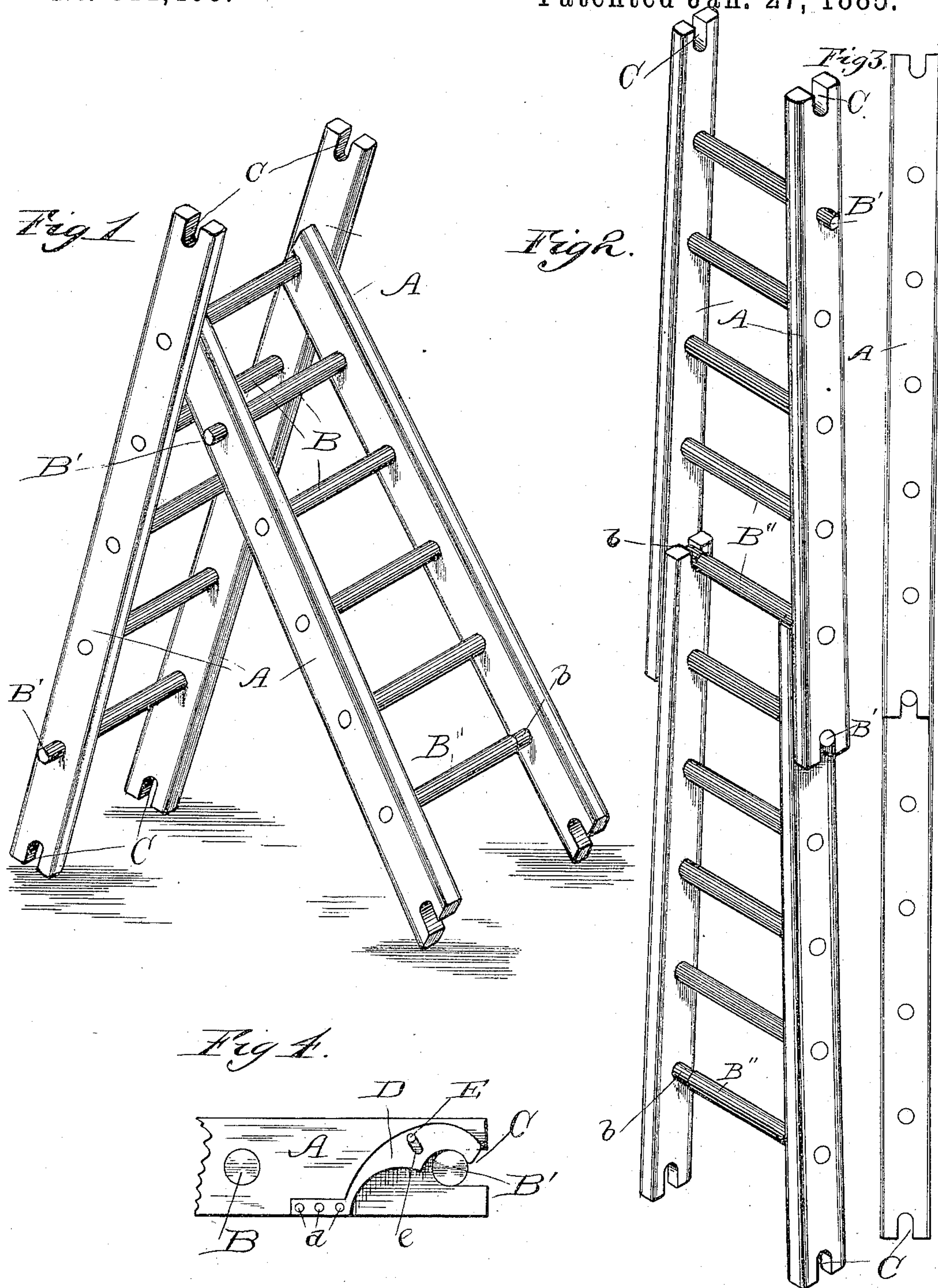


(No Model.)

H. AYRES.
LADDER.

No. 311,406.

Patented Jan. 27, 1885.



