No. 743,377. PATENTED NOV. 3, 1903.

O. B. DANNER.

MECHANICAL AMUSEMENT.

APPLICATION FILED JULY 31, 1902.

NO MODEL. 2 SHEETS—SHEET 1.

Fig. 1.

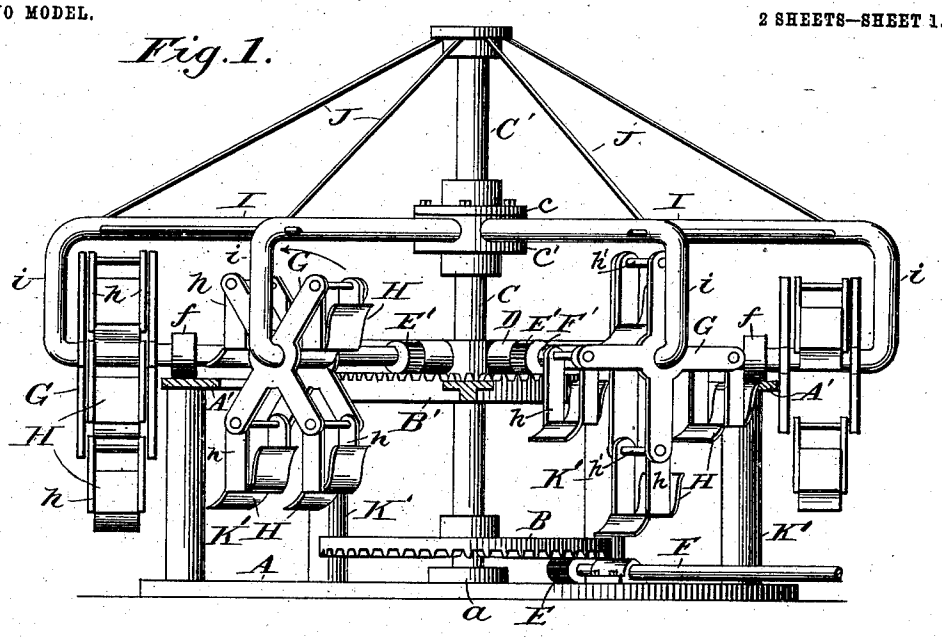
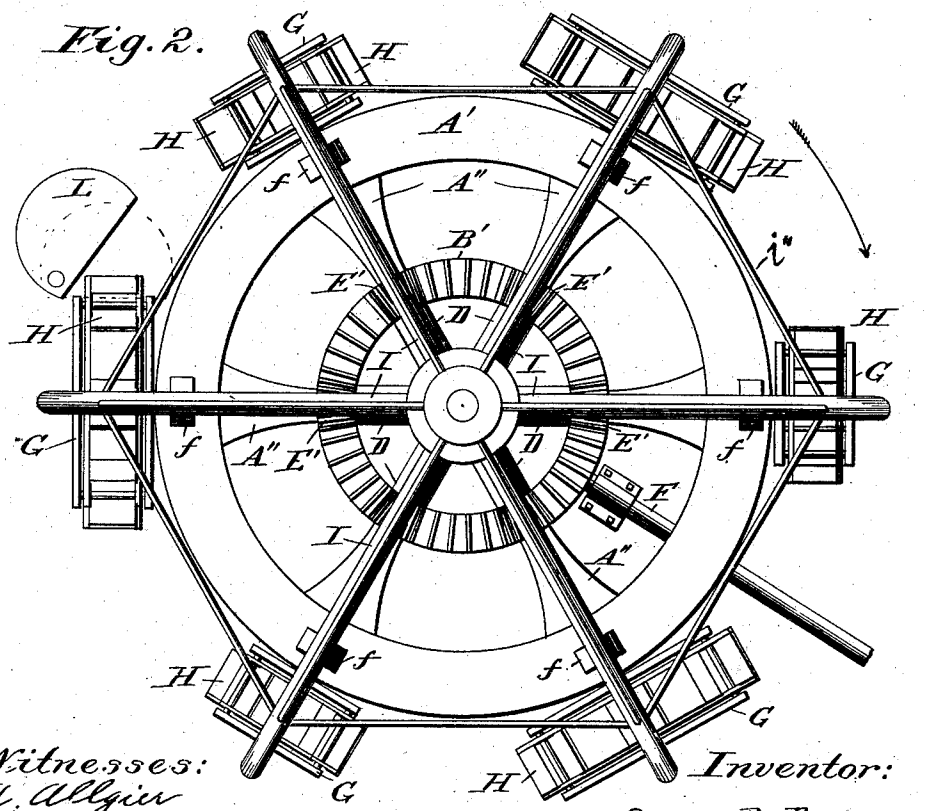


Fig. 2.



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MECHANICAL AMUSEMENT.

APPLICATION FILED JULY 31, 1902.

NO MODEL. 2 SHEETS—SHEET 2.

Fig. 3.

