July 21, 1931. M. MENKUS ET AL 1,815,378

TOY

Filed Aug. 26, 1929

Fig. 1

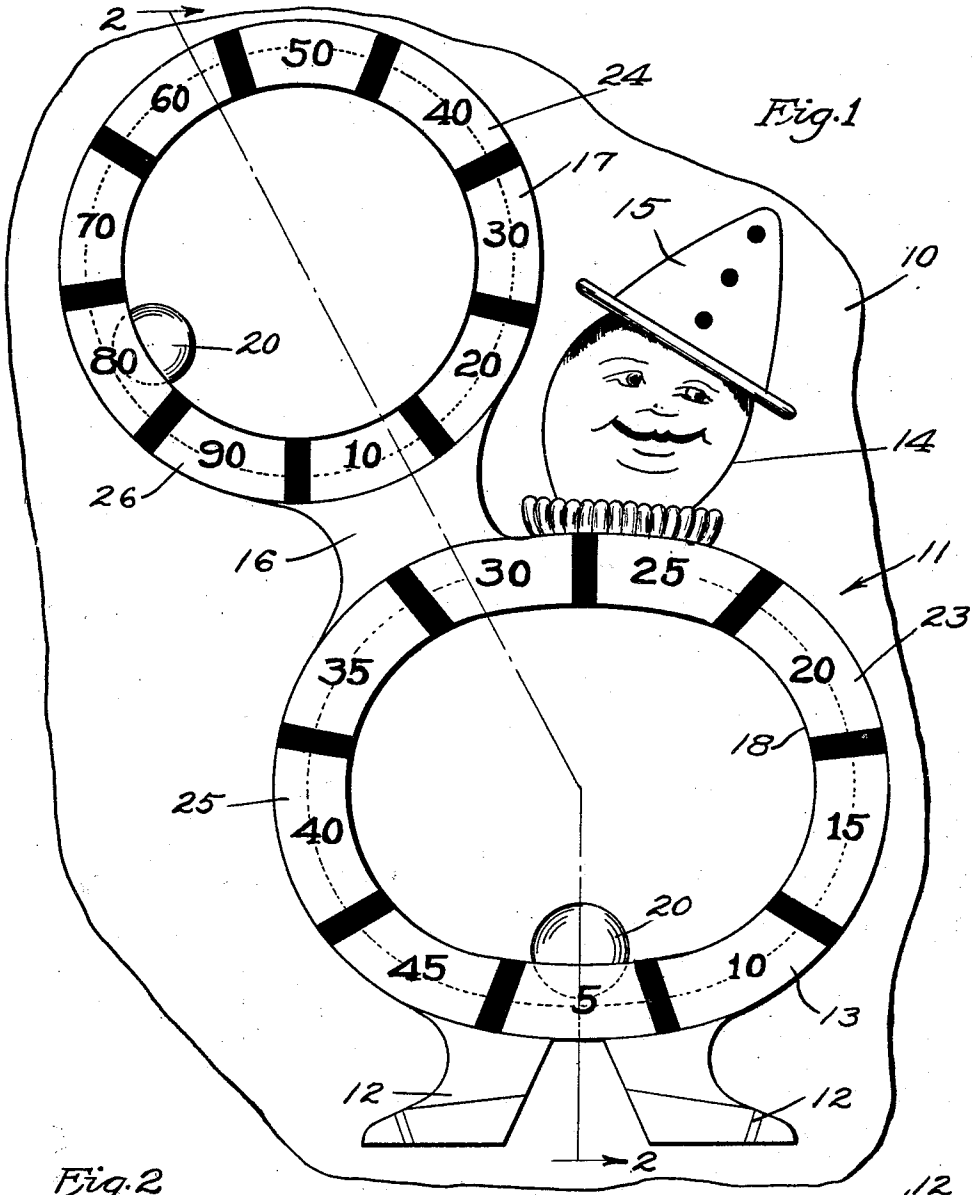
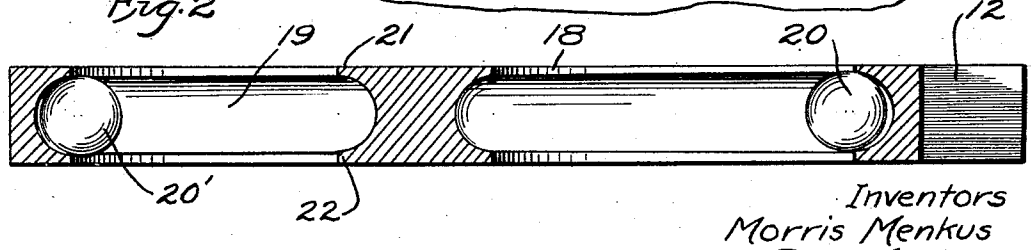


Fig. 2



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TOY

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This invention relates to amusement devices and particularly pertains to a toy.

