(No Model.) 2 Sheets—Sheet 1.

C. KEHR.

FOLDING CHAIR.

No. 491,214. Patented Feb. 7, 1893.

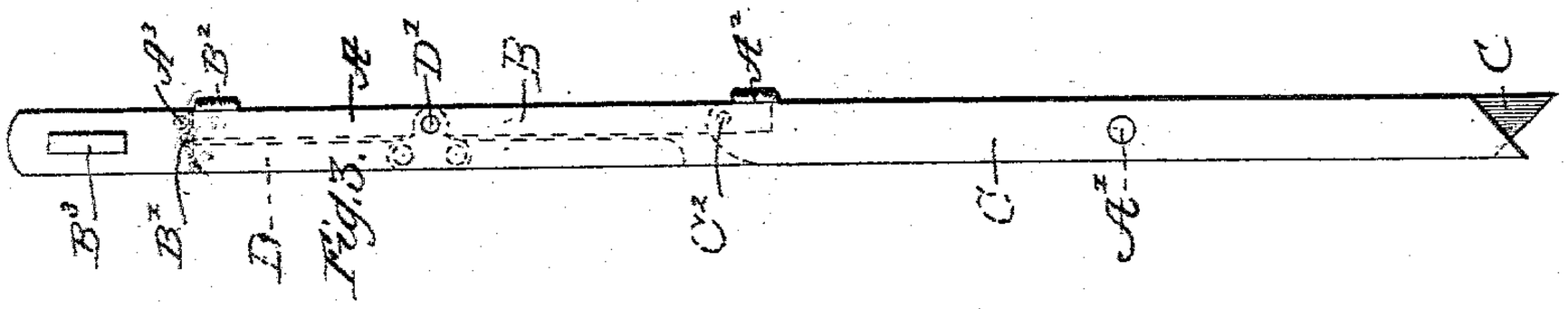

Fig. 3.

