(No Model.)

H. H. SCHUMANN.

LADDER.

No. 322,980. Patented July 28, 1885.

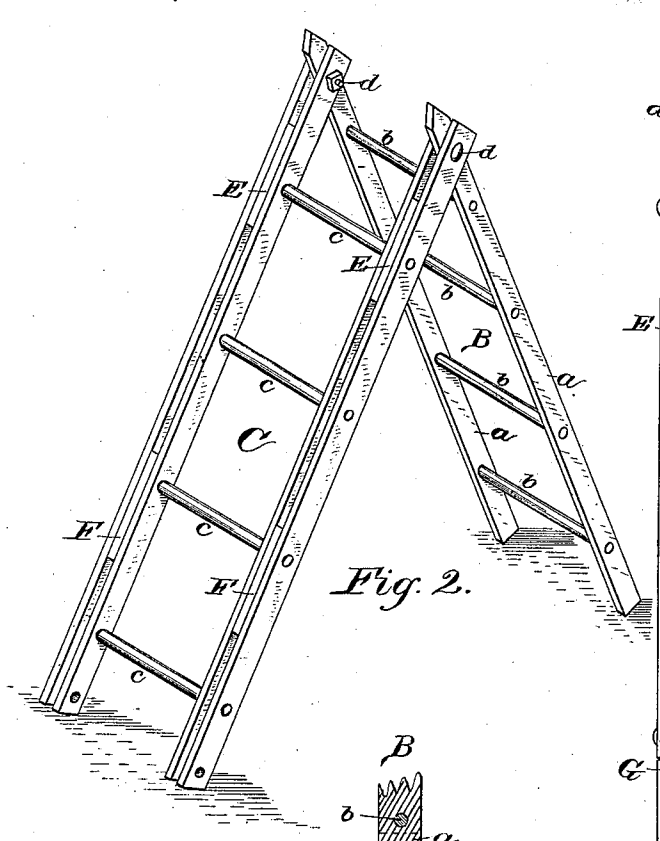


Fig. 2.

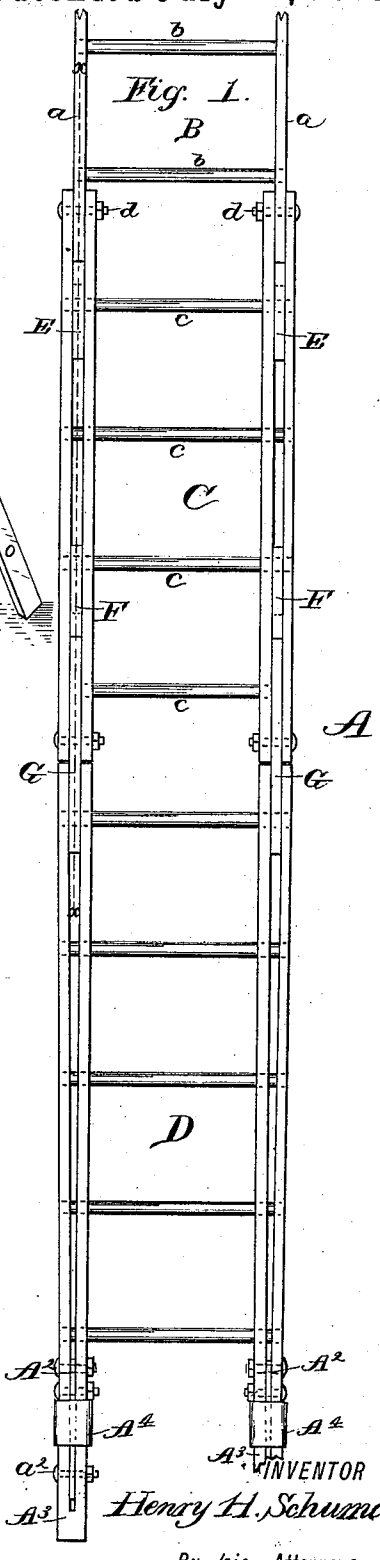


Fig. 1.

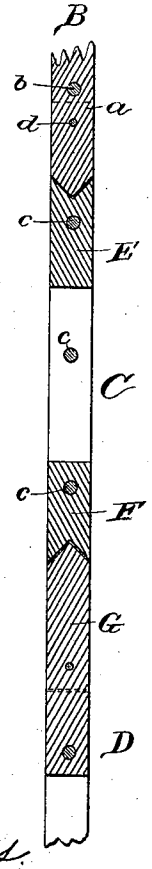


Fig. 3.

