

(No Model.)

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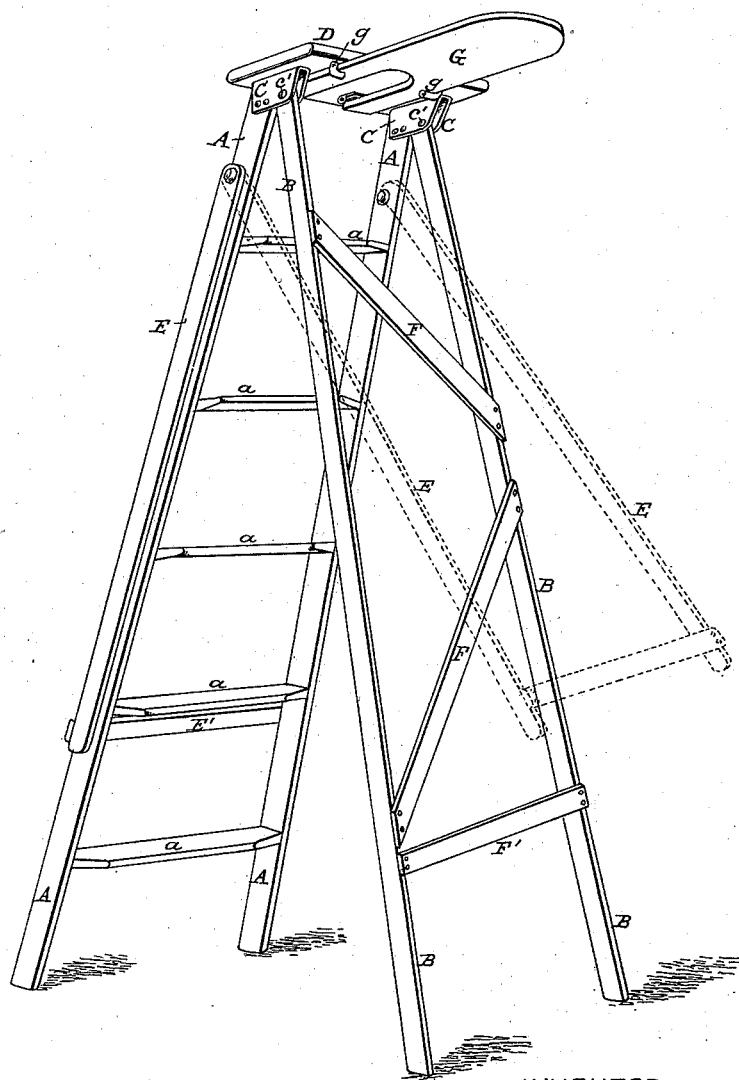
J. T. MILLER.

STEP LADDER.

No. 384,210.

Patented June 5, 1888.

FIG. 1.



ATTEST:

Geo H Arthur,
W J Murphy.

INVENTOR:

John T. Miller,
by, *Robert Burns,*
Attorney.

(No Model.)

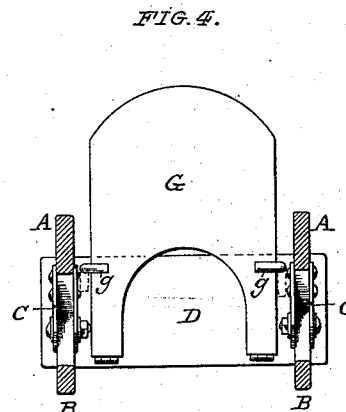
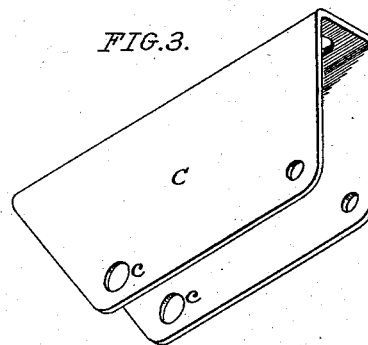
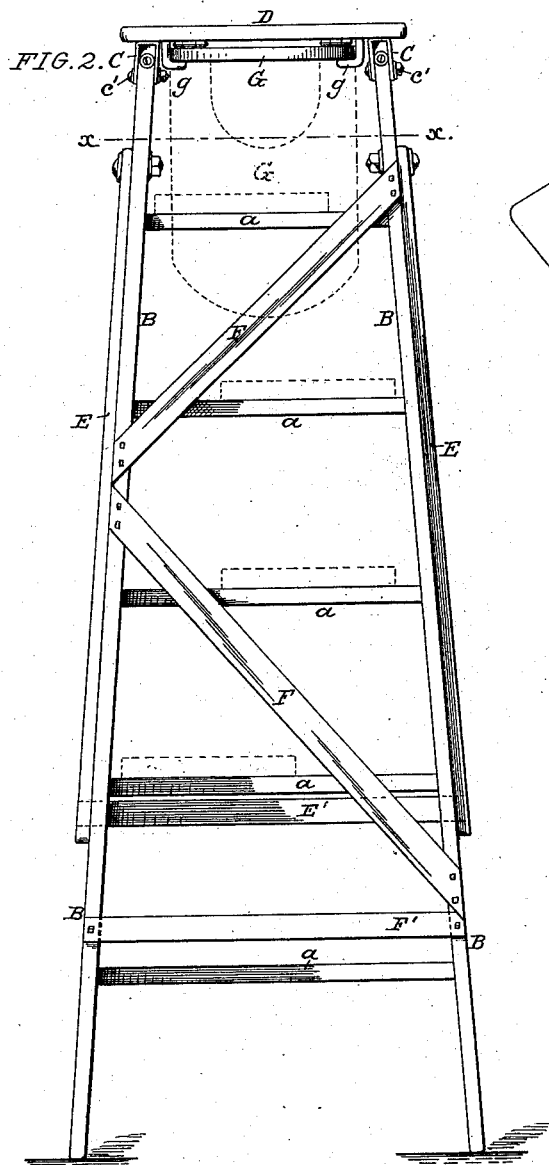
2 Sheets—Sheet 2.

