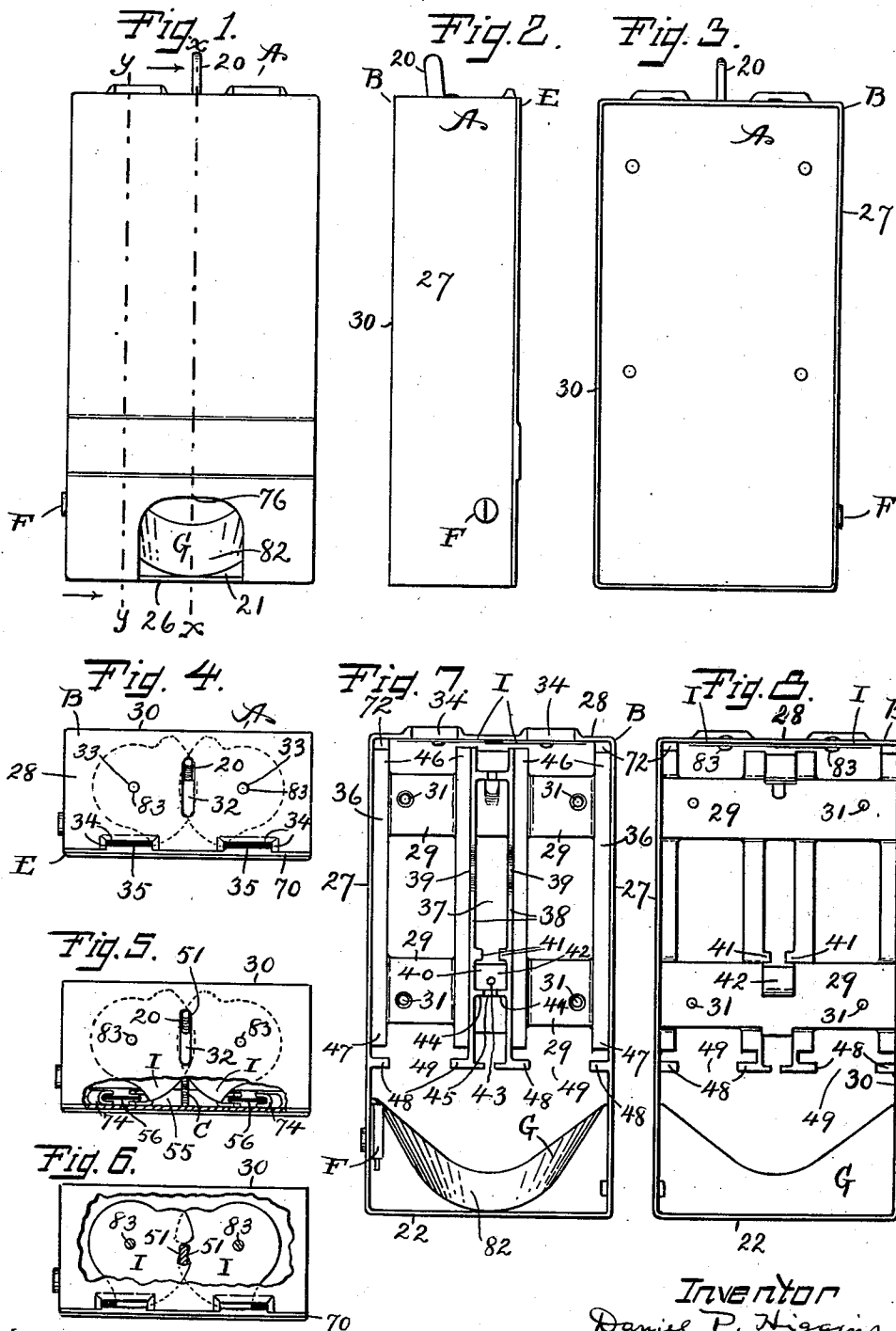


D. P. HIGGINS.
 COIN CONTROLLED DEVICE.
 APPLICATION FILED AUG. 8, 1911.

1,018,055.

