

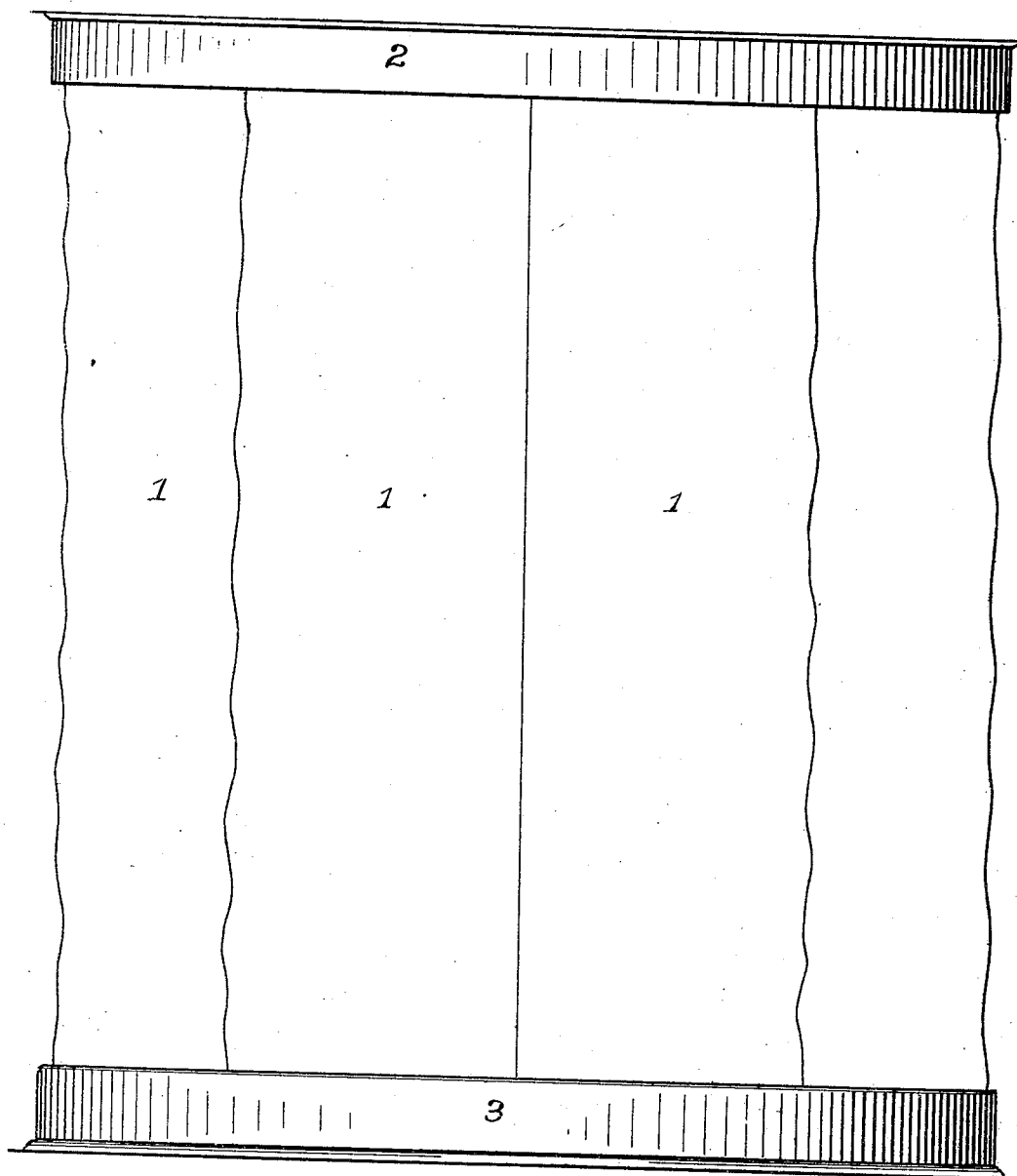
No. 835,638.

PATENTED NOV. 13, 1906.

C. F. RITCHEL,
AMUSEMENT APPARATUS.
APPLICATION FILED FEB. 28, 1906.

Fig. 1.

2 SHEETS—SHEET 1.



WITNESSES

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2 SHEETS—SHEET 2.

Fig. 2.

