June 13, 1950 A. E. ASHLEMAN 2,511,092

DICE AGITATING GAME DEVICE

Filed June 26, 1947

Fig. 1.

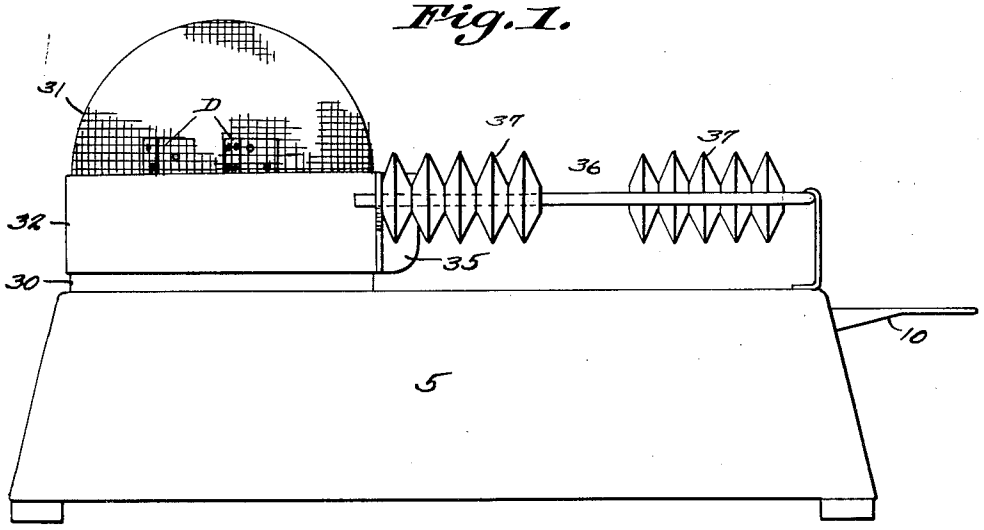


Fig. 2.

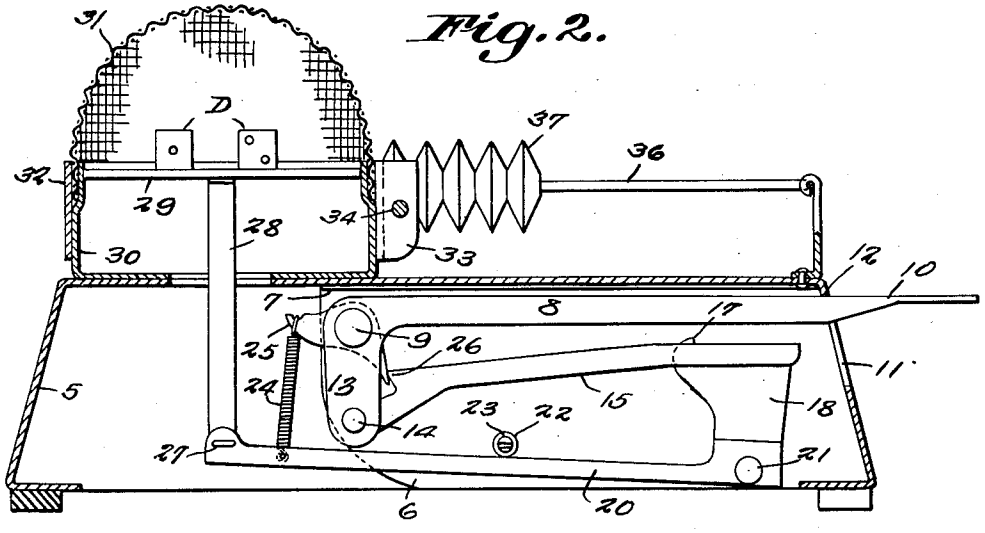
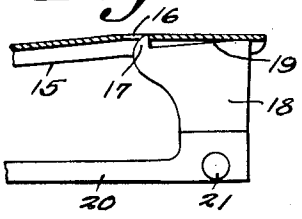


Fig. 3.



A. E. Ashleman

INVENTOR

BY C. A. Snow & Co.

ATTORNEYS.

Patented June 13, 1950 2,511,092

UNITED STATES PATENT OFFICE

2,511,092

DICE AGITATING GAME DEVICE

Adolph E. Ashleman, Waco, Tex.

