W. E. POTTER.

SWING.

APPLICATION FILED APR. 29. 1920.

1,355,260.

Patented Oct. 12, 1920.

2 SHEETS—SHEET 1.

Fig. 1.

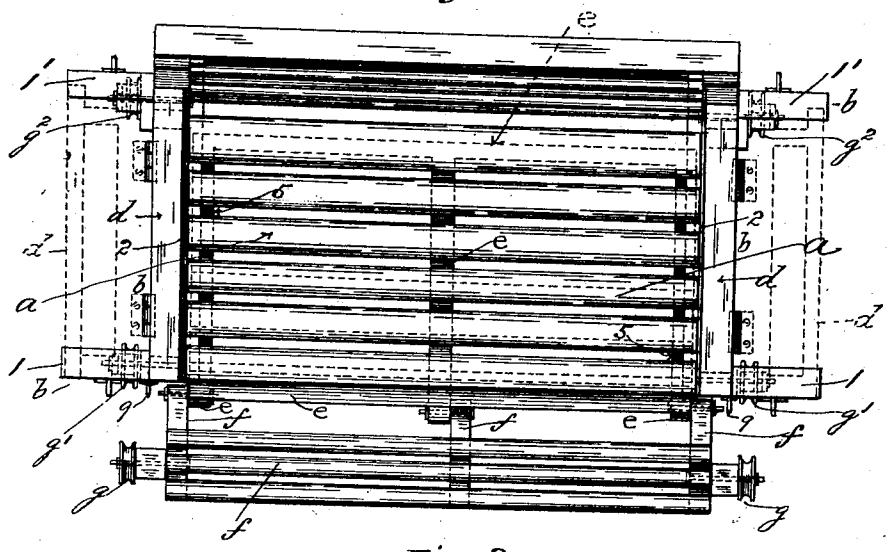


Fig. 2.

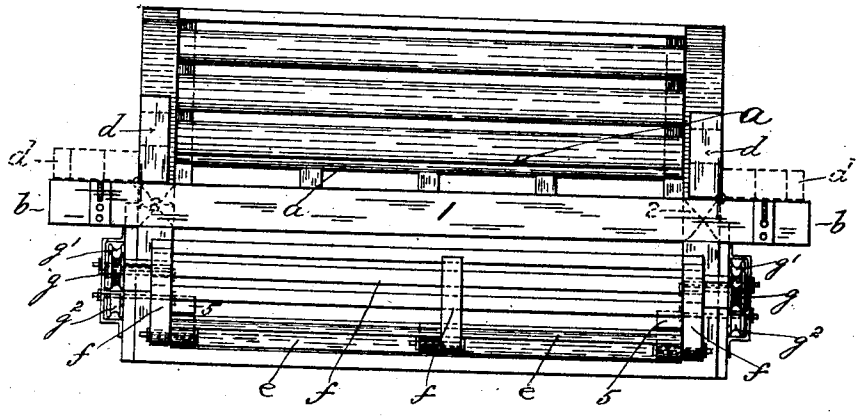


Fig. 3.

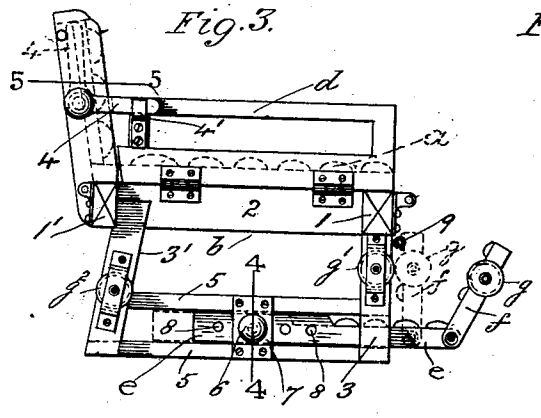


Fig. 4.

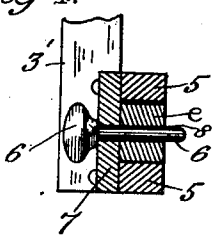
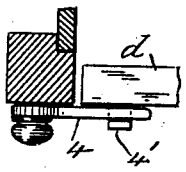


Fig. 5.



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2 SHEETS—SHEET 2.

Fig. 6.

