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SELECTIVE DISPENSER

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Fig. 2.

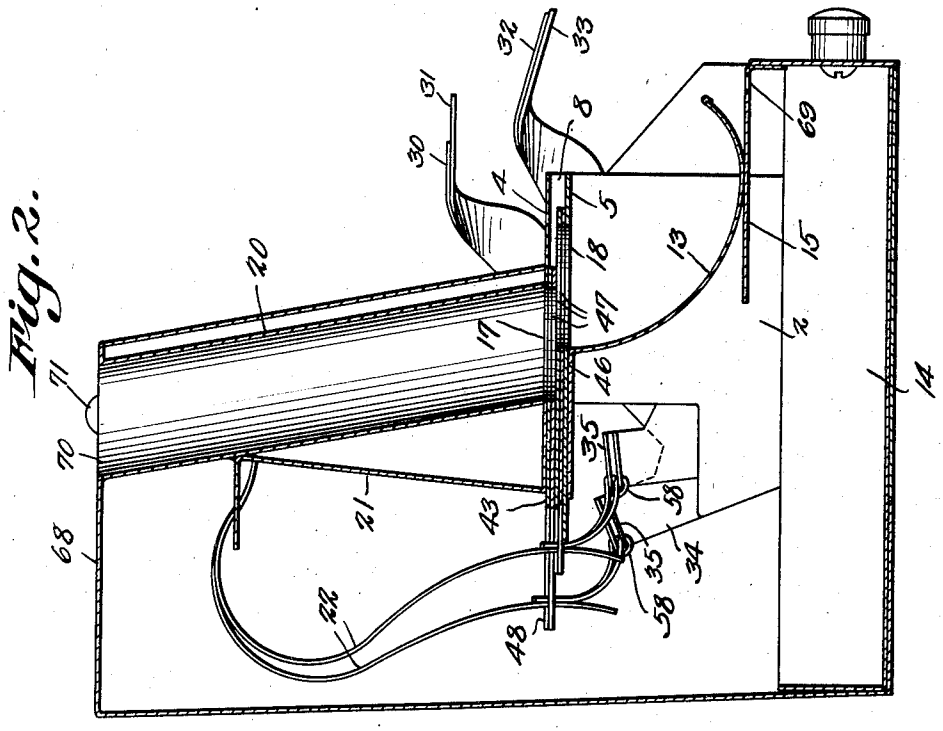
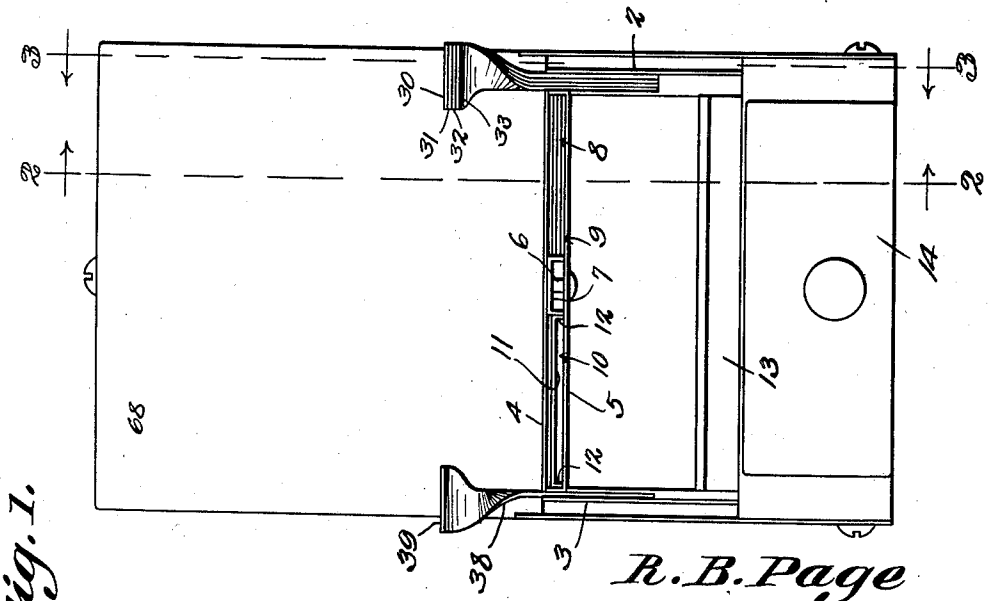


Fig. 1.



