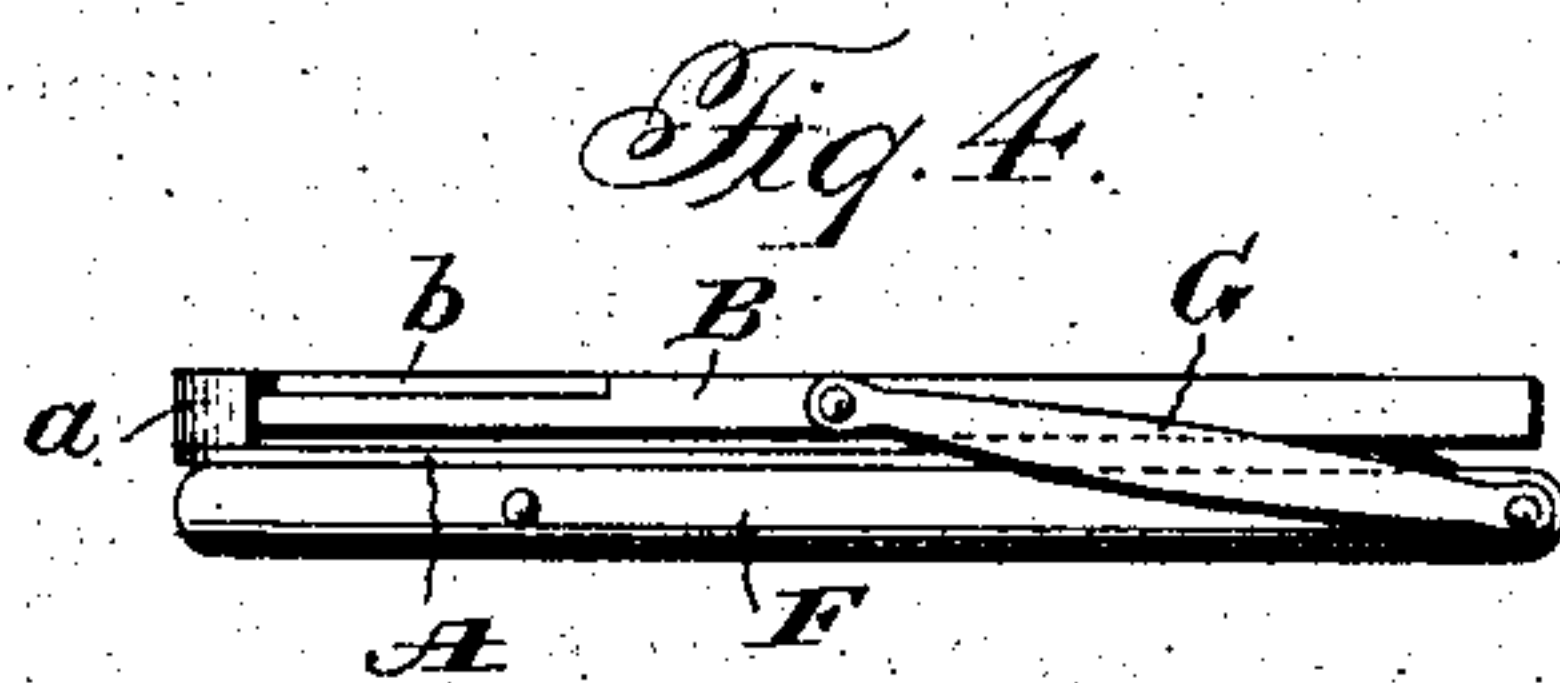
