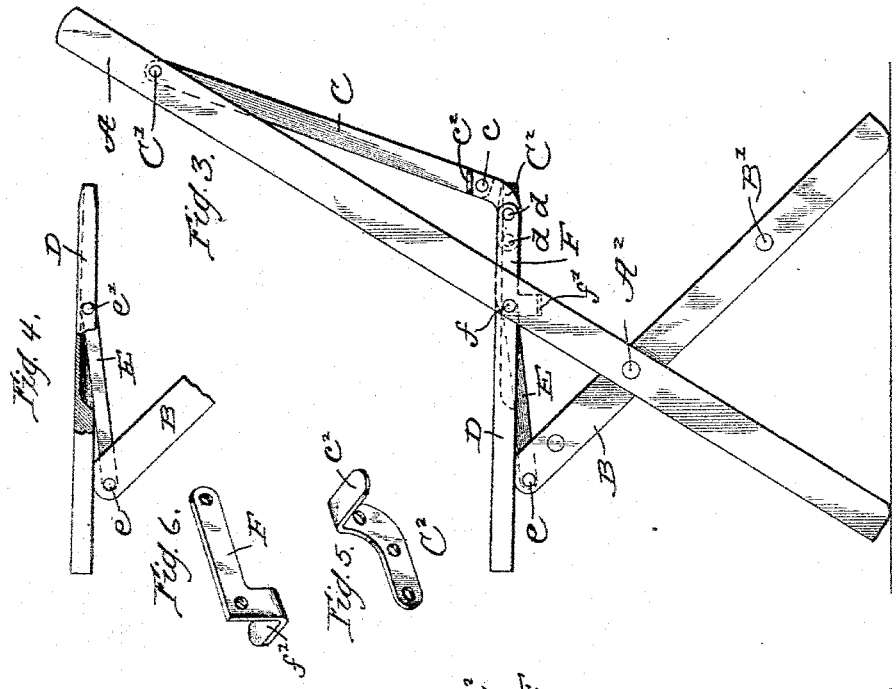
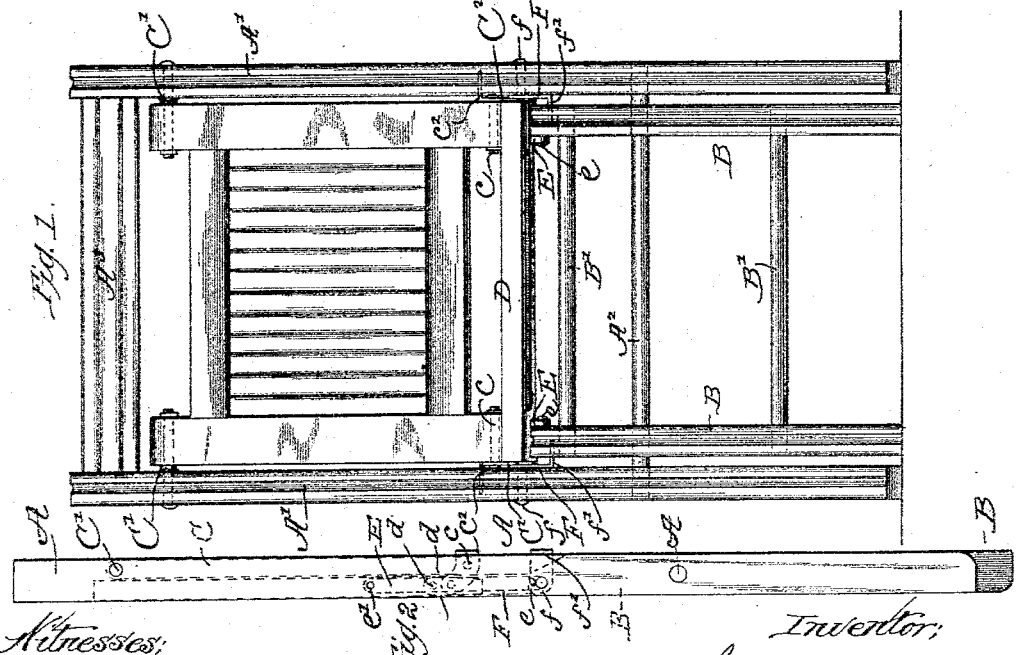
(No Model.)

C. KEHR.

FOLDING CHAIR.

No. 491,216. Patented Feb. 7, 1893.





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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. 491,216, dated February 7, 1893.

Application filed January 25, 1892. Serial No. 419,154. (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.

My improvement is applied to a chair embodying an open frame which constitutes the front legs and the support for the rear legs, the seat, and the back, said rear legs, seat, and back being located between the side rails of said open frame. My improvement relates particularly to means for controlling the movement of said rear legs, seat, and back.

In the accompanying drawings—Figure 1 is a front elevation of a chair when open. Fig. 2 is a side elevation of the chair when folded. Fig. 3 is a side elevation when open. Figs. 4, 5, and 6 are details.

