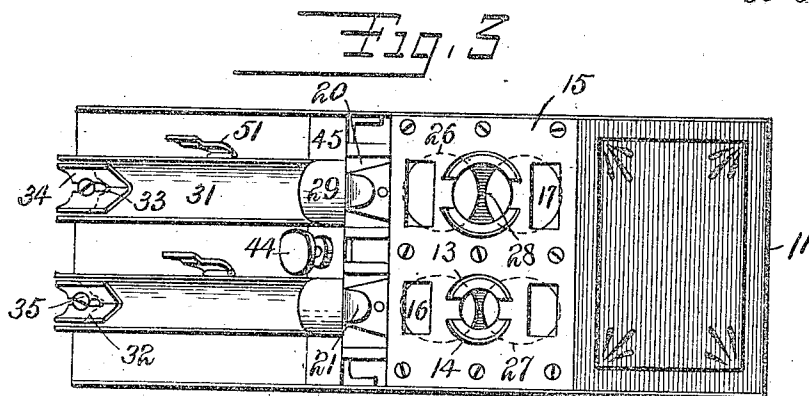
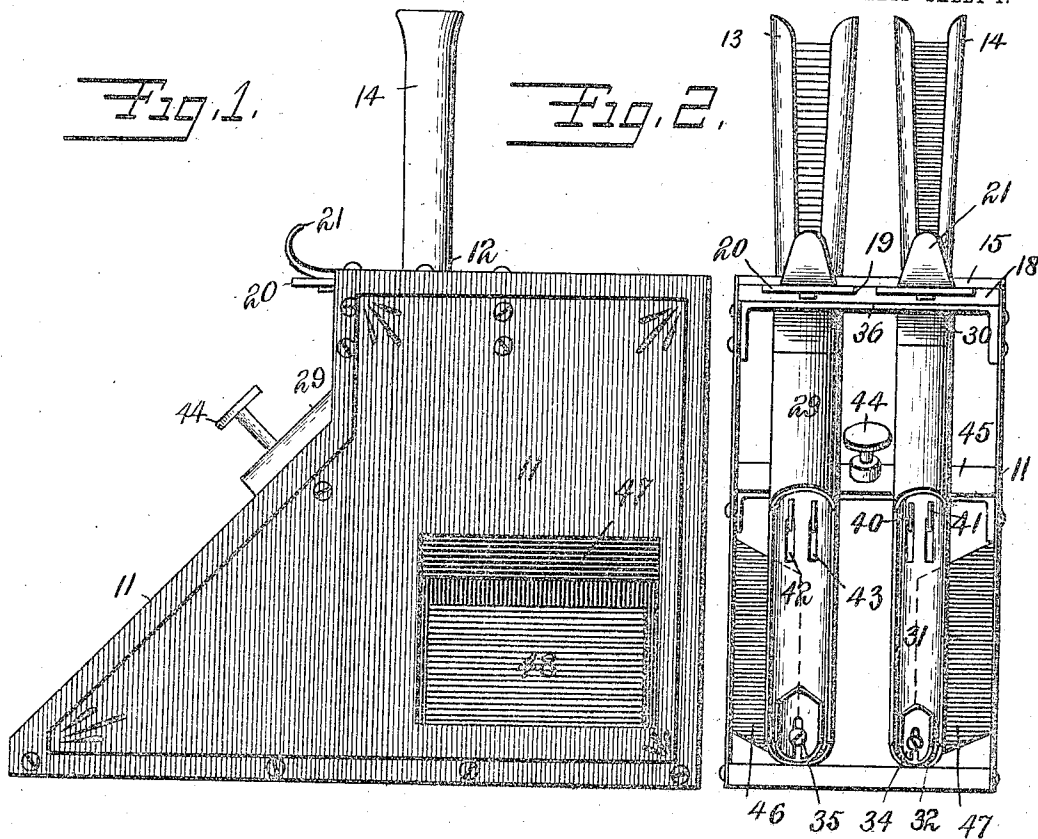


961,473.

