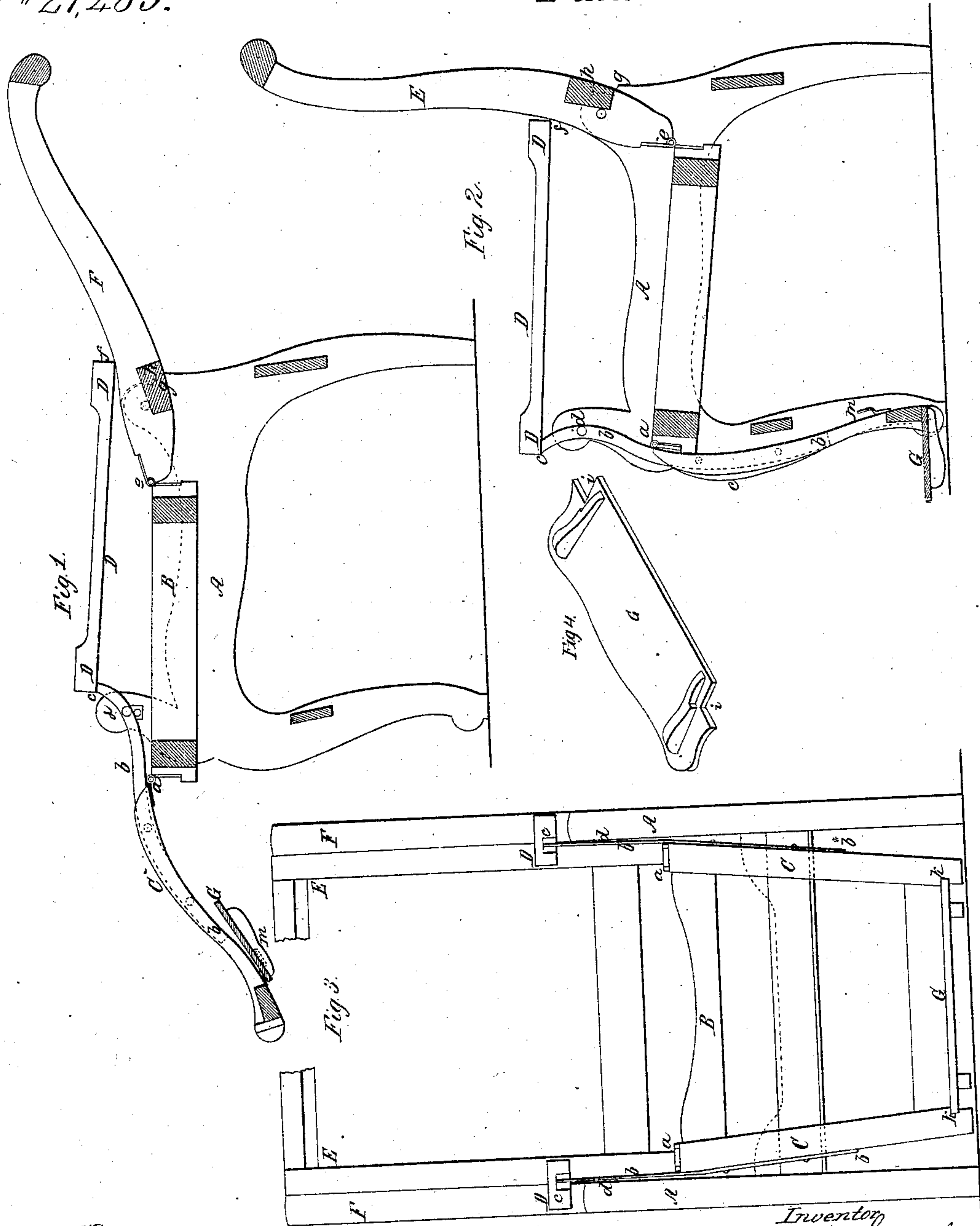


M. Stevens.

Invalid Chair,

N^o 27,483.

Patented Mar. 13, 1860.



Witnesses;
Jas. B. Bliss
W. C. Taylor

Inventor
Marcus Stevens by
A. H. H. H. H.

UNITED STATES PATENT OFFICE.

MARCUS STEVENS, OF DETROIT, MICHIGAN.

IMPROVED SELF-ADJUSTING RECLINING-CHAIR.

Specification forming part of Letters Patent No. 27,483, dated March 13, 1860.

To all whom it may concern:

Be it known that I, MARCUS STEVENS, of Detroit, in the county of Wayne and State of Michigan, have invented certain new and useful Improvements on Recumbent Chairs for Invalids and Others; and I do hereby declare that the following, taken in connection with the accompanying drawings, is such a full and clear description thereof as to enable others skilled in such matters to make and use my invention.