Patented Feb. 20, 1912.

3 SHEETS—SHEET 1.



Witnesses:
 S. H. Clarke
 R. W. Edwards

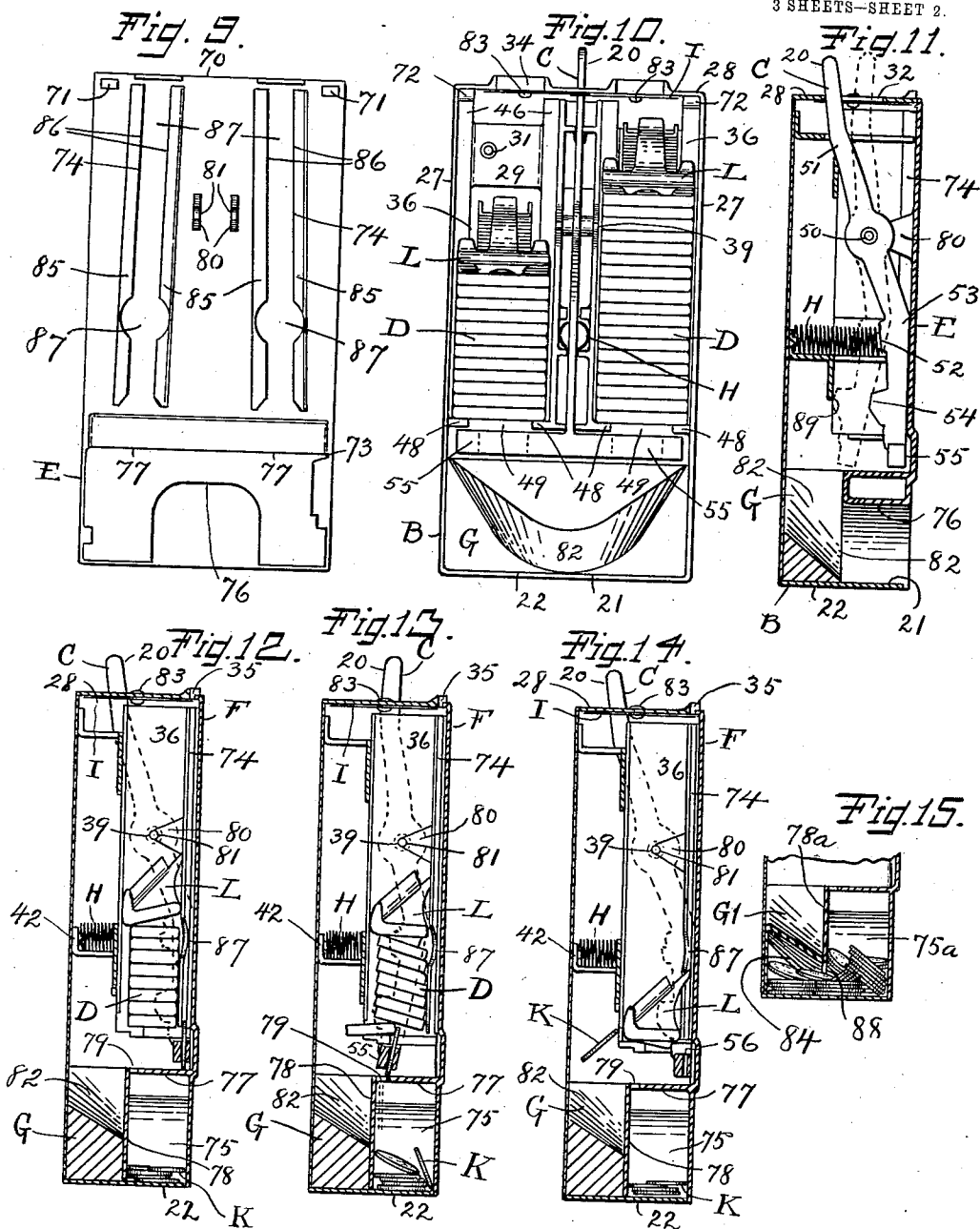
Inventor
 Daniel P. Higgins.
 By Louis M. Schmidt.
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3 SHEETS—SHEET 2.