2 SHEETS—SHEET 1.



WITNESSES:
F. E. White.
H. C. Cramma

Fig. 4.

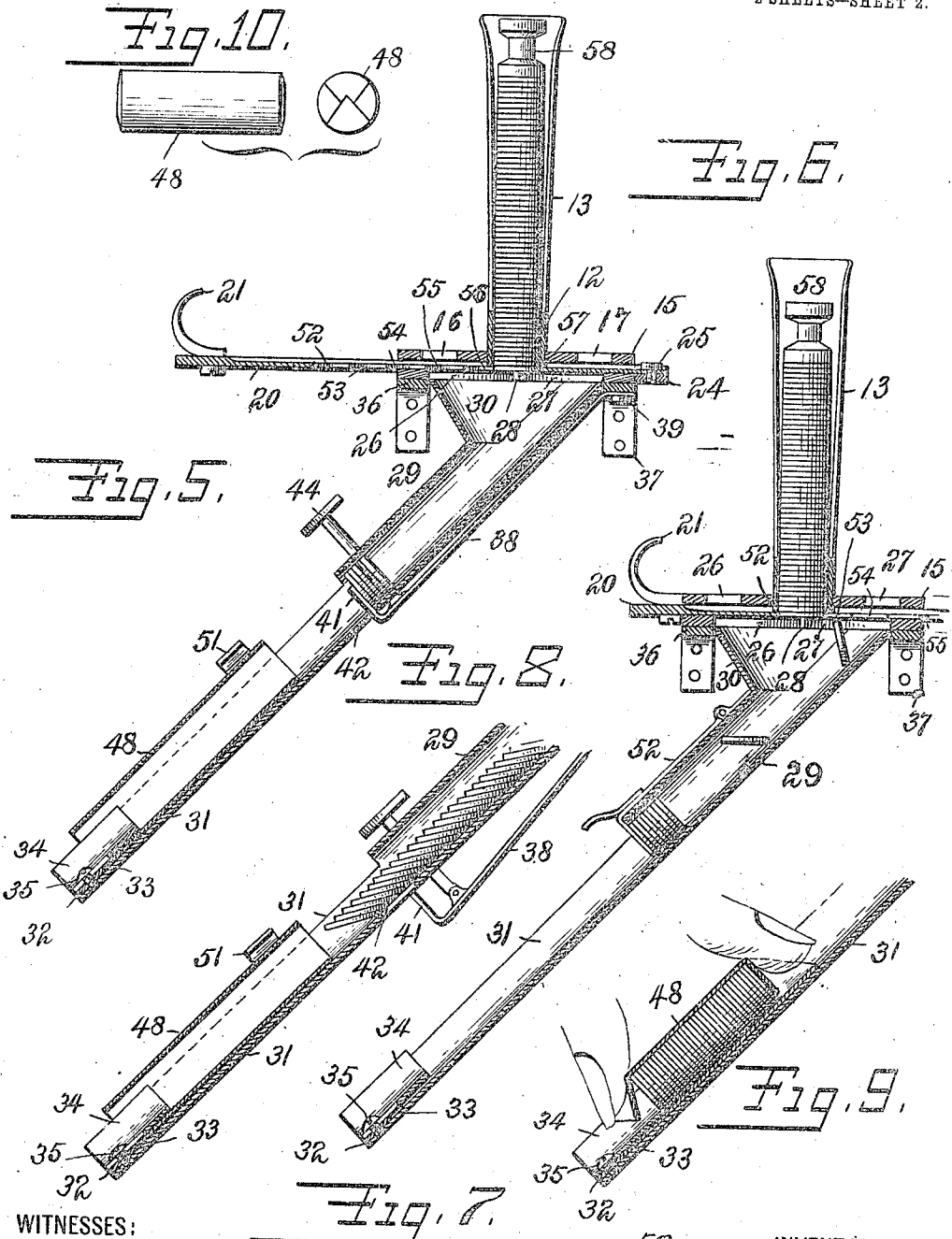
INVENTOR
Augustus Abbott
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 ATTORNEY

A. ABBOTT.
MACHINE FOR COUNTING AND PACKAGING COINS.
APPLICATION FILED MAY 29, 1909.

961,473.

