Nov. 23, 1926. 1,608,353

A. ZAIKINE

ROTARY MAGNET TOY

Filed Sept. 16, 1925

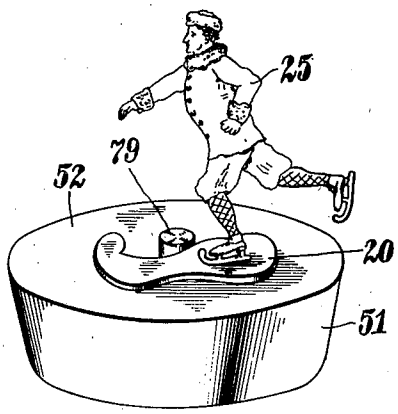



Fig. 1.

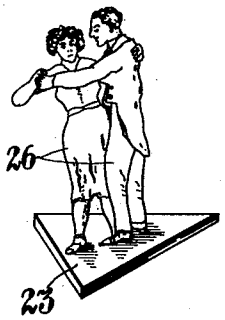



Fig. 2.

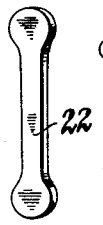



Fig. 4.



Fig. 5.

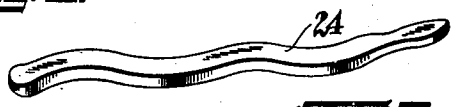



Fig. 3.




Fig. 6.

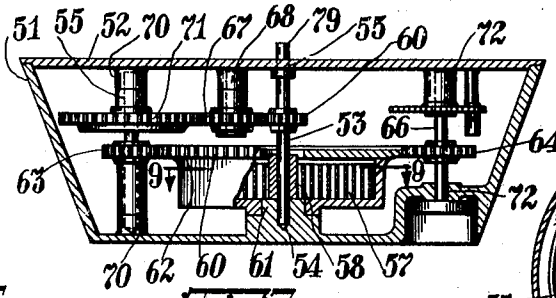



Fig. 7.

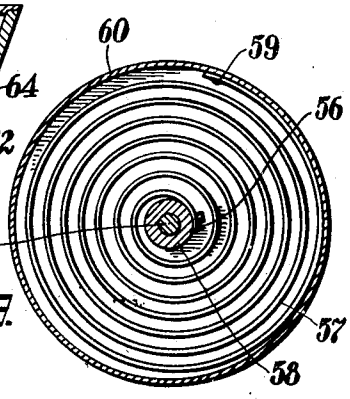



Fig. 9.

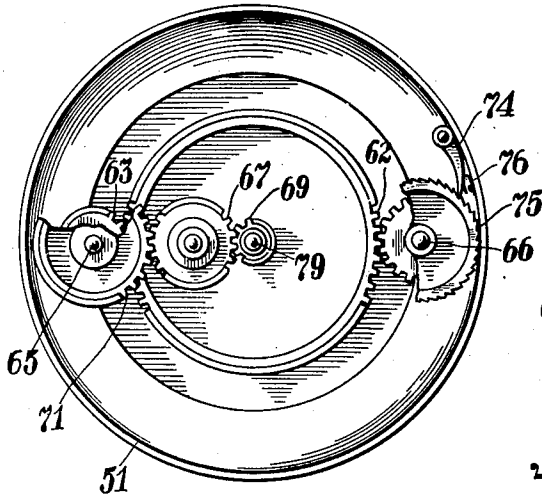



Fig. 8.

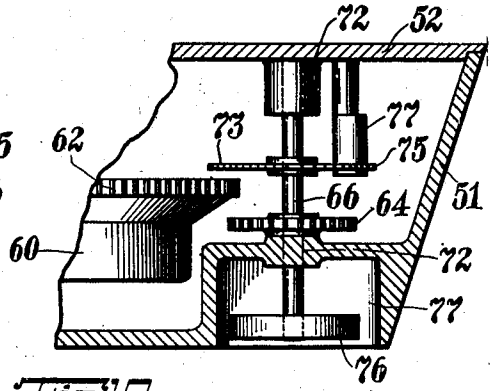



Fig. 10.

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# UNITED STATES PATENT OFFICE.

ANDREW ZAIKINE, OF BROOKLYN, NEW YORK.

## ROTARY MAGNET TOY.

Application filed September 16, 1925. Serial No. 56,557.

This invention relates generally to toys, the invention having more particular reference to a novel type of toy. The invention has for an object the provision of an improved toy which is instructive, and further objects which will be brought out as the description progresses.

For further comprehension of the invention and of the objects and advantages thereof, reference will be had to the following discription and accompanying drawing, and to the appended claims in which the various novel features of the invention are more particularly set forth.

Fig. 1 of the drawing is a perspective view of my improved toy, as it would appear when in use.

Fig. 2 shows the figures as used in conjunction with my device.

Fig. 3 shows a snake shaped piece as used in conjunction with my device.

Fig. 4 shows a dumb bell shaped piece.

Fig. 5 shows another figure as used in conjunction with my device.

Fig. 6 shows two pieces as used in conjunction with my device.

Fig. 7 is a longitudinal sectional view of the operating portion of my toy.

Fig. 8 is a top plan view of the same, showing the cover removed so as to show the mechanism.

Fig. 9 is a sectional view taken on the line 13—13 of Figure 7.

Fig. 10 is an enlarged fragmentary sectional view showing certain parts of the same mechanism.

As here embodied my improved toy comprises a suitable case 51, of any suitable shape and design, having a suitable cover 52 attached thereto. Protruding or extending above the cover 52 is the upper extremity 79 of a magnetized rotatable shaft. In the manipulation of the toy, odd shaped pieces of suitable material attracted by magnetic lines of force, such as designated by the numeral 20, are placed on the cover 52 against the upper extremity 79 of the rotatable shaft. As the shaft rotates, the member 20 will move over the cover 52. The said odd shaped member 20 has attached thereto a figure 25, as of a skater, which will slide irregularly along the cover, as though the figure 25 were skating.

