

(No Model.)

M. MINIER.
STEP LADDER.

No. 529,871.

Patented Nov. 27, 1894.

Fig. 1

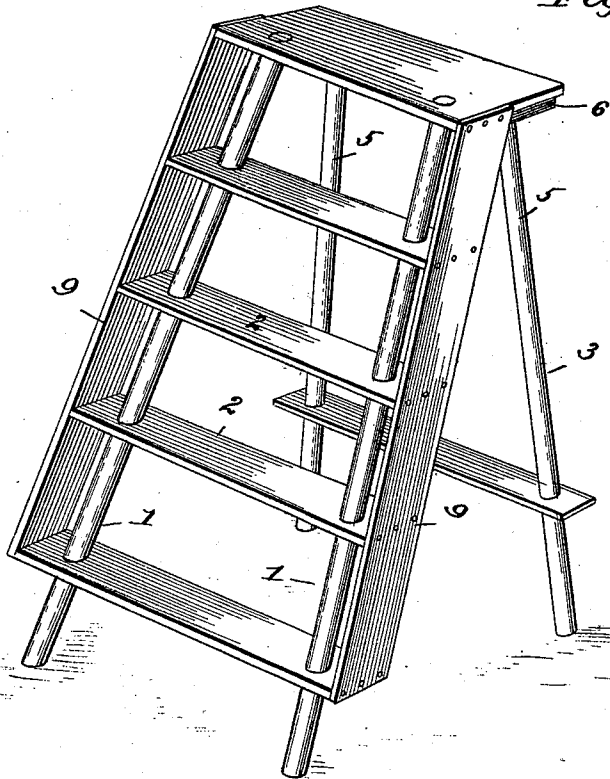


Fig. 2.

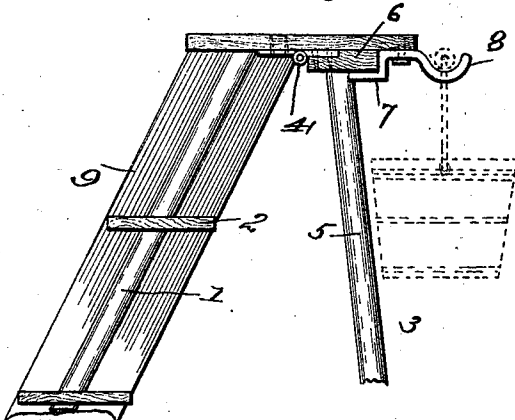
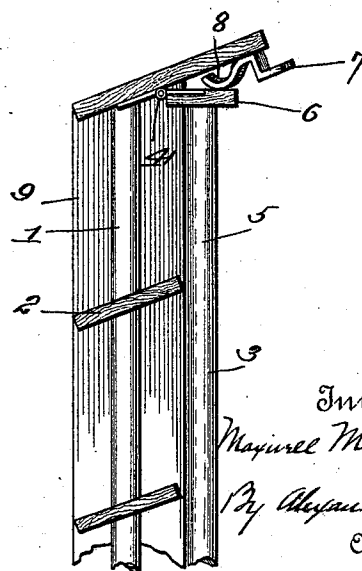


Fig. 3.



Witnesses

E. A. Muzzy

G. M. Samasore

Inventor

Maximilien Minier

By Alexander D. Davis

Attorneys

UNITED STATES PATENT OFFICE.

MAXWELL MINIER, OF ELMIRA, NEW YORK.

STEP-LADDER.

SPECIFICATION forming part of Letters Patent No. 529,871, dated November 27, 1894.

Application filed September 24, 1894. Serial No. 523,932. (No model.)

To all whom it may concern:

Be it known that I, MAXWELL MINIER, a citizen of the United States, residing at Elmira, in the county of Chemung and State of New York, have invented certain new and useful Improvements in Step-Ladders, of which the following is a specification, reference being had therein to the accompanying drawings.

This invention relates to a new and improved step ladder; and it has for its object to provide a ladder of simple and durable construction which may be easily operated, and which may be locked in either its open or its closed position.

Another of its objects is to secure bracing-strips to the projecting ends of the steps, said strips forming also guard-rails to prevent ladies' dresses or other articles from catching thereon. They also form hand-railings, which are very desirable on ladders of this class.

The invention consists of certain novel combinations and arrangements of parts hereinafter more fully set forth.

In the drawings:—Figure 1 is a perspective view of my improved ladder; Fig. 2, a vertical sectional view of the upper portion thereof showing it locked in its open position; and Fig. 3 a similar view showing it locked in its closed position.

Referring to the various parts by numerals, 1 designates the standards of the ladder which are cylindrical and pass through circular openings in the steps 2 near their ends and at an angle to the upper surface thereof. The top step or shelf 2 is broader than the lower steps and projects rearwardly a suitable distance. To the under side of the projecting portion of this step the support or rear portion 3 of the ladder is hinged by suitable hinges 4. This hinged support consists of the standards 5—5 suitably braced, and connected at their upper ends by a flat cross-bar 6 whose upper surface fits squarely against the under side of the top shelf or step of the ladder, when the support is in its open position, and thereby effectually prevents the further outward movement of the lower end of the support.

In order to lock the support 3 either in its open or its closed position I pivot to the under side of the top shelf of the ladder, adjacent to the rear edge of the cross bar 6 of the

support, a clamp 7. This clamp is adapted to engage the under side of the bar 6 at its rear edge when the ladder is in its open position, and to lock the support against any movement. The clamp 7 is formed with a hook 8 which projects beyond the rear edge of the top step of the ladder when the support is locked in its open position, and a bucket or other article may be hung thereon, as shown clearly in Fig. 2.

When it is desired to lock the ladder in its closed position either the hook 8 or clamp 7 may be turned inwardly to bear on the upper side of the cross bar 6 and thereby lock said support against any outward movement, as shown in Fig. 3.

The ends of the steps of ladders of this class project beyond the standards and these projecting ends form the great disadvantage of this otherwise cheap and durable class of ladders. To obviate this difficulty and to brace the steps I secure to these projecting ends guard rails 9—9 which extend from the lowest step to the topmost one, as clearly shown. These rails also form hand rails which are very desirable in this class of ladders. It will be readily seen that these rails are of great advantage in preventing ladies' dresses, or a workman's tape-line, or a sash-cord or similar articles from engaging the ends of the steps and causing great annoyance. They also strongly brace the steps, effectually tying them together so that the strain on them is distributed.

Having thus fully described my invention, what I claim is—

1. A step ladder consisting of the standards, steps secured thereon, said standards passing through the steps near the ends thereof and at an oblique angle to the upper surface thereof, guard rails secured to the outer projecting ends of the steps and adapted to cover said ends, and a rear portion or support, substantially as described.

2. A step ladder consisting of standards, steps secured thereon, a hinged rear portion or support formed with a cross bar at its upper end, said bar adapted to bear against the under side of the top step of the ladder to limit the outward movement of the support, and a clamp 7 pivoted to the under side of the top step and adapted to swing around un-

der the cross-bar and lock the support in its closed position, substantially as described.

3. A step ladder consisting of standards, steps secured thereon, said standards passing
5 through the steps near their ends, guard rails secured to the outer ends of the steps and adapted to cover said ends, a folding rear portion or support formed with the cross bar 6 and hinged to the under side of the top step
10 as described, the upper surface of said cross bar adapted to bear against the under side of

the top step, and a pivoted clamp 7 formed with hook 8 and adapted to lock the support in either its open or closed position, substantially as described.

In testimony whereof I affix my signature in presence of two witnesses.

MAXWELL MINIER.

Witnesses:

ANSEL ROBERTS,
S. T. MINIER.