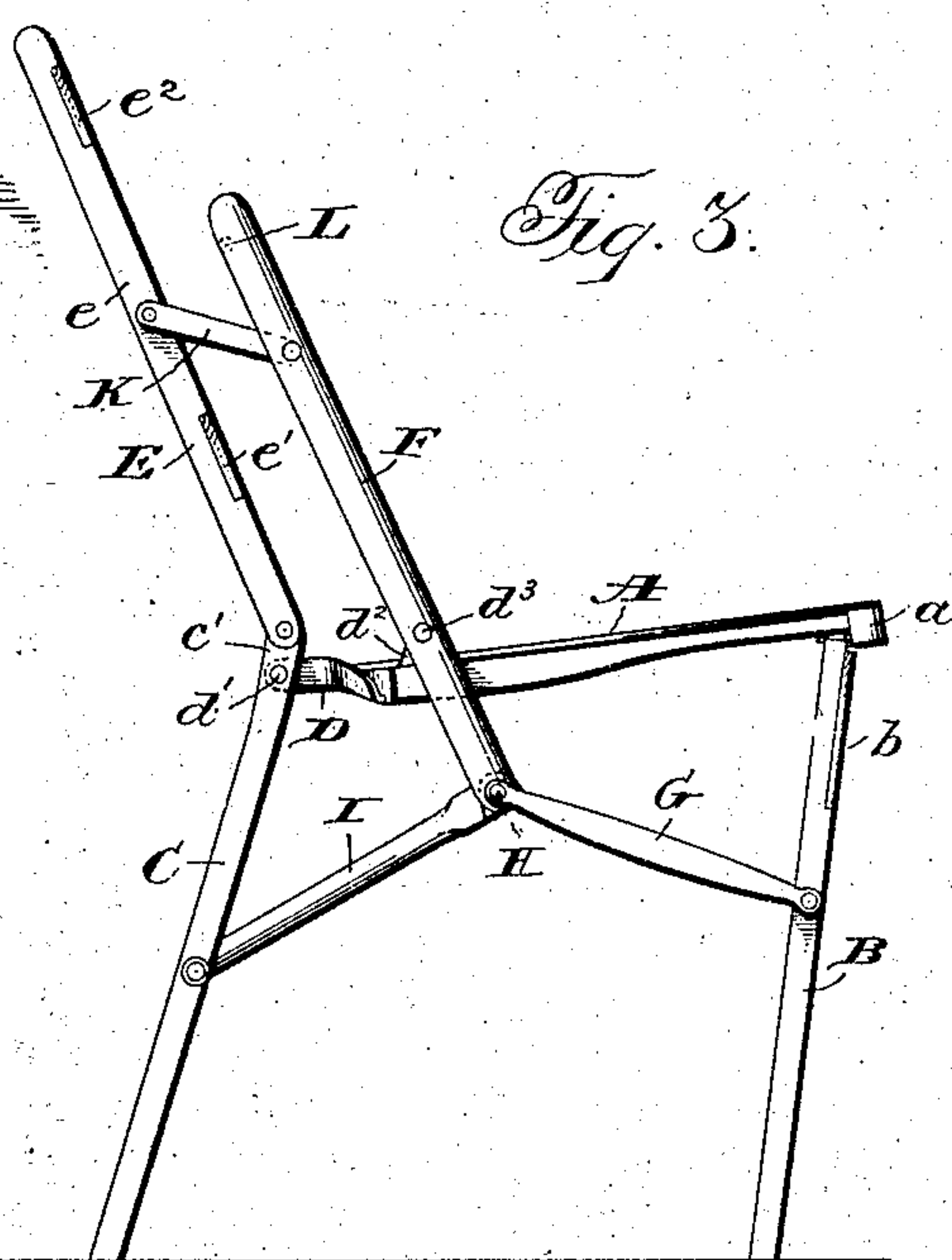
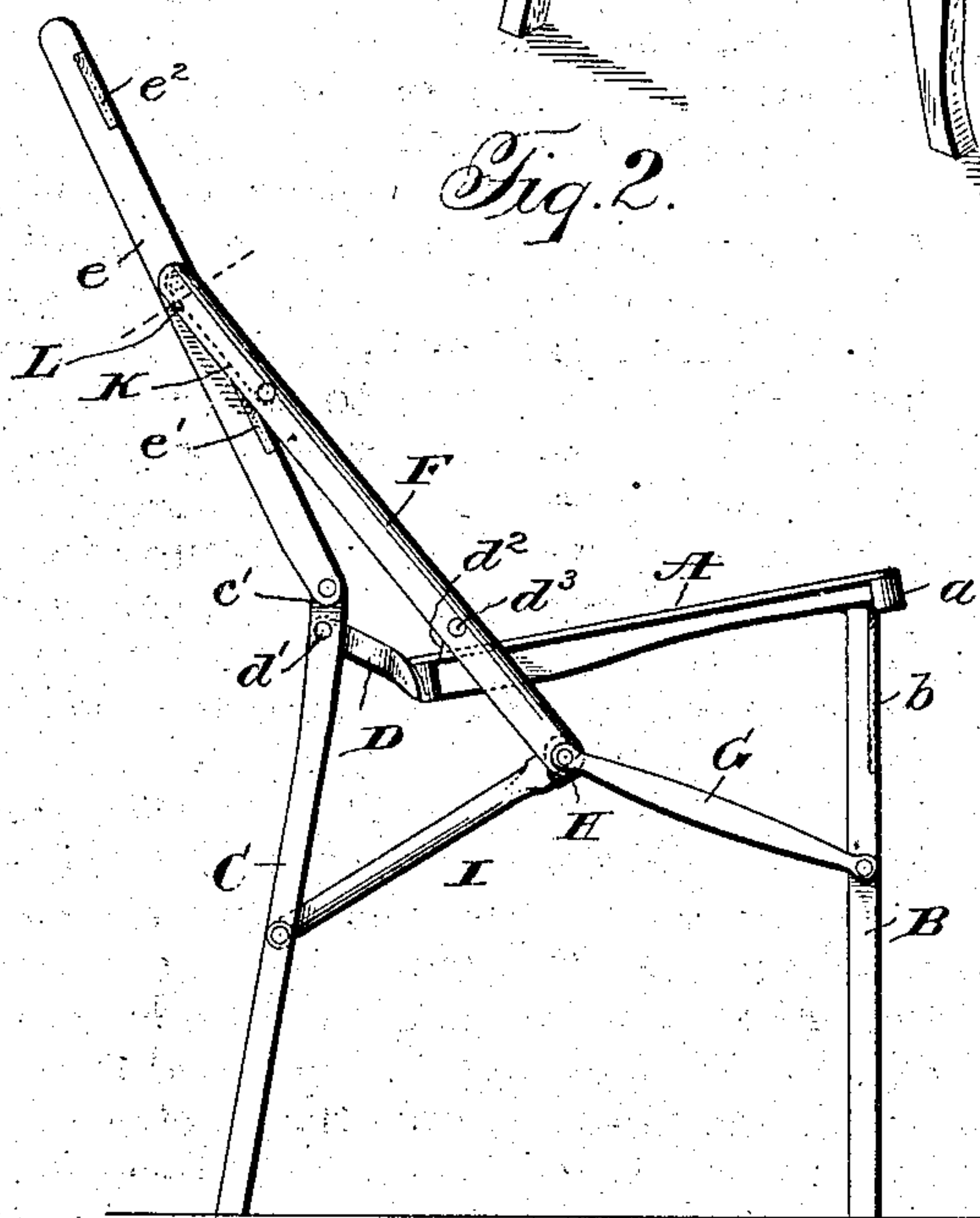