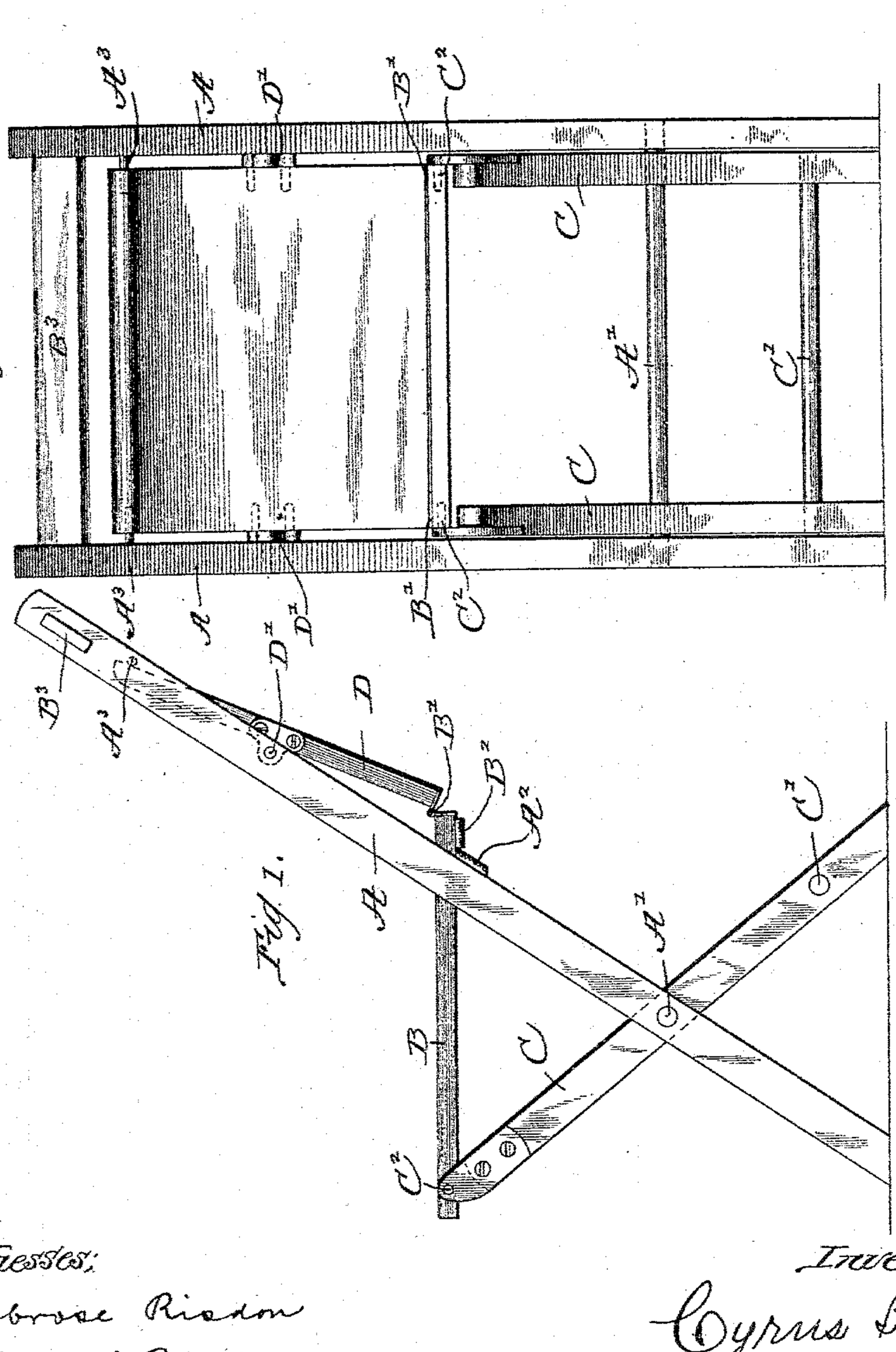

Fig. 2.

Fig. 1.

Witnesses:
Ambrose Riadon
Lola M. Riadon

Inventor:
Cyrus Kehr

No Model.)

2 Sheets—Sheet 2.

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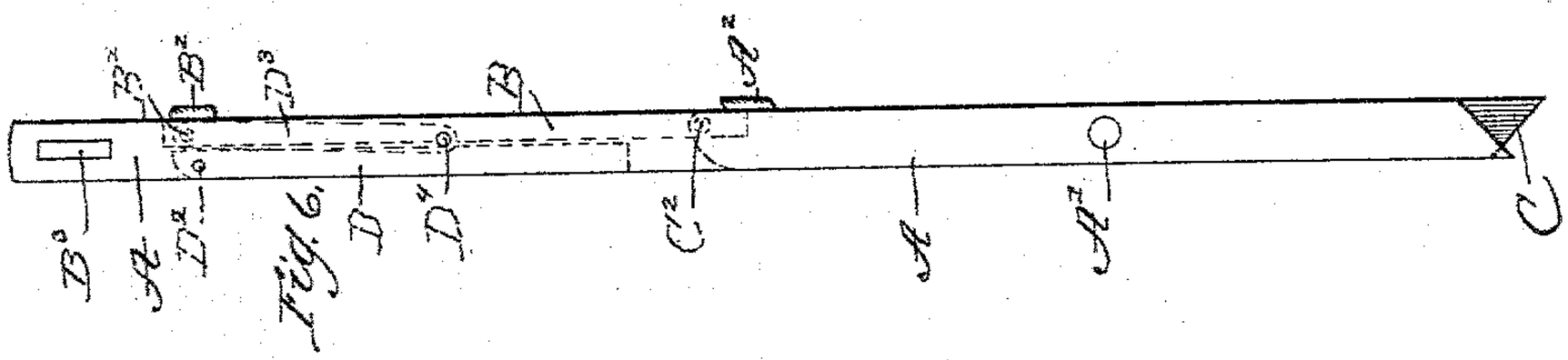

Fig. 6.

