

(No Model.)

J. T. McCABE.

SUPPORT FOR TRAVELING HANGERS FOR STEP LADDERS.

No. 534,964.

Patented Feb. 26, 1895.

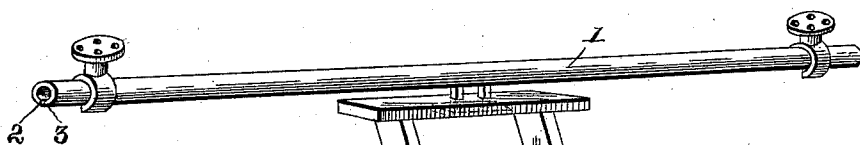


Fig. 4.

Fig. 2.

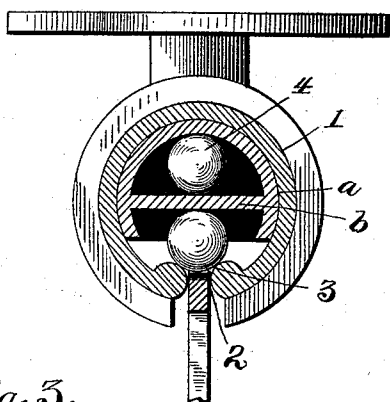


Fig. 3.

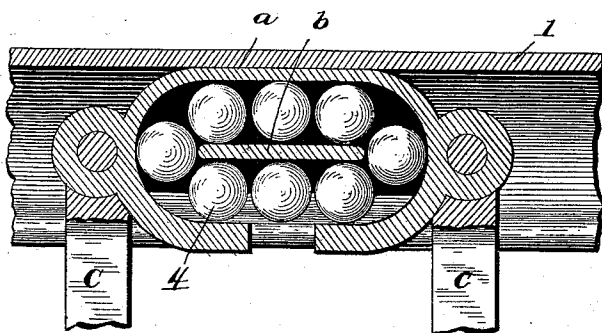
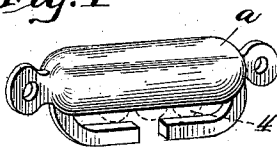


Fig. 1



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UNITED STATES PATENT OFFICE.

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SUPPORT FOR TRAVELING HANGERS FOR STEP-LADDERS.

SPECIFICATION forming part of Letters Patent No. 534,964, dated February 26, 1895.

Application filed December 8, 1893. Serial No. 493,089. (No model.)

To all whom it may concern:

Be it known that I, JAMES THOMAS McCABE, of the city of Toronto, in the county of York and Province of Ontario, Canada, have invented certain new and useful Improvements in Supports for Traveling Hangers for Step-Ladders; and I hereby declare that the following is a full, clear, and exact description of the same.

This invention relates to improvements in tubular trolley tracks adapted to support a ball-bearing hanger used in connection with movable step-ladders, and other devices of a similar nature, and the object of the invention is to so construct the track that the hanger may pass freely therethrough, and the wear of the several parts be reduced to a minimum.

To attain these ends the invention consists essentially of an overhead rail in the form of a tube having a longitudinal slot extending preferably from end to end of the same and formed at the lower extremity of the vertical diameter of the tube, the opposite meeting edges of the tube being curved into the form substantially as shown in the drawings in order to provide two rounded tracks for the ball bearing portion of the hanger to travel upon, the device being constructed and arranged as hereinafter set forth and more particularly pointed out in the claim.

In the drawings—Figure 1 is a perspective view of the traveling hanger. Fig. 2 is a cross sectional view of the same and of the tubular rail. Fig. 3 is a longitudinal sectional view of the traveling hanger and tubular rail. Fig. 4 is a perspective view showing the device in connection with a movable step-ladder.

Like numerals and letters of reference refer to like parts throughout the specification and drawings.

The carriage of the hanger consists of a shell *a* of any suitable form having a partition *b* medially located within the same, and connected to the sides of the shell. Between the under side of the partition *b* and bottom of the shell *a* is sufficient space to receive the balls *4* and between the ends of the partition *b* and the ends of the shell *a* is sufficient

space to permit the balls to pass and between the top of the partition *b* and the inner side of the top of the shell *a* is a space corresponding with the space between the under side of the said partition *b* and the inner side of the bottom of the shell *a*.

By reference to the drawings it will be noticed that the length of the shell *a* is considerably greater than the breadth, and that the space between the under side of the partition *b* and inner side of the bottom of the shell *a*, and the space between the top of the partition *b* and the under side of the top of the shell *a*, and the space between the ends of the said partition *b* and the ends of the shell, form an elliptical or continuous track for the balls. During the travel of the carriage the balls work continuously around the said space or track. It will be noticed that the bottom portion of this carriage is so cut away as to permit the balls *4* to run upon the ways *3* in order that the carriage, during its travel from end to end of the tube, may be relieved of unnecessary friction. Depending from the shell are two arms *c c* which, as shown in the drawings, are connected to the top of the ladder *D*, or they may, if so desired, be connected to any other article which the carriage is carrying. I do not confine myself to any particular means for connecting these arms to the carriage, nor to their location at any particular part of the carriage. As shown in the drawings, the carriage travels in a tubular metallic rail *1* having a slot *2* extending longitudinally from end to end thereof and within its lower side. Within the tubular rail *1* and located one on either side of the slot *2* are two convex bearing surfaces or ways *3* along which travel the balls *4* of the hanger. The balls *4* are made preferably of case-hardened or chilled steel, and it is advisable, when possible, to harden the convex bearing surfaces *3* in order that there will be as little friction as possible between the balls and the said bearing surfaces.

I do not confine myself to the specific use of applying my hanger to movable step-ladders, as it is obvious I can apply it to sliding doors and other devices of a similar character. Having thus fully described my invention,

what I claim as new, and desire to secure by Letters Patent, is—

A tubular trolley track having at its under side two parallel ways with an intermediate
5 slot, each of the parallel ways curved to form a convexed bearing surface, and adapted to support a carrier body consisting of a shell

and ball bearings to roll along the said ways; substantially as specified.

Toronto, November 17, 1893.

JAMES T. MCCABE.

In presence of—

DONALD C. RIDOUT,
C. H. RICHES.