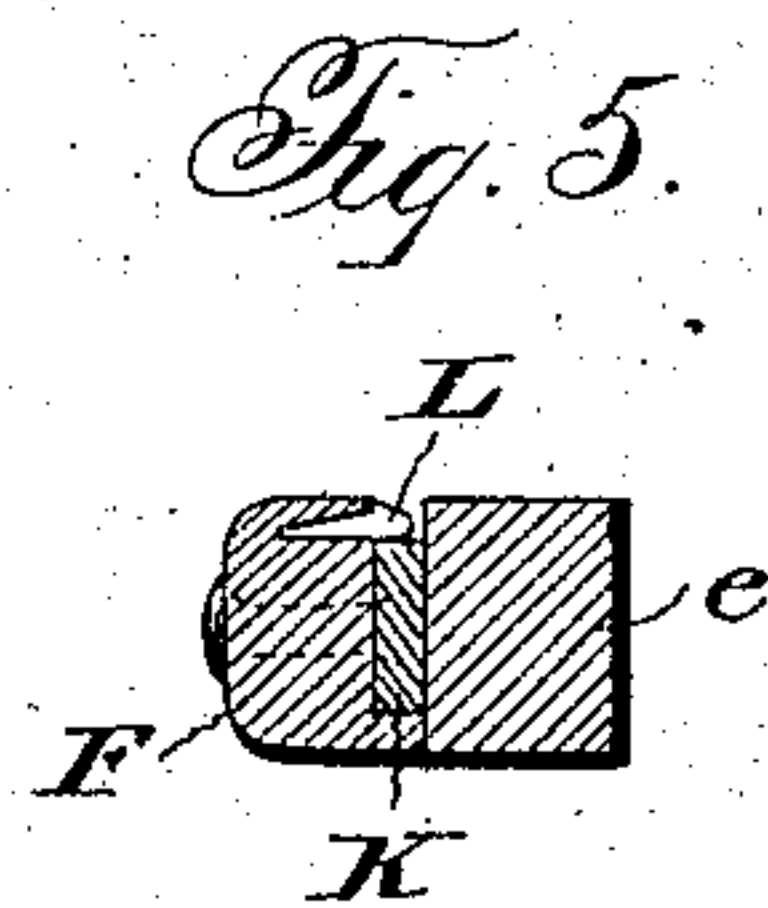
