Aug. 2, 1932. G. E. WORTHINGTON 1,869,951

PENDULUM TOY

Original Filed April 24, 1929

Fig. 7.

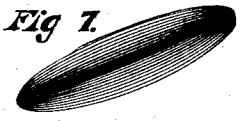


Fig. 10.



Fig. 8.

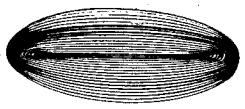


Fig. 9.



Fig. 6.

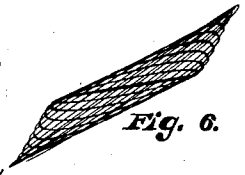


Fig. 1.

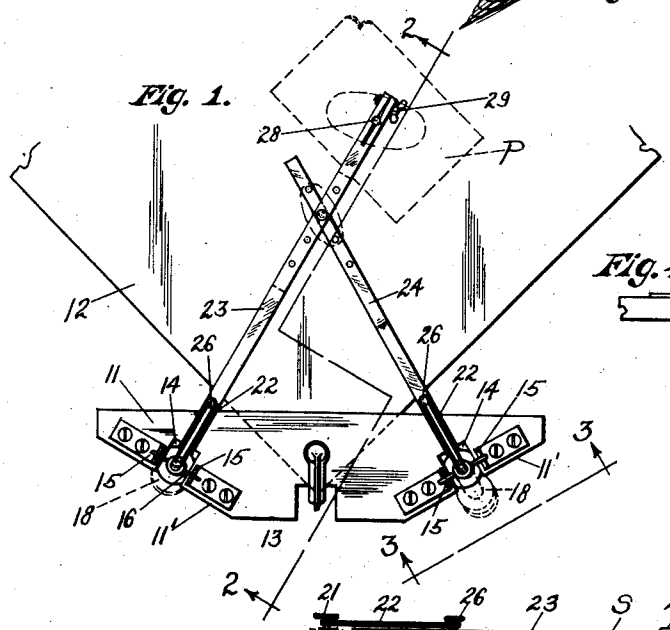


Fig. 3.

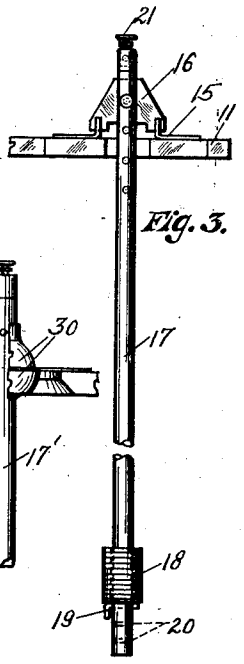


Fig. 4.

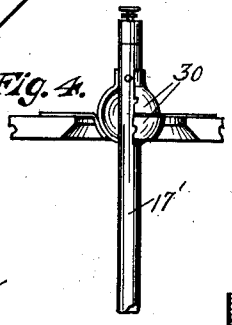


Fig. 2.

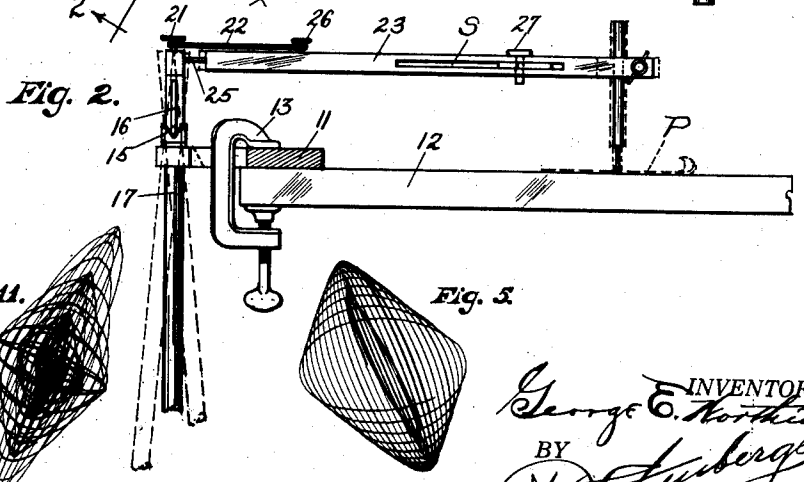


Fig. 11.

Fig. 5.

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Patented Aug. 2, 1932 1,869,951

UNITED STATES PATENT OFFICE

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PENDULUM TOY

Application filed April 24, 1929, Serial No. 357,812. Renewed December 18, 1931.

My invention relates to a pendulum toy, or amusement device adapted to automatically produce various beautiful designs with pen, or pencil, or stylus used with carbon, such marking device being actuated regularly during the swinging of the pendulum structure and producing the various designs with the regularity of the swinging of the pendulum but producing designs which are different and while the lines are uniform and evenly spaced, they are graduated down to the last movement of the pendulum. The designs are such as are practically impossible to be produced by hand.