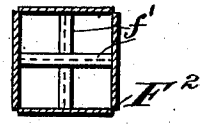


Fig. 4.

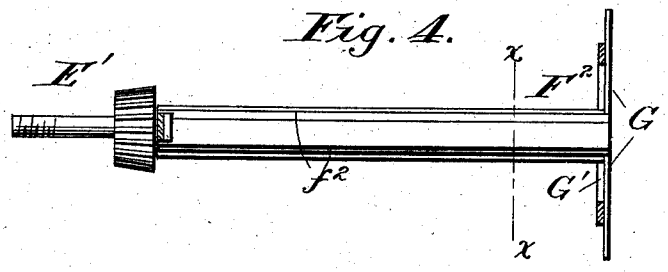


Fig. 5.

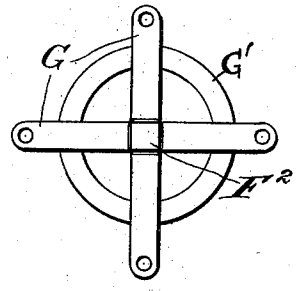


Fig. 6

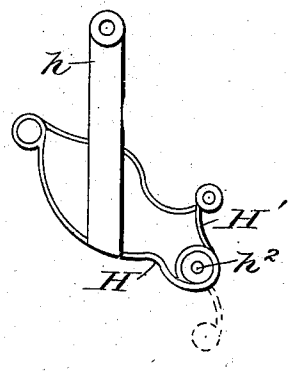
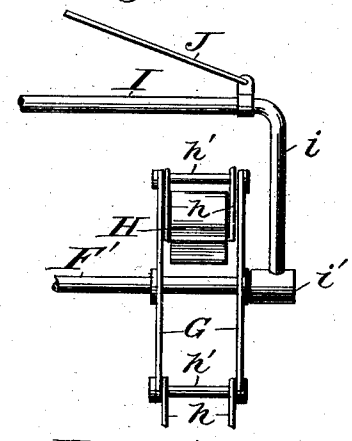


Fig. 7.



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No. 743,377. Patented November 3, 1903.

UNITED STATES PATENT OFFICE.

OSCAR B. DANNER, OF ALLEGAN, MICHIGAN.

MECHANICAL AMUSEMENT.

SPECIFICATION forming part of Letters Patent No. 743,377, dated November 3, 1903.

Application filed July 31, 1902. Serial No. 117,865. (No model.)

To all whom it may concern:

Be it known that I, OSCAR B. DANNER, a citizen of the United States, residing at Allegan, in the county of Allegan and State of Michigan, have invented certain new and useful Improvements in Mechanical Amusements, of which the following is a specification.

My invention relates to improvements in mechanical devices for out-of-doors amusements; and its objects are, first, to support and carry vertically-revolving baskets upon horizontally-revolving arms, thus combining the vertical and the horizontal revolutions in the one machine, and, second, to provide for suspending the vertically-revolving arms and baskets upon the horizontally-revolving arms in such a manner that they will be readily accessible to parties desiring to enter or leave them. I attain these objects by the mechanism illustrated in the accompanying drawings, in which—

Figure 1 is an elevation of the device with two of the posts cut away to show the position of the driving-gear. Fig. 2 is a plan of the same. Fig. 3 is a cross-section of a modified form of shaft upon the line *x x* of Fig. 4. Fig. 4 shows a modified form of shaft with one side cut away to show the manner of constructing it. Fig. 5 is an end elevation of the same, showing the position of the arms that form one side of the frame that supports the baskets. Fig. 6 is a basket; and Fig. 7 is a side elevation of the end of the shaft, the supporting-arms, and the baskets and their supporting-frame.

Similar letters refer to similar parts throughout the several views.

A represents the base or foundation that supports the device.

A′ represents the top of the frame and may also be used as a track for the wheels *f* to travel upon, and thus assist in supporting and carrying the baskets and their contents.

K′ K′ represent the posts or columns that unite and support the base and top of the frame.

C represents a vertical shaft the lower end of which is supported and revolves in the step *a*, and the upper end is supported by the geared plate B′ at the top of the frame.

D D is a spider that is securely attached to the shaft C just above the geared plate and is designed to receive and support the ends of the shafts F′ in such a manner that these shafts may be made to revolve by gear-wheels E′ traveling upon the geared plate B′. The shafts F′ extend out to and support the arms G of the basket-frame and may be provided with antifriction-wheels *f*, designed to travel upon the top A′ of the frame, as hereinbefore suggested.

The spider D D, as stated, is secured to the shaft C. In Fig. 2 the arms D D extend only to the gear-wheels E′. These arms, forming the projecting portion of the spider D, form bearings for one end of the shafts F′, which are driven by the gear-wheels E′ engaging with and traveling over the gear-teeth in the plate B′. This plate is supported upon the arms A″, that connect the rim A′ of the frame with the shaft C, in position to properly engage the gear-wheels E′, as hereinbefore stated.

