

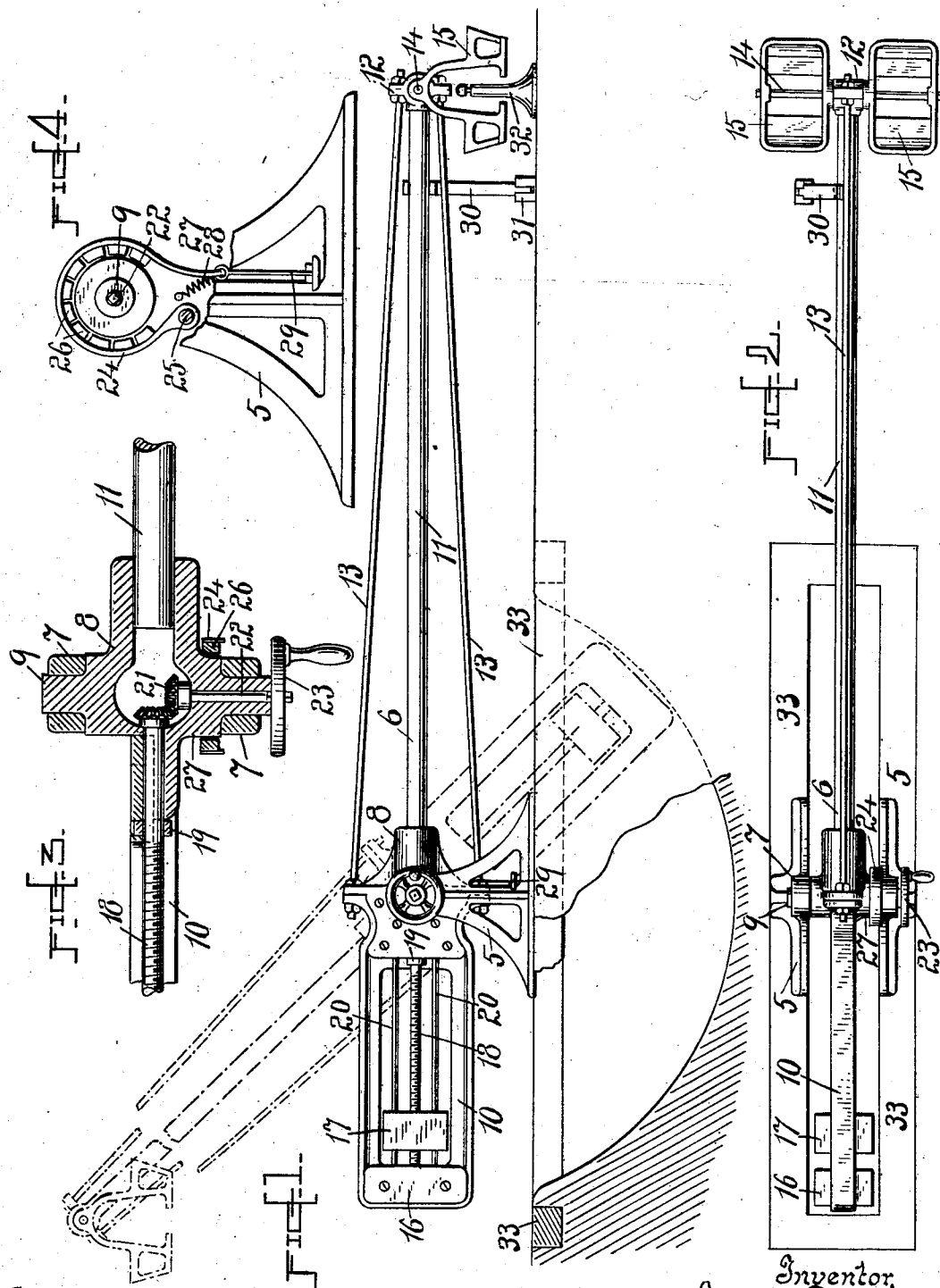
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G. P. ARMSTRONG.
SWING.

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NO MODEL.



Witnesses
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SWING.

SPECIFICATION forming part of Letters Patent No. 758,579, dated April 26, 1904.

Application filed December 8, 1903. Serial No. 184,253. (No model.)

To all whom it may concern:

Be it known that I, GEORGE P. ARMSTRONG, a citizen of the United States of America, and a resident of Woodridge, county of Bergen, State of New Jersey, have invented certain new and useful Improvements in Swings, of which the following is a specification.

This invention relates to that class of amusement devices commonly termed "swings," but differs from the usual devices of this class in that the occupant is given a trip through the air in a vertical plane describing an arc of a semicircle above the center located near the ground.

