(No Model.)

E. A. PERKINS.

RAILROAD LADDER.

No. 356,375. Patented Jan. 18, 1887.

Fig 1

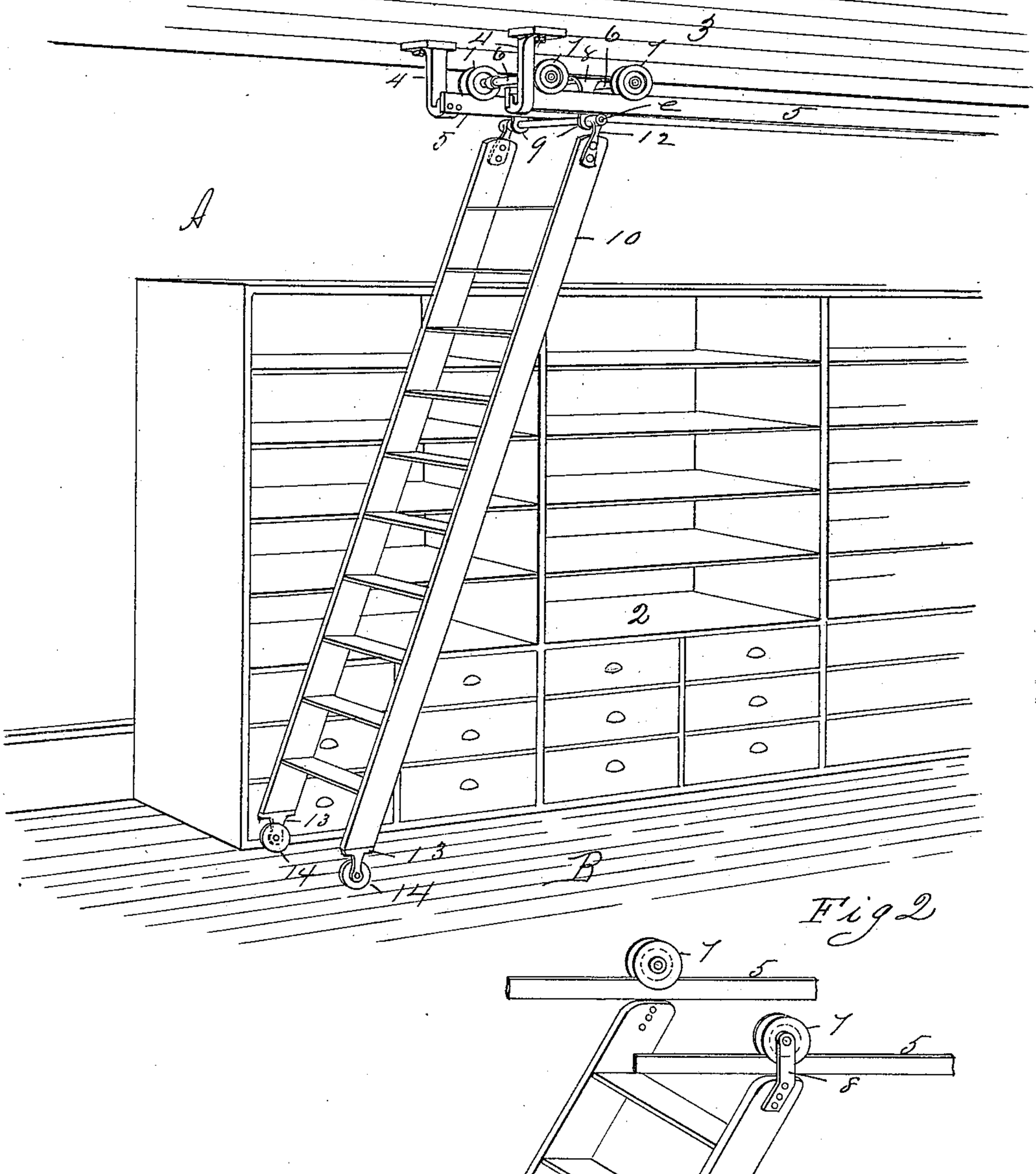

Fig 2

Witnesses.
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RAILROAD LADDER.

SPECIFICATION forming part of Letters Patent No. 356,375, dated January 18, 1887.

Application filed November 1, 1886. Serial No. 217,641. (No model.)

