(No Model.)

M. G. IMBACH, Jr.

COIN CONTROLLED GAME APPARATUS.

No. 476,384. Patented June 7, 1892.

Fig. 2.

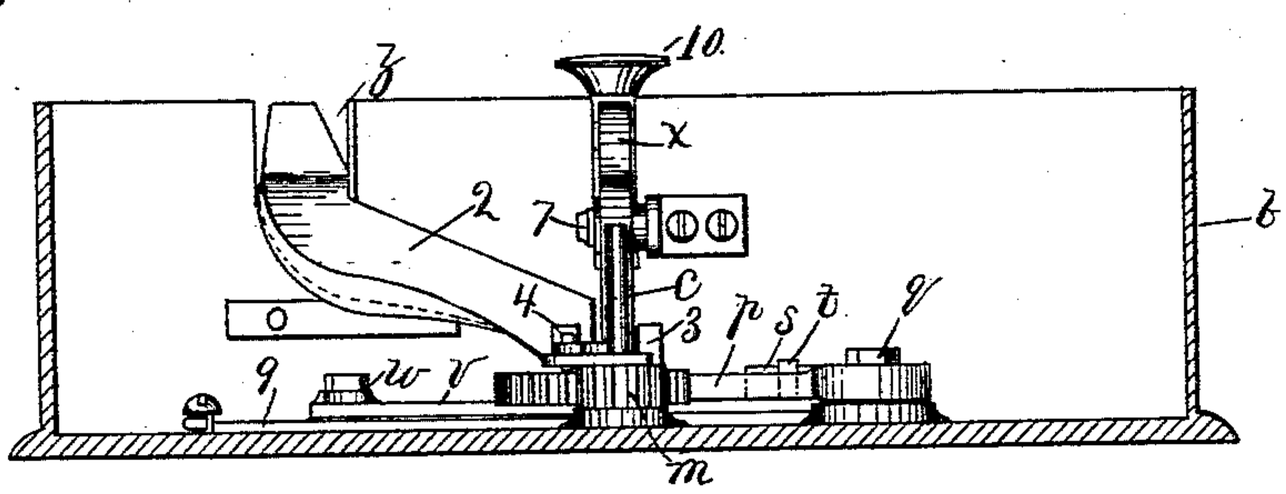


Fig. 1.

