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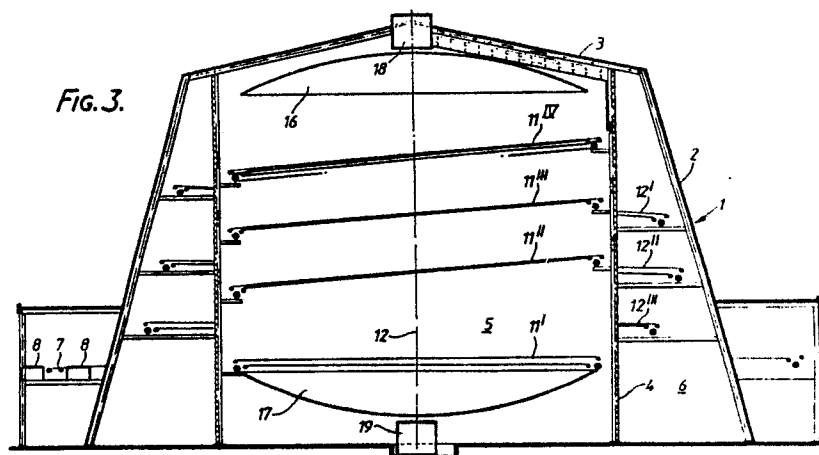
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54 **Amusement device.**

57 Amusement device provided with a structure (1), in which one or more passenger vehicles (14) can be moved along a path which winds around an imaginary axis (12). Measured along the imaginary axis (12), a curved projection screen (16, 17) is arranged spaced from the winding path in such a manner that the centre of curvature of said screen (16, 17) is located at the same side of the screen (16, 17) as the winding path whilst an installation (18, 19) is provided by means of which moving images, which are visible from the winding path can be projected on the screen (16, 17).



Amusement device

The invention relates to an amusement device provided with a structure, in which one or more passenger vehicles can be moved along a path which winds around an imaginary axis.

Such amusement devices are generally known, and the only sensation of said devices is in the fact that the vehicles carrying the passengers are led along a track with a sensation of high speed, said track unexpectedly changing direction at a number of places.

The object of the invention is to obtain an amusement device of the above kind, whereby an extra dimension can be added to the intended sensation by means of simple means.

According to the invention this objective can be accomplished in that, measured along the imaginary axis, a curved projection screen is arranged spaced from the winding path, in such a manner that the centre of curvature of said screen is located at the same side of the screen as the winding path, whilst an installation is provided by means of which moving images, which are visible from the winding path, can be projected on the screen.

By using the construction according to the invention the passengers can be given the impression, by projecting the right images on the screen, that they are for example travelling in mysterious and/or frightening surroundings.

The invention will be further explained hereafter with reference to a possible embodiment of the construction according to the invention diagrammatically illustrated in the accompanying figures.

Fig 1 is a diagrammatic side view of an amusement device according to the invention.

Fig 2 is a side view of Fig 1, seen according to the arrow II in Fig 1.

Fig 3 is a diagrammatic cross-section of the amusement device illustrated in Figs 1 and 2.

Fig 4 is a diagrammatic plan view of parts of the amusement device according to the invention.

Fig 5 is a cut-away view of the amusement device according to the invention.

Fig 6 shows on a larger scale a part of the amusement device illustrated in Fig 5.

Fig 7 shows a train built up of a number of vehicles, said train being intended for use in the amusement device according to the invention.

The amusement device according to the invention comprises a structure 1 provided with preferably non-transparent outer walls 2 and a non-transparent roof 3.

In the interior of the structure there is arranged a non-transparent partitioning wall 4, said partitioning wall extending between the ground surface and the roof, so that the interior space of the building is

subdivided into a central space 5, and a space 6 surrounding said central space and being separated from the central space 5 by the wall 4.

The amusement device furthermore comprises an endless rail track comprising a first track part 7 located at some distance above the ground level, whereby platforms are 8 located on both sides of said track part 7, said platforms being accessible to the public from the outside of the structure 1, via stairways 9.

The horizontal part 7 of the rail track joins, via a joining part 10, a rail track part 11 which is located in the enclosed space 5, said rail track part 11 extending spirally (windings 11' - 11^{IV}) about an imaginary axis formed by the central axis 12 of the structure 1.

