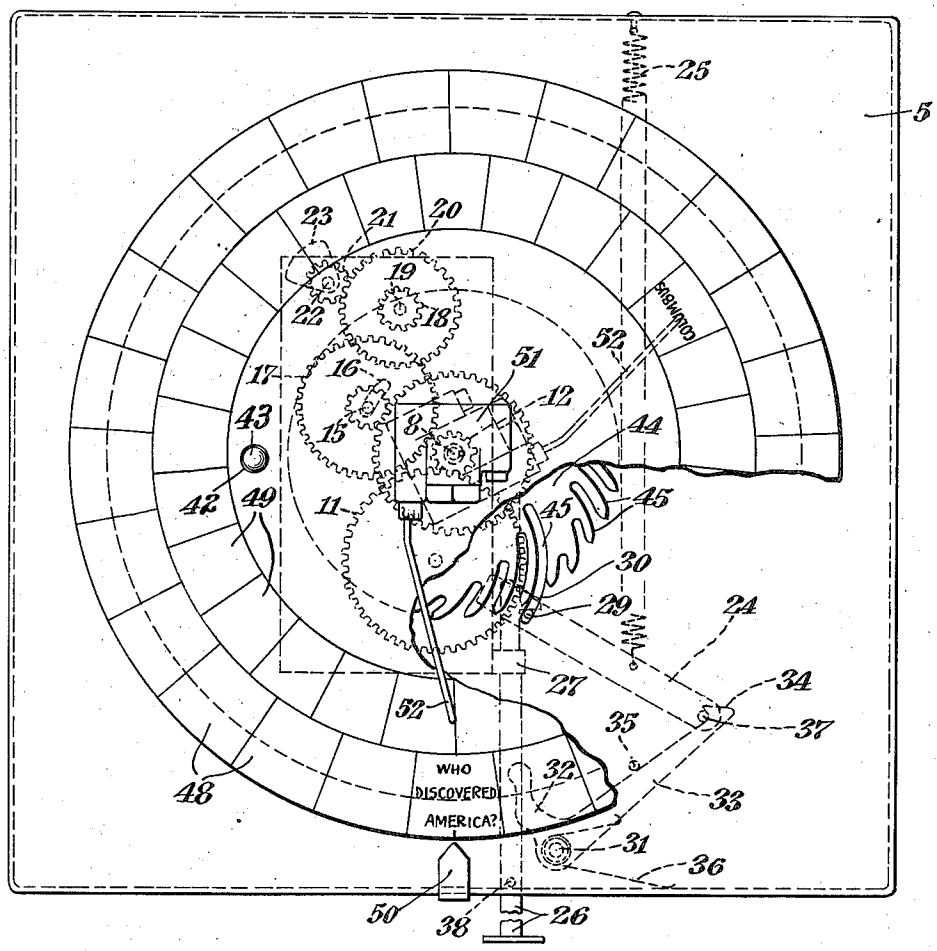
Feb. 15, 1938. C. F. COOKSON 2,108,430

AMUSEMENT DEVICE

Original Filed March 28, 1935 2 Sheets-Sheet 1

Fig. 1.



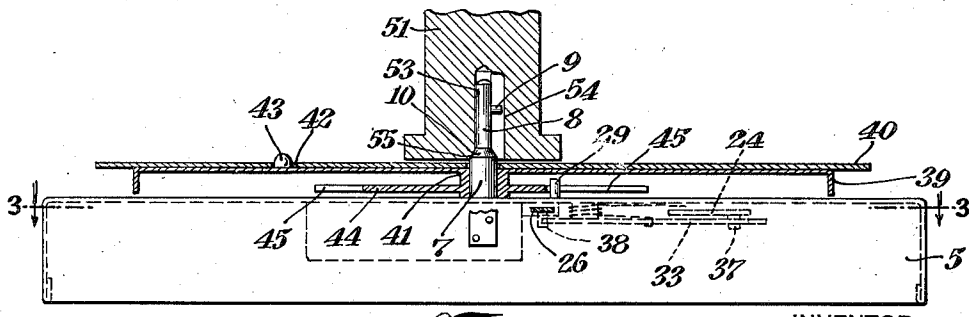


Fig. 2.

