

(No Model.)

2 Sheets—Sheet 1.

T. MANGAN & J. T. WILSON.

FARE BOX.

No. 328,326.

Patented Oct. 13, 1885.

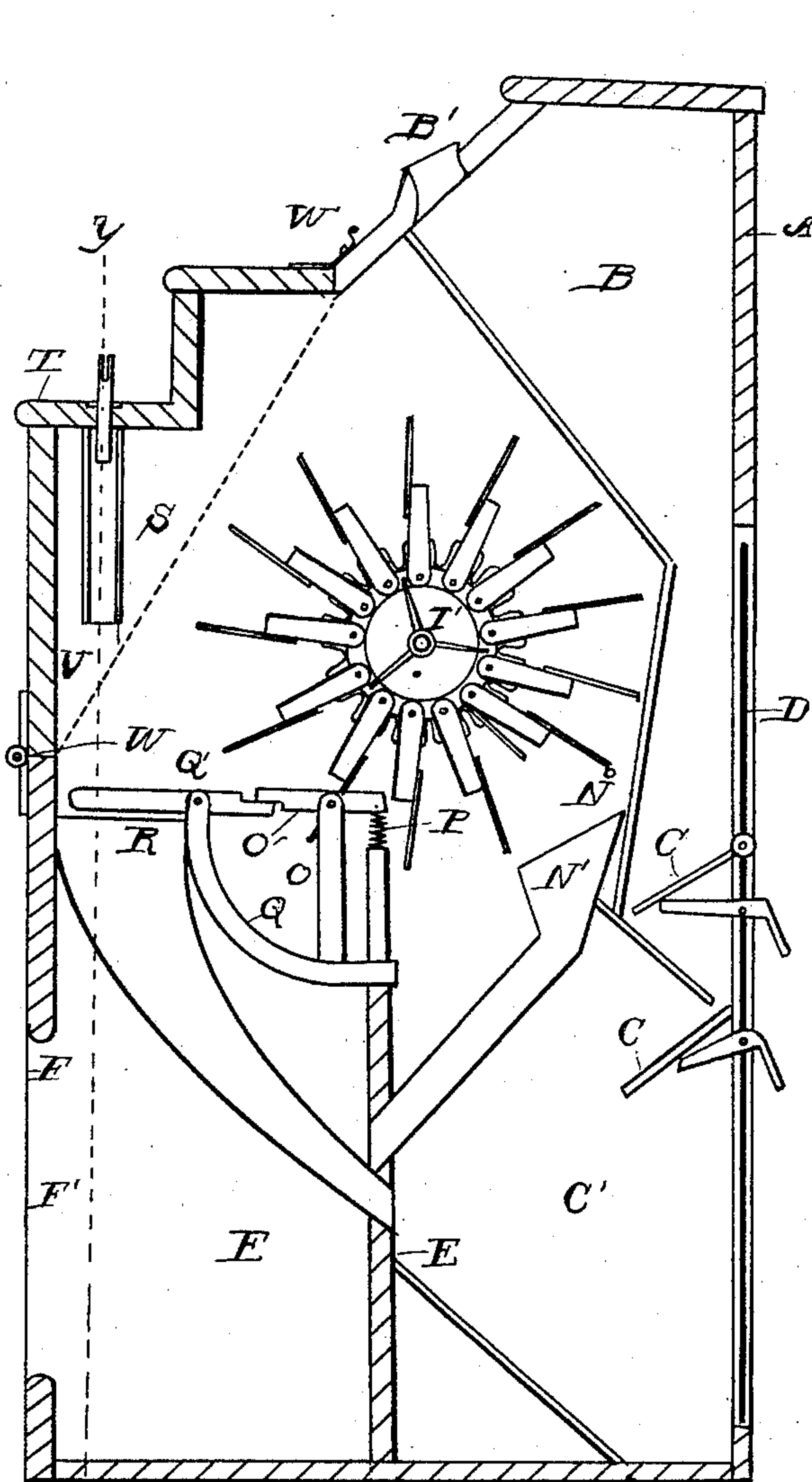


Fig. 1.