The end of the spiral rail track part 11 remote from the joining part 10 joins a spiral rail track part 12, which extends, in the shape of a few windings 12' - 12^{III}, in the space 6 between the partitioning wall 4 and the outer wall 2 of the structure.

The spiral part 12 then joins the rail track 7 again via a joining part 13. Vehicles, preferably a number of vehicles 14 coupled together as illustrated in Fig 7, can be driven across said endless rail track, as is indicated by means of the arrows A. The driving gear of such a vehicle may thereby be provided with driving means known per se.

As is diagrammatically illustrated in Fig 4 openings 15 are provided in the walls 4 and 6, through which openings the vehicles can freely move in and out of the spaces 5 and 6.

As is furthermore indicated in the Figures projection screens 16 and 17, respectively, are arranged both near the upper side of the space 5 and near the bottom side of the space 5, in such a manner that the spiral track part 11 is located between said projection screens. The centre of curvature of each projection screen is thereby located on the same side of said projection screen as the spiral track part 11.

In the centre of the projection screen 16 there is provided a small opening (not shown), such that a film can be projected on the projection screen 17 by means of diagrammatically indicated projection means 18. In a similar manner a small opening (not shown) is provided in the centre of the screen 17, via which opening a film can be projected on the screen 16 by means of diagrammatically indicated projection means 19.

When using this construction it is possible to project images on one or both screens while the vehicles with the passengers move along the spiral path formed here by the rail track, in order to give the passengers the impression that they are in

certain mysterious and/or frightening surroundings.

Of course all kinds of situations can be created hereby. It will e.g. be possible to create the impression that stones are hurled down from the upper screen, whereby said stones land on the lower screen, so that the passengers will be given the impression that they find themselves in a rain of stones. Also other situations can be created, for example the passengers can be given the impression that they find themselves in a natural disaster area or the like.

These effects can be intensified by producing accompanying sounds via sound equipment provided at suitable places. Also it is conceivable to intensify the sensation by increasing or decreasing the temperature and/or creating air flows in the space 5.

By arranging suitable projection screens at suitable places in the passage 6 it is possible to create sensational effects there as well. It will e.g. be possible to project an oncoming train on the screen, so that the passengers will have the impression that a collision is unavoidable, until at the very last moment the vehicle carrying the passengers moves away from the screen. Several screens may be suspended in the space 6, on which screens various sensation-creating images can be projected. After having first moved through the space 5 and then through the space 6 the passengers will eventually get back on the track 7 again, where the vehicles will be brought to a standstill for the passengers to get in and out.

The effects aimed at can be intensified by making the partitioning wall 4 partly or entirely of a mirroring material.

Of course it is also possible to have the vehicles drive in a direction opposite to the arrow A, i.e. first up along the spiral track in the space 6, and then down along the spiral track in the space 5.

Claims

1. Amusement device provided with a structure, in which one or more passenger vehicles can be moved along a path which winds around an imaginary axis, characterized in that, measured along the imaginary axis, a curved projection screen is arranged spaced from the winding path in such a manner that the centre of curvature of said screen is located at the same side of the screen as the winding path whilst an installation is provided by means of which moving images, which are visible from the winding path can be projected on the screen.

2. Amusement device according to claim 1, characterized in that the winding path is arranged

between a pair of projection screens.

3. Amusement device according to claim 1 or 2, characterized in that the winding path is arranged in a space which is surrounded by a second space, in which there is arranged a further winding path which is connected to said winding path as well as one or more projection screens and projection means, by means of which images can be created on the projection screens in question.

