No. 866,680. PATENTED SEPT. 24, 1907.

A. L. PLOTNER.

AMUSEMENT APPARATUS.

APPLICATION FILED JUNE 1, 1907.

3 SHEETS—SHEET 1.

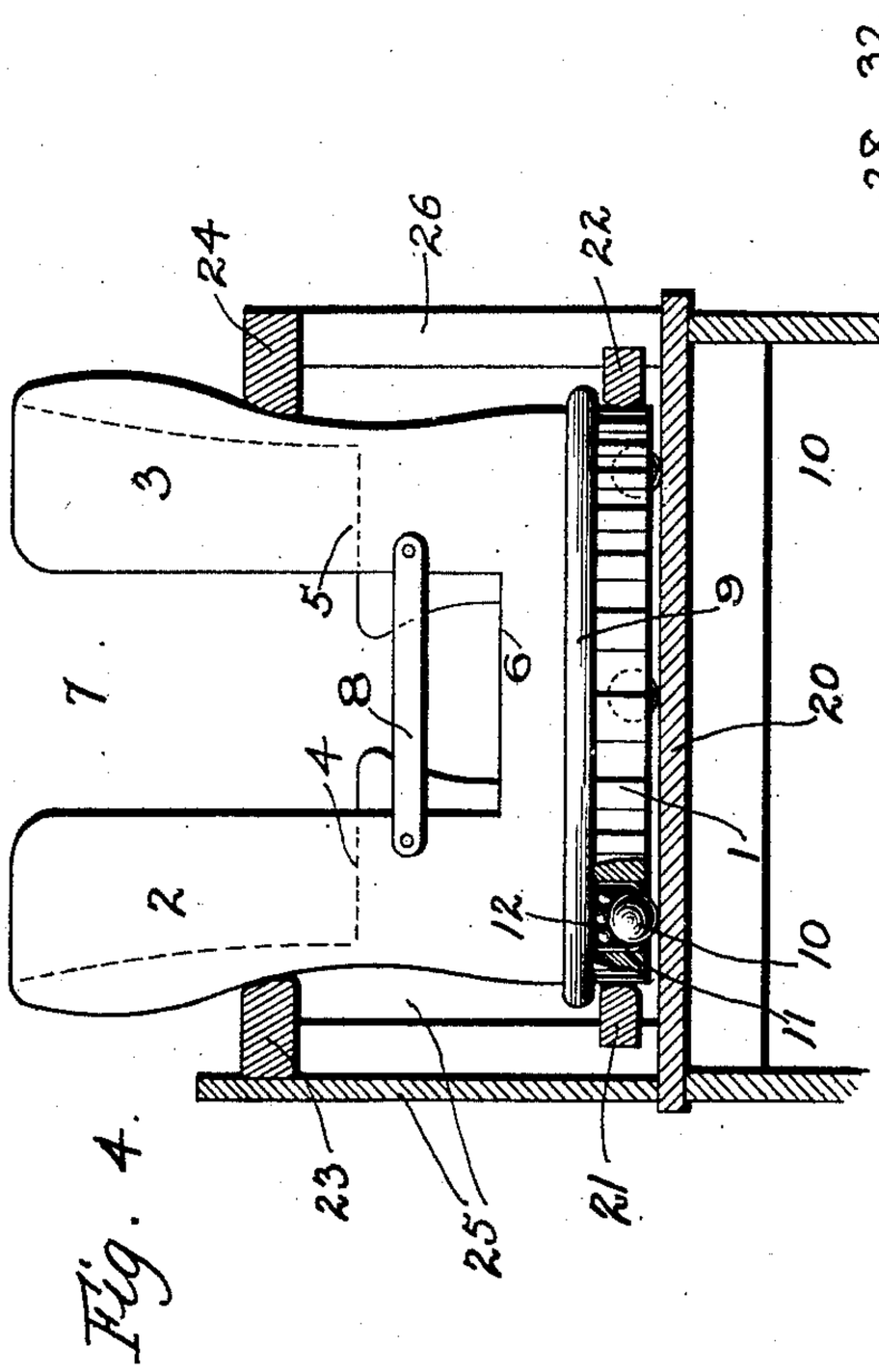

Fig. 4.