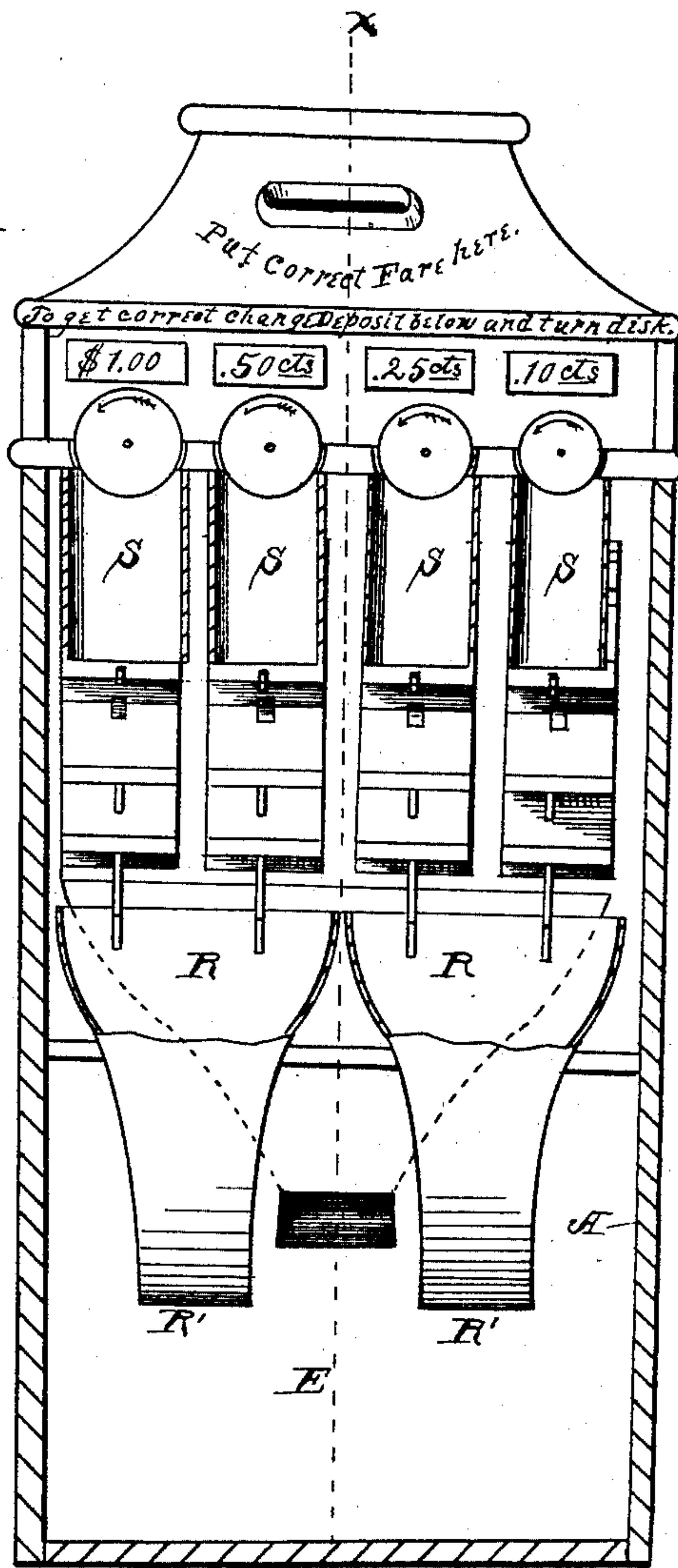


Fig. 2.

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By

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Attorney.

