(No Model.)

F. E. LEVANSELER.

STEP LADDER CHAIR.

No. 353,316. Patented Nov. 30, 1886.

Fig. 1.

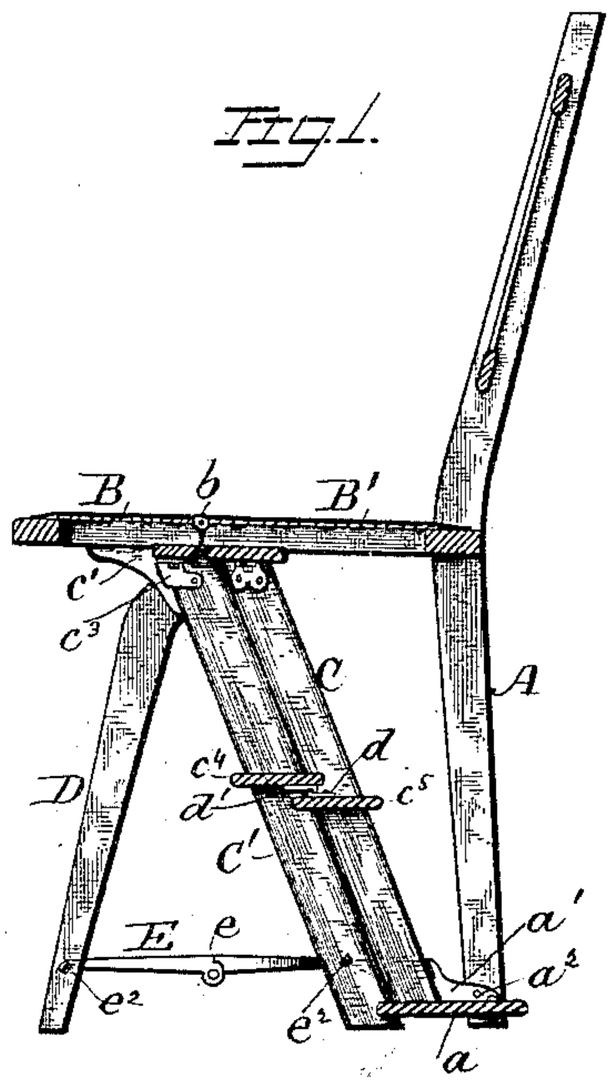

Fig. 2.

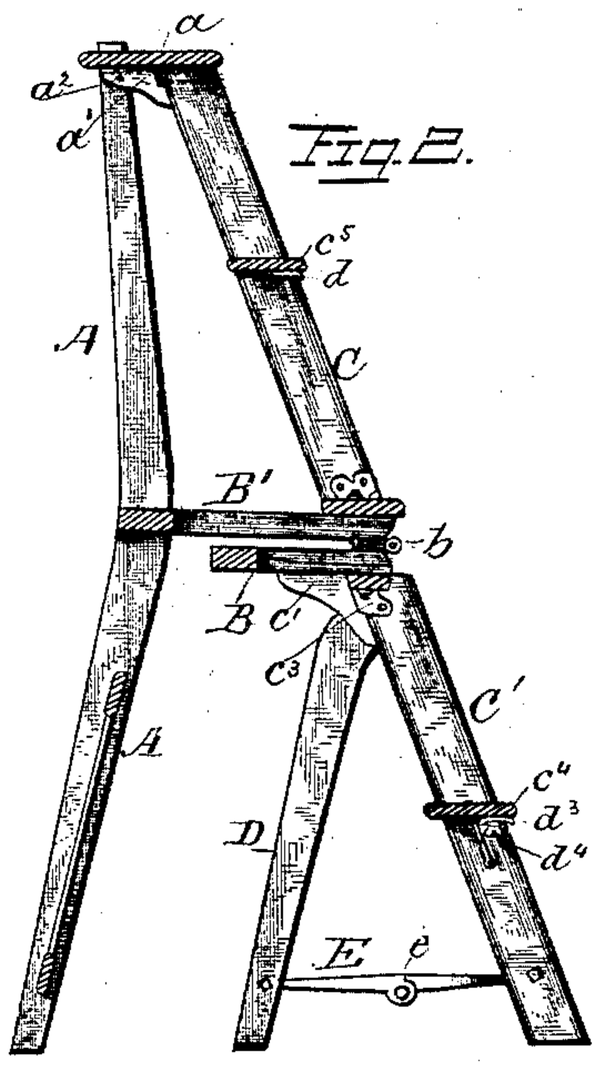

Fig. 3.

