May 4, 1926. 1,583,567

J. J. BECKER

MECHANICAL TOY

Filed May 20, 1925 2 Sheets-Sheet 1

Fig. 1.

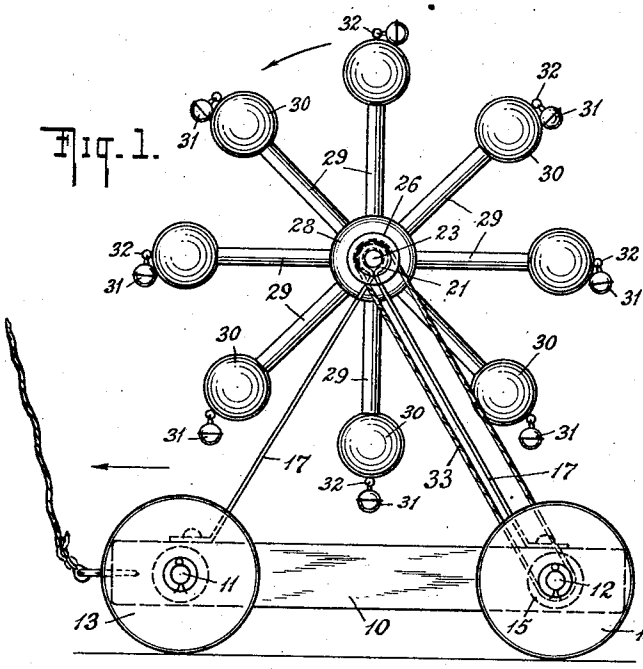


Fig. 2.

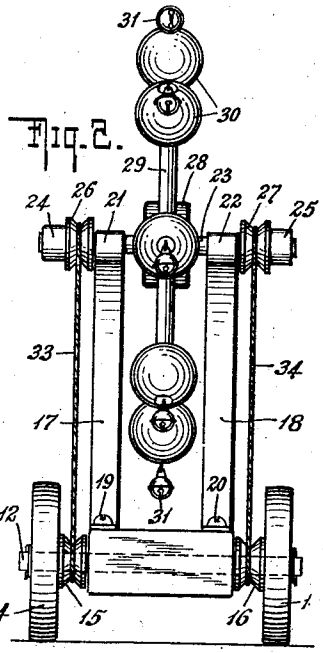
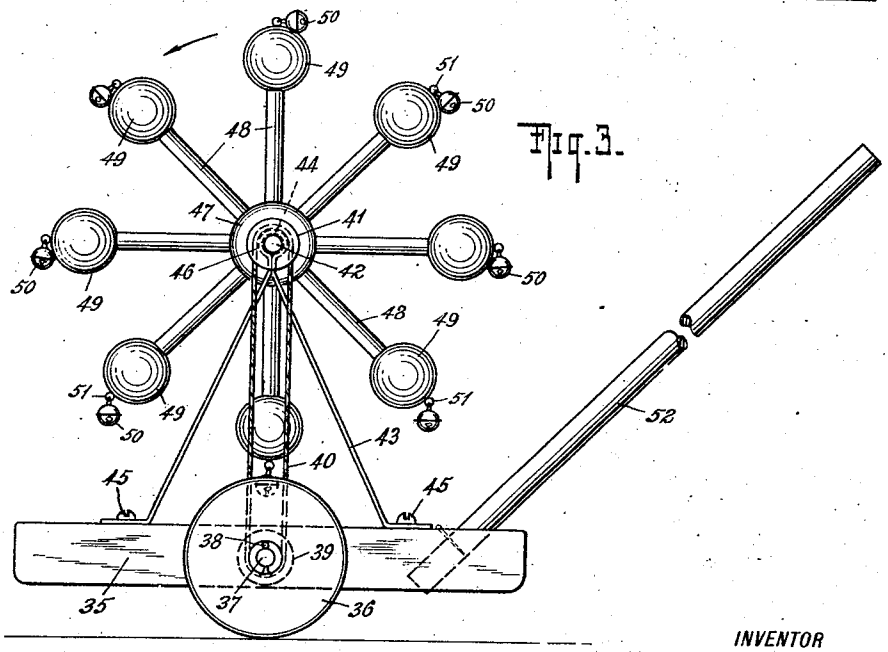


Fig. 3.



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2 Sheets-Sheet 2

Fig. 4.

