(No Model.)

A. C. BOLTON.

COIN SEPARATOR.

No. 459,673. Patented Sept. 15, 1891.

Fig. 1.

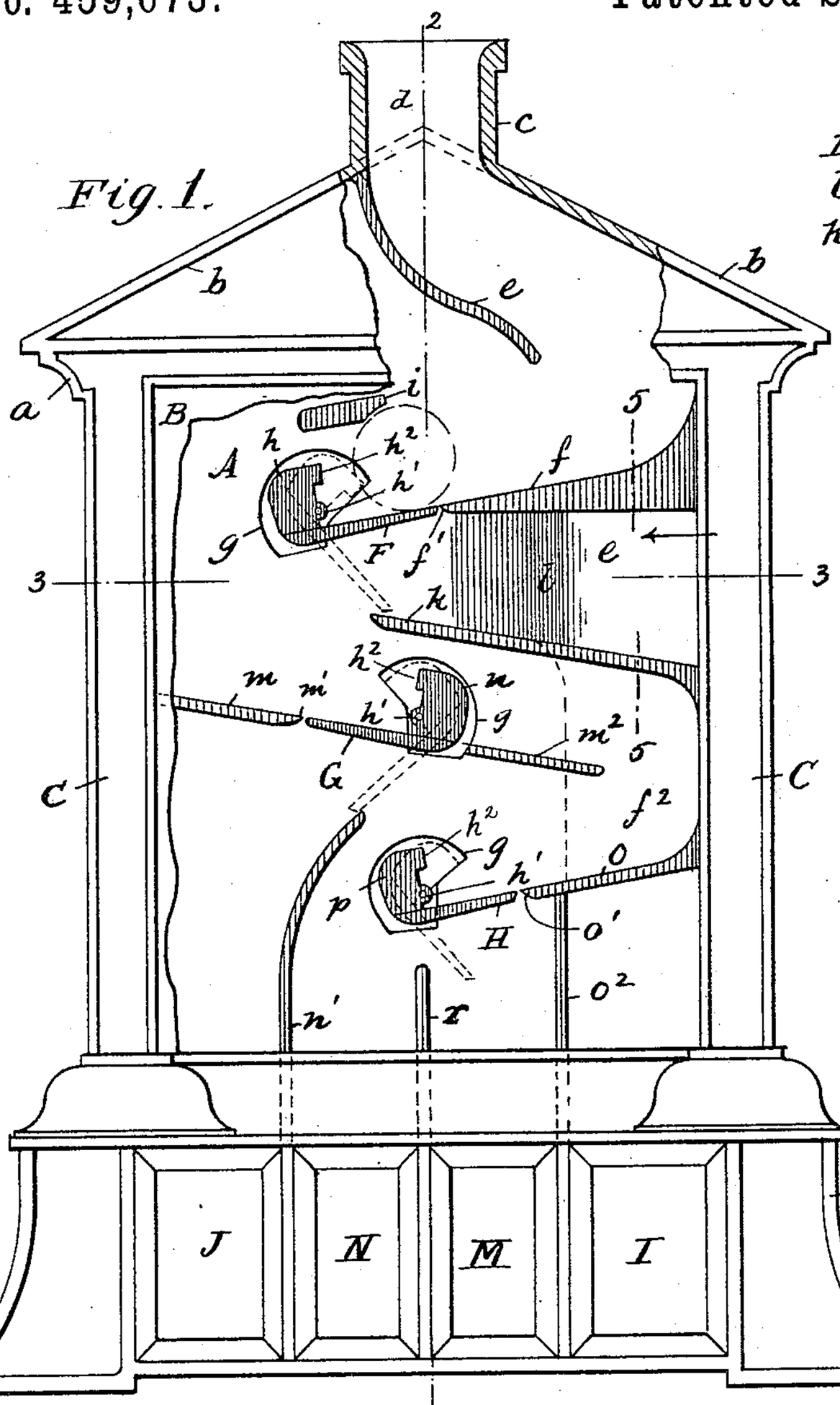


Fig. 5.

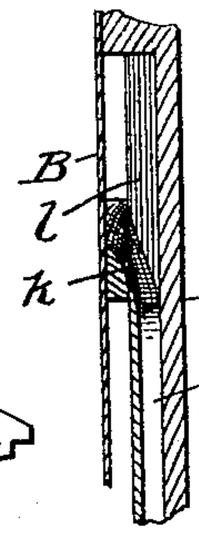


Fig. 2.

