

(No Model.)

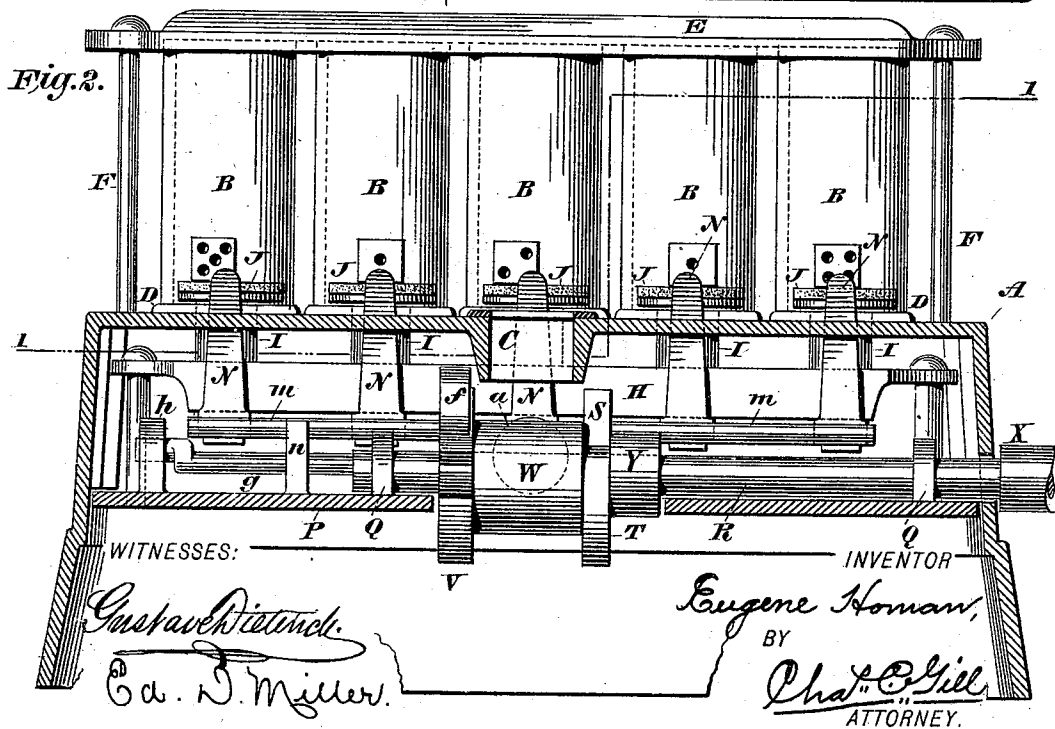
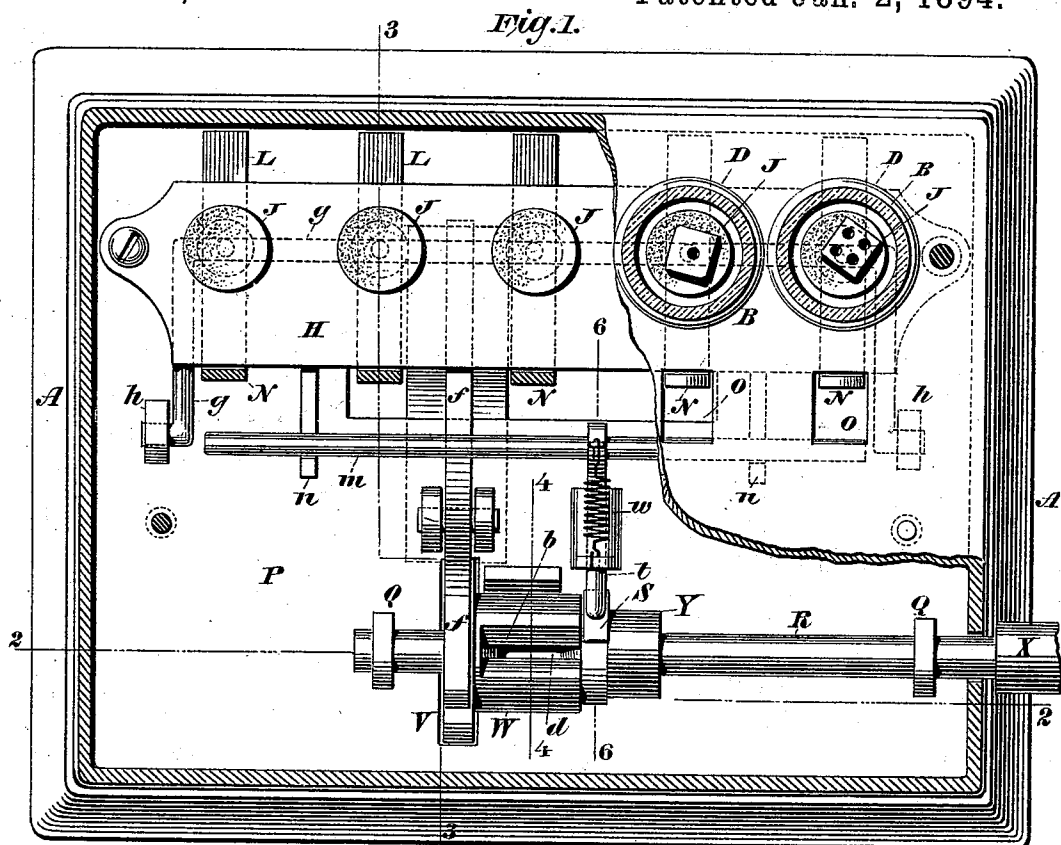
2 Sheets—Sheet 1.