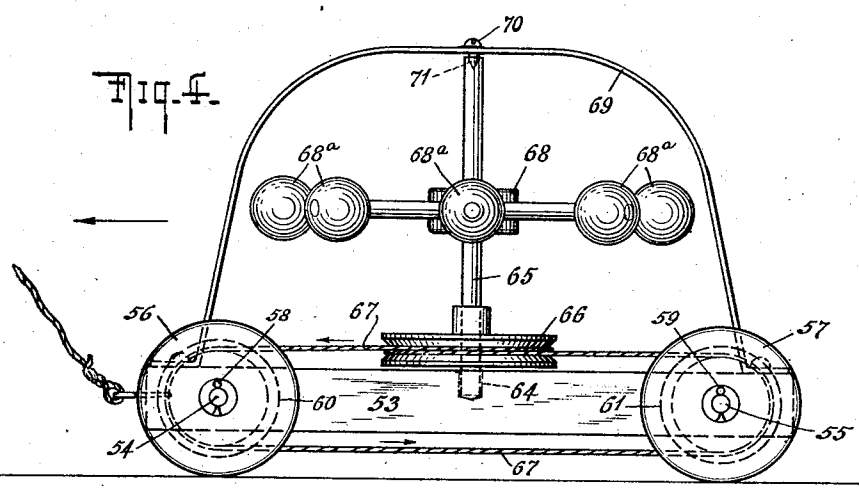


Fig. 5.

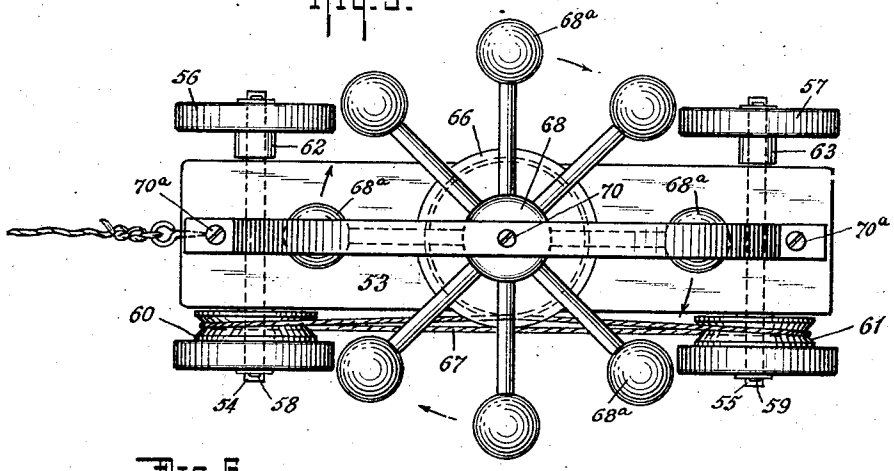


Fig. 6.

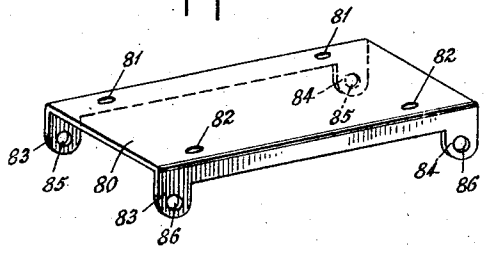
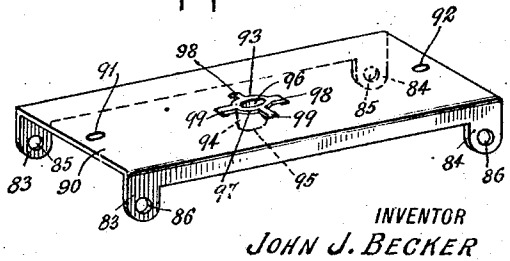


Fig. 7.



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Patented May 4, 1926. 1,583,567

UNITED STATES PATENT OFFICE.

JOHN JACOB BECKER, OF MASPETH, NEW YORK.

MECHANICAL TOY.

Application filed May 20, 1925. Serial No. 31,481.

To all whom it may concern:

Be it known that I, JOHN JACOB BECKER, a subject of the Kingdom of Rumania, and resident of Maspeth, in the county of Queens and State of New York, have invented certain new and useful Improvements in Mechanical Toys, of which the following is a specification.

My invention relates to mechanical toys, and more particularly to that class of toys in which a travelling carriage member, in its movement carries and actuates a rotor or rotatable member, adapted to produce sound or diffuse a variety of light colors, and which movable member is rotated by means connected to the carriage.

Some of the objects of my invention are to produce a toy of this type which is of simple and durable construction, of comparatively few parts, of pleasing and artistic appearance, and of educational value, and which may be a source of instruction or amusement to children or adults.

Another object is, to provide a toy of this type which when actuated, will produce musical or harmonious sounds automatically; and which is also adapted to similarly blend together different musical notes.

Another object is to provide a toy of this type which when actuated will produce an optical effect resembling a blended ring or rings of color or colors, or other desired color formations.

