

(No Model.)

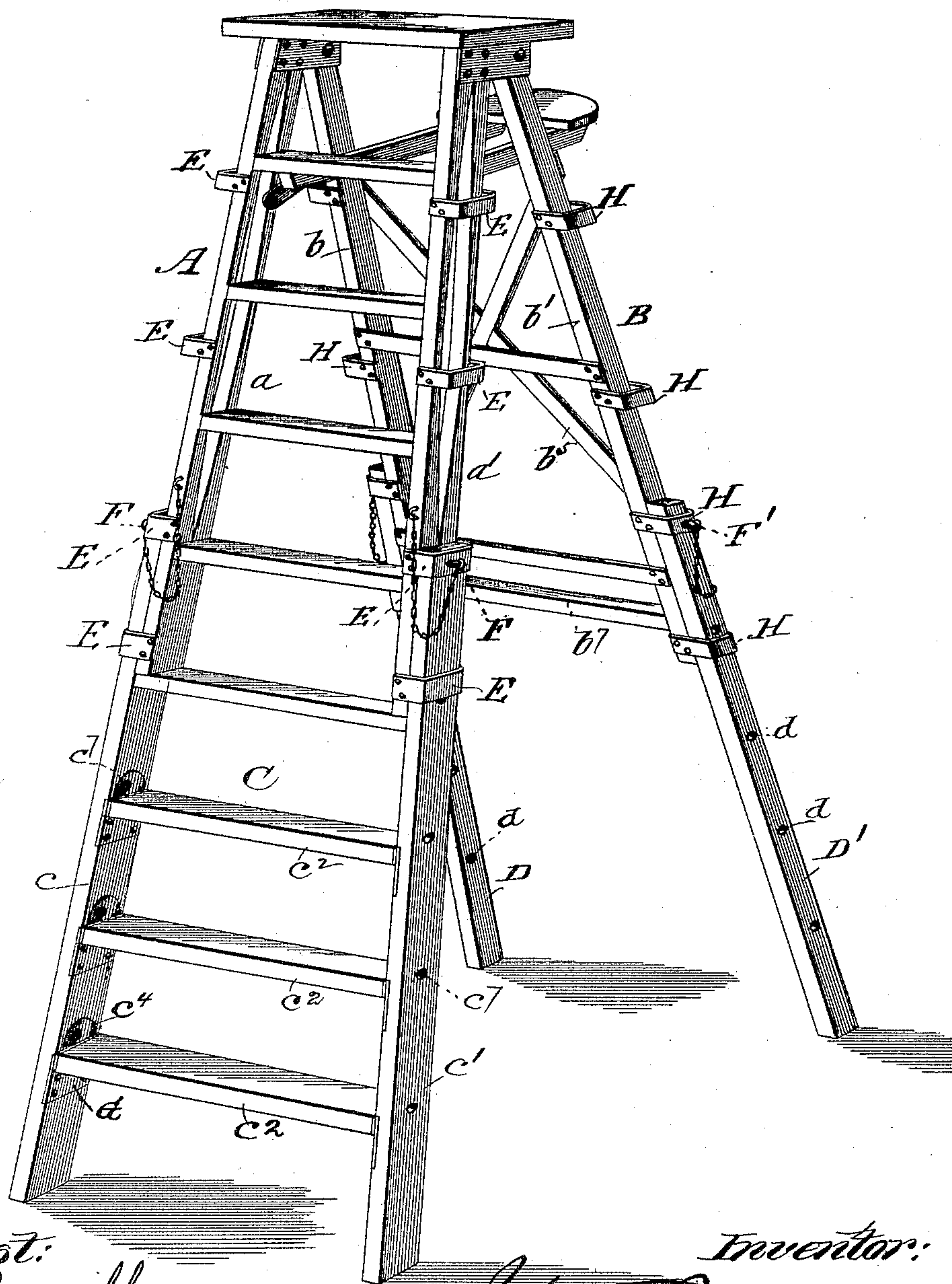
2 Sheets—Sheet 1.

J. T. EICHELBERGER.
STEP LADDER.

No. 497,712.

Patented May 16, 1893.

Fig. 1.



