(No Model.) 2 Sheets—Sheet 1.

C. BURTON.

COIN CONTROLLED VENDING MACHINE.

No. 572,523. Patented Dec. 8, 1896.

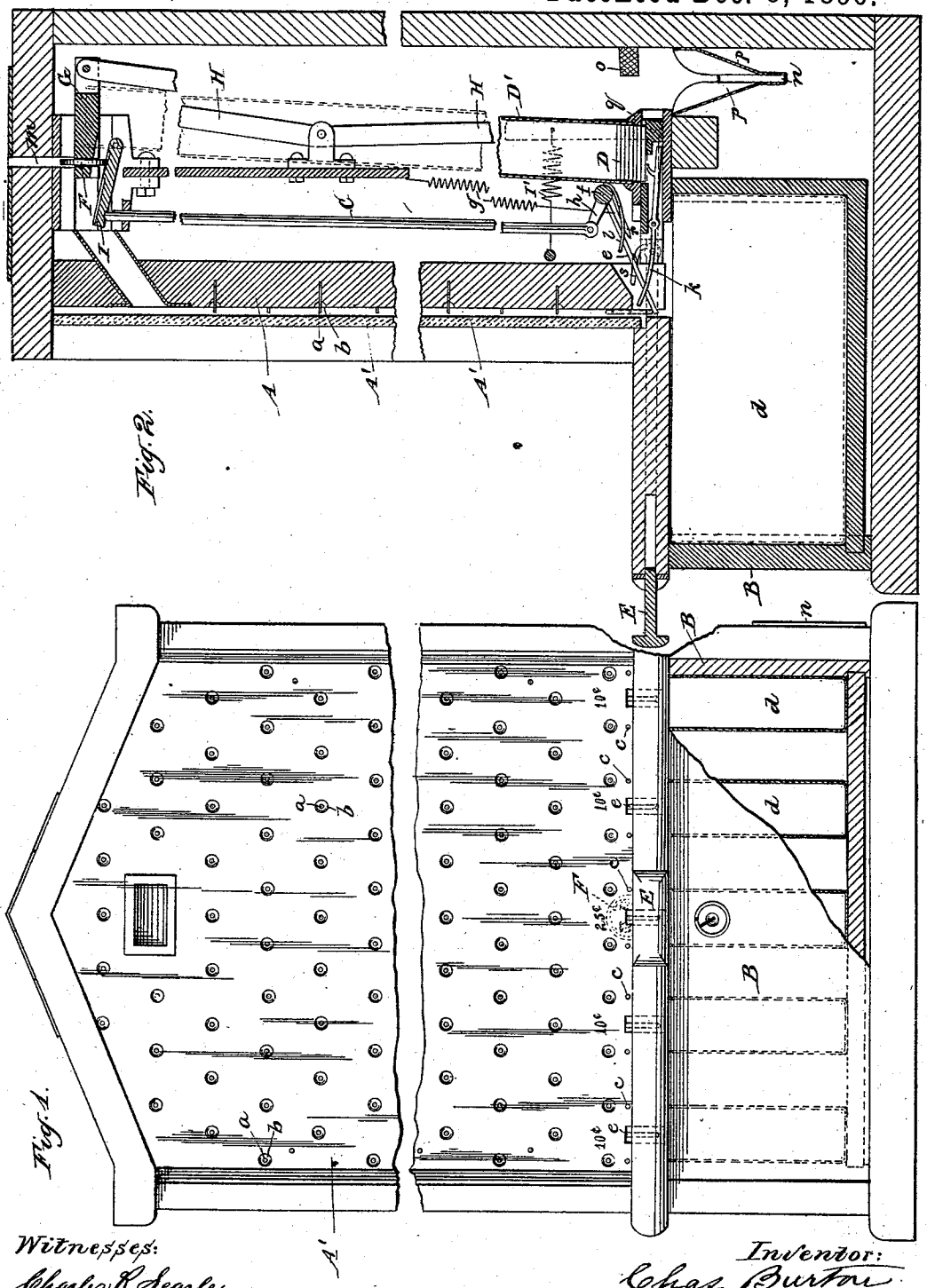

Fig. 2.