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SELECTIVE DISPENSER

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Fig. 4.

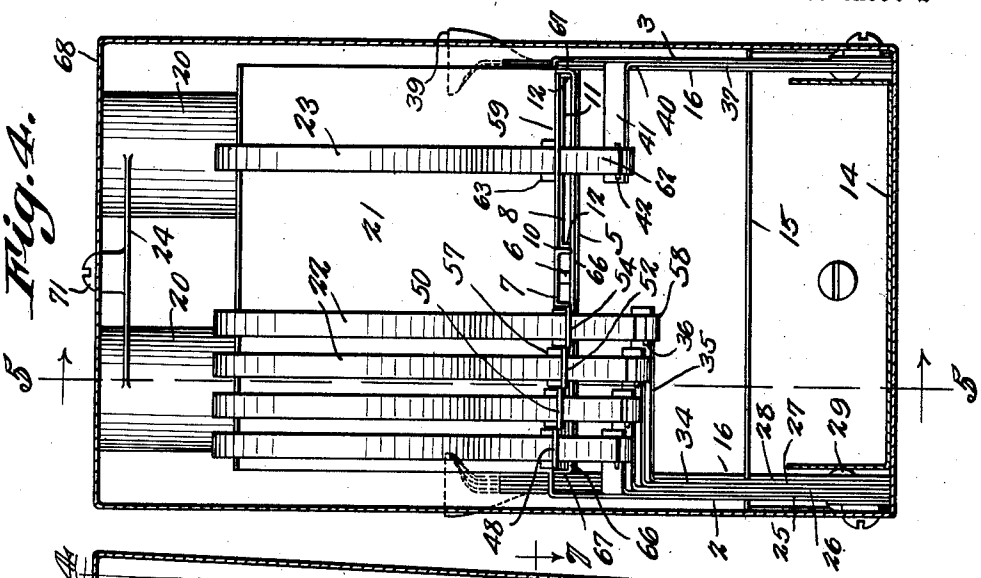
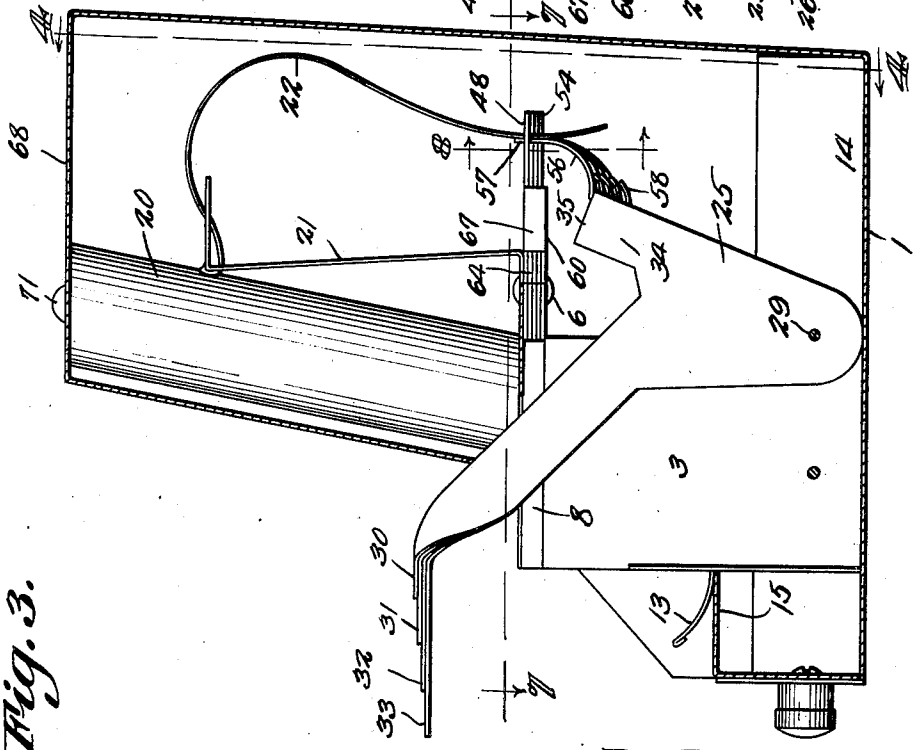