Witnesses

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Inventor

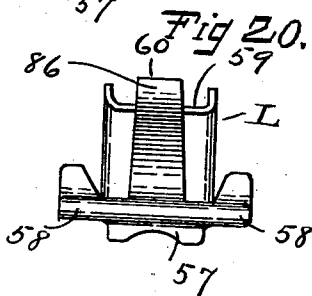
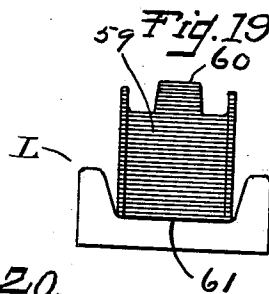
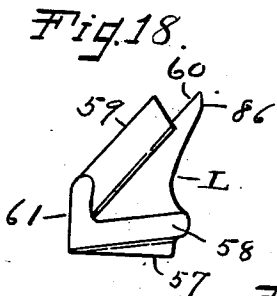
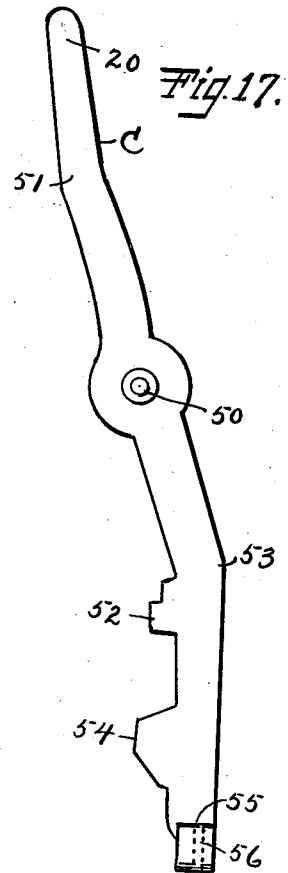
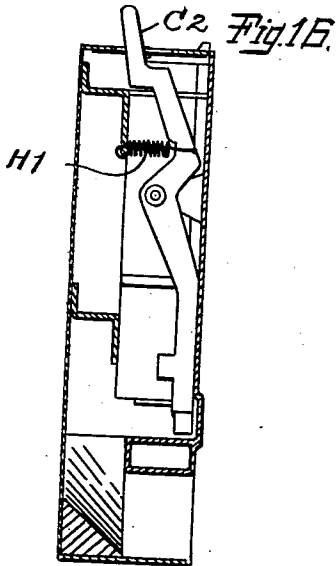
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3 SHEETS—SHEET 3.



Witnesses.

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UNITED STATES PATENT OFFICE.

DANIEL P. HIGGINS, OF NEW HAVEN, CONNECTICUT.

COIN-CONTROLLED DEVICE.

1,018,055.

Specification of Letters Patent.

Patented Feb. 20, 1912.

Application filed August 8, 1911. Serial No. 643,005.

To all whom it may concern:

Be it known that I, DANIEL P. HIGGINS, a citizen of the United States, residing at New Haven, in the county of New Haven and State of Connecticut, have invented certain new and useful Improvements in Coin-Controlled Devices, of which the following is a specification.

My invention relates to improvements in coin controlled devices and the objects of my improvements are simplicity and economy in construction, and convenience and efficiency in use.

