

**No. 692,964.**

**Patented Feb. 11, 1902.**

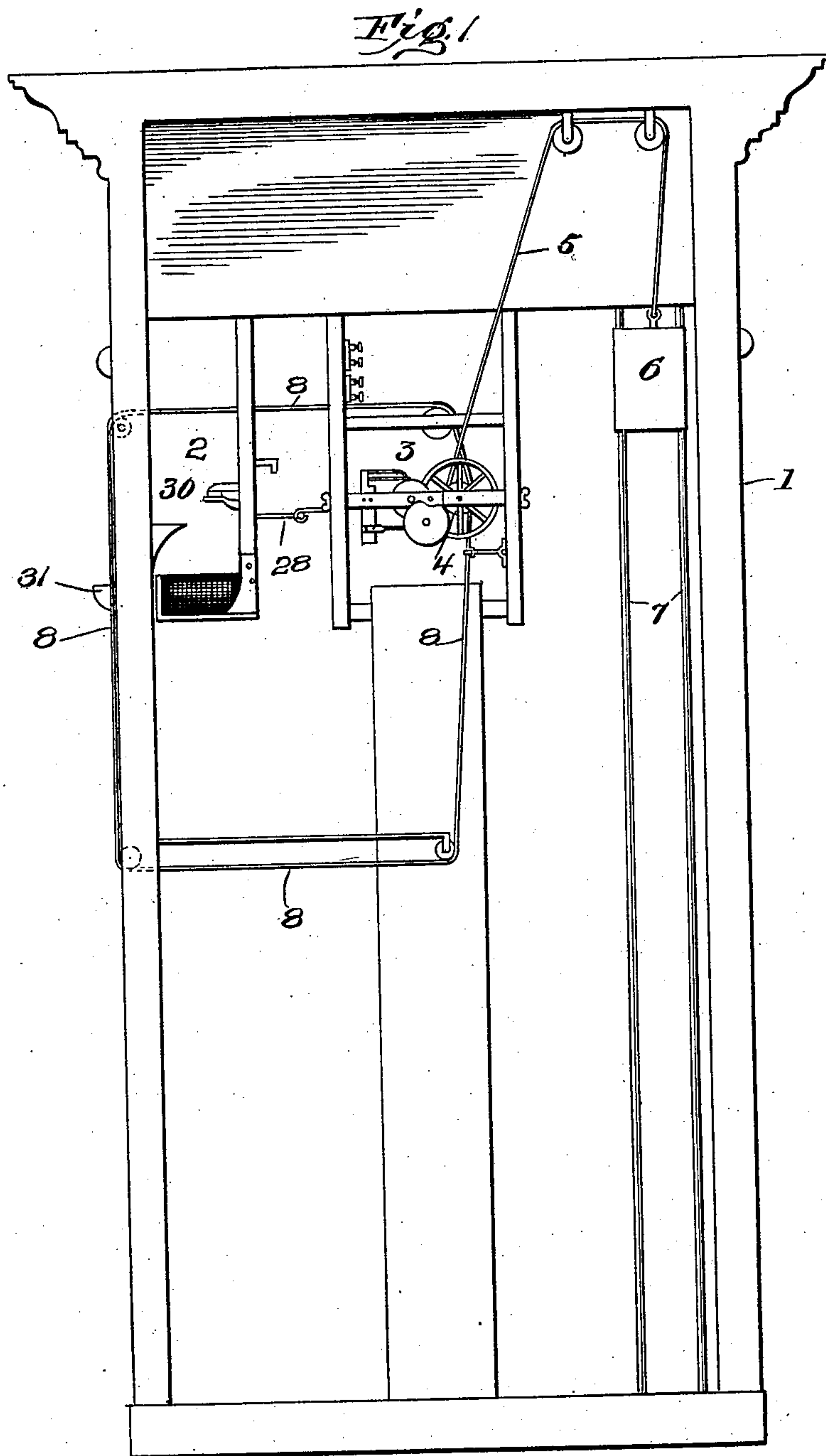
**C. A. YALE.**

**VENDING MECHANISM FOR COIN CONTROLLED APPARATUS.**

(Application filed Feb. 21, 1901.)

**3. Sheets—Sheet 1.**

(No Model.)



Witnesses:  
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L. G. Wilson.

