

UNITED STATES PATENT OFFICE.

JULIAN F. BURD, OF DUPUYER, MONTANA.

TOY GAME.

SPECIFICATION forming part of Letters Patent No. 442,012, dated December 2, 1890.

Application filed January 25, 1890. Serial No. 338,046. (No model.)

To all whom it may concern:

Be it known that I, JULIAN F. BURD, of Dupuyer, in the county of Choteau and State of Montana, have invented a new and useful Improvement in Toy Games, of which the following is a full, clear, and exact description.

My invention relates to an improvement in toy games of the ball-and-pocket type, and has for its object to produce a simple inexpensive device which will combine amusement with instruction.

To these ends my invention consists in the construction and combination of parts, as is hereinafter described, and indicated in the claims.

Reference is to be had to the accompanying drawings, forming a part of this specification, in which similar letters of reference indicate corresponding parts in all the figures.

Figure 1 is a sectional side elevation of the device, taken on the line 1 1 in Fig. 2. Fig. 2 is a plan view of the device, and Fig. 3 is a sectional plan view taken on the line 3 3 in Fig. 1.

The essential features of the invention consist of a preferably circular case A, of suitable height and diameter, made of any proper material, either wood or metal.

At a central point on the base-plate of the case A within the same a shaft *a* is vertically supported by a bracket-arm *b*, which latter is secured to the base A' of the case, extends upward to a point *b'*, and thence across the center of the case as an arm, the end portion of which is vertically perforated to receive and loosely support the upright shaft *a*, as shown in Fig. 1, the foot of the shaft being stepped into a socket-orifice in the base A' and free to revolve therein, the shaft being upwardly extended through the cover of the case A and a crank-handle *a'* secured on its end.

Upon the upper portion of the shaft *a* there is located and secured at its center the disk *c*. Said disk being circular in form, has its top face cut away from the peripheral edge *c'* inwardly on a downward incline to a point *c²*, where a vertical shoulder is produced, which terminates the annular inclined track *c³*, thus afforded on the upper surface of the disk *c*. The height of the disk *c* is proportioned to that of the case A, so that a proper

space will be provided above the disk within the case, and concentric with the peripheral edge of the disk and inner surface of the circular wall of the case A a flat dial-plate *d* is secured to the disk *c*.

As shown in Fig. 2, the dial-plate *d* is notched on its edge equally throughout the same, producing star-points thereon, which are of such proportionate size that a ball *e* of suitable diameter will lie between two adjacent points *d'* and be there retained, when by action of gravity it is caused to roll toward the point *c²* on the inclined surface of the annular track *c³*.

A transparent cover *f* is secured near the top edge of the case A for retention of the ball *e* and to prevent handling of the same during a game, the shaft *a* projecting through a perforation in the center of said cover, as before mentioned.

Opposite the notches between the star-points on the dial-plate *d* a series of promiscuously-arranged letters of the alphabet are impressed or affixed near to said notches.

Numbers from 0 to 9, inclusive, may be singly and promiscuously placed on the dial on a circle within the letter-circle, or outside of the same, as may be preferred, so that a space in which the ball *e* may rest will be represented by a letter or digit. It is intended to project the ball *e* from its normal position—that is, in engagement with two points of the dial-plate *d*—forwardly and outwardly by revolvable movement of said dial-plate, as will be further explained, and to effect this tangential movement of the ball novel and simple mechanism is employed, as will be described.

On the shaft *a*, near its lower end, the ratchet-toothed wheel *g* is secured, and below said wheel the shaft is inserted through the perforated end of the pusher-bar *h*, that is loosely supported to swing in a horizontal plane by a washer *h'*. The free end of the pusher-bar extending a proper distance beyond the periphery of the wheel *g* rests and slides upon a handle-lever *i*, which is pivoted on the base of the case A by its inner end near to the wheel *g*, its other terminal, which a handle is formed, being inserted through a horizontal slot *i'* in the side wall of the case A and free to swing laterally therein.

