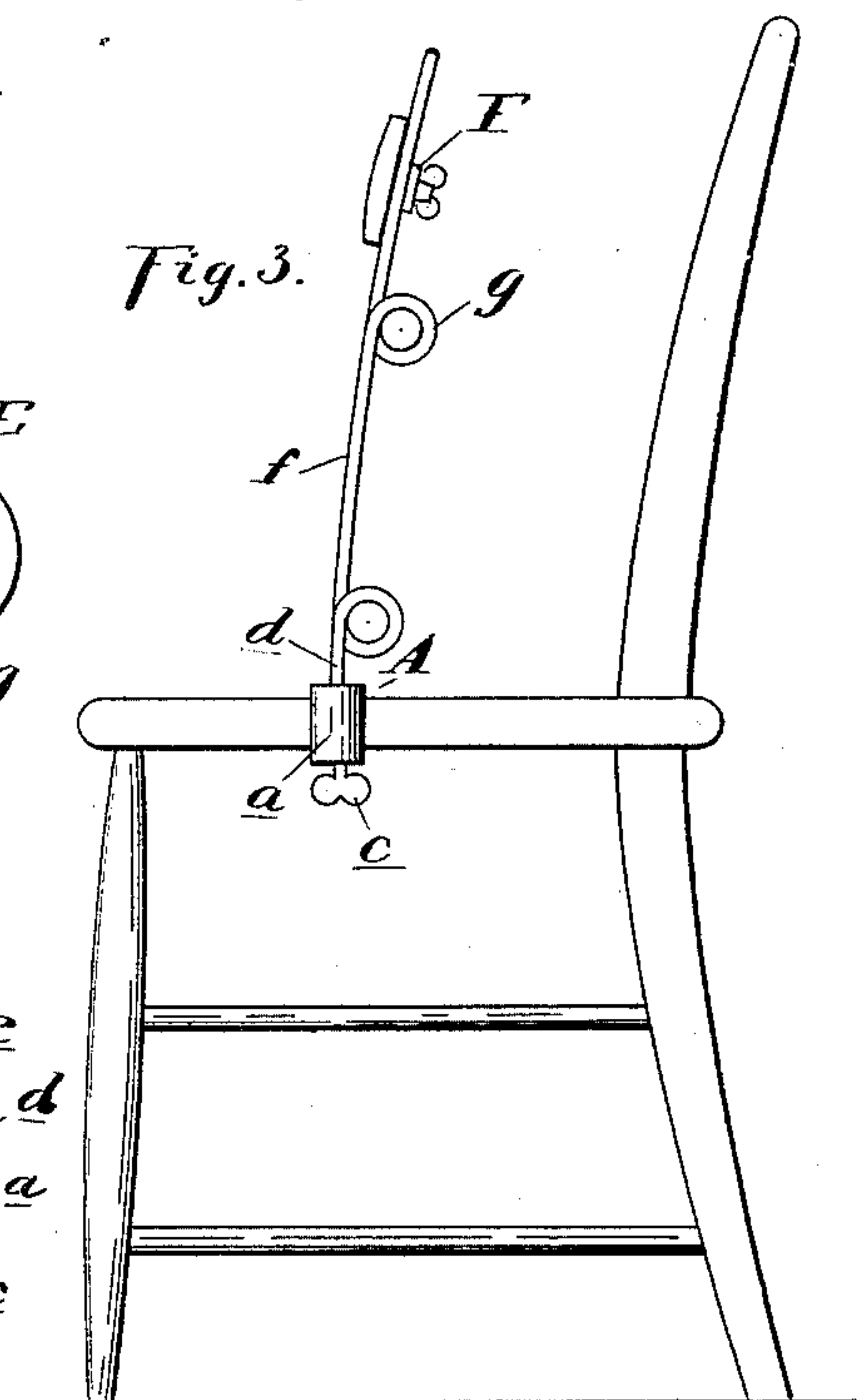
