(No Model.)

C. B. GRACEY & L. R. WATT.

SWING.

No. 600,963. Patented Mar. 22, 1898.

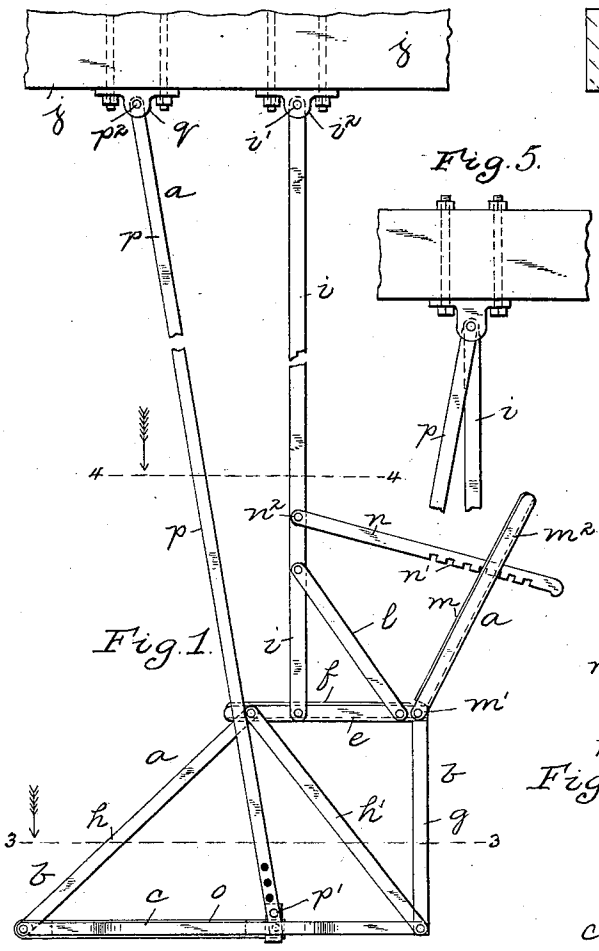

Fig. 1.

Fig. 5.

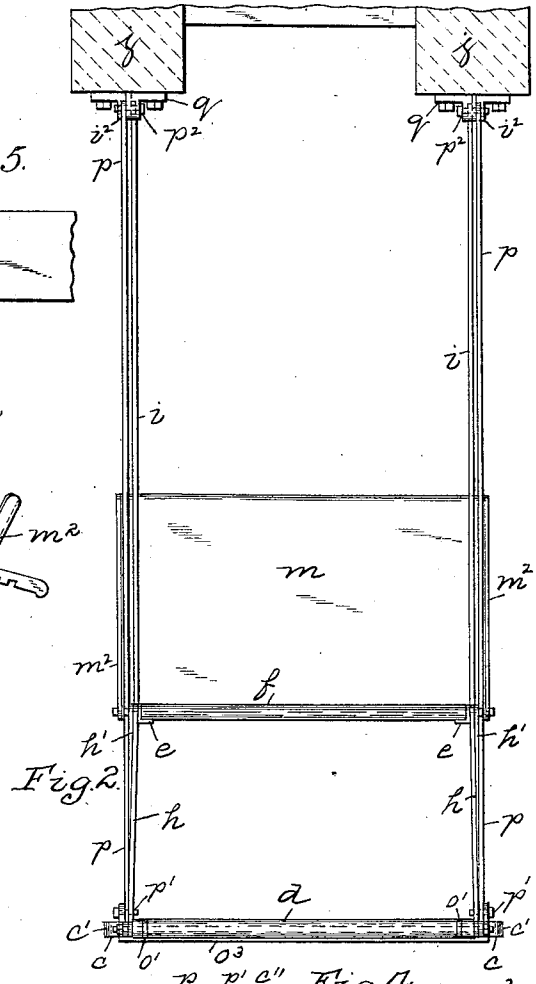

Fig. 2.

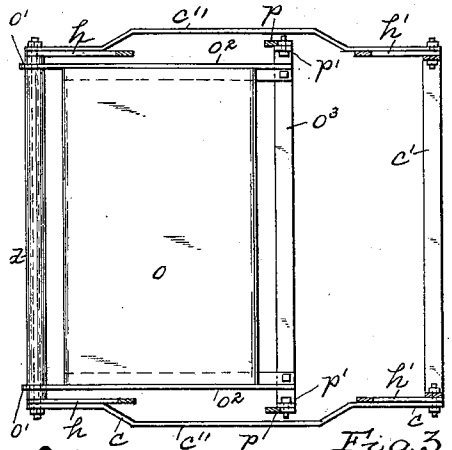

Fig. 3.