Application June 26, 1947, Serial No. 757,108

5 Claims. (Cl. 273—145)

1

This invention relates to game devices, and more particularly, has reference to a device embodying novel means for agitating a pair of dice or the like enclosed in a housing.

The primary object of the invention is to provide a device of the character described which is simply yet attractively designed, and in which the agitating means utilized will cause the dice to be snapped into the air by a positive movement almost too fast for the eye to follow, thereby sharpening interests in the game, and insuring thorough agitation of the dice so that different faces thereof will turn up when the dice drop.

It is a further important object of the invention to provide a device of the type stated wherein the parts thereof will automatically be returned to normal position after each operation by means of the novel construction and arrangement of the actuating means itself.

With the foregoing and other objects in view which will appear as the description proceeds, the invention consists of certain novel details of construction and combinations of parts, hereinafter more fully described and pointed out in the claims, it being understood that changes may be made in the construction and arrangement of parts without departing from the spirit of the invention as claimed.

Referring to the drawing

Figure 1 is a side elevational view of a game device constructed in accordance with the invention.

Figure 2 is a longitudinal vertical section through the device, in which the actuating means remain in elevation.

Figure 3 is a fragmentary view, partly in elevation and partly in longitudinal vertical section, of a trip means embodied in the invention.

Referring to the drawing in detail, the reference character 5 designates a base. This is hollow, and of relatively elongated formation, and constitutes a housing for the actuating means embodied in the invention.

To serve as a means for mounting the moving parts of the device substantially centrally and longitudinally of the base 5, a bearing plate 6 is provided. Preferably, this extends from one end of the base 5 to a point substantially short of the other end, as best shown in Figure 2. In depth, the plate extends from the upper surface of the base substantially to the lower edge thereof. The bearing plate 6 is flat, and is disposed in a plane parallel to but slightly offset from a line drawn longitudinally through the center of the base, this construction being preferred because the actuating means embodied in the invention are mounted against one face of the bearing plate, and extend along a line drawn longitudinally through the center of the base.

2

The upper edge of the bearing plate 6 is formed with a longitudinal flange 7, whereby the bearing plate can be fixedly connected, as by welding or the like, to the under side of the upper surface of the base.

Extended longitudinally within the base 5, and positioned close to the upper surface thereof, is a bell crank lever 8, which is pivotally connected intermediate its ends to the bearing plate 6, by means of a pivot pin 9. The bell crank lever 8 is of relatively elongated formation, having a long arm and a short arm, the long arm thereof projecting beyond one end wall of the base 5 so as to constitute an operating handle 10, the operating handle 10 being extended through an opening 11 in said end wall. The upper edge of opening 11, as shown at 12, constitutes a stop limiting upward swinging of the long arm of the lever beyond a point at which it will be disposed substantially parallel to the plane of the upper surface of the base.

The short arm of the bell crank lever 8 is designated at 13, and is substantially perpendicularly disposed to the long arm. This extends downwardly within the base, and its lower end is connected, by means of pivot pin 14, to one end of an elongtaed trip rod 15, that lies below and in spaced relation to the long arm of bell crank lever 8.

As shown in Figure 3, trip rod 15 is preferably a channel member, and adjacent the free end thereof, a small slot 16 is formed in its upper surface. Received in the slot 16 is an upwardly extended catch 17, formed at one end of the upper edge of a perpendicularly disposed plate 18. The upper edge of plate 18 is slightly inclined upwardly in a direction away from the catch 17, so that the end of upper edge 19 remote from catch 17 normally lies against the under side of the upper surface of trip rod 15, at the end of the trip rod. This inclined upper edge constitutes a cam, as will appear hereinafter.

An elongated actuating arm 20 is positioned below the parts described above, and at one end is rigid with the plate 18. The actuating arm 20 and plate 18 together constitute a bell crank. At said end, the actuating arm 20 is pivotally connected to the bearing plate 6 by means of a pivot pin 21.

Upward swinging of the actuating arm 20 is limited beyond a desired point by means of a stop

22 which is preferably formed from soft rubber or other resilient material, and extends laterally from the bearing plate 6, this being suitably attached to the bearing plate by a screw 23 or the like.

