

(No Model.)

W. N. RUSSELL & T. N. GIERDING.
COIN CONTROLLED FORTUNE WHEEL.

No. 487,968.

Patented Dec. 13, 1892.

Fig. 1.

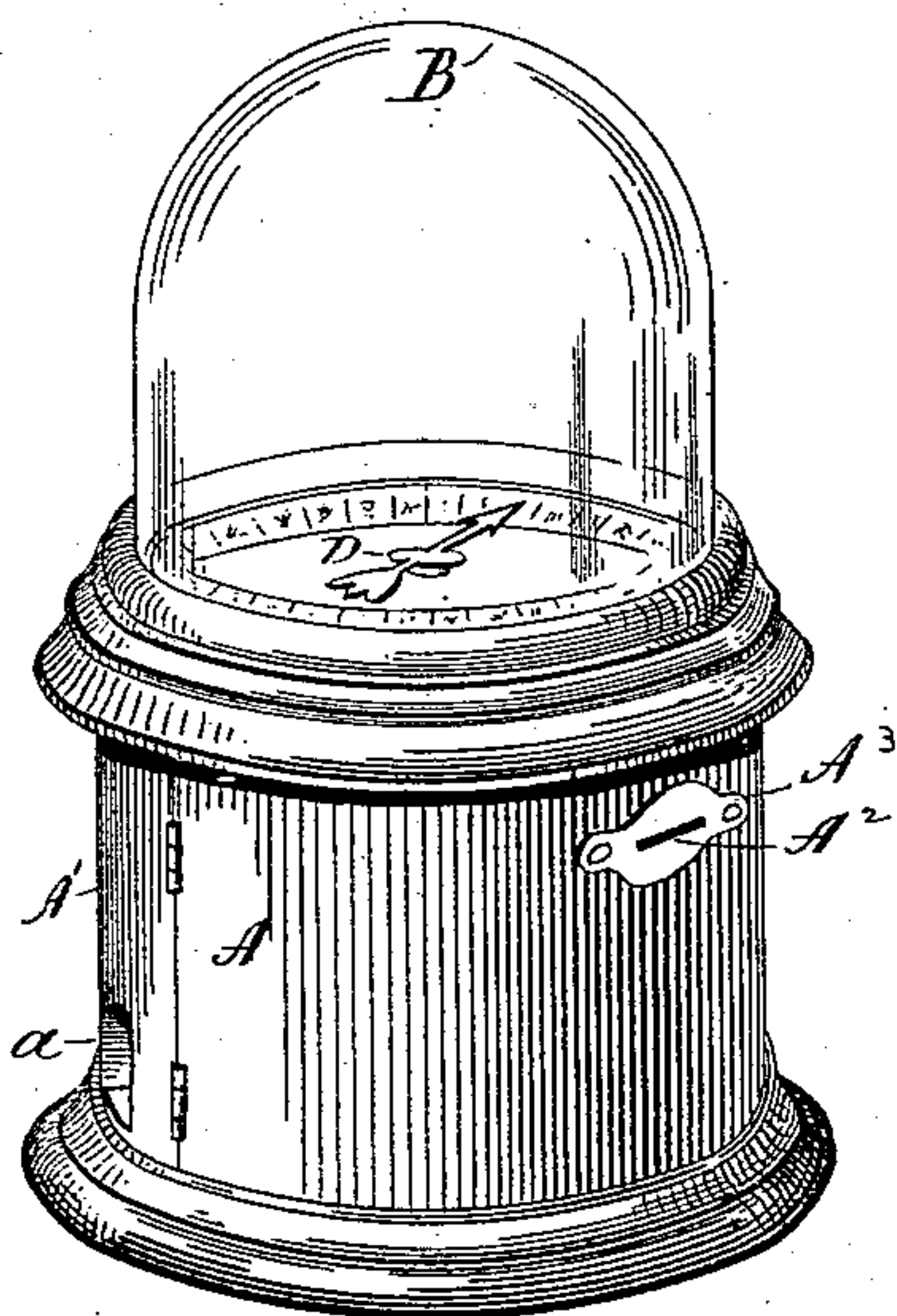


