Aug. 19, 1924. 1,505,426

J. RENHOLTS

COIN REGISTER

Filed Aug. 1, 1922 2 Sheets-Sheet 1

Fig. 1.

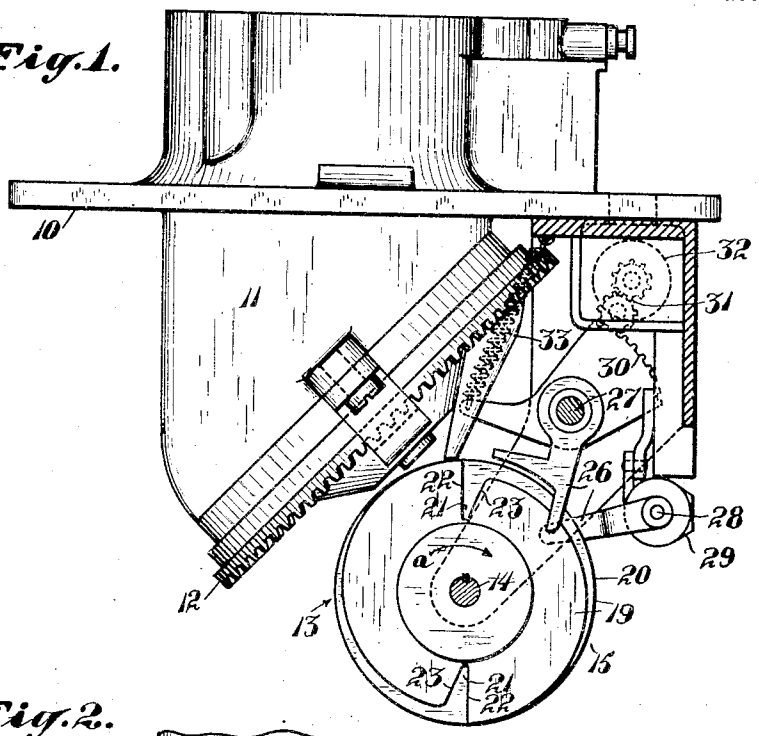
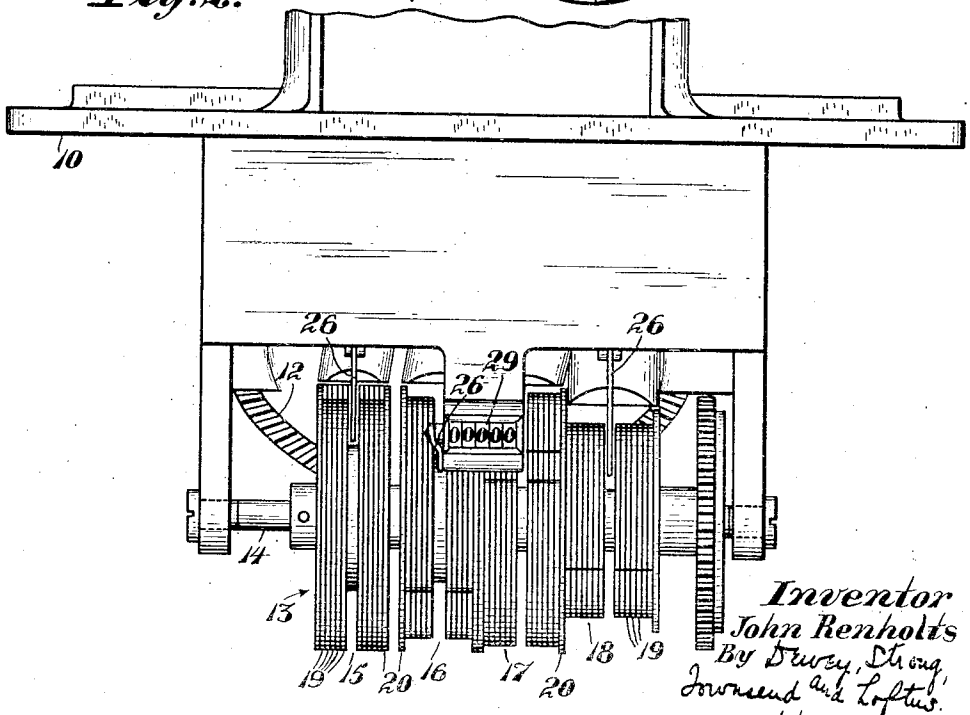


Fig. 2.