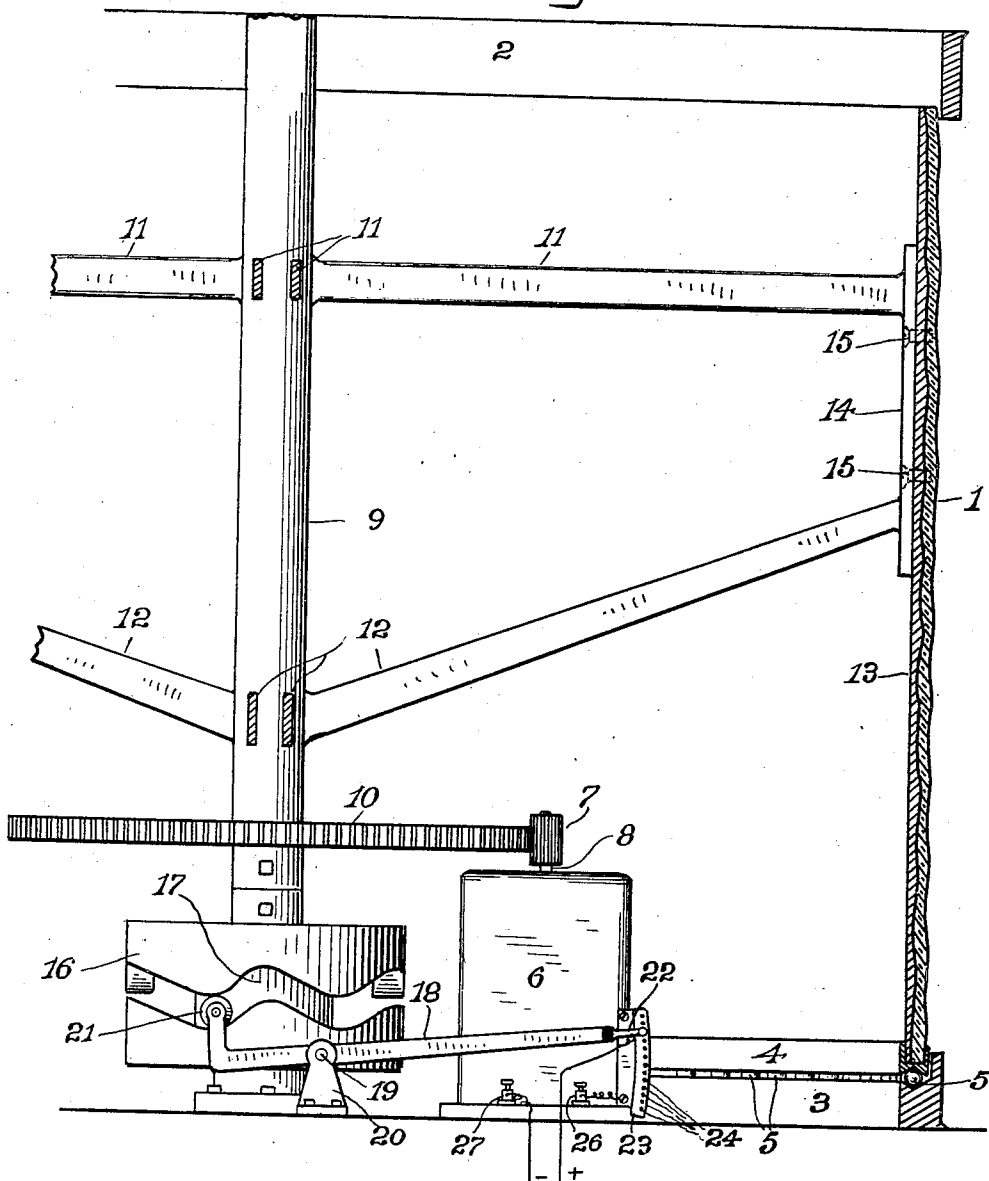
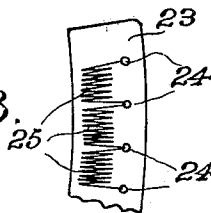


Fig. 3.



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AMUSEMENT APPARATUS.

No. 835,638.

Specification of Letters Patent.

Patented Nov. 13, 1906.

Application filed February 28, 1906. Serial No. 303,464.