Fig. 2

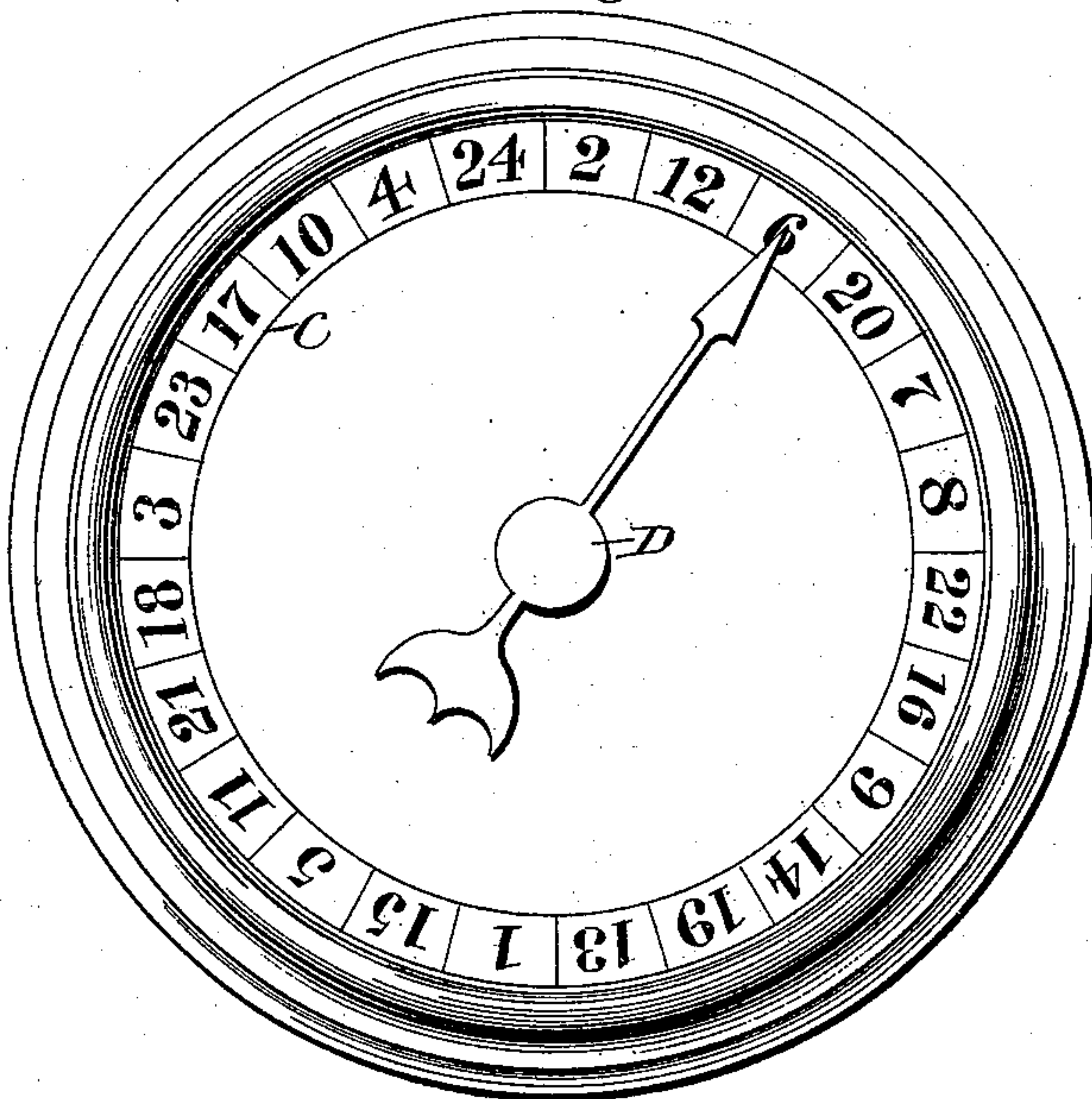


Fig. 4

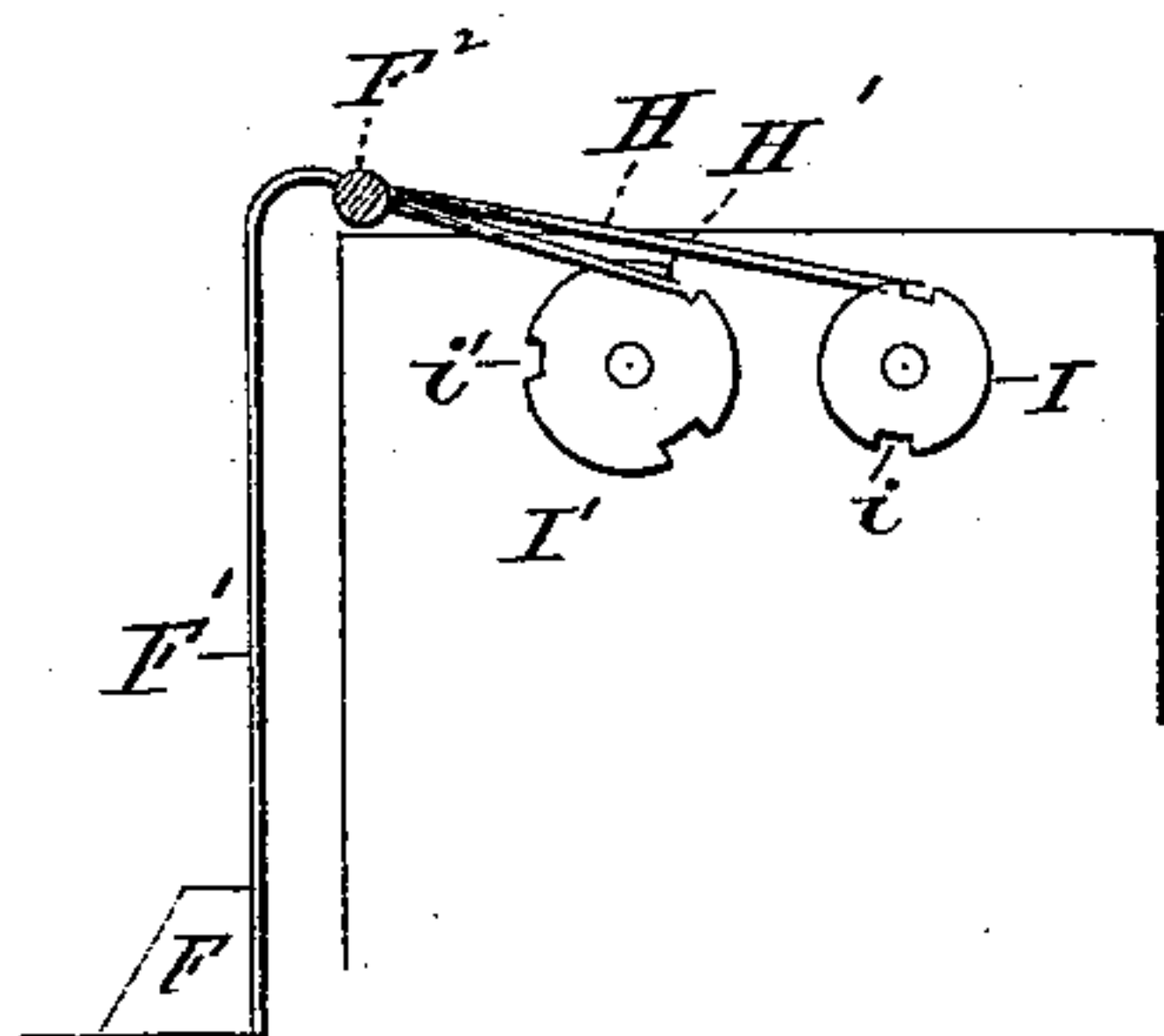


Fig. 5

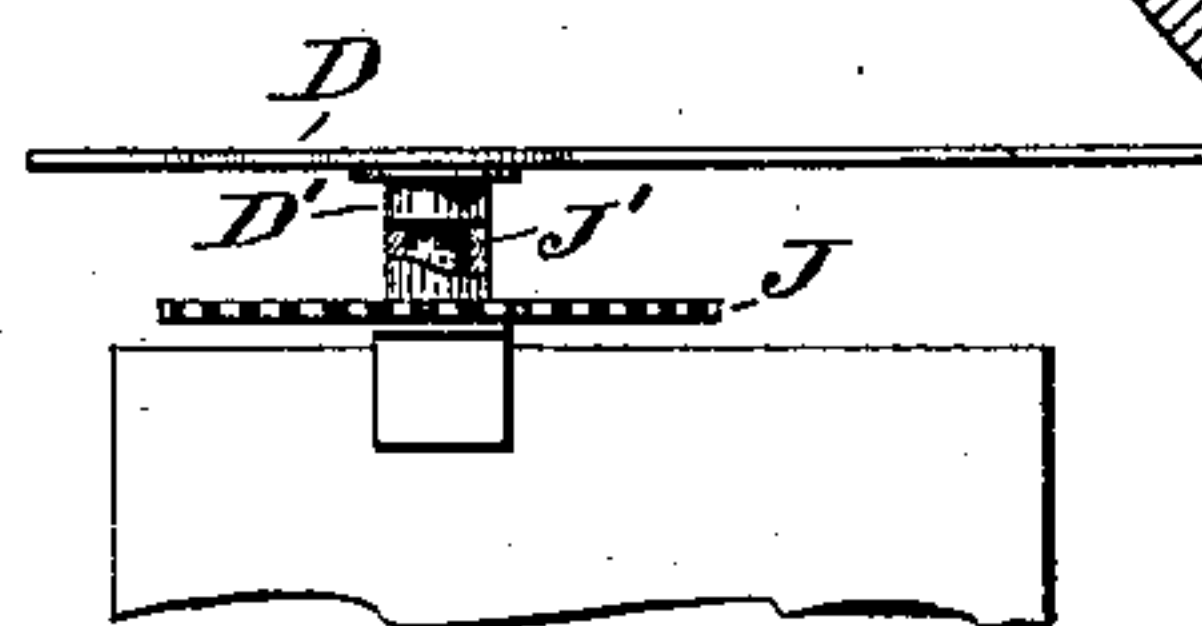


Fig. 6