E. HOMAN.

COIN CONTROLLED MACHINE FOR THROWING DICE.

No. 512,031.

Patented Jan. 2, 1894.



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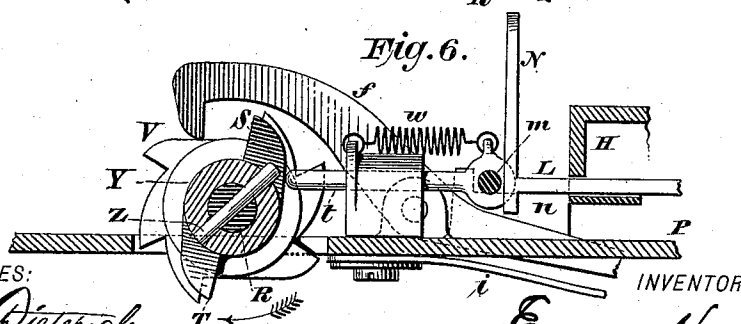
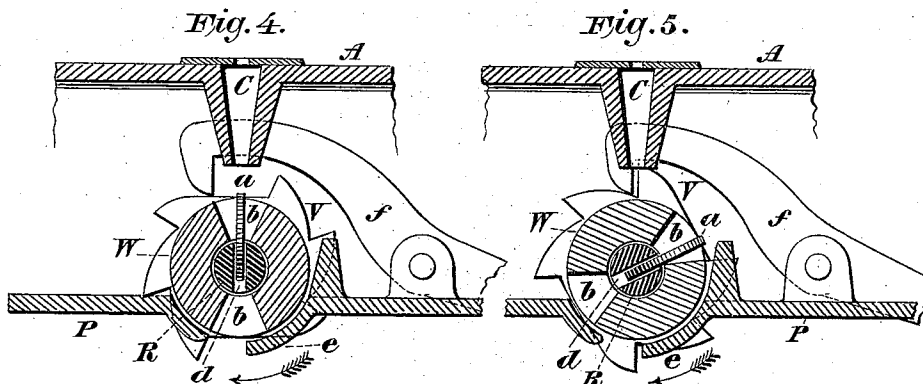
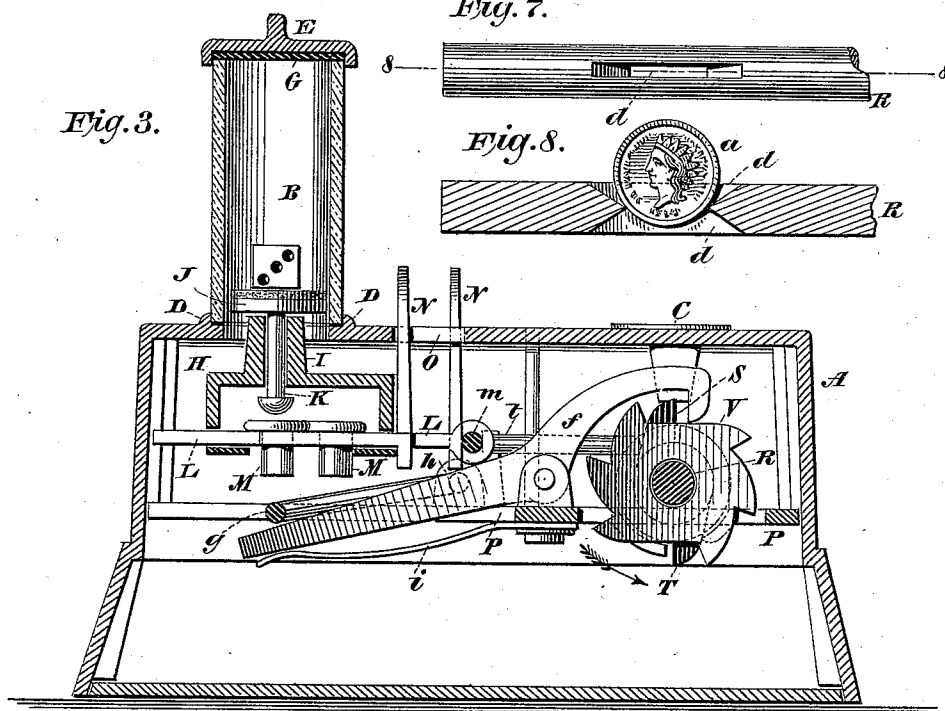
2 Sheets—Sheet 2.

