

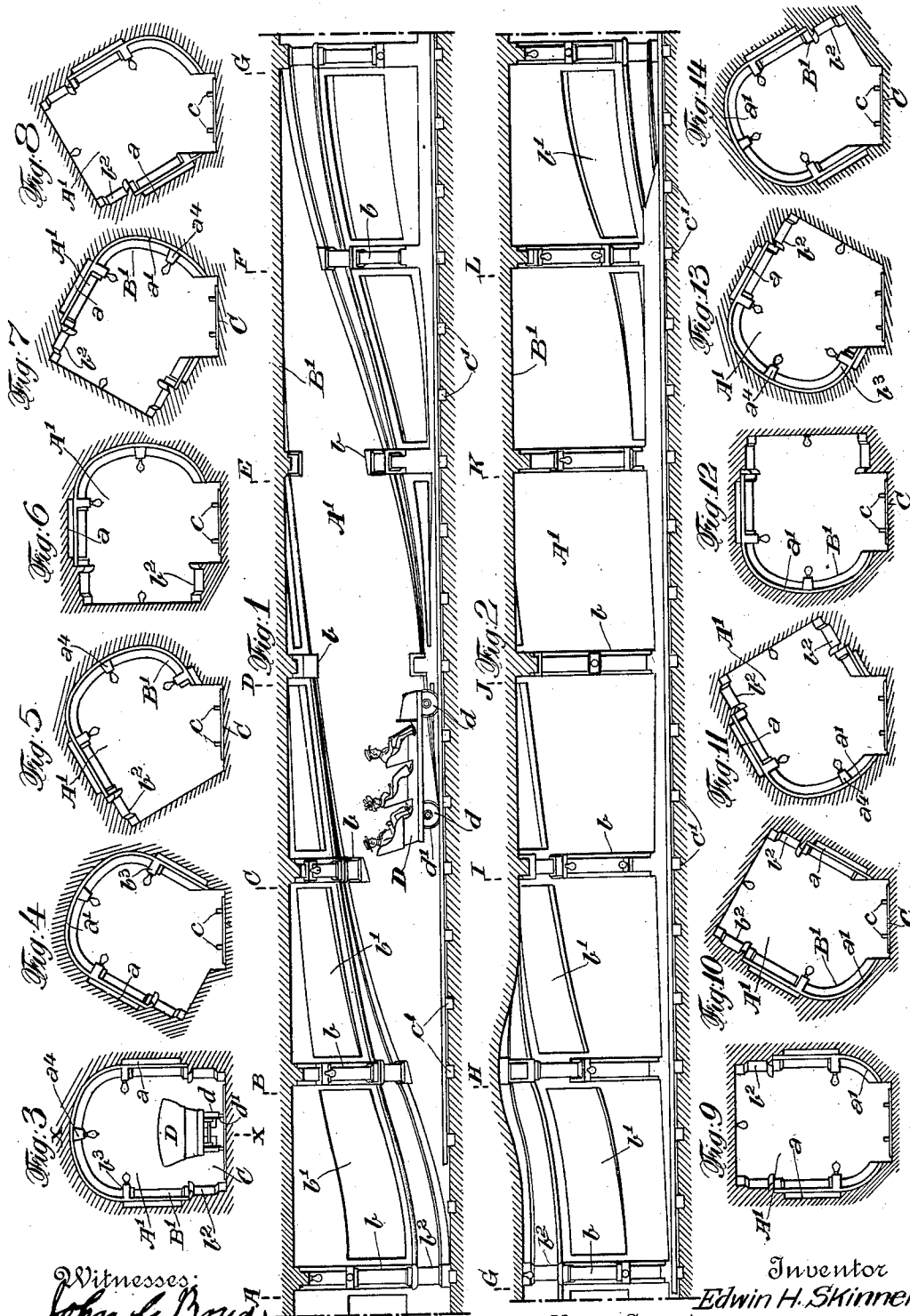
No. 896,944.

