C. C. VOGLESONG.

CHANGE MAKING MACHINE.

APPLICATION FILED AUG. 25, 1913.

1,092,313.

Patented Apr. 7, 1914.

2 SHEETS—SHEET 1.

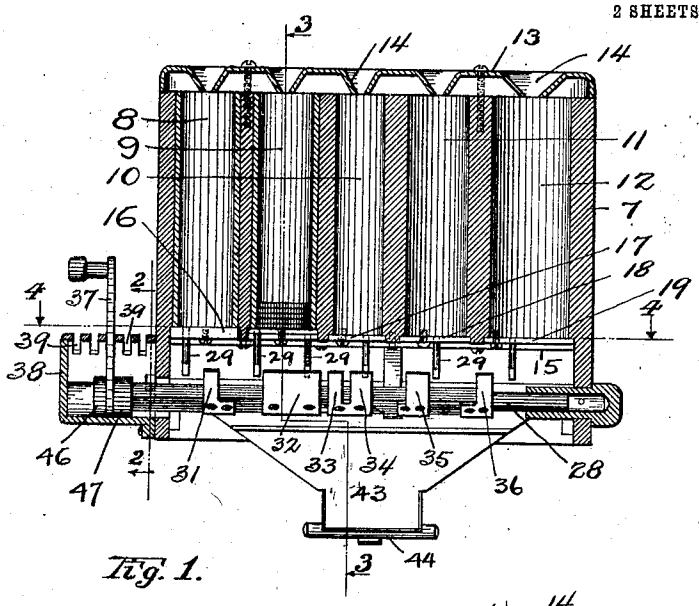


Fig. 1.

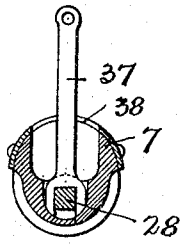


Fig. 2.

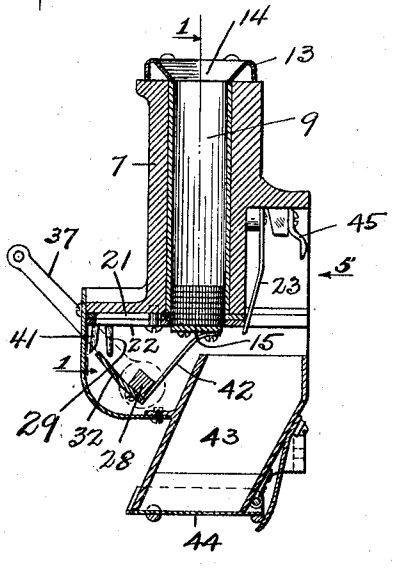


Fig. 3.

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2 SHEETS—SHEET 2.

Fig. 6.

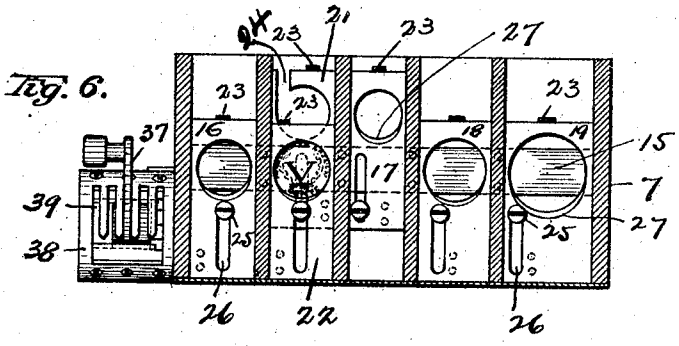


Fig. 5.

