(No Model.)

O. RICHARDSON.

STEP LADDER.

No. 603,579. Patented May 3, 1898.

Fig. 1.

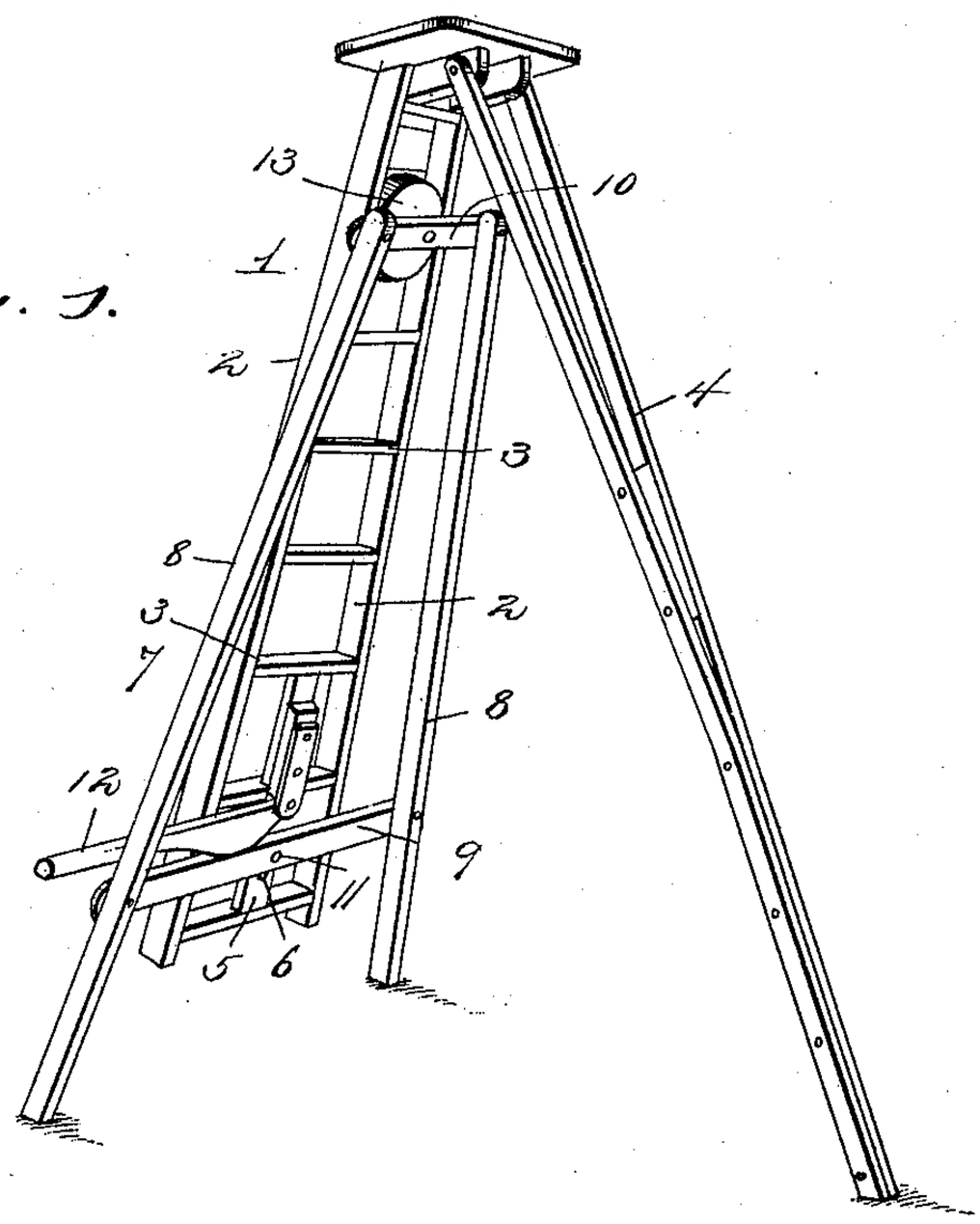


Fig. 2.

