(No Model.)

E. E. HIGINBOTHAM.

GIANT SWING.

No. 545,406. Patented Aug. 27, 1895.

Fig. 1.

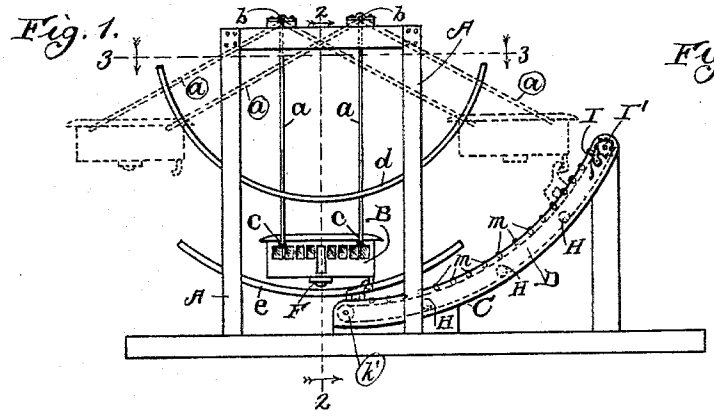


Fig. 2.

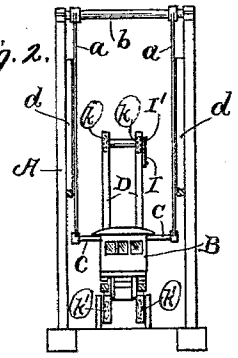


Fig. 3.

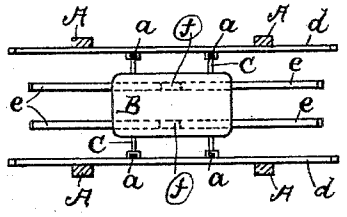


Fig. 4.

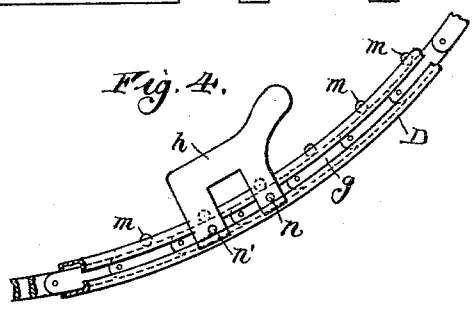


Fig. 5.

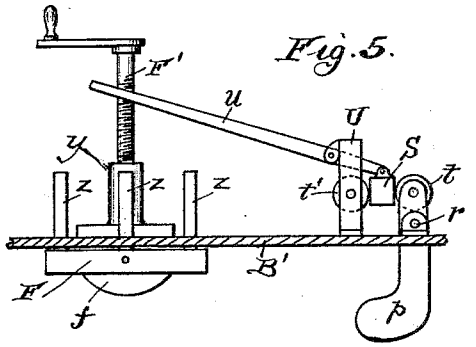


Fig. 6.

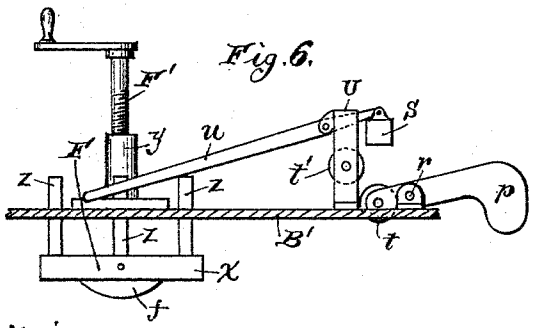
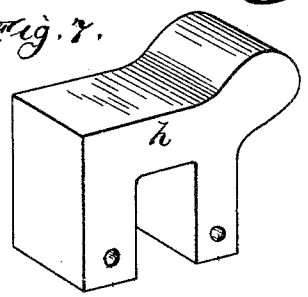


Fig. 7.



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UNITED STATES PATENT OFFICE.

ELMER E. HIGINBOTHAM, OF CHICAGO, ILLINOIS.

GIANT SWING.

SPECIFICATION forming part of Letters Patent No. 545,406, dated August 27, 1895.

Application filed December 8, 1894. Serial No. 531,268. (No model.)

To all whom it may concern:

Be it known that I, ELMER E. HIGINBOTHAM, a citizen of the United States, residing at Chicago, in the county of Cook and State of Illinois, have invented a new and Improved Giant Swing, of which the following is a specification.

The object of my invention is to amuse and give recreation to the public.

The accompanying drawings will illustrate the mechanism of the invention.

Figure 1 is a side elevation of the swing embodying my invention; Fig. 2, a sectional view on line 2 2 of Fig. 1, viewed in the direction indicated by the arrows; Fig. 3, a horizontal sectional view on line 3 3 of Fig. 1, viewed in the direction indicated by the arrow; Fig. 4, an elevation of one side of the frame carrying the propeller-chain, of the chain on one side thereof, and a view of the propeller. Fig. 5 is a view of a portion of the floor of the car of the swing and of the mechanism by means of which such car is attached to the propeller, such mechanism being in engaging position. Fig. 6 is a like view as Fig. 5 of the several parts illustrated in such Fig. 5, with the several parts of the mechanism in a disengaged position—that is, a position releasing the car from the propeller; and Fig. 7, an enlarged view of the propeller, showing the manner in which the shafts thereof extend therethrough.