PATENTED AUG. 25, 1908.

E. H. SKINNER.  
AMUSEMENT RAILROAD DEVICE.

APPLICATION FILED MAY 9, 1908.

2 SHEETS—SHEET 1.



Witnesses:  
*John G. Boyd*  
*Grace T. Lipon*

Inventor  
*Edwin H. Skinner*  
By Attorney  
*W. H. Appleton*

No. 896,944.

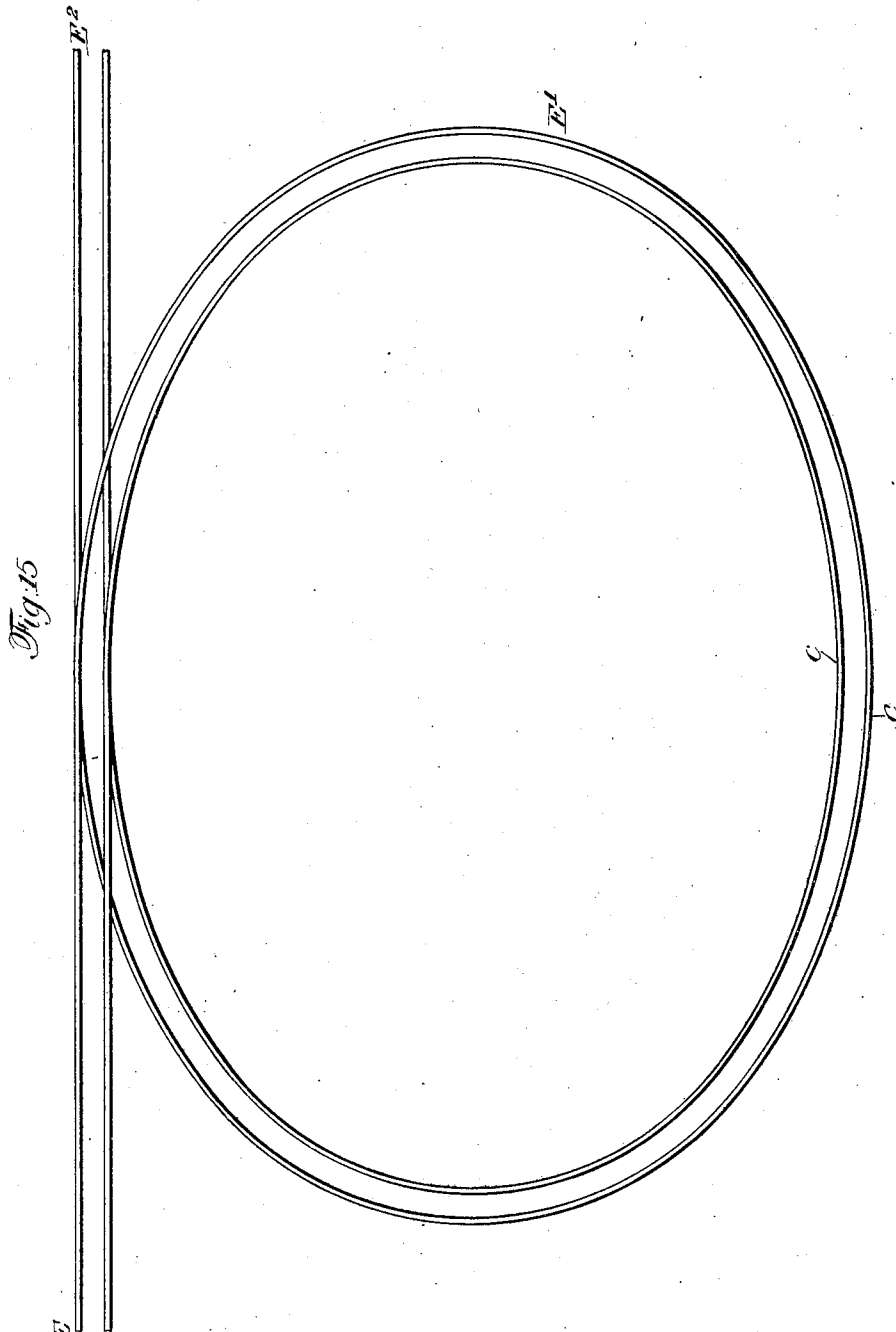
PATENTED AUG. 25, 1908.