In Figure 2 of the accompanying drawing, I have shown two dancing figures 26 attached to a triangular shaped piece 23.

In Figure 3, I have shown a snake shaped piece 24, to which may be attached any suitable figure.

In Figure 4 I have shown a dumb bell shaped piece 22, to which may likewise be attached any suitable figure, such as shown in Figure 5 of the accompanying drawings.

In Figure 6 I have shown two straight pieces 21, to which may be attached two separate suitable figures, such as a boy and a dog, it being understood that I do not necessarily limit the use of my device to the heretobefore mentioned pieces and figures.

Referring to Figs. 7, 8, 9 and 10 of the accompanying drawings, the case 51 having a suitable cover 52 attached thereto, the vertical shaft 53 being rotatably mounted in the case 51 and the cover 52 on suitable and conveniently located bearings 54 and 55 respectively preferably at or near the extremities of the vertical shaft 53. The vertical shaft 53 having the inner extremity 56 of a spiral spring 57 attached thereto by means of a bushing 58 the outer extremity 59 of the spiral spring 57 being attached to the housing 60 rotatably mounted in the case 51 on a suitable bearing 61 having a common center with that of the vertical shaft 53 and having attached at or near its upper edge a suitable gear 62 meshing with the pinions 63 and 64 attached to the shaft 65 and 66 respectively, and having suitable bearings 70 and 72, the shaft 65 having attached thereto a suitable gear 71 meshing with the intermediate pinion 67 rotatably mounted on a stub shaft 68 attached to the cover 52 and meshing with a pinion 69 attached to the vertical shaft 53. The said shaft 66 being also a slidable fit in the said bearings 72 and having suitably attached thereto a ratchet wheel 73 having a pawl 74 pivoted on the case 51 and so located as to engage with the teeth 75 of the ratchet wheel 73 and having a suitable spring 76 to insure the engagement of the said pawl 74, having an elongated surface as shown by the numeral 77 in Figure 10 of the accompanying drawing so as to engage with the teeth 75 of the ratchet wheel 73 when the said pinion 64 is slid into a disengaged position with the said gear 62 as shown in Figure 10 of the accompanying drawing; the said shaft 66 having attached at its lower extremity a winding key 76 or similar device located in a suitable recess 77 in the case 51.

Referring to the manipulation of the de-

vice, when the said pinion 64 is in an engaged position, as shown in Figure 7 of the accompanying drawings, the spiral spring may be wound by means of the winding key 76 and held in a wound position by means of the pawl 74, when the winding key 76 is pulled to a downward position, as shown in Figure 10 of the accompanying drawing, the said spiral spring 57 will be released and cause the said vertical shaft 53 to rotate by means of the previously described meshing gears and pinions.

It will be understood that my improved toy or device may be made of any suitable materials such as commonly used for devices of this nature.

While I have above described the preferred form, construction and arrangement of the several elements employed, it will be understood that the device is, nevertheless, susceptible of considerable modification therein, and I therefore reserve the privilege of resorting to all such changes as may be fairly embodied within the spirit and scope of the invention as claimed.

Having thus described my invention, what I claim as new and desire to protect by Letters Patent of the United States is as follows:—

1. A toy comprising a casing, a vertical shaft of magnetic material mounted in said casing, a spiral spring attached at its inner end to said shaft, a gear coaxially mounted to said shaft, the outer end of said spring being attached to said gear, a train of gears connecting said gear and said shaft, a shaft vertically mounted in said casing and having a certain amount of vertical movement, a gear fixed on said latter mentioned shaft and engageable with said first mentioned gear, a ratchet wheel fixed on said latter mentioned shaft, and an elongated pawl depending from said casing, and engaging said ratchet wheel.

2. A toy comprising a casing, a shaft of magnetic material mounted in said casing, said shaft having its end projecting from said casing, a spiral spring attached at its inner end to said shaft, a gear coaxially mounted to said shaft, the outer end of said spring being attached to said gear, a train of gears connecting said gear and said shaft, a shaft mounted in said casing, and having a certain amount of longitudinal movement, a gear fixed on said latter mentioned shaft and engageable with said first mentioned gear, a ratchet wheel fixed on said latter mentioned shaft, an elongated pawl depending from said casing, and engaging said ratchet wheel, and certain odd shaped pieces of magnetizable material engaging the projecting end of said shaft.

3. A toy comprising a casing, a vertical shaft of magnetic material mounted in said casing, a spiral spring attached at one end to said shaft, a gear coaxially mounted to said shaft, the other end of said spring being attached to said gear, a train of gears connecting said gear and said shaft, a shaft vertically mounted in said casing and having a certain amount of vertical movement, a gear fixed on said latter mentioned shaft and engageable with said first mentioned gear, a ratchet wheel fixed on said latter mentioned shaft, and an elongated pawl depending from said casing, and engaging said ratchet wheel.

4. A toy comprising a casing, a vertical shaft of magnetic material mounted in said casing, a spiral spring attached at its inner end to said shaft, a gear coaxially mounted to said shaft, the outer end of said spring being attached to said gear, a train of gears connecting said gear and said shaft, a shaft vertically mounted in said casing and having a certain amount of vertical movement, a gear fixed on said latter mentioned shaft and engageable with said first mentioned gear, a ratchet wheel fixed on said latter mentioned shaft, and a winding key fixed to one end of said latter mentioned shaft, and an elongated pawl depending from said casing, and engaging said ratchet wheel.

In testimony whereof I have affixed my signature.

ANDREW ZAIKINE.