(No Model.)

J. M. QUINN.

COIN SEPARATOR.

No. 264,425. Patented Sept. 12, 1882.

Fig 1.

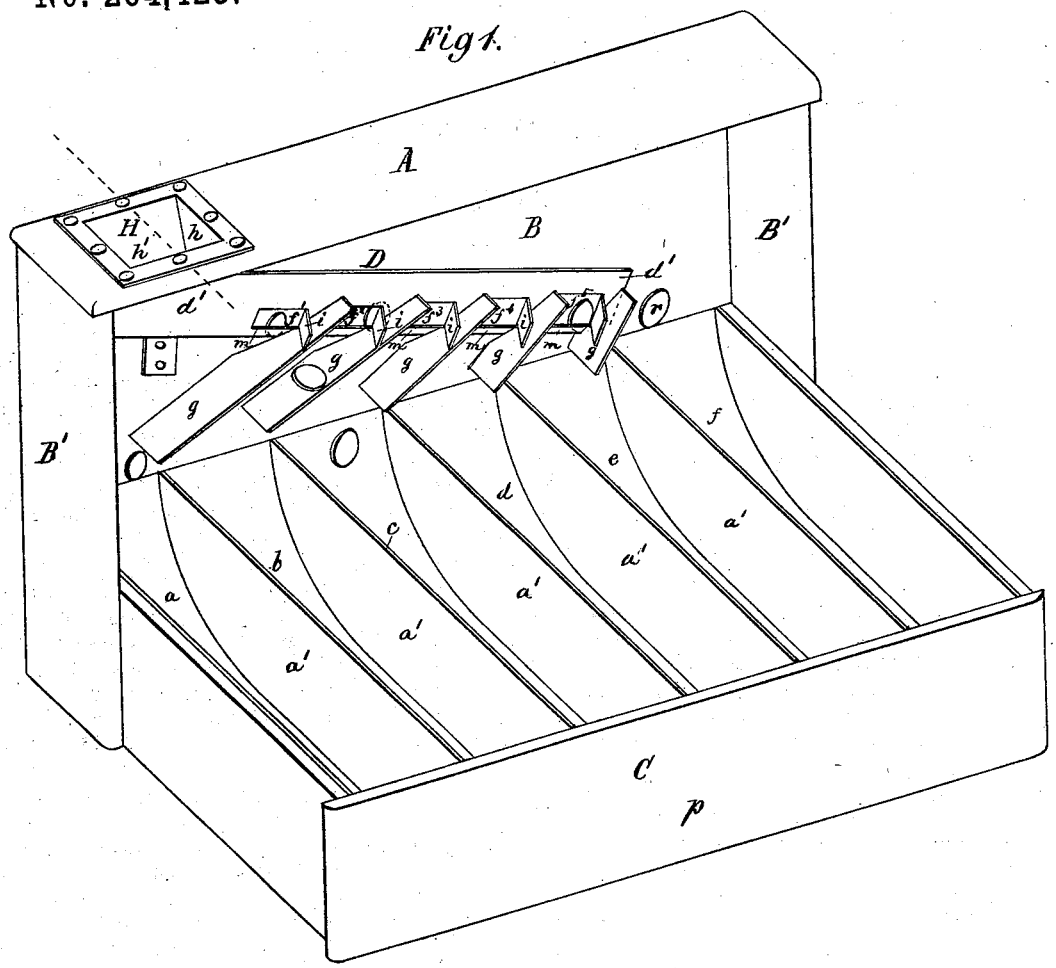


Fig 2.