Another object is to produce a toy of this character of such construction that it may be conveniently assembled for use, disassembled for repair or transportation in containers, and effectively supported for travelling movement.

Another object is, to produce a toy of such relation and construction of parts, that it will have a long life under ordinary usage, be exceedingly durable and not readily broken.

Another object is, to produce a toy in which, when the rotor or rotatable member is actuated, it shall simulate or suggest the appearance of a so-called Ferris wheel, when the rotor rotates in a vertical plane and likewise simulate or suggest the appearance of a carrousel when the rotor rotates in a horizontal plane.

Another object is, to produce a toy in which a travelling carriage is provided with rotatable wheels or rollers, which are in turn provided with spools or pulley devices that are adapted to be connected by a belt or belts to spools or pulley devices, carried by a rotor or rotatable member, mounted on said carriage, and thereby actuate and rotate the latter in correspondence with the movement of the travelling carriage and the rotation of its supporting wheels.

Another object is, to provide a device of this type which shall be of such weight and construction that when the travelling carriage is moved along a floor, pavement, or other surface, the wheels of said carriage will be rotated by friction with said surface and will thereby, by connecting means, cause a simultaneous rotation of the rotor or rotatable member.

Another object is, to provide a device of this type in which a rotor or rotatable member is so mounted upon a travelling carriage that the plane of its rotation may be either horizontal or vertical, as desired.

Another object is, to provide a device of this type, and having these characteristics, in which the travelling carriage may be in the form of a four wheel carriage, or may be of the two wheel cart type.

My invention consists in the particular construction, combination, organization and arrangement of parts, shown in the accompanying drawings, described in the specification, and more particularly pointed out in the appended claims. In the accompanying drawings:

Fig. 1, is a side elevation of one form of embodiment of my invention, showing the rotor or rotatable element arranged to move in a vertical plane.

Fig. 2 is an end elevation of the invention shown in Fig. 1, illustrating more clearly the means for transmitting rotary movement from the carriage wheels to the rotor or rotatable member.

Fig. 3 is a modification of the type of device shown in Figs. 1 and 2, illustrating the base supporting the rotor or rotatable member as carried by a pair of wheels substantially as a cart and having an extending rod or guide piece to direct the carriage and cause it to travel.

Fig. 4 is a side elevation of a form of my device modified to arrange for the rotation of the rotor or rotatable member in a horizontal plane.

Fig. 5 is a detailed plan view of the modi-

fication shown in Fig. 4, illustrating more clearly the arrangement of the mechanism for actuating the rotor or rotatable member.

Fig. 6 is a perspective view of a one piece type of metal base for the travelling carriage, designed to support the rotor or rotatable member in a vertical plane, the axles and movable parts of the apparatus being removed therefrom.

Fig. 7 is a perspective view of a similar type of metal base, for the travelling carriage, designed to support the rotor or rotatable member in a horizontal plane, the axles and other movable parts of the apparatus being removed.

Referring more particularly to the drawings, in which like numerals of reference indicate corresponding parts, my device comprises a base 10, provided near each end with axles 11 and 12, which extend through the base 10, from side to side and are held in fixed non-rotatable relation thereto. Wheels 13 and 14 are rotatably mounted on the axles 11 and 12 and are held from displacement therefrom by nuts, cotter-pins or other suitable fastening means. The wheels 13 and 14 serve as supports upon which the base 10 may travel over a floor, pavement or other suitable surface, when it is pulled, pushed or otherwise propelled. Each of the opposite wheels, at either end of the base 10, are provided with a grooved pulley or spool 15 and 16. These pulleys 15 and 16 are attached to their respectively adjacent wheels, or are formed as a part thereof, and are loosely mounted upon the axles, and are arranged to rotate thereon by and with the rotation of the wheels, and with the travelling movement of the carriage.

Supports or standards 17 and 18 are detachably mounted opposite each other upon the carriage base, near the opposite longitudinal edges thereof, and are held in proper position by means of screws, bolts or other fastening means 19 and 20. These standards 17 and 18 are preferably of metal, so that they may be readily given the desired formation, and may be arranged to operably support therebetween, a rotatable member. These standards 17 and 18 are each formed in a single piece and each comprises a pair of legs spreading apart from their upper extremities where they terminate in substantially cylindrical enlarged portions 21 and 22. These portions 21 and 22 are arranged opposite, and in alinement with each other, and provide means by, and in which a supporting shaft or axle 23, for carrying a rotor or rotatable member is adapted to be rotatably held.

