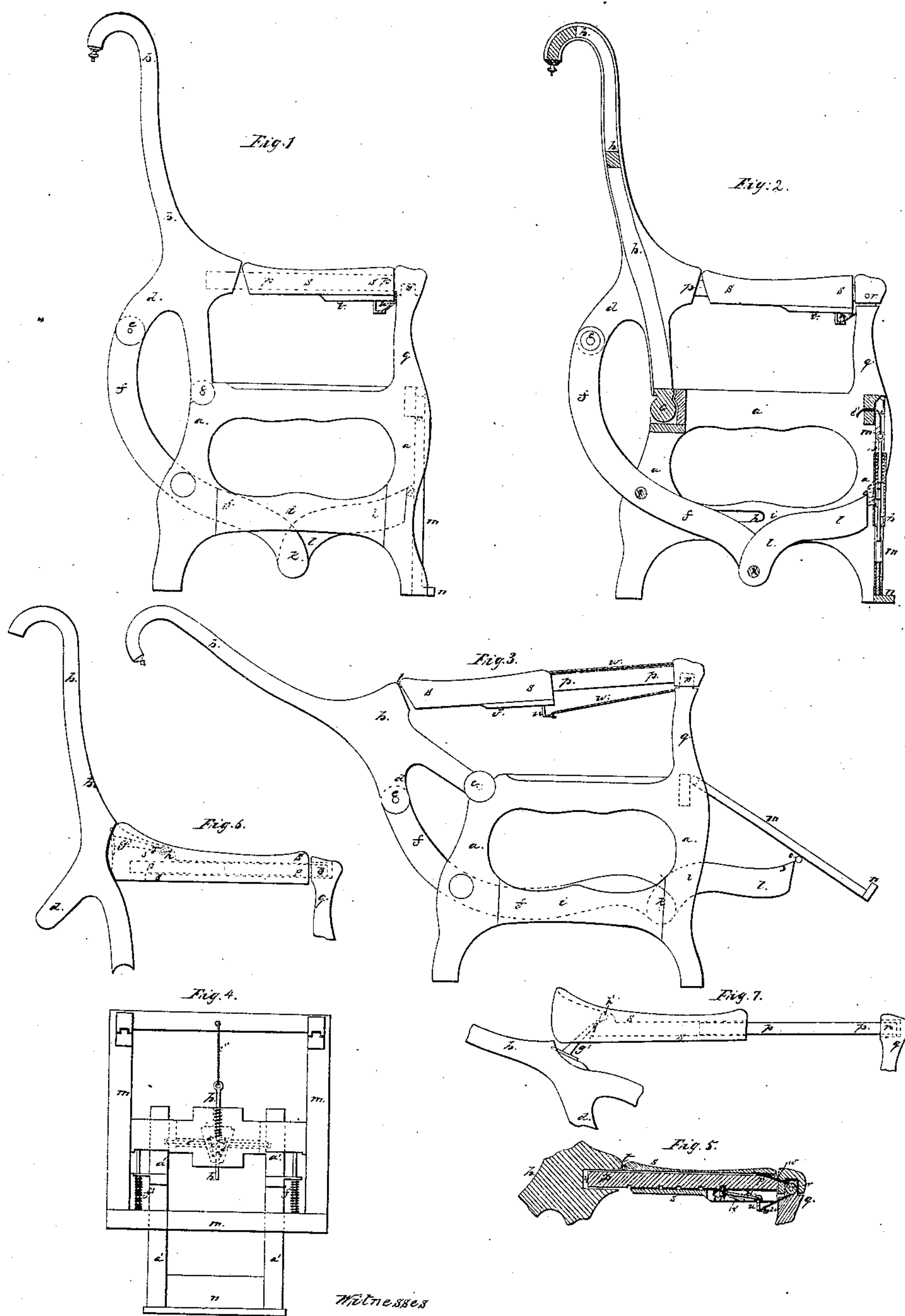


A. Eliass,
Invalid Chair,

N^o 20,198.

Patented May 11, 1858.



Witnesses
Joseph Garrett
Albert H. Brown

Inventor.
Augustus Eliass

UNITED STATES PATENT OFFICE.

A. ELIAERS, OF BOSTON, MASSACHUSETTS.

RECLINING-CHAIR.

Specification forming part of Letters Patent No. 20,198, dated May 11, 1858; Reissued January 25, 1859, No. 650.

To all whom it may concern:

Be it known that I, AUGUSTUS ELIAERS, of Boston, in the county of Suffolk and State of Massachusetts, have invented certain new and useful Improvements in Reclining-Chairs, and that the following description, taken in connection with the accompanying drawings, hereinafter referred to, forms a full and exact specification of the same, wherein I have set forth the nature and principles of my said improvements, by which my invention may be distinguished from others of a similar class, together with such parts as I claim and desire to have secured to me by Letters Patent.

The figures of the accompanying plates of drawings represent my improvements.

In Plate 1, Figure 1 is a side elevation of my improved chair. Fig. 2 is a central vertical section of the same. In Plate 2, Fig. 3 is a side elevation showing the parts in a different position. Figs. 4, 5, 6 and 7 are detail views to be hereinafter referred to.

The present invention relates to that class of chairs that are designed for reclining chairs and for invalids.