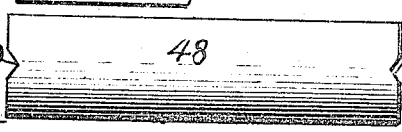
Patented June 14, 1910.

2 SHEETS—SHEET 2.



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UNITED STATES PATENT OFFICE.

AUGUSTUS ABBOTT, OF SEATTLE, WASHINGTON

MACHINE FOR COUNTING AND PACKAGING COINS.

961,473.

Specification of Letters Patent. Patented June 14, 1910.

Application filed May 29, 1909. Serial No. 499,112.

To all whom it may concern:

Be it known that I, AUGUSTUS ABBOTT, a citizen of the United States, residing at Seattle, in the county of King and State of Washington, have invented a new and useful Machine for Counting and Packaging Coins, of which the following is a specification.

My invention relates to a machine for counting and packaging coins of various denominations, within a previously prepared wrapper provided for the same.

The main object of the invention is to construct a small, neat and compact machine, which will have a magazine or receptacle for each denomination of coin it is to package, a counter for such coins, a suitable receptacle or trough to receive the coins from such counter, means for arresting the coin at the upper end of said trough, and means provided for holding a suitable wrapper in position for the coins to enter, also for positioning the coins within the same.

Another object is to provide a machine that will accurately verify and package coins of predetermined amounts, also take loose coins of the same denomination and by placing them in its respective magazine, will count and package them quicker than is done at the present time, also effecting a saving in the matter of wrappers.

With these and other points in mind, the invention will be pointed out in detail in the specification, reference being had to the drawings which form a part of this application.

Figure 1 is a side view of my invention; Fig. 2 is a front elevation of the same, showing a double magazine; Fig. 3 is a top plan view of the same; Fig. 4 is a detached detail of the counter; Fig. 5 is a sectional detail of the operative mechanism for a single denomination of coin; Fig. 6 is a like sectional view with the counter in its reverse position; Fig. 7 is a detail of the wrapper, which is made in sizes to inclose the various denominations of coins; Fig. 8 is a sectional detail of the lower end of the trough showing manner in which the coins enter the wrapper; Fig. 9 is a like sectional detail showing manner in which the coins and wrapper are removed from the machine, and Fig. 10 is a side and end view of the package after the same has been wrapped, showing the same after the ends have been tucked.

Like reference characters designate like

parts throughout the several views of the drawings.

The invention is particularly designed for use by banks and other institutions that handle specie of various denominations, and is so constructed as to take up the least possible room, yet to be of such size and shape as to afford every convenience for which it was designed. While only means are shown for packaging coins of two sizes or denominations, yet it will be clearly understood that it is the intention to provide in a single machine, means for counting and packaging coins of all sizes, such for instance, as the silver dollar, half dollar, quarter dollar, dimes, or ten cent pieces, five cent pieces and the one cent pieces. It will also be understood that when describing the machine, one device will be described, the mere duplication of several like devices on the same machine makes no difference as far as the operation of the machine is concerned.

The base or stand 11, has extending upwardly therefrom a magazine 12, which is composed of a tube, its upper end being bifurcated or forked so as to form two upwardly extending arms 13 and 14, by which means, the operator can readily place a pile of coins in the said magazine. With the arms of the magazine so spread it also allows the operator to see when the same becomes exhausted, which is also very essential. Said magazine 12 is suitably secured to a top plate 15, which in turn is secured to the top of the machine. The plate 15 has openings 16 and 17, one in the front, the other in the rear of the magazine or coin holder.