My invention as embodied comprises two pendulums mounted to swing relative to each other, and both connected together by means of two arms which overlie the table or support upon which the paper is placed, said arms being connected together and provided with means for holding the pen, pencil or stylus.

In order to explain my invention, I have shown on the accompanying sheet of drawing one embodiment of the invention, together with a few designs as actually produced with pen and ink with the instrument, although with pencil or stylus and carbon paper the designs are less shaded. In the drawing—

Figure 1 is a plan view, looking down upon the device and the corner of a table or board upon which the device is mounted, with the pendulums swinging down toward the floor;

Figure 2 is a side elevation, partly in section, taken on the line 2—2 of Fig. 1;

Figure 3 is a view of one of the pendulums and its pivotal bearing or support;

Figure 4 is a detail showing a modified pivotal or universal mounting for the pendulum;

Figures 5, 6, 7, 8, 9, 10, 11 are actual designs made with the instrument with pen and ink.

Referring now in detail to the drawing, I have provided a supporting member 11, adapted to be mounted upon the corner of a table or board, 12, and secured, as by means of a clamp 13, and having two angle portions, as at 11′, 11′, with notches, as 14, cut therein, and with V-shaped bearing plates 15, mounted thereon to receive the bearing plates 16, to which pendulums 17, 17, are adjustably attached, whereby said pendulums can swing in directions at angles to each other. Said pendulums are provided at their lower ends with weight elements, 18, 18, which can also be adjusted on the lower ends of said pendulums by means of pins 19, through holes 20 in said pendulums. The upper ends of said pendulums project above the pivotal mountings, and are shown provided with tacks or holding elements, 21, over which rubber bands 22, can be placed for holding the ends of two arms 23 and 24, having points 25, 25, bearing against the upper ends of the pendulums, to be moved thereby, the other ends of said rubber bands being placed over holding elements or tacks 26, 26, on the arms 23 and 24, as shown in Fig. 1 and Fig. 2. The two arms 23 and 24, are adjustably connected together at their outer ends, one arm being inserted through a slot S in the other and held in adjusted position by means of a through pin 27. The outer end of one of said arms, 23, is split and adapted to hold a pencil, pen or stylus, designated 28, held in place by means of a thumb nut 29.

In Fig. 4, I have shown one means for mounting the pendulums for universal swinging movement, by means of ball and socket bearing, designated as a whole 30.

The use and operation of the instrument may be briefly described as follows:

The instrument is set up as indicated in Figs. 1 and 2, the stylus 28, being in place and resting upon the paper P, which may be carbon over a sheet of paper to receive the design, or if pencil or pen is used, the paper may be a sheet of paper to receive the design without any carbon. The parts being properly mounted and adjusted, substantially as shown, the pen, pencil or stylus is raised and the pendulums started to swinging and then the pen, pencil or stylus let down gently upon the paper and the design commences and will be formed as the pendulums swing until quiet. No two designs are alike and there is no way of accurately determining that the designs will be the same in size or configuration. It will be noted that the lines are uniformly spaced and are made with such uni-

formity and regularity as to curvature, spacing and beauty and yet without any control other than to start the pendulums to swinging. The two pendulums swing at angles to each other and the arms are connected to be moved together. The various adjustments of the connections provided vary the designs as to size and form, and while I have shown and described one practical embodiment of the invention, I am aware that changes in details can be made without departing from the spirit of the invention, and I do not, therefore, limit the invention, except as I may be limited by the hereto appended claims.

I claim:

1. In combination, a marking device, two pendulum rods mounted to swing freely, and rigid means connecting said pendulum rods to said marking device to operate the same during the swinging of said pendulums.

2. In combination, two pendulums mounted to swing about axes at an angle to each other, two arms connected to said pendulums to be moved therewith, said arms being connected together at their outer ends, and a marking device carried by the outer end of one of said arms for marking as said pendulums swing.

3. In a device of the character referred to, in combination, a plurality of pendulums mounted to swing together about axes at angles to each other, arms connected with said pendulums and moved back and forth as said pendulums swing, said arms being connected together at their free ends, and marking means carried by the free end of one of said arms and adapted to move upon a surface and to scribe a design during the swinging of said pendulums.

4. In a device of the character referred to, in combination, a plurality of pendulums mounted to swing about axes at angles to each other and having their upper ends above the pivotal mountings for said pendulums, arms connected to the upper ends of said pendulums, the free ends of said arms being adjustably connected together, marking means carried at the free end of one of said arms and adapted to mark upon a surface during the swinging of said pendulums.

5. In combination, a pendulum, an arm connected to be moved horizontally as said pendulum swings and to have imparted thereto varying lateral movements, a member connected to said arms to cause it to move laterally as it is moved longitudinally, and marking means carried by said arm at its free end and adapted to mark upon a surface during the pendulum operation and to prescribe varying designs upon said surface.

Signed at Los Angeles, Los Angeles County, California, this 17th day of April, 1929.

GEORGE E. WORTHINGTON.