Inventor
John Renholts
By Drury, Strong, Townsend and Loftus.
Attorneys

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Fig. 3.

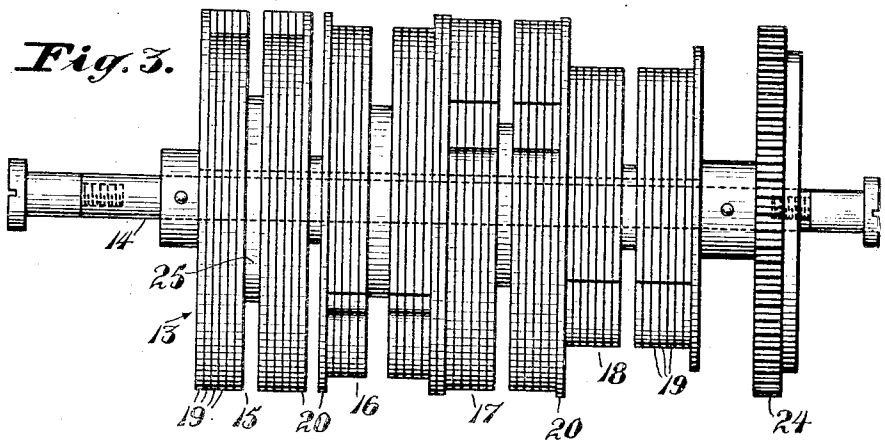


Fig. 4.

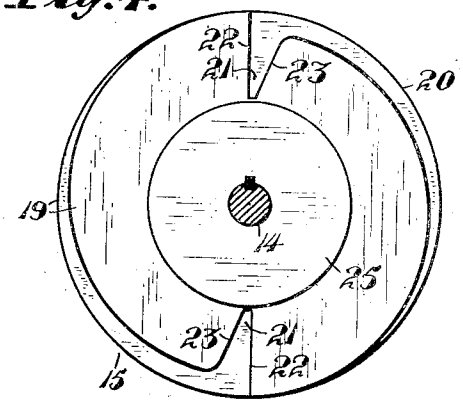


Fig. 5.

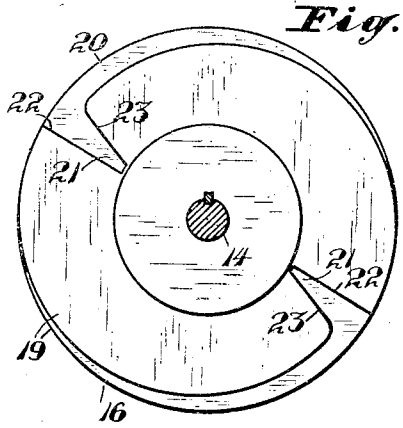


Fig. 6.

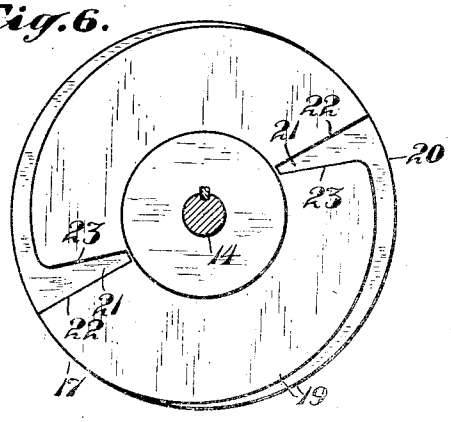
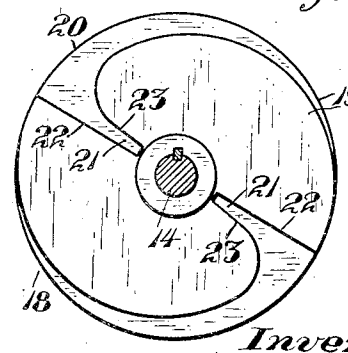


Fig. 7.