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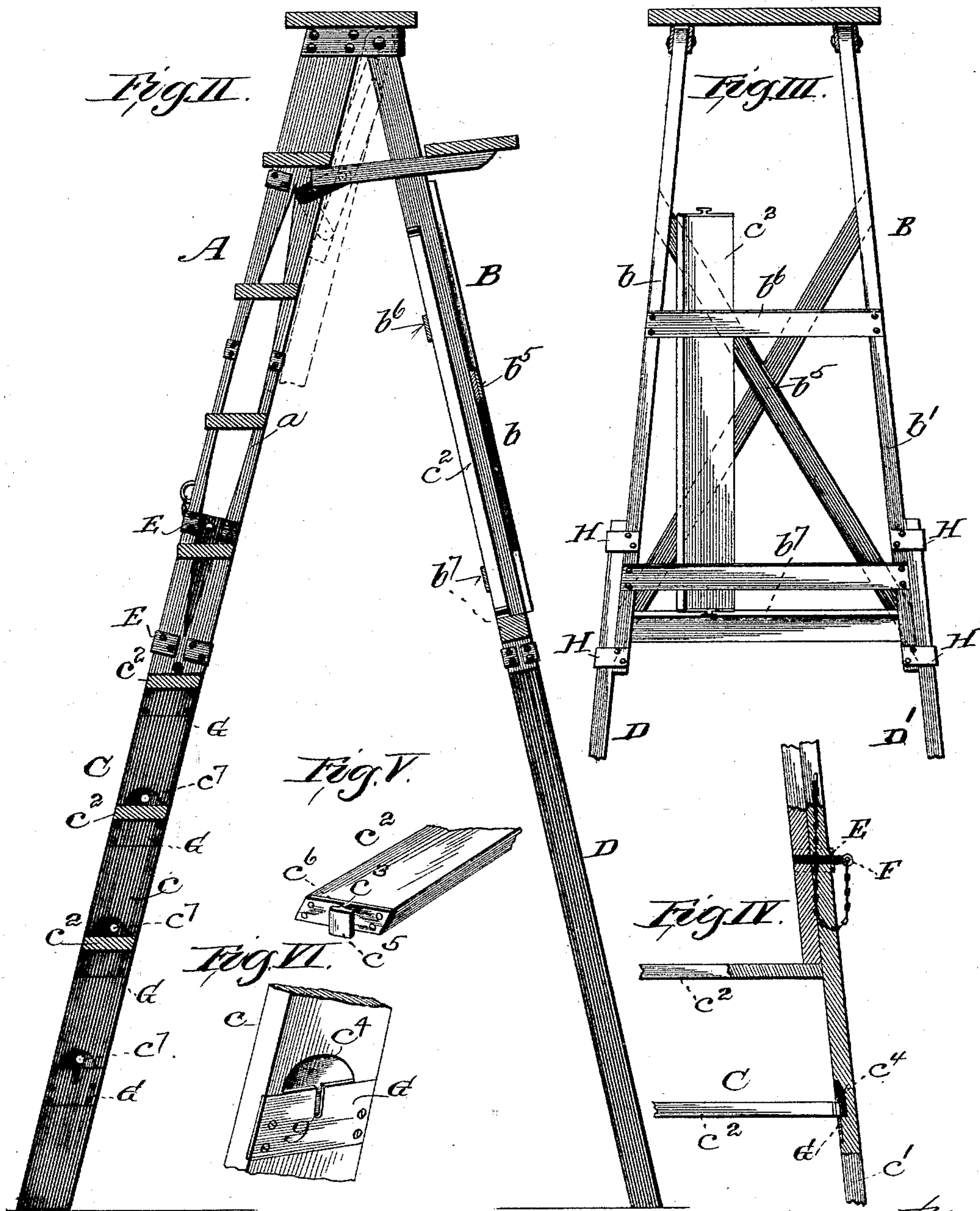
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UNITED STATES PATENT OFFICE.

JOHN T. EICHELBERGER, OF ST. LOUIS, MISSOURI.

STEP-LADDER.

SPECIFICATION forming part of Letters Patent No. 497,712, dated May 16, 1893.

Application filed March 15, 1892. Serial No. 425,013. (No model.)

To all whom it may concern:

Be it known that I, JOHN T. EICHELBERGER, of St. Louis, Missouri, have made a new and useful Improvement in Step-Ladders, of which the following is a full, clear, and exact description.