Similar letters refer to similar parts throughout the several views.

An arched framework will be erected some sixty or seventy feet in height, the length and breadth in proportion to give the structure strength and solidity.

The hangers or cables *a a a a* are attached to two shafts *b b*, which turn in frame A. Car B, capable of holding ten or twelve persons, is suspended from hangers or cables *a a a a*, swung on shaftings *c c* in a direct line under shaftings *b b*. Shafts *c c* extend beyond the side of the car B. Thus car B will always retain a horizontal position.

d d are guide-rails secured on the frame or tower A. Hangers or cables *a a a a* will swing between guides *d d* and in close contact therewith, keeping the car B in a straight line.

e e are concave rails, about thirty feet in length, running parallel two or three feet apart. On these rails brake F operates, checking car B in the manner referred to hereinafter.

A heavy concave frame C will be constructed beneath car B. On this frame C there is placed the boxing D, within which two endless chains *g g*, running parallel one foot apart and carrying propeller *h*, travel around four gear-wheels *k k k' k'*, two wheels at each end of frame C. The chains *g g* in ascending will pass through boxing D, mounted on the frame C, which is equipped with rollers *m m m m* at intervals to prevent friction and with slot in side for propeller-shaftings *n n'* to pass through.

n n' are shafts extending through propeller *h* and into links of chains *g g*, respectively. Propeller *h* is movable on its axle, so that there will be no wrench or strain in its passage around gear-wheels *k k k' k'* and rollers H H. Rollers H H may be placed at intervals to keep chains *g g* taut and at equal distances apart.

In Fig. 5 the trigger *p* and brake F are shown set for the ascent. Trigger *p* is swung on pivot *r* at end of car B and held in place by block S, which is fitted between two rollers *t t'* and operated by lever *u*. Roller *t* is rotatably mounted in the top of trigger *p*, and roller *t'* in frame U, attached to floor B' of car B.

The brake F consists of a roller or pair of wheels *f*, set in frame *x*, which extends across the bottom and is suspended midway of car B. It is operated up and down by screw F', which travels through threaded nut *y*, and is kept from swerving by guides *z z z z*.

It will require a small stationary engine to operate the swing. When steam is turned on and the machinery is set in motion, propeller *h* will catch on trigger *p*, and such propeller will propel car B up frame C. When steam is shut off, car B will remain suspended, held by two pawls I I, which operate in ratchet-wheels I' I', attached to shaft of top gear-wheels *k k*. When all is in readiness for the flight, conductor of car B will bear down on lever *u*, which draws block S from between rollers *t t'*. Trigger *p* will then turn on pivot *r*, releasing car B. After car B has swung to and fro several times, and the momentum becomes insufficient to carry the car a distance pro-

ducing a pleasing effect to the persons in the car, the conductor will apply brake F by operating screw F′, which will lower brake F onto the concave rails *e e* and check motion of car B.

I am aware that prior to my invention swings have been made with four hangers; also, that cars have been swung on shafting, that they may retain a horizontal position. I I therefore do not claim such a combination broadly; but

What I do claim as my invention, and desire to secure by Letters Patent, is—

1. The combination in a swing of a frame, shafts mounted in the frame so as to rock therein, hangers secured to the shafts, a car suspended on the hangers, a propeller arranged to travel in concave guides beneath the car, means for forcing the propeller up such guides, a trigger on the car and a lever connected to the trigger whereby the trigger can be engaged with the propeller or disengaged therefrom; substantially as described.

2. The combination in a swing, of a frame, concave guide rails on the frame, shafts mounted in the frame so as to rock therein, hangers secured to the shafts, a car suspended on the hangers between the concave guides, a propeller arranged to travel in concave guides beneath the car, concave guides, means for forcing the propeller up such guides, a trigger on the car and a lever connected to the trigger, whereby the trigger can be engaged with the propeller or disengaged therefrom; substantially as described.

3. In a swing consisting of a frame, guides thereon, rocking shafts therein, hangers and a car suspended by the hangers, a trigger consisting of a pivotal engaging piece, a roller in the upper end of such pivotal engaging piece, a roller mounted in a rigid frame, a lever and a block secured to the lever so as to be raised from between the rollers and forced into position between such rollers by the movement of the lever, and a propeller with which the trigger is engaged and disengaged by the movement of such lever; substantially as described.

4. In a swing consisting of a frame, guides thereon, rocking shafts therein, hangers and a car suspended by the hangers, the combination of concave guide rails underneath the car, and a brake within the car, such brake consisting of a frame arranged to be in contact with the concave rails and to be disengaged therefrom, and means for raising and lowering the brake; substantially as described.

5. In a swing consisting of a frame, guides thereon, rocking shafts therein, hangers movable between the guides, and a car suspended by the hangers, the combination of concave guide rails beneath the car, and a brake within the car arranged to be brought in contact with the concave rails and to be freed from contact therewith, such brake consisting of a vertically movable block, a screw for forcing the block down and for raising it up, and rollers mounted in the block, such rollers being in contact with the concave rails when the block of the brake is forced down; substantially as described.

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