Fig. 1.

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Att'y.

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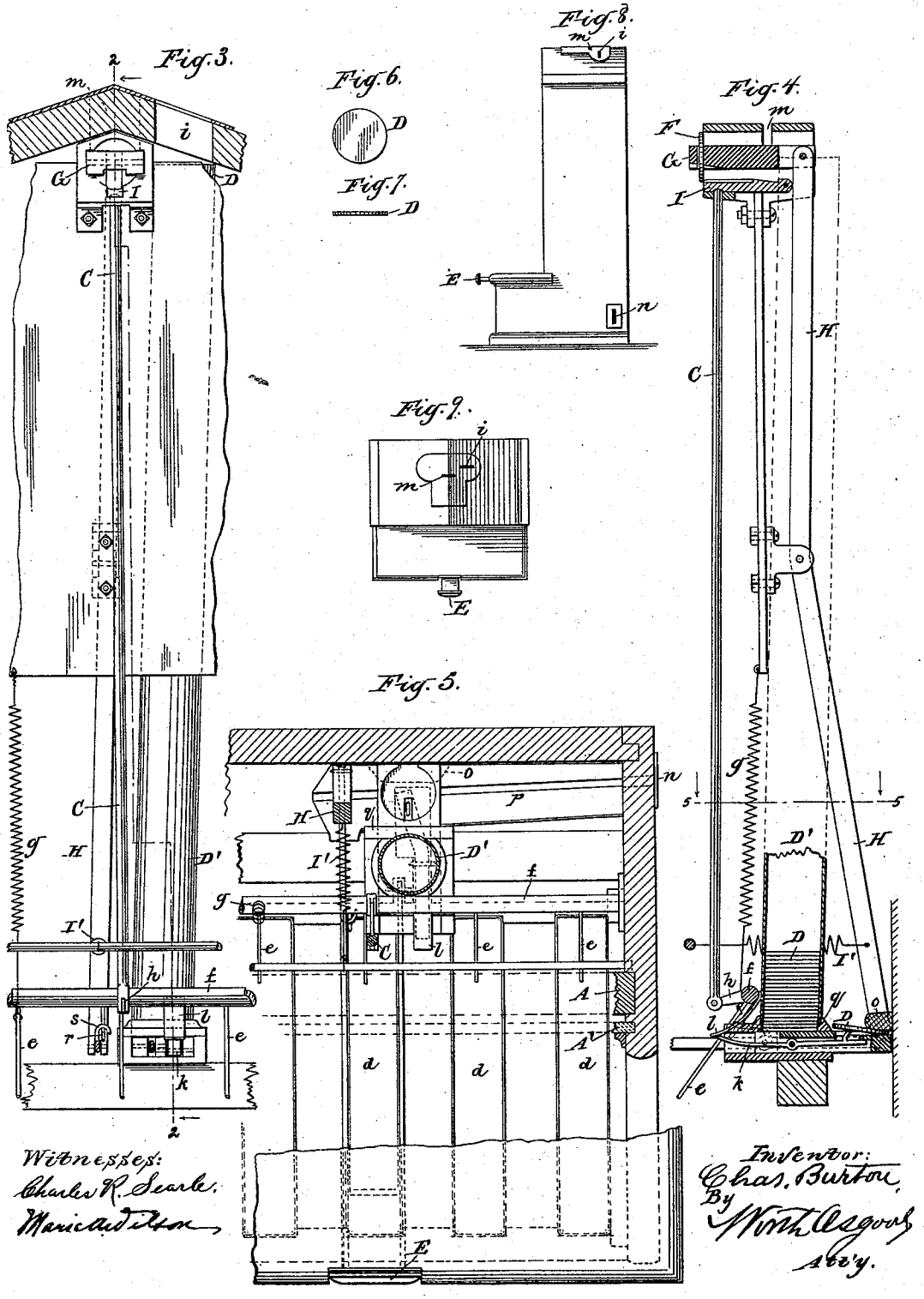

UNITED STATES PATENT OFFICE.