Fig. 3.



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SELECTIVE DISPENSER

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Fig. 6.

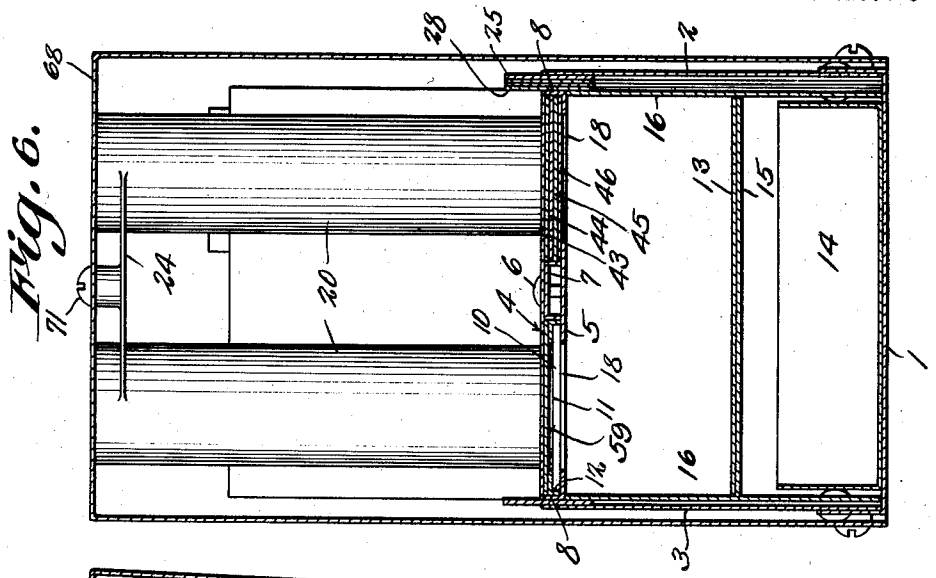
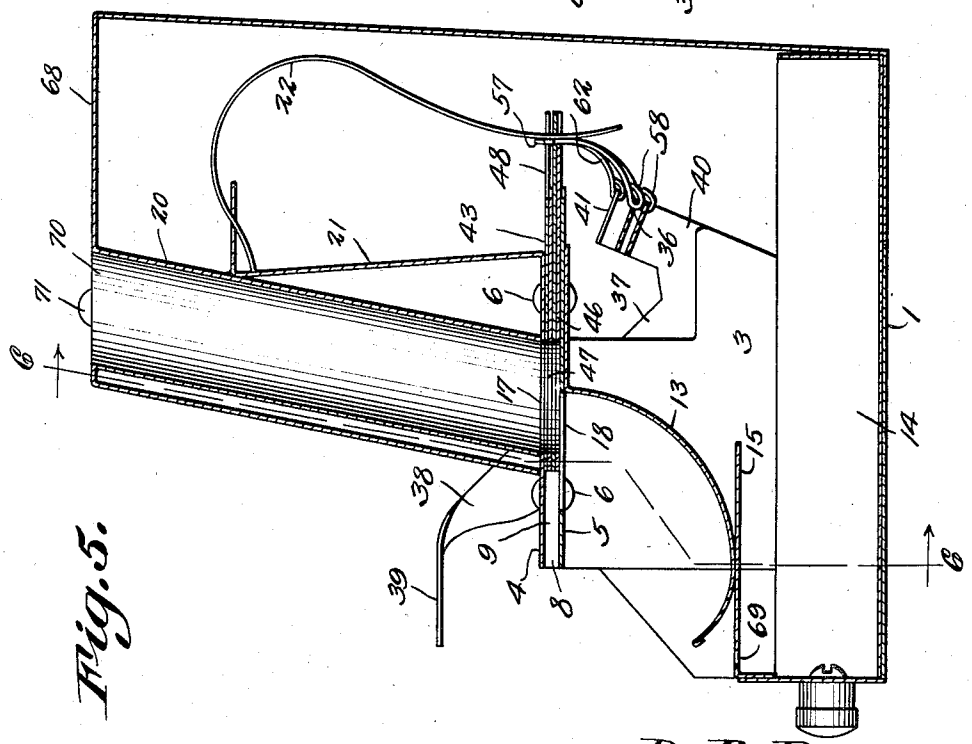