Inventor
John Renholts
By Emery Strong
Townsend & Loftus
Attorneys

Patented Aug. 19, 1924. 1,505,426

UNITED STATES PATENT OFFICE.

JOHN RENHOLTS, OF OAKLAND, CALIFORNIA.

COIN REGISTER.

Application filed August 1, 1922. Serial No. 578,867.

To all whom it may concern:

Be it known that I, JOHN RENHOLTS, a citizen of the United States, residing at Oakland, county of Alameda, and State of California, have invented new and useful Improvements in Coin Registers, of which the following is a specification.

This invention relates to coin registers, and particularly pertains to a device adapted to be used for registering street car fares and the like.

It is the principal object of the present invention to provide means for registering coins of various denominations by a mechanism which is simple in its construction, not liable to get out of order, and will positively operate at all times.

The present invention contemplates the use of coin distributing means by which coins of different denominations may be segregated and thereafter utilized in registering their respective amounts upon a suitable counter.

The invention is illustrated by way of example in the accompanying drawings in which:

Fig. 1 illustrates the present invention as seen in end elevation.

Fig. 2 is a view showing the device as seen in side elevation.

Fig. 3 is fragmentary view in plan showing the different coin receiving and counting members.

Figs. 4, 5, 6, and 7 show the different coin receiving members.

Referring more particularly to the drawings, 10 indicates a base plate adapted to receive a cash box or a hopper. This plate carries a coin hopper 11 which is here shown as having an inclined opening at its bottom normally closed by a revolving floor 12. This floor carries means for successively and selectively delivering coins to the counting device 13. The manner in which these coins are thus delivered forms no part of the present application.

The present invention is more particularly concerned with the counting and registering means. This comprises a shaft 14 carrying separate coin receiving devices 15, 16, 17 and 18. It will be understood, however, that any number of these devices may be used and may be designed for receiving coins of any desired denomination. Each of the coin receiving devices is formed of a plurality of disks 19 which are laid one against the other and mounted upon the shaft 14, these disks being built up to a width agreeing with the diameter of the coin to be used therewith. At the opposite sides of the built up section a pair of flange disks 20 are provided to prevent the coin from being misplaced. The disks 19 are each formed with transverse notches 21. These notches occur upon diametrically opposite sides of each disk. The notches of the several disks of any one set are in register so as to form a pocket into which the coins may slip. This pocket will hold the coins transversely of the receiving devices and will thus insure that they will be properly presented to the registering mechanism. The notches 21 are formed with straight back faces 22 and a short inclined front face 23. The peripheral edge of the disk extending from one of the back faces to a front face of the diametrically opposite notch is described by arcs of circles eccentric to the shaft 14. A gear 24 is secured on the shaft 14 and is in connection with a suitable gearing by which the shaft may be rotated.

As shown in the drawings, coin receiving structures are provided for coins of four denominations. The receiving member 15 is utilized for dimes, the member 16 for pennies, the member 17 for nickels, and the member 18 for quarters.

