

(No Model.)

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

No. 487,968.

Patented Dec. 13, 1892.

Fig 2

Fig 1

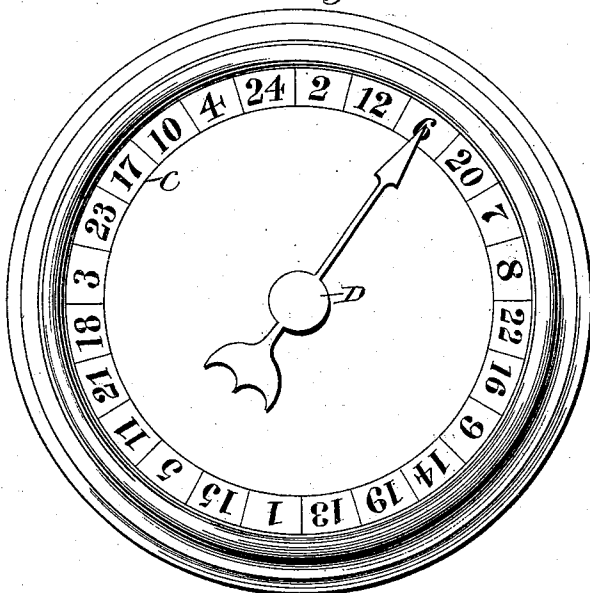
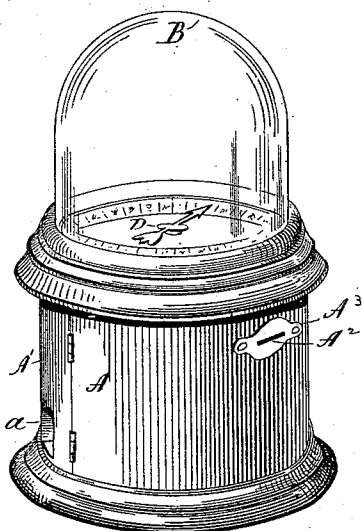


Fig 3

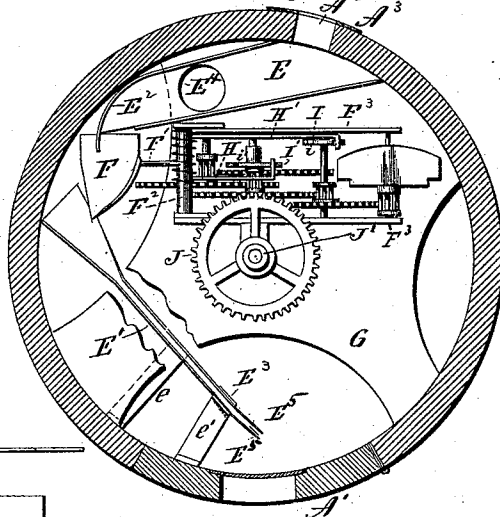


Fig 4

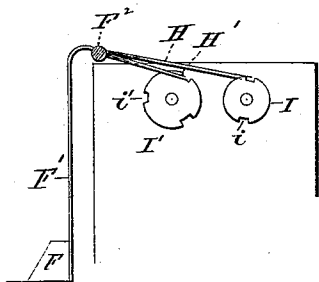


Fig 5

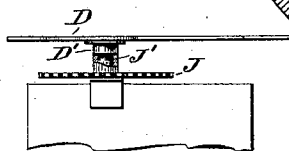
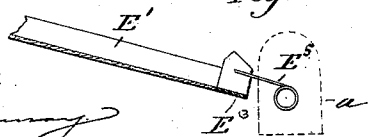


Fig 6



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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 of a short trough E^3 , substantially corresponding 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, for the said coin-holder is supported by an arm e' , extending inwardly from the door A' of the apparatus. Under the above construction of the chute the coins are stopped and held in front of the sight-opening in the door by the slight convergence of the springs of the coin-holder from which the coins are successively dislodged, the coin in the holder being dislodged by the impact upon it of the next coin coming down the chute, and so on. We would have it understood, however, that we do not claim this chute, nor do we limit ourselves to any particular way of constructing it. The said pan F is attached to the lower end of a wire F' , which is rigidly secured 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 platform G , located within the case. The said pan F and wire F' together form what we shall term the "starter" of the apparatus, inasmuch 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, with two detents H and H' , formed of wire and having their extreme ends bent transversely. These detents are operated in unison by the rocking of the shaft F^2 and are respectively engaged with the peripheries of 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 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 whatever be their number. These cams are independently mounted, which is to say on separate shafts of the train, and are differentially rotated, or, in other words, at different rates of speed. It will not be necessary to specify any particular arrangement of gearing for so rotating the cams, as that is a matter that will be readily understood by any one familiar with clockwork or kindred mechanisms.

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 here has the form of an ordinary pointer.

It will be understood that under the described construction the detents cannot operate to arrest the train except when notches in the cams are simultaneously brought under their bent outer ends, for the detents, being rigidly connected together and operating in unison, will not drop into the notches except when the same are simultaneously presented to all of them, so that as long as one detent rides upon the periphery of its cam 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 coincidence may take place very shortly after the train has been started. By preference, also, the wheel J will be actuated at a different speed from either of the cams, introducing another feature of differentiation into the action of the apparatus, which is further 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 unprogressive arrangement of the numbers there is an opportunity for such a variation in the indications of the apparatus that, although the action of the device is positive and mechanical, it is believed that in any ordinary operation of the apparatus the same could not be observed far enough to give any means of calculating a repetition of its indication, and, moreover, any observed operation of it, amounting to a key, could be entirely thrown out by shifting the indicator or dial or relatively 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 herein shown and described, but hold ourselves 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 Letters 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 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 simultaneously 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 cams differentiated in the rate of their rotation 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

movement from a coin introduced into the
apparatus and connected with the said de-
tents for simultaneously lifting them to re-
lease the train, a horizontal dial, and an in-
5 dicator arranged to sweep the said dial and
connected with the train to be driven there-
by, substantially as described.

In testimony whereof we have signed this

specification in the presence of two subscrib-
ing witnesses.

WILLIAM N. RUSSELL.
THOMAS N. GIERDING.

Witnesses:

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