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Patented Jan. 2, 1894.



WITNESSES:

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UNITED STATES PATENT OFFICE.

EUGENE HOMAN, OF NEW YORK, N. Y.

COIN-CONTROLLED MACHINE FOR THROWING DICE.

SPECIFICATION forming part of Letters Patent No. 512,031, dated January 2, 1894.

Application filed October 17, 1893. Serial No. 488,396. (No model.)

To all whom it may concern:

Be it known that I, EUGENE HOMAN, a citizen of the United States, and a resident of New York, in the county of New York and State of New York, have invented certain new and useful Improvements in Coin-Controlled Machines for Throwing Dice, of which the following is a specification.

The invention relates to improvements in coin controlled machines for throwing dice, and consists in the novel features of construction hereinafter described and particularly pointed out in the claims.

The machine constructed in accordance with my invention is provided, preferably, with five transparent receptacles containing at their base movable tables or platforms on which the dice will rest, and said machine is also provided with mechanism, hereinafter described, which, when the coin is introduced, will be set in motion by an actuating shaft to jar all of said platforms or tables and toss the dice upward within said receptacles. It is intended that each player shall have three throws of the dice for one coin, and the mechanism of the machine is such that on the first of said throws all of the dice will be tossed, while on the second and third throws the player may use his discretion as to tossing all of the dice again or withdrawing some from the jarring action of the machine and only tossing the remaining dice.

The particular nature of the invention, together with the details of the construction of the machine will appear in full from the description hereinafter presented.