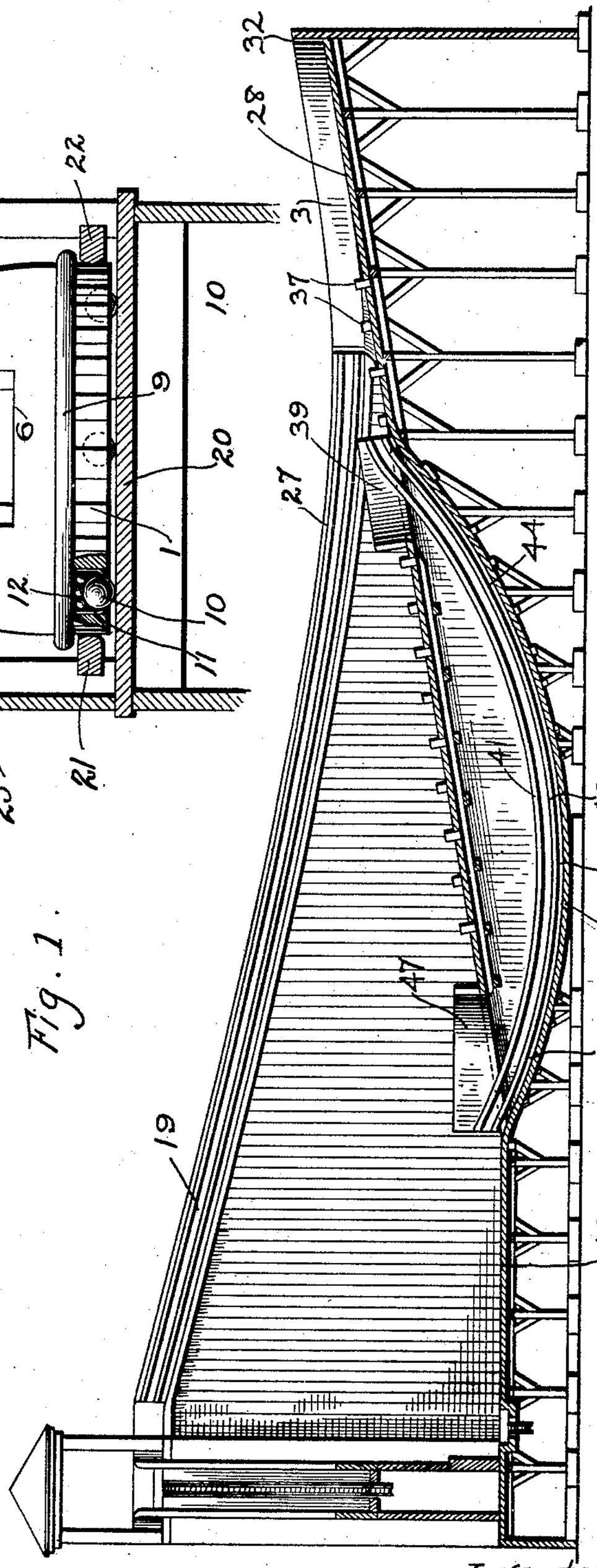

Fig. 1.