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INVENTOR:

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Attorney.

UNITED STATES PATENT OFFICE.

JOHN T. MILLER, OF CHICAGO, ILLINOIS.

STEP-LADDER.

SPECIFICATION forming part of Letters Patent No. 384,210, dated June 5, 1888.

Application filed October 1, 1887. Serial No. 251,255. (No model.)

To all whom it may concern:

Be it known that I, JOHN T. MILLER, a citizen of the United States, and a resident of Chicago, in the county of Cook and State of Illinois, have invented certain new and useful Improvements in Step-Ladders; and I do hereby declare the following to be a full, clear, and exact description of the same, reference being had to the accompanying drawings, forming a part of this specification, and in which—

Figure 1 is a perspective view of a step-ladder to which my improvements are applied; Fig. 2, a rear elevation of the same; Fig. 3, a perspective view of the saddle clip or bracket for hinging the rear support or legs to the main ladder portion, and Fig. 4 an inverted sectional view illustrating the folding-bucket shelf or rest and its connections.

Similar letters of reference indicate like parts in the several views.

This invention relates to the class of step-ladders that are provided with a rear support or legs hinged to the upper end of the ladder and adapted to fold against the same when not in use; and the present improvement has for its objects, first, to afford a strong, durable, and efficient means for pivoting the rear support or legs to the ladder proper, and which at the same time obviates the necessity of tie-rods, cords, &c., to prevent too great a spread of the parts; second, to furnish a folding supplementary support for the step-ladder adapted for use when the ladder is employed upon stairs and other sloping places; and, third, to furnish a bucket rest or shelf at the top of the ladder, simple and durable in construction and adapted to fold down out of the way when not required for use.

To enable others skilled in the art to which my invention appertains to make and use the same, I will now proceed to more fully describe its mode of construction.

Referring to the drawings, A represents the usual side bars which, with the steps *a*, form the main section of the ladder, and B the rear supporting legs or section having suitable braces, F F', and hinged to the main section at or near its top to constitute the ordinary step-ladder.

The first part of my improvement relates to the means employed to hinge the two ladder-sections together. In this C is an inverted

U-shaped saddle clip or bracket secured to the under side of the top step, D, and to the upper ends of the side bars, A, by bolts or other equivalent means, its side plates being provided with pivot-holes *c* for the pin or bolt *c'*, that forms the pivot upon which the rear section hinges, B, hinge. With this construction the side plates of saddle clip or bracket, by embracing both sides of the bars forming the front and rear sections, not only afford a very strong and substantial connection, but at the same time furnish, by means of their horizontal top plate or member, a simple and efficient means for attaching the top step, D, to the side bars, A, of the ladder.

The second part of my improvement relates to a supplementary support or legs for use upon stairs or other sloping places. It consists of a pair of vertical bars, E, of a less length than the main support or legs B, as shown, and pivoted to the side bars, A, or to the rear legs, B, as desired, and provided at their free ends with a cross bar or rail, E'. This supplementary support is adapted to swing over the top of the ladder into the required position for use, and when not needed can be swung either to the front of the ladder, as shown in Figs. 1 and 2, with its rail E' immediately below one of the steps *a*, where it will not be in the way, or swung back upon the rear support or legs, as found most desirable and convenient. When desired, this supplementary frame can be provided with means to secure it in a vertical position to act as a steady rest or bucket-supporting attachment, as described in my former application for a patent for step-ladder, Serial No. 227,078, filed February 9, 1887.

The third part of my improvement relates to a folding-bucket support for the top of the ladder. In this G is a board or shelf of a suitable size, hinged in any usual manner immediately beneath the top step, D, and near the front edge of the same. This shelf is adapted to fold down in a vertical plane at the rear of the main section when not required for use, and when required for use it is brought into a horizontal plane and locked therein by means of suitable turn-buttons or hooks, *g*, upon the under side of the top step, as indicated in Figs. 1 and 4.

I am aware that prior to my invention it

was usual to provide step-ladders with supplementary legs or supports to steady the same against lateral movement; also that it was not new to form a ladder-hinge by means of a horizontal U-shaped metal strap, embracing the ladder side bars and rear support or legs. I therefore do not claim either of such constructions, broadly, but

What I do claim as my invention, and desire to secure by Letters Patent, is—

1. A hinge for step-ladders, consisting of an inverted-U-shaped saddle clip or bracket, C, adapted to be secured by its horizontal plate or member to the top step, D, and by its vertical plates or members to the side bars, A, and rear support, B, in the manner and for the purpose set forth.

2. The combination, with a folding step-ladder, of a supplementary support or legs, E, of a less length than the main support B, and adapted to fold out of the way when not in use in a radial plane parallel with the main support, essentially as herein described.

3. A step-ladder having a shelf or bucket support, C, hinged immediately beneath the top step and near the front edge of same, in combination with the turn-buttons or hooks g, essentially as and for the purpose set forth.

In testimony whereof witness my hand this 20th day of August, 1887.

JOHN T. MILLER.

In presence of—

ROBERT BURNS,
GEO. H. ARTHUR.