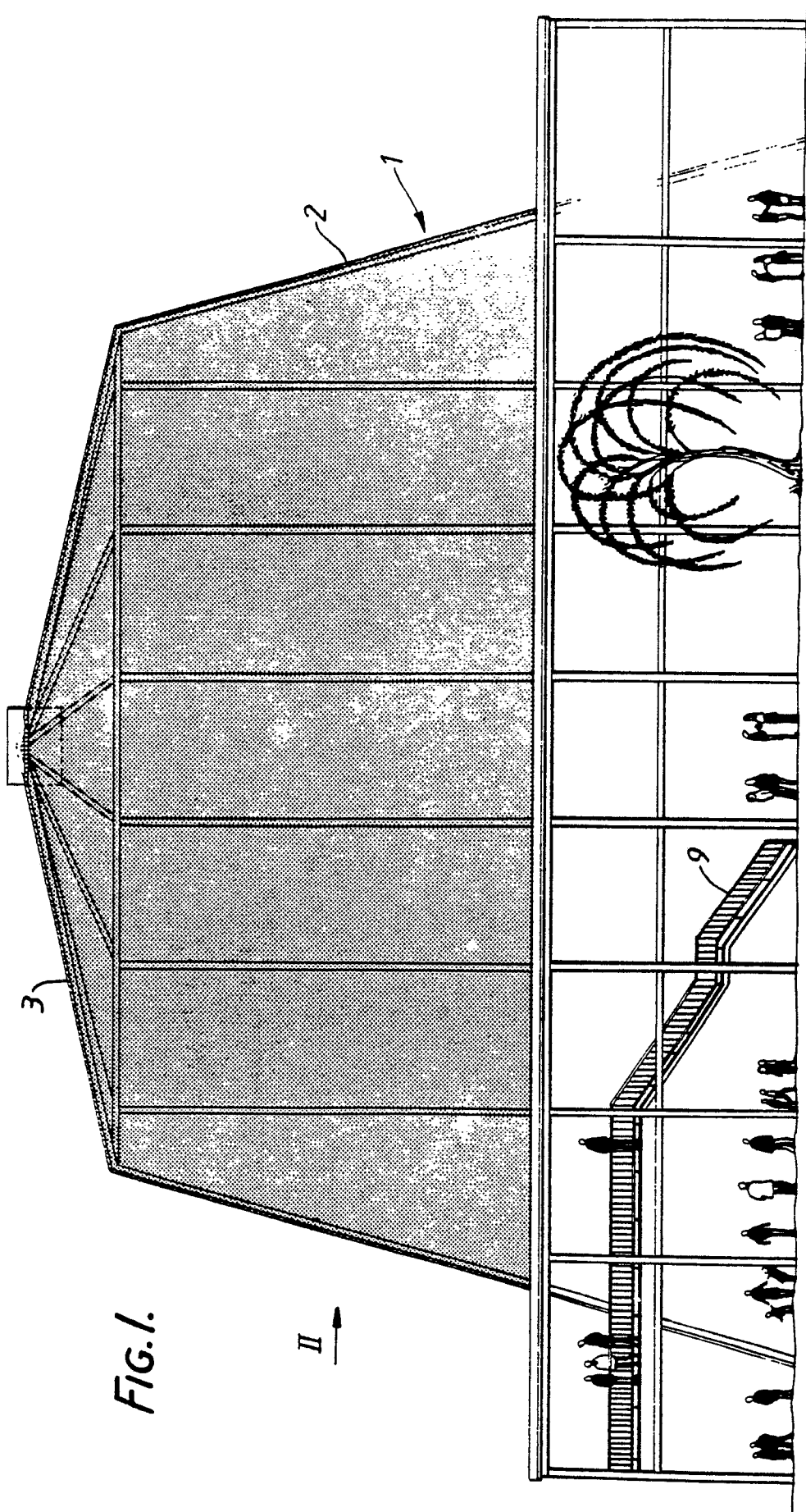
4. Amusement device according to any one of the preceding claims, characterized in that the device is provided with means for producing sounds.