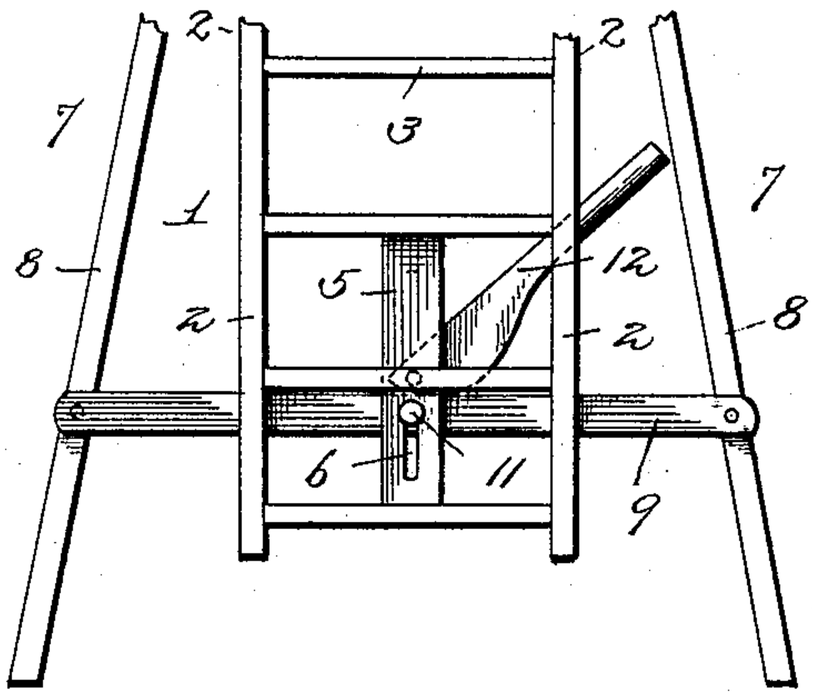
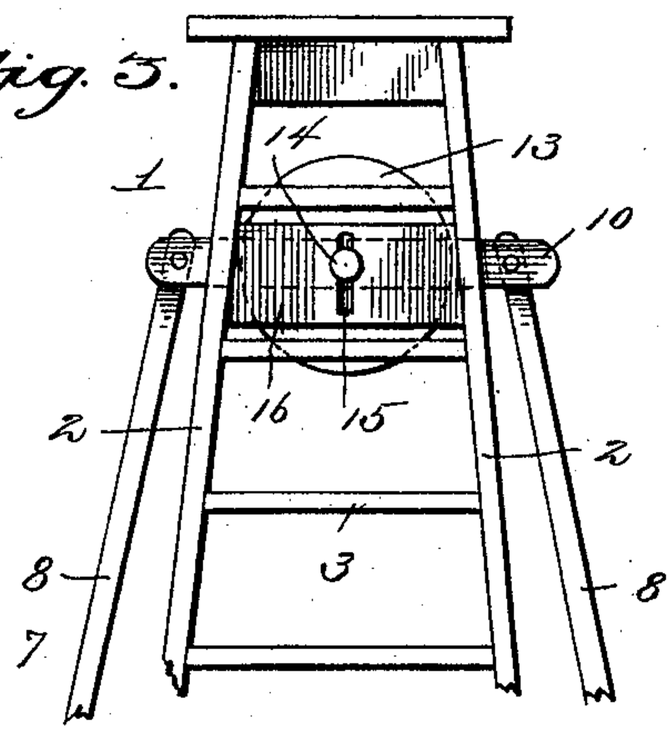


Fig. 3.



Witnesses
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UNITED STATES PATENT OFFICE.

ORRIN RICHARDSON, OF CLIPPER GAP, CALIFORNIA.

STEP-LADDER.

SPECIFICATION forming part of Letters Patent No. 603,579, dated May 3, 1898.

Application filed July 2, 1897. Serial No. 643,264. (No model.)

To all whom it may concern:

Be it known that I, ORRIN RICHARDSON, of Clipper Gap, in the county of Placer and State of California, 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 invention, such as will enable others skilled in the art to which it appertains to make and use the same.

My invention is designed for the production of a step-ladder which may be used upon hilly or uneven ground, the object of the same being to provide in a step-ladder supporting mechanism which will accommodate itself to uneven surfaces and means for locking the supporting mechanism in adjusted position.

The invention consists of a step-ladder comprising a step-frame, a supporting-leg pivoted thereto, a supporting-frame for the step-frame whose members are pivotally connected one to the other, and means for locking the supporting-frame and step-frame together.

More specifically the invention consists of a step-frame whose side bars converge at their upper ends, a supporting-leg pivoted thereto, a vertically-disposed guide-bar at the lower end of said step-frame, a supporting-frame for the step-frame comprising legs pivoted to cross-bars at the upper and lower ends thereof, a circular disk secured to the upper of said cross-bars adapted to fit between the converging upper ends of the side rails of the step-frame, a pin on the lower of said cross-bars fitting within the slot in said guide-bar, and a cam-lever fulcrumed to the step-frame and adapted to bear against the lower of said cross-bars.