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Fig. 3.

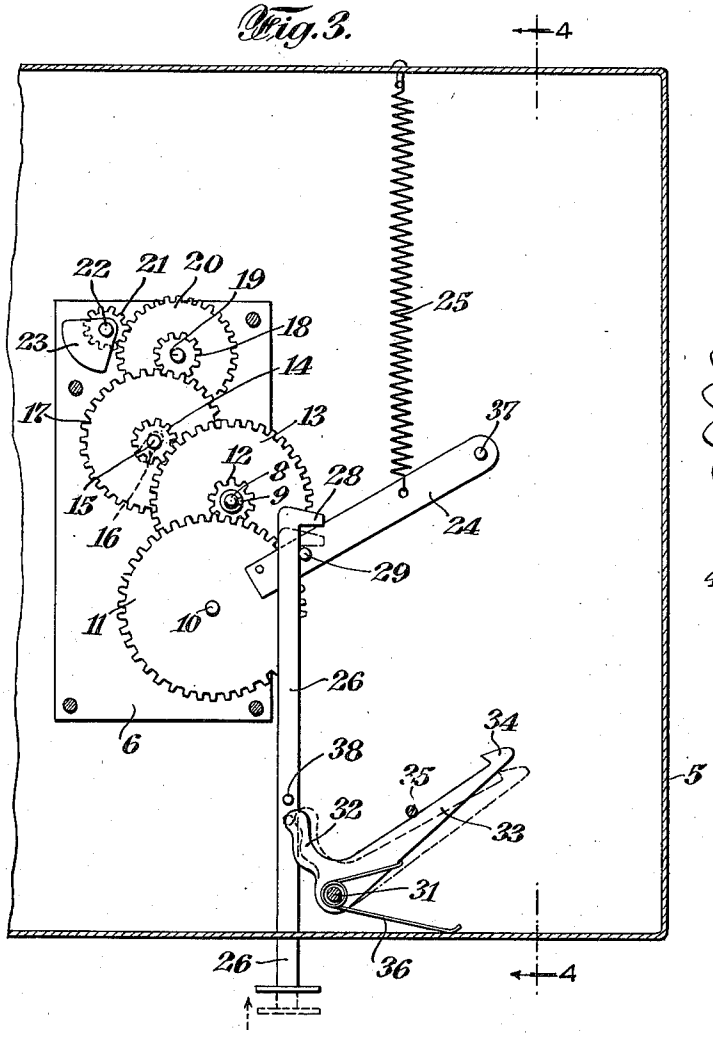
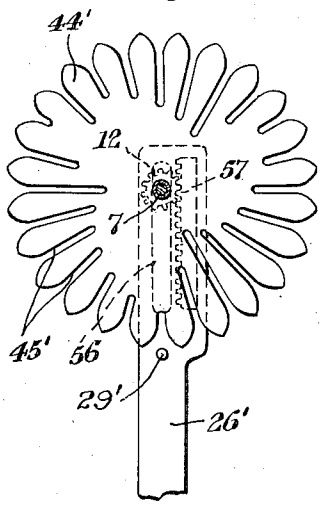


Fig. 5.