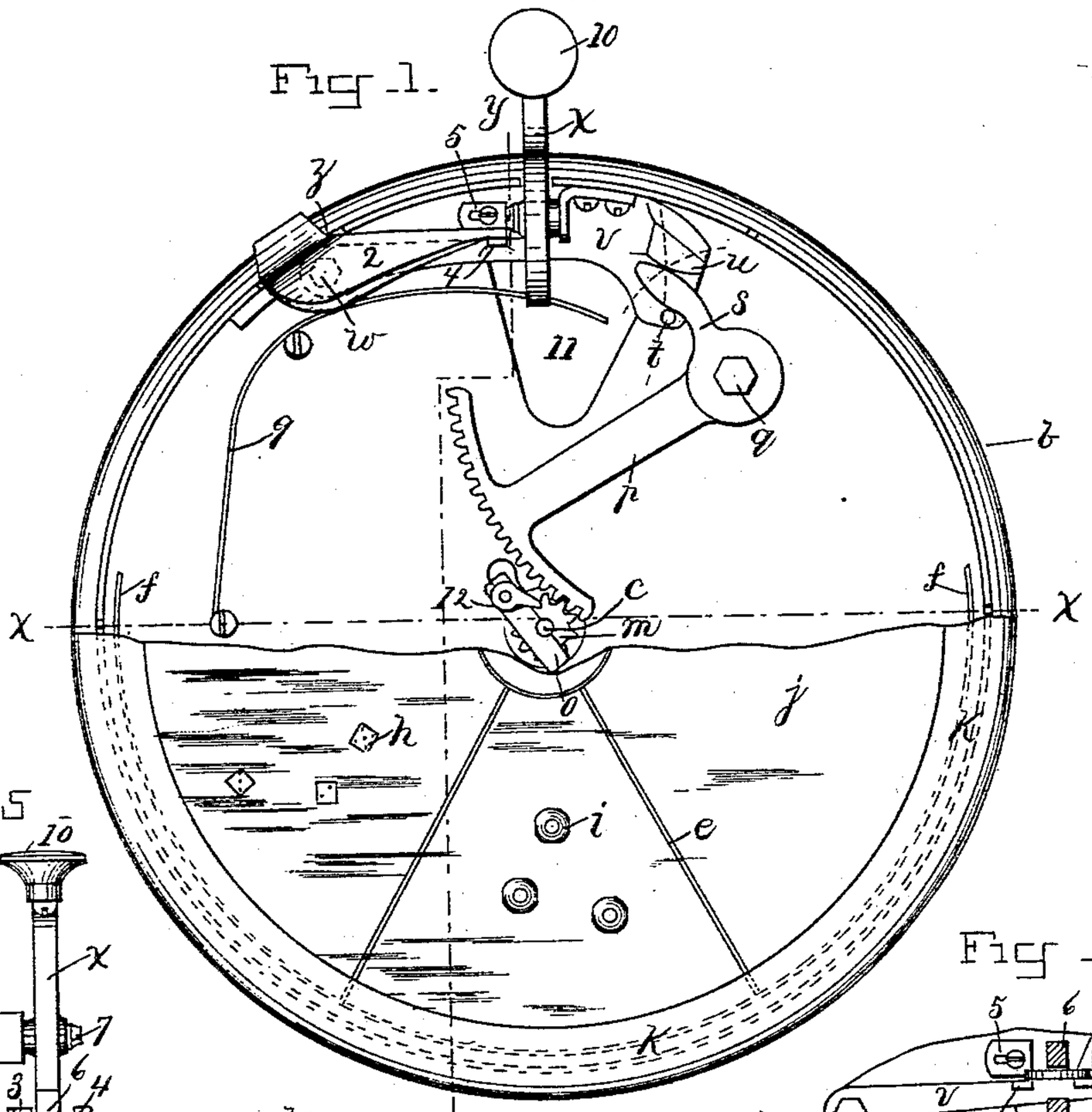


Fig. 5

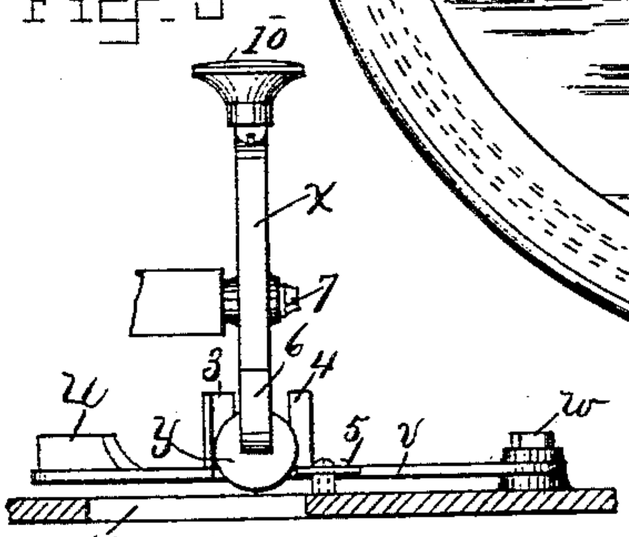


Fig. 4.

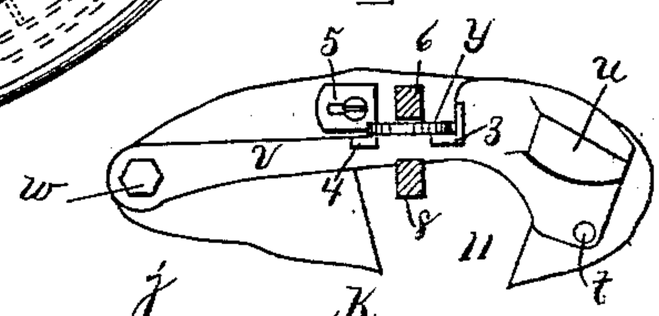
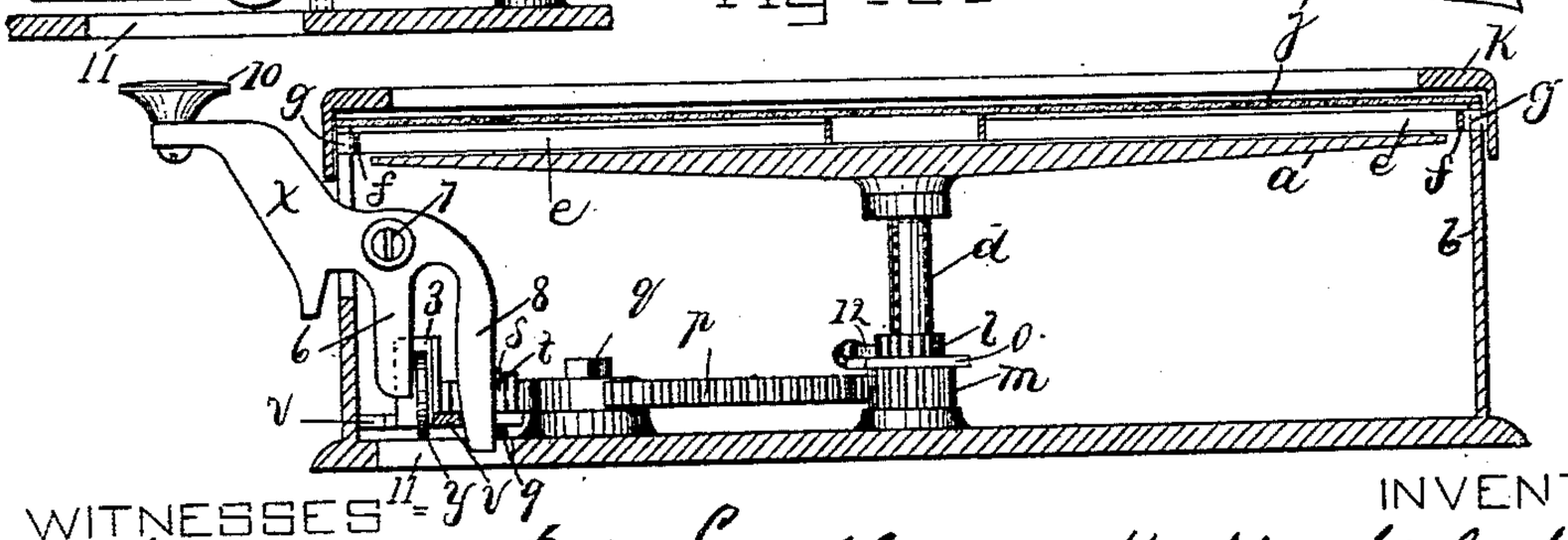


