A. BEST & D. L. DEAN.

AMUSEMENT DEVICE.

APPLICATION FILED APR. 29, 1912.

1,034,864.

Patented Aug. 6, 1912.

3 SHEETS—SHEET 1.

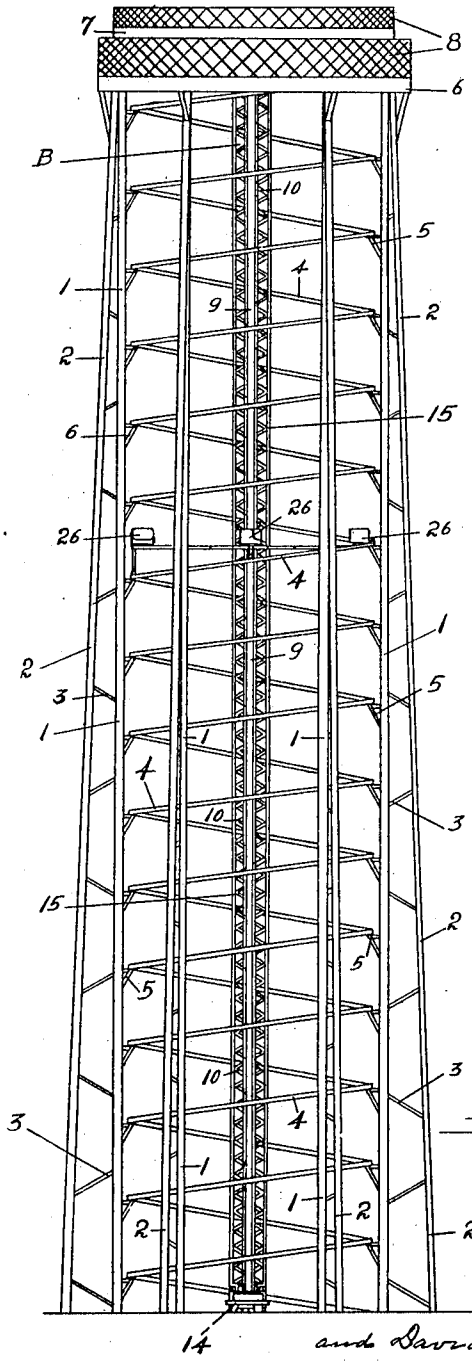

Fig. 1.

Witnesses:
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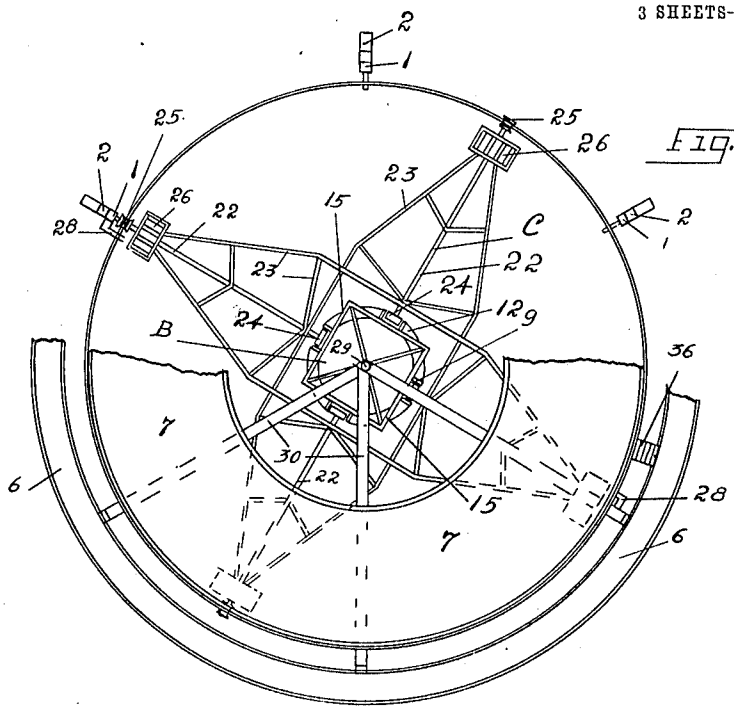

Fig. 2.