Referring to the accompanying drawings, Figure 1 is a top view partly broken away and in section of a machine constructed in accordance with and embodying the invention, the section being on the dotted line 1—1 of Fig. 2, which is a vertical longitudinal section of said machine on the dotted line 2—2 of Fig. 1. Fig. 3 is a vertical transverse section of said machine on the dotted line 3—3 of Fig. 1. Fig. 4 is a detached sectional view of a part of the machine on the dotted line 4—4 of Fig. 1. Fig. 5 is a like section of same on said dotted line 4—4 showing the position of the parts after the coin carrier has made a partial revolution. Fig. 6 is a de-

tached section of a part of said machine on the dotted line 6—6 of Fig. 1. Fig. 7 is a detached view of a portion of the actuating shaft of said machine, and Fig. 8 is a longitudinal section of same on the dotted line 8—8 of Fig. 7.

In the drawings A designates the box or frame of the machine, said box or frame being provided externally with the series of transparent receptacles B for the dice, and the entrance slot C for the coin. The receptacles B are formed from sections of glass tubing, said sections being seated within the annular flanges D and held in place by the bar E and screws F F. The bar E is recessed on the lower side to receive the packing G, which extends the entire length of said recess and forms a soft surface to bear against the upper ends of the receptacles B. The receptacles B being made of glass tubing may be readily and comparatively inexpensively produced, and the bar E and screws F furnish a ready means for securing said receptacles in place.

The box or casing A contains, below the receptacles B, the frame H having a series of hubs I corresponding with said receptacles, said hubs each supporting a table J within the lower part of the receptacles. The tables J correspond with the outline of the receptacles B in cross section and carry stems or short rods K, which extend downward through and project slightly below the hubs I, being headed at their lower ends to prevent any undue upward movement of the tables. The frame H supports the series of transverse independent slides L, each carrying a vertically movable button M, and a vertical handle or arm N, the latter extending upward through the slots O in the top of the box or casing A. When the slides L are at their outward position, shown in Fig. 1, the buttons M will be centrally below the stems K of the tables J, and when any one or more of the slides L are drawn inward toward the front of the box or casing A, as shown in Figs. 3 and 6, the buttons M of the slides so drawn inward will be removed from below the stems K previously above them, leaving said stems and their tables J to remain unaffected by the dice actuating mechanism, as hereinafter explained.

The slots O are sufficient in length to permit the movement of the slides L, which, at the proper time, will be drawn inward by hand.

Within the box or casing A is provided the supporting table P, upon which in bearing lugs Q, Q, is mounted the actuating shaft R carrying the fixed cams S, T, and loose ratchet V and sleeve W, the said ratchet and sleeve being integral with each other. The shaft R at one end extends through the end of the box or casing A and is there provided with a knob or handle X of any suitable description by which the shaft may be turned by hand. The cams S, T project from opposite sides of the sleeve Y, which is rigidly secured by a pin Z to the shaft R; and the sleeve W and ratchet V are loose on the said shaft and only rotate with the shaft when the coin *a* is in the position shown in Figs. 4 and 5 in which it serves as a key or connection between the shaft and sleeve. The sleeve W at opposite sides is provided with the recesses *b, b*, whose opposite sides converge toward the longitudinal coin slot *d* in the shaft R, which slot, as shown in Fig. 8, is wider at the outer surfaces of the shaft and is at its center less in length than the width of the coin. Thus the slot freely and to a large extent receives the coin but does not permit the coin to pass entirely through it. The ratchet V connected with the sleeve W is provided on opposite sides with two sets of teeth of three teeth each, as shown more clearly on Figs. 4 and 5, those portions of the ratchet in line with the recesses *b, b*, having plain surfaces. The supporting table P is provided with the curved flange or housing *e* which conforms to the circle of the sleeve W and serves to support the coin *a* at its outer edges during the revolution of the shaft R and sleeve W until the latter has completed a half turn, at which time the coin will have passed beyond the curved flange *e* and being then unsupported will fall to the bottom of the box or casing A. Upon the table P is pivotally mounted the pawl *f*, which at one end engages the ratchet V and at the other end supports the bar or frame *g*, which is loosely hung in bearings *h, h* and is adapted when thrown upward by the action of the pawl *f* and ratchet V to strike the buttons M above it and cause said buttons to strike the lower ends of the stems K above them and drive the tables J upward, thereby throwing the dice upward within the receptacles B and allowing them to fall freely and assume their own positions. The pawl *f* is given a constant bearing against the ratchet V by means of a spring *i*. The cams S, T, perform no part of the direct operation of throwing the dice, their purpose being at the end of each three throws of the dice to insure the slides L all being pushed outward toward the receptacles B before another person could make the first one of the succeeding three throws of the dice, and thus to prevent the succeeding person using the machine from holding any of the dice in the condition they