Inventor  
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by Jas. L. Skidmore  
his Attorney.

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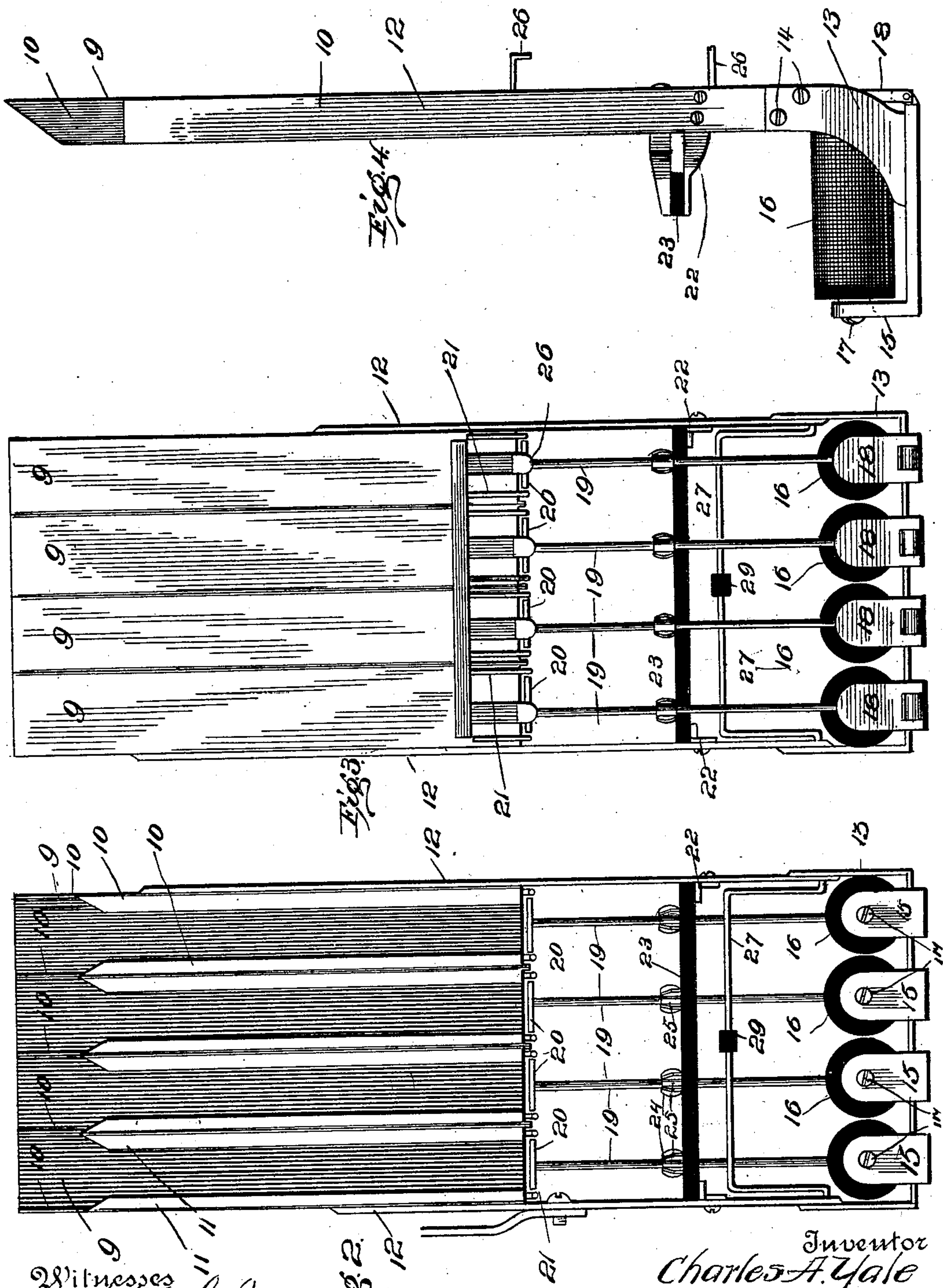
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3 Sheets—Sheet 2.