Fig. 5.



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SELECTIVE DISPENSER

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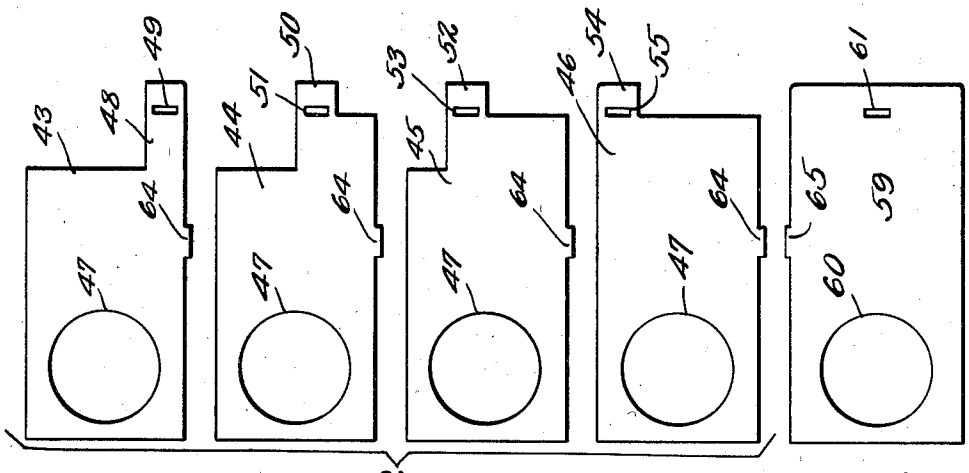


Fig. 9.

Fig. 10.

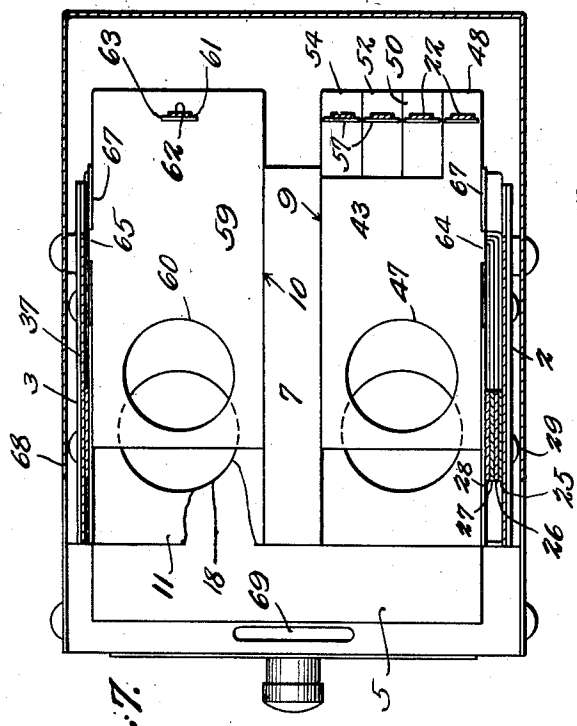


Fig. 7.