CHARLES BURTON, OF SALT LAKE CITY, UTAH, ASSIGNOR TO CHARLES H. KRAFT, OF SAME PLACE, AND FRED L. SHOCH, OF PHILADELPHIA, PENNSYLVANIA.

COIN-CONTROLLED VENDING-MACHINE.

SPECIFICATION forming part of Letters Patent No. 572,523, dated December 8, 1896.

Application filed March 7, 1896. Serial No. 582,170. (No model.)

To all whom it may concern:

Be it known that I, CHARLES BURTON, a citizen of the United States, and a resident of Salt Lake City, in the county of Salt Lake and State of Utah, have invented certain new and useful Improvements in Coin-Controlled Vending-Machines, of which the following is a specification.

My invention relates to coin-controlled vending-machines, and has for its objects the provision of a simple, cheap, effective, and reliable machine of the class named for vending tickets, cards, or disks having certain values (in the way of indicated discounts or rebates or privileges) in connection with purchases to be made at any time and at various places, and at the same time for vending articles for immediate delivery and of value according to the indications afforded by the apparatus, the underlying proposition being that the machine shall afford a means of promoting or stimulating trade, principally in the particular line or lines of goods carried by the merchant who controls the machine and subordinately in the lines carried by any number of different houses which may avail themselves of the use of the disks or cards which are to be sold through the agency of the machine. To accomplish all of this and to secure other and further advantages to the operators as well as the owners, my improvements involve novel and useful means for feeding or delivering the disks or cards, for making the necessary indications, for preventing fraud, and for securing simultaneous and accurate action of the parts at each sale, and certain details of construction and arrangements or combinations of parts, as will be herein first fully described and then pointed out in the claims.

In the accompanying drawings, forming part of this specification, Figure 1 is a front elevation of the machine, a portion being broken out. Fig. 2 is a vertical section corresponding with Fig. 1, the view being taken on planes through the broken line 2 2 in Fig. 3. Fig. 3 is a vertical view, partly in section, showing the working parts. Fig. 4 is a sectional elevation upon a plane at right angles with that of Fig. 3, illustrating corresponding portions, but with the parts differently positioned. Fig. 5 is a horizontal section and partial plan view on a plane through line 5 5 in Fig. 4. Figs. 6 and 7 are respectively face and edge views of one of the disks which are to be employed in the machine. Figs. 8 and 9 are on much smaller scales than previous views, Fig. 8 being a side elevation of the complete machine and Fig. 9 a corresponding top or plan view.

In all the figures like letters of reference wherever they occur indicate corresponding parts.

A is the pin-board, constituting the principal front of the machine and in which a series of pins are located and arranged after the manner described in the United States patent to Charles E. Wheeland, No. 524,475, dated August 14, 1894, the slightly-projecting pins *a* being seated in the bottoms of recesses *b*, and the tablet thus formed being covered by a glass plate A′, so as to confine the descending coin to the channel between the glass plate and the board.

The coin is deflected in its downward movements by the pins as it falls, and it must leave the channel through one or the other of a series of openings established by pins, as *c*. Some of these discharge-openings are marked to indicate various values, such as "10," "10," "25," "10," "10," (or any other values, as may be desired,) and others are not marked, as appears in Fig. 1.

The receiving box or drawer B is supplied with narrow removable boxes, as *d*, constituting partitions and affording compartments between them. One of these boxes is located under each marked discharge-opening, the spaces between the boxes falling under the unmarked openings, but of course this arrangement might be reversed.

