(No Model.)

G. E. HASTINGS.

SWINGING CHAIR.

No. 266,622. Patented Oct. 31, 1882.

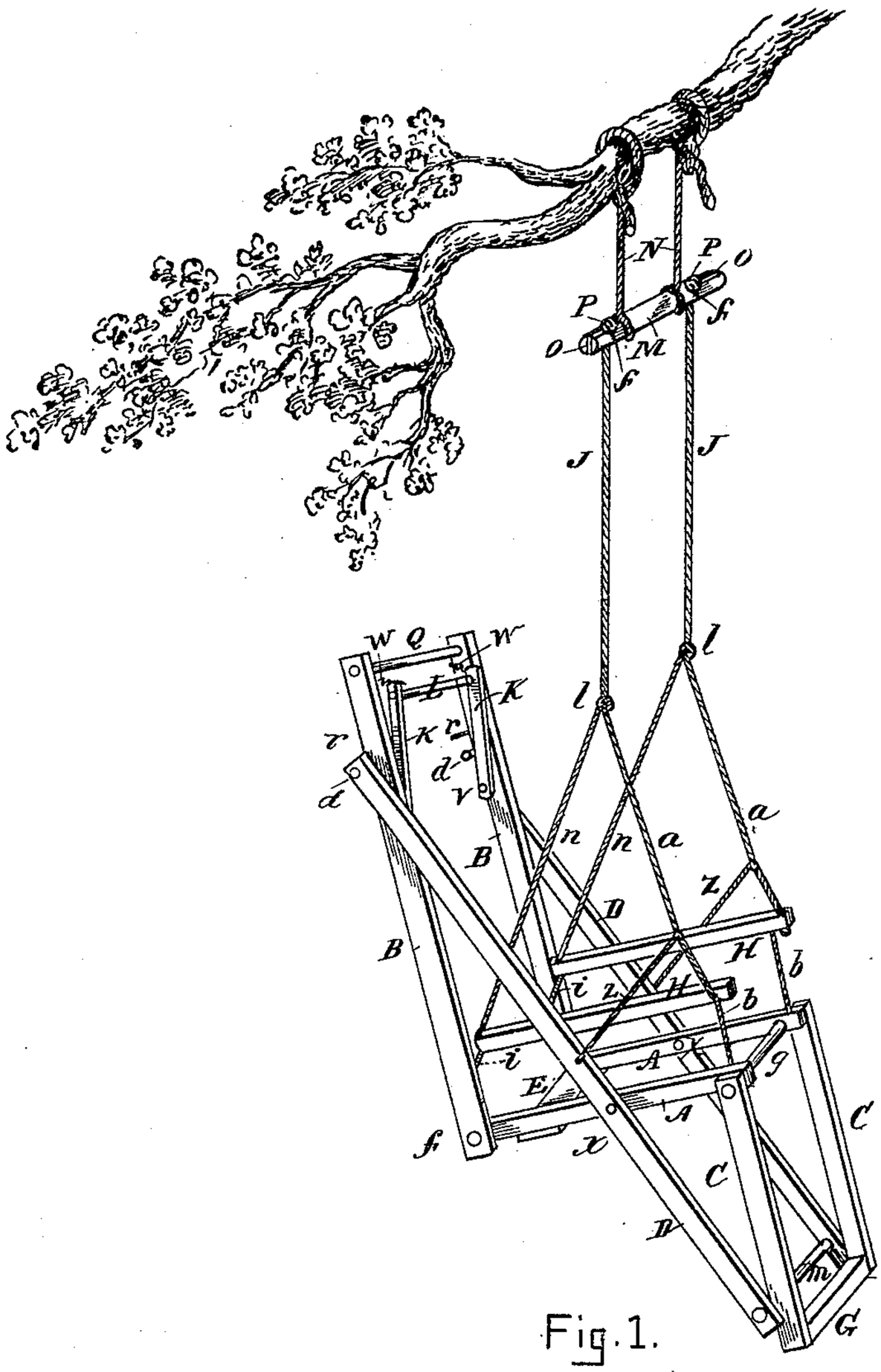

Fig. 1.