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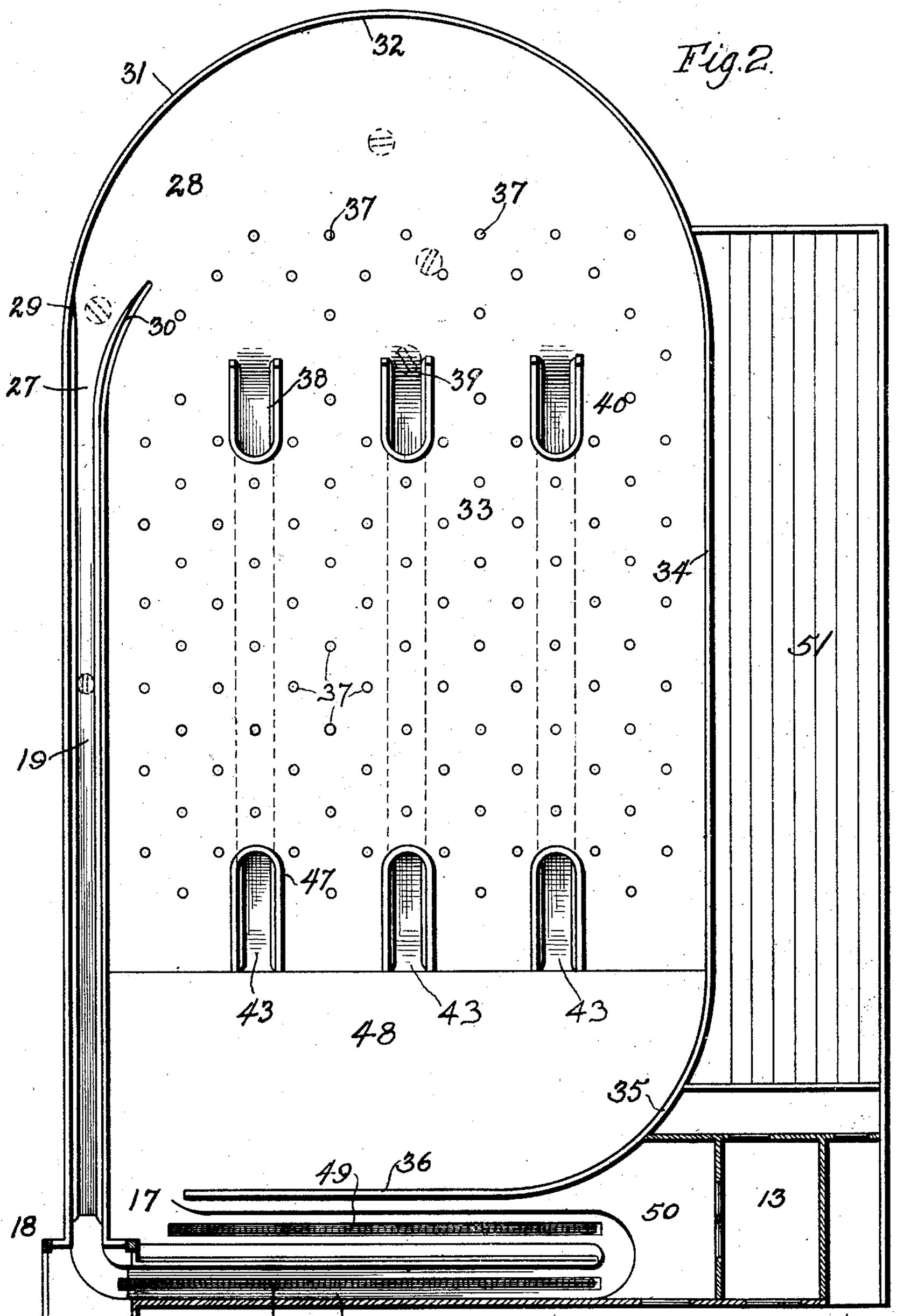
3 SHEETS—SHEET 2.

Fig. 2.



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3 SHEETS—SHEET 3.

Fig. 3.