To all whom it may concern:

Be it known that I, EDSON A. PERKINS, a citizen of the United States, residing at Holyoke, in the county of Hampden and State of Massachusetts, have invented new and useful Improvements in Railroad Ladders, of which the following is a specification.

This invention relates to improvements in railroad step-ladders, the object being to provide improved hangings and bearings for said ladders, whereby they are moved from place to place in a room or building with ease and convenience; and the invention consists in the peculiar construction and arrangement of the ladder hangings and track therefor, all as hereinafter fully described, and pointed out in the claim.

In the drawings forming a part of this specification, Figure 1 is a perspective view illustrating a portion of the floor, the ceiling, and side walls of a room having therein a ladder and means connected therewith for moving it from place to place embodying my improvements, said figure showing between said ladder and the side wall of the room a series of shelves and drawers, thereby illustrating the practical relation to the latter in a store or other similar place of a ladder having my improvements applied thereto. Fig. 2 is a perspective view of the upper end of a ladder and of a portion of the track to which said end is attached, showing a modification of the roller-connection between the latter and said track.

In the drawings 3 indicates a portion of the ceiling of a room having attached thereto the hangers 4, and to the latter are secured two parallel rails, 5, constituting the track near said ceiling. A carriage is constructed to run on said track, consisting of two axles, 6, having thereon suitably grooved or flanged wheels, 7, said axles being connected in parallel positions by two string-pieces, 8, in the ends of which said axles have a suitable bearing and from which extend downwardly two arms, 9. The said carriage, constructed as described, is adapted to be moved on said track freely back and forth, the wheels 7 having a proper engagement with the upper edge of the latter, whereby the carriage is kept in proper position. Only two hangers 4 are shown in the drawings; but as many thereof as may be required for the proper support of the track, according to the length thereof, are in practice employed, and the lower ends of the hangers are of a hook shape, and bent inwardly toward each other in order to carry the edge of the track on which the carriage rolls far enough away from the inner side of the hangers to permit the carriage to pass freely between the latter as it is moved along. Said track, hangers, and carriage are of suitable metallic construction.

The ladder 10 is of the common step-ladder form, and has attached to the upper end thereof the arms 12, and the latter and the aforesaid arms 9, which hang down from said carriage, are perforated to provide for passing the bar *e* therethrough, as shown in Fig. 1, whereby the ladder is pivotally connected to said carriage. To the lower end of the ladder are attached two caster-rollers, 14, by means of suitable attachments, 13, on which said rollers turn. The above described pivotal connection of the upper end of the ladder with the track or with the carriage thereon provides for such unobstructed swinging movement of the lower end of the ladder as may be produced by any inequalities of the surface of the floor B as the ladder is moved over the floor, and for permitting the lower end of the ladder to roll over any slight object which may lie in its track on the floor.

The ladder 10 hung, as above described, on the ceiling of a room, and having roller-bearings on its lower end resting on the floor, affords great convenience for handling merchandise in a store or other similar place, for it is constantly in position to be mounted upon in front of the shelves 2 to put up and take down goods, and when a person has goods to place on the upper shelves, which occupy both hands to carry, the ladder can be pushed, by the application of the foot thereto, to any desired position in front of the shelves, and it is so firmly hung and supported that it can be mounted by a person without grasping it for support, and while thereon the person may move himself and the ladder along in front of the shelves by grasping the latter to reach the goods on any part thereof.

If desired, the lower end of the ladder can be swung up out of the way, and be suspended or supported by any convenient or suitable means.

Fig. 2 illustrates portions of said track, consisting of parts of said rails 5 and the upper end of the ladder 10, to which are attached two roller-arms, 8, having the rollers 7 pivoted thereto, which are adapted to roll on said track in the manner above described. The construction illustrated in Fig. 2 provides for a pivotal connection of the upper end of the ladder with the track very similar to that shown in Fig. 1, but by somewhat more direct means, the upper ends of the ladder in said Fig. 2 being somewhat curved, as shown, to permit of more or less vibratory motion in the lower end of the ladder, for the purpose above set forth.

What I claim as my invention is—

Means for movably supporting a ladder between the ceiling and the floor of a room, consisting of a track suspended from said ceiling, a carriage rolling on said track, and a ladder having its upper end pivotally connected to said carriage and having on its lower end rollers to bear on said floor, combined and operating substantially as set forth.

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