The shaft 23 extends transversely, above and across the base of the carriage, is seated in the enlargements 21 and 22, extends therethrough and is provided with threaded portions at its opposite ends. Nuts, or other suitable fastening means 24 and 25, are carried on the threaded end portions of the shaft 23 so disposed that grooved pulleys or spools 26 and 27 may be mounted on the shaft 23, in non-rotatable relation therewith, between each standard 21 and 22, and the fastening means 24 and 25.

The spools or pulleys 26 and 27 may be readily adjusted with respect to the standards 21 and 22 by the loosening or tightening of the nuts or fastening means 24 and 25 on the shaft 23, so that said shaft may be held in the desired operative relation to the standards 21 and 22, and may at the same time be easily rotated.

Mounted between the standards 21 and 22, in fixed relation to the shaft 23, rotating therewith and being rotated thereby is a hub-member 28 of a rotor or rotatable element. This member 28 is disposed so as to rotate in a vertical plane when the shaft 23 is actuated and caused to rotate. The hub-member 28 is provided with a series of outwardly extending, radially disposed, arms or spokes 29, which are fixed to the hub-member and move with its rotation. At or near the outer end of each of said spokes 29 there is fixed a ball-like, or enlarged spherical member 30 and to each of these ball members 30, there is fixed, on its outermost surface a bell or sound producing device 31. The bells 31 are carried by, and held in operative relation to the balls 30 by a ring-like fastening member, or staple 32, so that they may have a free swinging movement, in relation to the ball member 31 within an arc of substantially 180 degrees. The spools or pulleys 15 and 16 are connected with the spools or pulleys 26 and 27 respectively, by means of endless belts or straps 33 and 34 in such a manner that the rotation of the wheels 13 and 14, and the consequent rotation of the pulleys 15 and 16 produced by the travel of the carriage on a floor, pavement, or other surface, or otherwise will be transmitted to and actuate the pulleys 26 and 27 and thereby effect the rotation of the shaft 23 and effect the corresponding rotation of the hub 28, of the rotatable member, and the movement of the radial arms 29, the balls 30 and the consequent movement therewith of the bells 31, and a further swinging movement of the bells 31 in relation to the balls 30, as the rotation of the rotatable member continues.

The bells 31, may all be of the same note or tone, or each of a different note or tone or may comprise any desired arrangement or combination of notes or tones so that pleasing musical sounds, either harmonious or otherwise may be produced as the rotor rotates, and the bells are thereby caused to swing and sound.

It will be obvious, from the foregoing description, that any substantial forward or

backward or continued travelling movement of the carriage will result in a rotation of the wheels 13 and 14, the rotation of the driving pulleys 15 and 16, and that this rotation, by means of the belts 33 and 34, will be transmitted to the driven pulleys 26 and 27, and that the shaft 23 and the rotor or rotatable ball and bell carrying member will likewise and correspondingly rotate. As this takes place, the bells will swing upon their carrying elements 32, so that, as the positions of the respective balls change in the course of rotation, the bells will swing in reference to the balls, and will eventually fall thereagainst, producing a relatively loud ringing sound at the time of their contact with the balls, as well as a ringing sound, more or less loud, during their movement through the arc in which they are permitted to swing, as the carriage travels and the rotor or rotating element is thereby rotated.

It will be seen that the rotor or rotatable element is caused to rotate synchronously, with, and in correspondence to the forward or backward travelling movement of the carriage. When the carriage is moved forwardly, as indicated by the arrow in Fig. 1, the rotor or rotatable element will rotate in the direction indicated by the arrow in that figure. When the carriage is moved backwardly, or in a direction reverse to that indicated by the arrow in Fig. 1, the rotor will likewise rotate in a direction the reverse of that indicated by the arrow in Fig. 1. This rotation is directly caused by the travelling movement of the carriage, producing thereby the rotation of the carriage supporting wheels 13 and 14, the consequent rotation of the pulleys 15 and 16, and the transmission of that rotation through and by the belts 33 and 34 to the driven pulleys 26 and 27.

For an efficient operation of my device, and an effective rotation of the carriage wheels, to produce the desired rotation of the rotor and other parts of the apparatus above referred to, it is desirable to construct the device with a base and parts assembled thereon of such weight that a proper frictional contact of the carriage wheels will be made with the surface upon which they travel; it being understood that the operation of my apparatus is due primarily to friction, produced by and during the travelling movement.