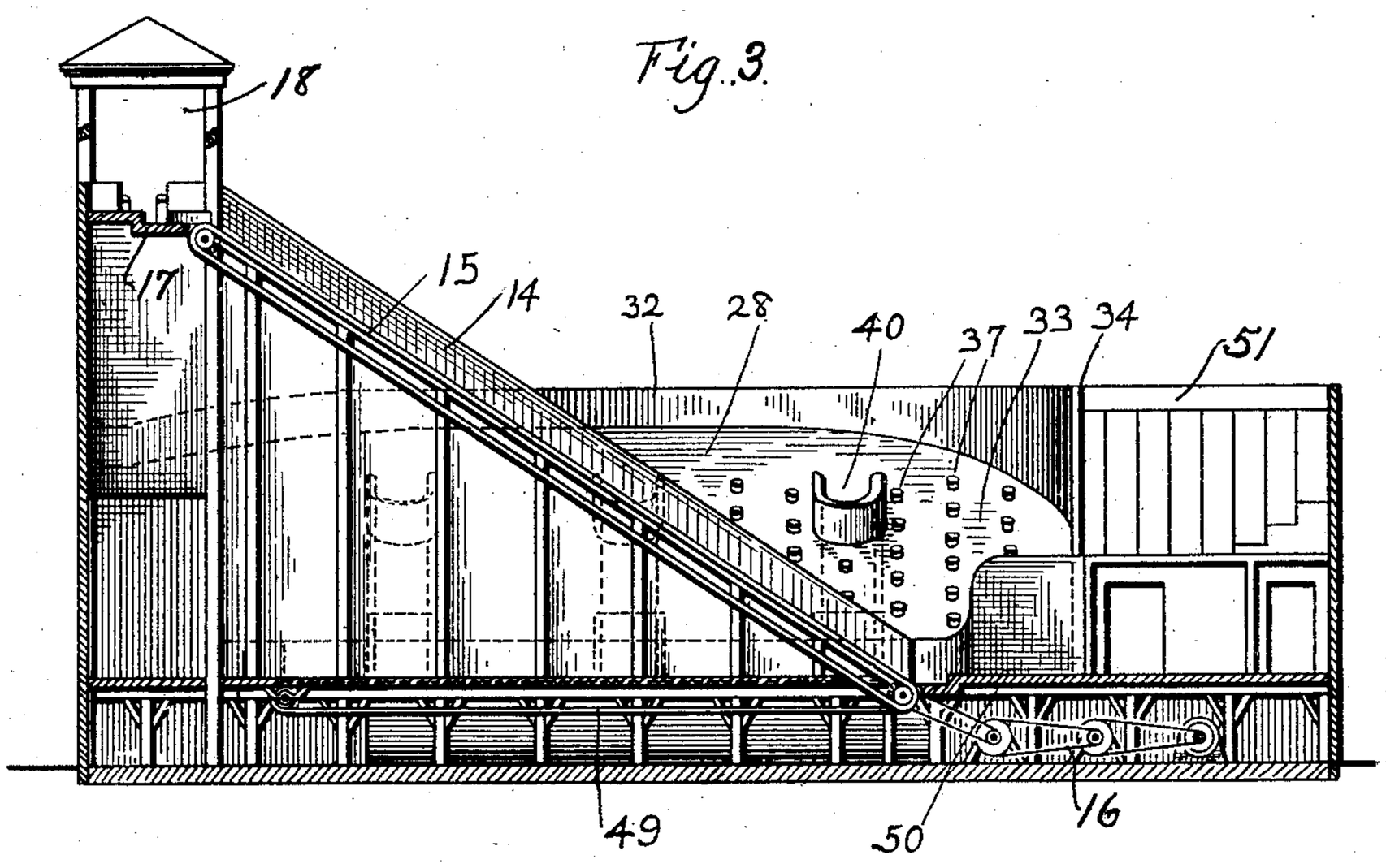


Fig. 5.