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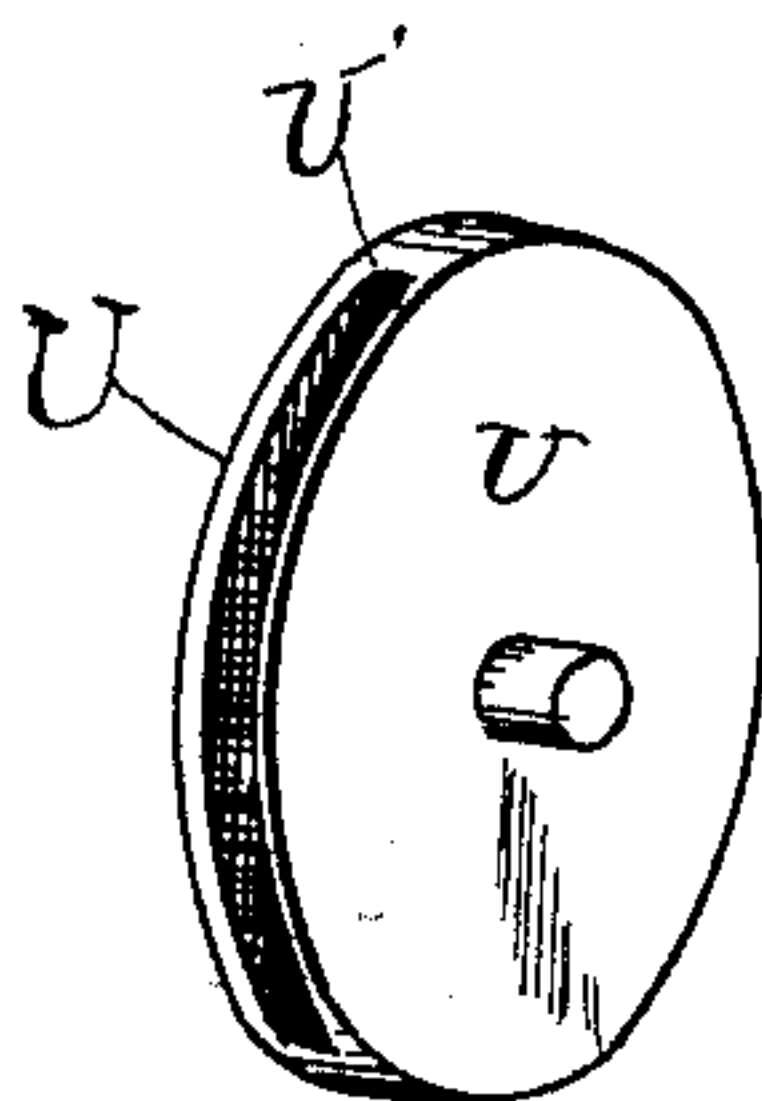


Fig. 3.

