

[54] **MAGNETIC ATTRACTION APPARATUS**

[75] Inventors: **Marvin I. Glass**, Chicago; **Jeffrey D. Breslow**, Highland Park, both of Ill.

[73] Assignee: **Marvin Glass & Associates**, Chicago, Ill.

[22] Filed: **Sept. 15, 1972**

[21] Appl. No.: **289,574**

[52] U.S. Cl. **273/1 M, 46/236**

[51] Int. Cl. **A63b 67/00**

[58] Field of Search **273/95 R, 1 R, 1 M, 273/143 C, 141 A; 46/242, 236-241**

[56] **References Cited**

UNITED STATES PATENTS

1,695,624	12/1928	Welpley	273/1 M
1,257,045	2/1918	Stotler	273/1 M
3,478,466	11/1969	Conner	273/1 M
3,312,470	4/1967	Ames	273/1 M

FOREIGN PATENTS OR APPLICATIONS

3,371	1810	Great Britain	273/141 A
964,851	1950	France	273/141 A

Primary Examiner—Richard C. Pinkham

Assistant Examiner—Marvin Siskind

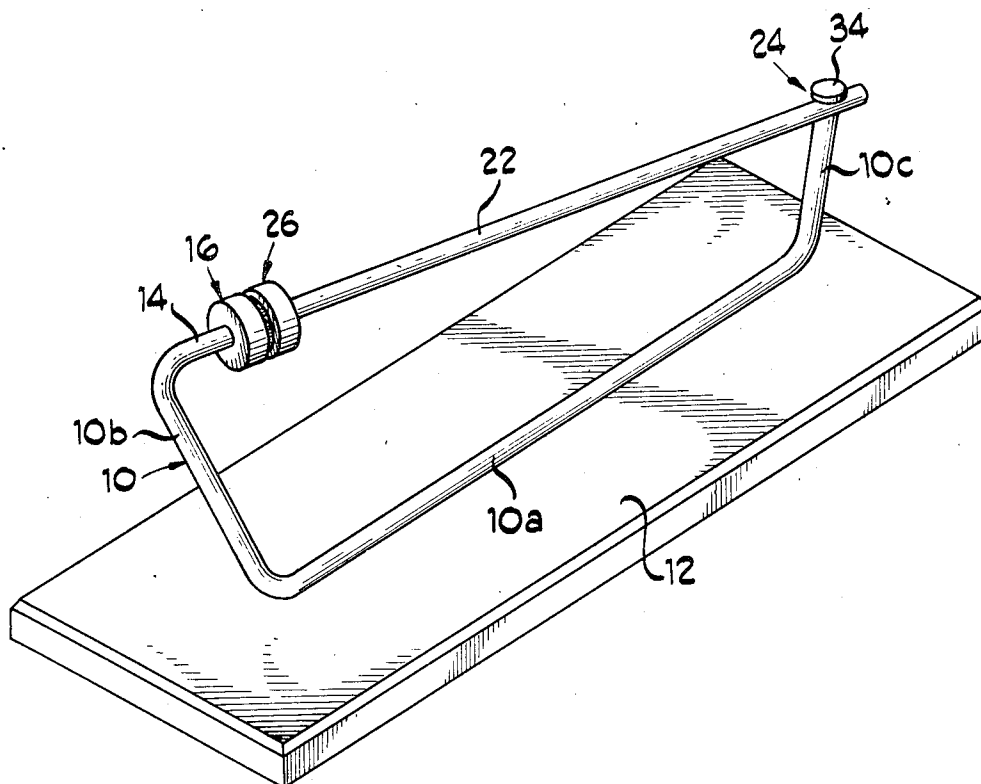
Attorney—James F. Coffee et al.