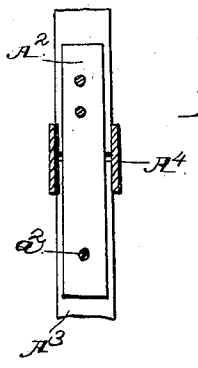


Fig. 4.

WITNESSES

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UNITED STATES PATENT OFFICE.

HENRY H. SCHUMANN, OF TROY, PENNSYLVANIA, ASSIGNOR OF ONE-THIRD TO CHARLES MUTH, OF SAME PLACE.

LADDER.

SPECIFICATION forming part of Letters Patent No. 322,930, dated July 28, 1885.

Application filed May 22, 1885. (No model.)

To all whom it may concern:

Be it known that I, HENRY H. SCHUMANN, a citizen of the United States, residing at Troy, in the county of Bradford and State of Pennsylvania, have invented a new and useful Improvement in Ladders, of which the following is a specification, reference being had to the accompanying drawings.

My invention relates to sectional ladders, the object being to provide a device of this character which may be readily and easily converted into a step-ladder, and to efficiently serve as both a ladder and step-ladder.

A further object of the invention is to provide means, which will, when the ladder is converted into a step-ladder, hold the sections against slipping or spreading.

With the above and other objects in view, the invention consists in the improved construction and combination of parts hereinafter fully described, and pointed out in the claims.

In the drawings, Figure 1 is a front elevation of a ladder constructed in accordance with my invention. Fig. 2 is a perspective view showing the same converted into a step-ladder, and Fig. 3 is a vertical section on the line *x x* of Fig. 1. Fig. 4 is a section on line *y y* of Fig. 1.

In the accompanying drawings, in which like letters of reference indicate corresponding parts in all the figures, A represents the ladder, which consists of a series of sections, B C D. The upper or top section, B, is composed of the two side pieces, *a*, connected by the horizontal parallel bars *b*, which form the rungs. The side pieces, *a*, of the top section, B, have their ends cut off to a V shape, as shown, and for the purpose which will be more fully explained. The section C is composed of the sides, connected by rungs *c*, each of said sides being composed of two pieces or strips, and between said pieces or strips, near the upper and lower ends thereof, are secured blocks E F, the blocks E, which are located near the upper end of the section, having V-shaped recesses at their upper ends, and the blocks F, which are located near the lower end of the ladder, having V-shaped recesses at their lower ends. The section D is composed of two sides, each of which sides is composed of two pieces, between the upper ends of which are secured strips G, having V-shaped upper ends, and projecting beyond the upper end of said section. Inasmuch as this section is the last or lower one in the present case, the pieces composing the sides of the same are secured together at their lower ends; but it will be seen that where another section is employed that a section similar to that just described, but having projecting strips at its lower end, would be employed.

In putting the ladder together the lower ends of the sides of the top section, B, fit in the V-shaped recesses of the block E in the section C, and are secured in place by transverse pins *d*, as shown. The strips G fit the recesses in the lower ends of blocks F, and are secured in place by pins.

To use the ladder as a step-ladder two sections are employed, and the pins for holding the sections together are removed to allow the sections to be separated. The sections are then placed together, so that the upper ends of the sides of section C will fit between the sides of section D, and the sections are held together by pins passing through the openings in the upper ends of the section.

The sides of the lower section of the ladder may be provided with downwardly-extending metal plates or tongues A^2, which are adapted to fit in slots or recesses in the upper ends of extensions A^3, by which arrangement the ladder may be leveled when on uneven ground, the said plates or tongues being provided with a series of openings adapted to be engaged by a pin, a^2, working in openings in the extension-piece. A collar, A^4, is also employed to hold the sections when together, as shown in Fig. 1.

It will be seen that, if desired, the metal tongues might be employed at all the sections, and serve as a means for connecting the same, the metal collars serving to hold the sections rigid.

Having fully described my invention, what I claim is—

1. A ladder consisting of a series of sections detachably secured together, one of said sections having projecting strips to which the

other section is adapted to be secured, substantially as set forth.

2. A ladder consisting of a series of sections, one of said sections having blocks secured between the strips composing its sides, said blocks having V-shaped recesses, and the other section having strips having V-shaped upper ends projecting from between the strips composing its sides, as set forth.

3. A ladder having the projecting tongues A^2, the bands or collars A^4, and the strip A^3, as set forth.

In testimony that I claim the foregoing as my own I have hereto affixed my signature in presence of two witnesses.

HENRY H. SCHUMANN.

Witnesses:
CHARLES MUTH,
ELMER PEARSALL.