Fig. 3.



WITNESSES

Wilfred. B. Earll

O'Gallagan

INVENTOR.

Martin G Imbach Jr

By A O Thayer

atty

UNITED STATES PATENT OFFICE.

MARTIN G. IMBACH, JR., OF BROOKLYN, NEW YORK.

COIN-CONTROLLED GAME APPARATUS.

SPECIFICATION forming part of Letters Patent No. 476,384, dated June 7, 1892.

Application filed June 5, 1891. Serial No. 395,195. (No model.)

To all whom it may concern:

Be it known that I, MARTIN G. IMBACH, Jr., a citizen of the United States, and a resident of Brooklyn, in the county of Kings and State of New York, have invented certain new and useful Improvements in Coin-Controlled Game Apparatus, of which the following is a specification.

My invention consists, essentially, of a horizontally-rotating disk and novel lever-and-ratchet mechanism combined with and adapted for quickly setting in motion at high speed the said horizontally-rotating disk for rolling dice confined within certain limits on the surface of the disk, said apparatus also having novel means of being controlled by a coin dropped in a slot and forming a necessary connection for the effective action of the same, as hereinafter fully described, reference being made to the accompanying drawings, in which—

Figure 1 is a plan view of the apparatus with part of the cover and the disk removed. Fig. 2 is a transverse sectional elevation on line *x x*, Fig. 1. Fig. 3 is a transverse sectional elevation on line *y y*, Fig. 1. Fig. 4 is a detail showing a plan view of the coin-cell detached, and Fig. 5 is another detail view of the same in side elevation.

The horizontally-rotating disk *a* is mounted within and below the top of a suitable circular case *b* on a vertical axis consisting of the center pin *c*, fixed in and projecting upward from the bottom of the case, and the hollow sleeve *d*, attached to and projecting downward from the bottom of the disk and on the stud-pin which enters the socket or bore of the sleeve. Above the disk the space is divided into several fields by the radial bars *e*, which at their outer ends connect with the ring *f*, which is supported by short arms *g*, projecting outward from it at suitable distances apart and resting in notches in the top of the case *b*, in which fields dice *h* or other like game devices, as spherical bodies *i*, having a number of differently-distinguished flat faces, are to be confined, so as to be violently thrust about and changed in their positions, somewhat in the manner of shaking dice, by the effect of the rapidly-moving disk under them and the obstructing-bars of the field-boundaries. A glass cover *j* is placed above the disk to prevent the moving bodies from being thrown off without obstructing the sight of them, and a flanged ring *k* is applied to secure the glass.

The sleeve *d* has a ratchet-wheel *l* at its lower end, below which is a toothed pinion *m*, turning freely on the lower portion of the stud-pin and carrying the pawl 12 on an arm *o*, attached to the upper side of said pinion, suitably for turning the ratchet-wheel, and thereby turning the disk by said pawl. This pinion gears with the toothed segment *p*, pivoted on the center *q* and having a radial arm *s* projecting between the stud-pin *t* and lug *u* of a thrusting-lever *v*, pivoted at *w*, and employed to transmit the motion of the hand-lever *x* for working the disk when suitable connection therefor is made by a coin *y*, dropped through the slot *z* into the chute 2, the lever then being actuated by a forcible thrust of the hand on the knob 10.