In the accompanying drawing:—Figure 1 is a side elevation of my coin controlled device. Fig. 2 is an end view of the same. Fig. 3 is a rear view of the same. Fig. 4 is a plan view of the same. Fig. 5 is a similar view of the same, with the top in part broken out. Fig. 6 is a similar view of the same, showing the shutters obstructing the coin receiving openings. Fig. 7 is a side elevation of the body frame. Fig. 8 is a rear elevation of the same. Fig. 9 is a rear elevation of the cover member. Fig. 10 is a side elevation with the cover member removed, and with goods units in the goods ways. Fig. 11 is a sectional view on the line *x x* of Fig. 1, certain parts being shown in side elevation. Figs. 12, 13 and 14 are sectional views on the line *y y* of Fig. 1, certain parts being shown in side elevation, and showing different positions of the moving elements. Fig. 15 is a fractional sectional view, showing a modification of the coin chamber. Fig. 16 is a sectional view on the line *x x* of Fig. 1, showing a modification of the lever and spring. Fig. 17 is a side elevation of the lever shown in Fig. 1, on an enlarged scale. Fig. 18 is an end elevation of the weight member. Fig. 19 is a side elevation of the same. Fig. 20 is a reverse view of the same.

A is my coin controlled device and comprises a body member B and a cover member E forming a box like structure, having at the upper side the exposed end or handle 20 of an operating lever C, and near the lower end a recess 21 extending from the front rearwardly for about one half the depth of the body member B. The bottom of the recess 21 is a part of the bottom 22

of the box B and serves as a receiving platform 26 for the goods D to be vended or delivered. The said body member B is a shell like structure having an open front and the side walls arranged in rectangular formation, comprising the lateral walls 27 cross-connected at the bottom by the said bottom wall 22 and at the top by the top wall 28. A skeleton back in the form of a pair of cross-pieces 29 cross-connect the lateral walls 27 at points appreciably forward of the rear edge 30 and in the same are provided holes 31 for holding screws. The said top wall 28 has a slot 32 extending across a part of the middle portion and which is an operative fit for the said handle 20 of the lever C, permitting a limited motion of the same; has a pair of rivet holes 33, one on each side of the said slot 32; is cut away at two points at the front to form the rear and side walls 34 of a pair of coin receiving slots 35; and on the inside is provided with a pair of lugs 72 suitable for engaging with corresponding lugs on the inside of the cover member E for holding the upper end thereof. Near the lower end on one side, shown as the left side there is a lock F suitable for engaging with a keeper on the cover member E and securing the lower end thereof. The lower rear portion of the said body portion B may be filled in by a block G, or integrally, to provide a chute 82 leading from the rear portion of the body member B to the delivery platform 26. The upper front interior portion of the said body member B is provided with a pair of ways 36 for the goods D, one on each side of the middle portion, and at the middle portion is provided with a housing 37 for the said lever C and operating mechanism therefor. The said housing 37 comprises a pair of lateral walls 38 which constitute inner walls of the said ways 36 and which are suitably spaced, to admit the said lever and a compression spring H, and which walls 38 are recessed near the upper central portion to provide bearings 39 for the lever and below said bearings there is provided a skeleton housing 40 for said compression spring H suitable for operating the said lever C. The said housing 40 comprises four corner members constituting interrupted top and bot-

tom walls 41 and 44 respectively, coöperative with the said lateral walls 38 to form a socket or cavity for the said spring H and a back wall 42 suitable for a bearing for the back end of the spring H and which may be provided with a projection 43 for entering the coil of the spring and positioning the said back end. The back of the said back wall 42 is preferably flush with the back of the body member B, and as shown is integral with the lower corner members forming a backward extension of the said bottom wall 44. The slot 45 in the said bottom wall 44 may be, as shown, an operative fit, suitable for guiding the lever C. The said goods ways 36 comprise the said lateral walls 38 for the inner wall, the body member walls 27 for the outer walls, and a skeleton rear wall in the form of a pair of vertical tracks 46, which latter are located approximately in the middle of the depth, and are limited at their lower ends 47 at an elevation above the goods holding platform corresponding approximately to the thickness of one piece of goods D. The said goods holding platform is horizontal, and cut away across the middle, as shown at 49, and consists accordingly of a pair of lateral supporting members 48, which constitute an interrupted platform. Rivets 83 in the said rivet holes 33 serve to pivotally support a pair of shutters I, which latter are generally sector shaped, have each a slot 51 that operatively engages with the lever C, and whereby the said shutters respond to the movements of the lever C; and the shape of and dimensions of the said shutters I are such that in one limiting position of the said lever C, shown as the rear position thereof, the said shutters will be clear of the coin receiving holes 35, and in the other limiting position thereof will partially obstruct the same, sufficiently to prevent the insertion of a coin therein.