E. H. SKINNER.

AMUSEMENT RAILROAD DEVICE.

APPLICATION FILED MAY 9, 1908.

2 SHEETS—SHEET 2.



Witnesses:  
*John G. Boyd*  
*Grace T. Dixon*

Inventor  
*Edwin H. Skinner*  
By Attorney  
*W. H. Appleton*

# UNITED STATES PATENT OFFICE.

EDWIN H. SKINNER, OF ARROCHAR, NEW YORK.

## AMUSEMENT RAILROAD DEVICE.

No. 896,944.

Specification of Letters Patent.

Patented Aug. 25, 1908.

Application filed May 9, 1908. Serial No. 431,849.

*To all whom it may concern:*

Be it known that I, EDWIN H. SKINNER, a citizen of the United States, and a resident of Arrochar, in the county of Richmond and State of New York, have invented a certain new and useful Improvement in Amusement Apparatus, of which the following is a specification.

My invention, while relating to the general class of amusement apparatus, has reference more particularly to that form thereof, in which a car or carriage for the accommodation of passengers is caused to travel along a passage-way, which may be either open or closed, with the track for the car or carriage disposed either in a level plane, or in gradually up and down inclining sections, and with the walls of the passage-way so constructed as to render them more or less grotesque, or otherwise; the object of my invention being, to provide a passage-way of this general character, which, while constructed in the form of a tunnel, shall at the same time be so formed as to convey the illusion that either the passage-way tunnel itself, or the car or carriage, is rotating around the line of movement of the latter as the car or carriage is passed along its course.

To this end, my invention consists first, in a tunnel, which is constructed with the projecting and receding portions of the design or configuration of the cross-section of its interior walls disposed in spiral lines around the axis of the bore, in a manner similar to that of the "lands" and "grooves" in the bore of a rifle barrel; second, in a tunnel, having the projecting and receding portions of the design of the cross-section of its interior walls thus disposed around the axis of its bore in spiral lines, with a track for a car or carriage formed horizontally along its under side and having its center line in line with and directly beneath the axis of the bore; third, in the combination with a tunnel, having the projecting and receding portions of the design of the cross-section of its interior walls disposed in spiral lines around the axis of the bore and provided with a track, of a car or carriage adapted to move along such track and receive and carry the persons to be transported; fourth, in the combination with a tunnel having the projecting and receding portions of the design of the cross-section of its interior walls thus disposed around the axis of its bore in spiral

lines, and provided with a track disposed horizontally along its bottom and having its center line below and in line with the axis of such bore, and a car adapted to move along such track, of means for illuminating the interior of the tunnel, and fifth in various other constructions and combinations of parts, all as will hereinafter more fully appear.

Referring to the accompanying drawings, which form a part of this specification, Figures 1 and 2 are longitudinal vertical axial sections of the tunnel, taken in the plane  $x x$  of Fig. 1, Figs. 3 to 14 inclusive are transverse sections of the tunnel, taken in the planes A, B, C, D, E, F, G, H, I, J, K, L, M, respectively, of Figs. 1 and 2, and Fig. 15 a diagrammatic view, showing one of the curvilinear forms in which the tunnel may be constructed.

In all the figures, like letters of reference are employed to designate corresponding parts.