I I represent arms that extend out from the hub *c′* and are bent down at the end, as at *i*, to form a support for the outer arms of the basket-frame and are designed as an auxiliary support assisting the shafts F′ in supporting the basket-frame. Upon large machines I prefer that the shaft F′ pass entirely through the basket-frame and the end be supported in the hub *i′*, as indicated in Fig. 7, as this averts all danger of the basket being thrown out of alinement by the excess of weight being at one end of the baskets, though with small machines, especially with the outer ends of the shafts supported by the wheels *f*, as hereinbefore stated, each side of the frame may be supported independently, as shown in Fig. 1.

C′ is an extension of the shaft C and is secured to the hub *c′*, which is securely attached to the top of the shaft C by bolts passing through the flange *c*, as shown, and is designed to receive and support the upper ends of the braces J, the opposite ends of which are secured to the arms I I, forming a truss construction for the support of the arms and their load. This extension could be a continuation of the shaft C; but I prefer that it be detachable, as by that means the machine can be more readily taken to pieces for transportation.

The baskets H H are suspended from the

arms G G by means of side bars h, the upper ends of which are pivotally supported at the ends of the arms G of the basket-frames, preferably upon the shafts h', so that the baskets will always hang suspended some distance below the supporting-shaft h'.

In Fig. 6 I have shown the basket in complete form and having a door or gate H' pivoted to the basket, as at h^2, so that it may be opened, as indicated by the dotted lines, so that the patrons of the machine may easily get in and out of the baskets. With this construction the horizontal travel of the machine in the direction of the arrow in Fig. 2 will cause the basket-frames to travel in the direction of the arrow in Fig. 1, thus making the combined motion such as will be least likely to inconvenience the patrons of the machine.

In Figs. 3, 4, and 5 I have shown a square shaft F^2, formed of two or more parallel plates or bars of sheet-steel f^2, having the outer ends turned back to form the arms G. I find it necessary to support the arms upon this form of shaft by an extra strong brace, and for this purpose I prefer the annular plate G', securely attached to the arms. I also deem it best to strengthen the body of the shaft, and for this purpose any form of internal bracing—as, for instance, the standards f', riveted solidly to the plates, as in Fig. 3.

The geared plate B is securely attached to the shaft C, by a key, set-screw, or other of the usual methods of securing driving-gears to shafts, in position to engage with the gear-wheel E, which is mounted upon and driven by the driving-shaft F, (shown in the drawings as disconnected from the motor, or rather as broken off,) and causes the shaft C, and with it the arms I, shafts E', and the basket-frames, to revolve horizontally in the direction hereinbefore stated, and the travel of the gear-wheels E' over the geared plate B' causes the basket-frames to revolve, as stated, thus attaining the first-mentioned and principal object of the invention—namely, a combined horizontal and vertical revolutionary motion at one and the same time.

L represents a pedestal or stand to assist patrons to enter or leave the baskets, and it may be of any desired or convenient form and operated as may be most convenient. I have shown it here as pivoted to be revolved to and from position with the baskets.

i'' i'' represent braces for supporting the arms I laterally. As this application of braces and also the truss-braces J are common in this class of structures, I do not deem it necessary to go farther into their description.

Having thus fully described my invention, what I claim as new, and desire to secure by Letters Patent of the United States, is—

1. In combination with the frame, driving-shaft, driving-gear and vertical driven shaft of devices for out-of-doors amusements; a circular geared plate supported upon the frame, a track formed upon the top of the frame around and some distance out from the geared plate, a spider secured to the vertical shaft above the geared plate, radiating arms upon said spider extending to the inner ends of the teeth on the plate, shafts revolubly supported at one end by these arms and radiating therefrom, gear-wheels upon said shafts engaging the gear-teeth on the plate, wheels near the outer ends of these shafts supported and traveling upon the track at the top of the frame, arms secured to and radiating from the outer ends of the shafts, arms radiating from the vertical shaft above and parallel with the radiating horizontal shafts, and arranged to support the outer ends of the shafts, lateral braces connecting said arms, and truss-braces connecting the arms with the vertical shaft, and baskets revolubly suspended from said arms, substantially as and for the purpose set forth.

2. In combination with the frame, driving-shaft, driving-gear, vertical driven shaft, and a radiating spider secured to said shaft; a geared plate secured to the top of the frame, radiating shafts revolubly supported at one end by the spider, gear-wheels on said shaft engaging the gear-teeth upon the geared plate, an annular track formed upon the frame-wheels near the outer ends of the shafts traveling over said track, arms secured to the ends of the shafts and radiating therefrom, baskets revolubly suspended from the ends of said arms, arms radiating from the vertical shaft above the radial shafts and the basket-frames and connected to form bearings for supporting the outer ends of the shafts, and braces connecting the outer ends of these arms with the top of the vertical shaft considerably above the point of conjunction of the radial arms with the shaft, substantially as and for the purpose set forth.

OSCAR B. DANNER.

In presence of—
JAMES M. CARVER,
ITHIEL J. CILLEY.