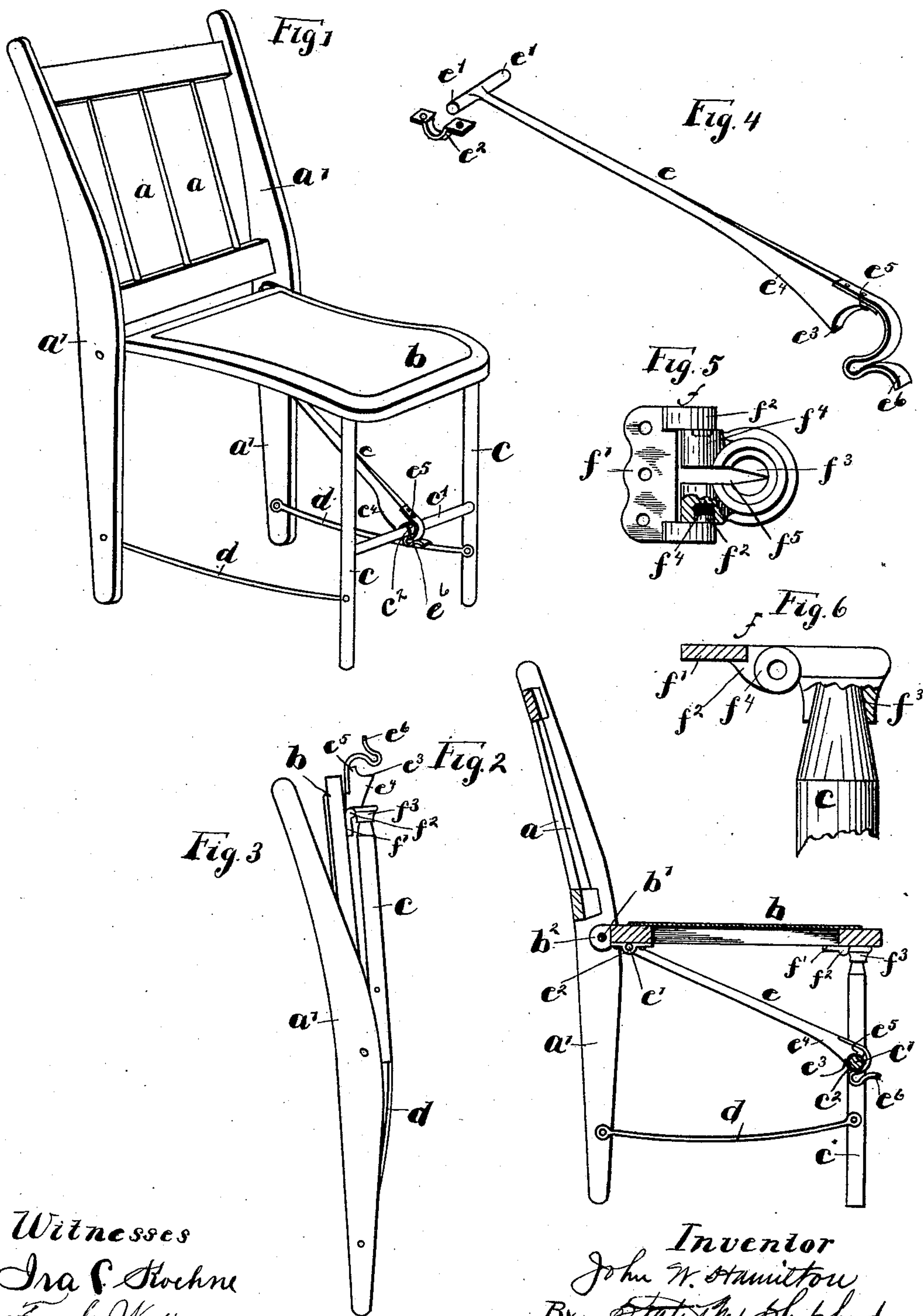


(No Model.)

J. W. HAMILTON.
FOLDING CHAIR.

No. 472,603.

Patented Apr. 12, 1892.



Witnesses
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UNITED STATES PATENT OFFICE.

JOHN W. HAMILTON, OF SPRINGFIELD, OHIO.

FOLDING CHAIR.

SPECIFICATION forming part of Letters Patent No. 472,603, dated April 12, 1892.

Application filed October 12, 1891. Serial No. 408,423. (No model.)

To all whom it may concern:

Be it known that I, JOHN W. HAMILTON, a citizen of the United States, residing at Springfield, in the county of Clark and State of Ohio, have invented certain new and useful Improvements in Folding Chairs, of which the following is a specification.

My invention relates to improvements in folding chairs; and the object of my invention is to provide a chair of simple construction the seat of which is adapted to be folded in a plane substantially parallel with the back, so as to occupy but little space, the constructions being such that the chair is firmly locked and braced in its unfolded or normal position. I attain these objects by the construction shown in the accompanying drawings, in which—

Figure 1 is a view in perspective of a chair embodying my invention. Fig. 2 is a sectional elevation of the same. Fig. 3 is an elevation of the same folded. Fig. 4 is a detailed view of the locking and supporting brace. Figs. 5 and 6 are detailed views of the hinges for connecting the front legs to the seat.

Like parts are indicated by similar letters of reference in the several views.