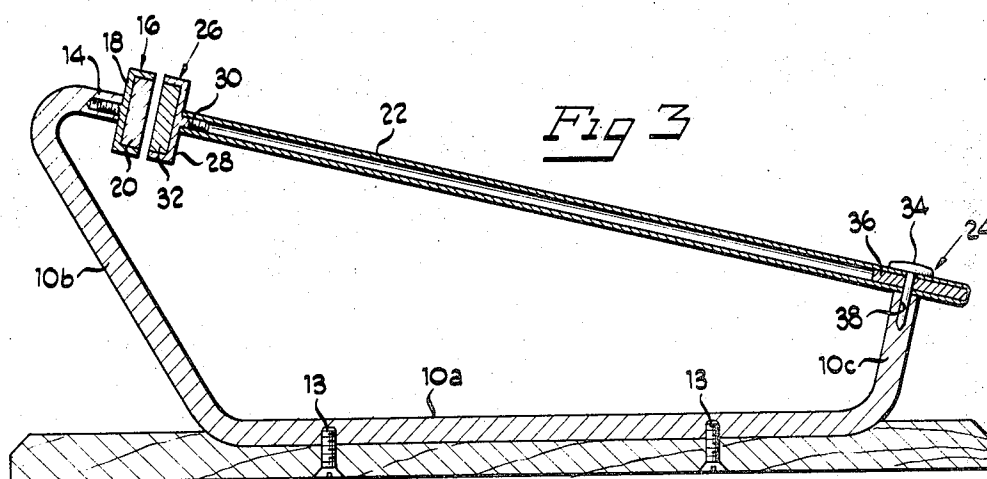
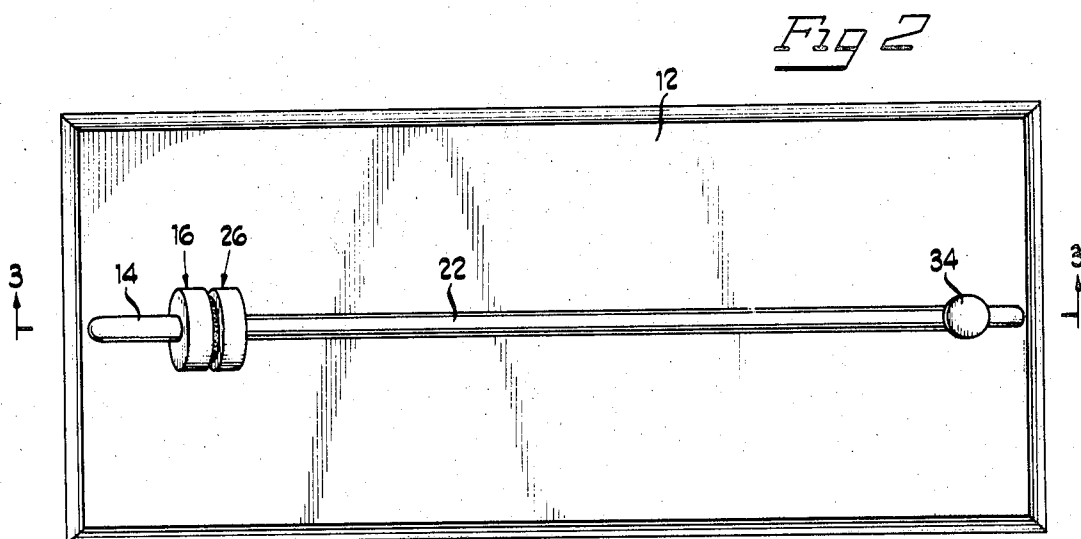
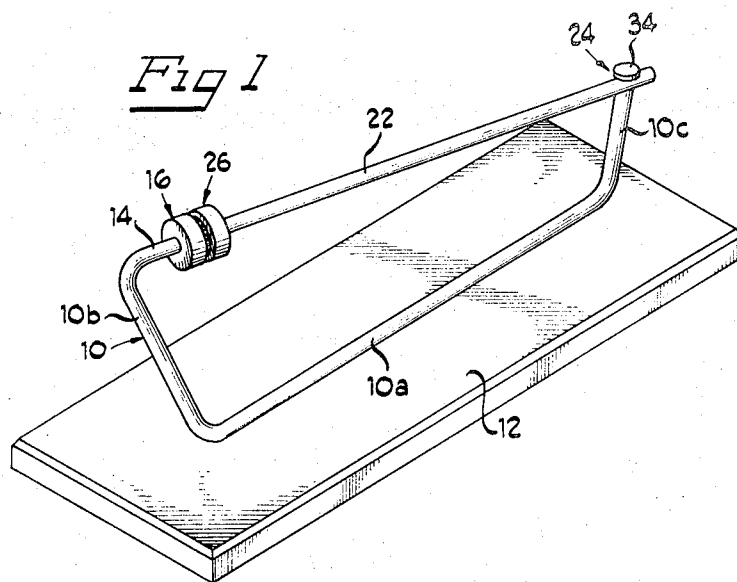
[57]