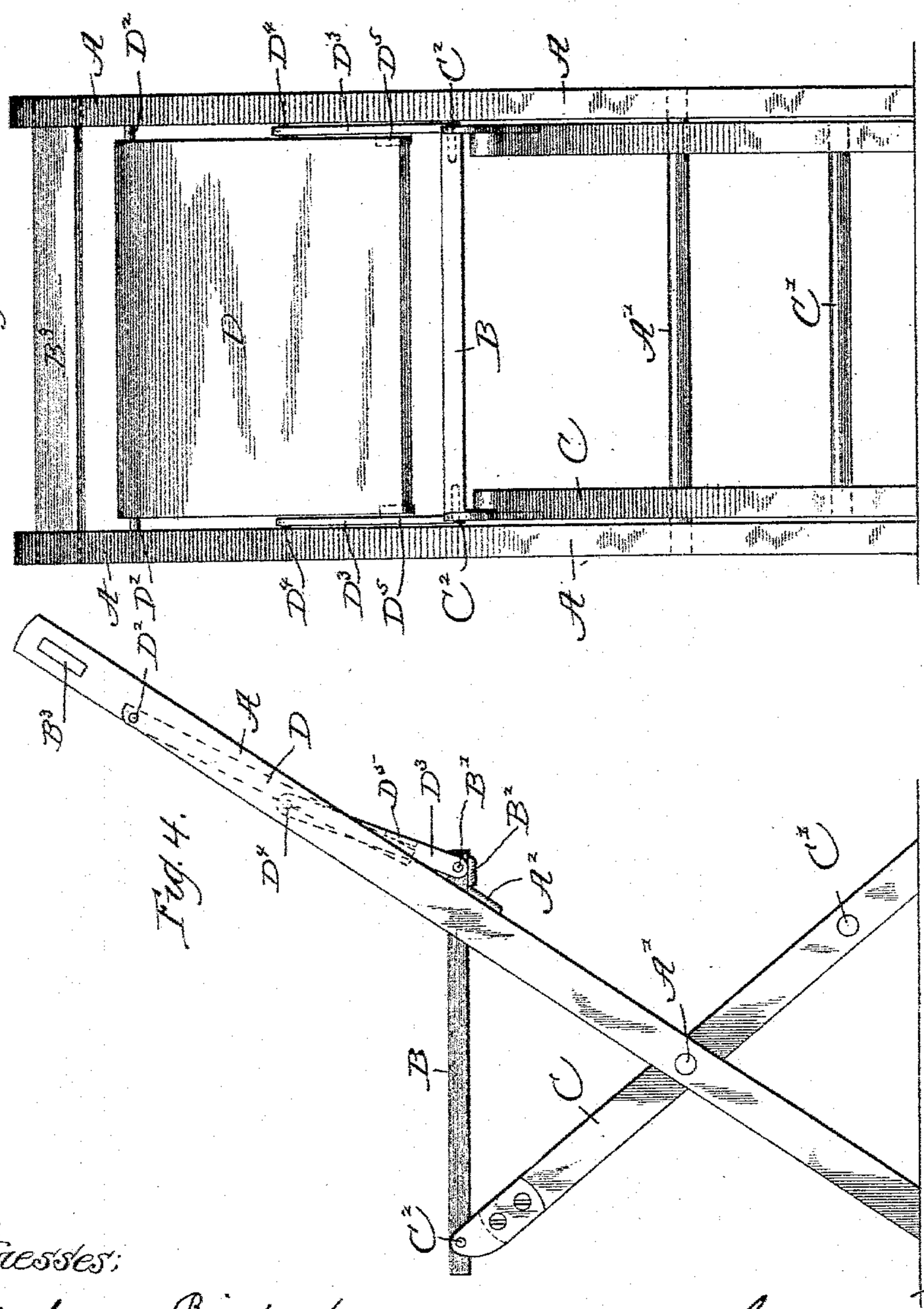

Fig. 5.

Fig. 4.

Witnesses:
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Lola M. Risdon

Inventor:
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UNITED STATES PATENT OFFICE.

CYRUS KEHR, OF LAKESIDE, ILLINOIS, ASSIGNOR TO THE NORTH WESTERN WIRE MATTRESS COMPANY, OF KENOSHA, WISCONSIN.

FOLDING CHAIR.

SPECIFICATION forming part of Letters Patent No. 491,214, dated February 7, 1893.

Application filed January 11, 1892. Serial No. 417,747. (No model.)

To all whom it may concern:

Be it known that I, CYRUS KEHR, a citizen of the United States, residing at Lakeside, in the county of Cook and State of Illinois, have invented certain new and useful Improvements in Folding Chairs; 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, reference being had to the accompanying drawings, and to letters of reference marked thereon, which form a part of this specification.

