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UNITED STATES PATENT OFFICE.

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SWING.

1,300,680.

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To all whom it may concern:

Be it known that I, JAMES C. WHSON, a citizen of the United States, residing at Dalton, in the county of Whitfield and State of Georgia, have invented certain new and useful Improvements in Swings, of which the following is a specification, reference being had to the accompanying drawings.

This invention relates to certain improve-10 ments in swings, and has relation more particularly to a device of this general character wherein the carriage or body is caused to oscillate through the instrumentality of a motor, and it is an object of the invention

15 to provide a device of this general character having novel and improved means whereby the extent of movement or stroke of the carriage or body may be regulated as desired. Furthermore, it is an object of the

20 invention to provide a device of this general character having novel and improved means whereby the operative connection between the carriage or body and the motor may be regulated in a manner to compensate for
25 the load carried by the carriage or body.

The invention consists in the details of construction and in the combination and arrangement of the several parts of my improved swing whereby certain important 30 advantages are attained and the device ren-

- 30 advantages are attained and the device rendered simpler, less expensive and otherwise more convenient and advantageous for use, as will be hereinafter more fully set forth. The novel features of my invention will
- 35 hereinafter be definitely claimed. In order that my invention may be the better understood, I will now proceed to de
 - scribe the same with reference to the accompanying drawings, wherein:
- 40 Figure 1 is a view in side elevation illustrating a swing constructed in accordance with an embodiment of my invention:

Fig. 2 is a view in top plan of the device as illustrated in Fig. 1;

45 Fig. 3 is a vertical sectional view taken substantially on the line 3—3 of Fig. 1; Fig. 4 is an enlarged fragmentary view

Fig. 4 is an enlarged fragmentary view in elevation with portions broken away of the motor as herein embodied.

50 As disclosed in the accompanying drawings, C denotes a rectangularly formed crown or frame which is supported in desired position through the medium of the props 1 suitably secured to the corner por-

tions of the crown or frame C and adapted 55 to have their lower extremities engaged with the ground or other support. As herein embodied the props 1 are disposed downwardly on an outward incline and the lower extremities of the props 1 at the similar side 60 of the crown or frame C are connected by the brace 2, while the upper end portions of the prop and the side members of the crown or frame C are connected by the brace strips 4. It is also desirable that the central por-55 tion of the side members of the crown or frame C be connected by the diagonally disposed brace members 5.

Arranged upon the upper faces of the side members of the crown or frame C and 70 adjacent the opposite ends thereof are the bearings 6. The bearings 6 are arranged in pairs with the bearings of each pair transversely alined to receive the opposite end portions of a shaft 7. It is preferred that 75 each of the bearings 6 be provided with anti-friction means as at 8, for coaction with the shaft 7, so that said shaft may rock with a minimum of frictional resistance.

Each of the shafts 6 are directed through 80 a pair of sleeves 9 each arranged in close proximity to a side member of the crown or frame C. Each of the sleeves 9 is fixed to the shaft 7 through the medium of a set screw 10 or its equivalent, whereby said 85 sleeve will be rocked in unison with the shaft 7.

Each of the sleeves 9 is provided with a depending barrel 11 in which is disposed the upper end portion of a rigid hanger 12 and 90 said hanger is keyed or otherwise secured to the barrel 11 as is particularly indicated at 14.

The lower end portions of the hangers 12 depending from a single shaft 9 have 95 suitably engaged therewith a seat structure S. Said hangers 12 below the seat structure S are connected by the transversely disposed member 15, and said lower end portions of the hangers at similar sides of the crown or 100 frame C are connected by the side members 17 of the flooring F.

The opposite end portions of each of the side members 17 are provided with the notches 18 to be engaged over the outstand-105 ing shanks or members 19 carried by the lower portions of the hangers 12. By this means the members 17 together with the flooring F may be readily removed or applied in accordance with the occasions of practice.

It is preferred that the flooring F be sep-5 arable from the side members 17 and for which reason the opposite end portions of the transversely disposed members 20 of the flooring F are reduced to afford the extensions 21 to overlie the side members 17.

One of the shafts 7 extends beyond a side 10 of the crown or frame C and depending from said extended portion of the shaft is an elongated arm 21 arranged substantially in parallelism with the adjacent hanger 12.