may have been left by the preceding player. At the front of the slides L is the sliding rod *m*, which is supported on ribs *n* and connected with the rod *t*, the front end of the latter terminating in close relation to the path of the cams S, T, as shown in Fig. 6. The rod *m* and rod *t* have a spring tension outward owing to the action of the spring *w*, and hence when unrestrained by the cams S, T, the said rods will assume the normal position shown in Figs. 1 and 6 free of the slides L. When the rod *m* is in its normal position the user of the machine can by means of the handles N draw any one or more of the slides L inward toward the front of the machine, thus withdrawing the buttons M of such slides from over the rod *g* and leaving the tables J previously over such buttons to remain unaffected by any subsequent movements of the rod *g*; and when the rod *m* is pushed toward the receptacles B through the action of the cams S, T, it will press said slides L outward toward the rear of the machine and set all of the buttons M in line with the stems K and tables J.

In the operation of the machine, the slot *d* of the shaft R being in line with the recesses *b, b* of the sleeve W and the slot C of the box A, the coin *a* will be dropped downward through said slot C and fall into the upper recess *b* and said slot *d*, as shown in Fig. 4, whereupon the player will by means of the handle X, turn the shaft R toward the rear of the machine. The first part of the movement of the shaft R will cause the cam S to drive the rod *t*, rod *m* and slides L outward toward the receptacles B, thus setting all of the buttons M below the stems K, and thereafter the continued motion of the shaft R causes the three teeth of the ratchet V (shown at the left in Fig. 4) to pass one after another below the engaging end of the pawl *f*, the passage of each of said teeth serving to cause the pawl, at its outer end, to strike the rod *g* and cause it to strike the buttons M and, through said buttons, the stems K, the result being that with the passage of each of said teeth below the pawl the tables J will be suddenly jarred upward and the dice will be thereby tossed upward within the receptacles B. After the first tooth, of the three teeth above mentioned, has passed beyond the point of the pawl *f*, as shown in Fig. 5, the cam S will also have passed beyond the rod *t*, and at this time the spring *w* will draw the rod *m* from the slides L in order to permit the player to withdraw any one or more of the slides L frontward to relieve the dice above them from being disturbed by the subsequent throws represented by the second and third of said three teeth. For instance, if on the first throw of the dice two "sixes" should appear, the player might want to hold them and only operate the remaining dice on the two subsequent throws, and if this should be the case he would, after the first throw, withdraw the slides L to remove the buttons M from below the tables J supporting these "sixes." If after the second

throw, represented by the second tooth another "six" should appear among the three dice at that time tossed, the player could also hold it by withdrawing the slide L below its table J, and then on the third throw, represented by the third and last of said three teeth, the player could attempt to secure additional "sixes" from the two dice remaining to be tossed. The introduction of the one coin *a* secures three throws of the dice, and these occur during a one half revolution of the shaft R, on completing which half revolution the coin, as above described, is left unsupported and falls to the bottom of the box A, and the machine is at once ready to receive an additional coin. By reason of there being two cams S T, two recesses *b, b*, and two sets of teeth on the ratchet V, as one coin falls to the bottom of the box A the mechanism is left with its parts in position to continue the operation without any adjustments being required. When the slot *d* is cut entirely through the shaft R, any coin substantially less than the standard size would pass directly through the recesses *b, b*, and slot *d* to the bottom of the box A without keying the shaft R and sleeve W together, thus preventing fraud, but I do not limit the invention in every instance to a slot *d* cut entirely through the shaft R.