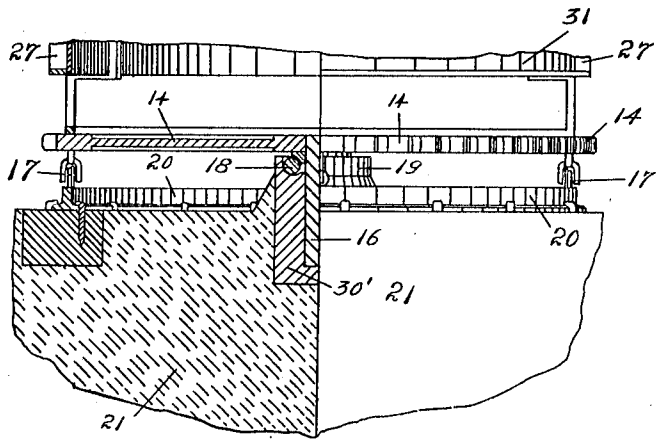

Fig. 3.

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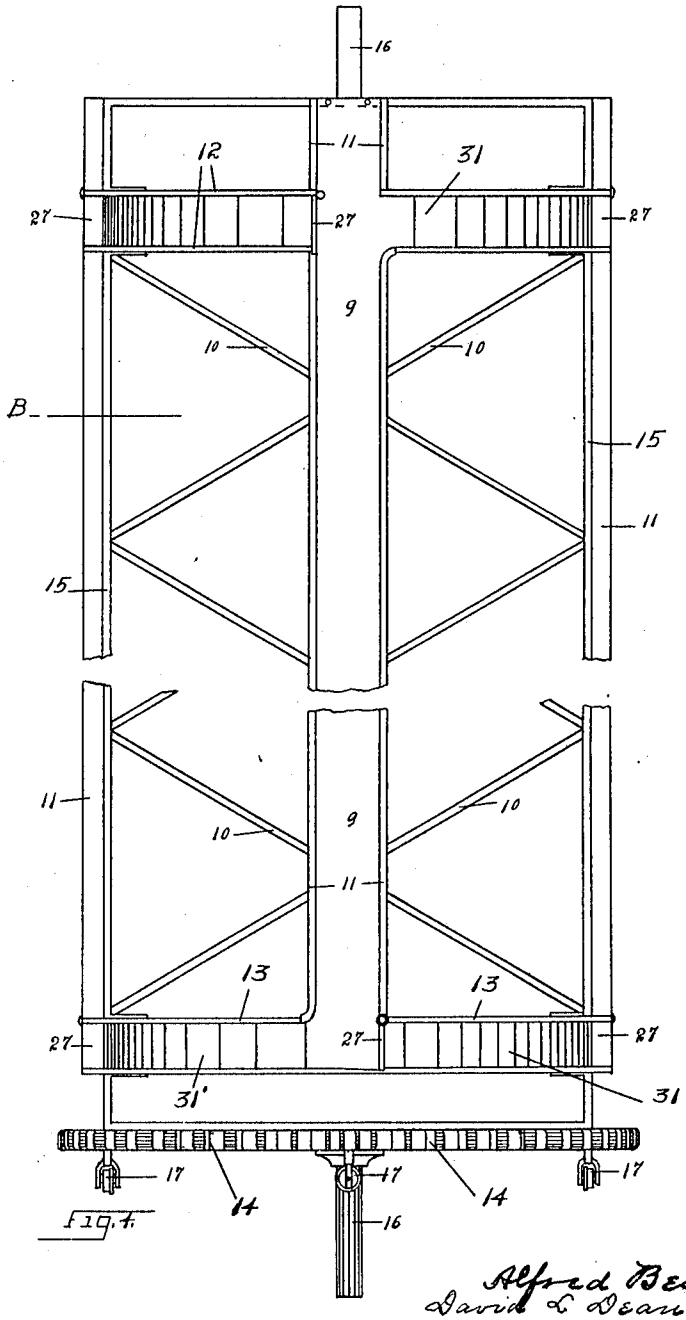

Fig. 1.

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COLUMBIA PLANOGRAPH CO., WASHINGTON, D. C.

UNITED STATES PATENT OFFICE.

ALFRED BEST AND DAVID L. DEAN, OF SALT LAKE CITY, UTAH.

AMUSEMENT DEVICE.

1,034,864. Specification of Letters Patent. Patented Aug. 6, 1912.

Application filed April 29, 1912. Serial No. 694,005.

To all whom it may concern:

Be it known that we, ALFRED BEST and DAVID L. DEAN, citizens of the United States, residing at Salt Lake City, in the county of Salt Lake and State of Utah, have invented certain new and useful Improvements in Amusement Devices, of which the following is a specification.

Our invention relates to an amusement device, and has for its object to provide a skeleton tower, firmly and properly braced, on which a spiral track is secured over which passenger carrying cars may be operated to convey the passengers from its base to the top and return; and so constructed that the view from the said cars is practically unobstructed. These and other objects we accomplish with the device illustrated in the accompanying drawings, and as described in the specifications forming a part of this application and as specifically pointed out in the appended claims.