A is the open frame. This is composed of the side rails A′, A′, the rung A^2 and the top bar A^3. B B are the rear legs. These are located between the side rails A′ A′ and hinged on the rung A^2. The legs B may be united by rungs B′.

C is the back of the chair. This is located within the frame A immediately below the top bar A^3 and joined at each upper corner to the adjacent side rail A′ by a hinge C′. The axis of said hinge is preferably located at the rear of the middle of the side rails A′, as shown in Figs. 2 and 3.

D is the seat. When the chair is open, the front of the seat rests upon the upper ends of the legs B, and the rear end of the seat meets the lower end of the back C. The back and the seat are joined at their meeting ends by two hinge-plates C^2, one of said plates C^2 being rigidly applied to each lateral edge of the seat D, as by nails or screws *d d*, and loosely to each lateral edge of the back C by means of a pin or screw *c*, so that a hinge is formed upon the axes of said pins *c*.

E E are links, hinged at *e*, at the front ends to the upper ends of the legs B B and at *e′* to the bottom of the seat D. The rear ends of these links may be sunk in the bottom of the seat as shown in Fig. 4. F F are links located at opposite sides of the seat and hinged at *f* to the inner face of the side rails A′ and extending horizontally rearward, when the chair is open, and hinged to the rear portion of the lateral edges of the seat, as by means of one of the pins *d*.

In folding, the entire seat D is raised by turning it upon the hinge *c*, until the seat lies in contact with the back. The lifting of the seat at *d* raises the rear end of the links F and turns the latter upon the hinges *f*. Thus the links F are raised into the space between the side rails A′ A′, and the lower end of the back C and the rear portion of the seat D, are drawn forward by said links F into the space between said side rails. The rear portion of the hinge plate C^2 is directed upward so that the hinge *c* will be about in line with the upper face of the seat D, to the end that said hinge will permit the seat D to fold closely against the front face of the back C. While the seat is thus raised into the vertical position, the rear ends of the links E are drawn rearward and upward, and the links in turn draw the upper ends of the legs B B rearward so that the legs are turned upon the rung A^2, until said legs and said links assume positions substantially in line with each other between the side rails A′ A′, the links E overlapping the seat D from the hinge *f′* to the rear edge of the seat.

The chair as above described has been heretofore made by others and has been found defective in that it is difficult to open the chair after it has been folded. This defect is so marked that persons in the furniture trade are puzzled in manipulating the chair and have declared that it is not marketable. The peculiarity is that the chair unfolds in several different ways, only one of which is right, and it is difficult to effect the unfolding which is right.

My invention relates to means for positively overcoming these difficulties. This I accomplish by applying to the hinge plate C^2 above the pin *c* a horizontal, laterally-directed extension c^2, which is of sufficient length to ex-

tend into the plane of the adjacent side-rail A′. When the chair is being folded, this extension is carried rearward and downward around the pin *c* until it stands a little at the rear of the plane of the rear face of the back C and against the rear edge of the adjacent side rail A′. When in this position, said extension positively prevents the lower portion of the back and the rear portion of the seat from moving forward between the side rails A′ through the frame A, whereby the seat would be thrown bodily forward and downward into a position near the floor. The application of this extension c^2 to the hinge plate C^2 is an effective, convenient, and economical manner of forming such a stop. The entire hinge plate C^2 may be stamped and cast in one piece, and the pins *d d* and *c* serve to support the stop as well as to form the hinge between the back and the seat.

To the front portion of the link F, I apply an extension *f′*, the direction of said extension being first downward a distance about equal to the distance between the hinge *f* and the rear edge of the side rail A′, and then toward the middle of the chair a distance a little more than the space between the adjacent faces of the side rails A′ and the legs B. When the chair is being folded, the extension *f′* will turn rearward and upward on the hinge *f* until the portion of said extension which is directed toward the middle of the chair is substantially even with the rear edge of the side rail A′. The upper end of the leg B, has, meanwhile, moved rearward into the space between the side rails A′ and against the extension *f′*. Thus the upper end of the legs B and the lower ends of the links E are prevented from moving rearward when it is attempted to unfold the chair. With both of these stops applied as described, the back, the seat, the links E, and the legs B can move in only one direction when it is sought to unfold the chair. The back is prevented from moving forward by a stop and a stop prevents the rearward movement of the links E and legs B B.

I claim as my invention—

The combination with the frame, A, back, C, located within said frame and hinged to the latter at its upper end, the legs, B, located within and hinged to said frame, the seat D, located within said frame, A, and extending to the lower portion of said back, and extending over the upper ends of the legs, B, and the hinged links, E, joining the upper ends of said legs and the rear portion of said seat, of links, F, having extensions *f′* and being hinged to the side-rails, A′, and extending rearward and hinged to the seat, D, and hinge-plates C^2 secured to the seat, D, and back, C, and having the extensions c^2, substantially as and for the purposes herein set forth.

In testimony whereof I affix my signature, in presence of two witnesses, this 21st day of January, in the year 1892.

CYRUS KEHR.

Witnesses:
FRANK L. STEVENS,
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