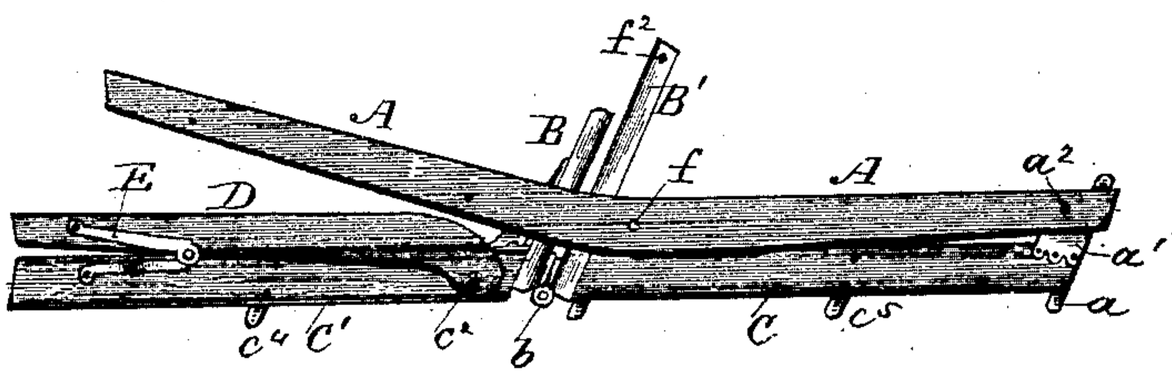

Fig. 4.

Fig. 5.

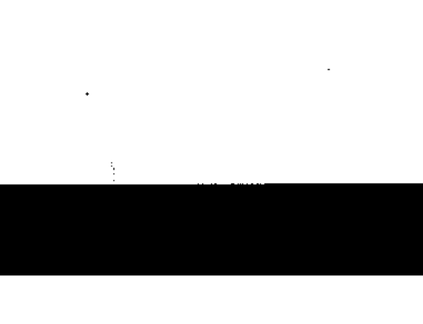

Fig. 6.

Witnesses:
E. C. Murdeman.
W. B. Masson

Inventor:
Frank E. Levanseler
by E. E. Masson
atty.

UNITED STATES PATENT OFFICE.

FRANK E. LEVANSELER, OF ST. CLOUD, MINNESOTA.

STEP-LADDER CHAIR.

SPECIFICATION forming part of Letters Patent No. 353,316, dated November 30, 1886.

Application filed March 29, 1886. Serial No. 196,937. (No model.)

To all whom it may concern:

Be it known that I, FRANK E. LEVANSELER, a citizen of the United States, residing at St. Cloud, in the county of Stearns, State of Minnesota, have invented certain new and useful Improvements in Step-Ladder Chairs, of which the following is a specification, reference being had therein to the accompanying drawings.

My invention relates to step-ladder chairs in which the seat is formed of two halves hinged together, and the rear half can be folded upon the front half to produce a step-ladder; and the objects of my improvement are not only to make a strong and inexpensive chair, but to permit said chair to be folded in small compass for transportation. I attain these objects by the construction illustrated in the accompanying drawings, in which—

Figure 1 is a vertical section through a chair constructed in accordance with my invention. Fig. 2 is a vertical section of the same transformed into a step-ladder. Fig. 3 is a side view of the same folded for transportation. Fig. 4 is a transverse vertical section through two of the steps, showing the adjustable spring latch and catch uniting said steps. Fig. 5 is a perspective view of the bracket used to support the upper step of the ladder. Fig. 6 is a perspective view of the bracket used to support the front of the chair-seat.

Similar letters refer to similar parts throughout the several views.

In the drawings, A represents the rear legs and back of the chair; B′, the rear half of the seat, and C the legs secured to the front of that portion of the seat. The rear legs and the legs C are united at the bottom by the board *a*, forming the upper step of the ladder when the chair is transformed into a ladder.

To the front edge of the rear half, B′, of the seat is hinged the front half, B, of said seat by means of a pair of hinges, *b*. The broad step *a* is firmly united to the legs C by means of brackets *a′*, that form also the bearing a^3 for the pivot-bolts a^2, upon which the back A is swung when the parts are to be folded for transportation. The legs C′ are secured to the rear portion of the front half, B, of the seat. They carry iron brackets *c′*, that extend enough forward to support the front edge of the seat B; and to prevent the chair from tipping forward these are pivoted at c^2 to the upper portion of the legs C′ and the front legs, D. The pivot-bolts c^2 passing at the same time through the wing c^3 of the brackets *c′*, a strong connection is formed at that point, and all danger of splitting the legs C′ is obviated.