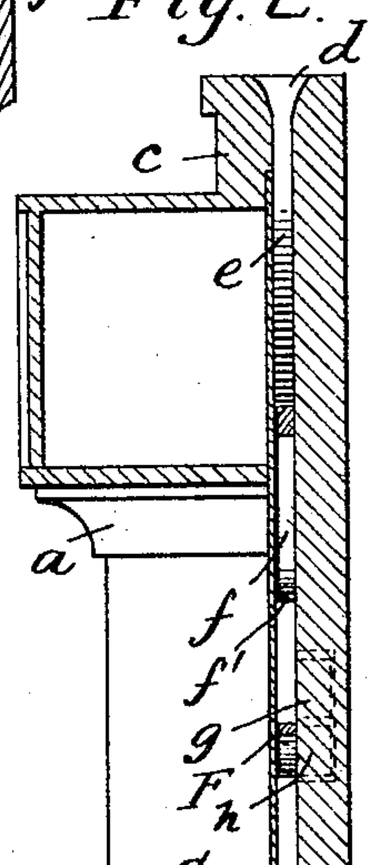
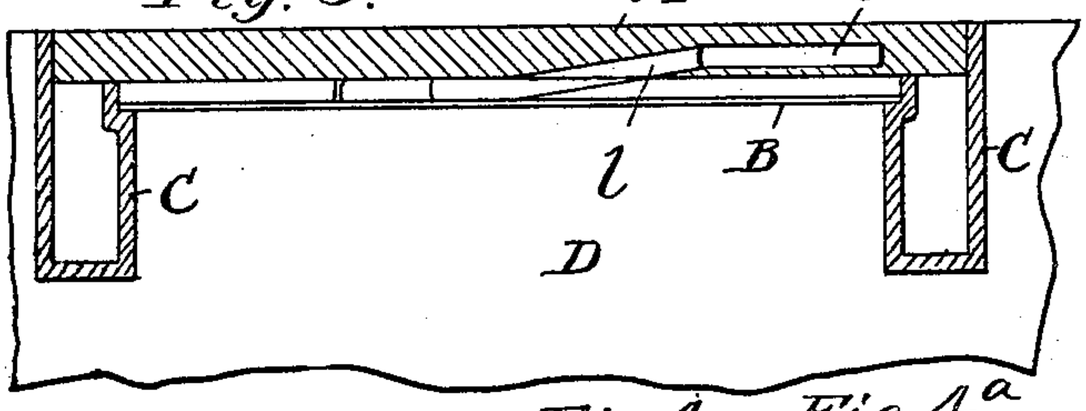


Fig. 3.



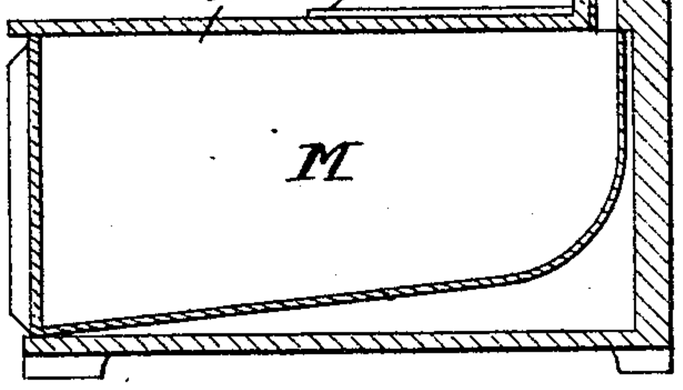


Fig. 4.

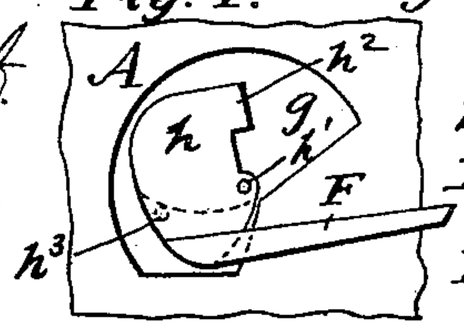
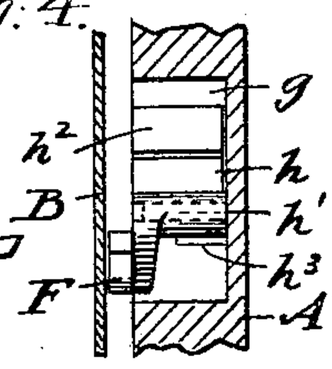


Fig. 4ª.



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UNITED STATES PATENT OFFICE.

ANDREW C. BOLTON, OF BROOKLYN, NEW YORK.

COIN-SEPARATOR.

SPECIFICATION forming part of Letters Patent No. 459,673, dated September 15, 1891.

Application filed December 11, 1890. Serial No. 374,284. (No model.)

To all whom it may concern:

Be it known that I, ANDREW C. BOLTON, of Brooklyn, in the county of Kings and State of New York, have invented a new and useful Coin-Separator, of which the following is a full, clear, and exact description.