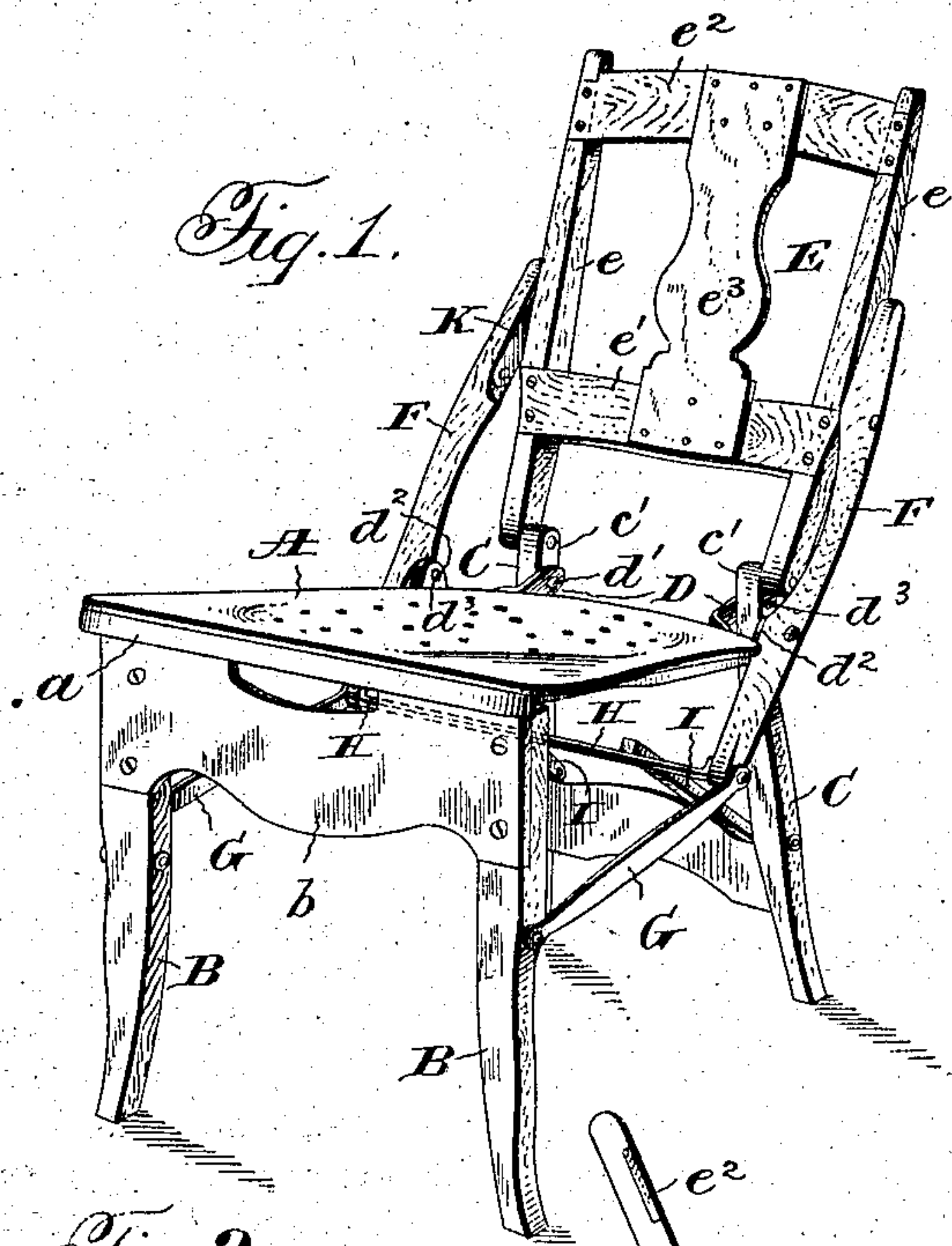