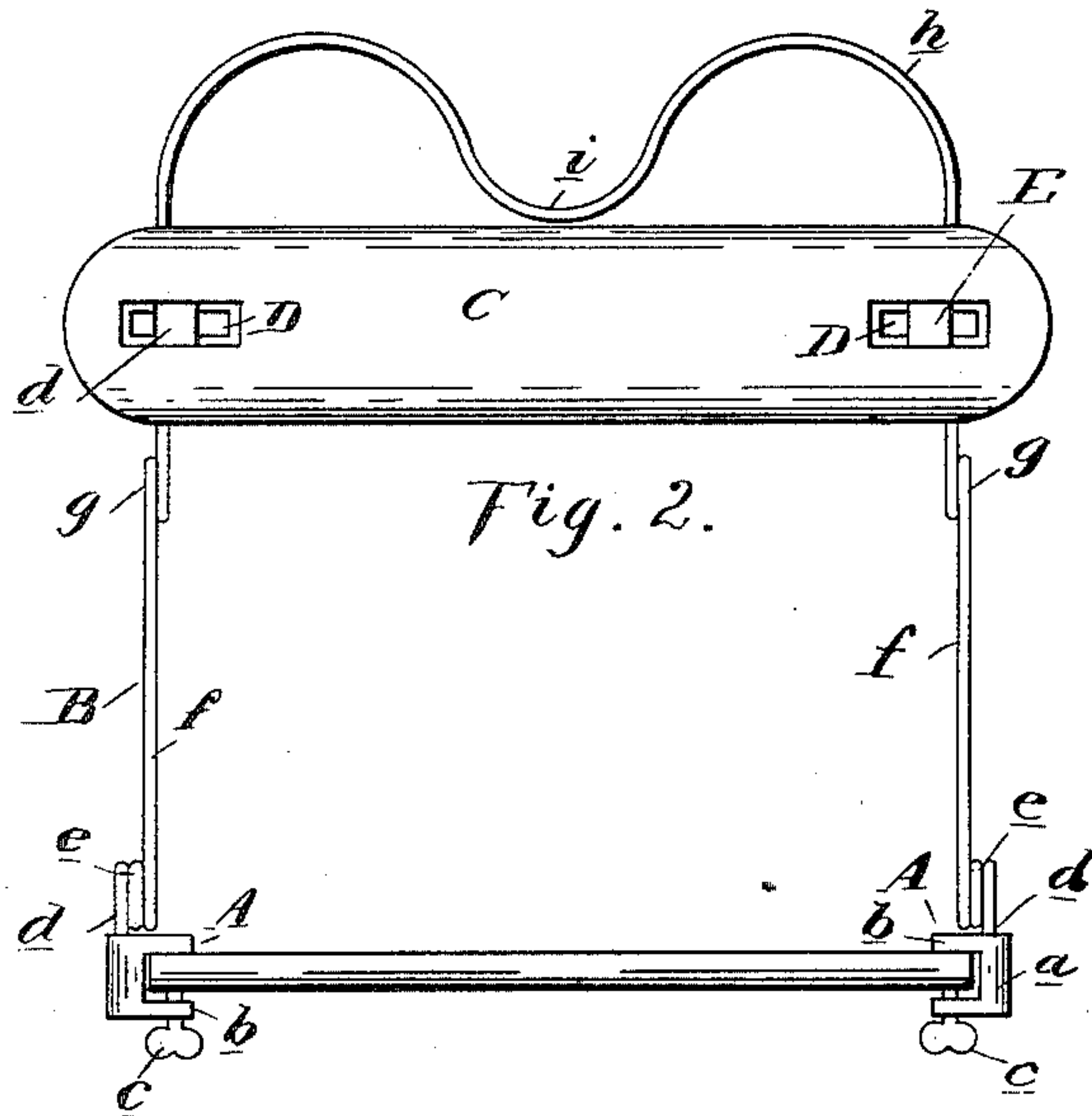
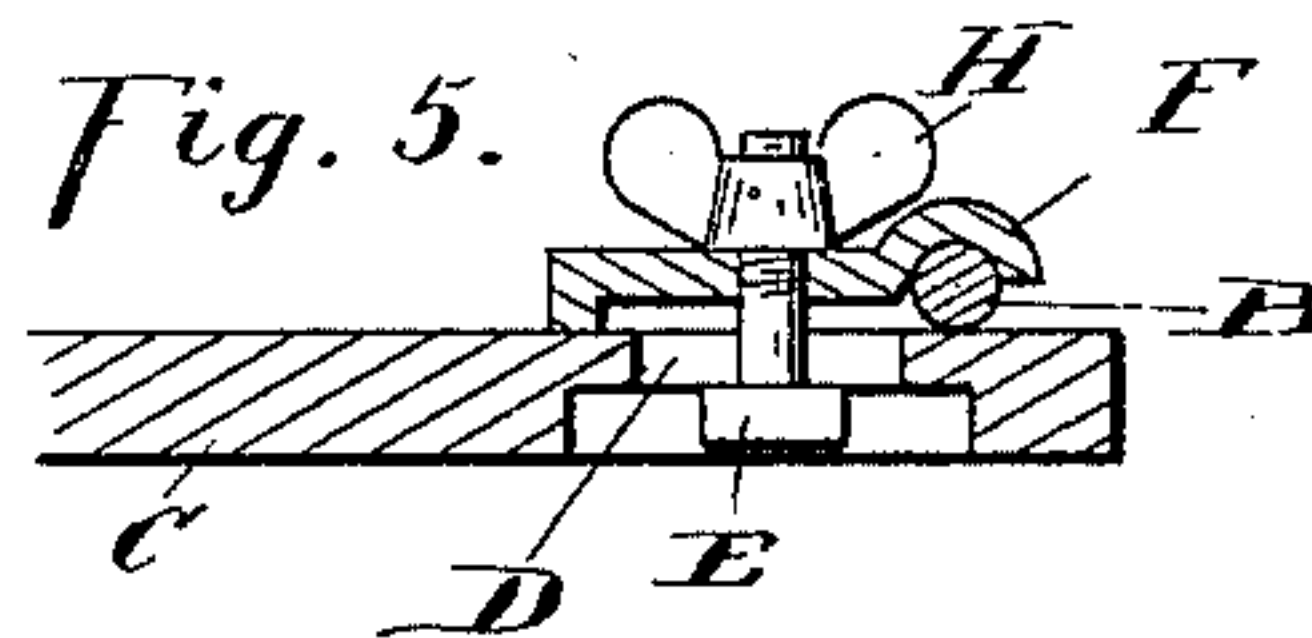