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Fig. 2

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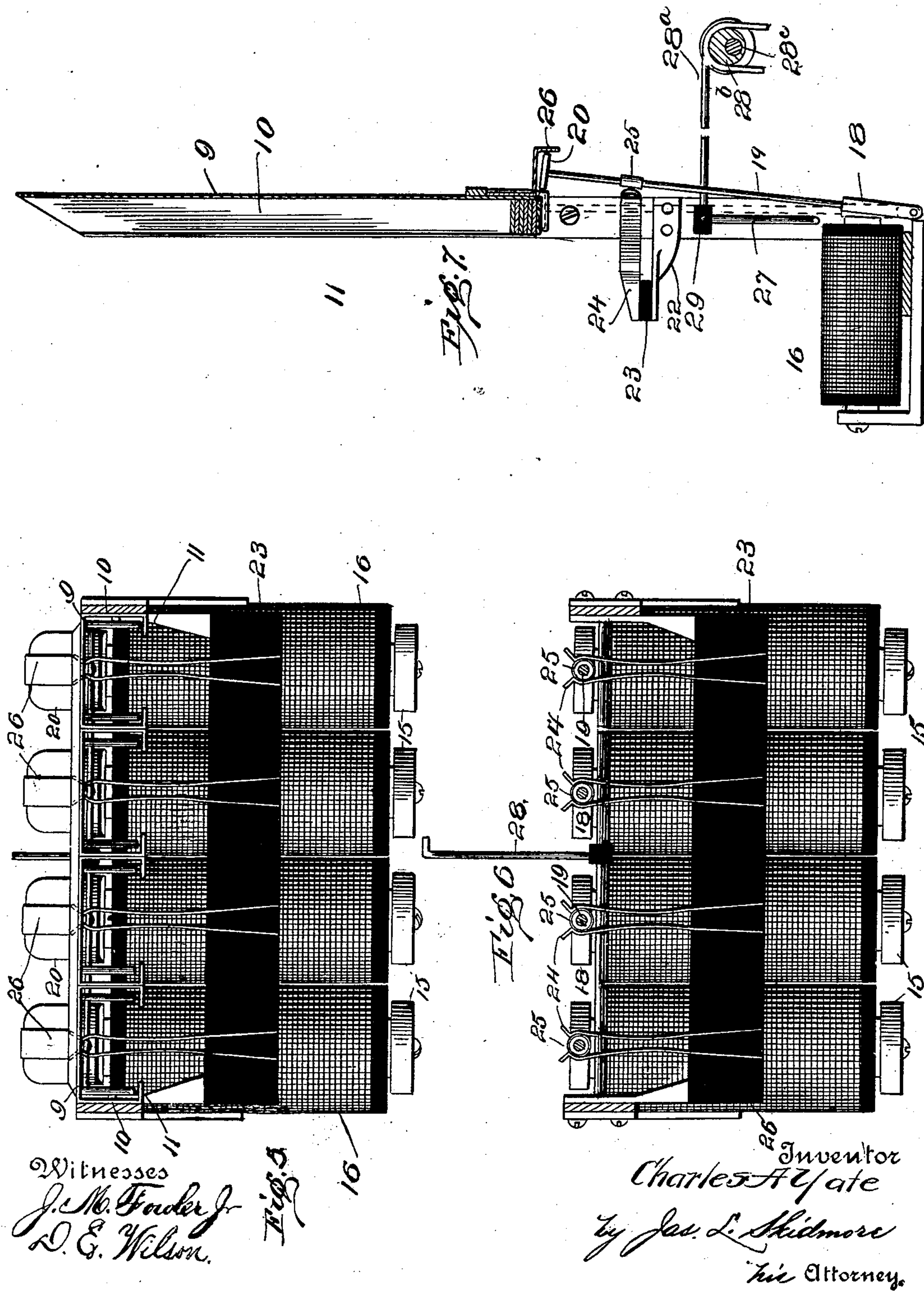
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3 Sheets—Sheet 3.





# UNITED STATES PATENT OFFICE.

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## VENDING MECHANISM FOR COIN-CONTROLLED APPARATUS.

SPECIFICATION forming part of Letters Patent No. 692,964, dated February 11, 1902.

Application filed February 21, 1901. Serial No. 48,281. (No model.)

*To all whom it may concern:*

Be it known that I, CHARLES ALBERT YALE, a citizen of the United States, residing at Burlington, in the county of Chittenden and State of Vermont, have invented certain new and useful Improvements in Vending Mechanism for Coin-Controlled Apparatus; and I do hereby declare the following to be a full, clear, and exact description of the invention, such as will enable others skilled in the art to which it appertains to make and use the same.