Upon the pusher-bar *h*, near to the edge of the wheel *g*, a pawl *k* is pivoted, which is pressed toward the teeth on the wheel and caused to mesh therewith by the spring *k'*, thus adapting the pusher-bar to revolvably actuate the wheel *g* by its vibration. The pusher-bar *h* is held in its normal position in contact with the stop-pin *m* by the spiral spring *m'*, the stop-pin projecting from the base-plate *A'* and the spring being secured by its ends to the base-plate and pusher-bar, as shown in Fig. 3. Near the free end *h²* of the pusher-bar *h* a vertical latching-stud *h³* is formed on or affixed to the upper face of the lever *i*, adapted to abut against the edge of the pusher-bar and simultaneously move said bar to a position shown in dotted lines in Fig. 3, when the handle-lever *i* is swung on its pivot toward the opposite terminal of the slot *i'*, in which it is located. The lateral vibration of the lever *i* and consequent movement of the pusher-bar *h* will distend the spring *m'*, and when the limit of lateral movement is nearly reached the end of the pusher-bar will be removed from contact with the latching-stud *h³*, the length of the bar and relative position of the stud permitting such a disconnection of parts. When the pusher-bar *h* is released, it will be forcibly returned to its normal position, and the shaft *a* and the disk *c* and plate *d*, supported thereon, will be given a revoluble movement by the action of the pawl carried by the pusher-bar on the wheel *g* and the contractile force of the spring *m'*.

In operation the ball *e* may be made to rest opposite any letter or figure, and when the handle of the lever *i* is moved, as previously mentioned, the sudden revoluble movement given to the plate *d* and disk *c* will project the ball toward the wall of the case *A* tangentially from the starting-point. When the ball strikes the case, it will roll against it until the momentum of the impetus given it is expended, when it will come to rest between two points of the dial-plate by reason of the inclined surface it travels upon. The letter or figure, or both of these designating-marks, which lie opposite the ball *e* when it comes to rest, are noted, and as a certain number of consecutive or alternate strokes are given to players the sum of the digits marked to each player will denote his rank in the game, the maximum sum indicating the winner when a game is completed. When letters alone are employed as indicating-symbols, the game may be varied by fixing as a standard the highest number of words having three or four letters which are produced by players, the letters to form a word being secured by plays in regular sequence or consecutively by a player when his turn comes; or the game with letters may be changed to see who can soonest secure the initials, one or more, of his or her name.

Other variations may be made in the game which will render it amusing and instruct-

ive, as the addition of the single numbers to find their sum will give practice in arithmetic, and the use of letters, as stated, will be really a lesson in spelling.

Should the mechanism provided to actuate the ball *e* become inoperative from any cause, the crank-handle *a'* may be used to rotate the disk *c* and ball *e*.

Having thus described my invention, what I claim as new, and desire to secure by Letters Patent, is—

1. The combination, with a circular case and a vertical shaft journaled in the case, of a horizontal disk fixed on the shaft and having an annular inwardly and downwardly inclined track on its upper face, a dial-plate fixed on the disk and having a serrated edge projecting partly over the track, a ball freely supported on the track of the disk, and means for imparting a revoluble impulse to the disk and dial-plate, substantially as described.

2. The combination, with a circular case and a vertical shaft journaled in the case, of a circular horizontal disk fixed on the shaft and having an annular inwardly and downwardly inclined track thereon, a dial-plate fixed on the upper face of the disk, having indicating-symbols displayed thereon, and provided with a serrated edge projecting partly over the track, a ball freely supported on the track of the disk, a ratchet-wheel on the shaft, and lever, pawl, and ratchet mechanism adapted to impart a rotary motion in the same direction to the disk and dial-plate, substantially as shown and described.

3. The combination, with a circular case having a transparent lid, a central vertical shaft journaled in the case, and a disk secured on the upper end of the shaft and provided with an annular track on its upper face which inclines from its outer edge inwardly, of a concentric serrated dial-plate secured on the disk, having letters and numerals placed thereon opposite the notches on its edge, a ball loose on the track of the disk, a ratchet-wheel, a pusher-bar, a pawl carried by the said bar, a spring for returning the pusher-bar to its normal position, and a pivoted lever adapted to give the pusher-bar a limited movement on its pivot and to release it, substantially as set forth.

4. In a toy game of the character described, the combination, with a shaft and a ratchet-wheel thereon, of a pusher-bar mounted on the shaft, a spring-pressed pawl carried by the said bar, a spring secured to the pusher-bar for returning it to its normal position, and a lever pivoted at one side of the pusher-bar and provided with a stud adapted to engage the pusher-bar, substantially as herein shown and described.

JULIAN F. BURD.

Witnesses:

ROBERT M. STEELE,
GEO. W. CREWS.