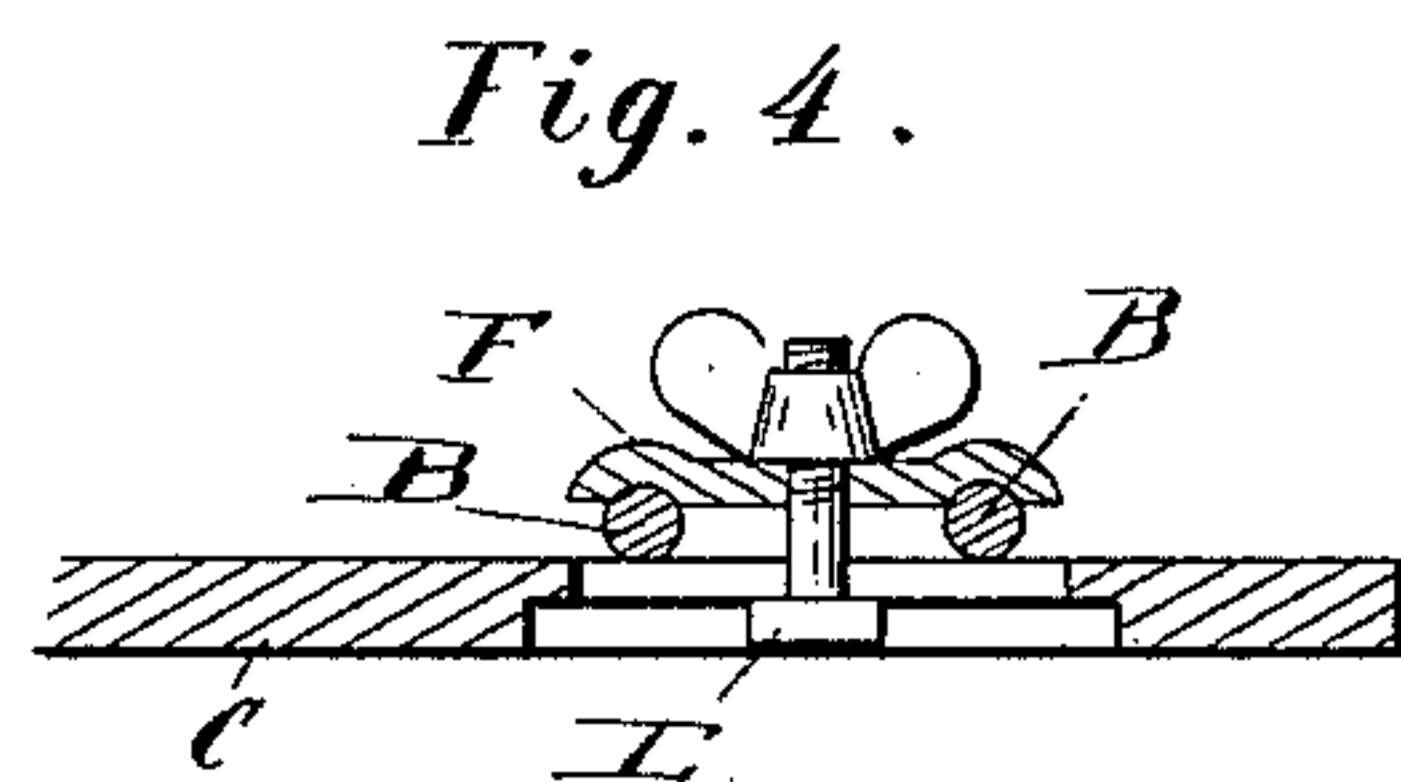