In the said drawings, *a* represents the back, and *b* the seat, which is hinged thereto, preferably by means of a rod *b'*, which passes through suitable lugs or ears *b²* on the rear of the seat and into the side pieces *a'*, which form the rear legs as well as the sides of the back *a*. Hinged to the front of the seat *b* are the front legs *c c*, joined together at a point near the middle of the length thereof by a connecting-round *c'*. Extending from the rear legs to the front legs and connected to each in a plane parallel with the plane of the seat *b*, and preferably at a point slightly above the bottom of said legs, are pivoted connecting-rods *d*, adapted to hold the said legs substantially parallel and in connection with the seat and brace the same when the chair is unfolded for use.

To provide for locking the seat in its normal or unfolded position, I employ a pivoted brace-rod *e*, preferably formed at its inner or rear end with a T-head, the laterally-extending ends of which form trunnions *e' e'*, which are journaled in bearings *e²*, secured to the

bottom of the chair-seat near the rear thereof. The other end of the said brace-rod is provided with a projecting shoulder *e³*, having a beveled approach *e⁴*, the said shoulder being adapted when the chair is in position to drop behind the connecting-round *c'*, and thus form a brace from the under side of the seat to the rear of said round which holds the same firmly in position. I also preferably provide the brace *e* with an outwardly-projecting finger *e⁵*, which, when the shoulder *e* is in engagement with the round, rests on top of the same and prevents it from dropping to a position below the round. To this finger I preferably attach a spring *e⁶*, which extends outwardly and downwardly, so as to embrace the round *c'* on the opposite side of the shoulder *e³*, as shown in Fig. 2, and thus firmly connect the brace *e* to said round and hold it against longitudinal movement in either direction when in place.

For connecting the front legs *c c* to the bottom of the chair I preferably employ a two-part hinge *f*, the stationary part *f'* being formed of a substantially C shape with inwardly-projecting trunnions *f²*. The movable or leg portion is provided with a socket *f³* and integrally-formed bosses *f⁴*, having openings or bearings adapted to receive the trunnions *f²*. The socket *f³* is preferably made slightly tapered from top to bottom and is adapted to receive the upper end of the leg *c*, which is similarly formed. The socket *f³* is divided by a lateral opening *f⁵*, which extends through the top thereof and between the respective lugs or bosses *f⁴*. The socket is formed of malleable iron, and when first formed the bosses *f⁴* are closed together sufficiently to permit said bosses to pass between the projecting ends of the trunnions *f²*, the socket *f³* being slightly elongated in cross-section. In assembling the parts the bosses are placed between the trunnions, as noted, and the legs driven into the sockets, which expand the same to a substantially circular form, forcing the bosses outwardly to engage with the trunnions *f²*, thus firmly uniting the parts of the hinge, as shown in Fig. 5, in which the parts are represented as expanded. The stationary part *f'* being secured by screws or otherwise to the bottom of the chair, it will be seen that the legs will be firmly united thereto. The socket

f^3 forms a cap for the end of the leg c and a bearing between the same and the chair when the chair is in position for use.

In folding the chair it is only necessary to
 5 raise the brace and then lift the seat upwardly, when the brace, resting on the round c' , is drawn upwardly with the other folding parts, as shown in Fig. 3, the said brace always resting on the top of the round c' , from whence,
 10 as the chair is unfolded, it drops to its position against said round, as shown in Fig. 2, thus firmly locking the same.

The round c' is preferably provided at the point of contact with the brace-rod e with a
 15 metallic wearing-plate c^2 when formed of wood. However, it is obvious that, if so desired, the whole round may be formed of metal.

The pivotal connections between the back and front portions of the chair are so arranged that when turned to the folded position the weight of the seat and its hinged legs is brought back of a line drawn through the centers of said pivotal connections, so that the chair remains in its folded position by
 25 gravity.

It is obvious that the constructions herein described admit of modifications in the hands of a mechanic. I do not, therefore, limit myself to the exact description shown and described; but
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I claim as my invention—

1. In a folding chair, the combination, with a seat and the front legs hinged thereto, of a two-part hinge for connecting said legs and
 35 seat, one of said parts being provided with inwardly-projecting trunnions and the other being provided with a divided socket-piece

having projecting bosses adapted to pass between said trunnions, said socket-piece being adapted to receive the ends of the legs, which
 40 when forced into the same expand said socket-piece so as to close the bosses over said trunnions, substantially as specified.

2. The combination, in a chair and with the seat thereof, of a C-shaped connecting-piece
 45 secured to said seat and provided with inwardly-projecting trunnions, a divided socket-piece having integrally-formed bosses with lateral openings or pockets adapted to receive said trunnions and a socket arranged in a plane
 50 at right angles to said bosses, and a tapered leg adapted to be driven into said socket and expand the same so as to force said bosses over said trunnions, and thus connect the legs and seat, substantially as specified.
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3. In a folding chair, in combination with the legs thereof, a stationary C-shaped piece having inwardly-projecting trunnions, a divided socket-piece having a transverse opening or socket with tapered walls, and integrally-formed cup-shaped bosses the openings
 60 of which are arranged in a plane at right angles to the plane of said socket, the said chair-leg being tapered at one end and adapted to be driven into said socket, and thus expand
 65 the same and force the cup-shaped bosses over said trunnions, substantially as specified.

In testimony whereof I have hereunto set my hand this 9th day of October, A. D. 1891.

JOHN W. HAMILTON.

Witnesses:

R. D. BALDWIN,
 FRANK WATT.