To all whom it may concern:

Be it known that I, CHARLES F. RITCHEL, a citizen of the United States, residing at Bridgeport, in the county of Fairfield and State of Connecticut, have invented certain new and useful Improvements in Amusement Apparatus; and I do hereby declare the following to be a full, clear, and exact description of the invention, such as will enable others skilled in the art to which it appertains to make and use the same.

My invention relates to amusement apparatus; and it consists of certain arrangements of parts and combination of parts such as will be hereinafter fully set forth and then particularly pointed out in the claims, which conclude this application.

The object of my invention is to provide a series of traveling irregular reflecting-surfaces, so that a person may without moving view results that are exceedingly grotesque and weird, while at the same time the various reflections as they follow in sequence shall blend together so that there can be no abrupt break or imperfection to mar the effectiveness of the result.

In the accompanying drawings, Figure 1 is an elevation which illustrates my improvement in substantially the form presented to the eye of the observer. Fig. 2 is a vertical sectional elevation, and Fig. 3 a detail broken rear elevation of the upright which contains the contacts and resistance-coils.

Similar numbers of reference denote like parts in the several figures of the drawings.

Heretofore separate mirrors with irregular reflecting-surfaces have been in common use at amusement resorts; but these mirrors are always stationary and are separate and distinct from each other and there can be no blending of results. Moreover, the effect produced by these separate mirrors is instantaneous and uniform, and a person is obliged to travel from one mirror to another or to walk to and fro in front of a mirror in order to get the various results.

My improvement possesses advantages and capabilities that can hardly be enumerated or realized, since the reflecting-surfaces are diversified by various regular and irregular concaved, convexed, inclined, and plain portions that are arranged and distributed with the end in view to produce the most startling effects when following each other in sequence, and these effects are still further enhanced and intensified by varying the

speed at which the reflecting-surfaces traverse the view of the observer.

For a clear understanding of my invention attention is called to the following description, which, in connection with the drawings above referred to, relates to a preferred manner of carrying out my invention.

The reflecting-surfaces may be glass or highly-polished metal and are preferably in the form of panels 1, which are disposed in the shape of a hollow cylinder and are secured in this position in any suitable and well-known manner. These panels have irregular reflecting-surfaces, the latter being concave, convex, inclined, or plane, according to the results desired.

2 3 are respectively upper and lower circular frames which are secured in any suitable manner, so as to be stationary and which inclose the upper and lower edges of said panels. The lower edges of these panels may be shod with an annular metal shoe 4, and steel-balls 5 may be interposed between the frame 3 and the bottom of this shoe, so that the panels in their cylindrical disposition will be supported on ball-bearings and will therefore be capable of ready revolution. If this be done, a well-drilled and skillful attendant stationed inside the cylinder may revolve the latter at the proper speeds, so as to produce the desired results.

While I do not wish to be limited to any particular means for revolving the cylinder of panels or for varying the speed of such revolution, nevertheless I prefer to utilize some sort of motor and automatic devices to accomplish these results. I can use an ordinary electric motor, (schematically shown at 6,) inclosed by said cylinder and having a pinion 7, carried by its shaft 8 in combination with a vertically-disposed shaft 9, suitably journaled so as to revolve in stationary bearings and carrying a gear-wheel 10, with which said pinion meshes.

I secure beams 11 and braces 12 to the shaft 9 and extend them out in close proximity to the inner circumference of the panel-cylinder. I prefer to equip the inner face of this cylinder with a suitable backing 13, of wood, plaster, or cement, so as to form a smooth plain surface, and a block or plate 14, carried at the ends of said beams and braces, is secured by screws 15 to said cylinder, so that it will be clear that the latter will move in synchronism with the shaft. Of course this cylinder may be connected to

the rotary element in many different ways, all of which are very ordinary and fall within the province of ordinary mechanical skill, and in this respect, therefore, my invention is not limited. Moreover, the ball-bearings at the bottom of the cylinder may be omitted and the cylinder suspended from said beams and braces without departing from my invention.

To vary the speed of this motor at predetermined times, I provide means for automatically increasing or decreasing the resistance in the electrical circuit, as follows:

16 is a face-cam secured on the shaft 9 concentric therewith, the groove 17 in this cam being shaped and outlined irregularly for the purpose presently to be explained.