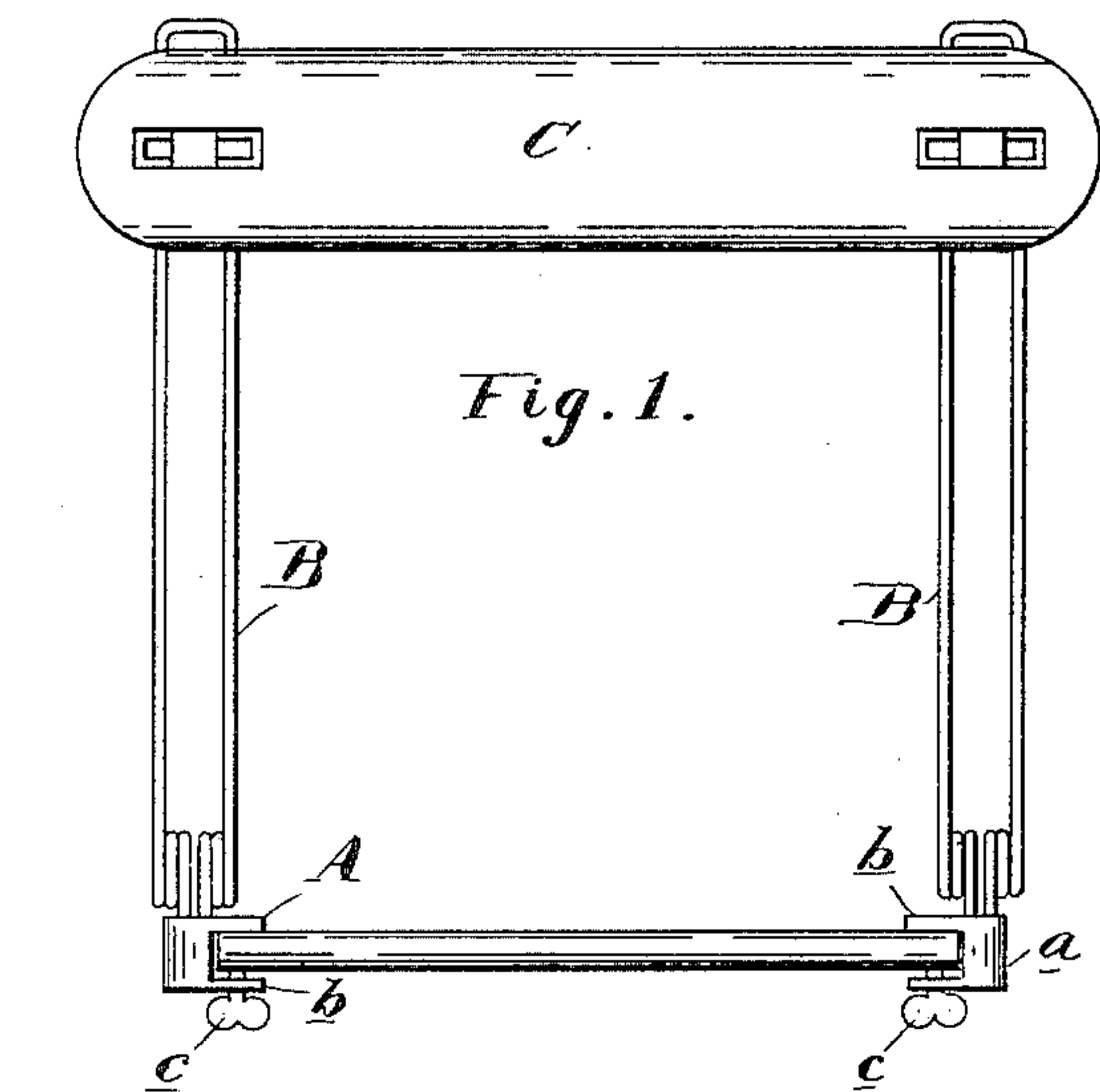


