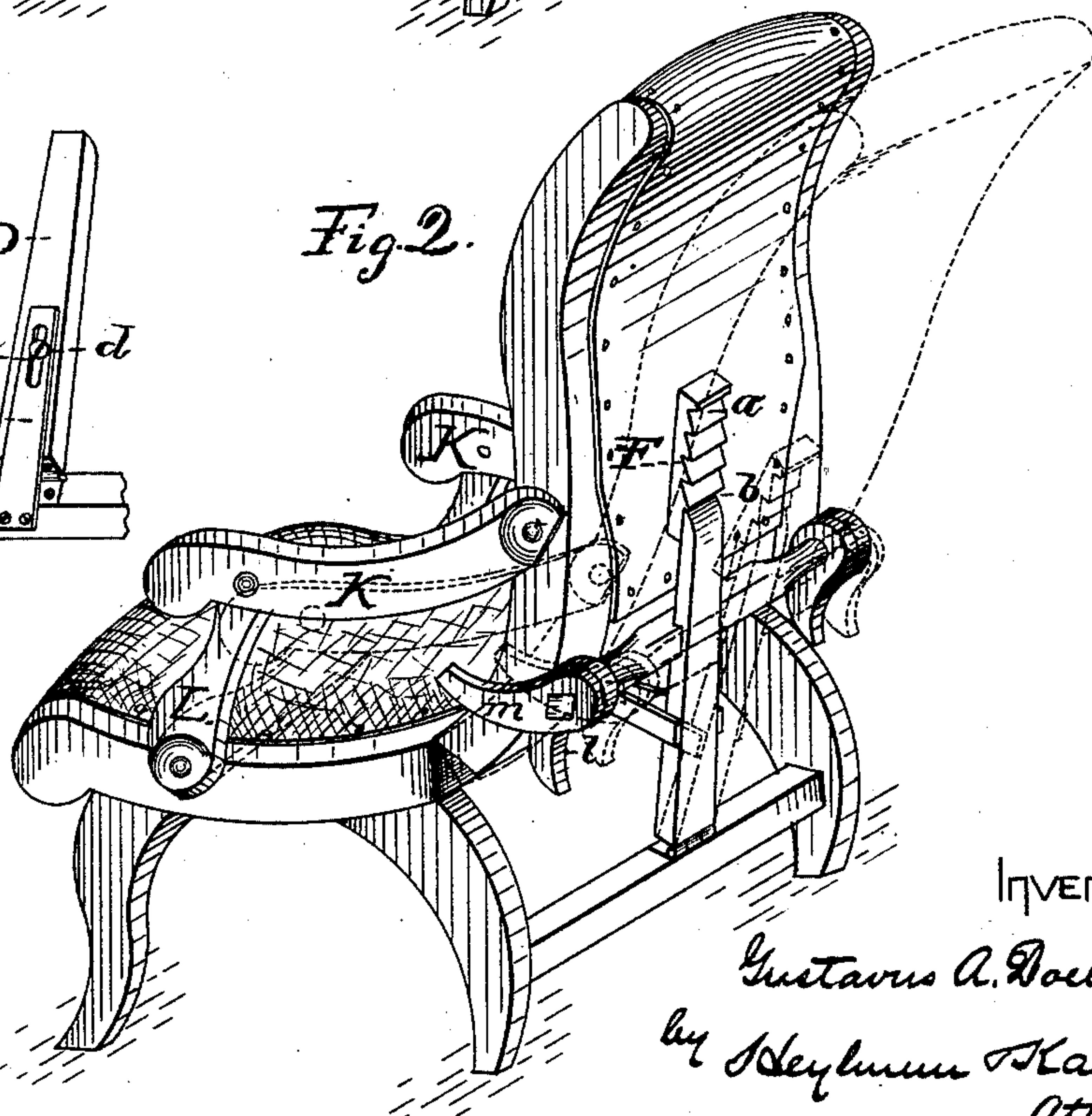
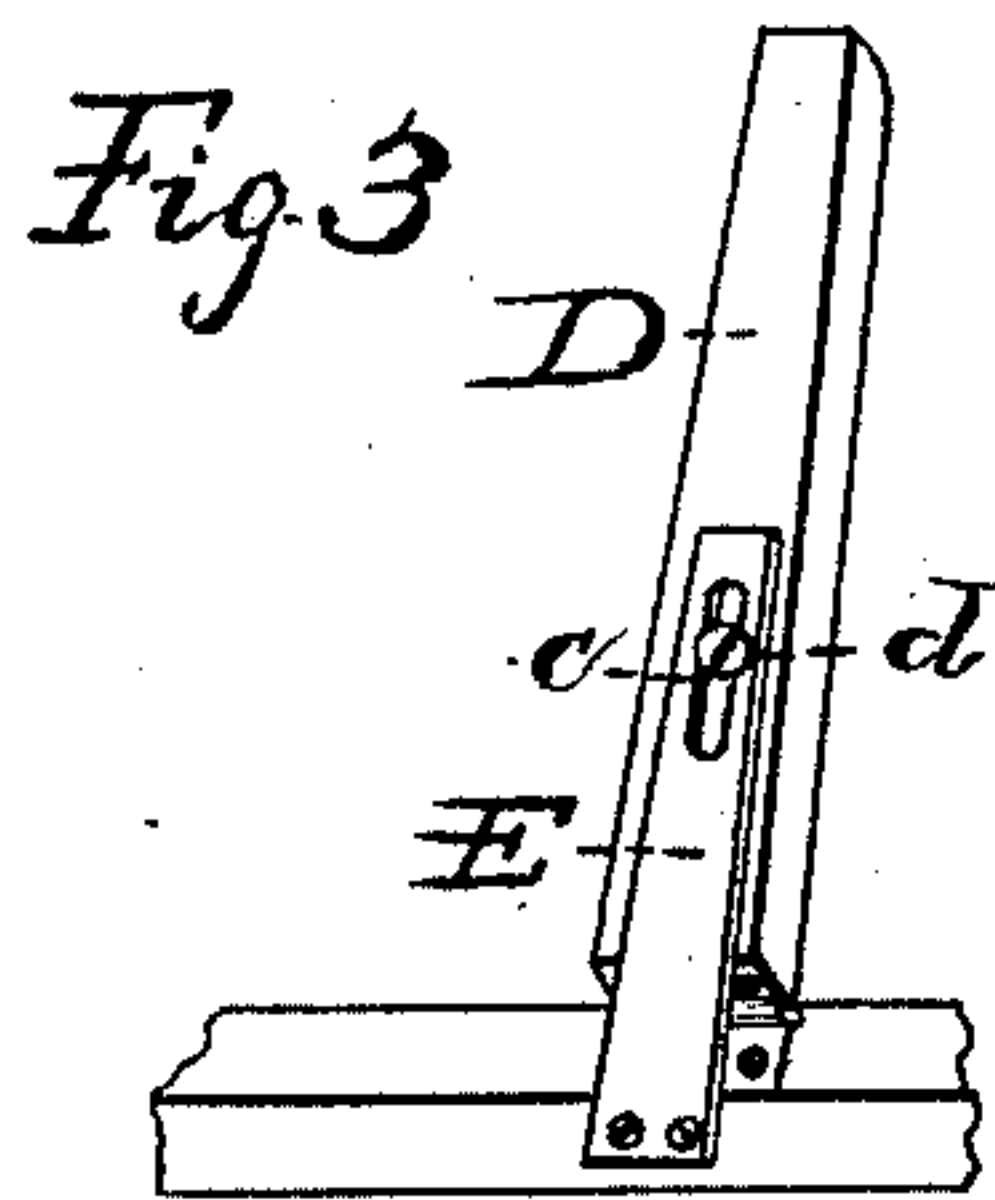
