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J. J. McGINTY

SWING

Filed Feb. 2, 1926

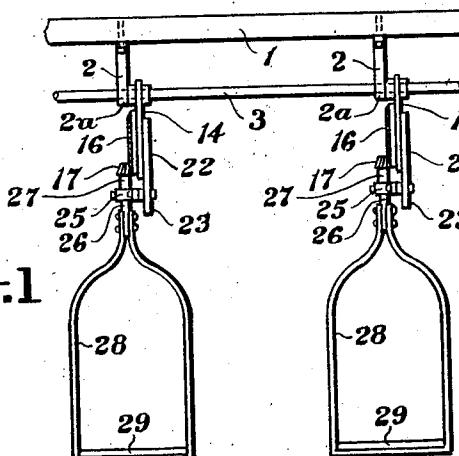


Fig. 1

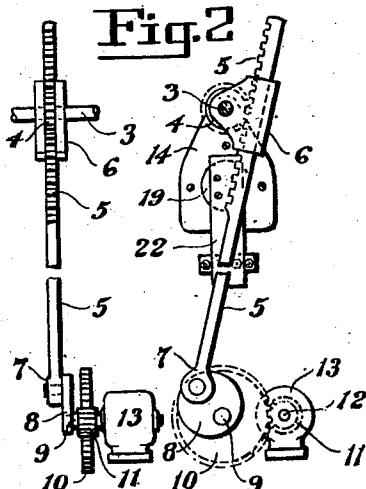


Fig. 2

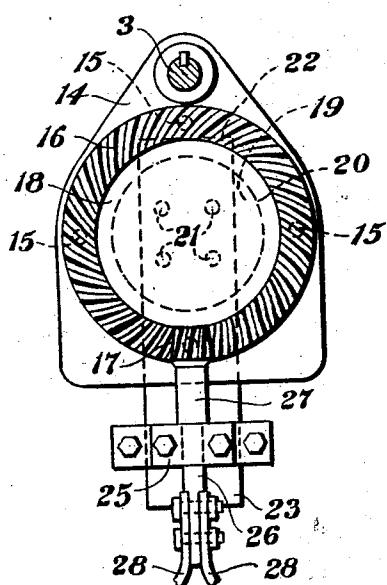


Fig. 3

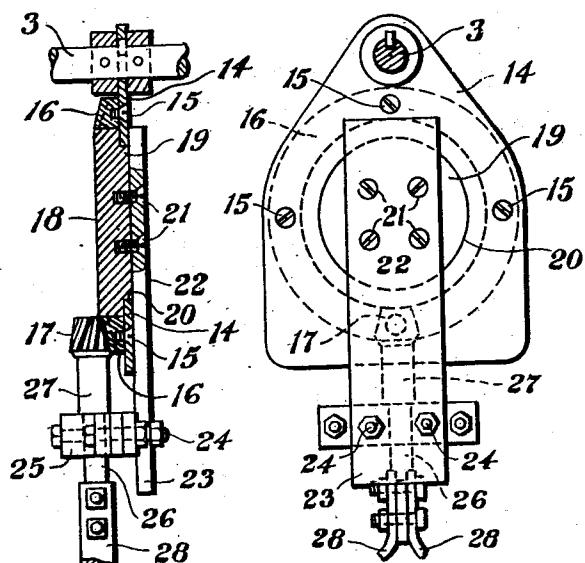


Fig. 4

Fig. 5

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SWING.

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This invention relates to swings, and particularly to a type of swings which operate automatically or by power.

The principal object of the invention is to provide an improved swing which will operate automatically. Another object is to provide a swing which will automatically impart to the seat an axial rotation in addition to its swinging action.

10 Other objects and advantages will hereinafter appear.

In the accompanying drawings,—

Fig. 1 is a general elevation of the swing.
Fig. 2 is a side elevation of the rocking

15 mechanism of the swing.