The lever *v* is placed horizontally, and at about the middle of its length has the angle-standard 3, extending upward at a suitable distance from and fronting another standard 4, also extending upward from the lever at a suitable distance, which with the pendent arm 6 of the hand-lever and the adjustable bottom piece 5, seated on a stud of the bottom of the case, constitute the coin-receptacle, into which the coins are conducted by the chute 2.

The hand-lever *x*, which is pivoted at 7 so as to swing in a vertical plane of the axis of the disk, has another arm 8, reaching over and down in front of the lever *v*, suitable for shifting it back after having been thrust forward to actuate the disk, and a spring 9 bears against it for forcing it back, or the lever may be so weighted as to gravitate backward without the spring; but it is preferred to use the spring. Below the coin-cell is an opening 11 through the base-plate for the escape of the coins when released from the cell after the forward thrust of the transmitting-lever.

The coins are retained in the cell after being dropped through the slot and before the operation of the lever by resting on the end of the bottom piece 5 and against the inside of standard 3. In the first part of the movement of the hand-lever the coin in the cell is gripped between arm 6 and the posts 3 and 4, and thus causes the lever *v* to be thrust forward by the further movement of the hand-

lever for rotating the disk, the coin being carried off the side of the bottom 5 over the opening 11 through the bottom of the case. The spring 9 instantly thrusts the hand-lever back when knob 10 is relieved of the pressure of the down-thrust on it, and the pressure of the coin against standards 3 and 4 by arm 6 is released, owing to the "slack motion" provided for between the arms 6 and 8, which allows arm 6 to release the coin when arm 8 comes into contact with lever *v* on the back-stroke and allows the coin to fall through said opening 11.

The bottom 5 is secured adjustably toward and from post 3 to enable it to be set closer to or farther away from said post, according as it may be desired to adapt the machine for coins of different sizes.

It is to be noted that the angular relation of lever *v* and the arm *s* of the toothed segment is such that the contact-point of lug *u* with said arm shifts toward the axis *q* as lever *v* swings forward to impel the segment and accelerates its motion, according as the radius of said contact shortens, and facilitates speeding the disk up to a high rate with less force and stress on the working parts at the beginning than would otherwise be required (see the dotted lines in Fig. 1, which indicate the movements when in action) of the respective parts of the lug and arm having contact when at rest.

I claim—

1. The combination, in a game apparatus, of the horizontally-rotating disk having the hollow sleeve attached to its lower side and resting on the stud-pivot attached to the bottom of the case, the horizontal driving-segment pivoted on the bottom of the case and geared with said sleeve by the ratchet and pawl, the horizontal thrusting-lever for operating said segment, also pivoted on the bottom of the case and having the stud and lug embracing the radial arm of the toothed segment, hand-lever for actuating the thrusting-lever, arranged in a vertical plane and having the pendent arms embracing the thrusting-lever, and the coin-cell providing the operative connection of said hand-lever and thrusting-lever through the instrumentality of a coin inserted through the slot and adapted to remove said connection by the escape of the coin, which is released by the retraction of the hand-lever, substantially as described.

2. The combination, with the horizontally-rotating disk and the driving-segment geared with it by the ratchet and pawl, of the thrusting-lever for operating said segment, a hand-lever for actuating the thrusting-lever, and the coin-cell providing the operative connection of said hand-lever and thrusting-lever through the instrumentality of a coin inserted through the slot, said thrusting-lever connected with the arm of the segment in the angular arrangement, whereby the contact-point of the thrusting-lever with the arm of the toothed segment shifts toward the axis of said arm and accelerates the movement of the driving-segment, substantially as described.

3. In a coin-controlled horizontally-rotating disk game apparatus having the disk-driving segment, a thrusting-lever for operating the disk-driver, and the hand-lever for actuating the thrusting-lever, the combination of the standards on the thrusting-lever, the adjustable bottom plate on the bottom of the case, and the arm of the hand-lever, forming the cell for the controlling-coin, substantially as described.

4. The combination, in a game apparatus, of the horizontally-rotating disk, inclosed field over the disk, bars dividing said field into two or more sections, and levers and driving-segment for rotating said disk, located below and geared with said disk through the ratchet and pawl, effecting continuous rotation of the disk by the thrust of the driving apparatus, substantially as described.

Signed at New York city, in the county of New York and State of New York, this 11th day of May, A. D. 1891.

M. G. IMBACH, JR.

Witnesses:
W. J. MORGAN,
W. B. EARLL.