aisle of the car, each set including an upper berth 17 and a lower berth 18, separated by the usual pivoted bunk 19 designed to be supported upon standards 35.

In accordance with the present invention the upper berth is provided with a guard rail 47 of a height substantially equal to the width of the bunk 19 and including a supporting section or arm 48 from which the curtain 49 may be suspended. This guard rail 47 is pivoted to the outer edge of the bunk 19 at 50 and is braced in its operative position in the manner described in said patent. When not in use the guard rail may be folded upon the top of the bunk 19 in such manner that when the bunk is in its inoperative position, folded upwardly against the top of the car, a suitable storage place for the guard rail will be provided. The guard rail has, intermediate its ends, a swinging gate 52 forming the entrance and exit to the upper berth and preferably depending from this gate is an arm 53 utilized for a purpose which will presently appear.

A ladder is provided for each upper berth to facilitate entrance thereto and exit therefrom and this ladder is shown as comprising the inner and outer side members 54 and 55, respectively, arranged at all times in planes parallel to that of the guard rail when the latter is in its operative position so that when the ladder is folded inwardly toward the berths the same will not obstruct the aisle. The side members 54 and 55 are connected by a plurality of steps 56 hinged to said members, as indicated at 57, so that the outer side member 55 can be adjusted from its operative position shown in Figure 2 to that shown in Figure 3. Coil springs 58 may be utilized for the purpose of yieldably maintaining the ladder in its folded condition. When folded, the ladder is of such length that the same may be placed upon the bunk 19 between the upper surface thereof and the guard rail 47 and stored in this position when the bunk is not in use. The inner side member 54 has extending upwardly therefrom and in a plane therewith a pair of supporting straps 59, the upper ends of which are curved so as to engage over the outer edge of the bunk 19 and thus suspend the ladder in its operative position. With the ladder in the position shown in Figure 3, the steps 56 thereof are disposed vertically and the depending arm 53 of the gate 52 is engaged with the inner surface of the top step

Thus when the gate 52 is swung open the outward movement of the same will cause the arm 53 to force the side member 55 and consequently the steps 56 outwardly and downwardly against the tension of the springs 58 to the position shown in Figure 2. Thereupon the occupant of the berth may step upon the ladder and thereby reach the floor of the car. As long as the gate remains open the lower end of the arm 53 will engage the top step and maintain the ladder in its operative position. If desired, the occupant of the berth may reach up and close the gate to permit the ladder to restore to its folded position under the influence of the springs 58 so as not to obstruct the aisle of the car. In order to again enter the berth, it is only necessary to swing the side member 55 outwardly and downwardly and then step upon the ladder to hold it in its operative position until the gate can again be opened.

What is claimed is:

1. In a sleeping car construction, an upper berth including a bunk, a guard rail therefor, a gate for said rail, and a normally folded ladder capable of suspension from said bunk and movable to an extended position by the opening of said gate.

2. In a sleeping car construction, an upper berth including a bunk, a guard rail therefor, a gate for said rail, a normally folded ladder capable of suspension from said bunk and movable to an extended position by the opening of said gate, and means for restoring said ladder to normal position upon closure of said gate.

3. In a sleeping car construction, an upper berth including a bunk, a guard rail therefor, a gate for said rail, a normally folded ladder capable of suspension from said bunk, and means carried by said gate and engageable with a step of said ladder to move the ladder to extended position upon opening of the gate.

4. In a sleeping car construction, an upper berth including a bunk, a guard rail therefor, a gate for said rail, a normally folded ladder capable of suspension from said bunk, means carried by said gate and engageable with a step of said ladder to move the ladder to extended position upon opening of the gate, and means for restoring said ladder to normal position upon closure of said gate.

5. In a construction of the class described, an elevated platform, a guard rail therefor, a gate for said rail affording access to and exit from said platform, a foldable ladder suspended from said platform and including side members arranged in planes parallel to that of the guard rail, and means carried by the gate and engaging a step of said ladder to swing the same from a folded position to an operative position upon opening of said gate.

6. In a construction of the class described, an elevated platform, a guard rail therefor, a gate for said rail affording access to and exit from said platform, a foldable ladder suspended from said platform and including side members arranged in planes parallel to that of the guard rail, means carried by the gate and engaging a step of said ladder to swing the same from a folded position to an operative position upon opening of said gate, and means engaging the steps of said ladder for moving said ladder to its folded position when said gate is closed.

7. In a construction of the class described, an elevated platform, a guard rail therefor, a gate for said rail affording access to and exit from said platform, a foldable ladder suspended from said platform and including side members arranged in planes parallel to that of the guard rail, supporting straps carried by one of said side members and disposed in a plane therewith and engageable with said platform to suspend said ladder in its operative position, and means carried by the gate and engaging a step of said ladder to swing the same from a folded position to an operative position upon opening of said gate.

In testimony whereof I have affixed my signature.

AGNES R. ROSSMAN.