Fig. 3 is a front elevation, in an enlarged scale of the swing operating mechanism.

Fig. 4 is a cross-sectional side elevation of the mechanism shown in Fig. 3.

20 Fig. 5 is a rear elevation of the mechanism shown in Fig. 3.

To a beam 1 is secured a series of suspenders 2 provided with bearings 2^a in which is rotatably mounted an operating shaft 3.

25 Said shaft carries a gear 4 that meshes with a rack 5 which is held thereto by means of a guiding nut 6, in which the rack is slideable, being pivoted upon the shaft 3 and being swingable about its axis. The rack 5

30 extends downwardly from the nut 6, and its lower terminal 7 is in turn pivoted to an eccentric 8 keyed upon a counter shaft 9, which carries a reduction gear 10 that

35 meshes with a driving pinion 11 keyed upon a drive shaft 12 driven by an electric motor 13.

To the shaft 3 is keyed a series of hangers 14, to each of which is secured, by means of screws 15, a ring-shaped spiral bevelled

40 gear 16 that meshes with a pinion 17. A flange 18 passes through the ringed gear 16 and abuts against the hanger 14, a portion 19 thereof, of reduced diameter, passing through a large opening 20 in the hanger

45 and being flush at the rear thereof with the hanger. To the flange 18 is secured, by means of screws 21, a plate 22, to the lower end 23 of which is fastened, by the bolts 24,

a bearing 25 for a journal 26 that projects

50 from a stem 27 forming part of the pinion 17. To the journal 26 is securely bolted a suspender 28 which carries the usual swing seat 29.

The operation of the swing is as follows: As the motor 13 is run, the gears 10, 11 impart slow and powerful rotation to the shaft 9 and eccentric 8, which in turn reciprocates the rack 5 upwardly and downwardly, and the rack meshing with the gear 4 in turn rocks the shaft 3 slowly and powerfully through a portion of a revolution. The rocking of the operating shaft 3 swings the hangers 14 correspondingly and sways the flanges 18 in an arc, which flanges are relatively mounted in the gears 16 and in the hangers 14, by abutment of the large part of the flange against the hanger and by the plate 22, which is secured to the flange, bearing against the rear of the hanger. As the hanger 14 and gear 16 are swung and the flange 18 swayed, a rotary motion is imparted to the pinion 17 and seat 29 in opposite directions, and as this swinging continues it progressively imparts a corresponding swinging to the gear 17 and to the seat 29 depending therefrom, while at the same time affecting a corresponding decrease of the rotary motion of gear 17 and the seat, until finally the seat swings fully in opposite directions and simultaneously receives a gentle axial turn about its axis in opposite directions, thereby giving to the sitter a compound swinging and turning movement with a correspondingly pleasurable sensation.

Variations may be resorted to within the scope of the invention, and portions of the improvements may be used without others.

Having thus described my invention, I claim:—

1. A swing having the combination of an operating shaft, means to rock said shaft, a hanger swung by said shaft, a gear carried by said hanger and swingable therewith, a pinion in mesh with said gear, said pinion being joined to a journal mounted in a bearing, said bearing being carried by a member, said member being pivoted in said hanger concentrically with said gear, a seat, and a suspender for said seat being joined to said journal.

2. A swing having the combination of an operating shaft, means to rock said shaft, a hanger swung by said shaft, a gear carried by said hanger and swingable therewith, a pinion in mesh with said gear, said pinion

being joined to a journal mounted in a bearing, said bearing being carried by a member, said member being pivoted in said hanger concentrically with said gear, a seat, a suspender for said seat being joined to said journal, said rocking means including a drive-shaft, an eccentric, means to drive said eccentric from said drive-shaft, a rod piv-

oted to said eccentric extending to said operating shaft, and a rack on said rod meshing with a gear on said operating shaft. 10

In testimony whereof, I have signed my name to this specification this 2nd day of January 1926.

JOHN J. McGINTY.