A<sup>1</sup> indicates the bore of the tunnel, and B<sup>1</sup> indicates the walls thereof. In the construction of this tunnel any appropriate form in cross-section may be adopted, and the tunnel formed either above or below the ground, or a part may be constructed above and a part below, as may be desired. It is preferred however to construct it above the ground, and to employ in its construction cement, beton, staff, or other appropriate material properly disposed to accomplish that end.

In the form of the invention which I have selected for purposes of illustration, the tunnel is constructed with parallel side walls  $a$ , which are joined along one of their edges by a curvilinear or arc shaped portion  $a'$ , and may be formed with the walls smooth and plain throughout, or may be ornamented with any appropriate architectural designs that may be desired. As shown in the drawing however, it is formed with pilasters  $b$ , disposed at equal distances apart throughout its length, with plain smooth panels  $b'$  interposed between them. As thus constructed, the pilasters  $b$  are or may be ornamented with suitable molded bases  $b^2$  and capitals  $b^3$ , and are or may be provided with cap-stones  $b^4$  which may be similarly ornamented or otherwise as preferred. These particular embellishments, it is to be understood however, are not essential, and other and differ-

ent architectural designs may be employed for the purpose; but whatever the form adopted may be, the interior of the walls of the tunnel, with their projecting and reced-  
 5 ent portions, instead of being arranged in straight parallel lines throughout, are disposed around the axis or center line of the tunnel in spiral form, in a manner similar to that of the "lands" and "grooves" in rifle  
 10 barrels, and as shown more particularly in the drawings, wherein, as in Fig. 3, the side walls *a* stand in vertical relationship with respect to the horizon, with the curvilinear or arc shaped portion *a'* extending from the top  
 15 of the wall on one side to the top of the wall on the other; while in Fig. 4, which is taken in the plane B in Fig. 1, the entire interior of the walls of the tunnel, with its pilasters and their embellishments are carried around the  
 20 axis or bore of the tunnel to the right. Again, in Fig. 5, which is a section taken in the plane C in Fig. 1, these parts are carried still farther to the right around the axis or bore of the tunnel, and so on throughout its  
 25 entire length; the bore, with the interior of the tunnel and its architectural embellishments, being disposed at one point in its length in a vertical or upright position, and at another point therein they are carried  
 30 around the axis or center line thereof until they rest upon their side, as shown in Fig. 6; thence farther around it until they are reversed and stand up-side down; thence farther around until they rest upon their oppo-  
 35 site side, as shown in Fig. 12; thence still farther around until they return to their original position, as shown in Fig. 3; and thence continue in this spiral disposition around the axis or center line throughout the entire  
 40 length of the tunnel, all as shown more fully in Figs. 3 to 14 inclusive, which illustrate the relationship of the parts of the interior of the tunnel at the respective planes indicated by the letters A to L inclusive in Figs. 1 and 2.  
 45 With the bore *A*<sup>1</sup> and projecting and recedent portions of its walls *B*<sup>1</sup> thus disposed in spiral relationship around the axis or center line of the tunnel as thus explained, the tunnel is provided in its bottom with a track  
 50 *C* for accommodation of a car or carriage *D*, which may be propelled along the same. As thus provided this track at the point where the tunnel and side walls thereof stand in an upright position, as shown in Fig. 3, will be  
 55 located in the bottom thereof, while at the point indicated by the section shown in Fig. 4, it will occupy a portion of the bottom of the tunnel and a portion of one side thereof; while again at the point indicated by the section illustrated in Fig. 5, it will occupy  
 60 nearly the entire portion of one of the sides of the tunnel and a small portion of the bottom thereof, and so on throughout the series, the track in its cross-section being disposed in  
 65 horizontal relationship in all its positions,

while the general design of the interior of the tunnel is rotated around with respect to it as such design is carried around the axis or center line of the tunnel in its travel throughout  
 70 its course. In some instances this car or carriage *D* may travel along the bottom of the track without any supporting devices therefor. It is preferred however to sustain it above the same, and, to that end, the parallelly disposed rails *c* are employed, which  
 75 supported upon suitable ties *c'*, receive the wheels *d* of the car or carriage that run upon them, and are guided along such rail by flanges *d'*, with which such wheels are provided.