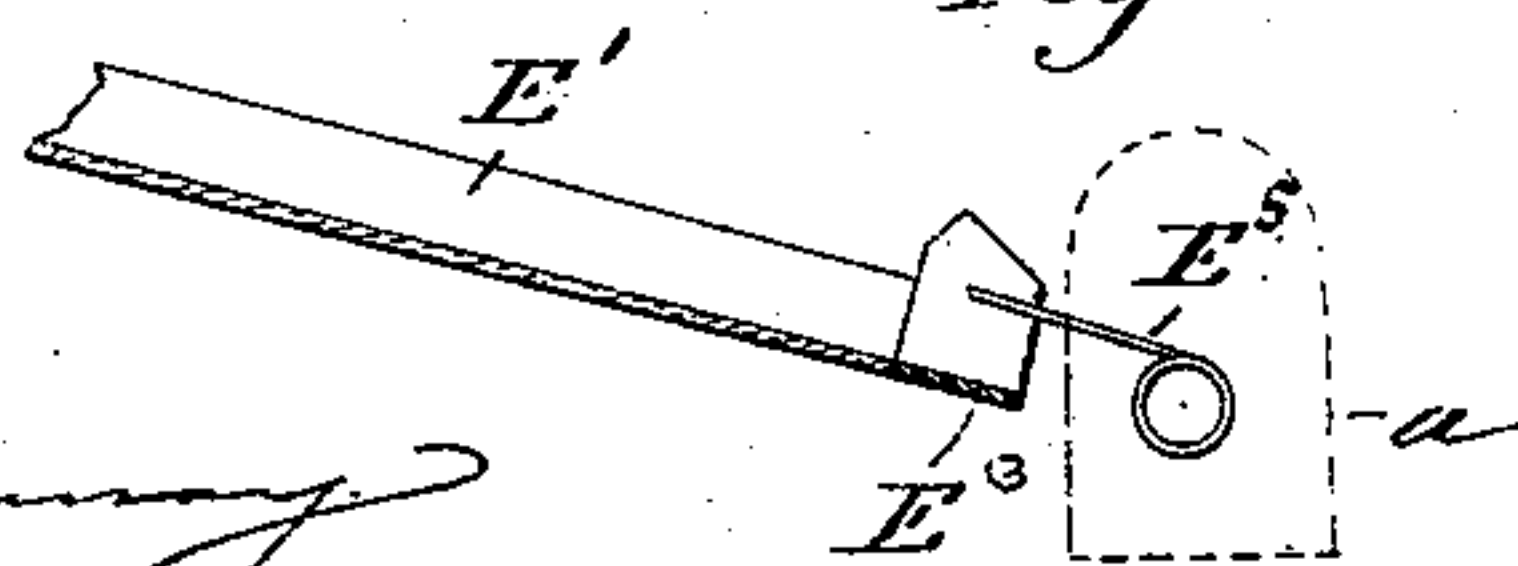
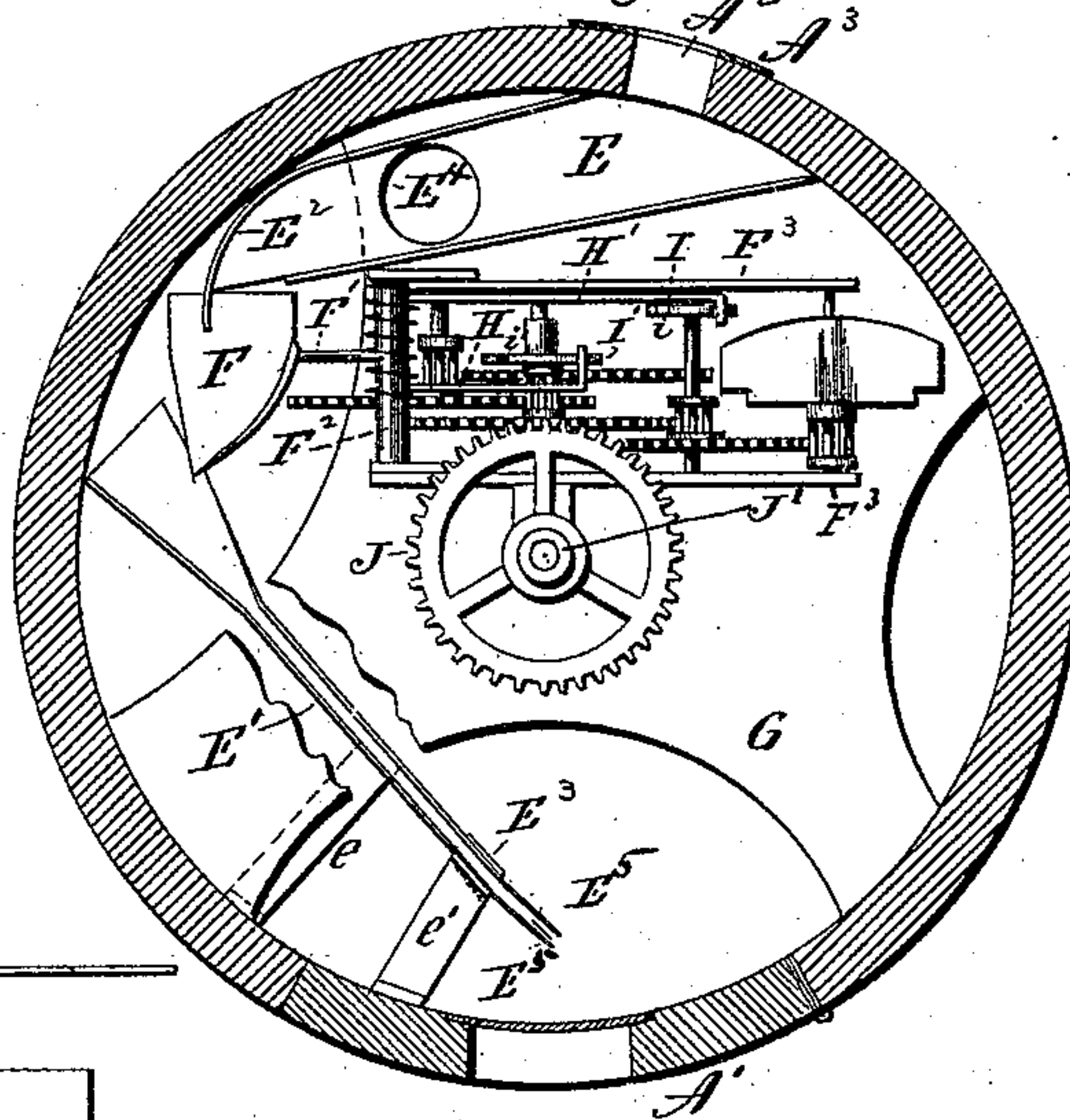


Fig. 3



Witnesses.

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UNITED STATES PATENT OFFICE.

WILLIAM N. RUSSELL AND THOMAS N. GIERDING, OF NEW HAVEN, CONNECTICUT, ASSIGNORS OF ONE-THIRD TO FRANK R. RUSSELL, OF SAME PLACE.

COIN-CONTROLLED FORTUNE-WHEEL.

SPECIFICATION forming part of Letters Patent No. 487,968, dated December 13, 1892.

Application filed August 1, 1892. Serial No. 441,836. (No model.)