The invention also consists in other details of construction and combination of parts, which will be hereinafter more fully described and claimed.

In the drawings forming a part of this specification, Figure 1 represents a perspective view of my step-ladder in operative position. Fig. 2 is a detail front elevation of the lower end thereof on an enlarged scale. Fig. 3 is a similar view of the upper end thereof.

Like reference-numerals indicate like parts in the different views.

The step frame or body 1 is made up of two converging bars 2 2, connected at suitable intervals by the steps 3. To the upper end of the step-frame 1 is pivoted a supporting-leg 4, and in the lower end of said step-frame, preferably connecting two of the steps 3 therein, is a guide-bar 5, having a vertically-disposed elongated slot 6 in it. The supporting-frame 7 consists of two legs 8 8, pivotally connected at points adjacent to their lower ends by a cross-bar 9 and at points adjacent to their upper ends by a cross-bar 10. The cross-bar 9 carries a pin 11, which fits and moves within the slot 6 in the guide-bar 5. The said cross-bar is adapted to be engaged by a cam-lever 12, which is fulcrumed to the step-frame 1. Secured to the upper cross-bar 10, which connects the legs 8 8, is a circular plate or disk 13, which fits between the converging side bars 2 of the step-frame and is slightly wider than the said step-frame at its upper end. Projecting inwardly from said disk or plate is a pin 14, which fits and moves within an elongated slot 15 in a cross-bar 16, secured to the step-frame between the side bars thereof and at a point adjacent to its upper end.

Constructed as above described the operation of my device is as follows: When the ladder is to be used upon hilly ground, the cam-lever 12 is depressed, and bearing against the upper surface of the cross-bar 9 forces the step-frame 1 upwardly with respect to the supporting-frame 7. This action throws the disk 13 out of contact with the inner surfaces of the side bars 2 and permits of a pivotal movement of the legs 8 8 and the cross-bars 9 and 10, so as to permit of one of the legs 8 being elevated higher than the other. When a proper adjustment of the supporting-frame has been made, pressure upon the cam-lever 12 is released, and when the operator steps upon the step-frame 1 the same is forced downwardly, rigidly connecting the said step-frame and said supporting-frame by the engagement of the disk 13 with the inner sides of the side bars 2.

Having now described my invention, what I claim as new, and desire to secure by Letters Patent, is—

1. In a step-ladder, a step-frame, a supporting-leg pivoted thereto, a supporting-frame for the step-frame, whose members are pivotally connected one to the other, and means

for locking said supporting-frame and said step-frame together.

2. In a step-ladder, a step-frame having converging side bars, a supporting-leg pivoted thereto, a supporting-frame for the step-frame, and a projection on said supporting-frame adapted to fit between the side bars of the step-frame, and be engaged thereby, as and for the purpose set forth.

3. In a step-ladder, a step-frame having converging side bars, a supporting-leg pivoted thereto, a supporting-frame for the step-frame comprising legs and cross-bars pivotally connected together, and a projection on one of said cross-bars adapted to fit between the side bars of the step-frame and to be engaged thereby, as and for the purpose set forth.

4. In a step-ladder, a step-frame having converging side bars, and a supporting-leg pivoted thereto, a supporting-frame for the step-frame made up of legs and cross-bars pivoted one to the other, a projection on one of said cross-bars adapted to fit between the side bars of the step-frame and to be engaged thereby, and means for moving said step-frame and said supporting-frame longitudinally with respect to each other, as and for the purpose set forth.

5. In a step-ladder, a step-frame having converging side bars, a supporting-leg pivoted thereto, a supporting-frame for the step-frame made up of legs and cross-bars pivotally connected to each other, a circular disk or plate secured to the upper of said cross-bars fitting between the side bars of the step-frame and adapted to be engaged thereby, a guide-bar on said step-frame having an elongated slot therein, a pin on one of the side bars of the supporting-frame fitting and moving in said slot, and a cam-lever fulcrumed to said step-frame and adapted to engage one of the cross-bars on said supporting-frame, as and for the purpose set forth.

In testimony whereof I have signed this specification in the presence of two subscribing witnesses.

ORRIN RICHARDSON.

Witnesses:

PAT FORD,

FRED PEPIN.