In Fig. 3, is shown a modified form of my invention, which differs from that shown in Figs. 1 and 2, in the arrangement of the means for supporting the base of the carriage and for causing it to travel. In the modification in Fig. 3, the base 35 is supported by but one pair of wheels 36, which are rotatably mounted on an axle 37, extending through the base 35, and projecting therefrom, on either side thereof. The shaft or axle 37 is in non-rotatable relation with the base 35, and is disposed transversely of said base at a point substantially midway the opposite ends of said base. The wheels 36 are held upon the axle 37, on either side of said base 35, by cotter-pins 38 or any other suitably fastening means, so that they will retain their desired operative position, and rotate on the axle 37 when the base and member carried thereon are caused to travel. Between each of the wheels 36, fixed thereto, adapted to rotate therewith, and adjacent the longitudinal sides of the base 35, I provide pulleys 39, substantially identical with the pulleys 15 and 16, illustrated in Figs. 1 and 2. These pulleys 39 carry belts 40, which operate similarly to the belts 33 and 34 in Figs. 1 and 2 and transmit the rotary motion of the pulleys 39 to pulleys 41, non-rotatably mounted on a transverse shaft 42, mounted on supporting standards 43, substantially similar to corresponding parts shown in Figs. 1 and 2, and described in connection therewith. Nuts 44, or other suitable fastening means, are carried on the opposite ends of the transverse shaft 42, to hold the shaft and pulleys thereon in operative, adjusted position in relation to the supporting frame 43. The supporting frame 43 is substantially identical to the supporting frame, composed of the members 17 and 18, shown and described in Figs. 1 and 2, and is detachably mounted upon the base 35, by screws 45 or other suitable fastening means. As in the embodiment shown in Figs. 1 and 2, the transverse shaft 42 is supported by bearings 46, that are substantially oppositely disposed enlargements of the standards 43, at the upper extremities of said standards. These bearings receive the shaft 42, and carry it in rotatable operative relation thereto, substantially as, and in the manner illustrated in Figs. 1 and 2.

Midway between the standards 43, the hub 47 of the rotor or rotatable member is mounted in fixed relation to, and on the shaft 42 and is adapted to rotate therewith in all respects substantially similarly to the rotatable member and arrangement illustrated in Figs. 1 and 2. This hub 47 is likewise provided with series of radially disposed arms or spokes 48, which move in a vertical plane with the rotation of the shaft and hub of the rotor or rotatable member.

At the outer end of each said arms or spokes 48, there is provided a ball or spherically shaped figure or weight 49, in all respects substantially similar to the corresponding elements illustrated in Figs. 1 and 2. Attached to the balls 49, substantially as illustrated in Figs. 1 and 2, there are also bells 50 which are held in swinging relation to the balls 49 by means of staples or other fastening elements 51, substantially as is illustrated in Figs. 1 and 2. The base 35

of the travelling carriage is, at or near one end, provided with a guiding arm or handle 52, which may be attached to the base, by screws, pins or other suitable fastening means, or may be inserted into a suitable opening or socket in the base, or at the side thereof, so that said rod or handle may be in fixed relation to the base, and may serve as a means by which the carrying member or cart-like element may be propelled and guided.

It will be obvious that the modification shown in Fig. 3 is substantially similar in all respects to the embodiment shown in Figs. 1 and 2, except that the carriage or carrying member is in the nature of a two wheel cart, guided and propelled by means of a handle or rod, projecting from the base while the embodiment illustrated in Figs. 1 and 2 is carried upon four wheels, and may be drawn by a cord or other suitable attachment, or may be pushed by any means adaptable. In the embodiment illustrated in Fig. 3, the rotor or rotatable ball and bell carrying element rotates in correspondence with, and in consequence of the travelling movement of the carriage. It will be obvious that this travelling movement may be either forwardly or backwardly, and that the rotation of the rotor or rotatable ball and bell carrying element will be either forward or reversed, in correspondence with the movement of the cart.

In Fig. 4, I have illustrated another modified form of my invention, in which the rotor or rotatable element is arranged to move in a substantially horizontal plane. A base member 53 is provided at, or near its opposite ends, with transverse axles 54 and 55, non-rotatably arranged in the base portion, extending therethrough and projecting from either side thereof. Wheels 56 and 57 are rotatably mounted on the projecting ends of the axles 54 and 55, at opposite sides of the base, and are held in rotatably operative relation of the axles 54 and 55, and against displacement therefrom, by cotter-pins 58 and 59, or by any other suitable fastening elements. One pair of these wheels 56 and 57, namely, those arranged on the same side of the base 53, are each provided, between that side of the base, and the inner face of said wheels and substantially unitary with said wheels, with grooved pulleys or spools 60 and 61, that are rotatably mounted on the shafts 54 and 55, and are adapted to rotate with the rotation of the wheels to which they are attached or of which they are a part. The wheels, adjacent the side of the base opposite to that adjacent which are the pulleys 60 and 61, are not provided with pulleys as above mentioned, but are laterally spaced from the base 53 by hub portions 62 and 63, in order that said wheels may be positioned so as to permit the free travelling movement of the carriage.