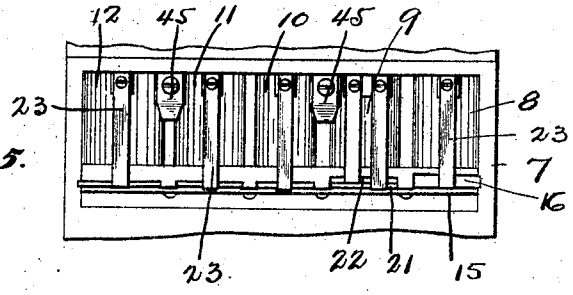
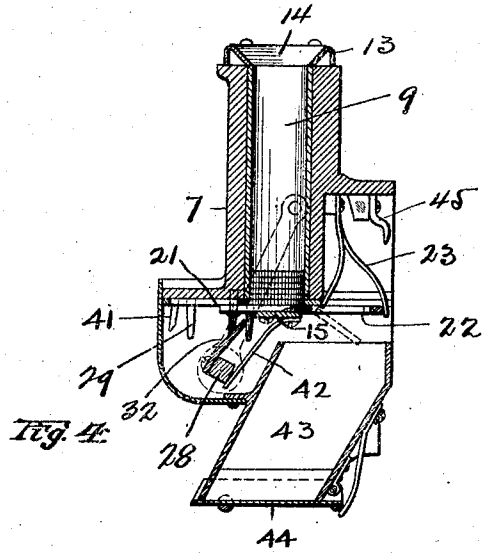


Fig. 4.



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UNITED STATES PATENT OFFICE.

CLYDE C. VOGLESONG, OF OAKLAND, CALIFORNIA.

CHANGE-MAKING MACHINE.

1,092,313. Specification of Letters Patent. Patented Apr. 7, 1914.

Application filed August 25, 1913. Serial No. 786,395.

To all whom it may concern:

Be it known that I, CLYDE C. VOGLESONG, a citizen of the United States, and a resident of Oakland, county of Alameda, and State of California, have invented certain new and useful Improvements in Change-Making Machines, of which the following is a specification.

The invention relates to change making machines adapted primarily to be used on street cars and other places where coins of the value of one dollar and lesser denominations must be continually changed.

The object of the invention is to provide a change making machine which will discharge the correct change for a coin of any denomination, preferably from ten cents to a dollar, in such denominations that the passenger receives coins of the proper denomination with which to pay his fare.

Another object of the invention is to provide a change making machine which is operated by one mechanism for producing the proper change for any coin within the limits of the machine.

The invention possesses other advantageous features, which, with the foregoing, will be set forth at length in the following description, where I shall outline in full that form of the invention which I have selected for illustration in the drawings accompanying and forming part of the present description. The novelty of the invention will be included in the claims succeeding said description. From this it will be apparent that I do not limit myself to the showing made by said drawings and description, as I may adopt many variations within the scope of my invention as expressed in said claims.

Referring to said drawings: Figure 1 is a vertical longitudinal section of the machine taken on the line 1—1 Fig. 3. Fig. 2 is a section taken on the line 2—2 Fig. 1. Fig. 3 is a vertical transverse section taken on the line 3—3 Fig. 1, showing the normal position of the parts. Fig. 4 is a similar view showing the position of the parts during the operation of the machine. Fig. 5 is a side elevation of the central part of the machine taken as indicated in Fig. 3. Fig. 6 is a horizontal longitudinal section of the machine taken on the line 4—4 Fig. 1.

In pay-as-you-enter cars, which are equipped with a fare box, the conductor usually returns to the passenger the entire change, allowing the passenger to deposit the fare in the fare box. In cars which are not equipped with a fare box, the conductor returns to the passenger the change remaining after the fare has been deducted. The machine of my invention is adapted for either of these uses and may be manipulated to deliver the total change for a coin of a certain denomination or a predetermined fraction of the coin tendered, permitting its employment with both systems. It is to be understood, however, that the use of the device is not limited to street cars, but that it may be employed in any situation where change should be rapidly made.

The machine consists of a casing 7 having arranged therein a plurality of coin receiving tubes 8—9—10—11—12 of the proper diameter to correspond to the coins to be contained therein. In the present embodiment, tubes 8 and 9 are to contain nickels, tube 10 dimes, tube 11 quarter dollars and tube 12 half dollars. The tubes are partly closed at their upper ends by the plate 13 which is provided with slotted bottom depressions 14, allowing the coins to be readily deposited in the tubes and preventing them from being dislodged from the tubes.

Closing the lower ends of the tubes and supported by the plate 15 attached to the frame, are a plurality of slides which control the discharge of the coins from the tubes. The slides are provided with apertures extending therethrough of substantially the same diameter as the respective coins and the lower coin or coins in each tube seat in the apertures in the slides, so that they are moved transversely out of contact with the supporting plate 15 as the slides are moved.

