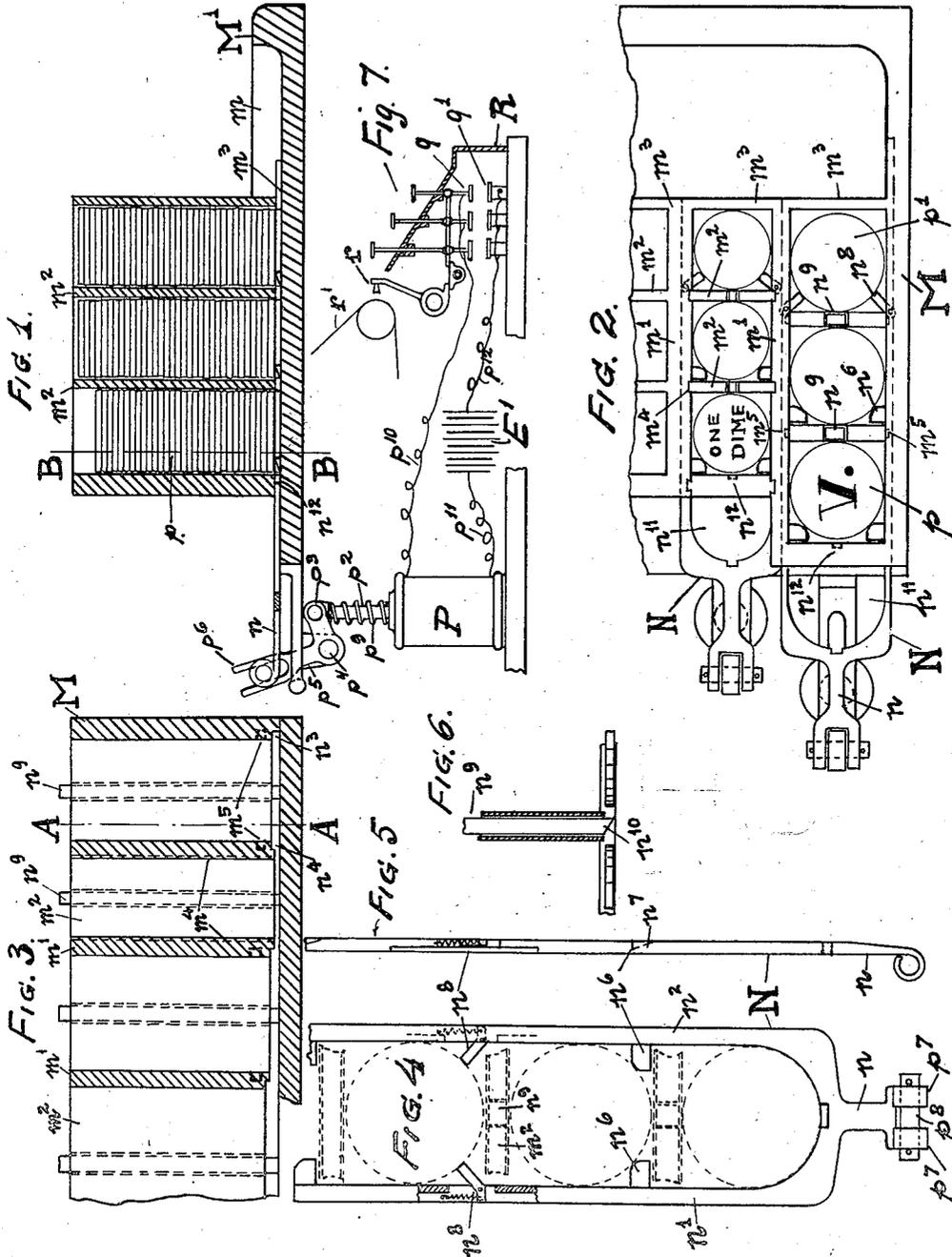


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 COIN OR CHANGE DELIVERY MACHINE.  
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Witnesses:  
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# UNITED STATES PATENT OFFICE.

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## COIN OR CHANGE DELIVERY MACHINE.

1,166,499.

Specification of Letters Patent.

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*To all whom it may concern:*

Be it known that I, ARTHUR VON BARTH, a citizen of the United States, and a resident of Perth Amboy, in the county of Middlesex and State of New Jersey, have invented a new and useful Improvement in Coin or Change Delivery Machines, of which the following is a specification.