18 is a base plate, having therein ways 19 in which fits and reciprocates a counter 20, which latter is provided on its front end with a finger hold 21, for operating the same. Said finger piece may be so placed as to act as a front stop, or the head of the screw that secured the same to the counter may accomplish the same result. The counter 20 is provided with an elongated irregular slot 22, that extends in the direction of its length, and which is composed of segments of circles, the diameter of such portions of each circle corresponding in each instance to the particular class of coins that it is to act upon, thus it will be seen that, by such circles intersecting each other, it leaves projecting pointed lugs 23 extending into said slot,

from point to point of each, being a little greater than one quarter the diameter of the particular coin it is to act upon. Said counter 20 is provided at its opposite end with a rear stop, which consists of a block 24, that is held secure to the counter by a screw 25, which acts as a stop when the counter is pulled out in the opposite direction.

The base plate 18, (see Fig. 3) is provided with openings 26 and 27, each of which is of a greater size than the coin which is to pass through the same, said openings may be elliptical or any other desired shape, as long as the length of the same extends in the direction of the movement of the counter 20. And it has been found desirable to have these openings separated by a small web of the metal as shown at 28, this web is immediately under the magazine 12, as shown and permits the coins to rest flat upon the same.

To the under side of the base plate 18, is secured a trough 29, which at its upper end flares as at 30, so as to encompass both openings 26 and 27 in the plate 18. Such trough as shown is closed at its upper end, but it may be found desirable to provide the same with means for the operator to see the coins as they are deposited therein from the counter, the lower end 31 of the said trough is open as shown, so as to provide a suitable place for the wrapper. To the lower end of the trough, is secured a gage 32, having an angular projection 33, which extends into suitable notches in the wrapper, which will be explained farther on. To the top of such gage is secured in any suitable way, either temporarily or permanently, the coin retainer 34 which as shown is adjustably secured by a screw 35. The object of such retainer is to arrest the coins at the proper point in the wrapper, so that the column of coins shall be equally distant from either end of the wrapper.

The base plate 18, and all of the co-acting parts, are supported and held secure to the base or stand 11, by straps 36 and 37 which hold the same together, to the strap 37 is secured a spring latch 38, by means of a screw 39, while its other or free end is provided with two upwardly extending fingers 40 and 41, each of which protrude through suitable slots 42 and 43, in the trough 29. These upwardly extending fingers, act to arrest the coins as they are discharged from the counter, and retain the same there in position, until the desired amount has been counted from the magazine. This spring latch 38 is operated by a key 44 that is suitably mounted for that purpose, as shown it extends through a bar 45, that extends under the trough, and is secured to the side walls of the device, and in practice it is intended that, one key shall act upon two troughs. As only one specie of coin is acted upon at once,

it will be seen by this arrangement a multiplicity of such keys are dispensed with, thus simplifying the machine. Such key may be secured to the spring 38 in any suitable manner.

Referring more particularly now to Fig. 6, it will be seen a modification is shown of the spring arm 38. In this form the gravity latch 52 is hinged to the upper end of the trough 29, the free end of the same is provided with a downwardly extending finger that intercepts and holds the coins in proper position as does the form shown in Fig. 5. This latch 52 is provided with a finger lift at its upper free end so that all that is necessary is to lift the same quickly. Either of these two forms may be used, but it is thought that by placing the spring latch beneath, as in Fig. 5, that the upper end of the trough 29, may as has already been suggested, be open for a suitable distance, so as to allow the operator to see the coins that may be in that part of the trough.