My invention relates to vending mechanism more particularly designed for use with coin-controlled apparatus; and the object of the invention is to provide reliable, efficient, and simple means for delivering or ejecting small packages of goods or a ticket representing goods from a coin-controlled apparatus whenever a coin has been deposited in the coin receptacle or slot.

In machines of this character it is of the greatest importance that the delivery mechanism shall operate with certainty in an efficient and reliable manner when a coin has been deposited, and in order that this desirable result may be accomplished the mechanism should be of comparatively few parts and arranged in such a manner as not to be liable to get out of order even when subjected to fairly rough usage. With this end in view it has been my aim to improve this type of mechanism by reducing the number of parts as much as possible and providing simple, accurate, and reliable means for the purpose.

The objects referred to are attained by means of the construction illustrated in the accompanying drawings, in which—

Figure 1 is a rear elevation of a coin-controlled apparatus with the back board or door removed in order that the arrangement of mechanism within the cabinet may be disclosed. Fig. 2 is a rear elevation of the delivery mechanism or ejector for goods or tickets. Fig. 3 is a front elevation of the same. Fig. 4 is a side elevation thereof. Fig. 5 is a plan view of the same. Fig. 6 is a sectionized plan view. Fig. 7 is a central vertical section of the ejector mechanism, showing several tickets or packages in their normal position in the compartment.

Like characters of reference designate like parts wherever they occur in the different views.

Referring to Fig. 1 of the drawings, the numeral 1 designates a cabinet for containing the various mechanisms of a coin-controlled apparatus, and 2 is the delivery mechanism made the subject of this application for Letters Patent. The motor 3, an outline of which is shown in this view, is made the subject of a separate application filed by me February 21, 1901, and bearing Serial No. 48,282. With a view to giving a general understanding of the operation of this motor it may be briefly described as follows: A winding-drum 4 is journaled in a frame, and a cord 5 leads from the drum to a weight 6, said weight being mounted to move on guide-rods 7. For winding up the motor an endless cord or band 8 is provided, this cord or band being passed one or more times around the drum and led up and around pulleys and out of the cabinet, where it may be grasped and pulled to raise the weight 6. Means are employed for clamping the cord 8 automatically after each pull in winding to prevent a retrograde movement of the drum. Means are also provided for starting and stopping the motor automatically whenever a coin has been deposited in the coin-receptacle; but these means form no part of this application and need not be described herein.

Referring now to Figs. 2, 3, 4, 5, 6, and 7 of the drawings, which illustrate the ejector mechanism, the numeral 9 designates a series of compartments, there being four of such compartments shown, but any suitable number may be utilized. These compartments may be conveniently formed of strips of sheet metal by bending the two longitudinal edges at right angles to form the dividing-walls and then bending the terminal edges inward toward each other to form flanges 11. The tickets or goods to be placed in these compartments must be of a size which will lie flat one upon another to form a column and may be inserted at the upper portion of each compartment, where the flanges 11 are cut away. To support the compartments at the required distance above the operating mechanism, two



vertical plates 12 are secured, one to each side of the compartments, and at the lower ends of these plates a bottom piece 13 is secured by screws 14. Secured to this bottom piece is a series of brackets 15, each having an electromagnet 16 connected thereto by the screws 17. On the opposite end of each bracket a contact-piece 18 is hinged, and attached to the upper ends of the contact-pieces are the ejector-rods 19. Projecting laterally from the upper end of each ejector-rod 19 is an ejector-plate 20. At the lower end of each compartment 9 a pair of wire supports 21 extend immediately under the flanges 11, and the distance between the lower end of the compartments and the wire supports 21 is substantially the thickness of a ticket or package of goods to be ejected from the machine. A pair of brackets 22 extend outward from the vertical plates 12, and secured to these brackets is a shelf 23. A series of spring-fingers 24 are supported by the shelf 23, said fingers being arranged in pairs. Each ejector-rod 19 has an enlargement 25 at a point in line with the fingers 24, and when one of the rods 19 is in position after a ticket or package has been ejected the enlargement 25 is held between a pair of the spring-fingers 24. Each ejector-plate 20 is limited in its backward movement by a stop 26, projecting out and down from the lower end of each compartment 9. A wire bail 27 is pivoted at its ends to the inner sides of the vertical plates 12, and a connecting-rod 28 is attached to a block 29, pivoted to the transverse portion of said bail. The purpose of the bail 27 is to return any of the rods 19 and the plates 20 to an initial position after a ticket has been pushed out, and the connecting-rod 28 is provided with a yoke 28<sup>a</sup>, seated in a groove in an eccentric 28<sup>b</sup> on shaft 28<sup>c</sup>, journaled in the motor-frame, and adapted to be given one revolution at each operation of the machine. This revolution of the eccentric 28<sup>b</sup> pulls the rod 28 toward the right in Fig. 1 and returns the rod 19 to a position ready to push out another ticket at the next operation of the apparatus.

