

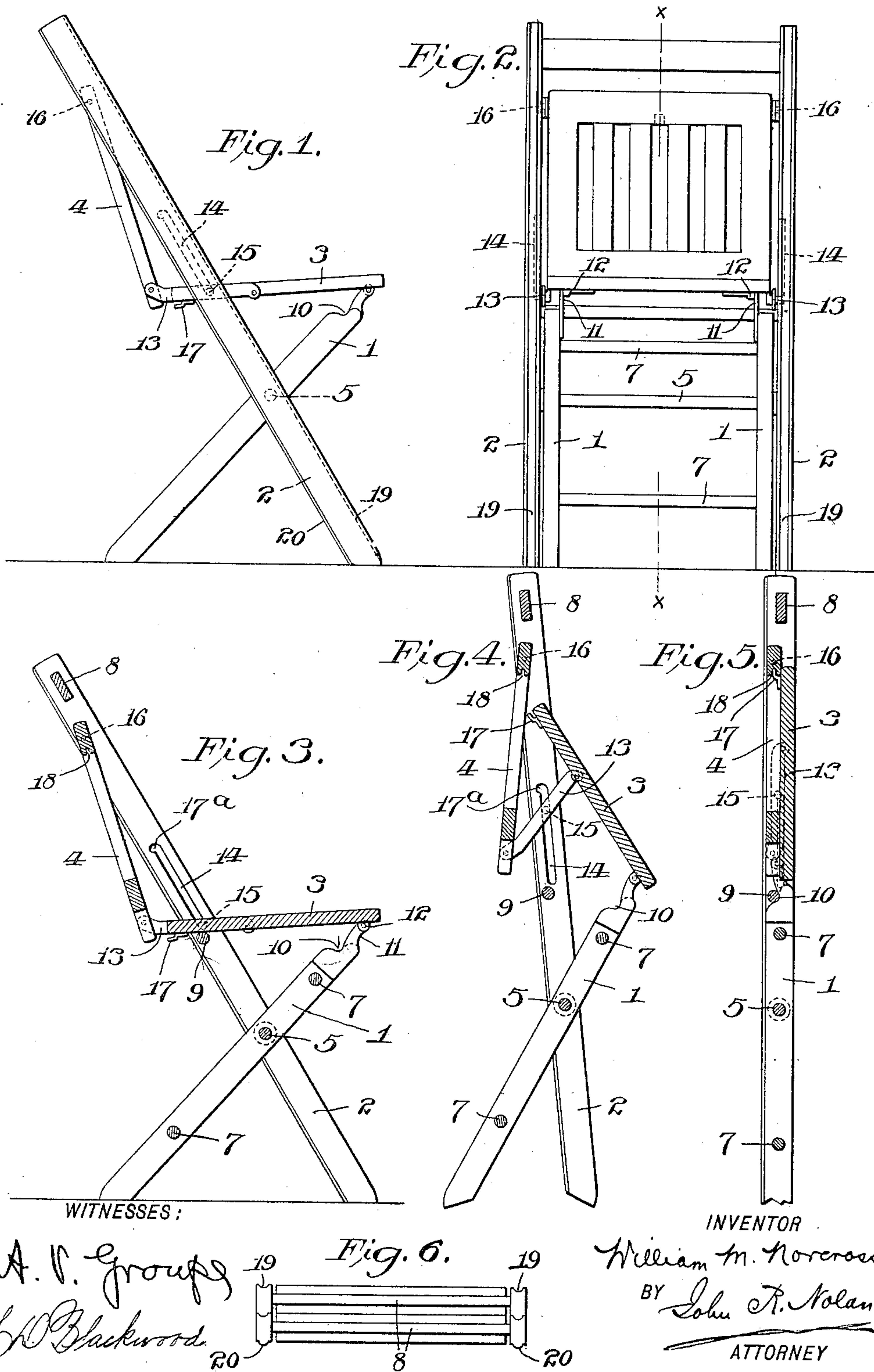
No. 657,745.