The thickness of the respective slides in proportion to the thickness of the coins in the various slots is determined by the change to be delivered. The present machine is constructed so that it may be operated to deliver at one time either two nickels, five nickels, two dimes and one nickel, a quarter, two dimes and one nickel or a half dollar, a quarter, two dimes and one nickel. In order to accomplish these results, the slide 16 arranged below the nickel tube 8 is of the thickness of three nickels so that as the slide is moved transversely three nickels are extracted from the stack in tube 8. The

slide 17 arranged below the dime tube 10 is of the thickness of two dimes, so that two dimes are extracted from the tube 10 as the slide is moved. The slide 18 below the quarter dollar tube 11 and the slide 19 below the half dollar tube 12 are each of the thickness of one of the respective coins. Arranged below the second nickel tube 9 are two superposed slides 21—22, each of the thickness of one nickel, which are capable of joint or independent movement so that the machine may be manipulated to extract one or two nickels at a time from tube 9. The slides under the various tubes are normally held in position with the apertures alined with the tubes by means of the springs 23 bearing against the ends of the slides and secured to the frame 7. The upper slide 21 under tube 9 is provided with a slot 24 to accommodate the spring 23 bearing against the lower slide 22 when the upper slide only is used. The transverse movements of the various slides are limited by the screws 25 engaging in slots 26 in the slides.

The thickness of coins vary somewhat with age and usage and in order that the proper number may be extracted by the slides, especially from those tubes from which a plurality of coins are removed at one time, the upper surface of the slides adjacent the rear end of the apertures therein are beveled or chamfered slightly as shown at 27 to compensate for the varying thicknesses.

Arranged below the slides and journaled in the frame 7 is a longitudinally movable rotatable shaft 28 which is provided with means for engaging certain predetermined slides at one time. The central portion of the shaft 28 is preferably rectangular in cross section, and secured thereto at certain predetermined intervals are keys or tongues which may be brought, by the longitudinal movement of the shaft, into juxtaposition with the pins 29 projecting from the slides. In the present instance, in order to obtain the results specified, I employ six tongues 31—32—33—34—35—36. In certain predetermined longitudinal positions of the shaft, certain of these tongues lie in alinement or juxtaposition with the pins 29 on certain slides causing a partial rotation of the shaft to extract a certain predetermined assortment of coins from the tubes.

The shaft is rotated and moved longitudinally by means of a handle or lever 37 secured thereto at one end. The handle is movable longitudinally in a slot in the casing 38 which is provided with transverse slots 39 which indicate the proper position of the handle for making certain predetermined change. A movement of the handle into a given transverse slot 39 causes a partial rotation of the shaft, which produces a movement of certain slides, thereby removing certain coins from the tubes. In Fig. 1 the handle is shown in the central transverse slot 39, in which position of the shaft 28, the tongue 32 is alined with the pin on slide 22 below tube 9, and tongue 34 is alined with the pin on slide 17 below the tube 10. A rotation of the handle in this position will cause the extraction of one nickel and two dimes from the tubes. A movement of the handle into alinement with the next transverse slot 39 to the left, will bring tongue 32 into alinement with the pins on slides 21 and 22 and will move tongue 34 out of alinement with any pin, causing the operation of the handle to extract two nickels from tube 9. By moving the handle into alinement with the various slots, the tongues will be brought into such relation with the pins, that the various mentioned amounts of change may be obtained. It is evident that the thickness of the slides and the positions of the tongues may be changed so that any desired combinations of coins may be obtained, and it is to be understood that I do not limit myself to a machine capable of producing only the amounts of change which I have herein mentioned.

In order to secure the return of the slides to normal position, should the springs 23 become weakened or broken, I prefer to arrange a pin 41 behind each pin 29 so that the tongues engage between the pins, thereby causing a positive rearward movement of the slides as the handle is moved backward. The handle is held in its normal backward position by the flat spring 42 secured to the plate 15 or other part of the frame and engaging the rectangular portion of the shaft.

As the slides are moved forward, the coins nesting in the apertures therein are moved out of contact with the bottom closing plate 15 and fall into the chute 43, which is closed at its lower end by the spring-held door 44, and by depressing the door the coins slide into the hand. The machine is provided with hooks 45 by which it may be attached to any suitable object such as the conductor's belt or the fare box.