The principal object of the present invention is to provide a toy which requires considerable skill in its manipulation, and which may be used in the playing of games where plays or moves are made in reference to a structure such as a spinner, by which different numerals might be obtained to direct and control the plays, and which structure might be also used as an educational device in forming simple problems in arithmetic.

The present invention contemplates the provision of a rigid body structure formed with one or more endless raceways therein disposed in substantially the same plane, and within which raceways spherical members may be placed and may be caused to rotate around the raceways and be held therein by centrifugal action as the structure is given a gyratory motion in the general plane within which the raceways lie.

The present invention is illustrated by way of example in the accompanying drawings in which:

Figure 1 is a plan view of the toy in its normal playing position, disposed on a flat surface; a fragment of which is shown.

Fig. 2 is a sectional view on line 2—2 of Fig. 1.

Referring more particularly to the drawings 10 indicates a flat smooth surface upon which the toy 11 is placed when the player is about to manipulate the same in a game or for any other reason. The toy 11 as shown simulates a grotesque figure having feet 12, a body portion 13, a head 14, having a cap 15 and adjoining and integral with a portion of the body 13 a member 16 integrally connects the elliptical body 13 with a circular raceway 17 which broadly simulates a raised hand. As is shown in the drawing the body 13 is formed as an endless raceway, the inner face of which is grooved to form a continuous ball race 18. The raceway 17 is formed as an annulus, the inner face of which is grooved to form a continuous ball race 19 about its inner face.

Balls 20 and 20′ are provided to move within the grooved paths and to facilitate their movement these grooves are so proportioned that the balls 20 extend for a portion of their diameter within the grooves and between marginal flanges 21 and 22; this construction eliminates surface friction and tends to cause the balls 20 to hold more truly to their paths of travel.

The plane face portion of the raceways is each divided into segments 23 and 24 which may be numerically indicated as at 31 and 32.

In order to use the toy, it is laid flat upon a table or other smooth level surface 10. After having placed the balls 20 within the areas bound by the annulus of the circular member 17 and the area bound by ellipse body 13, the whole toy is given a gyratorial motion in the general plane of the toy, which causes balls 20 to be given centrifugal action so that they will travel along their respective grooves 18 and 19. When the toy has been given sufficient motion to cause the balls 20 to travel at a fair rate or speed along their paths the toy is brought to rest upon a level plane surface. The balls will continue to travel around their raceways due to their momentum. They will gradually come to rest and will stand in register with one of the segments 23 and 24 which may be indicated by numbers or other symbols as indicated by the reference numerals 25 and 26. The number indicated by the position of the balls when they have come to rest, may be taken as the number of points allotted the player as would be the case when using a spinner in playing parcheesi. When used as an educational game the number indicated by the ball may be written upon a tabulation sheet and upon each subsequent play the numbers indicated by the balls may also be written down in the order played, which group of numbers, after a certain number of plays, may be added to give a total sum, or the number indicated, which will seldom be equal, and may be subtracted the one from the other.

The toy may also be used simply as an amusement device for it requires considerable skill to manipulate the toy and maintain the balls in the raceways when the toy is lifted

from the plane surface and disposed at different angles.

It will thus be seen that the toy here disclosed is quite simple in its construction and inexpensive as to manufacturing cost, and that it provides an amusement device which requires considerable skill in its operation and may be used in connection with the playing of games or as a device for setting up various simple problems in arithmetic, which may then be solved by the operator.

While we have shown the preferred form of our invention as now known to us, it will be understood that various changes may be made in the combination, construction and arrangement of parts by those skilled in the art without departing from the spirit of the invention as claimed.

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

A toy comprising a ball, an annulus along the inner surface of which the ball is intended to roll, said inner face of said annulus being recessed to form opposite marginal flanges described on a sectional arc of shorter radius than the radius of the ball whereby the ball will tend to wedge between said marginal flanges during operation of the toy, the opposite side faces of the toy being flat and in parallel planes whereby the annulus may be temporarily rested upon a plane surface and given a gyratory motion until the ball has been set in motion to roll along the inner face of the annulus under its own momentum, said plane faces of the annulus being formed with graduations of different value so that when the annulus is disposed upon a plane surface and the centrifugal action of the ball has been exhausted the ball will come to rest upon the plane surface adjacent a graduation on the annulus.

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