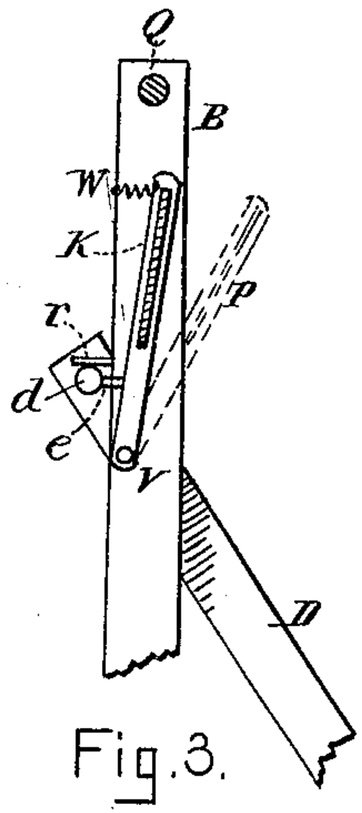

Fig. 3.

Fig. 2.

Witnesses:
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UNITED STATES PATENT OFFICE.

GEORGE E. HASTINGS, OF ANTRIM, NEW HAMPSHIRE.

SWINGING CHAIR.

SPECIFICATION forming part of Letters Patent No. 266,622, dated October 31, 1882.

Application filed August 24, 1882. (No model.)

To all whom it may concern:

Be it known that I, GEORGE E. HASTINGS, of Antrim, in the county of Hillsborough, State of New Hampshire, have invented a certain new and useful Improvement in Swinging Chairs, of which the following is a description, sufficiently full, clear, and exact to enable any person skilled in the art or science to which said invention appertains to make and use the same, reference being had to the accompanying drawings, forming a part of this specification, in which—

Figure 1 is an isometrical perspective view, showing the chair in position for use; Fig. 2, a side or edge view, showing it folded for transportation; and Fig. 3, a sectional view of the bolster.

Like letters of reference indicate corresponding parts in the different figures of the drawings.

My invention relates to that class of chairs which are designed to be suspended when in use, or what are commonly known as "swinging chairs;" and it consists in a novel construction and arrangement of the parts, as hereinafter more fully set forth and claimed, by which a new and more desirable article of this character is produced than is now in ordinary use.

The nature and operation of the invention will be readily understood by all conversant with such matters from the following explanation, its extreme simplicity rendering an elaborate description unnecessary.

In the drawings, A A represent the side or seat rails; B B, the back or top rails, and C C the leg-rails.

Pivoted to the side rails at *x x* are two inclined bars, D D, connected at their lower ends by the rod *m*, and extending diagonally across either side of the chair, as shown in Fig. 1, the upper ends of these bars being provided with inwardly-projecting studs *d d*.

The rails A A are connected by the bar E, and jointed at their rear ends, *f*, to the rails B B.

The rails C C are connected at their lower ends by the foot-rail G, their upper ends being jointed to the front ends of the rails A A by the rod *g*.

Two arms or horizontally-arranged bars, H H, are disposed at the sides of the chair, inside the bars D D, the forward ends of the same being connected to the front ends of the rails A A by the cords *b b* and the rear ends to the rails B B, about six or eight inches from their lower ends, by the cords *i i*, as shown in Fig. 1. Two cords, *a a*, are attached to the front ends of the bars H H and two corresponding cords, *n n*, to the rear ends of said bars, these cords uniting at *l l* to form the main cords J J, by which the chair is suspended. There are also two braces or cords, *z z*, connecting the cords *a a*, near their lower ends, with the bars D D, above the pivots *x x*.