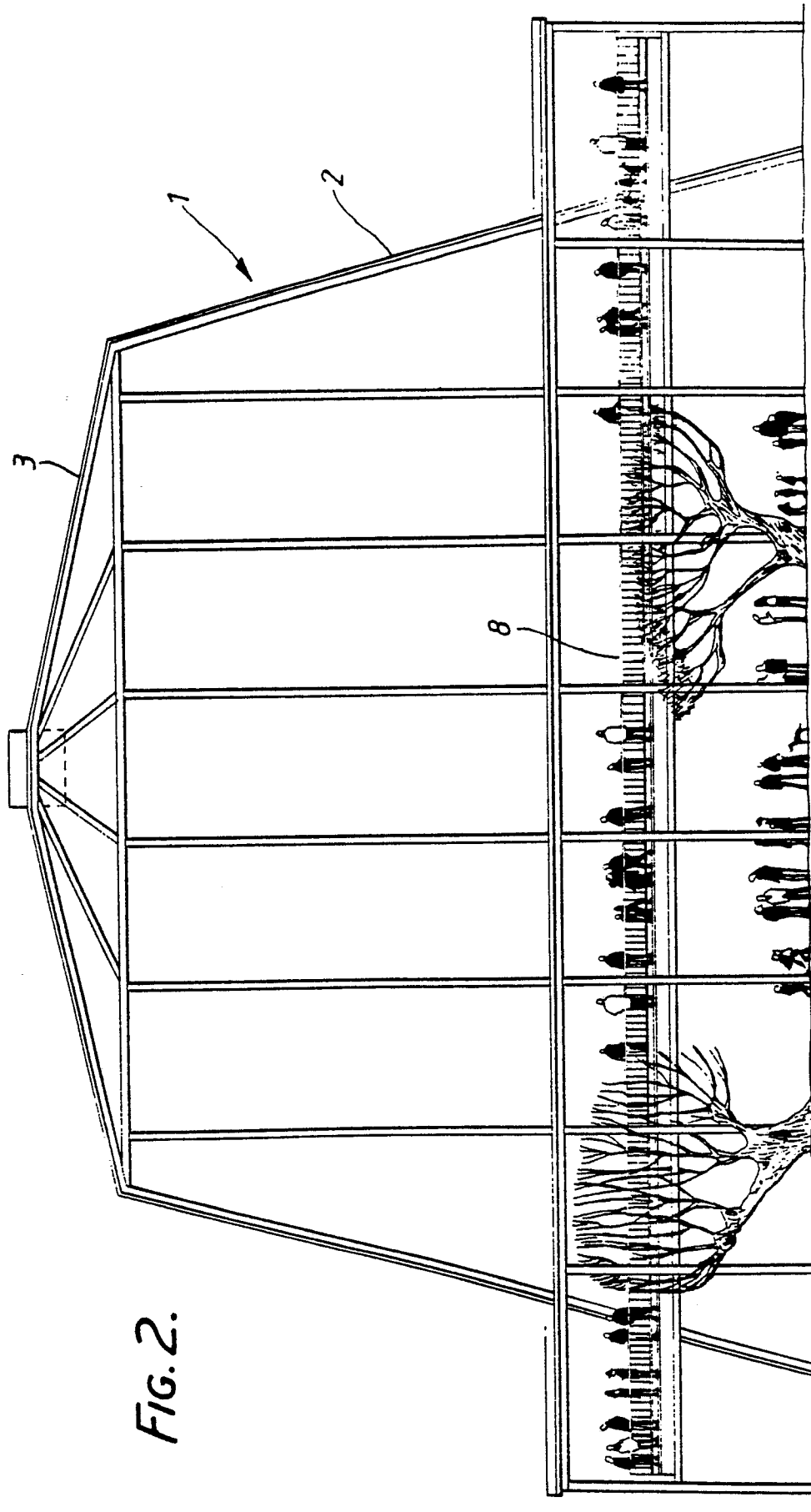
5. Amusement device according to any one of the preceding claims, characterized in that the device is provided with means for influencing the temperature in the interior of the device.