The object of this invention is to provide a simple, inexpensive receptacle for cash of different denominations, containing means for the reliable distribution of coin of various values into appropriate separate compartments of the structure.

To this end my invention consists in certain features of construction and combinations of parts, as is hereinafter described and claimed.

Reference is to be had to the accompanying drawings, forming a part of this specification, in which similar letters of reference indicate corresponding parts in all the figures.

Figure 1 is a front elevation of the improvement with the front side broken away to expose the interior above the base. Fig. 2 is a sectional side elevation taken on the line 2 2 in Fig. 1. Fig. 3 is a partial horizontal section taken on the line 3 3 in Fig. 1. Fig. 4 is an enlarged detail front view of one of the tilting platforms and a portion of the back plate in which it is seated. Fig. 4ª is a partial vertical section of the parts shown in Fig. 4; and Fig. 5 is a vertical section of a portion of the device, taken on the line 5 5 in Fig. 1, viewed in the direction of the arrow in said figure.

The exterior casing of the coin-receptacle is preferably made in the form of a building, but may be of any other available shape; and it consists, essentially, of two vertical parallel walls joined on their side edges by upright side walls, formed with forwardly-projecting columns.

On the columns C of the side walls of the structure a horizontal cornice *a* is imposed, and a roof composed of oppositely-inclined plates *b*, joining to form a central vertex *c*, surmounts the structure, which rests upon a rectangular base D.

A represents the rear wall, and B the front wall, of the casing, which walls are separated a proper distance to permit coins to slide downwardly between them, said coins of different values, weights, and dimensions being introduced through a vertical slot *d*, formed in the upward projection *c* of the walls A B above the roof, which projection is in the shape of a chimney, one wall *e* of said slot being downwardly and laterally extended to direct the falling coin upon a fixed tram-bar *f*, which is of sufficient width to fill the space between the walls A B, and is given a proper inclination downwardly to its free end *f'*.

As before stated, the device is designed to accurately and separately locate coins of different values in different receptacles in the case D of the structure, said coins being of various weights and dimensions. To effect such a result, tilting platforms F G H of like form have been provided, which will be hereinafter described.

The gradation of value and weight of a series of coins should be determined as a preliminary in the formation of the distributing devices. They may be graded from a silver dollar down to a dime or nickel, or the series may include a range of coin embracing a quarter of a dollar as the highest value, then a dime, next a nickel, and finally a cent, this last series being used to represent the method of construction and operation of the device.

There is a recess formed at *g* in the rear wall A of proper shape to receive a portion of the tilting platform F, which is the upper one of the series mentioned, and as these platforms constitute an important feature of the invention their construction has been clearly shown in the enlarged detached views of one of them, Figs. 4 and 4ª of the drawings, wherein it will be seen that the platform named consists of an elongated strip F, whereon a gravity-block *h* is attached in such a manner that the block will be loosely seated in the recess *g* and the strip or platform located between the walls A B. The gravity-block *h* is formed on the top side of the platform, as shown, the latter being extended along the front face of the block, the entire platform, with its block, being pivoted to the back of the recess *g* on a pintle *h'*. The point of pivotal attachment of the gravity-block *h* just mentioned is produced near the front edge of the same a proper distance above the top face of the platform, which will cause the entire platform to be rocked

away from the free end f' of the tram-bar f when it is downwardly vibrated, as shown in dotted lines, Fig. 1, a portion of the block overhanging the pintle, as at h^2. When the platform F is in position, the counterbalancing-weight of the gravity-block h will retain it in alignment with the tram-bar f, that its upper end nearly touches, so that in effect the platform is a continuation of the tram-bar, and is retained in the same inclined plane therewith by the contact of the block h with the pin h^3 in the recess g.

Above the platform F a transverse abutment strip or bar i is formed on or secured to either the wall A or B at such a point as will cause the arrest of a coin of the largest denomination of the series for which the device is to be used, which will in this case be a twenty-five-cent piece. (Shown by dotted lines in Fig. 1.) When the quarter of a dollar is introduced in the chimney-slot d and rolls down the tram-bar f upon the platform F, its superior weight will depress the platform, as shown by dotted lines, thus allowing the coin to roll edgewise upon the ledge k, that is secured to one of the walls A B, and is inclined in a direction opposite to the inclination of the tram-bar above it. At a point near the side wall of the structure a depression is made in the rear wall A, as shown at l in Figs. 1 and 5, the inner edge of the ledge k being sloped downwardly opposite said depression to precipitate the coin into a vertical channel f^2, which is adjacent to the side of the casing and leads from the point of entrance mentioned downwardly into a compartment I in the base of the structure.