As more clearly shown in Fig. 3, of the drawings, a spacing collar 25 is disposed between the two center disks of each set upon the shaft. This provides a space into which tripping fingers 26 project, said fingers thus being disposed directly in the path of travel of the coins carried by the various coin receiving structures. In the present instance levers 26 for members 15, 17 and 18 are secured to an operating shaft 27, while the lever 26 of the coin receiving member 16 is secured to the shaft 28 of a penny counter 29. The diameters of the various coin receiving members vary and the lengths of the levers 26 vary also. This insures that the levers will have a different swinging motion and will rotate the shaft 27 varying degrees of rotation. As, for example, it is intended that a coin carried by the receiving member 18 shall rotate the shaft 27 an angular distance 5 times as great as the rotation produced by a coin

carried by the receiving member 16. In this manner the fares will be accurately recorded, irrespective of the denominations of the coins passing through the counter. If the fare is five cents, and a quarter, dime and nickel pass through the counter, eight fares will be registered. This is insured by reason of the fact that the notches in the various coin receiving members are disposed at different angles to each other and are so arranged that when a coin in one receiving member is tripping its respective lever to register a fare, the coins in the other receivers are in non-tripping positions, and successively actuate the shaft 27. The shaft 27 carries a gear segment 30 which is in mesh with a suitable train of gears 31, the last one of which is carried by the shaft of a counter 32. This counter may be of any preferred design. A spring 33 connects with the shaft 28 and normally holds the shaft in a non-rotating position and in a manner to insure that rotation of the shaft will be against the tension of the spring.

In operation of the present invention, coins are thrown into the coin box and then pass into the hopper 11. Here suitable mechanism separates coins of different denominations and successively delivers these coins to the grooves of the coin receiving members and in positions to extend transversely of the receiving members. This operation occurs as the selecting device 12 and the coin receiving structure 13 are in simultaneous rotation. As the coin receiving members rotate they will pick up the coins from the selecting device 12 and will carry them in the direction indicated by the arrow —*a*— in Fig. 1. As they proceed the lever 26 will be encountered and the shaft 27 rotated. The degree of rotation of this shaft will determine the amount registered in the recording device 32. In the present case, pennies will not rotate the shaft 27 but will operate an auxiliary counter 29, the manner of operation being the same.

It will thus be seen that this registering mechanism, while decidedly simple in construction and operation, at the same time insures that coins may be positively counted without mistake, and that coins of large denominations may be counted while automatically registering the number of fares represented by this coin.

While I have shown the preferred form of my invention as now known to me, it will be understood that various changes might be made in the combination, construction and arrangement of parts by those skilled in the art, without departing from the spirit of the invention, as claimed.

Having thus described my invention, what I claim and desire to secure by Letters Patent is:

1. In a coin registering device, a rotatable shaft, a plurality of coin carrying members on said shaft adapted to separately receive coins of different denominations and to hold coins of different denominations transversely with respect to the path of travel of said members and at different distances from the axis of rotation of said members, the coins of larger denominations being respectively closer to the axis of rotation, a register operated by rotation in a continuous direction, a set of levers mounted to oscillate around an axis parallel to the axis of the coin receiving members, said levers being of different lengths whereby their arc of travel will be in inverse ratio with respect to the positions of the respective coins by which said levers are actuated, and means whereby the various levers when actuated by the coins will each actuate the coin register a definite amount and thus record the different values of the coins actuating the levers.

2. In a coin registering device, a rotatable shaft, a plurality of coin carrying members on said shaft, radial slots formed in said members for receiving coins of different denominations and for holding said coins transversely with respect to the path of travel of said members, the slots in the different members being of different depths whereby to dispose the coins of different denominations different distances with respect to the axis of rotation of the members, the coins of larger denominations being respectively closer to said axis of rotation, a register operated by rotation in a continuous direction, an operating shaft disposed parallel to said rotatable shaft, a set of levers mounted on the said operating shaft, said levers being disposed one in the path of each coin carrying member whereby they will be engaged and actuated by coins carried by said members, said levers being of different lengths and actuated by coins carried by said members, said levers being of different lengths whereby their arc of travel will be in inverse ratio with respect to the positions of the coins by which said levers are actuated, and an operative connection between said levers and said register whereby the various levers when actuated will each actuate the coin register a definite amount and thus register the different values of the coins actuating the levers.

JOHN RENHOLTS.