At a substantially central point in the upper surface of the base 53, I provide a chamber or socket 64, closed at its lower end, and open at its outer end, adapted to receive and rotatably support therein, a substantially vertical shaft 65. Near the upper surface of the base, in fixed relation to, and on said rotatable vertical shaft 65, I mount a horizontally disposed pulley 66, that is of sufficient diameter to produce the desired speed of rotation of the vertical shaft 65, when the rotation of the pulleys 66, effected by the rotation of the wheels 56 and 57 is transmitted thereto. The transmission of this rotation is accomplished by a strap or belt 67, which passes around the driving pulleys 60 and 61, and around the driven pulley 66, as is illustrated in Figs. 4 and 5. Above the pulley 66 and substantially midway the height of the rotatable shaft 65, I mount on, and in fixed relation to said shaft, a hub 68 of a rotor member or rotatable ball carrying element, that is substantially similar to the rotor or rotatable ball carrying element illustrated in the previous figures. In the embodiment shown in Figs. 4 and 5 I have illustrated the balls, 68^a, as not carrying any bells or sound producing devices. This difference is entirely arbitrary, and it will be apparent that, if desired, bells or other sound producing devices may be attached to one or more of the balls illustrated in Figs. 4 and 5.

The bells may be swingable attached to the balls 68^a by means of eyeleted screws or other suitable fastening means, such as illustrated in Figs. 1, 2 and 3. It will be apparent that as the rotor is caused to rotate and as the speed of said rotation varies, and as the carriage travels, the variation of the speed of rotation and the variations in the evenness of the surface upon which the carriage travels will cause the bells to vibrate and sound with more or less loudness.

Since the speed of travel of the carriage varies at the will of the operator, the tendency of the bells to be thrown outwardly by the rotation of the rotor will obviously vary with this speed. Their positions will, therefore, be constantly changing as the carriage is operated and will thereby be caused to produce a ringing sound.

The shaft 65, being in a vertical plane, it is obvious that the rotation thereof, causing a rotation of the rotor or ball carrying member mounted thereon, will cause such rotation of the ball carrying member to be in a horizontal plane. Upon the base 53, I mount a yoke 69 by means 70^a, so formed, constructed, and so positioned in reference to the base, and to the upper end of the vertical shaft 65, that it provides means by which the upper end of said shaft may be

retained in its desired operative position, while at the same time permitting the shaft to freely rotate. This yoke 69 is arranged substantially midway the middle of the base, and extends upwardly from either end of the base, spanning the rotor or rotatable ball carrying member directly over the end of the vertical shaft 65. Adjacent the upper end of said shaft, the yoke member 69 is provided with a downwardly extending adjustable pivot or set screw 70, adapted to engage the upper end of said shaft and retain it rotatably in an upright, operative position, thus permitting a delicate and effective adjustment of the shaft in its socket or bottom bearing 64. The adjustable pivot or set screw 70, may be provided with a conically shaped end 71 adapted to be seated in a correspondingly formed recess provided in the upper end of the shaft 65.

It will be obvious from the above, that as the carriage travels forwardly, its supporting wheels will rotate and so rotate the driving pulleys that the belt 67 will travel in the direction indicated by the arrows in Fig. 4, and that the driven pulley 66 will thereby be driven to effect a rotation of the vertical shaft 67 and the rotor or ball carrying member thereon, in the direction indicated by the arrows in Fig. 5. If the carriage be drawn or moved in a reverse direction, a reverse rotation of the wheels, pulleys, and rotor or rotatable ball carrying member will take place.

In the preceding described figures of my drawings, I have indicated that the base portion of my invention may be constructed of a block of wood or other suitable material, but it is to be understood that I do not confine myself to the use of these materials for that purpose or for the construction of any part of my invention.

In order that a desirable manner of forming this base member of other materials than wood may be illustrated, I have shown in Fig. 6 one form of metal base, adaptable for use with the type of invention illustrated in Figs. 1 and 2. In Fig. 7, I have shown a form of metal base adaptable for use in connection with my invention as illustrated in Figs. 4 and 5.

Referring to Fig. 6, the base member comprises a top portion or plate 80 of suitable shape, provided with perforations 81 and 82 suitably arranged to receive means to hold the upright supporting standards 17 and 18 in fixed, operative relation thereon. Near the opposite ends of the plate 80 are provided downwardly extending lugs 83 and 84, which are similarly placed in alinement with each other on the opposite lateral sides of the plate or base member, in such a manner that axles upon which the base member might rest, or by which it might be carried, would register through openings 85 and 86 arranged in said lugs, in such a manner that the axles would freely rotate therein, if desired, or serves as a means to operably carry wheels upon which the base may travel.