My invention relates to coin or change delivery mechanism although capable of use for delivering other articles like tickets and any round disks and square shaped objects.

The present mechanism as applied to the coin or change delivery is operated in conjunction with a controlling and registering device with a keyboard, keys of which when depressed cause a coin or a number of coins to be delivered at a time, registering at the same time on a sheet of paper inserted over the printing roller of said controlling device the denomination of a coin or amount of coins ultimately delivered.

In the accompanying drawing which form a part of this specification Figure 1 is a side elevation of the coin delivery mechanism sectioned on the line A—A of Fig. 3. Fig. 2 is a plan view of said mechanism partly broken off. Fig. 3 is an end elevation sectioned on the line B—B of Fig. 1. Figs. 4, 5 and 6 are explanatory sketches of certain details of the mechanism. Fig. 7 is an approximate sketch of the controlling and registering keyboard placed at any convenient distance and location to the coin delivery mechanism.

I will now describe the coin or change delivery mechanism. As illustrated this comprises an open top casing M within which are coins of different denominations and in front of which at the lower portion is an extension M<sup>1</sup> having a recess *m* for the coins fed out. The casing is divided into a series of compartments by means of walls *m*<sup>1</sup>, each compartment adapted to hold coins of a given denomination, for example 1¢, 5¢, 10¢, 25¢, 50¢.

The coin compartments within the casing M may each be longer than its width so as to contain a number of columns of coins of the same denomination, and these may conveniently be separated from each other by divisions *m*<sup>2</sup> as seen in Figs. 1 and 2. By this arrangement the coin mechanism is enabled to contain a very large number of

coins, and the feeding out mechanism which will be described, is adapted to feed out successively from each of the different columns without the need of any special attention by the operator or any re-adjustment of the mechanism after one column has been exhausted. Each of the compartments has a coin exit in front, for example the first or nickle compartment has a coin exit at *m*<sup>3</sup>, such exit consisting in a horizontal slit of sufficient depth to permit one or more coins to pass outwardly; as also according to the respective compartment from which one or more coins has to be delivered at a time, they also being of varying depths according to the coins. Each of the compartments may have a flat bottom surface, as clearly indicated in Fig. 1. The divisions *m*<sup>2</sup> contained in the compartments are each caused to stand slightly above the flat bottom so as to permit coins to pass forwardly under the divisions in a manner that will be explained. The divisions may be secured in place either by a sliding connection as seen at *m*<sup>4</sup> in Figs. 2 and 3, or a pivotal connection as seen at *m*<sup>5</sup>. In the latter case the divisions may be swung to an inclined position and in both cases the feature of movability is an assistance in putting coins into and taking them out of the compartments.

The means for feeding coins out is shown as a pusher or slide N having a stem *n* and forked beyond the stem in two branches *n*<sup>1</sup> and *n*<sup>2</sup>, said branches passing forward in parallelism to whatever extent may be necessary to correspond with the number of columns of coins in each compartment. The pusher seen in Figs. 4 and 5 is of a size for three columns of coins, and its application is more clearly seen in Fig. 2. In action the pusher rests upon the flat bottom of its compartment and slides forwardly and backwardly thereon in the act of pushing coins out of the compartment. The walls *m*<sup>1</sup> between the compartments as also between the side walls M of the casing are grooved or cut away at *n*<sup>3</sup> and *n*<sup>4</sup> to admit the pusher, and in fact as seen in Fig. 3 I prefer that the wall *m*<sup>1</sup> should not extend to the bottom of the casing but be suspended slightly thereabove so as to admit space for the side rails or branches *n*<sup>1</sup> and *n*<sup>2</sup> of the several pushers. The means which actually accomplishes the pushing out of the coins consists in a plu-

rality of projections  $n^6$  formed preferably in  
 pairs on opposite sides of the pusher, and  
 of such construction that on each forward  
 movement of the pusher the projections will  
 5 engage the lowermost coins and shove them  
 forward so that in the full operation of the  
 machine each complete forward movement  
 of the pusher forces a number of coins out  
 from the compartment into the recess  $m$  in  
 10 front. In order that the pusher may be re-  
 turned to its backward position notwith-  
 standing the presence of the projections  $n^6$ ,  
 the latter are made in the form of wedges  
 with inclined rear surfaces  $n^7$  so that they  
 15 may ride easily under the coins, or said pro-  
 jections are pivotally attached as at  $n^8$  and  
 made the same to recede on passing the col-  
 umn of coins while the pusher N is moving  
 to its backward position.