To retain the lower end of the legs D at a proper distance from the legs C′, they are united together by braces E, and to permit the legs D to be folded against the legs C′ to reduce the size of the chair, as shown in Fig. 3, the braces have a shouldered hinge, commonly called a "foot-rule hinge," *e*, substantially half-way between their two ends, and said ends are pivoted to the legs C′ and D at e^2. To retain the legs C and C′ temporarily united together while the device is used as a chair, the steps c^4 c^5, about half-way down said legs, are secured to said legs a short distance one above the other; and to the upper side of the step c^5 is attached, in the middle of its length, the catch *d*, having its beveled upper lip, d^2, projecting upward toward the step c^4, and to the under side of the step c^4 is adjustably secured the spring-latch *d′*, having its beveled hook d^3 projecting downward, not only toward the catch *d*, but so that its hook d^3 will (when the legs C C′ are brought together) pass the lip d^2 with frictional contact and become interlocked therewith, the amount of friction or holding capacity of the latch *d′* being regulated by the adjusting thumb-screw d^4.

When it is desired to unlatch the legs C C′, to transform the chair into a step-ladder, the operator stands in the rear of the back of the chair and presses upon the step c^5 with his foot. It causes this step to slightly bend down in the center and release the catch *d* from engagement with the latch, and while thus pressing he applies his hand against the top rail of the back and pushes it forward. The rear half of the seat is then free to be folded upon the front half and the chair transformed into a ladder, as shown in Fig. 2. The rear portion of the seat B′ is supported by screws *f*, passing through perforations in the rear legs or back A of the chair, and engaging with perforations f^2 in the sides of the seat B, adjacent to its rear edge.

To fold the step-ladder chair in a small compass, as shown in Fig. 3, only a screw on each side is temporarily removed—viz., the screws *f*, that enter the rear perforations, f^2, in the

seat. The braces E are then folded and the seat B B′ pushed through the rear legs or back, A. As the steps c^4 c^5 do not come opposite each other when folded, they, as well as the others, are broader than the legs C and C′, and thus give broad supports for persons using them.

In place of the catch d having the lip d^2, a convex-head screw may be inserted into the step at the point occupied by said lip, and thus form a vertically-adjustable projection or catch to engage with the hook of the latch.

I do not claim in this invention the step-ladder chair provided with six legs shown in my application filed March 22, 1886, Serial No. 196,170, as it shows a chair in which the front half has to be revolved and deposited upon the rear half to produce a step-ladder, and the folding braces are secured at one end to the rear legs, but the spring-catch is substantially the same.

Having now fully described my invention, I claim—

1. A step-ladder chair having the rear half of the seat hinged to the front half and adapted to be folded upon the latter, the step c^5, overtopped by the step c^4, and said steps provided with an adjustable flat metal latch screwed to the under side of one of the steps, and having a projecting lip, and a catch having a hook adapted to become interlocked when the chair-seat is open, substantially as described.

2. The combination of the rear half of a step ladder-chair seat, having the diagonally-retained legs C, the step a at the lower end of said legs, and the brackets a', having the bearings a^3, with the legs A, pivoted to said bracket, and the front half of the seat hinged to the rear half and provided with two pairs of legs, C′ and D, connected by a hinged brace, the legs D being pivoted to the legs C′, substantially as described.

3. The combination of the rear half of a step-ladder-chair seat, having the diagonally-retained legs C, the step a at the end of said legs, and the brackets a', having the bearing a^3, with the rear legs, A, pivoted to said bracket, and the front half of the seat provided with two pairs of legs secured to the front half of the seat, and the latter pivoted to the rear half of the seat, and connected together by a hinged brace, substantially as described.

4. The combination of the rear half of a chair-seat, its legs and back, and the front half of a step-ladder-chair seat hinged to the rear half, the legs C′, and bracket c', having the perforated wing C^3, with the pivoted legs D, having their pivot passing through said wing of the bracket, and a retaining-brace, E, hinged in the middle of its length, substantially as and for the purpose described.

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

FRANK E. LEVANSELER.

Witnesses:

W. S. ROBERTSON,

ANDREW C. ROBERTSON.