The handle 37 is provided on its end with a socket for engaging the square part of the shaft 28, so that the handle may be removed when desired, thereby preventing unauthorized persons from gaining access to the coins in the machine. This is particularly necessary on street cars where the conductor must alight from the car at various places. The handle engages the shaft between two fixed collars 46—47 so that the shaft is movable longitudinally by the handle.

I claim:

1. A change making machine comprising a plurality of coin receiving tubes, slides arranged below said tubes, a longitudinally movable rotatable shaft, and means on said shaft adapted to engage certain predetermined slides when the shaft is in a certain

predetermined longitudinal position, rotation of the shaft serving to eject the desired coin or coins.

2. A change making machine comprising a plurality of coin receiving tubes of different size, slides arranged below said tubes, a longitudinally movable rotatable shaft provided with means for engaging said slides and adapted to be rotated after engagement with the slide to advance the slide and eject a coin or coins, and means for locating said shaft by its longitudinal movement so that certain predetermined slides only are engaged.

3. A change making machine comprising a plurality of coin receiving tubes, a slide below each of said tubes, a pin on each of said slides, a longitudinally movable rotatable shaft arranged below said slides, and adapted to be set by longitudinal movement in position for actuating the desired slides, means on said shaft adapted to engage certain of said pins, and means indicating the longitudinal position of the shaft for engagement of said means with certain predetermined pins.

4. A change making machine comprising a plurality of coin receiving tubes of different size coincident to the size of the coins, transversely movable slides arranged below said tubes, a longitudinally movable rotatable shaft arranged below said slides, means on said shaft for engaging certain predetermined slides when the shaft is in a predetermined position longitudinally, and means for rotating said shaft to move said slides.

5. A change making machine comprising a plurality of coin receiving tubes of different size coincident to the size of the coins, slides arranged below said tubes adapted to be moved transversely, a pin on each of said slides, a longitudinally movable rotatable shaft, tongues on said shaft adapted to engage certain of said pins when the shaft is in a certain predetermined position longitudinally and a handle on said shaft.

6. In a change making machine, a coin receiving tube, an apertured slide arranged below said tube adapted to receive one coin, two pins arranged on said slide, a longitudinally movable shaft, a tongue on said shaft adapted to engage between said pins when said shaft is adjusted longitudinally to properly position said parts, and means for rotating said shaft.

7. In a change making machine, a coin receiving tube, a plurality of superposed apertured slides arranged below said tube, said apertures being of the same diameter as the tube and being alined therewith, a fixed closing plate arranged below the nethermost slide, a pin on each of said slides, a longitudinally movable shaft provided with means for engaging a predetermined number of said pins, and means for rotating the shaft to move the slides transversely.

8. A change making machine comprising a plurality of coin receiving tubes, apertured slides arranged below said tubes, said apertures being coincident with the tubes, a longitudinally movable rotatable shaft arranged below said slides, means permitting the rotation of said shaft in certain predetermined longitudinal positions only, and means on said shaft for engaging certain predetermined slides for each predetermined longitudinal position.

9. A change making machine comprising a plurality of coin receiving tubes, a slide arranged below each of said tubes, a longitudinally movable rotatable shaft arranged adjacent said slides and provided with means for engaging said slides, a handle engaging said shaft, and an apertured casing through which said handle extends, said casing being provided with spaced transverse slots into which said handle is movable to rotate said shaft.

10. A change making machine comprising a casing having a plurality of coin receiving tubes therein, slides arranged below said tubes, a longitudinally movable rotatable shaft arranged below said slides, tongues secured to said shaft arranged to engage certain slides for a certain longitudinal position of the shaft, a handle on said shaft, and a casing extension provided with a longitudinal slot in which said handle is movable, said casing extension being provided with spaced transverse slots into which said handle is movable to rotate said shaft.

11. A change making machine comprising a plurality of coin receiving tubes, reciprocating coin ejecting devices arranged below said tubes, a longitudinally movable rotatable shaft, and means on said shaft adapted to engage certain predetermined coin ejecting devices when the shaft is in a predetermined longitudinal position, rotation of the shaft serving to eject the desired coin or coins.

In testimony whereof, I have hereunto set my hand at San Francisco, California, this 15th day of August, 1913.

CLYDE C. VOGLESONG.

In presence of—
P. A. McKENZIE,
H. G. PROST.

Copies of this patent may be obtained for five cents each, by addressing the "Commissioner of Patents Washington, D. C."