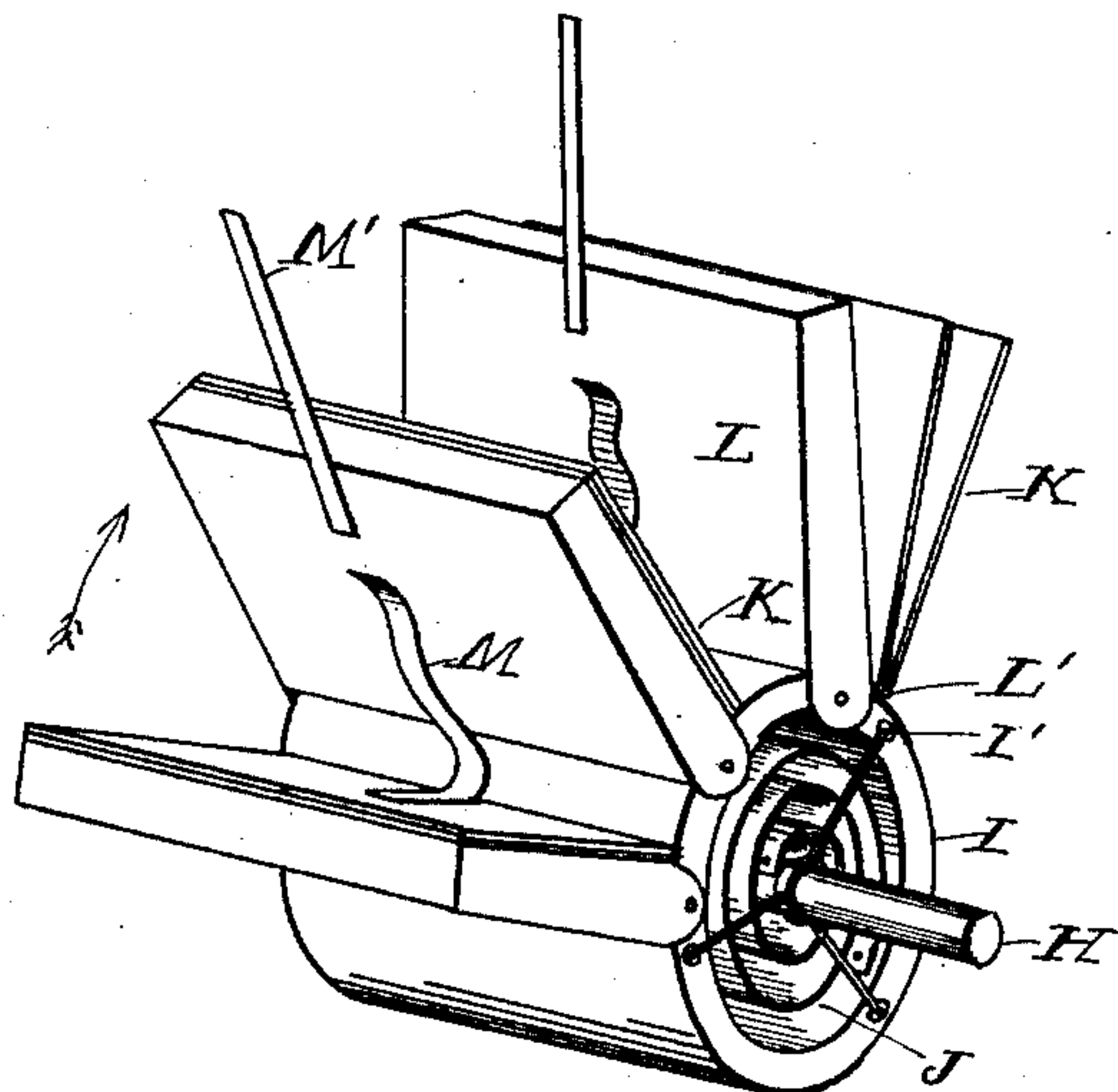


Fig. 4.

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# UNITED STATES PATENT OFFICE.

THOMAS MANGAN AND JOHN T. WILSON, OF NEW ORLEANS, LOUISIANA.

## FARE-BOX.

SPECIFICATION forming part of Letters Patent No. 328,326, dated October 13, 1885.

Application filed April 13, 1885. Serial No. 162,005. (No model.)

*To all whom it may concern:*

Be it known that we, THOMAS MANGAN and JOHN T. WILSON, both of New Orleans, in the parish of Orleans and State of Louisiana, have  
5 invented a new and useful Improvement in Automatic Change and Fare Boxes, which improvement is fully set forth in the following specification and accompanying drawings, in which—

10 Figure 1 is a vertical sectional view of our automatic change and fare box through line X of Fig. 2. Fig. 2 is a front view of same through line Y of Fig. 1. Fig. 3 is a perspective elevation of one of the coin-receivers;  
15 and Fig. 4 is a perspective view of one of the rotating cylinders partly equipped with change-holders.

The object of our invention is to provide a box for automatically changing money and  
20 for receiving the correct fares, so as to dispense with the cumbersome method of depending on the drivers for making change; and it also provides for receiving the correct fare in one and the same box; and to this end  
25 it consists of the ordinary box having on its front face, or on that face exposed to the occupants of the car, an independent section designed to receive one or more cylinders rotating on shafts, said cylinders having thereon  
30 a series of radiating shells or receptacles for receiving the change in the required denominations, the shells being so arranged as to be operated by means of an arm and bar as the cylinder is revolved by means of a coiled  
35 spring within. Below the cylinder is a pivoted lever having its inner end resting against one of the shells, and the outer end of the lever is hinged to a pivoted lever, the forward end of which is directly beneath a tube that  
40 leads from a coin-receiving disk, so that as the coin passes down the tube from the hand of the passenger it will strike the lever and trip the inner end of the lever and permits the cylinder carrying the change-holders to turn far  
45 enough so that the arm on the shell will open one of the change-holders and cause it to discharge its contents to a suitable receptacle in reach of the passenger, all of which will now be set forth in detail.