To all whom it may concern:

Be it known that we, WILLIAM N. RUSSELL and THOMAS N. GIERDING, of New Haven, in the county of New Haven and State of Connecticut, have invented a new Improvement in Coin-Controlled Fortune-Wheels; and we do hereby declare the following, when taken in connection with accompanying drawings and the letters of reference marked thereon, to be a full, clear, and exact description of the same, and which said drawings constitute part of this specification, and represent, in—

Figure 1, a perspective view of a fortune-wheel constructed in accordance with our invention; Fig. 2, a plan view thereof on a larger scale with the glass shade removed; Fig. 3, a view in transverse section on the scale of Fig. 2 and taken just above the mechanism which controls the indicator; Fig. 4, a detached view showing the two cams and their detents and the starter which receives its movement from the impact of a coin with it; Fig. 5, another detailed view, this one showing the mode of connecting the indicator with the train; Fig. 6, a detached broken view in longitudinal section, showing the lower member of the coin-chute, the spring coin-holder, and the sight-opening in the door of the case, the said sight-opening being indicated by broken lines.

Our invention relates to an improvement in fortune-wheels, the object being to produce a simple, compact, and attractive device adapted to be operated by a coin, and so constructed as to be beyond the reach of surreptitious manipulation.

With these ends in view our invention consists in the combination, with a train, of two or more independently-mounted cams differentiated in their rate of rotation, and one having one or more and another two or more notches, detents operating in unison for engagement with the respective cams, a starter receiving movement from a coin, connected with the said detents, for simultaneously lifting them to release the train, and an indicator driven by the train.

Our invention further consists in certain

details of construction and combination of parts, as will be hereinafter described, and pointed out in the claims.

As herein shown, the mechanism of our improved device is inclosed in a cylindrical box or case A, constructed with a door A', having a sight-opening a , and with a coin-slot A², protected by an escutcheon A³. A dome-like glass shade B, supported upon the top of the case and firmly secured thereto, covers a horizontal dial C and a horizontal indicator D, which sweeps over the same, the said dial being provided around its edge with a circular series of numbers arranged without reference to any arithmetical progression. These numbers may be replaced by letters or characters, or words, if desired. This dial may be either fixed in position or adapted to be rotated. If so adapted, the "combination" of the device, so to speak, may be changed by simply moving it one or more points, and in this way alone the range of the device for differential operation may be increased almost beyond calculation.

Within the case there is located a coin-chute, the upper member E whereof is arranged in an inclined position with its higher end under the coin-slot A² and its lower end terminating above a pan F, consisting of a plate of sheet metal. The chute member E is constructed with an opening E⁴, which discriminates between the coins in so far that it prevents smaller coins than those by which the device is to be operated from reaching the pan F, such coins falling through the hole into the bottom of the case. The extreme lower end of the chute has a curved deflector E², which deflects the coins of right size upon the pan F, from which they drop into the funnel-shaped upper end of the inclined lower chute member E', in which they are righted up and roll on their edges until they are discharged into a spring coin-holder made independent of but virtually forming a continuation of the said lower chute member, which is supported in part by an arm e , affixed to the case A. The said coin-holder consists in part of two parallel springs E⁵ E⁵, having