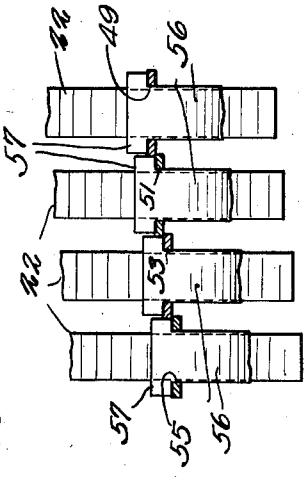


Fig. 8.

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2,226,908

UNITED STATES PATENT OFFICE

2,226,908

SELECTIVE DISPENSER

Richard Barmby Page, Joplin, Mo.

Application February 11, 1939, Serial No. 255,982

1 Claim. (Cl. 133—5)

This invention relates to an apparatus designed primarily for dispensing tokens and mills such as used in the payment of sales taxes and the like, an object being to provide a simple and compact structure which can be quickly actuated to deliver any predetermined value, in tokens or mills, from one to nine.

A further object is to provide an apparatus which can be readily attached to a cash register or to a counter so that it will be convenient at all times for operation by the cashier while making change.

With the foregoing and other objects in view which will appear as the description proceeds, the invention consists of certain novel details of construction and combinations of parts hereinafter more fully described and pointed out in the claim, it being understood that changes may be made in the construction and arrangement of parts without departing from the spirit of the invention as claimed.

In the accompanying drawings the preferred form of the invention has been shown.

In said drawings

Figure 1 is a front elevation of the dispenser.

Figure 2 is a section on line 2—2, Figure 1.

Figure 3 is a section on line 3—3, Figure 1.

Figure 4 is a section on line 4—4, Figure 3.

Figure 5 is a section on line 5—5, Figure 4.

Figure 6 is a section on line 6—6, Figure 5.

Figure 7 is a section on line 7—7, Figure 3.

Figure 8 is a section through a portion of the apparatus taken on the line 8—8, Figure 3.

Figure 9 is a view showing in plan the several slides comprising one group of dispensers.

Figure 10 is a plan view of the remaining slide.

Referring to the figures by characters of reference 1 designates a base having upstanding sides 2 and 3 which support a shelf 4 extending transversely therebetween and suspended below this shelf is a guide plate 5 held to the shelf by screws 6 or the like and spaced from the shelf at its center by a spacing strip 7. Flanges at the sides of the plate 5 space said sides from shelf 4 as indicated at 8. The shelf and plate thus cooperate to provide spaced channels 9 and 10 therebetween and the width of each of these channels is slightly greater than the diameter of the token or mill to be dispensed. The height of channel 9 is slightly greater than the combined thicknesses of four mills or tokens to be dispensed while the height of channel 10 is slightly greater than the thickness of one mill or token to be dispensed. This difference in height of channels 9 and 10 can be effected by mounting a filler plate 11 in the top portion of channel 10, the filler plate being supported by side flanges 12 as shown particularly in Figure 1 and the space below the filler plate being, as before indicated, slightly greater than the thickness of the token or mill to be delivered thereto.

Secured under the plate 5 is a downwardly and forwardly curved plate 13 constituting a receiving trough and this trough is located between the sides of the apparatus below plate 5. This trough serves to support tokens or mills when they are delivered by the mechanism hereinafter described and to hold them where they can be conveniently reached for the purpose of removal.

A drawer 14 can be located on the base 1 and is designed to hold retained tokens or mills paid for taxes, etc. This drawer is adapted to work under a transverse partition 15 which constitutes a stop for the front of the drawer when pushed backwardly as will be noted by referring to Figure 5.

The side edges of partition 15 and trough 13 are joined to supporting plates 16 mounted on base 1 at opposite sides of the drawer 14 and spaced from the respective sides 2 and 3.