My cover member E comprises a plate-like member suitable for a closure of the front of the body member B, the top edge 70 forming the front wall of the two coin receiving slots 35 and coöperating with the side and end walls 34 to completely inclose the said slots 35; has the lugs 71 to engage the lugs 72 on the body member and the keeper 73 for engaging with the lock F; has on the back wall and extending along the upper and middle portion of a pair of coin ways 74 connecting the said coin receiving slots 35 with coin delivery means to be described; and along the lower front portion of said back wall is provided with partitions serving to provide a pair of coin storage chambers 75, one on each side, and between the same an arched wall 76 forming lateral walls and roof for the said recess 21 and a working platform 77 one on each side, comprising a horizontal plate which constitutes the roof of the coin storage chambers 75 and is provided adjacent the rear vertical wall 78 of the said chamber with a coin delivery slot 79, through which a coin will be delivered from the said platform 77 to the said storage chambers 75; and furthermore, the said rear wall of the cover member is provided with a pair of rearwardly projecting wings 80 generally V shaped and to correspond to the shape of the said lateral walls 38 on the body member adjacent the bearings 39, and at the apex bearings 81 are provided that coöperate with the said bearings 39 on the body member B to complete the bearings for pivotally mounting the said lever C. The back wall 78^a of the coin storage chambers 75^a may be cut away as shown at 88 Fig. 15, and the filler block G¹ provided with a recess 84 that coöperates with the coin storage chamber 75^a and thereby serves to provide additional capacity for coin storage. The elevation of the said working platform 77 is determined by the elevation of the goods supporting members 48 and the diameter of the coin K so that a coin standing upright on edge and moved from front to rear while in such upright position will engage with the lateral edge of the bottom unit of the goods D when resting in the goods ways 36 and will bodily push the goods unit D off from the said lateral supports 48, the upper part of the coin K traveling in the open space 49 between the said lateral supports 48, the goods unit D dropping by way of the chute 82 to the delivery platform 26, and coincident with the delivery of the goods as described the coin K itself is delivered through the coin delivery slot 79 to the coin storage chamber 75.

The means for effecting the movement of the coin K as described and through the movement of the coin delivering the goods unit D to the delivering platform 26 comprises a branch arm 55 on the lower end of the operating lever C. The said lever C comprises an elongated moving element having adjacent the middle a pair of lateral bearings 50 suitable for engaging with the coöperating bearings 39 and 81 on the body member B and cover member E to provide a pivotal means of support, has the upper lever arm 51 extending upward, engaging with the shutters I and passing through the slot 32 in the top wall 28 of the body member B, the upper end of which serves as the handle 20, previously mentioned. Below the said bearings 50 on the back edge the lower lever arm 53 is provided with a backwardly projecting lug 52 which serves to engage with and support the front end of the spring H and in position suitable for bearing against the lever C and tending to push the said lower arm 53 outwardly or forwardly. A lug 54 is also provided on