The objects of this invention are to provide a swing that will carry the occupant to a great height, will be safe and wieldy in structure, consist of few simple and compact parts, and will be inexpensive to build.

Other objects and improvements will be hereinafter described.

In the accompanying drawings, forming part of this specification, an embodiment of the invention is shown, wherein—

Figure 1 is a side elevation of the swing, showing in broken lines a second position of the same. Fig. 2 is a plan. Fig. 3 is a horizontal section showing the weight-adjusting mechanism more fully described hereinafter, and Fig. 4 is a detail of the friction-clutch mechanism.

Similar figures refer to similar parts throughout.

The device consists, primarily, of two co-operating members, suitable bearing-supports 5, and a beam or lever 6, revolvably mounted thereon. The bearing-supports are of the usual triangular pattern, provided with journals 7 and large base-plates to insure stability.

The beam or lever 6 is a lever of the first class and consists of a central hollow casting 8, which carries the axles 9 on each side to engage the journals 7, a yoke-casting or power-arm 10, secured to the central casting 8, as shown, and a heavy pipe 11, secured to the hollow casting 8 and provided with an end casting 12. Reinforcing-rods 13 connect the castings, as shown, adding strength to the lever 6 where the strain is greatest.

To both sides of a bar 14, passing through the end casting 12, carriages 15 are movably suspended, so that they will retain their position of equilibrium independent of the position of the lever 6.

The power arm or yoke 10 is provided with weights to counterbalance the weight of the occupants in the carriages 15 and consists of a fixed weight 16 at the extreme end of the power-arm and an auxiliary weight 17, tapped to receive the thread on a shaft 18, which when revolved moves this weight to or from the center of swing, thereby decreasing or increasing the amount of counterbalance to accommodate occupants of various weights. The shaft 18 revolves in bearings formed in the yoke-casting 10 and in the hollow casting 8 and is held against longitudinal movement by the collar 19. The auxiliary weight 17 is guided by rods 20, which pass through it.

The shaft 18 may be revolved by mechanism such as shown in detail in Fig. 3, wherein a beveled gear on the shaft 18 meshes with a beveled gear 21 on a short shaft 22, which is carried in the axle 9 and is provided with a wheel and handle 23.

It will be noticed that while the weight-adjusting mechanism swings with the lever the wheel and handle 23, controlling same, will always remain in one place, enabling the operator to vary the amount of counterbalance at any position of the lever.

By means of a brake mechanism the speed of swing may be varied or the lever entirely stopped and held at any angle in its semicircular course.

The brake mechanism may consist of a strap or band 24, Fig. 4, secured to a pin 25, carried by the support 5 and provided with friction-shoes 26, which surround the sleeve 27 of the casting 8 and are held inactive by the spring 28, but which may be tightened against the sleeve 27 by pressure applied on the foot-lever mechanism 29.

A bar 30, pivoted at 31, the upper end of which is provided with projections, may engage the pipe member 11 to retain the seat at its lowermost position for receiving the occupants and to lock the device when not in use.

A post, such as at 32, is provided with a bumper and is placed so as to act as a stop on the end casting 12 when the lever has reached its lowermost position. These posts are placed on both sides of the supports 5, so as to furnish a stop to the descent on either side.

The device is mounted on a frame, such as that at 33, located over an excavation or pit into which the power-arm 10 may descend. The object of this feature of my invention is to enable the use of a longer and more practical power-arm and weights, to lower the center of swing, thereby securing greater stability to the device, and to obtain the horizontal position of the lever when the carriages are at the lowermost position, so that the travel at the starting and stopping or at the change in direction of travel is up and down. Changes in the state of rest or motion other than in a vertical direction when sitting are often accompanied by nausea, which is avoided in this invention.

On starting or on arriving at the lowermost position the persons using the swing may by pressing their feet upon the ground propel themselves up and to the other side of the support 5, where they can repeat the motion and repel themselves back, and so on as often as desired.

The swing may be constructed of iron or

wood, or partly of the one and partly of the other, or of any other suitable materials. The seating capacity may be varied and the design of the swing and arrangement of parts altered generally without departing from the spirit of the invention.

I claim—

1. In a swing which consists of a lever of the first class, provided with an adjustable weight at one end, and a seat at the other, adjusting mechanism for such weight operated by means passing through the axle of the lever.

2. In a swing which consists of a lever of the first class, provided with an adjustable weight at one end and a seat at the other end, means whereby the said weight may be adjusted by hand applying mechanism located at the journal of the said lever.

3. In a swing which consists of a lever of the first class, provided with a weight at one end and a seat at the other, of a friction-brake engaging the said lever at its axle, to stop the travel of the lever at any point of its course, substantially as described.

Signed at New York, N. Y., this 1st day of September, 1903.

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