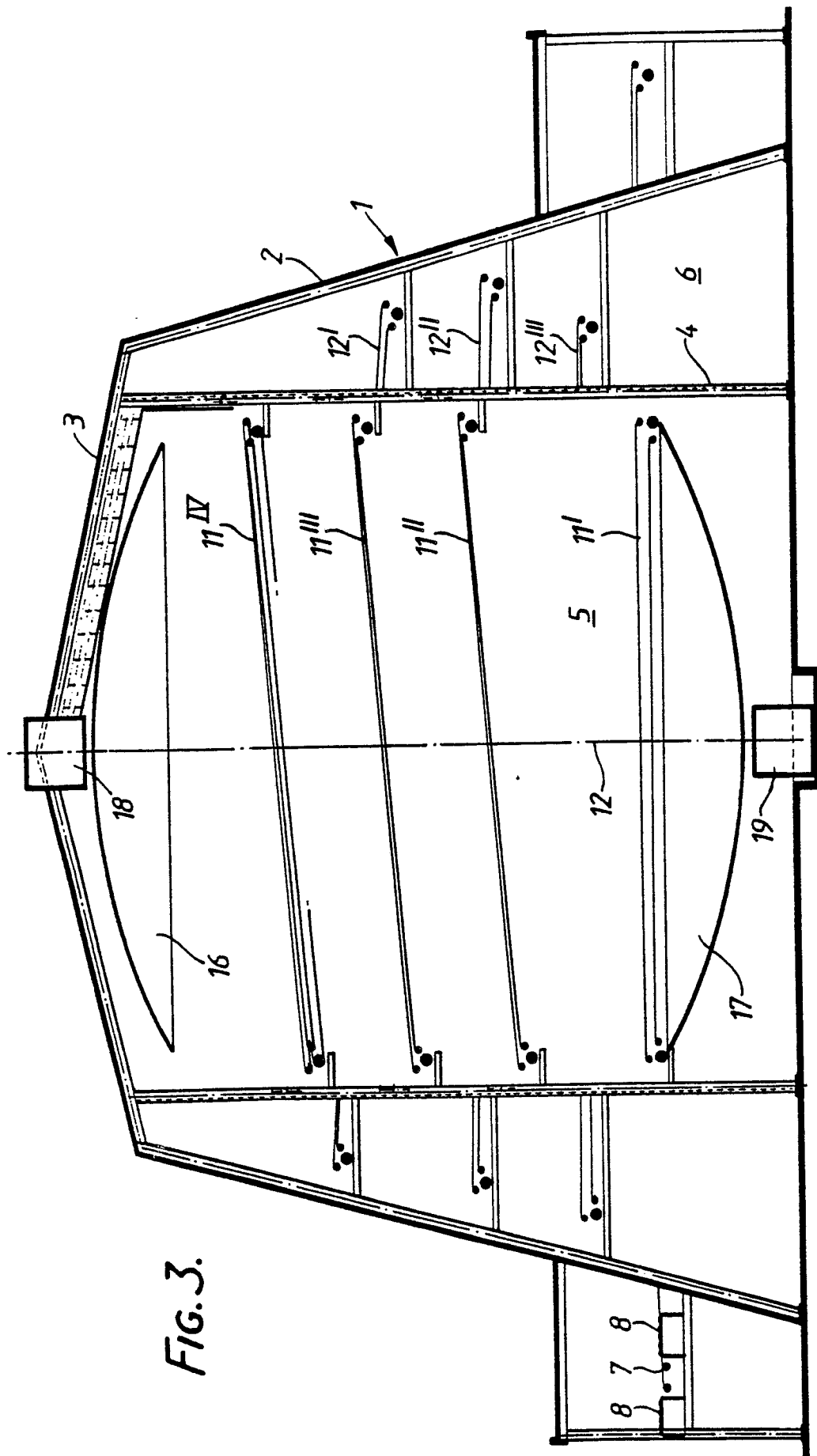
6. Amusement device according to any one of the preceding claims, characterized in that the device is provided with means for creating an air flow in the interior of the device.

7. Amusement device according to any one of the preceding claims, characterized in that the winding path extends in several windings, located one above the other.

8. Amusement device according to any one of the preceding claims, characterized in that at least part of the winding path extends in a space which is bounded by a wall which is at least partly made of a mirroring material.