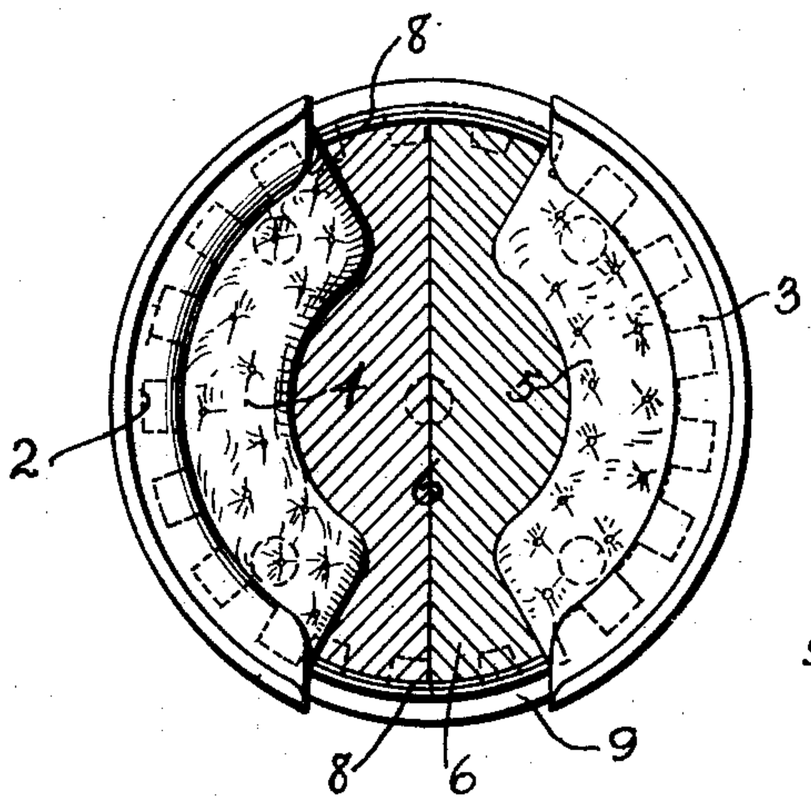
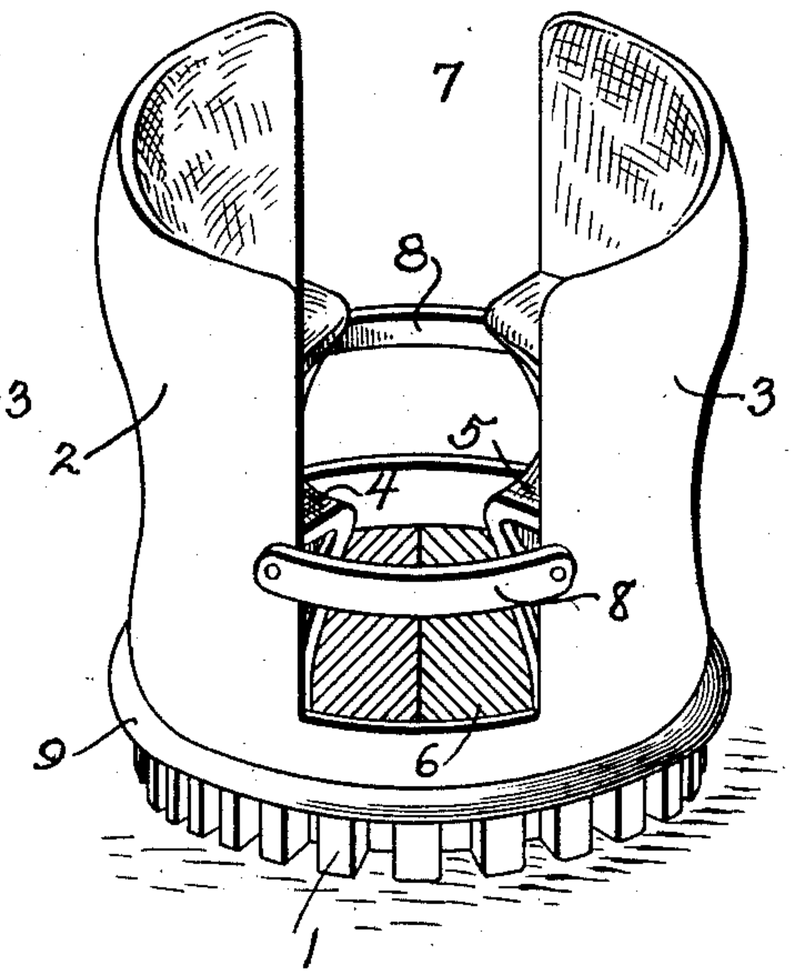


Fig. 6.



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UNITED STATES PATENT OFFICE.

ALBERT L. PLOTNER, OF DORCHESTER, MASSACHUSETTS.

AMUSEMENT APPARATUS.

No. 866,680. Specification of Letters Patent. Patented Sept. 24, 1907.

Application filed June 1, 1907. Serial No. 376,781.

To all whom it may concern:

Be it known that I, ALBERT L. PLOTNER, a citizen of the United States, and resident of Dorchester, in the county of Suffolk and State of Massachusetts, have invented an Improvement in Amusement Apparatus, of which the following description, in connection with the accompanying drawings, is a specification, like letters on the drawings representing like parts.

My invention relates to that class in which passengers in a car are permitted to travel down a more or less tortuous incline, the object of my invention being to produce an exceedingly mystifying and bewildering effect upon the passengers, thereby making the trip exciting and alluring.

To this end I have provided a special car which is round, viewed in plan, and capable of spinning around freely in any direction without injuring the occupants, and a track and field for said car to travel upon, having portions thereof so shaped as to coöperate with the car in giving initial exhilarating speed of sufficient duration to put the occupants comparatively at their ease and give them assurance, followed by a deflecting and spinning effect on the car, immediately succeeded by a most bewildering, uncertain and changing series of movements due to a series of posts or bumpers set at intervals on a reversely inclined field, preferably containing also a series of subways or caverns.