15 The arm 21 has extending laterally there-from a plurality of outstanding members or shanks 22 spaced longitudinally along the arm 21. P denotes a pitman having one end adapted for detachable engagement with the

- 20 members or shanks 22 so that the connection between said pitman \mathbb{P} and the arm 21 may be adjusted longitudinally of said arm as may be required by the necessities of practice.
- The opposite end portion of the pitman P 25 is pivotally engaged with the lower end portion of an arm A depending from the verge 23 comprised in the motor M.
- As herein embodied, the motor M is of a 30 weight operated type and the verge 23 is provided with the pallets 24 coacting with the escapement wheel 25. The shaft 26 of the escapement wheel has mounted thereon a gear 27 meshing with a gear 28 carried by 35 the shaft 29 of the drum 30. The drum 30 has disposed therearound a flexible member 31 having its lower end portion secured to a weighted member 32 so that the action of said weight and the consequent rotation of 40 the drum results in the desired oscillation of the arm A and which oscillation is substantially isochronous.

The arm A comprises two sections 33 adjustable longitudinally one relative to the 45 other, and which sections are held in their desired adjustments through the medium of the clamping member 34 or the like. \mathbf{The} relative adjustment of the sections 33 of the arm A affords means whereby the action of the motor relative to the swing proper may 50

be decreased or increased as desired. The pitman P also comprises two sections 35 adjustable longitudinally one relative to the other and which are held in their desired 55 relative adjustments through the medium of the clamping member 36 or the like. By having the pitman consisting of the two adjustable sections 35, said pitman may be readily lengthened or shortened in accord-60 ance with the adjustment of the pitman P longitudinally of the arm 21.

The pitman P is adjusted longitudinally of the arm 21 in accordance with the load carried by the swing proper. As the load 65 increases, it is of advantage to lower the connection between the pitman P and the arm 21, or to raise the lower section 33 of the arm A or both. As the load decreases, these several adjustments either singly or collectively are reversed.

It is also to be understood that the drum 30 is adapted to be manually rotated in any desired manner in order to wind the flexible member 31 therearound and to elevate the weight 32, and in which operation the drum 75 30 freely revolves around the shaft 29. The shaft 29 and the drum 30 are also provided with a conventional type of pawl and ratchet whereby the rotation of the shaft 29 is assured as the drum 30 is ro- 80 tated by the action of the weight 32. It is preferred that the motor M be suitably secured to the crown or frame C at the end portion thereof remote from the arm 21 and at the same side of said crown or frame C as 85 said arm 21.

In order that a child may readily wind the flexible member 31 around the drum 30 and consequently elevate the weight 32, I have operatively connected with the drum 30 a 90 sprocket wheel 37 over which passes the chain 38. The chain 38 is also disposed around a smaller sprocket wheel 39 supported by a prop 1 at a point in close proximity to the ground or other supporting sur- 95 face. Coacting with the sprocket 39 is a crank 40 which may be readily grasped by a child in order to wind the flexible member 31 about the drum 30 in order to operate the motor M. 100

From the foregoing description, it is thought to be obvious that a swing constructed in accordance with my invention is particularly well adapted for use by reason of the convenience and facility with 105 which it may be assembled and operated, and it will also be obvious that my invention is susceptible of some change and modification without departing from the principles and spirit thereof, and for this reason I do 110 not wish to be understood as limiting myself to the precise arrangement and formation of the several parts herein shown in carrying out my invention in practice except as hereinafter claimed. 115

I claim:

1. A device of the character described comprising a shaft supported for rocking movement, an oscillating member carried by the shaft, an arm extending from the shaft, 120 a motor including a rocking driving arm, and a pitman operatively connected with both of said arms, the connection of the pitman with the first named arm being adjustable lonigtudinally of said first named 125 arm

2. A device of the character described comprising a shaft supported for rocking movement, an oscillating member carried by the shaft, an arm extending from the shaft, 130

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a motor including a rocking driving arm, and a pitman operatively connected with both of said arms, the connection of the pitman with the first named arm being adjustable longitudinally of said first named arm, said pitman comprising a plurality of sections adjustable one longitudinally of the other.

3. A device of the character described 10 comprising a shaft supported for rocking movement, an oscillating member carried by the shaft, an arm extending from the shaft, a motor including a rocking driving arm, and a pitman operatively connected with 15 both of said arms, said second named arm

comprising a plurality of sections adjustable one longitudinally of the other. 4. A swing comprising, in combination, a

suitably supported crown, a shaft supported

by said crown, a seat structure supported by 20 the shaft for movement therewith, an arm depending from an end portion of the shaft, a motor supported by the crown and including a driving rock arm, and a pitman operatively connecting both of said arms 25 whereby the driving rock arm imparts rocking movement to the shaft, a series of outstanding members carried by the first named arm and spaced longitudinally thereof, said pitman being detachably engageable with 30 said members.

In testimony whereof I hereunto affix my signature in the presence of two witnesses.

JAMES C. WILSON.

Witnesses:

F. C. FLEMISTER, H. J. Wood.