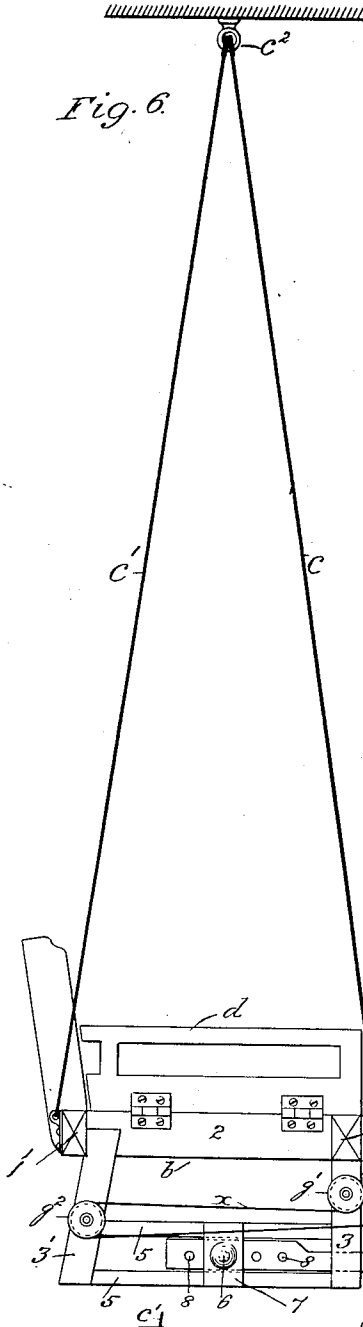


Fig. 7.

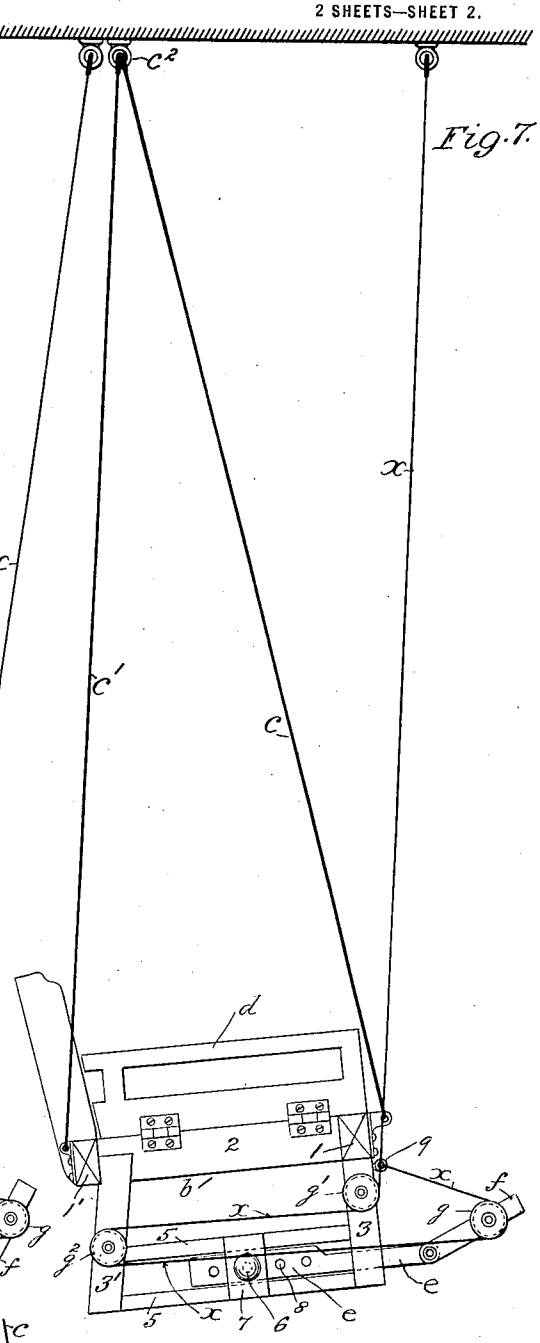
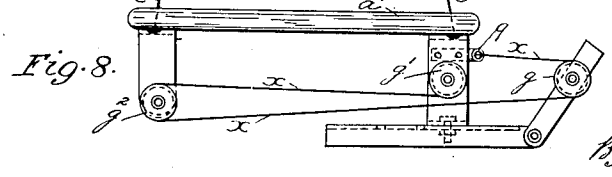


Fig. 8.



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UNITED STATES PATENT OFFICE.

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SWING.

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To all whom it may concern:

Be it known that I, WILLIAM E. POTTER, a citizen of the United States, residing at Armourdale, in the county of Wyandotte and State of Kansas, have invented a new and useful Improvement in Swings, of which the following is a specification.

My invention relates to a swing, especially to a porch swing, and has for its object principally, to provide means whereby the oscillation of the swing is started and maintained by the foot pressure of the swinger without the violent bodily exertion usually required; also, for enabling the swing seat to be extended for use as a couch.

It consists in features of novelty as hereinafter described and claimed, reference being had to the accompanying drawing forming part of this specification, wherein,

Figure 1, is a top plan view of my improved swing, omitting the suspension ropes or chains and the operating cord forming part of my invention, and showing the hinged foot rest forming part of the invention, in the extended horizontal position; Fig. 2, a front elevation of the swing with the foot rest inclined upward about its hinges; Fig. 3, an end or side elevation of the swing with the foot rest inclined upward as in Fig. 2; Figs. 4, and 5, transverse and horizontal sections to enlarged scale through parts of the device on lines 4, 4, and 5, 5, respectively, in Fig. 3; Fig. 6, a diagrammatic view of the swing corresponding to Fig. 3, suspended from a ceiling and at rest, or plumb; Fig. 7, a similar view to Fig. 6, showing the swing when moved forward about its point of suspension according to my invention, and Fig. 8, a corresponding view to Fig. 3 showing a modification of the device.