The further details of construction of my invention and the operation and advantages thereof will be pointed out more at length in the course of the following description, reference being had to the accompanying drawings, in which I have shown a preferred embodiment of the invention.

In the drawings: Figure 1 is a central vertical sectional view taken on the line 1—1 Fig. 2; Fig. 2 is a top plan view of the apparatus in end elevation, part thereof in section, viewing the apparatus from the lower end and looking upward; Fig. 3 shows the main portion of the apparatus in end elevation, part thereof in section, viewing the apparatus from the lower end and looking upward; Fig. 4 is an enlarged cross sectional view of the initial chute or track, showing the car in position, parts being broken away to show details; Fig. 5 is a top plan view of the car; and Fig. 6 is a perspective view thereof.

As the car is an essential and most important part of my invention, I will describe it first. Viewing the Figs. 4, 5, and 6, it will be seen that the car has an approximately cylindrical shape, comprising a round base 1 and segmental shell-like uprights 2, 3, facing each other and containing on their inner sides seats 4, 5, at proper distances above the floor or platform 6, opposite gaps or openings 7 serving for the entrance and egress of the passengers, normally closed in by any suitable means, as by straps 8. Adjacent the base 1 I provide a heavy yielding resilient cushion or bumper 9, which can be made of rubber tube or the like, the car being supported on any suitable kind of universal-movement casters, such preferably as balls 10 held in pockets 11 on ball bearings 12, so as to permit the car to move as readily in one direction as in another.

Referring now more particularly to Figs. 1, 2, and 3, it will be seen that I have provided, adjacent the ticket office and main entrance 13 an upwardly ascending way 14 and elevator 15, the latter being of any kind desired, and operated by a suitable engine or hoisting apparatus 16, by means of which the loaded cars are raised to the desired height, and landed on a starting platform 17 at a corner tower 18. At this point the main track 19 begins, whose construction is best shown in detail in Fig. 4, where it will be seen that it comprises a plane running board or way 20, on which the cars can travel in any position, and opposite guide rails 21, 22, for engaging the base 1 of the car adjacent the bottom edge of the car, and upper guide rails 23, 24 for engaging and guiding the upper portion of the car, said rails being firmly supported by uprights 25, 26, and the whole built on proper supports, trusswork, etc., which the skilled builder will understand, and need not therefore be explained or set forth in detail. The way or track 19 descends at a more or less steep decline, preferably straight for a considerable distance to approximately its lower end 27, where it changes its curve slightly and meets an upwardly inclined floor 28 into which it verges, the side rails flaring apart as indicated at 29, 30, so as no longer positively to guide the car, which is left to follow such impulse as it last receives on one side or the other as the case may be, depending largely upon the way the passengers sit in the car or the location of the main weight in the car. The floor 28 is bounded by a curved wall 31, highest at its center 32, as shown best in Fig. 1, and thence following around the periphery of the main field 33, as indicated at 34, and ending at its lower end in a curve 35 and straight terminal portion 36. Within the area bounded by this wall is a wide, preferably plain, and uniformly inclined field 33, descending from the upper portion 28. The latter is free of obstructions, so that the car, when it escapes from the directing track 19, is free to shoot forward until deflected by the inclined surface of the floor 28 or by bumping into the wall 32, whereupon the car changes its course and starts to travel down the field 33 in such angular direction as the impulse of the moment may produce. The field 33, however, is studded with short bumpers or posts 37, preferably set regularly throughout its entire area and so arranged that it is practically impossible for the car to go any considerable distance without bumping sidewise into one or more of these posts. Inasmuch as the car is round and the floor or tread surface of the field is flat or plane, the result is that