Figure 1 is a vertical elevation of our device much diminished and with the supporting base not shown. Fig. 2 is a plan of the same, parts cut away. Fig. 3 is an elevation of the base of the vertical shaft and operating machinery, parts in section. Fig. 4 shows the upper and lower portions of the shaft with the central portion omitted.

Our device consists of a skeleton tower formed by the uprights 1 and brace standards 2 adjacent each of said uprights. Between said uprights 1 and said brace standards 2 are the angled braces 3. Between the said uprights 1 which are shown in the drawings as six in number is mounted the spiral track 4. Said track 4 is supported from below by the truss braces 5 in order to leave the upper portion thereof unobstructed. Near the top of said tower is provided a circular platform 6 and above that and concentric therewith is another platform 7. Said platforms are each surrounded by screens 8 to prevent passengers from falling from said platforms if they should alight from the cars which they may do when said cars are adjacent the lower platform 6. A stairway 36 connects the two platforms. Within and at the center of said tower is mounted a vertical shaft B which consists of a cage-like square shaft 15 and four channels 9 and braces 10. Each of said channels 9 has outwardly projecting edges 11, except that near the top and bottom of said shaft a portion of said edges 11 is cut away, the purpose of which will be explained hereinafter. Said channels are secured in place by arcuated braces 12 at the top, and arcuated braces 13 and a gear wheel 14 at the bottom. The said channels 9 are also further secured in place by being bolted to the square cage-like shaft 15. The said channels 9, angular braces 10, arcuated braces 12, and 13, gear wheel 14, and square cage-like shaft 15 form the center shaft B. Firmly secured in the top and bottom of said shaft B are the bearing pins 16. The upper bearing pin 16 is journaled in a bearing 29, which is secured in cross braces 30 and on which braces said platform 6 is carried. Secured beneath the said gear wheel 14 are the trunnion wheels 17. The said trunnion wheels and ball bearings 18 support said shaft B. The bottom bearing pin 16 is mounted in a bearing 30′ and rests on said balls 18. A track and case for holding said balls is shown at 19. A circular track 20 is provided on which said trunnion wheels 17 are operated. Said track 20, bearing 30′ and bearing case 19 are each mounted on and secured in a solid foundation 21, which may be made of stone, cement or other solid and weight supporting material. A truss frame work C is constructed surrounding said shaft B, and on the outer end thereof is secured the passenger carrying cars 26. Said truss frame C consists of diametrically placed braces 22 and angular braces 23. Mounted on the inner ends of each of said diametrically placed braces 22 is a bearing wheel 24, each of which is made to operate within one of said channels 9. On the outer end of each of said diametrically placed braces 22 is mounted a double flanged wheel 25, adapted to travel or roll on said spiral track 4. On three of said diametrically placed braces, the bearing for said double flanged wheel 25 is placed below the horizontal plane of said frame C in order that the double flanged wheel may be in contact with said spiral track 4, and at the same time the passenger carrying cars 26 may be on the same horizontal plane. As stated heretofore, portions of the sides of said channels 9 are cut away near the top and bottom, and horizontally adjacent to the said cut out portions, the ends of the inclined tracks 4 are secured.

On one side of each of said channels 9 the cut away portions 11 are pivotally connected at one end to act as guide dogs 27.