The base member shown in Fig. 7 is similar in many respects to that shown in Fig. 6, but is provided in its face and near its opposite ends with openings 91 and 92, by means of which fastening members can be utilized to engage and hold in fixed relation thereto a yoke member 69, as illustrated in Fig. 4, provided to retain the vertical shaft 65 in upright position. There is further provided in the body of the base 90, socket 93, having a cuplike portion 94, which extends downwardly beneath the plate portion 90 and is closed at its lower end 95, while having an opening 96 at its upper end. A flange portion 97 is provided around the upper end of said cuplike portion, said flange 97 having diametrically oppositely extending tongues 98, which are adapted to be received into and engage corresponding slots 99 in the plate portion of said base, and to be clinched therein, to hold said cuplike and flange portion in fixed relation to said base, and to thereby effect a bearing for and proper positioning of the vertical, rotatable shaft 65.

It will be understood that my rotor or rotatable member may be formed in a single piece of wood, metal or other suitable material, or may be made up of assembled elements, held together in the desired operative relation to each other. It will be understood that the balls 30, 49, and 68a, upon the outer ends of the spokes of the rotatable member, may be of any desired size or formation, and that they need not be of spherical shape, and that by so illustrating them I have arbitrarily chosen that form. It is to be understood that, although I have illustrated bells of a specific design or pattern, yet it is intended to be within the scope of my invention to employ bells or other sound producing devices of a different character. It is also to be noted that the speed with which the rotor or rotatable element moves may be regulated by the speed of movement of the carriage and by the relative sizes of the driving and driven pulleys. It will therefore be obvious that, if desired, the rotation of the rotor or rotatable element may be of a high or lesser degree of speed at the will of the operator.

It is contemplated that the bells may be colored of a uniform color or that each bell may be given a different color or shade. It is contemplated that the balls may also be each given the same color or each given a different color or shade, and likewise the color of the spokes may be varied or combined, as desired, and it is also obvious that the hub of the rotor, as well as the driving wheels, and even the body of the carriage

may be colored to suit the taste, or to effect the desired optical impression.

It will be seen therefore that if a certain well-known combination and proportion of colors is arranged and distributed upon the rotor the rotation of the rotor at the required speed will blend the colors, so that the optical illusion of the vision of white would be created. It is also apparent that at different speeds different optical impressions would be brought about. It is also apparent that almost any desired impression of various combinations of concentric rings would be created in the mind of the observer by the proper arrangement of colors upon the pulleys, spokes, and balls of the rotor element and causing that element to rotate.

I have illustrated my ball elements as being of solid formation, but it is to be understood that they may be hollow if desired, and may be made of celluloid, glass or any other material that will produce the effect of transparency, translucency or opaqueness.

I may, if desired, cover these balls with material having a high reflective power, disposed either evenly or irregularly and thereby produce a unique, flashing, flickering or wavering light effect when light is thrown upon the rotor in the course of its rotation. It is understood that this may be artificial or natural light, and that such an effect may be produced indoors or otherwise.

It will be seen from the above, that I have produced a device with many desirable advantages and results, that is useful and of value as an educational device, and as an instrument of amusement, that is of comparatively few parts, and of simple construction, is of cheap manufacturing cost, may be so disassembled that it may be readily packed for shipment or transportation, and so that repairs thereto may be readily and conveniently made, which operates as the result of the travelling movement of the carrying member in combination with friction produced by the weight of the carrying and carried parts and which has other advantages, and results that may be apparent.

Although I have thus described my invention in detail and specifically illustrated it in the accompanying drawings, I do not wish to be limited to the particular form of embodiment shown, nor by the terms of description defining it, except as the state of the art and the appended claims may require, for it is obvious, that various modifications may be made in the combination, organization, and arrangement of parts of my invention without departing from the spirit and scope thereof.

What I claim as new and desire to secure by Letters Patent is:

1. In a mechanical toy, the combination of a travelling carriage, rotatable wheels mounting said carriage, pulleys mounted on said wheels in fixed relation thereto and rotating therewith, a pair of substantially triangular shaped supporting brackets mounted on said carriage oppositely disposed at the opposite lateral edges of said carriage, a supporting bearing at the top of each of said brackets, a transverse shaft rotatably supported by said bearing on said brackets, a rotor having a series of radially disposed arms provided with enlarged ball ends at their outer extremities integral therewith and in fixed relation thereto carried by said shaft and adapted to rotate therewith, pulleys carried by said shaft in fixed relation thereto and rotatable therewith, and belts connecting said wheel carried pulleys with said last mentioned pulleys to rotatably actuate said shaft and rotor upon and by the travelling movement of the carriage.