ABSTRACT

A novelty or game device which includes a pair of magnets provided with relative movement whereby the movement may be caused to stop should the magnets be brought into sufficiently close proximity to each other to be mutually attracted thereby. One magnet is immovably mounted on an upright support member, and a second magnet is mounted on the free swinging end of an elongated manually manipulatable support arm. The opposite end of the support arm is pivoted to a second upright support member spaced from the first support member. As the support arm is swung about the second upright support member, the magnet on the free end thereof is swung in a defined circle into sufficiently close proximity to the fixed magnet whereby the two magnets may mutually attract each other and stop the swinging magnet only if it is travelling at a sufficiently slow rate of speed.

3 Claims, 3 Drawing Figures





MAGNETIC ATTRACTION APPARATUS

BACKGROUND AND SUMMARY OF THE INVENTION

This invention relates to novelty devices and particularly to hand manipulatable novelty devices which, in turn, provide a challenging game type apparatus.

Various hand manipulatable game type novelty devices presently are available and are becoming increasingly popular not only as game devices but as novelty devices for use in offices or the like. Many such devices employ balls or other movable objects which must be manipulated by a user of the device, with considerable manual dexterity, in order to achieve the object presented by the device.

The principal object of the present invention is to provide a new and improved novelty or game device of the character described.

In the exemplary embodiment of the invention, a generally U-shaped rod-like support structure is provided, with leg portions of the U-shaped support structure comprising first and second spaced upright support members. An immovable magnet is mounted in elevated position on one of the upstanding leg portions of the U-shaped support structure. A manipulatable member in the form of an elongated support arm is pivoted at one end thereof onto the top of the other leg portion of the U-shaped support structure for full 360° swinging motion thereabout. A second magnet is mounted on the free swinging end of the elongated support arm for orbital movement into close proximity to the immovable magnet so that mutual attraction between the magnets may cause the swinging magnet to stop only if the support arm is manipulated so as to swing the magnet thereon at a sufficiently slow rate of speed past the immovable magnet.

Other objects, features and advantages of the invention will be apparent from the following detailed description taken in connection with the accompanying drawings.

DESCRIPTION OF THE DRAWINGS

FIG. 1 is a perspective view of a novelty or game device made in accordance with the concepts of the present invention;

FIG. 2 is a top plan view, on an enlarged scale, of the novelty or game device of FIG. 1; and

FIG. 3 is a vertical section taken generally along the line 3—3 of FIG. 2.

DETAILED DESCRIPTION OF THE INVENTION

Referring to the drawings in greater detail, an exemplary embodiment of the invention is shown therein and includes a generally U-shaped support structure, generally designated 10, with the bight portion 10a thereof fixed to a base platform 12 so that leg portions 10b and 10c of the support structure protrude upwardly from the platform 12. The leg portions 10b and 10c of the generally U-shaped support structure comprise first and second generally upright support members, respectively.

As shown in FIG. 3, the bight portion 10a of the generally U-shaped support structure 10 is fixed to the platform 12 by means of a pair of screws 13.

In the embodiment of the invention shown in the drawings, the leg portion or first upright support member 10b is shown inclined outwardly in relation to the

top of the platform 12 and has an inwardly protruding support portion 14. A first, immovable magnetic means, generally designated 16, is fixed to the inner end of the support portion 14. The magnetic means 16 includes a cup-like open receptacle 18 within which is mounted a permanent magnet 20.