50 In the accompanying drawings, A represents the box carrying the mechanism, hav-

ing on its rear side the compartment B for receiving the correct fare from passengers through the opening or mouth B'.

C C represent the tilting glass gates as now  
5 constructed in fare-boxes; C', the receiving-vault, and D the glass through which the driver inspects the deposited fare.

E is a central vertical partition, which extends up nearly half the distance of the box,  
6 so as to form a compartment, E', in the front of the box at its base, and the front face of the box F has an aperture or opening, F', through which the passenger gains admission to receive the change deposited by the dis-  
6 charge of the change-holding shell.

H represents a horizontal cross shaft or bar rigidly secured to standards which project  
7 upwardly from the platform G, but not shown; or this bar may be attached to the sides of the box, if found more convenient. On this bar  
7 is placed four or more cylinders, I, having at each end or within the spiders I', so as to enable the cylinders to rotate upon said bar. Each cylinder has within a spring, J, coiled  
7 around the bar H, one end being attached to the bar and the other to the cylinder, so that the cylinder may be wound up on the bar, and when so wound up and released the spring  
8 will cause the cylinder to rotate.

Each cylinder is provided with a number  
8 of radiating blades, K, equidistant from each other, and these are rigidly secured to the cylinder. By the side of each blade, but  
8 hinged to the cylinder I, is a pan-shaped receiver with its open side resting against the blade. This pan-shaped receiver is the same  
8 in area as the blade K, and when resting against said blade the two form a closed shell  
9 for receiving the change of such denomination as is to be supplied to the cylinder to which  
9 it is attached. This pan-shaped receiver may be hinged to the end of the cylinder I by means  
9 of the ears L', or otherwise, as may be deemed most expedient; but it will be observed that  
9 the pan-shaped receiver is always hinged so as to be on the rear face of the blade K. A  
9 spring, M, of any suitable character rests against the back of the pan L, and connects  
1 with the opposite blade K, so as to keep the pan against the blade and thus keep the receiver closed. The outer edge of the pan is



provided with a projecting arm, M', so that the said arm will strike a rod or bar, N, as it travels around and opens the receiver, thereby discharging its contents. Instead of the cross-bar N, the upper end of the discharge-hopper N' may be employed for this purpose. The change after leaving the receiver or holder, as shown, passes through the tube N', and is deposited in the chamber E'.

For the purpose of showing the means of rotating the change-cylinder only the distance of one blade, we attach a vertical post or standard, O, to the platform below the cylinder, and pivot to the upper end a lever, O'. The inner end of this lever rests against one of the blades K of the cylinder I, and it will be observed, in Fig. 1, that when the blade is in this position the bar N is so located that it opens the shell or receiver. A coiled spring, P, rests under the rear end of the lever O' to retain it in position.

Q is a forwardly and upwardly projecting arm, to the upward end of which is pivoted the lever Q'. The inner end of this lever rests under the forward end of the lever O', before described, so that when the forward end of the lever O' will likewise be depressed and clear the lower end of the blade K, when the coiled spring J will cause the cylinder I to rotate.

The cylinders I being placed side by side on the same bar H, each cylinder is provided directly beneath it with the same train of levers as has just been described. The forward ends of the levers Q' project over the mouths or hoppers R of the conducting-tubes R'. These tubes project downwardly and rearwardly, terminating on the rear side of the central partition, E, so as to discharge in the vault or compartment C'.

Directly above each lever Q' and secured to the under side of the box-lid is a pendent flat tube, S. These tubes are designed to conduct the coin down so that they strike the levers Q' at right angles. The flat top T of the lid has four coin-receivers, U, journaled thereto, so that they rotate or turn within the tubes S. The receiving-disk U has on one side an opening, U', of sufficient size to admit only the coin of the denomination required for this particular disk, and after the coin is placed therein the disk is turned to the left, which causes the coin to fall out and discharge through the tube S, and in its downward course strikes the lever Q', causing the inner end of the lever O' to clear the blade K and permit the cylinder to turn the distance of one blade. This operation causes the arm M' to strike the bar N and discharge the change deposited in the holder or receiver L. At the same time the coin deposited by the passenger in the disk U, after striking the lever Q, passes through the tube R' into the compartment C', thus enabling the passenger to take his change from the compartment E', which receives the same through the tube N.