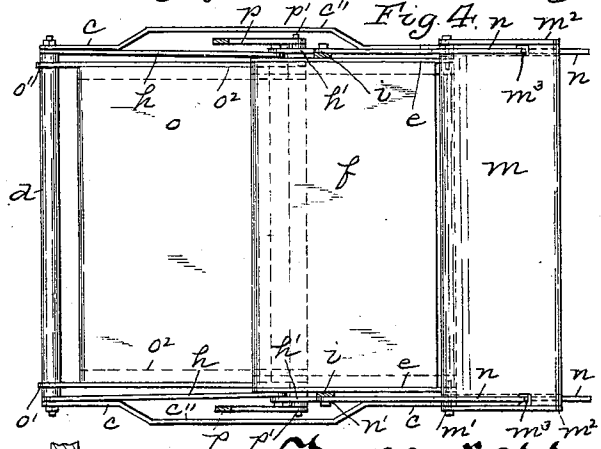

Fig. 4.

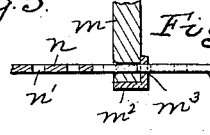

Fig. 6.

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UNITED STATES PATENT OFFICE.

CHARLES B. GRACEY, OF CORAOPOLIS, AND LEWIS R. WATT, OF PITTSBURG, PENNSYLVANIA, ASSIGNORS TO THE PITTSBURGH ORNAMENTAL IRON WORKS, OF PITTSBURG, PENNSYLVANIA.

SWING.

SPECIFICATION forming part of Letters Patent No. 600,963, dated March 22, 1898.

Application filed January 30, 1897. Serial No. 621,318. (No model.)

To all whom it may concern:

Be it known that we, CHARLES B. GRACEY, residing at Coraopolis, and LEWIS R. WATT, residing at Pittsburg, in the county of Allegheny and State of Pennsylvania, citizens of the United States, have invented certain new and useful Improvements in Swings; and we do hereby declare the following to be a full, clear, and exact description thereof.

Our invention relates to swings, and has special reference to such devices that can be used as lawn-swings, porch-swings, chair-swings, &c.

The object of our invention is to provide a swing which is neat and simple in its construction and one which is strong and durable in its parts; and the object of our invention is to provide a swing which can be operated by the foot and can be regulated and adjusted to be operated by any person, regardless of age, and one which is so easy of movement and operation that a child can adjust and operate the same; and a still further object of our invention is to provide a swing which can be operated by the person on the same in whatever position the body can be placed and one in which the back of the seat can be adjusted to whatever position desired to suit the convenience of the body of the person operating the same.

Our invention consists, generally stated, in the novel arrangement, construction, and combination of parts, as hereinafter specifically set forth and described, and particularly pointed out in the claims.

To enable others skilled in the art to which our invention appertains to make and use the same, we will describe it more fully, referring to the accompanying drawings, in which—

Figure 1 is a side view of our improved swing. Fig. 2 is a front view thereof. Fig. 3 is a cross-section on the line 3 3, Fig. 1, looking in the direction of the arrow. Fig. 4 is a cross-section on the line 4 4, Fig. 1, looking in the direction of the arrow. Fig. 5 is a detail side view showing another manner of attaching the supports or hangers and operating-levers to the beams; and Fig. 6 is a detail view, partly in section, showing the manner of adjusting the seat-back.

Like letters herein indicate like parts in each of the figures of the drawings.

Our improved swing a is preferably made of thin strips of wrought-iron and angle-iron and is formed of the frame b, which is provided with the horizontal braces c, which are connected together at their rear ends by the cross-brace c' and at their front ends by the front brace d. Above the horizontal braces c are the seat-supports e, which are adapted to support and hold the seat f, which is preferably formed of wood or other light material. The seat-supports e and the horizontal braces c are held together and supported by the vertical braces g and the inclined braces h h', connected and secured thereto.

Rigidly secured to the seat-supports e are the supports or hangers i, which extend up and are pivoted at i' in bearings i^2, secured on the beams j, although the bearing i^2 can be secured upon any desirable object in any suitable manner.