Formed in the shelf 4 over each of the channels 9 and 10 is an opening 17 the diameter of which is slightly greater than that of the token or mill to be dispensed. Another opening 18 is formed in plate 5 and is offset forwardly from the corresponding opening 17, it being understood that one opening 18 is formed in the bottom of each channel 9 and 10 and that each of the openings 18 is of a diameter greater than that of the mill or token to be dispensed.

An upwardly extending tube 20 is mounted on shelf 4 with its lower end soldered or otherwise joined thereto. One of these tubes is provided for each opening 17 and each tube has its inner surface flush with the wall of the opening 17 communicating therewith. Each tube is adapted to hold a stack of token or mills and it is designed to place in one of the tubes mills or tokens having the value of one-tenth of a cent while in the other tube is to be placed a stack of tokens each having a value of five mills or one-half a cent.

The tubes are braced by means of a backing plate 21 extending upwardly from the rear portion of the shelf 4, and secured to the upper portion of this backing plate directly back of one of the tubes 20 is a series of springs 22 arranged side by side and extending downwardly to points below the plate 5. Four of the springs 22 are employed. Another spring, 23 is secured to the top

of plate 21 near the other side and extends downwardly to a point below plate 5, this spring being located back of the other tube 20.

The two tubes 20 are connected near their upper ends by a web 24.

Pivotally mounted between the side wall 2 and plate 16 are bell-cranks 25, 26, 27 and 28 all mounted on the same pivot 29. These levers are formed with upwardly and forwardly inclined arms terminating in overlying keys 30, 31, 32 and 33 respectively, the key 30 being uppermost and shorter than the next adjoining key 31 which, in turn, normally bears upon and is shorter than the key 32. The lower key 33 projects forwardly beyond key 32. It will be obvious, therefore, that by depressing key 30, all of the levers 25 to 28 inclusive will be depressed whereas by depressing key 31 only three of the levers will be operated, the lever 25 remaining stationary. Likewise when key 32 is depressed lever 28 will also be actuated with lever 27 whereas when lever 33 is depressed, only the one lever 28 will be operated.

The levers have rearwardly and upwardly extending arms 34 extending to different heights, and at the upper end of these arms are overlying laterally extending fingers 35 of different lengths, each being formed with a slot 36.

Another lever 37 is pivotally mounted between the wall 3 and the adjacent plate 16, this lever being shaped substantially like the lever 25 and having its forwardly and upwardly extending arm 38 terminating in a depressible terminal or key 39. The upwardly and rearwardly extending arm 40 of this lever 37 has a laterally extending finger 41 also formed with a slot 42.

Mounted in the channel 9 are superposed slides 43, 44, 45 and 46 each having an opening 47 therein of the same diameter as the adjacent opening 17. The openings in the slides normally register with the adjacent opening 17. A tongue 48 is extended rearwardly from the slide 43 at one side thereof and has a slot 49. The width of this tongue is slightly less than one-fourth the width of the plate. Another tongue 50 is extended rearwardly from plate 44 and has a slot 51, this tongue being slightly less than one-fourth the width of the plate and being spaced laterally from one side a distance slightly greater than the width of the tongue. Plate 45 has a rearwardly extending tongue 52 also formed with a slot 53. The width of this tongue is slightly less than one-quarter the width of the plate and the tongue is located between the longitudinal center of the plate and that side remote from tongue 48 of plate 43. The fourth plate has a rearwardly extending tongue 54 provided with a slot 55 and located where it will occupy the space between tongue 52 and the adjacent side of the plate 45. When these plates are superposed plate 46 is lowermost and supported thereon in regular succession are the plates 45, 44 and 43. The slots are engaged by strips 56 having heads 57 resting on the respective tongues and each of these strips is extended downwardly and forwardly where it terminates in a hook 58 engaged in one of the slots 36. The parts are so joined that the tongue 48 is connected to lever 25 while tongues 50, 52 and 54 are connected to levers 26, 27 and 28 respectively. The springs 22 are extended downwardly through the respective slots in the tongues and exert a backward thrust upon the respective slides so that the openings therein are maintained normally in alinement with each other and with the opening 17 thereabove.