the car is caused to spin round first in one direction and then in the other direction, to the mingled amusement and terror of the passengers. The rubber buffer 6 reduces the shock, and also, because of its resiliency, aids in accelerating the deflecting movement upon striking a post. One or more subways open adjacent the upper end of the field 33, three of said subways 38, 39, 40, being herein shown, having hooded openings, as clearly shown in Figs. 1, 2, and 3, each subway being provided with upper and lower guide rails 41, 42, and plane running boards or ways 43, the same as the starting track 19. These subways preferably have a very steep incline 44, see Fig. 1, at their upper ends, a substantially horizontal intermediate portion 45, and a slight upward incline 46, at their lower ends for giving variety to the passage. The lower or exit ends of the subways are protected by a U-shaped housing 47, shown in plan in Fig. 2, so that such cars as do not enter the subway will be properly deflected upon bunting into said housing 47. Toward the lower end of the inclined field 33 is a more or less extensive plane surface 48, bounded by the wall 35, 36, where the attendants may stop the cars and shift them to a return conveyer 49, leading back to the starting point at 50. I prefer to have the passengers leave the car at the bottom of the tower 18, where a suitable exit (not shown) is provided. A grand stand 51 is also preferably provided at the right hand side of the field 33.

In operation, the pleasure seekers enter at 13 and step into the car which is ready on the platform 50, seating themselves conveniently on the opposite seats 4, 5 of the circular car, which is thereupon shoved by the attendants onto the elevating apparatus 15 and landed on the top platform 17, whence the car is started down the track 19. The speed increases gradually, and if the car is fully loaded there will be very little rotary movement of the car as it moves forward with an exhilarating initial speed, but whatever tendency there may be to rotate is freely permitted by the fact that the car is round and is supported on casters traveling on a plane way or running board. During its descent the car is held steady by the opposite rails 21—24, which are so placed as not to interfere with the rubber buffer 9. As the car nears the lower end of the track 19 it immediately loses the directing guidance of the side rails and has its direction changed by the changing angle of the floor 28 and the curved wall 31, 32. If the car is very heavily loaded it will travel a considerable distance around the wall 31 before it starts on its downward movement through the field 33, but if it is very lightly loaded it will almost immediately leave the floor 28 and start on its uncertain course among the bumpers 37. In other words, it will meet with the bumpers sooner or later. The effect of each bump against one of the posts or bumpers 37 is either to accelerate the spinning movement of the car in the same direction, or to stop it and start it rotating in the opposite direction, according as the car strikes the bumper in the direction of its spinning movement or in opposition thereto. If, for instance, the car be spinning around to the left as the hands of the clock viewing Fig. 2, and it strike a post on its left hand side, the car will be deflected toward the right but its spinning movement will probably continue and be accelerated in the same direction, whereas if it strike a post on its right hand side it will be suddenly stopped, thereby correspondingly shocking and startling the occupants, and the car will immediately start spinning in the opposite direction as it is shunted quickly to the left. This effect, however, will not always be the same, as the rotating speed of the car will determine to some extent whether the car will continue to spin in the same direction when striking a post on the side of the upward spinning motion. This still further adds to the mystification, as it makes it still more difficult for any of the occupants to calculate upon what the resulting movement of the next bump will be. By the time, however, that the car has arrived at this point in its progress, its whirling, changing movement will have so bewildered the occupants that they will have lost their bearings more or less, and will be hanging onto the car and onto each other in an endeavor to keep their seats and to present an orderly appearance to the onlookers. As the car goes shifting from one position to the other and whirling in one direction and the opposite, it will verge more or less toward the subways, the purpose being to stimulate the desire of the passengers to enter a particular subway. This is, to a slight extent, within the control of the skilled occupant who has the required presence of mind at the critical moment to shift his weight so as either to coöperate with the effect of a particular bump, or to neutralize or oppose said effect, thereby, in a sense, steering or directing his car to one or the other entrances to the subways.

While the subways may be labeled according to the desire or fancy of the proprietor, I prefer to label the left hand subway "Heaven", as indicated by the letter H in Fig. 2, and the right hand subway "Hades", said two being the hardest to enter and the easiest to enter respectively, while the middle one may be labeled "Purgatory", as indicated by the letter P in Fig. 2, being the subway through which the majority will travel, it being understood that the subways themselves will be embellished according to fancy as suggested by their names, said embellishment not being herein shown as the details thereof do not constitute a part of this case.

As already intimated, my invention is capable of a wide variety of changes in form, arrangement, and combination of parts without departing from the spirit and scope of the invention as defined more particularly in the appended claims.