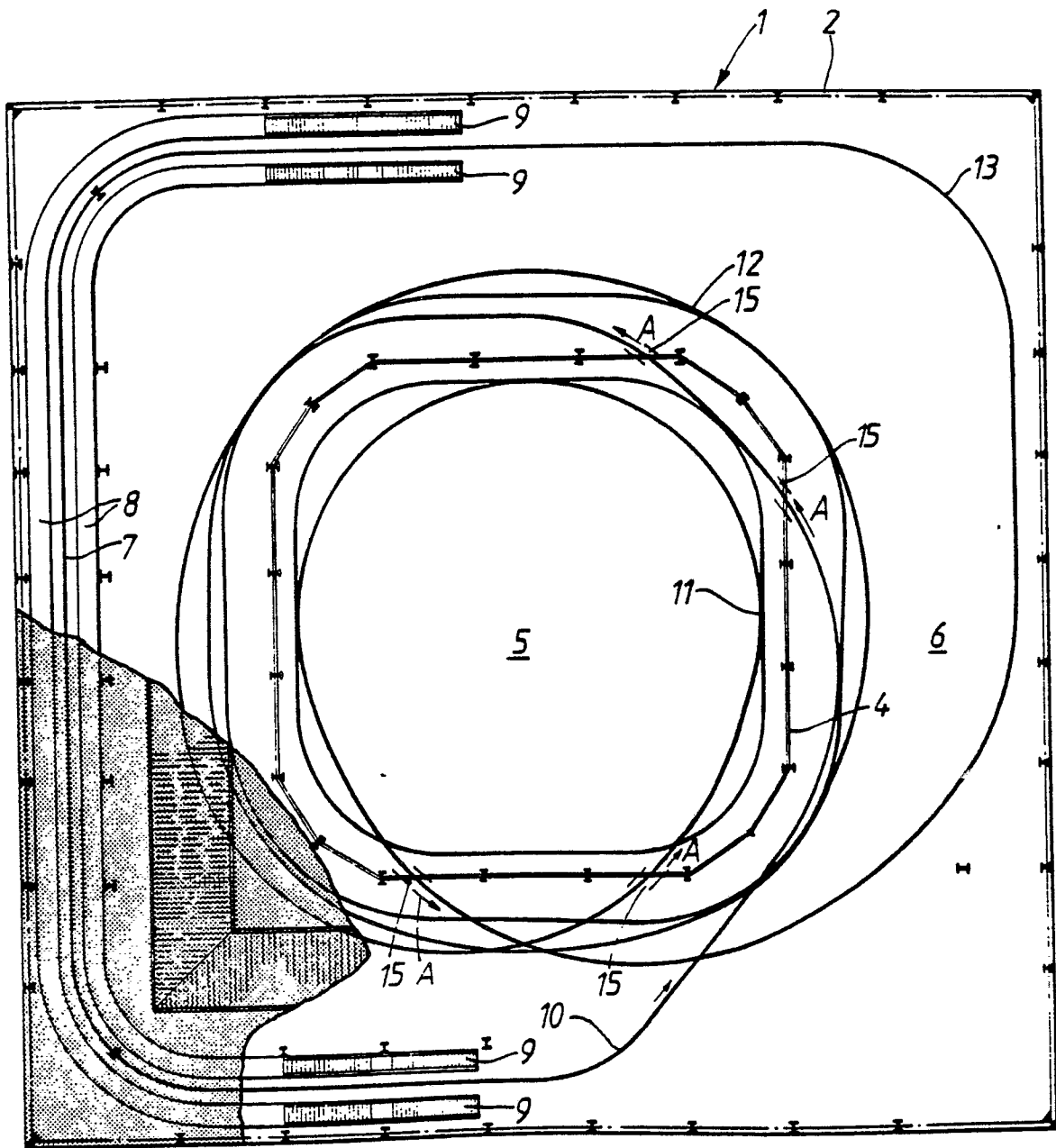


Fig. 4.