An elongated tubular support arm 22 is pivoted at one end, generally designated 24, to the top of the leg portion or second support member 10c for full 360° swinging movement thereabout. Second magnetic means, generally designated 26, is fixed to the free swinging end of the support arm 22. As with the immovable magnetic means 16, magnetic means 26 includes a cup-like open receptacle 28, secured by a boss 30 within the free swinging end of the support arm 22. A permanent magnet 32 is mounted within the cup-like receptacle 28. The magnets 20 and 32 are mutually attractable when mounted as shown.

The support arm 22 is pivoted to the leg portion or second support member 10c by means of a pin member 34 which protrudes through a plug member 36 within the support arm and is press fit within an aperture 38 in the top of the support member 10c. The support arm thus is capable of swinging the magnet 32 in a confined path, namely a fixed circle which is close to magnet 20 at one point therealong.

With the above described structure, the elongated tubular support arm 22 comprises a hand manipulatable member which is swung by users of the device about its pivot connection with the upright support leg 10c of the support structure. The manipulatable member defines the path of swinging movement of the magnetic means 26 and permits the magnetic means 26 to be swung into close proximity to the magnetic means 16, whereby the magnets 20 and 32 are mutually attracted. The object of the game or device is to stop the swinging movement of the magnetic means 26 by swinging the manipulatable support arm 22 at a sufficiently slow rate of speed that the mutual attraction between the magnetic means 16, 26 will halt swinging movement of the support arm. Considerable manual dexterity is required, the degree depending upon the magnetic force of attraction between the magnetic means 16, 26.

As seen best in FIG. 3, support leg 10b is higher than support leg 10c and the support arm 22 is pivoted to the top of support leg 10c so that it is canted relative thereto. In this manner, the magnetic means 26 is swung upwardly toward the magnetic means 16 and moves downwardly away from the magnetic means 16. Thus the magnetic means 26 has a tendency to swing under gravity away from magnetic means 26.

The novelty or game device of the present invention could be made more difficult by providing a degree of vertical movement of the support arm 22 in relation to the leg portion or support member 10c whereby the magnetic means 26 would be capable of being swung above or below the magnetic means 16 as it passes thereby. Thus, not only would the rate of speed be a critical factor in stopping the swinging movement of the support arm 22, but the support arm would have to be swung in a path whereby the magnetic means 26 travels in sufficiently close proximity to the magnetic means 16.

It should be pointed out that the use of the terms "magnetic means" herein and in the claims hereof does not necessarily mean and is not restricted to a pair of

3

permanent magnets, as shown. Obviously, other magnetic means, such as a single permanent magnet and a highly attractable metallic object on one or the other of the support arm of the fixed support leg **10b** could be utilized. No unnecessary limitations are intended.

The foregoing detailed description has been given for clearness of understanding only and no unnecessary limitations should be understood therefrom as some modifications will be obvious to those skilled in the art.

We claim:

1. A novelty device comprising:

a generally U-shaped support structure having first and second upstanding leg portions;

first magnetic means mounted in an elevated position on said first leg portion;

a generally rigid elongated support arm rotatably mounted at one end to said second leg portion so that said support arm is swingable through the air relative to said second leg portion between said leg portions; and

4

second magnetic means attractable by said first magnetic means and mounted on the free swinging end of said support arm, the free end of said support arm defining a path of travel for said second magnetic means, one portion of said path of travel being sufficiently close to the first magnetic means so that said first and second magnetic means attract one another, whereby the magnetic attraction between said first and second magnetic means can stop the rotation of the support arm and the second magnetic means thereon when said second magnetic means is travelling at a sufficiently slow rate of speed.

2. The novelty device of claim **1** wherein said support arm may be swung a full 360° about said second leg portion.

3. The novelty device of claim **1** wherein said first magnetic means is mounted above the mounting between the support arm and said second leg portion.

* * * * *

25

30

35

40

45

50

55

60

65