the arm C for engaging with a fixed stop 89 on the body frame B and positively limit the movement of the lever arm C. At the extreme lower end the said lower arm 53 is provided with the said branch arms 55, extending laterally, one on each side. The said branch arms 55 in normal position, extend below the lower ends of the said coin delivery ways 74 and are each provided with a generally vertical slot 56 that is a fit for a coin K and in registration with the said lower end of the coin way 74, and immediately above the said working platform 77, whereby a coin dropped in the receiving slot 35 will pass along the coin way 74 and be delivered to the slot 56, and will be held substantially vertical thereby, with the bottom edge of the coin resting on the working platform 77 and the top edge immediately in front of the body of one of the goods units D. Accordingly, a movement of the lever C by the handle 20 will serve to deliver the goods unit D to the delivering platform 26 and the coin K to the coin chamber 75 in the manner described, and upon release of the handle 20 by the operator the spring H will restore the lever C to the normal position. The means described comprise the normal conditions of operation, involving the delivery of a goods unit responsive to the insertion of a coin. Means are also provided for delivery of the coin K inserted in slot 35 to the delivery platform 26 independent of the lever C in case the charge or supply of goods D has been exhausted, and which will be described. The said coin way 74 comprises essentially a pair of laterally disposed channel members 85 attached to the said back wall of the cover member, and separated at their rear and inwardly disposed edges 86 by an open space 87, the rear faces of the said channel members 85 constituting the front wall of the goods way 36 and wherefore when the cover member is removed, the said goods ways are open at the front, permitting of loading or charging the same.

It is found convenient in devices such as described to utilize a weight L on the goods D to positively hold the same on the goods supporting platform and in position for delivering under normal conditions of operation. I provide a weight L that in lateral extent and dimensions corresponds to the dimensions of the goods units D, whereby the said weight will be guided in its downward course essentially in the same manner as the goods D. I provide essentially a double bottom for my weight L, the two bottoms or bases being disposed relatively one to the other, comprising respectively a middle portion 57, and a pair of lateral portions 58 on each side thereof and which cooperate to form a divided support. The said middle portion 57 projects below the

lateral portions 58, whereby the said middle portion 57 will rest on the goods D when there are such goods in the goods way 36 and will serve as the normal base, supporting the weight L on the goods D. Furthermore, the said base 57 is appreciably narrower than the space 49 between the lateral goods supports 48, whereby when the goods are exhausted, the said lateral portions 58 will engage with the lateral goods supports 48 and serve as the base for supporting the weight L on the said lateral goods support. The angular disposition of the said bases 57 and 58 is such that when the goods are exhausted and the base 58 comes into play as the weight support the weight L will be bodily tilted forward by an appreciable angle, and for a purpose to be described. The upper portion of the said weight L is provided with an auxiliary coin way 59 which extends angularly across the said weight L, the upper end 60 of which is normally held adjacent and clear of the said coin way 74 and the lower end 61 is directed toward the chute 82, and the said upper end 60 is cut away at the sides to provide a tongue 86 suitable for entering between the lateral edges 86 of the coin way on the sides of the space 87 and for being interposed across the said coin way. The tilting of the weight L in the manner described when the goods D are exhausted effects such positioning of the said tongue 60 across the coin way 74 and obstructs the same. An enlargement or cutting away of the said coin way 74 as shown at 87 above the position of the auxiliary way 59 when in the tilted position permits the escape of a coin K so obstructed from the coin way 74 through the auxiliary coin way 59. Accordingly, under the conditions described, a coin admitted through the slot 35 to the coin way will be deflected from its normal course of travel along the coin way 74 and through the auxiliary coin way 59 on the weight L to the delivery chute 82 and thence to the delivery platform 26 where under normal conditions the goods D are delivered.

As described, my coin controlled device may be operated singly, on either side, or duplex, and in all cases, when the supply of goods has been exhausted, the coin or coins will be delivered to the delivery platform in lieu of the goods. Furthermore, as described, as the device is operated after the insertion of a coin, the shutters I are operated by the lever C to obstruct the coin receiving slot 35 to prevent the insertion of a coin during such operation, and they also serve in combination with the lever C to keep the slot 32 in the top wall 28 closed in all positions of the lever C.

My coin controlled device comprises essentially a two part compartment which houses as moving elements the lever C as the main

moving element and as auxiliary moving elements the weight L and the shutters.

The simplicity of the mechanism described is due to a considerable extent to the feature of utilizing the coin for selecting and pushing the goods unit to the delivery chute.

By suitably extending the branch arms of the operating lever, providing additional coin-carrying slots therein and constructing additional goods ways and coin ways to correspond, a plurality of goods in excess of the duplex arrangement shown may be delivered to the one receiving platform by the operation of a single lever.