My improvement has reference to that description of recumbent chairs in which the seat, back, arms, and front or apron are made capable of joint motion and partake of a parallelogramic action—the seat with the arms and the back with the front—to adapt the chair either to a sitting posture or to a variable recumbent one with a rest or support for the legs of the occupant. Such chairs have been variously constructed, and it is a matter of no small importance to so construct them as that, while they shall be perfect in their action and durable, complication of parts is avoided. These results my improvements are calculated to effect more advantageously than most or all other previous constructions of such chairs.

In the accompanying drawings, Figure 1 represents a side view of the skeleton or framework of a chair constructed according to my improvement with the parts in the positions they occupy when arranged for an extreme recumbent position; Fig. 2, a vertical section of the same with the parts as arranged for a sitting posture; Fig. 3, a front view of the chair, and Fig. 4 a view of my improved reversible foot-board detached.

The body or stationary frame A of the chair is of any suitable form and size. The adjustable seat B is connected at its front by hinges *a* to the front frame or apron-piece C, which has braces *b* firmly secured to it at its sides. These braces project above the junction of the seat with the front, and are attached at their upper ends by hinges *c* to the arms D in front, and also are hung on pivots *d* to the body A at a level intermediate of the seat and arms. Hinges *e* connect the seat at its rear to the adjustable back E at its bottom, and other hinges *f* serve to unite the rear ends of the arms with the back. The back E may or may not be hung on pivots secured

to the body corresponding with the pivots on which the braces *b* are hung. The absolute necessity for such additional pivots is avoided by the attachment of the front ends or short sides of the parallelogrammic jointed structure which embraces the seat, arms, front, and back to the body by the pivots *d*, on which the braces are hung, in combination with a peculiar construction of side pieces F to the back end of frame A, where said side pieces fit on or over. The side pieces F may correspond in their general contour to the sides proper of the back, against which they lie, and are made capable of removal from to facilitate changing the "cover" to the back; but they do not project as low as the sides proper, and are not like the latter arranged to lie within the stationary frame or body but over it, so as to admit of establishing at their lower ends what is termed in anatomy an "articulation joint" with the body. This is done by a free circular gear or junction of the lower ends of the side pieces with or on or over the rear upper ends of the body, and, further, by notching the body at its back, as at *g*, and leaving a butt or projection *h* on the lower ends of the side piece or otherwise equivalently constructing the side pieces and the body at their free junction with each other, so that when the back E is thrown to its extreme recumbent position the back is locked or stopped from further rear play and supported by the butt and notch *g* and *h* on either side. Even when rear pivots be used to suspend the back on the body an articulation-joint connection of the back with the body will greatly relieve the pivots from strain and wear, and in case of the rear pivots breaking or becoming loose or too free in their sockets the back will still be firmly supported and objectionable rattle or shake of it prevented. Likewise, the manner herein previously described of hinging the front C to the seat B, in combination with the braces *b*, hinged to the arms D, and fastened to the sides of the front C, not merely materially strengthens the front or apron and steadies the arms, but it effects great simplicity in construction and requires a less number of parts or independent pieces than is usual to other chairs of similar character. Further, it is usual to provide recumbent chairs of this class or general character with a foot-board at the bottom of the front piece

or apron for the feet of the occupant to rest upon. Such foot boards are sometimes hinged to the front arm made capable of changing their positions to adapt them to changes in the recumbent position of the chair. They have been made to fold up and to trail upon the ground, and instead of being hinged to the front made of a flexible material or flexibly hung; but all such previous constructions have been objectionable either in the foot-board wanting firmness when set to occupy a fixed position or in its assuming an awkward or inconvenient position in certain "sets" or in its not being conveniently detachable when it is felt to be in the way,

To obviate all of these objections I construct the foot-board G so as not only to be readily detachable, but also reversible in relation to the front or apron C by, say, making it with recesses *i* at either end, the back ends of which fit into notches K cut in the front legs of the chair, while the inner intermediate portion of the board laps under the lower cross-rail in front when the foot-board is required to project from the chair as a rest for the feet. When the foot-board is not required to occupy this position, it is readily drawn out in front, and when it is desired to ar-

range said board so as to form a flat surface across the apron-piece in front as a support for the legs of the occupant when reclining I slip the board into hooks *m* in the backs of the front legs of the chair and from which it is readily detachable by simply lifting on it.

What I claim as new and useful herein is—

1. The arrangement of the apron or front piece C, hinged to the seat, in combination with the braces *b*, secured to the sides of the apron and hinged to the arms D and pivoted to the stationary frame or body of the chair between the arms and the seat, substantially as shown and described.

2. The detachable foot-board, in combination with the hooks in the backs of the front legs and made reversible relatively to the front or apron piece of the chair for attachment thereto at pleasure in either of the two directions specified.

In testimony whereof I have signed my name to this specification before two subscribing witnesses.

MARCUS STEVENS.

Witnesses:

GEO. B. ENSWORTH,
RACINE M. DARWIN.