This engages the actuating arm 20 at a point substantially intermediate the ends of the actuating arm.

Adjacent the other end of the actuating arm 20, which as shown in Figure 2 projects beyond the bearing plate 6, a spring 24 is connected at one end to said arm. The other end of the spring 24 is connected to one end of a small angle member 25 which is pivoted intermediate its ends to the bearing plate 6, by means of pivot pin 9. The other end of the short angle member 25 is projected downwardly, and is urged by the action of the spring 24, tending to compress, against a projection 26 formed on trip rod 15 adjacent the pivotal connection 14 of the trip rod to the bearing plate.

Referring to the operation of the parts hereinbefore described, it should be noted at the outset that all the various moving parts will be normally retained in the positions shown in Figure 2 by the tendency of the spring 24 to compress. By reason of this tendency, the downwardly extended end of the angle member 25 is continually urged against projection 26. This causes trip rod 15 to be continually urged to the right in Figure 2, and therefore, by reason of the pivotal connection 14, the bell crank lever 8 is swung upwardly so that its operating handle 10 is in engagement with the upper edge of opening 11, as shown at 12. In the meantime, the compressing action of spring 24 pulls the actuating arm 20 upwardly, into engagement with stop 22, and this causes catch 17 to be positively retained in engagement with end wall of slot 16, in which position the inclined upper edge 19 of the plate 18 is in engagement with the end of the trip rod 15.

Because of this construction and arrangement, the following will occur in operating the device. The operator depresses the operating handle 10. This causes the short arm 13 of bell crank lever 8 to be swung in a direction away from the operating handle, moving with it the trip rod 15. Since catch 17 is engaged by the trip rod 15, the plate 18 is also swung forwardly, and thus the remote end of the actuating arm 20 is swung downwardly to a noticeable extent. All these movements will, as will be readily observed from the drawing, occur simultaneously. At the same time of course, the projection 26 on trip rod 15 will simultaneously cause the other end of the angle member 25 to be swung upwardly, and it is seen from this that spring 24 is simultaneously distended in opposite directions, that is both ends of the spring are simultaneously moved away from each other.

Concurrent with these movements, the inclined upper edge 19 or more properly, that end of the upper edge 19 that is in engagement with trip rod 15, is being swung upwardly in a very slight arc, by reason of plate 18 being moved in the manner described above. As a result, the free end of the trip rod 15 is caused to ride up on the catch 17, and as the operator continues to depress the operating handle 10, catch 17 is suddenly freed from engagement with the trip rod 15. Therefore, spring 24 instantaneously snaps the free end of the actuating arm 20 upwardly, against its stop 22.

When the operating handle 10 is released, spring 24, being still expanded due to projection 26 having moved that end of angle member 25 to which the spring is connected in an upward direction, will now be free to compress. Trip rod 15 is accordingly moved rearwardly, swinging the operating handle 10 back to normal position. As trip rod 15 moves rearwardly, its upper surface slides along catch 17 until slot 16 reaches and comes into engagement with the catch. The parts are all thus returned to normal position.

The free end of actuating arm 20 is pivotally connected as by a cotter pin 27, to one end of a plunger rod 28, the other end of which carries a platform 29 for dice D. Platform 29 is freely slidable in a cup 30, fixedly mounted on the base 5. A dome 31, which may be of screen material, is positioned over the cup 30, and can be effectively retained thereon by means of sleeve clamp 32 or other suitable fastening means. Sleeve clamp 32 has spaced ears 33, formed with registering openings in which may be received bolt and nut means 34 or the like. The bolt 34 can also be passed through laterally projecting ears 35, carrying spaced rods 36 on which slidable counters 37 are placed, for the purpose of scoring the competitor's efforts.

By reason of the construction described immediately above, the upward snapping of actuating arm 20 caused by the lower end of the spring compressing, bringing the actuating arm forcibly against stop 22, causes the platform 29 to be similarly actuated, and it has been found that this will cause a pair of dice D to be impelled upwardly in effect simultaneously with release of the catch 17 from trip rod 15. In operation of a device constructed in accordance with the invention, the pair of dice D are found usually to strike the dome 31 forcibly, and a different pairing of faces of the dice, because of the thorough agitation thereof, results.

