

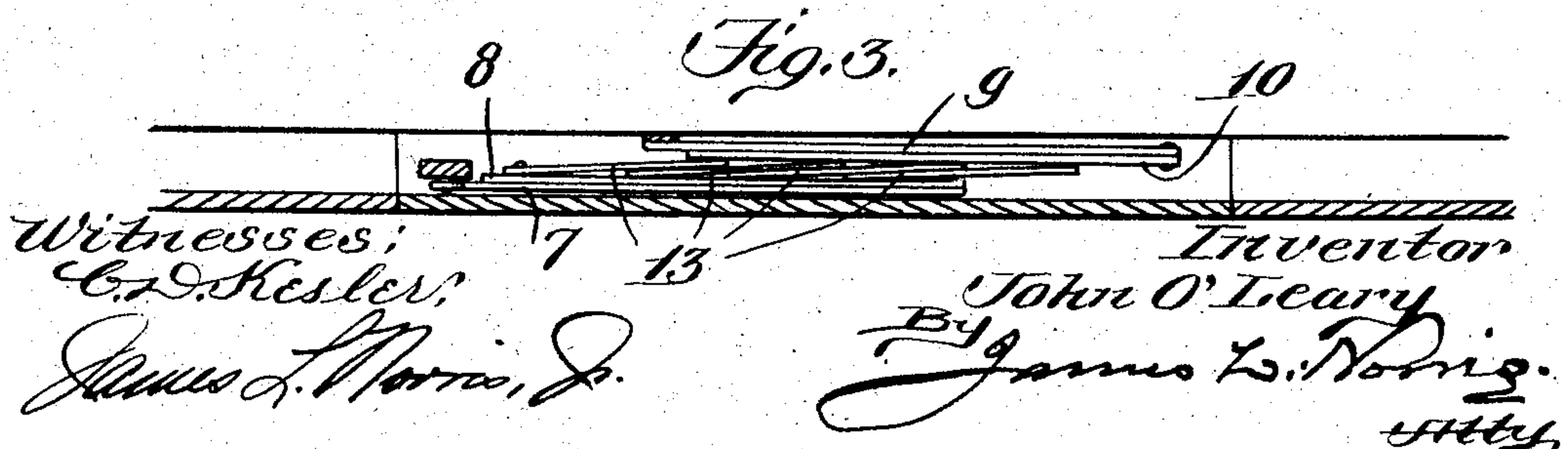
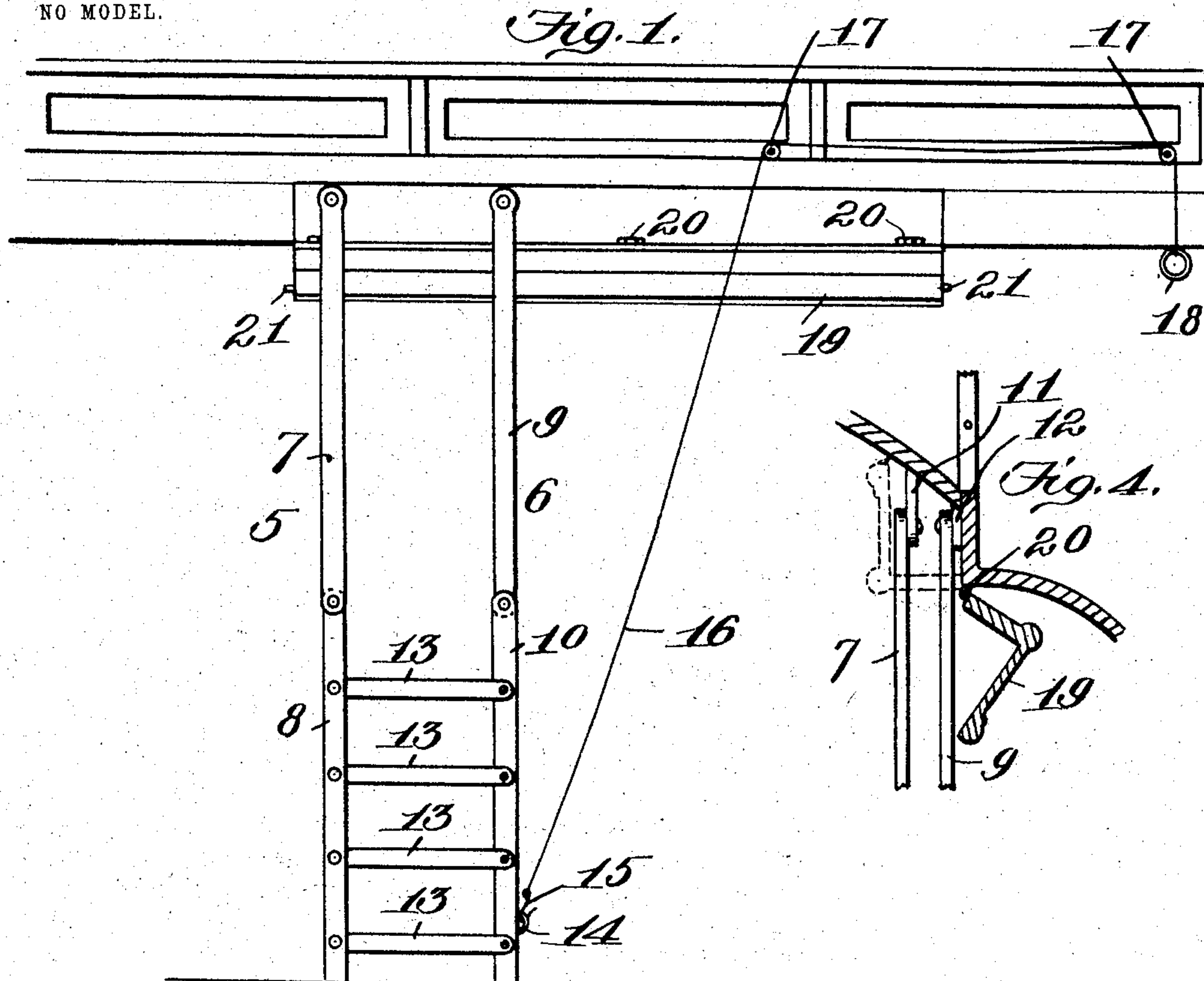
No. 772,741.