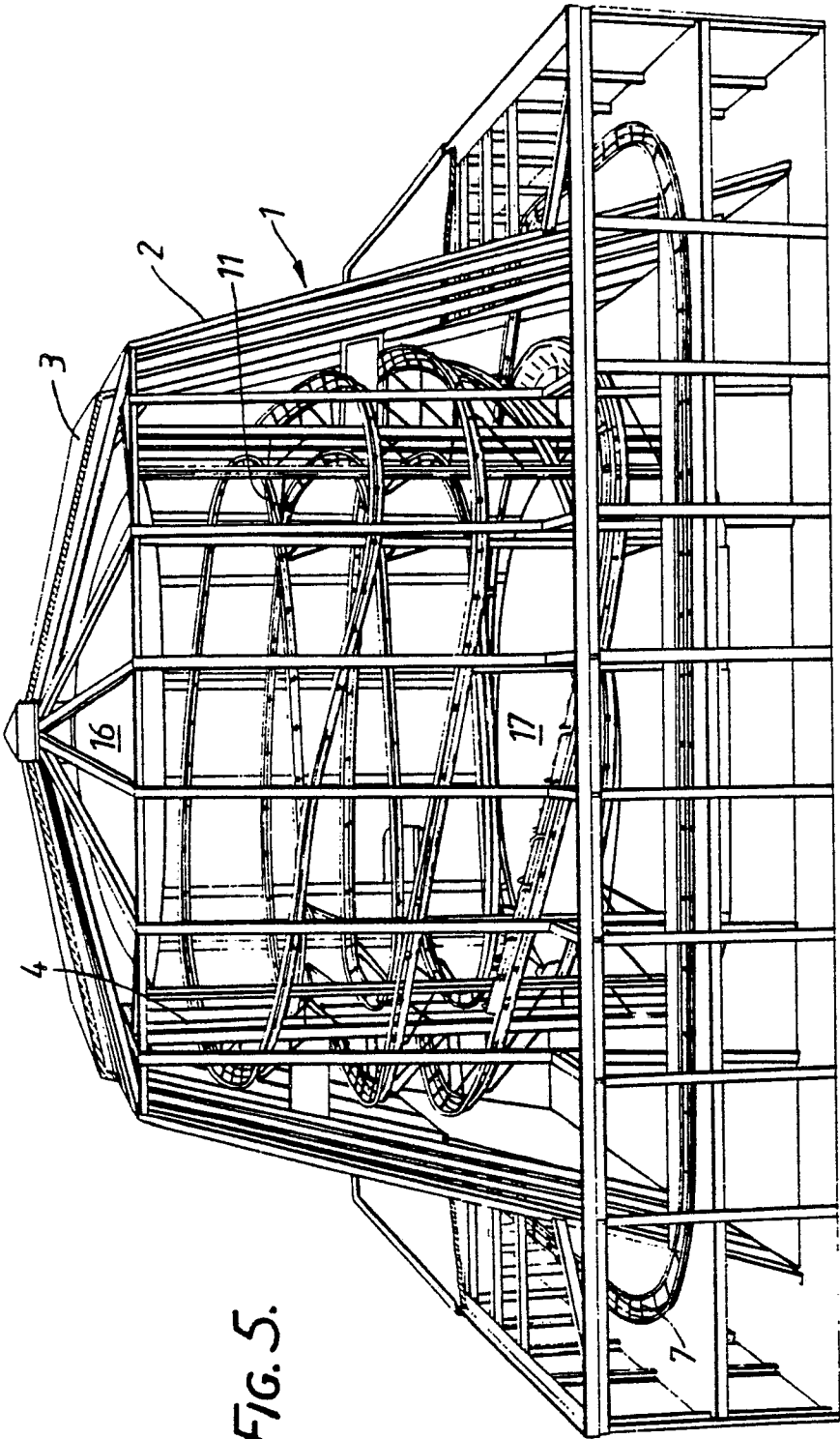


FIG. 5.

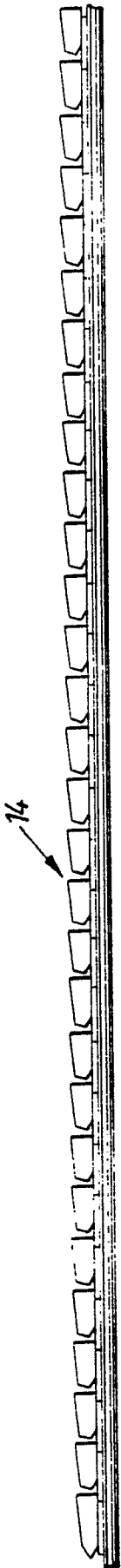


FIG. 7.