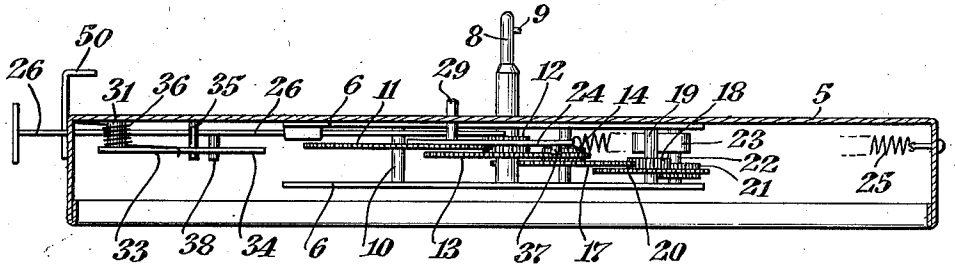


Fig. 4.

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UNITED STATES PATENT OFFICE

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AMUSEMENT DEVICE

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Application March 28, 1935, Serial No. 13,411
Renewed August 17, 1937

6 Claims. (Cl. 35—8)

This invention relates to amusement devices and has for its primary object to provide a device embodying a movable indicator with novel manually controllable means for variably limiting the movement of said indicator with respect to a series of objective points or locations delineated on a relatively stationary member or playing field.

Another object of the invention in one of its embodiments is to provide a rotatably mounted pointer or indicator and operating means therefor, said pointer being movable over an adjustable member having an annular series of questions and an annular series of answers to said questions printed thereon, together with a member rigidly connected with said adjustable member and having means to cooperate with a part of the operating means for the pointer and limit the rotation of the latter to a position above the correct answer to a selected question.

A further object of my invention is to provide a manually operable device for controlling the actuation of said pointer operating means.

Generally, the present invention aims to provide a device of the above character which is amusing and instructive, easily operated, and capable of manufacture at comparatively small cost.

With the above and other objects in view the invention consists in the improved amusement device and in the form construction and relative arrangement of its several parts, as will be hereinafter more fully described, illustrated in the accompanying drawings and subsequently defined in the appended claims.

In the drawings wherein I have illustrated several desirable embodiments of the invention, and in which similar reference characters designate corresponding parts throughout the several views;

Figure 1 is a plan view, one of the parts being broken away, illustrating a preferred embodiment of the invention.

Fig. 2 is a vertical section, the base being shown in elevation.

Fig. 3 is a horizontal section taken on the line 3—3 of Fig. 2.

Fig. 4 is a sectional view taken on the line 4—4 of Fig. 3.

Fig. 5 is a plan view illustrating a slightly modified form of a part of the device.

Referring in detail to the drawings, in the example of the invention which I have selected for illustration, the base 5 may be of any preferred form and constructed of sheet metal, wood, or other materials. To the top of this base, on the underside thereof a frame 6 is suitably secured. A vertical shaft or spindle 7, journalled in this frame, projects centrally above the base 5 and has a reduced upper end portion 8, provided with a key lug 9. At the lower end of said reduced portion 8 the spindle is formed with a conical part 10 for a purpose which will presently appear.

The spindle is rotated by the gear 11, mounted in the frame 6 and meshing with the pinion 12 fixed on said spindle. A gear 13 on the spindle is in constant mesh with a pinion 14 on vertical shaft 15, the ends of which are movable in arcuate slots, as indicated at 16, in vertically spaced parts of the frame 6. This shaft also carries gear 17 movable into and out of mesh with pinion 18 on a shaft 19 journalled in the frame. A gear 20 on shaft 19 meshes with pinion 21, to the shaft 22 of which a governor weight 23 is secured.

One end of a radially disposed arm 24 is rigidly fixed to the gear 11 and a contractile spring 25 has one of its ends attached to said arm intermediate of its ends, the other end of said spring being suitably secured to the casing or base. A rod 26 is movable in a suitable guide 27 on the frame 6 and through an opening in one marginal wall of the base 5. At its inner end this rod is formed with a hook 28 to engage a pin 29, fixed in the arm 24 adjacent to the gear 11 and extending upwardly through an arcuate slot 30 in the top of the base 5. Thus, it will be apparent that, when the rod 26 is pulled outwardly, gear 11 is rotated in a clockwise direction and shaft 15 is shifted in the slots 16 to disconnect gear 17 from pinion 18 and governor 23, thereby permitting relatively unretarded rotation of gear 11 and expansion of the spring 25.