PATENTED OCT. 18, 1904.

J. O'LEARY.
PASSENGER CAR.

APPLICATION FILED JUNE 23, 1904.

NO MODEL.



Witnesses:
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UNITED STATES PATENT OFFICE.

JOHN O'LEARY, OF COHOES, NEW YORK.

PASSENGER-CAR.

SPECIFICATION forming part of Letters Patent No. 772,741, dated October 18, 1904.

Application filed June 23, 1904. Serial No. 213,849. (No model.)

To all whom it may concern:

Be it known that I, JOHN O'LEARY, a citizen of the United States, residing at Cohoes, in the county of Albany and State of New York, have invented new and useful Improvements in Passenger-Cars, of which the following is a specification.

This invention relates to passenger-cars adapted for steam, electric railway, and other uses, the improvements being directed particularly to those cars known as "sleepers." A so-called "sleeper" ordinarily is provided with lower and upper berths, and it is an exceedingly difficult matter to enter and leave an upper berth, this being particularly the case with infirm persons and women.

It is the primary object of my invention to provide a simple and effective device whereby access may be readily had by a passenger to an upper berth and whereby the latter may be as easily left, the means being of such a nature that when not in use it may be housed in a suitable compartment where it is not visible.

In the drawings accompanying and forming a part of this specification I have illustrated one simple and convenient adaptation of the invention which I will fully disclose in the following description; but I do not limit myself to the exact showing thus made, for certain variations may be adopted within the scope of my claims succeeding said description.

Referring to said drawings, Figure 1 is an interior view of a portion of a sleeping-car with means associated therewith constructed in accordance with my invention, said means, as shown, including a ladder. Fig. 2 is a view of the upper interior part of the car shown in the preceding figure, representing the ladder as collapsed or folded and housed within a compartment, the front portion of the compartment being broken away. Fig. 3 is a sectional top plan view of the parts occupying the position indicated in Fig. 2. Fig. 4 is a transverse sectional elevation, only the upper part of the ladder being shown, and the panel constituting the cover for the ladder-compartment being represented as closed and open by dotted and full lines, respectively.

Like characters refer to like parts throughout the several figures.

In the drawings I have represented a portion of a sleeping-car, which may be of the usual construction. To obtain access to each upper berth of the car, I provide a ladder which, as will hereinafter appear, is collapsible in such a way that it can be folded up to occupy a comparatively small space and within a suitable compartment. Only one ladder is represented. Such ladder includes in its construction side bars, (denoted in a general way by 5 and 6,) which when the ladder is in working condition are adapted to be disposed vertically and in parallelism. Each side bar of the ladder in turn is composed of two pivotally-connected links, the links of the side bar on the left in Fig. 1 being denoted, respectively, by 7 and 8, while the corresponding links of the other side bar are denoted by 9 and 10, respectively. The links 7 and 8 and 9 and 10 are pivotally connected together at their inner terminal ends in order to secure a ready flexion of the same when it is desired to fold the ladder up. The upper end of the ladder is connected to the interior of the car at a point under the ceiling or at any other desired place and above the upper berth. This, however, is not essential. Nor do I limit myself to the precise construction of the ladder thus far and hereinafter more particularly described. One of the upper links, it will be apparent upon an inspection of Figs. 3 and 4, is situated to the rear of the other, and the upper ends of both are pivotally connected to suitable supports, as 11 and 12, respectively, shown as pendent brackets mounted in some convenient manner within the car immediately below the ceiling thereof.