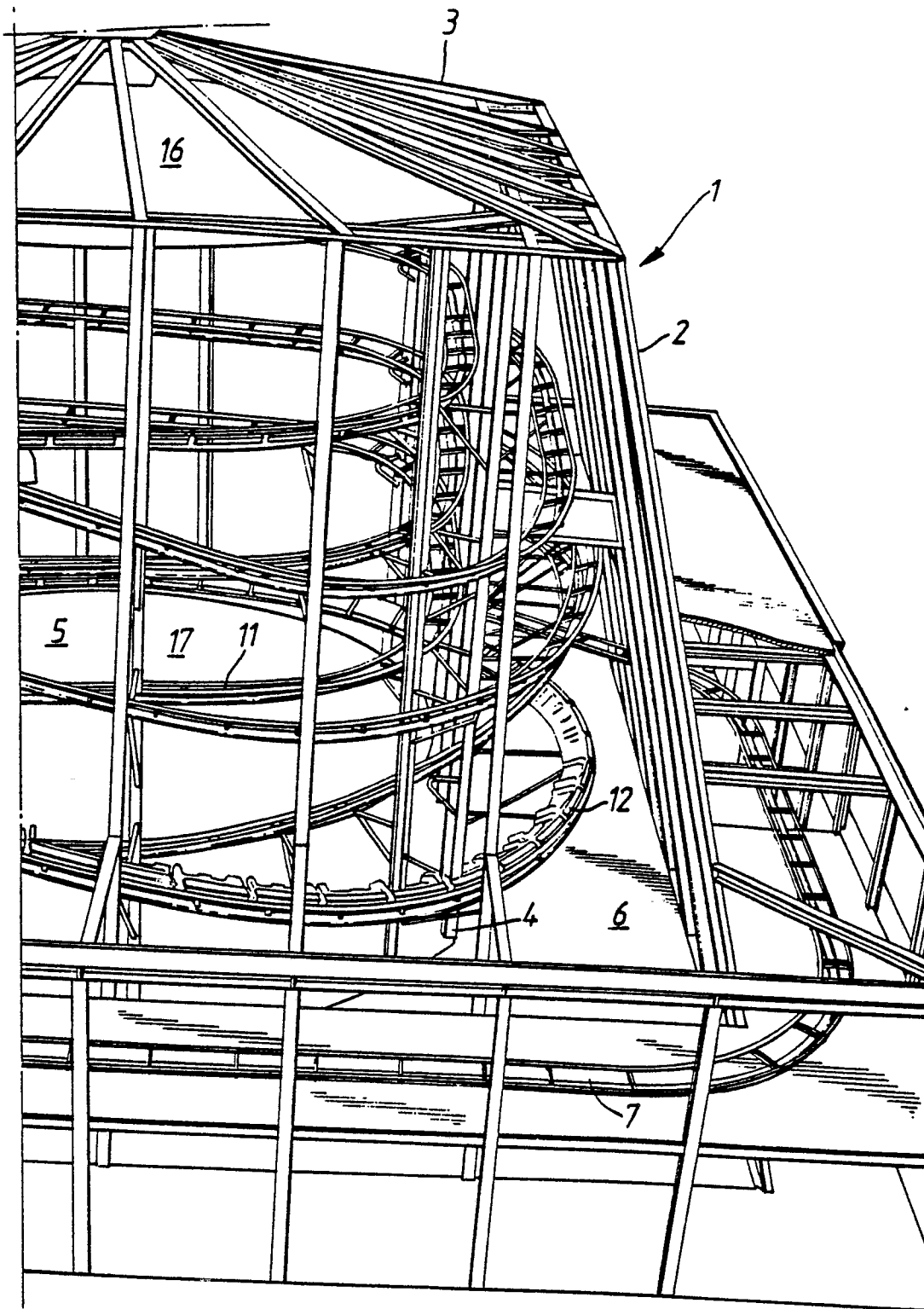


Fig. 6.



DOCUMENTS CONSIDERED TO BE RELEVANT			
Category	Citation of document with indication, where appropriate, of relevant passages	Relevant to claim	CLASSIFICATION OF THE APPLICATION (Int. Cl.5)
X	US-A-3 602 499 (KOJIMA) * Column 2, lines 58-75; column 3, lines 1-7,22-34; figure 1 * ---	1	A 63 G 31/16 A 63 G 21/10
A	US-A-4 066 256 (TRUMBULL) * Column 4, lines 15-18; column 5, lines 3-31; column 6, lines 1-16; figures 1,7 * ---	1,4-6	
A	GB-A- 466 855 (BARTLETT) * Page 6, lines 3-32; figure 1 * ---	1,4	
A	FR-A- 601 758 (MAYNES) * Page 1, lines 6-35; page 3, line 35-52,87-93; figures 1,2 * ---	1,6	
A	FR-A- 473 718 (PRIDMORE) * Abstract, point 1; figures 1,2 * ---	1	
A	GB-A- 8 310 (McDONAGH)(A.D. 1909) * Page 2, lines 45-48; figures 1,2 * ---	1	TECHNICAL FIELDS SEARCHED (Int. Cl.5)
A	US-A-1 751 096 (MORRIS) * Figures 1,4 * -----	7	A 63 G
The present search report has been drawn up for all claims			
Place of search	Date of completion of the search	Examiner	
THE HAGUE	22-11-1989	BAERT F.G.	
CATEGORY OF CITED DOCUMENTS		T : theory or principle underlying the invention E : earlier patent document, but published on, or after the filing date D : document cited in the application L : document cited for other reasons & : member of the same patent family, corresponding document	
X : particularly relevant if taken alone Y : particularly relevant if combined with another document of the same category A : technological background O : non-written disclosure P : intermediate document			