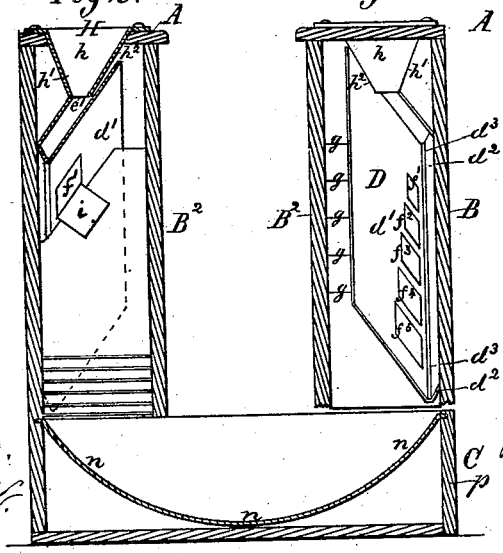
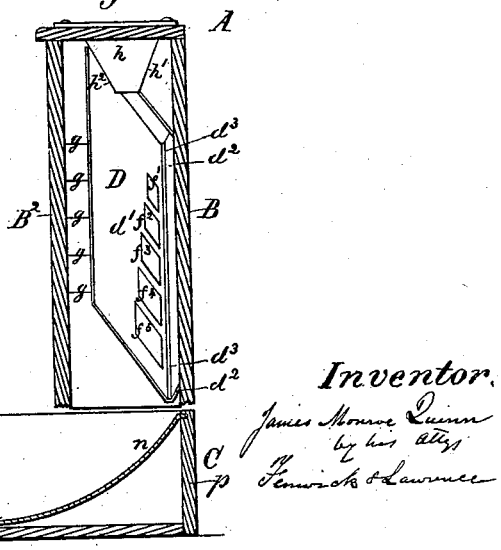


Fig 3.



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UNITED STATES PATENT OFFICE.

JAMES M. QUINN, OF SEDALIA, MISSOURI.

COIN-SEPARATOR.

SPECIFICATION forming part of Letters Patent No. 264,425, dated September 12, 1882.

Application filed April 24, 1882. (No model.)

To all whom it may concern:

Be it known that I, JAMES M. QUINN, a citizen of the United States, residing at Sedalia, in the county of Pettis and State of Missouri, have invented a new and Improved Coin-Separator; and I do hereby declare that the following is a full, clear, and exact description thereof, reference being had to the annexed drawings, forming a part of this my specification of said invention, in which—

Figure 1 is a perspective view of my improved coin-separator with a front portion removed in order to expose to view the inclined track upon which the coins travel from the hopper at the head of the machine until finally discharged into the several apartments of the drawer adapted to receive the different denominations of coin. Fig. 2 is a cross-section in the line *x x* of Fig. 1; and Fig. 3 is a view, partly in section and partly in perspective, looking from the rear end of the machine along up the inclined coin-track and inside of said track.

The nature of my invention will fully appear from the subjoined description, when considered with reference to the accompanying drawings, forming a part of this specification; and the object of the same is to provide a coin-separator which, while coins of various denominations may be simultaneously passed into the separator through a hopper common to all, will cause the variant coins to be separately deposited in apartments adapted to only receive coins of the same denomination, thereby affording facility in "making change" as well as saving the time required to assort the coins in case the same in such condition are to be stowed away in a place of more or less permanent deposit.

In Fig. 1, A indicates the top portion of the coin-separator, B its rear wall, and B′ B′ its end walls.

As shown in Figs. 2 and 3, B^2 indicates a front wall, which, as clearly signified in Fig. 2, extends from the drawer or money-compartment portions of the separator up to its top portion, A, this front portion or wall being removed in Fig. 1 in order to expose to view the inclined coin-track of the separator.

C indicates the bottom or money-drawer of the separator applied to the parts A B B′, and divided by plates *a′* into compartments, as at *a b c d e f*, to receive the different coins dropped into the hopper H. The bottom portions, *n*, of these several compartments are made concave or of dishing form, as shown in Fig. 2, so that the coin will concentrate thereon, such form permitting a person to readily withdraw a single coin by one finger without the necessity of clasping a single coin with both thumb and finger in order to effect its removal.

The hopper H at the head of the separator is of oblong form, as shown, and communicates with a coin-track, D, upon which the coin placed in the hopper is discharged. Said hopper is constructed with vertical ends *h* and slanting sides *h′* h^2, and together form a longitudinal contracted discharge-passage, *e′*, through which the coins pass from the hopper to the coin-track.

The coin-track D is composed of a broad front portion, *d′*, and a rear narrow portion, d^2, the two portions being set at an angle or in such relation to each other as to form at their bottom a gutter, as at d^3, the whole length of the coin-track. The broad portion *d′* is made to extend up in front of the side h^2 of the hopper, as shown, while the narrower portion d^2 of said track rests against and is secured to the interior surface of the wall B, and in this position the track is secured on an inclination downwardly from the hopper and toward the rear end of the machine in any proper manner. It will thus be seen that when a piece of money is dropped upon the side *h′* of the hopper the coin, in passing out of the hopper, will have its edge strike against the inclined broad side *d′* of the coin-track, and thus the coin will be deflected downward toward the gutter d^3 with one of its sides leaning against the inclined broad side portion, *d′*, of the coin-track; and that if a coin be dropped upon the side h^2 of the hopper H it will slide down upon one of its sides along the inclined part *d′* to the gutter d^3 of the coin-track without any material variation in the direction of its descent; and in either case that when the coin reaches the gutter d^3 it will incline on one of its sides against the inner surface of the part *d′* and on an inclination toward the bottom portion or drawer, C, of the separator. The gutter d^3 between the walls or parts *d′* d^2 of the