Patented Sept. 11, 1900.

W. M. NORCROSS.  
FOLDING CHAIR.

(Application filed May 2, 1900.)

(No Model.)





# UNITED STATES PATENT OFFICE.

WILLIAM M. NORCROSS, OF PHILADELPHIA, PENNSYLVANIA.

## FOLDING CHAIR.

SPECIFICATION forming part of Letters Patent No. 657,745, dated September 11, 1900.

Application filed May 2, 1900. Serial No. 15,174. (No model.)

*To all whom it may concern:*

Be it known that I, WILLIAM M. NORCROSS, a citizen of the United States, residing in the city and county of Philadelphia, in the State of Pennsylvania, have invented certain new and useful Improvements in Folding Chairs, of which the following is a specification.

This invention relates to that class of folding chairs in which the legs, seat, and back are pivotally connected and arranged in such relation to each other that they may be folded into small compass for convenience of packing and transportation, my object herein being to provide a folding chair of simple, durable, and efficient construction that may be properly opened and closed with ease and facility, as will be hereinafter particularly described and claimed.

In the drawings, Figure 1 is a side elevation of a chair embodying my invention, the same being represented in open position. Fig. 2 is a front elevation thereof. Fig. 3 is a vertical section, as on the line  $x x$  of Fig. 2. Fig. 4 is a similar section showing the chair partially folded. Fig. 5 is a similar section showing the same entirely folded. Fig. 6 is an end elevation of two folded chairs of a pile.

1 2 are the crossed legs at the respective sides of the chair, 3 the seat, and 4 the back. The legs 1 are pivoted at 5 on the inner side of the legs 2, and the latter are extended upward to constitute the back-posts 6. The inner legs are connected together by rungs 7, and the upper ends of the back-posts are united by a cross-bar 8. The outer legs are connected by a rung 9, which lies directly below the seat when the chair is open and affords a substantial support therefor. This rung also serves as an abutment for the upper ends of the inner legs when the parts are folded, such legs being properly cut away or offset at their upper ends in respect to the rung, as indicated at 10, so as to permit the requisite folding of the parts.

The front of the seat is pivotally connected with the tops of the inner legs, the latter having affixed thereto upwardly-extending lugs or brackets 11, which are horizontally pivoted to depending lugs 12 on the under side of the seat.

The sides of the seat, at some distance from

its rearward edge, are pivotally connected with the lower portion of the back by means of links 13, which lie adjacent to the inner sides of the back-posts, the latter being provided with longitudinal grooves 14, to which are fitted laterally-projecting studs 15 on the respective links. The back is pivoted in and between the posts directly below the cross-bar 8, as indicated at 16.

On the under side of the seat, at the rearward edge thereof, is a hook-like lug 17, which when the parts are folded, as hereinafter described, engages a socket 18 on the under side of the upper cross-bar of the back and tends to lock the parts in folded position.

The several parts of the structure are so relatively constructed and arranged that when the same are opened to constitute a chair they occupy the positions represented in Figs. 1 and 3, the seat being horizontal and resting upon the rung 9, the links being also horizontal, with their studs located at the lower portions of the respective grooves 14 and the back being swung slightly rearward of the back-posts.

To fold the chair, the seat is swung upward on its pivotal forward end, thus causing the studs of the links 13 to travel upward in the lateral grooves of the back-posts and at the same time swinging the back between said posts and the inner legs between the outer legs. (See Fig. 4.) Thus the hook-like lug 17 on the rearward end of the seat is swung toward the socket in the upper cross-bar of the back and registers therewith as the several parts assume their respective positions in parallelism between the outer legs and back-posts, thus locking the upper edge of the seat to the back and obviating all liability of such edge being pulled outward or strained by a person attempting to open the chair. When the parts are fully closed, the pivotal connection at the lower end of the seat passes slightly beyond the vertical center of the link connection with the seat, similarly to the action of a toggle-lever, thus effectually locking the parts in place. (See Fig. 5.)