Like letters and numerals of reference denote like parts in all the figures.

Referring to Figs. 1, 2, 3, 4, and 5, *a* represents the swing seat which in the present case is preferably mounted on a rectangular-shaped frame *b* comprising a front longitudinal member 1, an opposite rear member 1′, and two opposite transverse end or side members 2, the front and rear members 1, 1′, preferably extending for a suitable distance beyond the end members 2, and to these extended portions of the members 1, 1′, are hitched the suspension ropes or chains *c*, *c*′, at each end of the swing which converge therefrom to a single point of suspension c^2 as shown in Figs. 6 and 7.

From each member 2 preferably depend a front leg 3, and a rear leg 3′, whereby the swing when not in use as such, may be disconnected and placed on the ground for use as a bench or seat.

At each end of the seat *a* is preferably hinged to the corresponding end member 2 of the frame *b* an arm *d* which is normally in the raised position as shown, but which may if desired be folded downward and rest on the extended portions of the members 1, 1′, as shown by dotted lines in Figs. 1 and 2, so as to form an extension of the seat *a* for use as a couch. For locking each arm *d* in its raised position (see Figs. 3 and 4) I may use a latch 4 which is pivoted at one end to the back of the seat *a* and adapted to engage at its other end with a slotted bracket or keeper 4′ fixed to the outer side of the arm *d* as shown; or other means may be used for this purpose.

Fixed to and between the front and rear legs 3, 3′, preferably on their inside faces, at each end of the frame *b*, at a suitable distance beneath and parallel to the seat *a*, and to each other, are preferably two guide bars 5 between which is mounted the corresponding side edge portions of a rectangular-shaped framework *e* which is slidably adjustable in the guides 5 and may be locked in any desired position of its front edge relatively to the swing seat *a*, by a bolt 6 which is passed through a block 7 fixed to, and spanning the space between the bars 5, and adapted to engage in either of a series of holes 8 which are formed in the said side edge portions of the framework *e* as seen in Figs. 3 and 4.

To the front edge of the slidable framework *e* and extending preferably the entire length thereof, is hinged a foot rest *f* which is upwardly inclinable at any desired angle relatively to the framework *e* and swing seat *a*, and to each end of the foot rest *f* is pivoted a vertically arranged pulley *g*, while to the outside of each front leg 3 of the swing at a suitable distance below the seat *a* is pivoted a pulley *g*′, and to each rear leg 3′, a pulley g^2, which is preferably below the front pulley *g*′, the pulleys *g*, *g*′, g^2, being in the same vertical plane with each other.

To the ceiling at a suitable distance from

the point of suspension of the swing at each end thereof by the front and rear ropes c, c' respectively, is hitched one end of a cord x (hereinafter termed operating cord) which passes thence under the front pulley g', thence over and under the rear pulley g^2, and thence under and over the pulley g of the foot rest f, the other end of the operating cord x being hitched to an eye-bolt 9 fixed to the front part of the swing as seen in Figs. 6 and 7.

In operation, assuming the parts to be in their normal operating position as shown in Fig. 6, when a person is seated on the swing seat a and presses with the foot against the foot rest f, the operating cord x will be shortened between its points of attachment to the swing and ceiling, and the weight of the front portion of the swing, which is normally supported by the suspension rope c will be shifted to the operating cord x, so that, the swing being now supported by the suspension rope c' and operating cord x, its center of gravity will be midway between the points of attachment of the rope c' and cord x to the ceiling, or forward of its original position, which will cause the swing to move downward and forward into the position seen in Fig. 7 or thereabout. On removal of the foot pressure from the rest f the swing will be returned by gravity to its original position and, by its momentum, rearwardly beyond the latter, when on repeating the operation by renewing and releasing the foot pressure alternately, the oscillation of the swing will be increased and its momentum maintained to any desired extent without undue exertion by the swinger.

Fig. 8 shows my invention as applied to a single board swing seat a' without the underframe b described and shown in Figs. 1, 2, and 3, the foot rest with the pulley g, and the pulleys g', g^2, in this case being pivoted to L-irons or equivalent members, attached to the underside of the seat a' as shown.

I claim:

1. In a swing, a seat having a single point of suspension at each end, a foot rest hinged to the swing below the level of the seat, a pulley pivoted to each end of the said rest, a pulley pivoted to each end of the swing at the front and rear respectively thereof, and a cord hitched at one end to a point of suspension adjacent to the first named point, the said cord passing thence around the said pulleys and hitched at its other end to the swing.

2. In a swing, a seat having a single point of suspension at each end, a member adjustable beneath the seat, a foot rest hinged to the said member in advance of, and below the level of the seat, a pulley pivoted to each end of the said rest, a pulley pivoted to each end of the swing at the front and rear respectively thereof, and a cord hitched at one end to a point of suspension adjacent to the first named point, the said cord passing thence around the said pulleys and hitched at its other end to the swing.

WILLIAM E. POTTER.