coin-track, it will be seen, is a narrow plane inclined surface, and does not form an acute angle between the parts d' d^2, as would be the case if the two parts were joined together at their lower edge, like the letter V. By thus forming the gutter coins of a different size and varying gravity, when simultaneously dropped into the hopper, have a better chance to pass each other in their descent upon the track, and are less liable to become wedged between the walls d' d^2 than would be the case were said walls joined together so as to form an acute angle at their base. In point of fact, by my construction of the coin-track D coins of various denominations may simultaneously travel down said track at variant speed, according to their gravity, without interfering with or wedging against each other.

As shown in the drawings, f' f^2 f^3 f^4 f^5 are oblong openings cut through the wall d' of the coin-track. These openings are made of a length considerably greater than the diameter of the piece of money intended to pass through them, but of a width less than that of the coin intended to pass through them, and are made a distance above the gutter d^3 sufficient to form a ledge, m, over which the coin will tip out of the track D, the height of the ledge m and width of the openings f' f^2 f^3 f^4 f^5 being such, for example, as to permit a silver five-cent piece to tip through the opening f', while a ten-cent piece would have a bearing against the wall d' of the coin-track above the opening f' when passing said opening in its descent down the track, and so on for all the openings with reference to the various sizes of coins. In other words, a twenty-five-cent piece, in rolling down the track, would tip out through the aperture f^4, for example, but would lean or strike against the wall d' while passing the respective apertures f', f^2, and f^3.

When the front wall, B^2, of the separator is in place, as indicated in Figs. 2 and 3, its inner surface will abut against the chute-plates g, which conduct the different pieces of money to their appropriate compartments—either a, b, c, d, or e, as the case may be. These plates g are attached to the portion d', as shown in Fig. 1, with a part of their rear edges abutting against the wall B, while their front edges abut against the wall B^2 when the wall B^2 is in position, as shown in Figs. 2 and 3, and thus said plates serve to conduct the different pieces of coin to their proper places of deposit beneath the lower ends of said chutes in the drawer C. Partitions or check-plates i, attached to the chutes and projecting outwardly from the lower end of the apertures f' f^2 f^3 f^4 f^5, serve to prevent the several pieces of coin from jumping off the chutes and into the wrong compartment in the drawer C during their descent. As shown in the drawings, a silver five-cent piece will tip out from the coin-track D through the opening f', a ten-cent piece through the opening f^2, a nickel five-cent piece through f^3, a twenty-five-cent piece through f^4, a fifty-cent piece through opening f^5, while a silver dollar (indicated at r) will be discharged directly into the compartment f of the drawer or bottom C of the separator.

The drawer or bottom C may be fixedly attached to the parts A B B', or, it may be made movable so as to be withdrawn from the parts A B B'; and, if desired, all of its compartments may be housed in by a hinged lid or cover and supplied with a lock made to engage with the front portion, p, of the drawer.

I would here state that by making a given aperture—as, for example, f'—of less width than the diameter of the coin which is to escape through it allows a coin of next greater diameter to with certainty strike or lean against the part d' immediately above such aperture while rolling past the aperture, while at the same time the ledges m, which are in height less than half the diameter of the smallest coin named, prevent all the pieces of money from escaping from the coin-track until each piece has reached its proper aperture through which to escape.

What I claim as new, and desire to secure by Letters Patent of the United States, is—

1. The coin-track D, having an inclined side, d', provided with a series of oblong apertures which are of a length greater and of a width less than the diameter of the coin intended to be passed through them, a ledge, m, beneath said apertures, a gutter, d^3, and inclined side d^2, substantially as and for the purpose described.

2. The combination of the drawer C with a coin-track having a gutter, d^3, ledge m, partition-plates i, and chutes g, substantially as and for the purpose described.

Signed in presence of two witnesses.

JAMES MONROE QUINN.

Witnesses:
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J. M. BARNES.