A bolster consisting of the arms K K and rod L is pivoted at *v* to the inner sides of the bars B B in such manner as to fall or fold between the bars when not in use. A laterally-projecting stud, *e*, extends inwardly from each of the studs *d d*, being so arranged in respect to the bolster-arms K K that when the chair is extended they will strike said arms and throw them forward or elevate the bolster, as shown by the dotted lines P in Fig. 3.

The rails B B are connected at their upper ends by the rod Q, and projecting from the rear sides of the same are two pins or studs, *r r*, which engage with the studs *d d* of the bars D D to prevent the rails from getting out of position or falling below the upper ends of said bars.

The chair is designed to have a canvas sack or covering, (not shown,) the upper end of the canvas being attached to the rod Q and its edges secured by tacks, or in any other convenient and proper manner, to the rails A A C C. It is preferable to have the sack in one continuous strip or piece, and not attached to the rails B B. It may also be shortened at the lower end to expose the rail G, when that is required for a foot-rest. This rail may also be arranged in such a manner in the rails C C as to be adjusted vertically, if desired, in order to change the position of the foot-rest in accordance with the requirements of the occupant of the chair.

In the use of my improvement it will be obvious that the person sitting in the chair may easily cause the same to swing or describe regular reciprocating curvilinear movements by straightening out or extending, and then sud-

denly contracting, the body and limbs in such a manner as to throw the center of gravity alternately to either side of a vertical line drawn through the center of motion, said center being the point at which the suspensory cords N are attached to their support.

It will also be obvious that the chair may be easily extended to form a couch or cot, the rails A A turning partially on the pivots *x x* to permit the rails B B C C to slide respectively up and down nearly into parallelism with the bars D D.

The bars or arms H H, acting as connecting-rods between the cords *a n*, cause the seat of the chair and its occupant to be lifted vertically, or nearly so, in changing from an upright to a horizontal position, which would not be the case to the same extent if the bars were omitted, as the weight of the head and body resting against the back of the chair and acting upon the side rails would overbalance the weight of the legs pressing against the rails C C, and hence the person in the chair would be thrown backward too suddenly.

The object of the braces *z z* is to keep the upper ends of the bars D D in close contact with the rails B B, and thus steady the motion of the chair when in use, and also overcome any tendency of the occupant of the chair to inadvertently assume a horizontal position while sitting upright.

The arms H H and cords *z z* may be dispensed with, if desired, although their use is preferable; but in case the arms are omitted the cords *a* and *n* should be respectively extended to take the places of or make continuous connections with the cords *b i*.

In suspending the chair I make use of the trapeze or cross-bar M, which may be secured to any proper support by the cords N, and is provided with a slot, O, at either end, into which the cords J J are respectively passed and held by the knots P P, the cords being prevented from slipping out of the slots by concaves or depressions *f f* in the upper part of the bar at the inner ends of the slots, and in which the knots rest.

It will be obvious that the chair may be readily extended or partially extended to form a couch or cot and again contracted to the position shown in Fig. 1 by a corresponding extension or contraction of the body and limbs of the occupant.

In order that the chair may be properly balanced, the distance from the lower end of the rail B to the point where the cord *i* is attached thereto should correspond with the length of the cord *b*.

Each of the arms K K is provided with a coiled spring, W, arranged as shown, which acts contractively to keep the bolster in parallelism with the rails B when not in use.

I am aware that swinging chairs have long been known and used, and therefore do not claim the same, broadly; but

Having thus described my invention, what I claim is—

1. The improved swinging chair described, the same consisting of the rails A B C G, bars D E, rods *m g* Q, and cords J *n a b i*, combined and arranged to operate substantially as and for the purpose specified.

2. In a chair substantially such as described, the braces or cords *z z*, substantially as and for the purpose set forth.

3. The bolster K L, in combination with the rails B B, bars D D, and studs *d d*, provided with the studs *e e*, substantially as and for the purpose specified.

4. The arms H H, in combination with the cords *a n i b*, substantially as and for the purpose set forth.

5. The slotted bar M, provided with the concaves *f f*, in combination with the cords J J and N, for suspending the chair, substantially as specified.

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