20 In conjunction with the wedge projections  
 $n^6$  or  $n^8$  I employ also a means to prevent  
 coins being fed backwardly by friction  
 caused by projections of the pusher and this  
 may conveniently comprise drop latches  $n^9$ ,  
 25 each of which is shown mounted centrally  
 in one of the division walls  $m^2$ , the latter  
 having an interior passage from top to bot-  
 tom to permit the free movement of the  
 latch. The lower end of each latch is in-  
 30 clined as seen at  $n^{10}$ , Figs. 3 and 6.

In the operation of a pusher of the con-  
 struction described, referring to Fig. 1, coins  
 will be fed on each reciprocation of the  
 pusher and will be drawn from the rearmost  
 35 column  $p$  of the coins in such compartment.  
 To describe the action in detail it is as fol-  
 lows: Fig. 2 shows the pusher N in its  
 backward position. The several projections  
 $n^6$  or  $n^8$  are behind the three respective  
 40 bottom coins of the three columns. The  
 several latches  $n^{10}$  are inclined at their lower  
 ends so as to permit forward movement but  
 to prevent backward movements of the coins.  
 With this condition of affairs, the pusher is  
 45 shoved forwardly the distance approxi-  
 mately the diameter of one coin. The three  
 bottom coins are thereby each moved for-  
 wardly to the extent of one diameter, and  
 the forward coin  $p^1$  passes out from the  
 50 front slit  $m^3$  into the recess  $m$  of easy access  
 to the operator. At the same time the other  
 two coins are each moved forwardly taking  
 their place beneath the next succeeding col-  
 umns, and at the end of the front stroke of  
 55 the pusher the rear column  $p$  will drop to  
 the extent of the thickness of a single coin  
 and a new coin will thereby engage the  
 pusher in the space  $n^{11}$  thereof. On the  
 backward movement of the pusher the sev-  
 60 eral pairs of wedge projections  $n^6$  or  $n^8$  will  
 pass easily under or around the several col-  
 umns of coins respectively, and the pusher  
 will be returned to its normal position or  
 that seen in Fig. 1, while the coins will be  
 65 prevented from moving backwardly with

the pusher by means of the latches  $n^9$  stand-  
 ing in their way. The rearmost wall does  
 not require a drop latch with inclined bot-  
 tom face, but instead is provided with a  
 fixed lug or projection  $n^{12}$  which stands per- 70  
 manently in position to prevent any coins  
 passing backwardly out of the compartment.

A convenient means to actuate the pusher N  
 is as follows: A solenoid P may be employed  
 having an armature  $p^2$  acting upon one arm 75  
 $p^3$  of a bell crank lever which is pivoted at  $p^4$   
 and has a second arm  $p^5$  forked at  $p^6$ . The  
 rear end of the pusher is formed as seen in  
 Figs. 4 and 5 with a pair of supporting exten-  
 sions  $p^7$  for a pin  $p^8$ , in consequence of which 80  
 the inward and outward movement of the  
 armature  $p^2$  effects a forward and back-  
 ward movement of the pusher, and the ex-  
 tent of such movement will be in accord-  
 ance with the size of the coin handled in the 85  
 compartment, to which the pusher applies.  
 A spring  $p^9$  may be employed and con-  
 veniently located about the armature  $p^2$  for  
 the purpose of forcing the bell crank lever  
 back to its normal position, thereby return- 90  
 ing the pusher to its rearward position.  
 The solenoid will be sufficiently powerful to  
 overcome the force of the spring  $p^9$  and the  
 friction and other resistance of the coins in  
 being moved forwardly. To energize the 95  
 solenoid any source of electricity, conven-  
 tionally illustrated at  $E^1$ , may be employed,  
 and the wires  $p^{10}$ ,  $p^{11}$  and  $p^{12}$  may be em-  
 ployed to complete a circuit through the  
 solenoid, the source of current and the con- 100  
 trol device. It is to be mentioned that in  
 the control mechanism there is an electrical  
 contact device consisting of two contacts  $q$   
 and  $q^1$  which are adapted to be brought to-  
 105 gether by the depression of the proper key.  
 For example if the key marked 5¢ is de-  
 pressed, it will effect a contact between the  
 contacts  $q$  and  $q^1$  and complete the circuit so  
 as to energize the solenoid P corresponding  
 110 to the compartment which contains five cent  
 pieces. In this way the depression of the key  
 not only effects the feeding out of a five cent  
 piece from the coin compartment into the  
 recess  $m$ , but also records at the same time  
 115 by means of an oscillating type  $r$  the amount  
 of money paid out on the sheet of paper  $r^1$ .  
 The solenoid P may be conveniently fixed  
 below the coin container, and the control  
 mechanism R can be located at any con- 120  
 venient distance from the coin or change  
 delivery mechanism. It has to be said also  
 that the thickness of projections  $n^6$  or  $n^8$  of  
 the pusher N as also clearances at the bot-  
 tom of compartments and at the exit  $m^3$   
 must be made according to the thickness of  
 one or a number of coins a pusher from the  
 respective compartment is destined to feed  
 out at a time.

