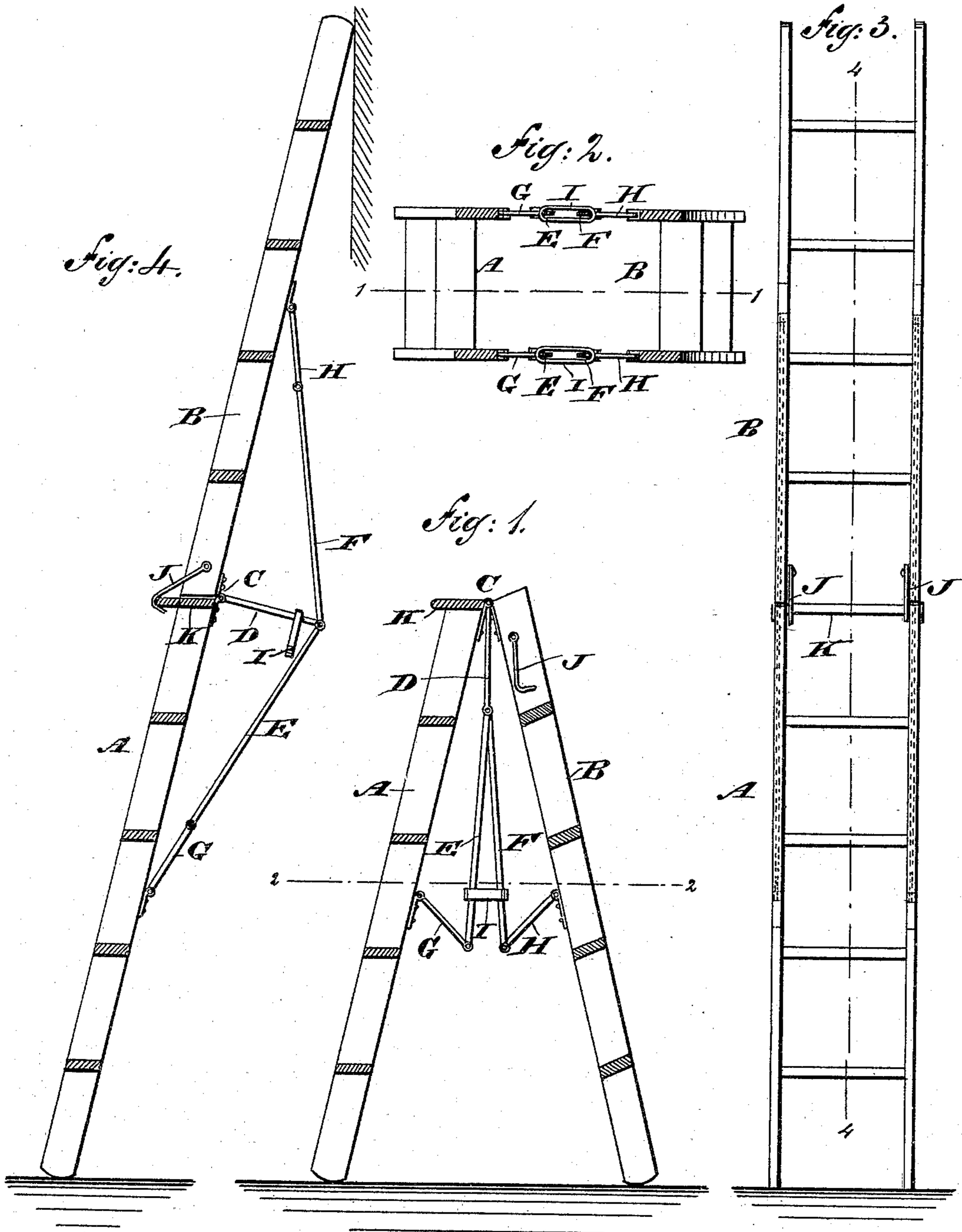


(No Model.)

C. V. CHILDS.
LADDER.

No. 493,977.

Patented Mar. 21, 1893.



WITNESSES:

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UNITED STATES PATENT OFFICE.

CHARLES V. CHILDS, OF PITTSBURG, PENNSYLVANIA.

LADDER.

SPECIFICATION forming part of Letters Patent No. 493,977, dated March 21, 1893.

Application filed May 20, 1892. Serial No. 433,652. (No model.)

To all whom it may concern:

Be it known that I, CHARLES V. CHILDS, of Pittsburg, in the county of Allegheny and State of Pennsylvania, have invented a new and Improved Ladder, of which the following is a full, clear, and exact description.

The object of the invention is to provide a new and improved ladder, which is simple and durable in construction, and arranged to be quickly and conveniently changed from a step-ladder to a straight ladder, and vice versa.

The invention consists of a ladder made in two sections hinged together, and a truss connecting the two sections with each other, in such a manner as to prevent the sections from spreading when the ladder is used as a step ladder and to strengthen the sections when they are extended to form a straight ladder.

The invention also consists of certain parts and details and combinations of the same, as will be fully described hereinafter and then pointed out in the claims.

Reference is to be had to the accompanying drawings forming a part of this specification, in which similar letters of reference indicate corresponding parts in all the figures.

Figure 1 is a sectional side elevation of the improvement on the line 1—1 of Fig. 2, and arranged as a step-ladder. Fig. 2 is a sectional plan view of the same on the line 2—2 of Fig. 1. Fig. 3 is a front view of the improvement arranged as a straight ladder; and Fig. 4 is a sectional side elevation of the same on the line 4—4 of Fig. 3.

The improved ladder is made in two sections A and B, connected with each other at their side beams by hinges C, each hinge provided with a hinge rod D, pivotally connected at its outer end with truss rods E and F, connected with short rods G and H, respectively pivoted to the side beams of the sections A and B. This rod D and the rods E, F and G, H form a truss to strengthen the two sections A and B when extended, as shown in Figs. 3 and 4.

In order to prevent the sections A and B from spreading when used as a step-ladder, as illustrated in Figs. 1 and 2, a link I is

passed over the rods E and F, so that the latter are locked in place which consequently prevents spreading of the sections A and B.

In order to prevent accidental displacement of the sections A and B, when extended as a straight ladder, as shown in Figs. 3 and 4, hooks J are provided, pivoted to the side bars of the section B and engaging the top step K of the section A, so as to prevent accidental closing of the said sections, as will be readily understood by reference to Fig. 4.

It will be seen that a ladder of this construction can be very cheaply manufactured and readily changed from a step-ladder to a straight ladder, and vice versa, according to the use intended to be made of the ladder.

Having thus fully described my invention, I claim as new and desire to secure by Letters Patent—

1. A ladder formed of two sections hinged together at their upper ends, rods D depending from the hinge joints depending truss rods E F, pivoted at their upper ends to the lower ends of rods D, and short rods G H pivoted at their inner ends to the lower ends of truss rods E F respectively and at their outer ends to the respective ladder sections, substantially as set forth.

2. A ladder formed of two sections hinged together at their upper ends, a hook to connect the two sections when swung into longitudinal alignment, and a truss connection between the two ladder sections bracing them when in their extended or folded positions, substantially as set forth.

3. A ladder comprising two sections hinged together, truss rods hinged to the said sections and pivotally connected with each other, a rod connecting the joint of the truss rods with the hinge of the ladder sections, and a link adapted to be passed over the said truss rods to lock the latter in place, substantially as shown and described.

CHARLES V. CHILDS.

Witnesses:

WILLIAM L. CROSGROVE,
D. B. KENNEDY.