No. 781,554.

PATENTED JAN. 31, 1905.

H. F. RYHER.
FOLDING CHAIR.

APPLICATION FILED DEC. 27, 1902.



Witnesses: a.
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UNITED STATES PATENT OFFICE.

HENRY FRANKLIN RYTHER, OF MONTGOMERY CENTER, VERMONT.

FOLDING CHAIR.

SPECIFICATION forming part of Letters Patent No. 781,554, dated January 31, 1905.

Application filed December 27, 1902. Serial No. 136,792.

To all whom it may concern:

Be it known that I, HENRY FRANKLIN RYTHER, of Montgomery Center, in the county of Franklin, and in the State of Vermont, have invented a certain new and useful Improvement in Folding Chairs; and I do hereby declare that the following is a full, clear, and exact description thereof, reference being had to the accompanying drawings, in which—

Figure 1 is a perspective view of a chair embodying my invention. Fig. 2 is a side elevation of the same, the chair being shown as ready for use. Fig. 3 is a like view of such chair, the chair being shown as partially collapsed. Fig. 4 is a like view of the said chair, the chair being shown as folded up; and Fig. 5 is a sectional view taken through the bars *e* and braces *F*.

The object of my invention is to provide a chair which, while strong and comfortable when in use, shall be capable of being readily folded into very small compass; and to such ends my invention consists in the chair hereinafter specified.

In carrying my invention into practice I provide a seat *A* of any desired construction, and I prefer to secure a strip *a* under or across the front edge thereof. To the said strip or to the seat, as desired, I hinge a pair of front legs *B*, which are preferably connected by some form of brace, such as the board *b*. The pintles of the hinges securing the legs *B* to the strip *a* are preferably near the lower rear edge of the said strip, so that when, as illustrated in Fig. 4, the legs are folded against the seat their front surfaces shall come flush with the lower surface of said strip, or they may be secured in the side pieces of the seat. Back legs *C* are connected by a brace *c* and are hinged to the seat either directly or by means of brackets *D*, which are secured to the said seat and which have vertical arms projecting rearward, into which rivets *d'* are secured to act as pivots for the legs *C*. The legs *C* have projections *c'*, which extend above the pivots.

A back *E* is provided, such back consisting of two vertical bars *e*, connected by braces *e'* and *e''*, respectively, said braces being connected, if desired, by a back-board *e'''*. The

lower ends of the bars *e* are pivoted to the projections *c'* in any desired manner, as by rivets passing horizontally through such parts.

The brackets *D* are preferably provided with ears *d''*, which at the sides of the seat project upward above the surface of the latter, and arms *F* are respectively pivoted between their ends upon the said ears, as by rivets passing through said arms and secured to the said ears. The said arms, if desired, can be pivoted directly to the sides of the seat. The lower ends of the arms are connected, as by links *G*, to the front legs *B*, the said links being pivoted, preferably, to the outer sides of said arms and legs. The inner faces of the said arms are preferably connected by a bar *H*, which, as illustrated, is formed of a strap of metal having ears bent up at its ends, in which ears the pivots passing through the arms are secured. Links *I* connect the arms and the back legs *C*, and they may be conveniently secured indirectly to the arms by being secured to the bar *H* upon its upper face and may be connected to the inner faces of the legs *C*, as by rivets passing through the said links and the said legs. The upper ends of the arms are connected to the back in any convenient manner. I have illustrated such connection as consisting of links *K*, which are pivoted to the side bars *e* of the back and to the arms below their upper ends. The arms are, as illustrated, provided with catches *L*, which are beveled upon their faces toward the links *K* and are adapted to ride over the said links in opening the chair and to spring behind the links and hold them between such catches and flanges or other stops formed upon the front of the arms. The pivots *d'* and the pins *d'''* are preferably located at a distance above the level of the seat sufficiently so that the back, the legs *C*, and the arms can lie above and flat against the upper surface of the seat when the chair is folded, as illustrated in Fig. 4.

In the operation of my chair as above illustrated to open the chair one hand is placed upon the top of the back and the other hand upon the front of the seat. These parts are then pulled apart until the chair is nearly open.

The chair is then set upon the floor, and the upper ends of the arms are pressed back until the catches catch upon the links K, when the chair will be found to be securely fastened, so that it cannot collapse. To close the chair, one should stand behind it and placing the thumbs upon the inner sides of the upper ends of the arms press such ends outward or apart until the catches are disengaged from the links K, when if the top of the back and the front of the seat are again engaged with the hands and are forced together the chair will immediately be folded into an exceedingly compact compass.