2. In a mechanical toy, the combination of a travelling carriage, rotatable wheels supporting said carriage, pulleys mounted on said wheels and adapted to rotate therewith, a supporting frame-work mounted on said carriage, a rotor having a series of radially disposed arms provided at their outer ends with enlarged ball portions integral therewith and in fixed relation thereto, a shaft carrying said rotor and disposed transversely of said carriage and rotatably supported by said frame-work, pulleys mounted on said shaft near the opposite extremities thereof, means to adjust said shaft and pulleys laterally relatively to said framework, and belts connecting said wheel carried pulleys with said last mentioned pulleys, adapted to rotatably actuate said pulleys and said rotor upon and by the travelling movement of said carriage.

3. In a mechanical toy the combination of a travelling carriage, rotatable wheels supporting said carriage, pulleys mounted on said wheels in fixed relation thereto and adapted to rotate therewith, a pair of substantially triangular shaped supporting brackets oppositely disposed on the opposite lateral edges of said carriage, journal bearings at the top of said brackets, a shaft disposed transversely of said carriage rotatably mounted in said journal bearings, a rotor having a series of radially disposed arms provided with enlarged ball ends integral therewith and in fixed relation thereto mounted on said shaft and rotatable therewith, bells swingably carried by said enlarged ball ends, pulleys mounted on said shaft near the opposite extremities thereof and adapted to rotate therewith, means carried by said shaft to adjust said shaft and pulleys laterally relatively to said supporting brackets and belts connecting said wheel carried pulleys with said shaft carried pulleys adapted to rotatably actuate said shaft carried pulleys and shaft and rotor upon

and by the travelling movement of the carriage.

4. In a mechanical toy, the combination of a travelling carriage, rotatable wheels supporting said carriage, pulleys mounted on and in fixed relation to said wheels and adapted to rotate therewith, a pair of substantially triangular supporting brackets oppositely disposed at the opposite lateral edges of said carriage substantially horizontal journal bearings at the top of said brackets, a substantially vertically disposed rotor having a series of radial arms provided with substantially enlarged ball ends integral therewith and in fixed relation thereto, a substantially horizontal shaft disposed transversely of said carriage and rotatably and adjustably supported in said journal bearings carrying said rotor between said supporting brackets, pulleys mounted on said shaft adjacent the outer ends of said journal bearings, means carried at the ends of said shaft to adjust said shaft and pulleys laterally relative to said journal bearings, and belts connecting wheel carried pulleys and said shaft carried pulleys adapted to rotatably actuate said shaft and rotor upon and by the travelling movement of said carriage.

5. In a mechanical toy, the combination of a travelling carriage, rotatable wheels supporting said carriage, pulleys mounted on said wheels in fixed relation thereto and adapted to rotate therewith, substantially triangular shaped supporting brackets oppositely disposed on the opposite lateral edges of said carriage, a rotor having a series of radially disposed arms provided with enlarged outer ball ends integral therewith and in fixed relation thereto, said radially disposed arms and said enlarged ball ends being suitably colored, a horizontal shaft disposed transversely of said carriage rotatably supported by said brackets and operably mounting said rotor in fixed relation thereto and rotatable therewith, journals mounting said shaft near the opposite extremities thereof at the upper ends of said brackets, means on said shaft near the ends thereof adapted to adjust said shaft and pulleys laterally relatively to said brackets and belts connecting said wheel carried pulleys with said shaft carried pulleys adapted to rotatably actuate said pulleys and said shaft and rotor and thereby produce a unique and peculiarly deceptive color effect resembling concentric formations and designs of different colors.

6. In a mechanical toy, the combination of a travelling carriage, rotatable wheels supporting said carriage, pulleys mounted on said wheels and adapted to rotate therewith, substantially triangular shaped supporting brackets mounted on said carriage, a substantially vertically disposed rotor having a series of radial arms provided with enlarged ball ends integral with and in fixed relation to said arms at their outer extremities, a series of bells attuned to a different note or tone of sound, swingably mounted on the outer extremities of said ball ends, a substantially horizontal shaft carrying said rotor disposed transversely of said carriage and rotatably supported by said brackets, pulleys mounted on said shaft near the opposite extremities thereof adjacent the outer edges of said brackets, means on the ends of said shaft to adjust said shaft and pulleys laterally relatively to said brackets, and belts connecting said wheel carried pulleys with said shaft carried pulleys adapted to actuate said shaft carried pulleys and said shaft and said rotor upon and by the travelling movement of said carriage, and thereby cause said bells to ring and produce different sound notes harmoniously.

Signed at city, county, and State of New York this 18th day of May, A. D. 1925.

JOHN JACOB BECKER.