It may be noted that the platform 29 is depressed concurrently with depression of the operating handle 10, as may be observed from the construction and arrangement described hereinbefore. As it reaches a certain point in its downward travel, it is suddenly caused to spring back to normal position in a movement which is instantaneous so far as the eye of the observer can perceive. It is this snapping movement that causes the dice D to be forcibly impelled into the air.

What is claimed is:

1. A game device for agitating dice, comprising a base, a bell crank lever pivoted therein, a trip rod connected to the bell crank lever, an actuating arm pivotally mounted in the base, a catch carried by one end of the actuating arm releasably engageable by the trip rod, said end adjacent the catch being formed as a cam and being in slidable contact with the trip rod to move the trip rod out of engagement with the catch on movement of the arm a predetermined distance by the trip rod, means adapted to yieldably retain the bell crank lever, trip rod, and actuating arm in a normal position, a plunger rod connected to the actuating arm, and a dice-carrying platform carried by the plunger rod.

2. A game device for agitating dice, comprising a base, a bell crank lever, having a long and a short arm, pivoted therein, the long arm constituting an operating handle, a trip rod extended adjacent to and longitudinally of the long arm, one end of the trip rod being pivoted to the short arm; there being a slot in the trip rod adjacent its other end, a plate, having one edge slidably engageable with the latter end, said edge being formed with a catch portion and a portion in-

clined relative to said end of the trip rod, the catch portion being releasably engageable within the slot, an actuating arm fixedly connected at one end to the opposite edge of the plate, the actuating arm being pivotally mounted in the base at said end, a stop in the base engageable with the actuating arm, an angle member pivotally mounted in the base, a projection intermediate the ends of the trip rod slidably engageable by one end of the angle member, a spring connected at one end to the other end of the angle member, and at the other end to the actuating arm, a dice-carrying platform operatively connected to the actuating arm for joint movement, and an enclosed cup on the base in which the platform is slidable.

3. A game device for agitating dice, comprising a base, a bell crank lever therein, an operating handle on the bell crank lever, a trip rod pivotally connected to the bell crank lever, there being a slot in the trip rod, an actuating arm pivotally mounted in the base, a plate carried by the actuating arm, a catch on the plate releasably engaged in the slot, the plate being proportioned to slidably engage the trip rod for releasing the catch, means for limiting movement of the actuating arm, means for returning the bell crank lever, trip rod, and actuating arm to normal position, a cup on the base, a platform slidable therein, and means for connecting the actuating arm and platform for joint movement.

4. In a game device, a base, opposed bell cranks pivoted to the base, a trip rod connected to one bell crank for movement in one direction thereby, a catch on the other bell crank normally engaged by the trip rod for movement of said last named bell crank in one direction, a cam on the last named bell crank adapted to move the trip rod out of engagement with the catch on movement of the last named bell crank by the trip rod a predetermined distance, a spring connected at one end to the last named bell

crank, and an angle member pivoted to the base, said angle member connected to the other end of the spring and engaging the trip rod, said spring adapted to return the angle member, trip rod, and bell crank to normal position on release of the catch, and a stop against which the actuating arm engages, restricting movement of the actuating arm and cooperating members, under the action of the spring.

5. A game device including a base, a ball crank pivoted between its ends to the base and having one end formed as an operating handle, a trip rod pivotally connected at one end to the other end of the bell crank for movement in the direction of its length on depression of the handle, an angular actuating arm pivoted between its ends to the base, a catch rigid with one end of the arm and releasably engaged by the trip rod, a cam rigid with said end of the arm and in slidable contact with the trip rod, said cam adapted to elevate the trip rod and break the engagement between the catch and trip rod on movement of the arm a predetermined distance by the trip rod, an angle member pivoted to the base and having one end pressing against the trip rod, a spring connected at its ends to the other end of the angle member and to the actuating arm respectively, for expansion on depression of the handle and contraction on release of the catch to impart return movement to the trip rod, bell crank, and actuating arm, and a platform movably mounted in the base and connected to the actuating arm for movement thereby.

ADOLPH E. ASHLEMAN.

REFERENCES CITED

The following references are of record in the file of this patent:

UNITED STATES PATENTS

Number	Name	Date
49,700	Bee	Sept. 5, 1865
2,387,125	Derby	Oct. 16, 1945