In the operation of our device, and starting with the cars near the ground, power is applied to said gear wheel 14, which revolves the said shaft B. The rotation of shaft B on its axis revolves the frame C and the cars 26. When said frame C with the cars 26 thereon are carried around by the turning of said shaft B as supported by the said double flanged wheel 25 on the inclined track 4, said frame C and the cars 26 will be forced vertically upward. The said wheels 24 will engage one side 11 of said channels 9 until the cut out portion of said channel at the upper end thereof is reached. The rotation of the shaft may then continue and the said frame C with the passenger carrying cars 26 will rest on a portion of said track, at that point in a horizontal plane. Said horizontal portion of said track 4 is adjacent to said platform 6. A bumper 28 is provided on said horizontal portion of said track to stop the cars, and if the said shaft B should continue to rotate the cut out portions in the said sides 11 of the said channels 9 will allow said frame C and the cars to remain stationary while the openings in the sides of the said channels 9 will leave the wheels 24 an unobstructed track around a horizontal channel 31 formed between the arcuated braces 12, and when said wheels strike the said guide dogs 27 they will turn on their pivots and allow said wheels to pass when the shaft is being rotated to the left. When the said shaft B is rotated to the right said wheels 24 will engage said guide dogs 27 and be directed in a downward course as guided by said channels 9, and said double flanged wheels 25 will run down the inclined spiral track 4 as controlled by the rotations of the shaft B. The openings in the sides of the channel 9 near the base of the tower and the horizontal channel 31′ provided between the arcuated braces 13 and the said circular track 20 will allow said shaft to continue to rotate until the double flanged wheels 25 have engaged against a similar bumper 28 on a horizontal portion of said track 4 near the base. The guide dogs are pivoted on the opposite side 11 of said channel, and allow said shaft to turn to the left freely but when turned to the right the guide dogs 27 engage said wheels 25 and direct them upward within said channels 9. Having thus a vertical guide channel 9 and horizontal guide channels 31 and 31′ allows the said wheels 24 to either travel in a vertical or horizontal direction. Guide dogs 27 direct said wheels from the horizontal channel 31 and 31′ into the vertical channels 9 and automatically provide a safety appliance for our device as the frame C carrying the cars 26 cannot ascend higher than said horizontal channel 31 or lower than the horizontal channel 31′. Whether the power is released from the said shaft B or not, the cars would stop when contiguous said channels 31 and 31′ even should the workman fail to stop or reverse the power. The shaft B would continue to revolve without in any way imparting motion to the cars. The form of the said cars may be changed to resemble an aeroplane in which case they would be secured on said frame C sufficiently within the circle of the track 4 to allow wings to be extended from each side thereof somewhat in resemblance to an aeroplane.

It is our intention to construct the tower with a diameter of about one hundred feet and a height of three hundred feet. The size of the same, however, is immaterial.

Having thus described our invention we desire to secure by Letters Patent and claim:—

1. An amusement device consisting of a power driven vertical shaft; a frame slidable on said shaft; passenger carrying cars secured to said frame; a spiral track concentrically spaced from said shaft; and wheels mounted on said frame and adapted to run on said track.

2. An amusement device consisting of a power driven vertical shaft; a frame slidable on said shaft; a spiral track concentrically spaced from said shaft; wheels mounted said frame and adapted to run on said track; and cars mounted on said frame.

3. An amusement device consisting of a power controlled vertical shaft having channels in the peripheric face thereof; a frame surrounding said shaft and slidable thereon; passenger carrying cars carried by said frame; a spiral track concentrically spaced from said shaft; wheels mounted in said frame and adapted to operate in said channels; wheels mounted on the outer ends of said frame and adapted to run on said track; and means to stop said cars, without stopping the rotation of the shaft.

4. An amusement device consisting of a vertical shaft having circumferential and longitudinal channels thereon; a frame slidable on said shaft; wheels mounted in said frame adjacent said shaft and adapted to operate in said channels; a spiral track concentrically spaced from said shaft; wheels mounted on the outer ends of said frame and adapted to run on said track, and cars mounted on said frame.

5. An amusement device consisting of a vertical shaft having two circumferential and longitudinal channels thereon; a frame surrounding said shaft; a spiral track having the lower end secured adjacent one of the circumferential channels on said shaft and the upper end secured adjacent the other circumferential channel on said shaft; wheels

mounted in said frame adapted to run in said longitudinal channels on said shaft; other wheels mounted on the outer ends of said frame adapted to run on said spiral track; and cars carried by said frame.

6. An amusement device consisting of a skeleton tower; a spiral track secured on said tower; a power driven vertical shaft having circumferential and longitudinal channels thereon; a frame surrounding said shaft and adapted to slide thereon; wheels mounted on said frame adapted to operate in said longitudinal channels; double flanged wheels mounted on the outer ends of said frame and adapted to run on said spiral track; passenger cars mounted on said frame; and a platform mounted on said tower adjacent one of said circumferential channels on said shaft.

7. An amusement device consisting of uprights; braces supporting said uprights; a spiral track secured on said uprights, a shaft axially mounted in said track and having vertical guide channels in the sides and horizontal guide channels around the said shaft near the top and bottom thereof; guide dogs fitted in the sides of said vertical channels; a truss frame slidably mounted around said shaft; passenger carrying cars secured thereon; guide wheels mounted on said frame adapted to operate in said guide channels; double flanged wheels mounted on the outer ends of said frame and adapted to operate on said track, as and for the purposes described.

In testimony whereof we have affixed our signatures in presence of two witnesses.

ALFRED BEST.
DAVID L. DEAN.

Witnesses:
BEN L. CORUM,
J. J. CORUM.