When a coin is dropped down over the pin-board, if it passes through a discharge-opening having no marked value it finds its way immediately to the receiving-compartment below; but if it passes into one of the marked openings provision is made for arresting it there previous to its reception by the box B, in order that the trade or purchase permitted according to the position of the coin may be

consummated or recorded before the next coin can be admitted to the machine, and this to avoid mistakes, disputes, or fraud. The means employed for thus arresting the coin consist of a number of arms *e e*, one for each marked opening, the same projecting under the openings and being applied upon a rock-shaft *f* and being held normally in proper position by a suitable spring, as *g*.

The rod C, which is depressed whenever a coin is admitted to the channel in front of the pin-board, is connected with an arm *h* upon shaft *f*, and thus rocks the shaft, depressing arms *e*, by which movement they are to be carried out of the way to allow any arrested coin to pass into the proper compartment in the receiving-box, and the arrangement insures the holding of a coin at its marked opening until another coin is dropped into the machine. If the coin dropped into the machine be smaller than that for which the machine is calculated, (that is, of less value than it should be,) it will not depress the rod C far enough to carry the arms *e* down sufficiently to release the previously-arrested coin, and the latter must remain in view until released by the admission of a coin of proper size. After the coin has been released the arms *e* are immediately returned to their proper places by the action of the spring *g*.

The merchant who owns or operates the machine delivers to the patron any goods in his line (whatever that may be) up to the value of the mark at the opening where the patron's coin is arrested, and thus the machine operates to vend any of the merchant's goods and is not confined to a particular line contained in the machine, as in many of the forms of vending-machines now in use, and this with manifest advantage to the merchant.

In addition to the vending provided for as above explained the machine carries a supply of cards, tickets, or disks, which upon the deposit of a coin of proper value are projected (one at a time, of course) and delivered to the depositor, in addition to any goods of the purchasable value which may be indicated, as above explained, so that the depositor must always receive full value for his money, eliminating the feature of chance of loss common to many machines.

On one face of the cards or disks referred to may be printed any advertisement, and this constitutes a source of revenue to the maker or seller of the machines. On the other face, on each, is printed its value, either in trade or discount, or rebate, or price of admission, at any establishment (one or more) with which arrangement may have been made for allowance of such value. Usually these arrangements are made with merchants in or near the locality where the machine is set up. So a depositor may receive in value many times more than that of his deposit, but it is made certain that he can never receive less.

The printed cards or disks D are of uniform size and are received in a tube or hopper D', being admitted thereto through a slot or opening *i*, and being projected from the lower end of the hopper, one at a time, and delivered to the purchaser by mechanism to be hereinafter described.

E is a sliding bar movable back and forth through a slot in the top of box B. The inner end of this bar extends below the lower mouth of the hopper, and is recessed at its extremity sufficiently to accommodate the thickness of one of the disks. Being pushed in far enough, the slide will carry one of the disks with it beyond the margin of the hopper, and if the disk be not removed from the slide it will travel back and forth with it and not be projected outside the machine.

Within the slide E is a hinged lever *k*, the same having a slight projection adapted to reach up through a slot in the slide immediately beneath the position of the disk which may be resting thereon, and upon the shaft *f* is an arm *l*, calculated to depress the end of lever *k* when the arm itself is sufficiently depressed. This last condition will obtain when and only when a coin of proper size has been entered at the opening *m*, through which all coins are to be deposited. The tripper is placed under tension by the arm *l*, so that when the slide moves out with the front edge of the disk beyond the incline *q* the tripper snaps the disk above the slide and the slide returns a short distance before the tripper begins to descend. The slide having been pushed in and the lever having been properly tipped, upon withdrawing the slide the disk thereon strikes the margin of the hopper and is forced off the slide, and drops down and out at the opening *n* to be received by the purchaser.

At *o* is a little block of rubber or other substance under which the margin of the disk may catch when it is projected forward and tipped, and *p p* are walls of the channel leading to the opening *n*. At *q* is an incline on the lower mouth of the hopper to facilitate the projection of the disk from the slide when the disk has been suitably tipped.