My chair possesses, among others, the following advantages: Its mechanism does not require any alterations in the proportions of the chair from those ordinarily used, so that the chair can be proportioned for greatest comfort. My chair can have great strength, because its legs are vertical, in which position the material is best capable of standing strain, the usual construction of folding chairs being one in which the legs are crossed, in which position the material is least capable of standing strain. My chair, while composed of comparatively few parts, is capable of being folded into exceedingly small compass, it occupying but little more space when folded than the mere volume of the material from which it is constructed. For instance, the ears upon which the arms and back legs are pivoted can be formed upon separate brackets instead of upon the same bracket, or they can be combined into one bracket, or the four ears or brackets can be formed of one integral part. The form of connection between the arms and the back can be widely varied. Instead of the stationary catches L and the flanges for locking the arms F and the links K together the catches can be in the form of spring-bolts which engage the holes in the links K, thereby serving the functions both of the stationary catches and the flanges illustrated in the drawings. The links K may even be dispensed with and suitable studs sliding in the slots substituted therefor. The extension of the rear legs above the pivots on the seat, while an advantage, can be omitted.

Having thus described my invention, what I claim is—

1. A folding chair, consisting of a seat, front and rear legs, arms or side bars pivoted between their ends to said seat, connections between said arms and said front and rear legs of the chair, and connections between said arms and the back of the chair, said connections being partially detachable to permit the chair to fold.

2. In a folding chair, the combination of a seat, legs pivoted at their upper ends to said seat, joints connecting said legs and seat, said joints being so constructed that said legs can swing simultaneously in the same direction, a

toggle-joint connecting said legs, such toggle-joint consisting of links pivoted to each other and to said legs, and means for rigidly connecting the central pivot of such toggle-joint to said seat.

3. In a folding chair, the combination of a seat, legs pivoted at their upper ends to said seat, a toggle-joint connecting said legs, and means for rigidly connecting the central pivot of such toggle-joint to said seat, such means consisting of arms pivoted to the seat and to such central pivot, and means for connecting said arms to the back of the chair.

4. In a folding chair, the combination of a seat, legs pivoted to the front portion of the seat, legs pivoted to the rear portion of the seat, and extended above said seat, a back pivoted to said extended portions of said legs, and a linkage connecting said legs and back with said seat, whereby said legs may be locked in open position or may, by the swinging of said back, be caused to fold so that the front legs shall come against the under side of the seat, and the back legs against the upper side of the seat.

5. In a folding chair, the combination of a seat, legs pivoted to the front portion of the seat, legs pivoted to the rear portion of the seat, said rear legs extending above their pivots on the seat, a back pivoted to said extended portions of the rear legs, a linkage connecting said legs and back to said seat, means for locking said linkage to hold the chair in upright position, means whereby said back may be caused to fold said legs against opposite sides of the seat.

6. In a folding chair, the combination of a seat, legs pivoted to the front portion of the seat, legs pivoted to the rear portion of the seat, a back, said rear legs extending above the pivots on the seat, and said back being pivoted to said extended portions of said rear legs, arms pivoted to said seat and extending above and below the same, links connecting said arms with said back, links connecting said arms with said legs, and means for locking said arms to said back.

7. In a folding chair, the combination of a seat, legs pivoted to the front and rear portions of the seat, arms or side bars pivoted to said seat, links pivoted to the lower ends of said arms and to said legs, a back pivoted upon said chair, and means for connecting the upper ends of said arms with said back.

8. In a folding chair, the combination of a seat, legs pivoted to the front and rear portions of said seat, the rear legs extending above their pivots on the seat, a back pivoted to said extending portions of said rear legs, arms pivoted to said seat between their ends, links connecting the lower ends of said arms with said legs, links connecting said arms with said back, and means for locking said arms and said back together.

9. In a folding chair, the combination of a seat, legs pivoted to the front and rear portions of said seat, the rear legs extending above their pivots on the seat, a back pivoted to said extending portions of said rear legs, arms pivoted to said seat between their ends, links connecting the lower ends of said arms with said legs, links connecting said arms with said back, and means for locking said arms

and said back together, said means consisting of catches upon said arms which engage said links.

In testimony that I claim the foregoing I have hereunto set my hand.

HENRY FRANKLIN RYTHUR.

Witnesses:

WILLIAM J. WRIGHT,

C. L. MARTIN.