Having described my invention, what I claim as new and desire to secure by Letters Patent is:

1. In an amusement apparatus, a car provided with supporting means arranged to permit the car to have a universal sliding movement, an inclined field provided with a plurality of deflecting means for producing a multiplicity of changes in the direction of said sliding movement as the car slides down the incline, a raised track leading down to said field at an inclination approximately opposite to that of the field for giving initial sliding movement to the car, and intermediate means between said track and field for changing the general direction of sliding movement of the car from the inclination of the track to the inclination of the field.

2. In an amusement apparatus, a car provided with supporting means arranged to permit the car to have a universal sliding movement, an inclined field provided with a plurality of deflecting means for producing a multiplicity of changes in the direction of said sliding movement as the car slides down the incline, a raised track leading down to said field at an inclination approximately

opposite to that of the field for giving initial sliding movement to the car, and intermediate means between said track and field for changing the general direction of sliding movement of the car from the inclination of the track to the inclination of the field, said track having opposite side rails arranged to guide the car adjacent its upper part and its lower part.

3. In an amusement apparatus, a car provided with supporting means arranged to permit the car to have a universal sliding movement, an inclined field provided with a plurality of deflecting means for producing a multiplicity of changes in the direction of said sliding movement as the car slides down the incline, a raised track leading down to said field at an inclination approximately opposite to that of the field for giving initial sliding movement to the car, and intermediate means between said track and field for changing the general direction of sliding movement of the car from the inclination of the track to the inclination of the field, said track having opposite side rails arranged to guide the car adjacent its upper part and its lower part, and the car having resilient projecting bumpers for coöperating with the deflecting means of the field in easing the bump and facilitating the spinning movement of the car.

4. In an amusement apparatus, a car provided with supporting means arranged to permit the car to have a universal sliding movement, an inclined field provided with a plurality of deflecting means for producing a multiplicity of changes in the direction of said sliding movement as the car slides down the incline, a raised track leading down to said field at an inclination approximately opposite to that of the field for giving initial sliding movement to the car, intermediate means between said track and field for changing the general direction of sliding movement of the car from the inclination of the track to the inclination of the field, and a plurality of subways opening into the field from beneath the same at separated intervals in the area of the field.

5. In an amusement apparatus, a car provided with supporting means arranged to permit the car to have a universal sliding movement, an inclined field provided with a plurality of deflecting means for producing a multiplicity of changes in the direction of said sliding movement as the car slides down the incline, a raised track leading down to said field at an inclination approximately opposite to that of the field for giving initial sliding movement to the car, intermediate means between said track and field for changing the general direction of sliding movement of the car from the inclination of the track to the inclination of the field, and a plurality of subways opening into the field from beneath the same at separated intervals in the area of the field, and reëntering the field adjacent the lower end thereof.

6. In an amusement apparatus, a car provided with supporting means arranged to permit the car to have a universal sliding movement, an inclined field provided with a plurality of deflecting means for producing a multiplicity of changes in the direction of said sliding movement as the car slides down the incline, a raised track leading down to said field at an inclination approximately opposite to that of the field for giving initial sliding movement to the car, intermediate means between said track and field for changing the general direction of sliding movement of the car from the inclination of the track to the inclination of the field, a plurality of subways opening into the field from beneath the same at separated intervals in the area of the field, and reëntering the field adjacent the lower end thereof, and U-shaped housings open at their lower ends protecting the lower ends of the subways.

7. In an amusement apparatus, a circular car having a plurality of universally movable supporting devices for permitting the car to travel in all directions, said car having segmental shell-like uprights for inclosing and protecting the occupants.

8. In an amusement apparatus, a circular car having a plurality of universally movable supporting devices for permitting the car to travel in all directions, said car having segmental shell-like uprights provided with opposite seats for inclosing and protecting the occupants.

9. In an amusement apparatus, a circular car having a plurality of universally movable supporting devices for permitting the car to travel in all directions, said car having segmental shell-like uprights provided with opposite seats for inclosing and protecting the occupants, and a side entrance between said uprights and seats.

In testimony whereof, I have signed my name to this specification, in the presence of two subscribing witnesses.

ALBERT L. PLOTNER.

Witnesses:
M. J. SPALDING,
GEO. H. MAXWELL.