This invention refers to coin-exchanging mechanism and in particular to such mechanism as applied to prepayment meters, vending machines and the like.

The object of the invention is to provide simple and effective means whereby a single coin of known value, hereinafter referred to as a major coin, may be exchanged for a series of coins collectively equivalent to the single coin, and hereinafter referred to as the minor coins. One application of the invention will be in exchanging a dollar piece for ten dimes or in exchanging a shilling for twelve pennies.

According to the invention the improved coin-exchanging mechanism comprises a drawer to receive the minor coins, a bolt normally holding the drawer closed and a manually operated bolt-retracting member adapted to be made operable by the inserted major coin. In the preferred example, the inserted major coin provides a fulcrum for said bolt-retracting member, and such member may consist of a lever pivotally connected to the bolt and having a projection passing into a chute for the major coin so as to ride on the inserted major coin.

The improved mechanism may be combined with means to obstruct the insertion of the major coin until one more than the required number of minor coins for release has been inserted.

The invention may be characterized by the particular constructional embodiment hereinafter described and illustrated, whether as a part of a coin box of a meter, or not.

The accompanying drawings illustrate an example of the invention built into the coin box of a pre-payment gas meter.

Fig. 1 is a sectional elevation of the coin box and with the mechanism in the normal or closed position.

Fig. 2 is a front view with a part of the front cover broken away for the sake of clearness.

Fig. 3 is an exterior side view showing the mechanism in the open or change-giving position, and

Fig. 4 is a plan of what is shown in Fig. 1.

Referring to the drawings, the improved mechanism comprises a vertical cylinder constituting a receptacle or chute, into which the minor coins (say dimes or pennies) are dropped one by one from the gas controlling mechanism of the meter (not shown) and a drawer immediately below such receptacle or chute, the drawer having a through opening forming a continuation of the cylinder a and into which the minor coins fall and in which they lie supported by the shelf c below the drawer. The depth of the drawer is equal to the height of the number of minor coins to be exchanged i.e. 10 dimes or 12 pennies, etc. applied one upon another, and the drawer is constructed so as to prevent movement of the coins in the receptacle a whilst in the open position. The drawer is provided with a knob or handle b to allow of its being pulled out from, or pushed into position below the receptacle a. A latching bolt d mounted in bearings c and impelled by a spring f normally engages a notch in the drawer to prevent its withdrawal from below the receptacle, and such bolt d is only released when a major coin (say a dollar or shilling) is inserted into a further chute g alongside the receptacle for holding the minor coins as hereinafter explained.

A window may be provided to show the number of coins in the drawer, but that is not strictly necessary.

Alongside the receptacle a for the minor coins is a bolt retracting member, comprising a lever h which is pivotally connected to and controls the latching bolt d of the drawer i.e. on the lever h being moved in one direction and provided a major coin is in the chute g it raises the bolt d to release the drawer. From such lever extends a short pin or spindle h, which projects a slot g in the wall of the chute g for the major coin.

In the wall of the receptacle a for the minor coins and at the lower end is a slot i through which projects one end of a further lever j pivoted at k, which lever at its other end is cranked to form a projection j normally extending across the chute g.

In operation, after the drawer b for the
minor coins is full and an eleventh dime or thirteen penny, as the case may be, has been inserted, such coin lies in the path of and retracts the lower end of the lever \( j \) and thus holds the end \( j \) out of the way for a major coin (dollar or shilling) to pass into and down its chute \( g \) where it comes to rest immediately below the lateral pin or spindle \( h \). On such lever being depressed, the major coin acts as a fulcrum for the lever and causes the drawer-releasing bolt \( d \) to be raised and the drawer to be released, which latter may then be drawn out by hand, or forced out by a spring, such as \( l \). By means of the hinged flap \( m \) at the lower end of the chute \( g \), and the link \( n \) the outward movement of the drawer releases the major coin which is then free to fall into the lower part of the apparatus. Prior to opening the drawer, the major coin is supported by the flap \( m \) and link \( n \) so as to provide a stable fulcrum. After removing the coins from and closing the drawer, the bolt \( d \) by reason of the spring \( f \) relocks it, and the parts resume their original positions.

When applied to a gas meter or the like, the minor coins will pass into the receptacle \( a \) only after they have effected the usual operations for controlling the working of the meter.

A spring \( h^2 \) holds the lever \( h \) normally raised, so that the inserted major coin falls beneath it.

As shown the mechanism is built into the coin box \( o \) of a meter, and to prevent the coins inserted after the receptacle \( a \) is filled, fouling the mechanism, a hood or shield \( p \) may be provided as shown in Fig. 1.

What I claim is:

1. Coin-changing mechanism for pre-payment meters, vending machines and like purposes comprising a drawer to receive the minor coins to be exchanged, a bolt normally holding the drawer closed, a manually operated bolt-retracting member adapted to be made operable by the inserted major coin acting as a fulcrum therefor, and means to support the major coin whilst the drawer is closed but to release the major coin when the drawer is opened, as set forth.

2. Coin-changing mechanism according to claim 1, characterized by a closed-ended chute for the major coin, a spring-pressed bolt to hold the drawer closed, a manually operated bolt-retracting lever pivotally connected to the bolt and having a projection passing through a slot in the wall of the chute so as to ride on and fulcrum about the inserted major coin, with a spring to hold the bolt-retracting lever in the raised position, and means to release the major coin when the drawer is opened as set forth.

3. Coin-changing mechanism comprising a drawer to receive minor coins to the correct value for exchange, a bolt normally holding the drawer closed, a chute for the major coin, a manually operated bolt retracting member having a projection passing through a slot in the wall of the chute to ride on and fulcrum about the inserted major coin, a removable end to such chute to support the major coin below the bolt retracting member, and a link connecting the drawer to said removable end to release the major coin upon opening of the drawer, as set forth.

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