An inspection of the platform F and the coin shown in dotted lines thereon in Fig. 1 indicates the relative proportion of the quarter of a dollar and the strip it rests upon, and the dotted lines show the position assumed by the platform when downwardly vibrated by the weight of the coin, the rearward movement of the entire platform as it rocks affording a sufficient clearance for the piece of money to fall upon the ledge k, as stated.

The peculiar construction of the gravity-block h throws a portion of its weight forward of the pivot-point h', and thus adds it to that of the platform F and the coin on it, whereby the vibration of the platform is aided materially, the form given to the platform and its counterbalancing-block h permitting the platform to be shortened, while the proper action of the same is assured.

The next coin in the series named with regard to weight and size is the nickel five-cent piece, which, when introduced above the tram-bar f, will roll edgewise down it and across the platform F, as its weight will not overcome the weight of the block h. From the extremity of the platform F the nickel will fall upon a short fixed guideway m, that is inclined downwardly in a plane about parallel with that of the ledge k, and thence rolls upon the platform G, that is given the same degree of inclination and has its free end adjacent to the free end m' of the guideway. The platform G is of the same shape as F, and has a similar-shaped gravity-block n, said block being of such a relative weight as compared to that of the five-cent nickel coin that said coin will depress the platform and allow the nickel to slide down the upwardly-curved wall n' into another compartment J of the base D, which is adjacent to the side of the casing opposite to that near which the compartment I is located. A continuation m^2 of the guideway m is formed near the recess g, made in the rear wall A for the introduction and pivotal support of the gravity-block n, the guideway, platform G, and guideway-extension forming a continuous inclined plane when the platform is in its normal position. There is an open space intervening the end of the guideway portion m^2 and the side wall of the casing, and at a proper distance below this end of the guideway a lower tram-bar o is secured between the walls A B, which is given about the same degree of downward inclination as the upper tram-bar f. The length of the tram-bar o is proportioned to the width of the coin-channel f^2, so that its free lower end o' will project beyond the division-wall o^2, that is erected between the coin-receptacle I and the adjacent similar receptacle M, wherein coins of the next weight or copper cents are to be deposited. When a copper cent-piece is introduced in the slot d, it will traverse the tram-bar f, platform F, thence pass upon the guideway m over the platform G and guideway-extension m^2 and fall upon the lower tram-bar o, from which it will roll upon the platform H, the gravity-block p of which will allow the platform to tilt under the weight of the cent-piece and drop it into the receptacle M.

There is a vertical division-wall r erected between the walls o^2 and n', thus producing a fourth coin-receiving compartment N in the base D, which is designed for the reception of the dime or lightest coin of the series, which when introduced in the slot d will travel upon all the inclined supports before described and roll off of the platform H at the end which is above the channel leading into the compartment N, wherein it will be deposited, as its weight is not sufficient to depress the platform named. It will thus appear that by the peculiar construction and arrangement of parts coins of different values, sizes, and weights are automatically separated and conveyed to their proper receptacles within the walls of the device.

There may be changes made in the outward form of the cash-distributing apparatus without violation of the spirit of my invention if the platforms and their counterbalancing-weights are constructed and arranged as is hereinbefore described, and any desired means for affording access to the money-compartments may be provided which will be secure, and that may be opened when properly ma-

nipulated. As this is not a feature of the present invention, such a portion of the structure is not shown.

Having thus described my invention, what I claim as new, and desire to secure by Letters Patent, is—

1. In a coin-separator, the combination, with a casing, of a platform provided with an upwardly-projecting gravity-block pivoted in the casing with its pivot near the front edge thereof, whereby when the platform is tilted the upper portion of the block will be thrown forward of its pivot, thereby assisting the vibration of the platform and permitting a short platform to be used, as set forth.

2. In a coin-separator, the combination, with a casing having a recess in one of its walls, of a platform provided with an upwardly-projecting gravity-block at one side thereof, said block being pivoted in the said recess with its pivot at the front edge thereof, substantially as herein shown and described.

3. The combination, in a structure having two upright parallel walls and a base divided into coin-receiving compartments, of a series of counterbalanced platforms pivoted therein, each adapted to be tilted by the passage of a coin of proper weight to overcome the counter-balance thereof and remain in normal condition for the passage of a coin of lighter weight, substantially as set forth.

4. The combination, in a structure having a series of coin-receiving compartments in its base, vertical channels leading thereto between its parallel upright walls, and a vertical passage in its top wall for the introduction of coins of varying dimensions, weights, and values, of a series of substantially similar counterbalanced platforms pivoted between the walls of the structure and each adapted to rock downwardly when a coin it is weighted for rests on it and pass all other coins of the series that are of less weight, substantially as set forth.

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