In the accompanying drawings—Figure 1 is a side elevation of a chair embodying my improvement. Fig. 2 is a front elevation of the same chair. Fig. 3 is a side elevation of the chair folded. Fig. 4 is a side elevation of a modified form of the chair. Fig. 5 is a front elevation of the same. Fig. 6 is a side elevation of the same when folded.

A, A, are side rails separated from each other a little more than the width of the seat of the chair.

B is the seat.

C, C, are the legs supporting the front of the seat. Said legs are preferably located between the side rails, A, A, and pivoted on a rung, A′, extending through said legs and said side rails. At their lower end, said legs, C, C, may be joined to each other by a rung, C′, or otherwise. The upper ends of the side rails may or may not be joined to each other by a bar, B^3. At their upper ends, said legs, C, C, are hinged to the front of the seat, B at C^2.

D is the back of the chair. This is located above the seat, B, and between the side rails, A, A, and hinged to the latter at or near the middle of the lateral edges of the back at a distance above the hinge, B′, mentioned below substantially equal to half the distance between said hinge, B′, and said hinge, C^2. A hinge, marked D′, is preferably located at the front of the back, D, and in the rear half of the side rails, A, A, so that when the chair is opened, the lower portion of the back will stand rearward of the side rails and so that when the back is rotated upon said hinge until the upper end becomes the lower end, the back will occupy the front portion of the space between the side rails, A, A, as indicated by the dotted lines in Fig. 3. A hinge, marked B′, joins the rear edge of the seat, B, to the lower edge of the back, D.

In folding the chair, the seat, B, and the upper ends of the legs, C, C, are pushed backward through the space between the side rails, A, A. This causes the lower portion of the back, D, to move rearward and upward on the hinge, D′, whereby the rear end of the seat, B, is also carried backward and the upper end of the back, D, turned downward. In other words, the back, D, makes nearly a half rotation on the hinge D′ and carries the rear end of the seat, B, rearward and upward until the hinge B′ and the meeting ends of the seat and back are between the side rails, A, A, as indicated in Fig. 3. If the side rails, A, A, are of a width equal to the combined thickness of the back and seat, the back and seat will just fill the space between said side rails, as shown in Fig. 3. And the legs, C, C, may be of the same width as the side rails A, A, so that they will just fill the space at the inner side of the side rails, A, A. The location of the several hinges is to be such as to bring the legs, C, C, and the seat, B, into line with each other and within the side rails, A, A, when the seat and back have been folded upon each other.

When the chair has been folded as shown in Fig. 3, the hinge formed on the rung A′, the hinge joining the legs, C, C, and the seat, B, and the hinge joining the seat, B, and the back, D, are substantially in line, and the meeting ends of the legs, C, C, and the seat, B, may be moved either forward or backward. The forward movement is the proper one, and the movement in the opposite direction is prevented by a stop, A^2, applied to one or both of the side rails, A, A, and made to extend into the way of the legs, C, C, or seat, B.

To prevent the upper end of the legs, C, C, and the seat, B, from moving forward and downward, a stop, B^2, of any suitable form and supported by the seat, B, may be fitted to engage the side rails, A, A, from the rear. In the drawings, the stop, B^2, is shown as applied to the bottom of the seat, B, at the rear of the side rail, A, and the stop A^2, so that said stops B^2 and A^2 are opposed to each other. This forward movement of the seat may also be prevented by a stop A^3 arranged to effect engagement between the upper portion of the

back, D, and the side rail, A, whereby the rearward movement of the upper portion of the back, D, is limited. If the bar B^3 be omitted, the upper ends of the side rails, A, A, may be held in their proper positions through the hinge D'. In this case, the side rails, A, A, need not extend higher than said hinge.