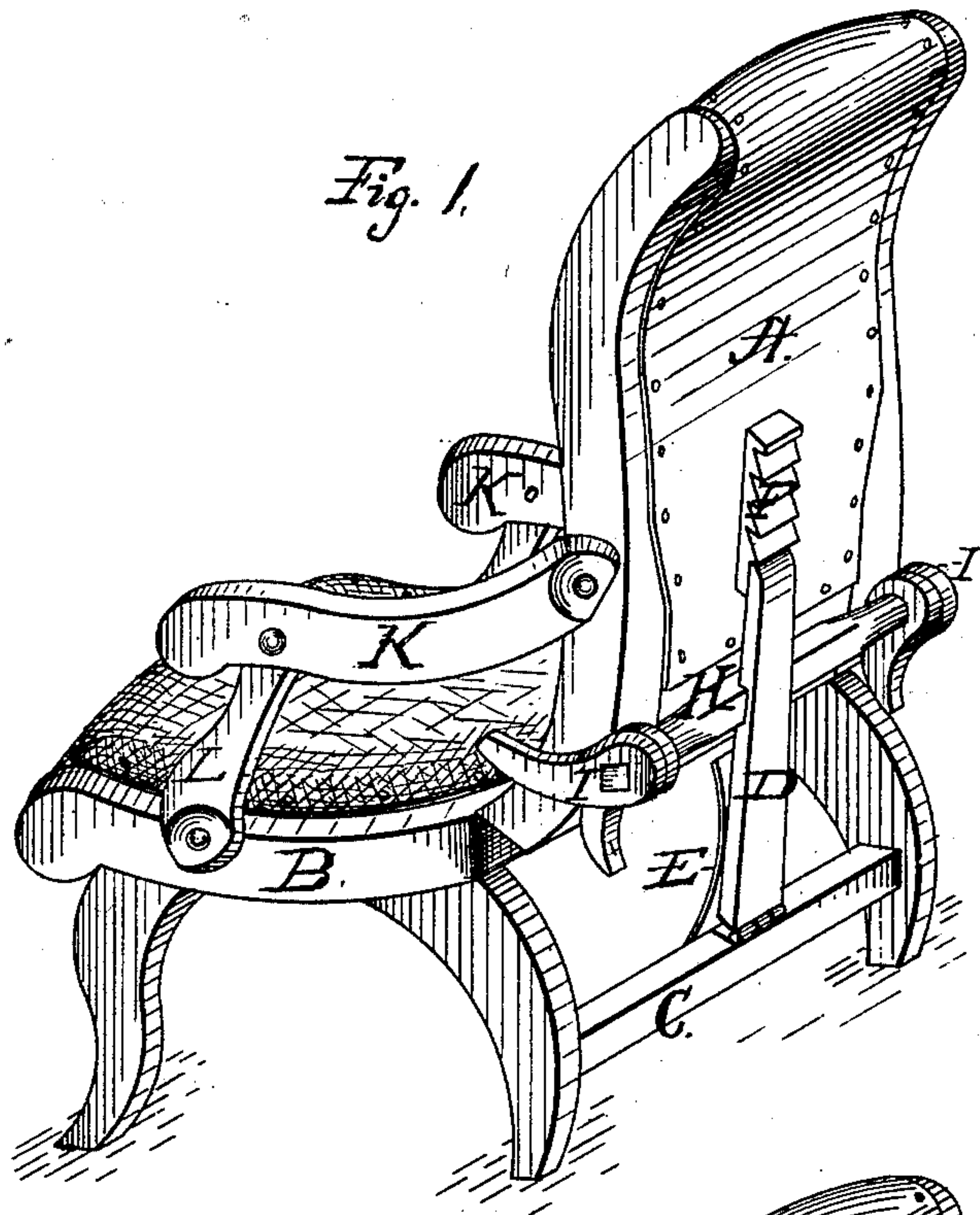