18 is a lever pivoted at 19 to a stationary block 20, the end of the lever nearest the pivot 19 having journaled therein a roll 21, which tracks within the groove 17. The lever is made of any suitable material and carries at the end of its long arm a small insulated contact-finger 22.

23 is a stationary upright, preferably made of wood or some other non-conducting material, having projecting slightly beyond its face a series of contacts 24, which latter are connected at the back of the upright by a series of resistance-coils 25. The finger 22 extends athwart the face of the upright 23 and when moved along the latter will make successive connections with the contacts 24.

The electric current enters the motor through the medium of the finger 22 and the contacts 24 and binding-post 26 and passes out by means of a wire connected with the binding-post 27.

The lowermost contact 24 is connected directly to the inlet-post 26, and therefore it will be clear that when the finger 22 is in touch with this contact the resistance will be minimum, and the speed of the motor and the panel-cylinder will be at its maximum rate, and that such resistance will increase as the finger is elevated into touch with succeeding contacts 24, thus causing the motor to decrease its speed.

The contour and character of the groove 17 determines the extent and the variation of the movement of the finger 22, and this groove is skilfully laid out and constructed with the end in view to produce the most startling and amusing effects in the reflecting-surfaces. For instance, the peculiarity of one reflector may be that as it initially traverses the view of the observer the latter will appear without legs and arms, while as the reflector continues its travel both legs and arms will apparently grow gradually from the body of the observer until they attain abnormal lengths; but these results could not be obtained with any degree of sensationalism and they would be robbed of their amusing and uncanny nature unless the

speed at which this reflector traveled was very slow, and accordingly in this instance the relation between the groove 17 and this reflector is such that the finger 22 will be in touch with the uppermost contact 24.

Variable speeds in motors and machines are brought about and regulated in many ways, all of which are quite ordinary and are in common use, and while I have selected the electric motor and the appliances heretofore described for accomplishing the desired results nevertheless, as I stated before, I do want my invention limited to the use of any particular means in this connection. The reflecting-panels need not be disposed in the form of a cylinder, since they can just as well be in elliptical disposition, although I prefer the cylindrical arrangement, since the comparatively abrupt curves at the ends of the ellipse would not be conducive to the best results. Also very good results may be obtained by causing all the reflecting-surfaces to travel at a uniform speed, and I therefore do not wish to be limited to a variable speed.

Having thus described my invention in detail and pointed out the salient features thereof, what I claim as new, and desire to secure by Letters Patent, is—

1. The herein-described amusement apparatus which consists of a rotary series of arcuately-arranged adjoined mirrors having irregular reflecting-surfaces.

2. An amusement apparatus comprising a series of reflectors having irregular surfaces and arcuately disposed, and means for imparting to said reflectors a line of travel coincident with their arcuate arrangement.

3. An amusement apparatus comprising a series of irregular reflecting-surfaces arcuately disposed in continuous circuit, and means for causing said surfaces to travel throughout the line of said circuit.

4. An amusement apparatus comprising a series of reflecting-panels having irregular reflecting-surfaces and adjoining at their side edges, and arranged in an endless arcuate circuit, and means for causing said panels to travel in a line coincident with said circuit.

5. In an amusement apparatus, the combination of an arcuate series of vertically-disposed adjoined mirrors having diversified reflecting-surfaces, with means for causing said series to travel in a line coincident with its arcuate disposition.

6. An amusement apparatus, comprising an arcuate series of reflectors having irregular reflecting-surfaces, and means for revolving said series at a variable speed and in the line of its arcuate arrangement.

7. An amusement apparatus comprising a series of irregular reflecting-surfaces arranged in the form of a cylinder, and means for revolving said cylinder at variable speeds.

8. An amusement apparatus comprising a

series of irregularly-surfaced reflectors in the shape of upright panels adjoining each other and forming a cylinder, and means for revolving said cylinder at variable speeds.

series to travel at variable speeds and in a line coincident with its arcuate disposition. 10

In testimony whereof I affix my signature in presence of two witnesses.

CHARLES F. RITCHEL.

Witnesses:

F. W. SMITH, Jr.,

M. T. LONGDEN.

5 9. In an amusement apparatus, the combination of an arcuate series of vertically-disposed adjoined mirrors having diversified reflecting-surfaces, with means for causing said