The rungs of the ladder are denoted by 13, four of the same being represented, although this number may be increased or diminished, as desired. The rungs are shown as connected simply with the lower links 8 and 10 of the ladder, for it is found that this will answer all the purposes for assuring a ready entrance to and departure from an upper berth. It will be remembered that one of the upper links of the ladder is located to the rear of the other, and upon inspection of Figs. 3 and

4 it will be seen that the upper ends of the lower links 8 and 10 are located in the space between said upper links, and, further, that one end of each rung is connected to the rear 5 of one lower link, while the opposite end thereof is connected to the front of the other lower link, by which construction the ladder can be folded into a very small compass. The rungs 13 may be pivoted to the lower links 8 10 and 10 in any desirable way. One of the lower links of the ladder, as the link 10, is represented as having near its lower end an eye, as 14, adapted to be detachably engaged with a hook, as 15, on the lower end of the controlling-cord 16, which cord passes between its 15 ends over horizontally-alined guide-sheaves, as 17, separated a suitable distance and mounted in the car above the upper end of the ladder. What might be considered the outer 20 terminal end of the cord is provided with a handhold, as 18, represented as a ring.

When the ladder is folded or collapsed, it is adapted to occupy a compartment, shown as formed by what I term a "box," as 19. The box 25 19 is represented as L-shaped or is substantially right angular in cross-section, the inner portion or bottom of the box being hinged, as at 20, below the upper end of the ladder. The box 19 may be dropped down, as shown 30 in full lines in Figs. 1 and 4, for example, in order to obtain access to the ladder for the purpose of lowering the same.

In Figs. 2 and 3 the ladder is shown as folded up or housed within a compartment 35 formed by the drop-down box 19, which latter, it will be perceived, presents, in effect, when closed a panel. When the box 19 is closed, it is held in such relation by one or more catches, as 21. To open the box 19 to 40 reach the ladder, the catches 21 will be operated to effect the swinging down of the box, whereby the ladder can be readily lowered until the links 7 and 8 and 9 and 10, respectively, assume a vertical position and aline, 45 respectively, with each other. During the time the ladder is being opened the rungs 13 are moving toward a horizontal position, and when the side bars of the ladder are opened and when their lower ends rest upon the floor 50 of the car said rungs will have assumed a horizontal position, so that the ladder can be readily ascended by a passenger to enter the upper berth, with which said ladder coöperates.

To raise the ladder, the inner end of the 55 cord 16 is pulled down until the hook 15 can be engaged with the eye 14, following which the pull-piece 18 will be drawn down. When said pull-piece is drawn down, the ladder will be elevated, the links 7 and 8 and 9 and 10 60 and the rungs 13 folding automatically upon the elevation of said ladder. The ladder will be fully folded when the several links reach a horizontal position, as shown in Fig. 2. When such latter position is reached, the box 65 19 will be closed and will be fastened closed by means of the catches 21.

It will be understood that as the links 7 and 8 and 9 and 10 present when vertical, toggles it will be necessary to impart a slight 70 lateral stress to their joints in order to assure the proper elevation of the ladder.

Having thus described the invention, what I claim is—

1. A passenger-car having a collapsible ladder 75 interiorly thereof, the upper end of which is connected with the ceiling structure of said car, and said ceiling structure having a compartment to house the ladder when not in use.

2. A passenger-car having a suitably-mounted 80 collapsible ladder interiorly thereof, and means for housing and wholly hiding from view said ladder when the same is not in use.

3. A passenger-car having in the interior thereof a foldable ladder, a drop-down box to 85 contain the ladder when not in use, and means for holding the box closed.

4. A passenger-car combined with a ladder therein, the side bars of the ladder consisting of upper and lower links pivotally connected 90 together, one of the upper links being situated behind the companion upper link, and rungs flexibly connected with said lower links.

5. A passenger-car combined with a ladder 95 therein, the side bars of the ladder consisting of upper and lower links pivotally connected together, and rungs pivotally connected at their ends to the forward and rear sides of the lower links, one of the upper links being 100 situated behind the companion upper link.

In testimony whereof I have hereunto set my hand in presence of two subscribing witnesses.

JOHN O'LEARY.

Witnesses:

JOHN LYONS,

JAS. HENRY IRVING.