Witnesses:
Taylor E. Brown
Chas. O. Gaylord

Inventor:
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his Atty.

UNITED STATES PATENT OFFICE.

HOBART AYRES, OF CLINTON, IOWA.

LADDER.

SPECIFICATION forming part of Letters Patent No. 311,406, dated January 27, 1885.

Application filed June 27, 1884. (No model.)

To all whom it may concern:

Be it known that I, HOBART AYRES, a citizen of the United States, residing at Clinton, in the county of Clinton and State of Iowa, have invented a new and useful Improvement in Ladders, of which the following is a specification.

My invention relates to improvements in ladders having side bars connected together by rungs; and the object of my invention is to construct a ladder or section of a ladder of such form and in such a manner that all "sections," as they are termed herein, may be a duplicate of all other sections, and any desired number of such sections may be joined or fitted together in the manner hereinafter more fully described, for the purpose of forming a long continuous ladder, a step-ladder, trestle for staging purposes, and other like uses.

I am aware that a ladder of the same general character as the ladder invented by me, and here described, was invented by one G. Ckertizza, to whom Letters Patent No. 58,984, dated October 23, 1866, were granted; and I do not therefore claim, broadly, the principle herein described of constructing a ladder in sections having sides so sloping that the narrow end of one section shall fit within the wider end of any other, with slots and bars of the character described in the patent herein referred to.

I have illustrated my invention by the drawings accompanying this specification, in which Figure 1 represents two sections of my improved ladder placed together to form a step-ladder or trestle. Fig. 2 is a plan of two sections of my improved ladder placed together to form a continuous ladder. Fig. 3 is an elevation of Fig. 2. Fig. 4 is an elevation of any one of the ends of the side bar of my improved section-ladder, showing a catch or hook for holding firmly together the different sections. This catch may or may not be used, as preferred.

Like letters refer to like parts throughout the several views.

A A are the side bars of my improved ladder. These sides or side bars are inclined or sloped together, so that the narrow end of one

section fits within the wider end of any other section.

B B are the rungs.

B' B' are the ends of the rungs placed at the narrow end of each section, which project beyond or outside of the side bars.

b b is that portion of the rung placed at the larger end of the section, which is made smaller than the remainder of said rung. B' B' and b b (of rungs B B'') are of the same size.

C is the slot in the side bars, at each end thereof, and in which slots that portion of the rungs B and B' lettered, respectively, B' and b fits or enters.

D is a spring-catch attached to one end of side bar, A, by bolts d.

E is a bolt or pin fitting into slot e on spring-catch D.

That portion of the rung B' lettered b and shown in Figs. 1 and 2, which is smaller than the remainder of said rung, fits closely into slot C, and by reason of the shoulder formed by said portion b of rung B' being smaller than the remainder of said rung all side spring or movement in side bars, A A, is prevented; and by reason of the end rungs being round and having the shoulder above described any two of the sections may be joined together in the manner illustrated in Fig. 1, and the lower end of each section brought together as closely as required. By thus joining the sections together a step-ladder or trestle may be easily and quickly formed.

Where it is desired to form a long continuous ladder composed of several sections, and the use to which the same is to be put is of such character that great strength as well as prevention from accidental or malicious disconnection is required, a spring or other catch substantially like the one illustrated in Fig. 4 may be used.

Having thus described my invention, its construction, and method of operation, what I claim, and desire to secure by Letters Patent, is—

1. The combination, in a ladder, of sides so sloping that the narrow end of one section fits within the wider end of any other section,

with slots C C, and the bar B, having projections B' B', and bar B'', having shoulder or smaller portion *b b*, all substantially as described, and for the purpose specified.

- 5 2. The combination, in a ladder, of sides so sloping that the narrow end of one section fits within the wider end of any other section, with slots C C, spring-catch D, and the bar

B, having projections B' B', and the bar B'', having smaller portion or shoulder *b*, all substantially as described, and for the purpose specified. 10

HOBART AYRES.

Witnesses:

T. E. SPAEDS,
CHARLES T. BROWN.