For convenience we have shown the front part of the box provided with a lid, V, hinged at W, and provided with an ordinary lock or hasp and lock at W'. By this means the mechanism can be readily adjusted and the change holders or receivers charged with the proper change. This lid holds the coin-receiving disks U, and also has printed or stamped thereon suitable directions for aiding passengers to properly change and deposit their fares.

The levers O' Q' are so constructed and adjusted that if the coins of either of the denominations smaller than one dollar should be placed in the disk designed for the dollar-coin the lever would not clear the blade K; hence the cylinder would not discharge, and it is impossible to either place a nickel in the disk reserved for the ten-cent coin, or for the fifty-cent piece to be forced through the disk designed to receive the twenty-five-cent coin, so that provision is made against deception on the part of the passenger, or liability on the part of the change-box to give the wrong change.

It is obvious that the change-box and the fare-receiver are separate, and do not necessarily need to be combined to constitute an operative machine; but we have in this instance shown how the two may be operated together.

In charging the change-receivers the pans L on the cylinder, directly opposite the tube leading from the dollar-disk, are each provided with change aggregating the sum of one dollar. The next receivers have each change to the amount of fifty cents, and so on, and it is impossible to place in more than one coin of any denomination at one time. The cylinder cannot be rotated more than the distance of one blade at each impulse.

What we claim as new is—

1. A change-box having within it one or more rotatable change-receivers for holding change equivalent to the denomination required, rotated by means of a spring and held in position by a train of levers, said levers being operated and the cylinder released by means of the weight of the coin striking said levers, substantially as herein set forth.

2. The rotatable cylinder I on the permanent rod or bar H, having a coiled spring, T, within, provided with the radiating blades K, and the hinged receiving-pans L with the springs M and the projecting arms M', in combination with the cross-bar N, above the mouth of the hopper N', so located as to cause the ends of said arms M' to strike said bar and open the receiving-pans as the cylinder rotates, substantially as herein set forth.

3. The rotatable cylinder I on the permanent bar H, having the coiled spring J, provided with the radiating blades K, and the hinged receiving-pans L with the springs M and arms M', in combination with the train of levers Q' O', against which the blades K



rest, and with the spring P under the lever O', whereby the impulse on the lever Q' is regulated, substantially as herein set forth.

4. The coin-receiver composed of two disks, 5 U, placed side by side a distance apart corresponding with the thickness of the coin required and having its entire periphery closed except one side, of sufficient size to receive the coin, centrally journaled so that its upper 10 half projects out of the box, with its lower half within the upper end of the tube S, which leads down into the box, substantially as herein set forth.

5. The combination of the cylinder I, having the fixed radiating-blades K, rotatable on 15 a fixed shaft by means of a coiled spring, and the hinged change-receiving pans L, provided with springs M and arms M', with the cross-bar N, and the train of levers O' Q', substantially as herein set forth. 20

6. The combination of the cylinder I, rotatable on a fixed shaft by means of a coiled spring, having the radiating blades K, and the hinged change-receiving pans L, provided

with springs M and arms M', with the cross- 25 bar N, the train of levers O' Q', regulating-spring P, and the coin-conducting tube S, substantially as herein set forth.

7. The combination of the cylinder I, rotatable on a fixed shaft by means of a coiled 30 spring, having the radiating blades K, and the hinged change-receiving pans L, provided with springs M and arms M', with the rod N, train of levers O' Q', the coin-conducting tube S, and the tube R, for conveying the coin to 35 the compartment C', and this tube N' for conveying the change to compartment E', as and for the purpose substantially as herein set forth and described.

In testimony that we claim the foregoing we 40 have hereunto set our hands this 21st day of March, 1885, in the presence of witnesses.

THOS. MANGAN.  
JOHN T. WILSON.

Witnesses:

J. S. ZERBE,  
E. SLOUGH.