The coin (represented at F) is entered at the slot *m* and is received in an opening in a movable bar G, which bar is connected with slide E by a hinged lever H. Upon pushing the slide in, the coin must be carried forward, as will readily appear. As it travels forward it depresses a hinged block I, which rides upon the top of rod C. If the coin be of the proper diameter, it will, through the hinged block upon which it travels, depress the rod C far enough to release the previously-arrested coin and tip the disk so that it may be delivered by the machine; but if the admitted coin be not of the proper diameter the rod C will not be sufficiently depressed and the disk will remain on the slide, the improper coin being deposited, but without defrauding the machine.

There is of course some little variation in

the diameters of the coins in circulation, and to make certain that one of the disks must be projected, even though the admitted coin may be lacking a trifle in proper diameter, the shaft *f* carries a short rod *r* and the slide E carries a loop *s*, and these two are located with respect to each other so that when the shaft *f* is rocked the proper distance through the medium of the coin the loop *s* will ride upon the bar *r* and as the slide is pushed in will compel the shaft to rock and thus insure that the tripping-lever shall operate upon the disk.

The spring I′ is connected with the hinged lever H and is made strong enough to force the slide E outward, in which position it is intended it shall remain until purposely pushed in.

The compartments in the receiving-box are for the purpose of enabling the merchant who operates it to balance his accounts with the machine. The coins found in the compartments under the marked spaces are counters which show the value of the goods he has delivered. With these and the others from the other compartments he is entitled to reimbursement, the balance, if any, belonging to the owner of the machine, as in the way of rent for its use.

The separate removable boxes facilitate the division and apportionment of the coins, as will be readily understood.

The machine is simple and reliable, as required, and well calculated to stimulate trade, according to the purpose of the invention, as previously set forth.

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

1. In a vending-machine, the combination with a board having pins for deflecting coins and marked spaces for their exit, of the receiving-drawer divided into compartments by a number of narrow, independently-removable boxes, said boxes being separated from each other and affording compartments between them, substantially as shown and described.

2. In a vending-machine, a hopper for containing a supply of disks or cards and the recessed, sliding bar located over the coin-receiving drawer, said bar being supplied with a disk-tripping mechanism and operating in connection with the hopper, substantially as described for projecting and delivering one of said disks or cards, the parts being combined and arranged substantially as and for the purposes set forth.

3. In a vending-machine, the arms for arresting the coins, said arms being located under the marked spaces, hung upon a rock-shaft, and arranged to be moved by the descending rod bearing upon an arm on the rock-shaft, an arm *l* attached to said shaft, and a tripping-lever mounted in the slide-bar, the parts being combined and arranged substantially as and for the purposes set forth.

4. In a vending-machine, the slide-bar movable beneath the lower mouth of the hopper, a tripping-lever mounted in said bar, a rock-shaft carrying an arm for operating on the tripping-lever, a descending rod connected with the rock-shaft, and a hinged lever connected with the slide-bar and carrying a slotted slide for moving the coin, the parts being combined and arranged substantially as shown and described.

5. In a vending-machine, the combination with rod C, and the rock-shaft carrying the coin-arresting arms actuated by said rod, of hinged lever H, slotted bar G, hinged block I, and a slide-bar connected with lever H, substantially as shown and described.

6. In a vending-machine, the slide-bar connected with the hinged lever and operating therethrough and through the connected, slotted block, to force the admitted coin forward, said bar being recessed at the inner end and supplied with a disk-tripping lever and operating to deliver a single disk from the hopper when the coin is admitted, the parts being combined and arranged substantially as shown.

7. In combination with the hopper, D′, and the slide-bar, E, having the disk-tripping mechanism, the incline, *q*, to facilitate the removal of the disk from the slide when the disk is elevated and the slide-bar retracted, substantially as shown and described.

In witness whereof I have hereunto signed my name in the presence of two subscribing witnesses.

CHARLES BURTON.

Witnesses
HARRY G. NAISBITT,
ZEBULON H. JACOBS.