Having thus described my invention and  
 while not wishing to limit myself to the me- 125

chanical details of construction, I claim as new and desire to secure by Letters Patent the following:

1. A machine of the kind described, embodying therein a series of coin containers, each comprising a plurality of members having connecting open bottoms, and adapted to hold horizontally a vertical column of coins, vertical partitions separating the members of each series, said partitions having a space below the same sufficiently large to permit the passage of a coin and means simultaneously forcing a coin from one member to the next adjoining member beneath said partition, and delivering a coin from the last member to the operator, and a controller whereby said last named means may be selectively operated.

2. A machine of the kind described embodying therein a series of coin containers each comprising a plurality of members having connecting open bottoms and adapted to hold horizontally a vertical column of coins, vertical partitions separating the members of each series, said partitions having a space below the same sufficiently large to permit the passage of one coin and means simultaneously forcing a coin from one member to the next adjoining member beneath said partition, and delivering a coin from the last member to the operator, comprising a reciprocating pusher common to all members of each container, and a controller whereby said last named means may be selectively operated.

3. In a machine of the kind described, the combination of a coin container embodying therein a series of vertical containers each having a plurality of columns therein, vertical partitions separating said columns, said partitions being spaced above the bottom of the container sufficiently to permit the passage of one coin, a pusher common to all columns of a container and moving in the bottom of said container, permanently adapted to engage and to feed out coin, from any column next to the last exhausted, said pusher constructed to simultaneously move forward the bottom coins of all the columns so as to feed out the foremost coin, and to

permit the rearmost column to feed downwardly to replace a coin in the vacant space.

4. In a machine of the kind described, the combination of a coin container embodying therein a series of vertical containers each having a plurality of columns therein, vertical partitions separating said columns, said partitions being spaced above the bottom of the container sufficiently to permit the passage of a coin, a backwardly and forwardly moving pusher common to all columns in a container and moving in the bottom of said container, permanently adapted to engage and to feed out coin, from any column next to the last exhausted, said pusher constructed to simultaneously move forward the bottom coins of all the columns so as to feed out the foremost coin and to permit the rearmost column to feed downwardly to replace a coin in the vacant space, and means whereby the pusher may return backward without moving coins backward.

5. A coin container comprising a plurality of alined coin columns of equal diameter, division walls therebetween having cut away portions at the bottom thereof to permit coins to be pushed below said walls from one column to the adjacent column, a reciprocating pusher common to all of said columns for feeding coins from said columns, one at a time, upon one reciprocation thereof, and latches in said division walls whereby coins are prevented from being fed upon the return reciprocation of said pusher.

6. A coin container having a plurality of coin columns, division walls therebetween arranged with spaces thereunder to permit coins to be pushed out from below, a pusher for feeding out coins, and latches in said division walls to prevent coins feeding back, and means on said pusher permitting it to move back without obstruction by the coins.

In testimony whereof, I have signed my name to this specification in the presence of two subscribing witnesses.

ARTHUR VON BARTH.

Witnesses:

Mrs. H. R. CLARK,  
INGVARD GREISEN.