Inclined braces l are rigidly secured to the supports or hangers i and the seat-supports e, which act to support and brace these parts together. Pivoted to the seat-supports e at m' are the angle-bars m^2, which are adapted to contain and hold therein the seat-back m, preferably formed of wood, which is capable of being placed at any angle through the medium of the slots m^3 in the angle-bars m^2, engaging with notches n' in the levers n, pivoted at n^2 on the supports or hangers i. Pivoted at o' on the front brace d is the treadle o, which is held and supported by means of the angle-bars o^2, secured on the sides thereof and connected with and secured to the cross-bar o^3 on the rear of the treadle o in any suitable manner. Pivoted to the cross-bar o^3 at p' are the operating-levers p, which extend up on the outside of the frame b and are pivoted at p^2 to the bearings q, secured to the beams j, the horizontal braces c being widened or enlarged at c'' to permit the free movement of the operating-levers p in swinging. A number of openings p^3 are formed at

the lower ends of the levers p for the pivoting or connecting of the levers p to the treadle o to suit persons of different heights and length of limbs in operating the swing.

If desired, both the levers p and the supports or hangers i, one each side of the swing a, can be pivoted in one bearing on the beam j, as shown in Fig. 6, although the form shown in Fig. 1 is preferable, as it permits an easier operation of the swing a, and, if desired, the levers p and supports or hangers i can be curved or bent over the frame b sufficient to clear a person operating the swing a and be pivoted centrally in bearings over the frame b without departing from our invention.

The operation of our improved swing a is as follows: The parts being connected together for operating, as shown in the drawings, the person or persons desiring to operate the swing can be seated upon the seat f with their feet resting upon the treadle o, and by pressing down on the treadle o the treadle o will swing on its pivots o', connected to the front brace d of the frame b, so drawing the frame b forward by means of the levers p, pivoted to treadle o and bearings g, the supports or hangers i supporting the frame b and allowing the swing a to swing forward and backward through the supports or hangers i, being pivoted at i' in the bearings i^2 on the beams j. By pressing down on the treadle o as it rises the swing a can be kept swinging forward and backward to any height and as long as desired. The seat-back m can be placed at any angle desired for convenience or comfort by the operator through the medium of the slots m^3 engaging with the different notches in the levers n, and the swing a can be operated successfully as long as the feet engage with the treadle o sufficient to press it down, as above described.

Various modifications in the construction and position of the various parts of our improved swing may be resorted to without departing from the spirit of the invention or sacrificing any of its advantages.

It will thus be seen that our improved swing is very cheap in its construction, and, being formed of iron, is very strong in its parts. It can be operated by a child without injury to life or limbs and will not get out of order. It can be conveniently and comfortably operated by any person with ease, and on account of its simplicity the parts can be easily and rapidly repaired when necessary.

What we claim as our invention, and desire to secure by Letters Patent, is—

1. A swing comprising a frame, a support or hanger secured to said frame and pivoted in a bearing at its upper end, a treadle within said frame and having its forward end pivoted thereto, and an operating-lever having its lower end pivoted in the rear of said treadle, and its upper end pivoted in a bearing, substantially as and for the purposes set forth.

2. A swing comprising a frame, a support or hanger secured to said frame and pivoted in a bearing at its upper end, a treadle within said frame and having its forward end pivoted thereto, an operating-lever having its lower end pivoted in the rear of said treadle and its upper end pivoted in a bearing, and means for raising and lowering said treadle on the operating-lever, substantially as and for the purposes set forth.

3. A swing comprising a frame, a support or hanger secured to said frame and pivoted in a bearing at its upper end, a treadle within said frame and having its forward end pivoted thereto, an operating-lever having its lower end pivoted in the rear of said treadle and having its upper end pivoted in a bearing, and a movable or adjustable back pivoted in said frame, substantially as and for the purposes set forth.

4. A swing comprising a frame, a support or hanger secured to said frame and pivoted in a bearing at its upper end, a treadle within said frame and having its forward end pivoted thereto, an operating-lever having its lower end pivoted in the rear of said treadle and having its upper end pivoted in a bearing, a movable or adjustable back pivoted in said frame, and a lever pivoted to said support or hanger having notches therein engaging with said movable back, substantially as and for the purposes set forth.

In testimony whereof we, the said CHARLES B. GRACEY and LEWIS R. WATT, have hereunto set our hands.

CHARLES B. GRACEY.
LEWIS R. WATT.

Witnesses:
TH. C. KUBH,
J. N. COOKE.