With the tunnel constructed as above explained, and a car or carriage propelled therethrough along the track *C*, the illusion is conveyed to the person or persons carried  
 80 by the latter that either the tunnel is being rotated around its axis or center line, or that they themselves with the car or carriage are being similarly rotated in the opposite direction. To heighten this effect, and to illuminate the interior of the tunnel, various  
 85 means may be employed. I prefer however to effect this illumination by rows of lights *e* and to dispose them spirally in parallel lines throughout the length of the tunnel in correspondence to the spiral lines of the  
 90 projecting and recedent portions of the interior walls thereof.

In some instances the tunnel may be disposed in a straight line throughout. In other instances, on the other hand, it may  
 100 be disposed in curvilinear lines, or in the shape of a loop or loops, as shown, for instance, in Fig. 15, wherein the general direction of the tunnel is indicated by the rails *c*. When disposed in a straight line throughout,  
 105 the track *C* may lie in a level plane, or be made up of upwardly and downwardly inclined grades, or part of such track may lie in a plane, and the other parts thereof lie in inclined sections. On the other hand,  
 110 when the tunnel is constructed in the form of a loop, it is preferred that the track shall incline upward slightly from the point *E* to approximately the point *E*<sup>1</sup>, and thence downward thereover to the end *E*<sup>2</sup>, whereby  
 115 to permit of this descending portion passing beneath the ascending portion thereof, as shown.

In the construction of the car or carriage *D* various forms may be adopted, it only being  
 120 essential that, whatever its construction, it be provided with appropriate seats upon which to receive and conveniently carry the passengers that are to be transported.

With a tunnel constructed as above described, an amusement apparatus is produced in which the startling effect is produced of either a tunnel being rotated around  
 125 its axis or center line in one direction, as the passengers are being carried through it, or 130

of the car and passengers being rotated around such axis or center line in the opposite direction while in such transit.

While, in the foregoing, I have described one of the forms in cross-section in which my tunnel may be constructed, and have also described various longitudinal courses along which it may extend, I wish it distinctly understood however, that these are merely illustrative, and that I do not limit myself to them, but reserve to myself the right to construct the tunnel in any other form in cross-section, and to dispose it in other lines without departing from the spirit of the invention.

Having now described my invention, and specified certain of the ways in which it is or may be carried into effect, I claim and desire to secure by Letters Patent of the United States,—

1. A tunnel constructed with the projecting and receding portions of its cross-section disposed in spiral lines around its axis or center line throughout its length, substantially as described.

2. A tunnel constructed with the architectural elements of its cross-section disposed in spiral line around its axis and center line throughout its length and provided with a passage-way or track, substantially as described.

3. The combination, with a tunnel having

the architectural elements of its interior in cross-section disposed in spiral lines around its axis or center line and provided with a track whose cross-section lies in a horizontal plane, of a car or carriage adapted to be passed through such tunnel, substantially as described.

4. The combination, with a tunnel having the architectural elements of its interior disposed in spiral lines around its axis or center line and provided with a horizontally disposed track or passage-way, of parallelly disposed rails supported upon such passage-way or tracks, and a car or carriage adapted to move along such rails throughout the tunnel, substantially as described.

5. The combination, with a tunnel having the general design of the cross-section of its interior walls rotated around its axis or center line spirally throughout its length, and a longitudinally extending passage-way or track, of rows of lights disposed in spiral lines along the interior of the tunnel in parallel relationship to the spiral arrangement of the interior of the walls of the tunnel, and a car or carriage adapted to be moved along the passage-way or tracks, substantially as described.

EDWIN H. SKINNER.

Witnesses:

EDWARD A. SARGENT,  
J. CHARLES TURNER.