The upper ends of the grooves 14 are slightly offset, as at 17<sup>a</sup>, for the reception of the lateral studs of the respective links when the chair is closed.

The outer legs and posts are grooved longi-



tudinally along their forward edges, as at 19, and correspondingly tongued along their rearward edges, as at 20, to the end that the tongues on one chair will interlock with the grooves of the contiguous underlying chair when the chairs are piled one upon another, and thus insure the uniformity and stability of the pile.

A folding chair constructed as above described is simple, durable, and efficient. The manner of opening and closing the same is apparent. It unfolds and folds in the right way only, and therefore the structure may be manipulated with ease and facility by a person of ordinary intelligence.

I claim—

1. The combination of the crossed and pivoted legs, the outer ones of which are extended to constitute back-posts, the back pivoted at its upper end between said posts, the seat pivotally connected at its forward end with the inner legs, links connecting the sides of said seat, at some distance from its rearward edge, with the lower portion of the back, and a pivotal sliding connection between the said links and the back-posts, substantially as described.

2. The combination of the crossed and pivoted legs, the outer ones of which are extended to constitute back-posts, the back pivoted at its upper end between said posts, the seat pivotally connected at its forward end with the inner legs, links pivotally connecting the sides of said seat, at some distance from its rearward edge with the lower portion of the back, and a pivotal sliding connection between the said links and the back-posts, the pivotal connections being such that when the parts are closed the pivotal connection at the forward end of the seat passes slightly beyond the vertical center of the link connection with the seat, substantially as described.

3. In a folding chair, the combination of the crossed and pivoted legs whereof the outer legs are extended to constitute back-posts, the seat, pivotal connections between the same, the legs, and the back, whereby the several elements may be folded and unfolded, and a rung uniting the outer legs and affording a stop or abutment which coacts with the seat when the chair is open, and with the inner legs when the chair is closed, substantially as described.

4. The combination of the crossed and pivoted legs, the outer ones of which are extended to constitute back-posts provided with longitudinal guideways, the back pivoted at its upper end between said posts, the seat pivotally connected at its forward end with the

inner legs, links connecting the sides of said seat, at some distance from its rearward edge, with the lower portion of the back, and studs on said links coacting with the guideways in the back-posts, substantially as described.

5. The combination of the crossed and pivoted legs, the outer ones of which are extended to constitute back-posts provided with longitudinal guideways, the back pivoted at its upper end between said posts, the seat pivotally connected at its forward end with the inner legs, links connecting the sides of said seat, at some distance from its rearward edge, with the lower portion of the back, studs on said links coacting with the guideways in the back-posts, and a rung uniting the outer legs, and affording a stop or abutment which coacts with the seat when the chair is open, and with the inner legs when the seat is closed, substantially as described.

6. The combination of the crossed and pivoted legs, the outer ones of which are extended to constitute back-posts provided with longitudinal guideways, the back pivoted at its upper end between said posts, the seat pivotally connected at its forward end with the inner legs, links connecting the sides of said seat, at some distance from its rearward edge, with the lower portion of the back, studs on said links coacting with the guideways in the back-posts, and a hook or lug on the rearward end of the seat adapted to be interlocked with the upper portion of the back when the chair is folded, substantially as described.

7. The combination of the crossed and pivoted legs, the outer ones of which are extended to constitute back-posts provided with longitudinal guideways, the back pivoted at its upper end between said posts, the seat pivotally connected at its forward end with the inner legs, links connecting the sides of said seat, at some distance from its rearward edge, with the lower portion of the back, studs on said links coacting with the guideways in the back-posts, a rung uniting the outer legs, and affording a stop or abutment which coacts with the seat when the chair is open, and with the inner legs when the chair is closed, and a hook or lug on the rearward end of the seat adapted to be interlocked with the upper portion of the back when the chair is closed, substantially as described.

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

WILLIAM M. NORCROSS.

Witnesses:

ANDREW V. GROUPE,  
JOHN R. NOLAN.