The leading feature of the improvement is the provision whereby a step ladder can be extended, substantially as is hereinafter set forth and claimed, aided by the annexed drawings, making part of this specification, and exhibiting the most desirable mode of carrying out the improvement, in which—

Figure 1 is a view in perspective of the improved ladder extended; Fig. 2 a sectional side elevation of the same; Fig. 3 a front elevation of the upper portion of the ladder; a portion of the construction appearing in Figs. 1 and 2 is omitted; Fig. 4 a detail in vertical section, exhibiting the mode of interlocking the extension with the main portion of the ladder when the ladder is extended, and also the mode of securing the steps of the extension; Fig. 5 a view in perspective showing an end of one of the extension-steps; and Fig. 6 a view in perspective showing the portion of the extension with which the step engages.

The same letters of reference denote the same parts.

The upper portion of the construction under consideration is mainly in the usual form, it being, substantially, an ordinary step ladder, whose step-portion A, and leg B, are made, united, and operated in the customary manner, saving as modified or supplemented, by the extension-mechanism which, when the ladder is opened out, constitutes its lower portion. Said lower portion is composed of the ladder C, and the legs D, D'. The ladder, C, consists of the sides, c, c', and the steps, c², substantially, and it is adapted to coact with the portion, A, of the upper part of the ladder. The sides, c, c', when not in use can be telescoped upon the sides, a, a', respectively of the portion A, and, when used, to be drawn out into the position shown substantially in Figs. 1 and 2. To this end the sides, a, a', are each provided with clips, E, into which the sides, c, c', can be slipped, and the lower ones of which serve to hold the sides, c, c', in position, and to secure them to the sides, a, a', when the extension is in use. Any suitable

means, such as the pins, F, F', may be used to hold the sides, c, c', longitudinally in place upon the sides a, a', respectively when the ladder is extended. In this position the ends of said sides a, a', will also rest upon and be steadied by the upper removable step c². In order that the sides, c, c', may be thus telescoped upon the sides a, a', the steps, c², are made removable from the sides c, c'. In carrying out this feature of the construction the means exhibited in Figs. 4, 5, and 6 are considered the most desirable. The step, c², at each end thereof is provided with a projection, c³, which, when the step is in position, engages in a plate, G, which is secured to the inner side of the side, c, and slotted at g, to receive the projection; the sides c, c', are each recessed at c⁴, to admit the enlarged portion, c⁵, or head, of the projections c³, and the neck, c⁶, of the projection is suitably extended vertically, and the slot g, is correspondingly extended, to enable the step, c², to be when in position for use, kept from turning in its supports. Any other suitable method can be adopted whereby the steps, c², can be made detachable from the sides c, c', and when attached to the sides to be securely held therein. It will also be seen that the steps when thus interlocked with the sides, c, c', serve to hold the sides laterally in position. The legs, D, D', can be similarly closed and drawn out from the sides, b, b', respectively, of the legs B, and for this purpose said sides b, b', are provided with clips H, in a manner analogous to the clips E upon the sides a, a', and the legs D, D', are similarly confined therein. Pins, F, F', are the preferable means for confining the legs, D, D', longitudinally when in use.

The sides c, c', have a series of perforations, c⁷, and the legs D, D', have a series of perforations, d, and the lowest clips E and H, are also perforated, substantially as shown, to provide for the proper insertion of the pins F, F', as indicated. When the extension is not needed, and its vertical members are closed as described upon the upper portion of the construction, the steps, c², can be conveniently stowed in the leg B, substantially as is indicated in Figs. 2 and 3, and for this purpose the leg B, by means of any suitable cross pieces such as the bracing b⁵ and the strips

b^6, b^7 , can be adapted to form a rack to receive the steps as indicated.

I claim—

1. In a step ladder the combination of the
5 step portion A, and leg portion B, each having clips attached thereto, with the lower portion C, having steps c^2 , the legs D D', and the pins F F', whereby when the ladder is extended it is held in position by the pins which pass
10 through the clips and the sides of the ladder and by the upper step c^2 , on which the lower ends of the sides $a a'$, of the step portion rest, substantially as described.

2. The ladder C, the sides $c c'$, of which are
15 recessed at c^4 , the slotted plates G, secured to the said sides and the steps c^2 , each provided at the ends with a projection c^5 , adapted to

engage in the said slotted plates, whereby each of said steps c^2 , can be removed at pleasure, substantially as shown and described. 20

3. The combination of the leg portion B, having bracing b^5 , and strips $b^6 b^7$, whereby a rack is formed for the removed steps c^2 , in the manner and for the purposes set forth, whereby when the ladder is not in use said steps 25 can be conveniently stowed, substantially as described.

Witness my hand this 29th day of February, 1892.

JOHN T. EICHELBERGER.

Witnesses:

C. D. MOODY,
A. BONVILLE.