Suitable latch means is provided for holding the spring 25 in its tensioned condition, as seen in Fig. 1 of the drawings. In the present instance, I provide a latch lever fulcrumed at 31, and having a short arm 32 and a long arm 33, terminating in the latch hook 34. The lever is yieldingly held in a normal position, with arm 33 thereof bearing against the stop pin 35, by means of a suitable spring 36. When arm 24 is moved to the position shown in dotted lines in Fig. 1, the latch hook 34 engages a stud 37 on the outer end of said arm and thus holds the spring 25 under tension after the rod 26 is released. Outward movement of said rod is limited by the pin 38 fixed thereto contacting with the front wall of the base 5. When the rod 26

is pushed inwardly pin 38 strikes the end of the short arm 32 of the latch lever and actuates said lever to disengage the hook 34 on the arm 33 thereof from the pin 37, thus releasing spring 25 which contracts and operates the gearing to rotate the spindle 7.

A support 39 for a disk 40 of cardboard or other suitable material, is provided with a central hub 41, loosely receiving the spindle 7 above the base 5. The disk 40 has an aperture 42 to receive the stud 43 on the support 39, which prevents rotation of the disk relative to the support. The hub 41 carries a disk 44, provided with circumferentially spaced arcuate slots 45, of relatively different lengths, opening upon the outer edge of said disk.

In the present instance the disk 40 has its upper surface divided by concentric circles and spaced radial lines into two series of spaces 48 and 49 respectively. In the outer series of spaces 48 suitable questions are printed and in the inner series of spaces 49 the appropriate answers to said questions are printed in circumferentially spaced relation to the respective questions, as determined by the ratio of the gear 11 and pinion 12 and the length of the slots 45. To the base 5 a suitable index member 50 is fixed, with respect to which the selected question is positioned by turning or rotating the support 39 and disk 40 around the spindle 7.

A standard 51, which may be fashioned in the form of a "robot" or mechanical man, carries a pointer 52, inclined downwardly therefrom and having its lower end positioned above and adjacent to the inner series of answer bearing spaces 49 on the disk 40. This standard at its lower end has a central bore 53 and a key-way 54 at one side thereof to receive the lug 9 on the spindle 7. The wall of said bore, at its lower end, is outwardly flared or bevelled, as at 55, to rest upon the part 10 of the spindle and support the standard 51 out of frictional bearing contact upon the disk 40.

From the above description the operation of my invention will be readily understood. The rod 26 is first pulled outwardly, as above explained, to position pin 29 in the outer end of the slot 30 and engage pin 37 on the arm 24 with the latch hook 34. Disk 40 and its support 39 are now rotated until the selected question is in line with the index member 50 and pointer 52. One of the slots 45 in the disk 44 will then be disposed in registering relation with the slot 30.

When the rod 26 is pushed inwardly the latch device is actuated to release arm 24 as above described. The initial rotation of gear 11, as spring 25 contracts, shifts the gear 17 into mesh with pinion 18 so that the governor weight 23 will act to insure rotation of the spindle 7 at a constant speed. Pin 29 on arm 24 limits the rotation of the spindle and standard 51, by contact with the inner end of the slot 45 in disk 44, at which time the lower end of the pointer 52 is positioned above the correct answer to the selected question, as shown in Fig. 1 of the drawings.