G. A. DOELLINGER.
Reclining-Chair.

No. 223,120.

Patented Dec. 30, 1879.



WITNESSES
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UNITED STATES PATENT OFFICE.

GUSTAVUS A. DOELLINGER, OF ROCK ISLAND, ILLINOIS.

IMPROVEMENT IN RECLINING-CHAIRS.

Specification forming part of Letters Patent No. **223,120**, dated December 30, 1879; application filed August 6, 1879.

To all whom it may concern:

Be it known that I, GUSTAVUS A. DOELLINGER, of Rock Island, in the county of Rock Island and State of Illinois, have invented a new and valuable Improvement in Reclining-Chairs; and I do hereby declare that the following is a full, clear, and exact description of the construction and operation of the same, reference being had to the annexed drawings, making a part of this specification, and to the letters and figures of reference marked thereon.

Figure 1 of the drawings is a representation of a rear perspective view of my improved chair. Fig. 2 is a similar view, showing the back in dotted lines in a reclining position. Fig. 3 is a detail view of the support-bar and slotted spring.

The object of this invention is to simplify and cheapen the manufacture of reclining or easy chairs of that class having means for increasing or decreasing the inclination of the back; and the main object is to bring the operating means, located in rear of the chair, within easy reach of the occupant while seated in the chair, so that the back of the chair can be manipulated.

The improvements, therefore, consist in a single vertical bar pivoted or connected to a cross-bar arranged between the hind legs of the seat-frame and provided with a transverse bar, with cams arranged upon said transverse bar at a point in line, or nearly so, with the chair-seat, so as to be within easy reach of the occupant; also, in combination with the foregoing, a slotted flat spring, or its equivalent, attached to the cross-bar of the seat-frame and engaging with a pin on the vertical bar, so as to keep the said bar in contact with the rack-bar attached to the rear surface of the back; also, in the novel construction and arrangement of the parts, as will be hereinafter more fully set forth.