The portion of the back, D, between the hinge D' and the hinge B' virtually constitutes a link controlling the rear portion of the seat, B. It will be observed that the movement of the seat would be the same if the portion of the back above the hinge D were removed. It will be observed further that the movement of the seat would be the same if a distinct piece extended from each hinge D' downward to the adjacent corner of the seat, B. Such a construction is illustrated in Figs. 4, 5, and 6. In said construction, the side rails, rungs, legs, seat, and the bar B^3 are the same as in the preceding figures. But the back and seat are not hinged to each other. On the contrary, the upper portion of the back is hinged to the side rails A, A, at D^2, and the lower end thereof is free, while each rear corner of the seat, B, is joined to the lower end of a link D^3, which link has its upper end hinged to the side rail A at D^4, substantially the point at which the hinge D' in Fig. 1 is located. The back is shown as extending between the links D^3 and resting against inward-directed lugs, D^5, at the rear of said back. When the chair is to be folded, the seat, B, and the upper ends of the legs C are pushed rearward between the side rails, A, and the rear end of the seat, B, is carried rearward and upward by the links D^3 in the same manner as the seat is carried rearward and upward by the back, D, in Fig. 1.

It is to be noted that the back may be altogether omitted, the back of the person occupying the chair being allowed to rest against the bar B^3, which is in fact a fixed back. And, if desired, more bars B^3 may be placed below the one shown within the space occupied by the back D when folded.

I claim as my invention—

1. The combination of the legs, C, C, side-rails, A, A, seat, B, hinged to said legs at its front, and a link connection hinged to the rear edge of said seat and extending thence upward a distance substantially equal to half the distance between the hinges at the front and rear of said seat and there hinged to the side-rails, A, A, these several parts being otherwise so spaced and hinged as to allow said legs, seat, and link connection to fold parallel with and entirely within the space between the side-rails, A, A, and a stop to limit the forward movement of the seat and upper ends of the legs when the chair is unfolded, substantially as described.

2. The combination of the legs, C, C, side-rails, A, A, seat, B, hinged to said legs at its front, and a link connection hinged to the rear edge of said seat and extending thence upward a distance substantially equal to half the distance between the hinges at the front and rear of said seat and there hinged to the side-rails, A, A, these several parts being otherwise so spaced and hinged as to allow said legs, seat, and link connection to fold parallel with and entirely within the space between the side-rails, A, A, and a stop to limit the forward movement of the seat and upper ends of the legs when the chair is unfolded, and a stop to limit the rearward movement of said legs and seat, substantially as described.

3. The combination of the side-rails, A, A, legs, C, C, seat, B, hinged at its front to said legs, back, D, hinged at its lower end to the rear of said seat, and hinged at its sides to the side-rails, A, A, at proper position to allow said lower end and the rear end of said seat to pass rearward and upward between the side-rails, A, A, into a position parallel with and wholly within the space between the side-rails, A, A, while the legs, C, C, fold parallel to and wholly within the space between the side-rails, A, A.

4. The combination of the side-rails, A, A, legs, C, C, hinged to said side-rails, seat, B, hinged by its front to the upper ends of the legs, C, C, back, D, hinged by its lower end to the rear end of the seat, B, and near its middle to the side-rails, A, A, these several parts being so spaced and hinged as to fold parallel to and wholly within the space between the side-rails, A, A, and a stop for limiting the forward movement of said seat and the upper ends of the legs, C, C, substantially as shown and described.

5. The combination of the side-rails, A, A, legs, C, C, hinged to said side-rails, seat, B, hinged by its front to the upper ends of the legs, C, C, back, D, hinged by its lower end to the rear end of the seat, B, and near its middle to the side-rails, A, A, these several parts being so spaced and hinged as to fold parallel to and wholly within the space between the side-rails, A, A, and stops, A^2 and B^2, for limiting the forward movement of the seat and the upper ends of the legs, C, C, substantially as shown and described.

6. The combination of the side-rails, A, A, legs, C, C, hinged to said side-rails, seat, B, hinged by its front to the upper ends of the legs, C, C, back, D, hinged by its lower end to the rear end of the seat, B, and near its middle and forward of the plane of said back to the side-rails, A, A, these several parts being so spaced and hinged as to fold parallel to and wholly within the space between the side-rails, A, A, and a stop for limiting the forward movement of said seat and the upper ends of the legs, C, C, substantially as shown and described.

In testimony whereof I affix my signature, in presence of two witnesses, this 5th day of January, in the year 1892.

CYRUS KEHR.

Witnesses:
AMBROSE RISDON,
FRANK L. STEVENS.