In Fig. 16 a tension spring H^1 is arranged above the point of pivotal support for the lever C^2 to retain the said lever to the normal position.

It is apparent that some changes from the specific construction herein disclosed may be made and therefore I do not wish to be understood as limiting myself to the precise form of construction shown and described, but desire the liberty to make such changes, in working my invention, as may fairly come within the spirit and scope of the same.

I claim—

1. In a coin controlled device comprising a lever operative under normal condition to deliver goods to a delivery platform responsive to a coin inserted in a coin slot in the said device and a coin way operative to deliver the said coin to said lever, the said coin way being fixedly and rigidly supported and in combination therewith means for delivering the said coin to the said platform directly and independently of the operation of the said lever when the supply of goods to be delivered has been exhausted.

2. In a coin controlled device having means for delivering goods responsive to a coin inserted therein upon the operation of a lever and having a coin receiving slot, and a slot in which the lever has a limited motion, a shutter operated by the said lever serving to obstruct the said coin receiving slot and in combination with the said lever to close the said second slot.

3. In a coin controlled device having means for delivering goods responsive to a coin inserted therein upon the operation of a handle having a limited reciprocal movement and having a coin receiving slot, a shutter pivotally mounted and in contact directly with the said handle and responsive by reason of such contact to the movements of the said handle, and the said shutter provided with an extension suitable for obstructing the said slot at one position of the said handle.

4. In a coin controlled device having a casing provided with a coin receiving slot and a second slot, and a handle having a re-

ciprocal motion across the said second slot, a shutter operatively mounted and in contact with the said handle and operative in response to the movement thereof, the said shutter serving to close the portion of the said second slot not occupied by the said handle at all positions of the said handle therein and also to obstruct the said coin receiving slot at one position of the said handle.

5. In a coin controlled device, having a goods way, a coin way, and means operative under normal conditions for delivering goods from said goods way to a delivery chute, and for delivering a coin to a coin storage chamber, an auxiliary way supported under such normal conditions on said goods in said goods way, means for connecting the said auxiliary way with the said coin way upon the exhaustion of the supply of said goods, and operative to deflect a coin inserted in said coin way, via said auxiliary way to the said delivery chute.

6. In a coin controlled device comprising a goods way, a coin way, and mechanism operative under normal conditions and responsive to a coin inserted in said coin way to deliver goods from said goods way to a delivery chute, and comprising a weight on said goods, the said weight provided with an auxiliary way normally adjacent and clear of said coin way, a support operative to receive and support the said weight after the goods supply has been exhausted, and to permit a tilting of the said weight so as to connect the said auxiliary way with the said coin way.

7. In a coin controlled device comprising a goods way, suitable for retaining goods and having an interrupted goods support comprising lateral supports separated by a space, a weight fitting said way laterally and having a double base in angular relation one to another comprising a middle and lower portion serving as a support by resting on the goods and of width such as to be admitted to the said space, and a pair of lateral portions suitable for engaging with and resting on said lateral supports when the goods supply is exhausted, and an auxiliary way extending across the top of the said weight and having a tongue at the upper end, a coin way suitable for receiving and guiding a coin, and mechanism operative under normal conditions to deliver goods from said goods way responsive to a coin inserted in the said coin way, the angular direction of the said two bases being such that the change of support of the said weight from the goods to the lateral supports effects a tilting of the said auxiliary way so as to bring the said tongue across the said coin way and deflect a coin therefrom through the said auxiliary way.

8. In a coin controlled device operative to

deliver goods units to a goods receiving platform responsive to the insertion of a coin, means operative to deliver a coin inserted therein after the supply of goods
5 units has been exhausted to the said goods receiving platform comprising a weight provided with an auxiliary way in combina-

tion with means for directing the said coin thereover *en route* to the said platform.

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Witnesses:

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Copies of this patent may be obtained for five cents each, by addressing the "Commissioner of Patents,
Washington, D. C."