The principal features of my invention are, first, a novel arrangement of devices for supporting and actuating the back and the foot-rest, whereby they are more rigidly sustained in any position in which they may be placed by the occupant than by other chairs heretofore designed for a similar purpose; second, a combination of devices by which the back can be placed in a horizontal or nearly horizontal position, so that the chair can be used for a couch or bed and at the same time the back be rigidly supported. These results could not be obtained by the usual mode of construction, as will be hereinafter explained; third, an adjustable foot-rest which can be raised or lowered by the occupant at pleasure and locked at any desired height, so as to adapt the foot rest to different lengths of limbs.

a a in the drawings represent the supporting framework or legs of the chair.

b b is the back hinged to the framework *a a* at *c*. To projections *d d* of the back are attached by pivots *e e*, the curved arms *f f* extending inside the framework *a a* and having passed through them the shaft *g*, the ends of which enter the grooves *h h* formed in the crossbars *i i* of the framework *a a*. To the ends of the arms *f f* are at-

tached by pivot joints at *k k*, the arms *l l* that support the frame *m m* in which the foot rest *n* is placed, the arms *l l* being hinged to the frame *m m* at *o o*, and the frame *m m* hinged to the front bar of the framework *a a*.

p p are guiding rails attached to the standards *q q* by pivot joints *r r*. On the rails *p p* slide the arms *s s* which are hinged to the back *b b* at *t t* as shown.

u u, Fig. 5, are right angular lever arms, the studs *v v* of which extend up through the arms *s s* and enter proper holes formed in the rails *p p* for the purpose of holding the arms *s s* and consequently the back, &c., in any desired position. By pulling a cord *w* the studs *v v* will be disengaged from the holes in the rails *p p* and allow the arms *s s* to slide either forward or backward thereon. On relieving the tension upon the cord the studs *v v* will be made to enter again the holes in the rails *p p* by means of a bent spring *x*.

y y are mortises formed in the back *b b* into which the rails *p p* enter when the back is raised into a slightly inclined position.

From the foregoing description it will be seen that the back can be depressed into a horizontal position and firmly supported there, being sustained by the arms *f f*, the shaft *g* of which, when the back is in a horizontal position, abutting against the end of the groove *h*, and also by the sliding arms *s s* fastened to the rails *p p* as described, and it will be observed that the supporting of the back rigidly in a horizontal position by means of the sliding arms *s s* is effected without shortening the arm of the chair, which otherwise than by the peculiar arrangement above described would be necessary, as unless the rails *p p* were allowed to enter the back *b b* at *y y* the back *b b* could not be brought into a vertical position, and the rails *p p* being hinged at *t t*, as before described, allow both the rails and the sliding arms to play slightly up and down, according as the back is raised or lowered, which it will be evident is essential. The foot-rest frame *m m* being connected by the arms *l l* to the arms *f f*, as before explained, it will of course be raised or lowered by the movements of the back and will like the back be firmly held in any desired position.

The foot-rest *n* is attached to a sliding

frame $a' a'$, Fig. 4, which travels up and down in the frame $m m$ and is locked in any desired position, so as to adapt the foot-rest to the length of limb of the occupant, 5 by means of a rod b' that is attached to a bevel box c' the flanges $d' d'$ of which engage with suitable hooks on the ends of bolts e', e' , whereby when the rod b' is raised by a cord e'' the bevel box c' will be 10 raised and withdraw the bolts $e' e'$ from the side bars of the frame $a' a'$, Fig. 4. On releasing the cord e'' , the rod b' and bevel box c' will be forced downward and cause the bolts $e' e'$ to enter again the side bars 15 of the frame $a' a'$, thereby locking the foot-rest at any desired point. On withdrawing the bolts $e' e'$ from the side bars of the framework $a' a'$ by the rod b' the foot rest frame will be forced upward by means of 20 spiral springs f', f'' , until the bolts $e' e'$ are allowed to lock into the frame $a' a'$.

A modification of my improvements is represented in Plate 2, Figs. 6 and 7, in which the back instead of being hinged di- 25 rectly to the sliding arms $s s$ is attached to short arms $g' g'$, rigidly secured to the back and each turning upon a pivot h' in the sliding arms $s s$, the end of each arm being enlarged as shown and having a groove 30 formed therein in lieu of a mortise in the back for the play of the arm g' when the back is raised or lowered. By this means I

am enabled to obtain a longer arm even than by the first described arrangement, and it will be observed that no reclining chair has 35 previously been constructed in which a long arm could be used and at the same time the back be placed in an entirely horizontal position and a vertical one also, and this without lowering the arms nearly in contact with 40 the seat, which is the case in the operation of most reclining chairs.

Having thus described my improvements, I shall state my claim as follows:

What I claim as my invention and desire 45 to have secured to me by Letters Patent, is—

1. The general arrangement of the chair herein described whereby the back, foot-rest, &c., are sustained and actuated as specified, and the foot-rest made adjustable and 50 locked in any desired position as set forth.

2. I also claim the combination of the hinged rails $p p$, sliding arms $s s$ and mortises to receive the rails $p p$, or in lieu of the rails entering the mortises, in the said com- 55 bination, the arm g' attached to the back and turning upon a pivot in the grooved or mortised sliding arm, whereby I am enabled to obtain a very long arm as set forth.

AUGUSTUS ELIAERS.

Witnesses:

JOSEPH GAVETT,
ALBERT W. BROWN.