In Fig. 5 of the drawings I have shown a simplified embodiment of the essential feature of my invention in which the disk 44' is provided with radially extending slots 45' of different lengths. The inner end of rod 26' is slotted, as at 56, to receive the lower end of spindle 7. In this construction the pinion 12 and spindle 7 are rotated by a rack 57 on rod 26' as the latter is moved inwardly. As in the first described construction, disk 44' is rigidly connected with member 39 upon which the disk 40 is positioned and the pin 29' on rod 26', contacting with the inner end of one of the slots 45' limits such rotation of the spindle 7 and pointer 52 connected therewith. The proper slot 45' in the disk 44' is aligned with the pin 29' in the adjustment of disk 40 and its support 39 on the spindle in the manner above explained. When the rod is pulled outwardly pinion 12 and spindle 7 are rotated in the opposite direction to return the pointer 52 to a normal position opposite the index member 50.

The rod, rack and pinion parts shown in Figure 5 are of course, to be enclosed within the casing 5, and replace all of the mechanism shown in Figure 3 of the drawings, disk 44' being substituted for the disk 44, shown in Fig. 1.

From the above description the construction, manner of operation and several advantages of my invention will be readily understood. A series of the disks 40 may be provided, which may be easily interchanged and positioned on the adjustable support 39, it being understood that the central opening in the disk is of sufficient diameter to accommodate the spindle 7 and lug 9 thereon. Thus, after lifting the standard 51 to disconnect the same from the spindle, the disk 40 may be removed and another disk bearing different questions and answers substituted therefor.

I have herein described my invention in connection with a particular device which is instructive as well as amusing. However, it is apparent that the novel features of the present disclosure may also be advantageously employed in the operation of various other amusement devices or toys which need not be specifically referred to herein. It is, therefore, to be understood that I reserve the right to such analogous applications of my invention, as well as the privilege of resorting to all such legitimate structural alternatives of the several novel features thereof as may be fairly considered within the spirit and scope of the appended claims.

I claim:

1. In combination, a disk, a member movable over said disk, operating means for said member, and an adjustable element having means to coact with means carried by a part of said operating means and control the actuation of said operating means, whereby movement of said member is limited to one of a plurality of definite positions with respect to the surface of the disk.

2. In combination, a disk, a member movable over said disk, operating means for said member, and a manually adjustable element having spaced means, selectively cooperable with means carried by a part of said operating means to variably limit movement of said member from a predetermined position with respect to the surface of said disk.

3. In combination, a disk, a rotatably mounted member movable over the surface of said disk, operating means for said member, and means for controlling the actuation of said operating means, comprising a relatively stationary element and a member movable with a part of said operating means, said element and member being relatively adjustable and coacting with each other to variably limit the rotation of said rotatably mounted member from a predetermined position with respect to the surface of said disk.

4. In combination, a disk, a rotatably mounted

member movable over the surface of said disk, operating means for said member, and means for controlling the actuation of said operating means comprising a disk rotatably mounted in concentric relation with the axis of rotation of said member and adjustable with respect thereto, said latter disk having spaced slots of different lengths opening upon the periphery thereof, and a member carried by a part of said operating means adapted to enter a selected slot in said disk and coacting therewith to variably limit the movement of said rotatably mounted member from a predetermined position with respect to the surface of the disk.

5. In combination, a disk, a rotatably mounted member movable over the surface of said disk, operating means for said member including a drive gear, an operating spring therefor manually operable means for energizing said spring, a latch device for restraining the operative action of said spring actuated by said manually operable means to release position, and means for variably limiting the actuation of said operating means comprising relatively adjustable coacting members, one of which is movable with said drive gear, whereby movement of said rotatably mounted member from a predetermined position is correspondingly limited.

6. In combination, a base, a disk rotatably supported by the base, a co-centric spindle mounted in the base and extending above the disk, an indicating pointer detachably connected with the spindle for rotation therewith over the surface of the disk, operating means for the spindle, a limiting stop carried by a part of said operating means, a member having spaced means rotatably adjustable with the disk relative to said spindle to position a selected point on the surface of the disk relative to said pointer and one of said spaced means in position to coact with said stop, whereby actuation of said operating means is variably limited to move the pointer to another point on the disk surface having a complementary relation to said selected point.

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