The same type of connection is provided between spring 23 and a slide 59 which is mounted in guide channel 10. This slide has an opening 60 the diameter of which is slightly greater than the diameter of the token or mill to be dispensed thereby and in the back portion of the slide is a slot 61 in which is mounted a strip 62 similar to the strips 56 and having a similar head 63. This strip 62 hooks into the slot 42 in finger 41 and the spring 23 also extends into slot 61 so as to exert a backward thrust upon the slide and maintain the opening 60 normally in register with the opening 17 thereabove.

Backward movement of the various slides can be limited in any manner desired. For example each slide 43, 44, 45 and 46 can be provided at one side with a lug 64 and another lug 65 can be extended laterally from the slide 59. These lugs are adapted to work against a stop strip 66 extending under the slides and having upstanding terminal ears 67 in the paths of the ears 64 and 65.

A housing 68 serves to encase all of the apparatus except the keys 30, 31, 32, 33 and 39, the trough 13, and the forward portion of the partition 15. This forward portion has a slot 69 opening downwardly into the drawer 14 so that a mill or token can be dropped into the drawer without opening the drawer. The top of the casing has openings 70 opening into the respective tubes 20 so that these tubes can readily be filled with mills or tokens. The casing can be fastened in place by means of a screw 71 or the like engaging the web 24 as shown for example in Figure 4.

As before stated this dispenser is designed for use in making change with tokens or mills. It is intended to use the tokens or mills of the value of one-tenth of a cent and also tokens of the value of one-half a cent or five mills. The five-mill tokens are to be placed in the tube 20 associated with the slide 59 while the tokens representing a value of one mill are stacked within the other tube 20 above the slides 43, 44, 45 and 46. Obviously the lowest token in the tube above plate 59 will move by gravity into the opening 60 while the four lowest tokens of the other stack will move by gravity into the openings 47 in the four slides associated with said stack.

Should it be desired to deduct one mill from one cent so that it may be retained by the dealer, the user would depress key 30 and key 39. When key 30 is depressed all of the levers 25, 26, 27 and 28 are actuated and will pull forwardly through the strips 56 upon the several slides 43, 44, 45 and 46 so that they will be shifted simultaneously against the action of their springs and carry forwardly from opening 17 to opening 18 the four mills or tokens contained in said openings. These will then be dropped by gravity into the trough. The operator also pushes downwardly on the key 39 so as to move slide 59 forwardly and deposit one token of five-mills value into the trough. The total of nine mills thus deposited in the trough are then removed and handed to the customer while the penny, which is the amount from which the one-mill tax has been deducted, is dropped through the slot into the drawer. By depressing key 39 only, a five-mill token will be delivered to the customer. By depressing key 33 a one-mill token will be delivered to the customer. Two mills are delivered when key 32 is depressed. When key 31 is depressed three mills are delivered and when key 30 is depressed four mills are delivered. Thus any number of mills up to and including nine can be paid to the customer on receipt of one cent.

In every case, after the key has been released, the spring or springs will return the parts to their initial positions where additional tokens will be free to gravitate into the slides preparatory to being delivered from the apparatus.

What is claimed is:

In selective dispensing mechanism a structure including a shelf, a tube mounted on and opening through the shelf and constituting a magazine for holding a stack of tokens, a plate fixedly mounted below the shelf having an opening offset forwardly from below the tube, a token-receiving trough beneath said opening, superimposed relatively slidable plates between the shelf and plate and having token-receiving openings normally registering with the tube, each slide being the thickness of a token, a rearwardly extending tongue on each slide, each tongue being beyond one side of the remaining tongues in echelon formation, separate key levers mounted for pivotal movement on a common axis and at one side of the shelf and trough, means movable with the levers and connected to the respective tongues for actuating the respective slides to convey tokens to the opening in the plate, and keys located wholly at one side of and projecting forwardly beyond the tube and trough and carried by the respective levers in stepped overlapping relation, said keys being so proportioned and positioned that when any key is depressed it will depress the keys thereunder.

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