In the annexed drawings, forming a part of this specification, the letter A represents the back, hinged at its lower end to the rear end of the seat-frame B, substantially as shown in Fig. 1 of the drawings. This seat-frame is provided with a cross-bar or stretcher, C, secured between the hind legs, and to the upper surface of which is hinged the vertical brace

or prop D, located at the middle, between the legs, engaging with a ratchet-bar, F, suitably attached near the lower end of the chair-back. This ratchet-bar is intended to be embedded in the back of the chair, so that the teeth only shall protrude to receive the vertical bar or brace.

The saw-shaped teeth *a* of the rack-bar F have their beveled portions extending downward, so as to afford a substantial projecting bearing-surface, *b*, for the upper end of the bar D, and at the same time present a gradual incline for the rod to easily descend as adjusted from space to space.

E represents a flat spring, bolted or otherwise fastened at its lower end to the inner surface of the cross-bar C, (see Fig. 3,) so as not to be visible from a casual inspection and to be out of the way. The upper end of this spring is provided with an oblong slot, *c*, through which is passed a pin, screw, or bolt, *d*, fastened to the inner side of the support-bar.

By this means and connection the upper part of the spring E and support-bar D are held together and in upright, or nearly upright, position. The oblong slot *c* in spring E allows sufficient play for support-bar to be pushed back or disengaged, and permits the spring E to draw forward the support-bar D for engagement with the ratchet-teeth on the back of the chair.

In lieu of the slotted spring E, a rubber strap connected with the support-bar D and attached to the under side of the seat may be employed, as shown in Fig. 2 of the drawings, or both may be used together.

The support-bar D is provided with a transverse bar, H, secured near the upper end thereof, and in line, or nearly so, with the chair-seat, within easy reach of the occupant of the chair. At the outer ends of the bar H are arranged combined cams and handles I, of the shape substantially as shown. These cams and levers or handles I are so arranged that the surfaces of the cam portion *l* come in contact with the timber frames of the back of the chair, and the handles *m* project in the direction of the arms of the chair and are easy of access to the occupant.

It will be observed that when the vertical

bar D is in contact with the rack, which is fixed to the center of the back of the chair, the cam-surfaces of the device I are brought against the outer under edges of the chair-back, acting as supports, and at the same time preventing any twisting or depression of the chair-back.

The side arms, K, are pivoted to the hinge-back and to the pivoted arms L, attached to the seat-frame. By these mechanical means and connections the chair-back can be tilted at any desired angle by the occupant while in the seat, thus enabling him to assume the desired inclined or recumbent posture.

The chair-back is moved backward and forward in the following manner: The occupant sitting in the chair, desiring a different and more comfortable posture, throws his hands backward, grasping the handles at the ends of the cross-bar within reach, and by pulling upward with his hand the cams are brought into action, and the support is released from its engagement with the rack-bar, the back drops the distance of one or more teeth or spaces, and the support engages with the next or upper space to sustain the chair-back in the new position.

In order to raise the chair-back to a different inclination it is only necessary to pull or move the side arms of the chair forward.

It will be observed by reference to the drawings that only one vertical bar or prop, one spring, and one rack are employed, and that the vertical bar is released from engagement with the rack through the positive action of the transverse bar and its cams.

This new organization of parts for adjusting the inclination of the back simplifies as well as materially cheapens the construction of the easy-chair.

What I claim as my invention is—

1. In a reclining-chair, the combination, with a hinged back having a suitable rack located in its rear surface, of a hinged supporting-bar provided near its upper end with a transverse bar carrying combined cams and handles, substantially as and for the purpose set forth.

2. In combination with a chair having a reclining back with a centrally-arranged rack, the vertical single bar D, pivoted centrally to a cross-bar, C, arranged between the hind legs of the seat-frame, and provided near its upper end with the transverse bar H, in line, or nearly so, with the chair-seat, and the combined handles and cams I, arranged on opposite sides of the reclining back, substantially as and for the purpose set forth.

3. The improved reclining or easy chair consisting of the new organization, to wit: the seat-frame B, hinged back A, with rack F, cross-bar C, vertical bar D, with slotted spring E, transverse bar H, and combined cams and handles I, substantially as shown and described.

In testimony whereof I have hereunto subscribed my name.

GUSTAVUS A. DOELLINGER.

Witnesses:

J. I. FRANTZ,

AUGUST WENDT.