(No Model.)

J. H. HAULENBEEK.  
DETACHABLE CHAIR BACK.

No. 433,125.

Patented July 29, 1890.



Witnesses:

Geo. A. Gregg.  
M. B. O'Gherly.

Inventor

John Henry Haulenbek  
By James Whittemore  
Atty.

# UNITED STATES PATENT OFFICE.

JOHN H. HAULENBEEK, OF CLEVELAND, OHIO.

## DETACHABLE CHAIR-BACK.

SPECIFICATION forming part of Letters Patent No. 433,125, dated July 29, 1890.

Application filed February 18, 1890. Serial No. 340,954. (No model.)

*To all whom it may concern:*

Be it known that I, JOHN HENRY HAULENBEEK, a citizen of the United States, residing at Cleveland, in the county of Cuyahoga and State of Ohio, have invented certain new and useful Improvements in Detachable Chair-Backs, of which the following is a specification, reference being had therein to the accompanying drawings.

10 This invention relates to new and useful improvements in detachable seat-backs; and the invention consists in the peculiar construction of the spring-back, adjustable to different widths of seats and vertically adjust-  
15 able for different persons, all as more fully hereinafter described.

In the drawings which accompany this specification, Figures 1 and 2 are elevations of different modifications of my seat-back.  
20 Fig. 3 is a side elevation of Fig. 2 as in use. Figs. 4 and 5 are detail views of the clamps used, respectively, on the backs shown in Figs. 1 and 2.

A are clamps which consist of the blocks *a*,  
25 having the jaws *b* adapted to embrace the side of the seat or chair and a clamping-screw *c*. These blocks have in their upper faces suitable apertures to receive the lower end of the springs B. These springs are preferably  
30 made, as shown in Fig. 2, with the sides and backs made in one piece, bending them with the arms *d* at the lower ends adapted to engage in the apertures in the blocks *a*, the coil *e*, the vertical side pieces *f*, the upper coil *g*,  
35 the curved back *h*, having the downwardly-projecting bend *i*, the other side being similarly bent. Upon this vertical spring I attach the cross-piece or connecting-bar C, which is provided with slots D, in which en-  
40 gages the head of the clamping-bolt E, the

bar being suitably recessed to countersink the head of the bolt flush with the bar. This bolt on the under side passes through the clamping-bar F, which has the curved bearing G adapted to bear against the vertical  
45 portion of the spring, and a winged nut H to clamp the parts together.

In Fig. 1 I show the springs B, consisting of two vertical pieces joined together at their upper ends and having a double coil at the  
50 bottom, being connected together at the top only by the cross-bar. In this construction the clamping-bar F requires two curved seats for the double wires. It is evident that this construction of the back may be detached from  
55 the clamps by simply lifting it out of engagement with the clamps, which in no way interfere with the ordinary use of the seat. It is evident that it may be adjusted to any width  
60 of seat by adjusting the top on the cross-bar and fitting the clamps to the seat. It may be also vertically adjusted to suit the back of the user. The yielding tendency of the wire frame shown in Fig. 2 allows of the lateral  
65 adjustment of the bars B.

What I claim as my invention is—

In a detachable seat-back, the combination, with the clamps, of the spring-supports B, secured in the clamps, the cross-bar C, having elongated slots therein, clamping-bolts E,  
70 passing through the slots, and clamping-bars F, through which the bolt passes, substantially as described.

In testimony whereof I affix my signature, in presence of two witnesses, this 16th day of  
75 January, 1890.

JOHN H. HAULENBEEK.

Witnesses:

O. J. CAMPBELL,  
E. E. BROOKS.