This invention is designed as an improvement on the construction shown in my Patent No. 647,353, bearing date April 10, 1900, and reference is made to that patent for a full understanding of the operation of certain parts referred to herein.

The operation of the machine is as follows:  
The magnets 16 are connected up to any source of electrical supply, and the motor is wound up by means of the cord 8. When a coin is deposited in a coin-tube, a connection is established through one of the magnets 16 and the contact-piece 18 is attracted to its magnet, thus pushing the bottom ticket or package out of one of the compartments 9 by means of the ejector-plate 20, the ticket or package dropping into a chute or tube 30, Fig. 1, and carried to a tray 31 at the outside of the cabinet 1. After each operation of the machine the bail 27 is drawn back to return the ejection

rod and plate 20 to its initial position by means of the rod 28 and the eccentric 28<sup>b</sup>. The column of tickets or packages then drop upon the wire supports 21, the ticket at the bottom always being in position to be ejected at the next operation of the machine.

It is to be understood that this delivery mechanism is designed to be used in connection with a chance device, such as that shown in my Patent No. 669,433, dated March 5, 1901, or with vending-machines of various types, and the tickets or packages of goods may be of different values, materials, or characters in each compartment 9, so that the person who deposits the coin gets in return any one of the tickets or packages, depending upon chance, if chance mechanism is used, the value or equivalent of the coin always being ejected, with a chance of a ticket or package of greater value being delivered.

Many changes may be made in the details of construction and manner of operating this mechanism without departing from the spirit and scope of my invention. Hence I do not wish to be limited to the precise details shown.

Having thus fully described my invention, what I claim is—

1. In a delivery mechanism, a compartment for tickets or packages of goods having an open lower end, supports for the tickets or goods below the compartment, a pivoted ejector, spring-fingers for holding said ejector in one position, means for moving it in one direction to push a ticket or package from the supports into a tube or tray, and means for returning the ejector to its original position at each operation of the mechanism.

2. In a delivery mechanism, a compartment for tickets or packages of goods, said compartment having an open lower end, supports for the tickets or goods below the compartment, a pivoted ejector, spring-fingers for holding said ejector in one position, a stop to limit the outward movement of said ejector, and means for moving the ejector in one direction to push out a ticket or package and to return the ejector to its initial position.

3. In a delivery mechanism, a compartment for tickets or goods, supports for tickets or goods below said compartment, a pivoted ejector for pushing out the bottom ticket or package of goods, spring-fingers for holding said ejector in one position and means for moving the ejector in and out at each operation of the mechanism.

4. In a delivery mechanism, a compartment for tickets or goods, an ejector for delivering said tickets or goods, spring-fingers for holding said ejector in one position, a stop to limit the outward movement of the ejector, means for moving the ejector to push out a ticket or package of goods, and a bail for returning the ejector to its original position.

5. In a delivery mechanism, a ticket-compartment, an ejector provided with an enlargement, a pair of spring-fingers for engaging the enlargement to hold the ejector in one



of its two positions, and means for moving the ejector in and out, substantially as described.

5 6. In a delivery mechanism for coin-controlled apparatus, a series of compartments for tickets or goods, an ejector for each compartment, electromagnets for moving the ejectors independently for ejecting a ticket or goods, a stop for limiting the outward movement of each ejector, spring-fingers for hold-

ing the ejectors in one position, and means for returning the ejectors at each operation of the machine.

In testimony whereof I have affixed my signature in presence of two witnesses.

CHARLES ALBERT YALE.

Witnesses:

THEO. E. HOPKINS,  
A. O. PALMER.