their outer ends bent to form upright eyes
 and converged just enough to stop and hold
 a slow-rolling coin, their straight inner ends
 being attached to the opposite sides or walls
 5 of a short trough E^3 , substantially correspond-
 ing in cross-section to the cross-section of the
 lower end of the chute member E' , with which
 it is aligned when the door of the case is
 closed, as shown by Fig. 3 of the drawings,
 10 for the said coin-holder is supported by an
 arm e' , extending inwardly from the door A'
 of the apparatus. Under the above construc-
 tion of the chute the coins are stopped and
 held in front of the sight-opening in the door
 15 by the slight convergence of the springs of
 the coin-holder from which the coins are suc-
 cessively dislodged, the coin in the holder be-
 ing dislodged by the impact upon it of the
 next coin coming down the chute, and so on.
 20 We would have it understood, however, that
 we do not claim this chute, nor do we limit
 ourselves to any particular way of construct-
 ing it. The said pan F is attached to the
 lower end of a wire F' , which is rigidly se-
 25 cured to a rock-shaft F^2 , mounted between
 the two plates $F^3 F^3$ of a spring-actuated train
 which is supported upon a horizontal plat-
 form G , located within the case. The said
 pan F and wire F' together form what we
 30 shall term the "starter" of the apparatus, in-
 asmuch as the impact of the coins upon the
 pan causes the same to be moved together
 with the wire F' carrying it and so rock the
 shaft F^2 , which is provided, as herein shown,
 35 with two detents H and H' , formed of wire
 and having their extreme ends bent trans-
 versely. These detents are operated in uni-
 son by the rocking of the shaft F^2 and are re-
 spectively engaged with the peripheries of
 40 two cams I and I' , one of which has two
 notches i and the other three notches i' , the
 said notches being adapted to receive the bent
 ends of the detents which normally rest in
 them and restrain the train. If preferred, we
 45 may employ more than two cams and they
 may be of the same or of different sizes; but
 one of the cams should be provided with one
 or more and the other with two or more
 notches however they are constructed and
 50 whatever be their number. These cams are
 independently mounted, which is to say on
 separate shafts of the train, and are differ-
 entially rotated, or, in other words, at different
 rates of speed. It will not be necessary to
 55 specify any particular arrangement of gear-
 ing for so rotating the cams, as that is a mat-
 ter that will be readily understood by any one
 familiar with clockwork or kindred mechan-
 isms.
 60 A horizontally-arranged wheel J , meshing
 into a wheel of the train, as shown by Fig. 3
 of the drawings, is provided upon its upper
 face with a hub J' , over which is sleeved the
 depending socket D' of the indicator D , which
 65 here has the form of an ordinary pointer.

It will be understood that under the de-
 scribed construction the detents cannot op-
 erate to arrest the train except when notches
 in the cams are simultaneously brought un-
 der their bent outer ends, for the detents, be-
 70 ing rigidly connected together and operating
 in unison, will not drop into the notches ex-
 cept when the same are simultaneously pre-
 sented to all of them, so that as long as one
 detent rides upon the periphery of its cam
 75 the other detent cannot drop into a notch
 passing under it. As the two cams rotate at
 different rates of speed, it may take several
 revolutions of them before any two of their
 notches coincide under the detents, or such
 80 coincidence may take place very shortly af-
 ter the train has been started. By prefer-
 ence, also, the wheel J will be actuated at a
 different speed from either of the cams, in-
 troducing another feature of differentiation
 85 into the action of the apparatus, which is fur-
 ther complicated by the want of progression
 in the arrangement of the numbers of the
 dial. Between the differential revolution of
 the cams and the indicator and the unpro-
 90 gressive arrangement of the numbers there is
 an opportunity for such a variation in the in-
 dications of the apparatus that, although the
 action of the device is positive and mechani-
 cal, it is believed that in any ordinary oper-
 95 ation of the apparatus the same could not be
 observed far enough to give any means of cal-
 culating a repetition of its indication, and,
 moreover, any observed operation of it,
 amounting to a key, could be entirely thrown
 100 out by shifting the indicator or dial or rela-
 tively changing the positions of any of the
 cams or other moving parts.

We would have it understood that we do
 not limit ourselves to the exact construction
 105 herein shown and described, but hold our-
 selves at liberty to make such changes and
 alterations as fairly fall within the spirit and
 scope of our invention.

Having fully described our invention, what
 we claim as new, and desire to secure by Let-
 110 ters Patent, is—

1. In a fortune-wheel, the combination, with
 a train, of two or more independently-mounted
 differentially-rotating cams driven by the said
 115 train, one of the said cams having one or more
 and the other two or more notches, detents
 operating in unison for the respective cams,
 a starter receiving movement from a coin and
 connected with the said detents for simulta-
 120 neously lifting them to release the train, and
 an indicator driven by the train, substantially
 as set forth.

2. In a fortune-wheel, the combination, with
 a train, of two or more independently-mounted
 125 cams differentiated in the rate of their rota-
 tion and actuated by the train, one of the said
 cams having one or more and the other two
 or more notches, detents operating in unison
 for the respective cams, a starter receiving
 130

movement from a coin introduced into the apparatus and connected with the said detents for simultaneously lifting them to release the train, a horizontal dial, and an indicator arranged to sweep the said dial and connected with the train to be driven thereby, substantially as described.

In testimony whereof we have signed this

specification in the presence of two subscribing witnesses.

WILLIAM N. RUSSELL.
THOMAS N. GIERDING.

Witnesses:

FRED. C. EARLE,
GEO. D. SEYMOUR.