In the use of the machine above described it is intended that the player shall have three throws of the dice for one coin, and hence the ratchet V is provided with sets of teeth of three each, but the number of the teeth should vary with the number of the throws any other manufacturer should conclude to give for a single coin. After the first player shall have concluded his three throws, the second player will place his coin in the slot C and turn the shaft R as before, the first effect being that the cam T (which at such time would be at the upper side of the sleeve Y) would press the rod *t*, rod *m* and slides L firmly toward the receptacles B, and thereafter the teeth of the ratchet V would effect the three throws in succession as above described. The operation just described of the cam T prevents the said second player from "holding" any of the "sixes" secured by the first player and compels the tossing of all the dice on the first throw.

I recommend the use of the five receptacles B but do not limit the invention to the number of receptacles employed.

What I claim as my invention, and desire to secure by Letters Patent, is—

1. The actuating shaft having the coin slot and the loose sleeve and ratchet on said shaft, said sleeve having the coin recesses, combined, with the pawl engaging said ratchet, the dice receptacle having the movable table, and mechanism intermediate said table and said pawl, substantially as set forth.

2. The actuating shaft having the coin slot, and the loose sleeve and ratchet on said shaft, said sleeve having the coin recesses, combined with the pawl engaging said ratchet,

the dice receptacles having the movable tables, mechanism imparting the motion of said pawl to said tables, and mechanism for withdrawing any one or more of said tables from the influence of said pawl; substantially as set forth.

3. The actuating shaft having the coin slot, and the loose sleeve and ratchet on said shaft, said sleeve having the coin recesses, combined with the pawl engaging said ratchet, the dice receptacles having the movable tables, the slides having buttons below said tables, the rod intermediate said buttons and the outer end of said pawl, the cams on said shaft, and the mechanism intermediate said cams and said slides whereby the former may set the latter; substantially as set forth.

4. In a dice machine, the series of receptacles having the movable tables carrying depending stems, and the series of slides below said tables and having the movable buttons, combined with coin controlled mechanism for striking said buttons to jar said stems and tables; substantially as set forth.

5. In a dice machine, the series of receptacles having the movable tables carrying depending stems, and the series of slides below said tables and having the movable buttons, combined with coin controlled mechanism for striking said buttons to jar said stems and tables, and mechanism intermediate said slides and the driving shaft, whereby the motion of the latter moves said buttons below said stems; substantially as set forth.

6. In a dice machine, the actuating shaft having the coin slot and the loose sleeve and ratchet on said shaft, said sleeve having the coin recesses at opposite points and said ratchet having two sets of teeth, combined with the dice receptacles having a movable table, and mechanism intermediate said table and said ratchet whereby said teeth effect the jarring of said table; substantially as set forth.

7. In a dice machine, the actuating shaft having the coin slot, the loose sleeve and ratchet on said shaft and having the coin recesses and teeth, and the cams on said shaft, combined with the dice receptacles having movable tables, mechanism intermediate said tables and said ratchet for communicating motion from the latter to the former, and mechanism intermediate said cams and said tables whereby from said shaft the tables are compelled to receive the motion from said ratchet; substantially as set forth.

8. The series of receptacles having the movable tables carrying depending stems, and the series of slides below said tables and having the movable buttons and also the exposed handles, combined with the actuating shaft, the rod operated thereby to move said slides below said receptacles and coin controlled mechanism connected with said shaft for striking said buttons to actuate said tables; substantially as set forth.

9. The actuating shaft having the coin slot, and the loose sleeve and ratchet on said shaft,

said sleeve having the coin recesses inclining toward said slot at either side of said shaft, and said ratchet having two sets of teeth, combined with the dice receptacle having a
5 movable table, and mechanism intermediate said table and said ratchet communicating the motion of the latter to the former; substantially as set forth.

Signed at New York, in the county of New York and State of New York, this 13th day of 10 October, A. D. 1893.

EUGENE HOMAN.

Witnesses:

CHAS. C. GILL,
ED. D. MILLER.