In the use of this machine as has already been stated, every convenience is provided for, such for instance as providing accessible places for the wrappers, (see Fig. 1) where pockets 46 and 47 are shown in the walls of the machine, and within which may be stored a suitable number of such wrappers 48, which have been made the desired length and diameter of the coin which it is designed to hold. The wrappers 48, are cut the desired size so that when pasted in a cylindrical shape, they will be the proper size to fit the diameter of the particular coin to be wrapped, and its length, as has been noted, such that it will permit of a predetermined number of coins being placed within the same, leaving enough material at their ends to properly fold or tuck the same. So as to store or house as many of these wrappers as possible, it has been found convenient to flatten them, thereby taking up with a quantity as little space as possible. Again by making these wrappers in this manner, the very least amount of paper is used, thus making a very economical wrapper, and effecting a very material saving in the cost of the same. These wrappers are printed, stating the quantity and denomination of the coins therein, again by having the notches 49 and 50 at either end, permits of the same being pushed down against the gage 32 and causing the angular projection 33 to fit and hold it in position, preventing it from turning. Here it may be said that the wrappers are flattened on the line of the notches, thus when such wrapper is placed over the coin retainer 34, the latter assists to not only hold that end open, but positions the coins with respect to the ends of the wrapper, so that the proper amount of material will remain at each end to properly tuck the same as shown in Fig. 9.

To the sides of the trough 29, is secured in any suitable way a finger 51, which when as has been stated, the wrapper has been placed in position (see Fig. 5) said finger 51 will spread the upper end of the wrapper open as is shown in said figure. The wrappers being made up and housed in this flat condition, it has been found necessary to provide this means for keeping the upper end of the wrapper open to receive the coin, otherwise it would be necessary to hold the finger on the same to accomplish the same result, therefore with these means provided, the wrappers will by reason of the projection extending into the notch, and the finger 51 holding the wrapper in the position to receive the coin, give the operator the free use of his other hand.

With my machine at the disposal of an operator a package of dimes may be placed in the magazine 12, and the counter 20, pulled out as shown in Fig. 5, the coins in the magazine having been extracted by each of the so formed cavities 52, 53, 54, 55 and 56 of the counter in its outward movement, said coins as they are forced from the ledge or rest 28, are discharged by the counter from the magazine, drop through one or the other of the openings 26 and 27 into the trough where they are arrested and held in proper position for further operation that will be explained farther on in the description. After the coin has been discharged from the cavity 56 through the opening 26 in the bed plate, it will be seen that it left the cavity 57 of said slot in alinement with the mouth of the magazine 12. On pressing the counter 20 in the opposite direction, the same operation takes place, only reverse from that just explained, for instance, the cavity 57 will discharge the first coin, cavity 56 the second, cavity 55 the third, cavity 54 the fourth and cavity 53 the fifth into the trough 29, where it will be seen that ten coins are arrested. And so on each and every time the counter is moved forward, five coins are discharged one after the other in rapid succession, and for each rearward movement, five more coins are discharged, thus should there be any variance in the count, the same would show immediately.

As shown in Fig. 5, a small weight 58 is made of any convenient size and shape for easy handling, and the same acts in a two fold capacity should the package be short one dime for instance, the weight 58 would fall into the cavity 52 or 57, of the slot 22, and prevent the further manipulation of the said counter until it was removed, thus showing the package of dimes was short. So also should there be a mistake the other way, by having one coin in excess of the amount, say five dollars, the single dime would remain in the magazine. Now having placed the coins in the magazine, and

having discharged them therefrom, and found them correct, a wrapper is taken from its compartment and placed in position as shown, its notched end fitting securely the angular projection 33, and the coin retainer acting to hold the same spread, (see Fig. 8) while the finger 51 holds the other end in proper position for the reception of the coins that have been counted. The operator then presses the key 44 which releases the coins from the upper end of the trough and they fall over as shown in Fig. 8, and dive into the open end of the wrapper. This action of the coins is caused by the angle of the trough. The coins by coming in contact with the retainer 34 causes them to straighten up, and assume the position shown in Fig. 9. The operator then throws back his latch 51, and with his thumb and fore finger, he extracts the coins and wrapper from the retainer at the same time causing the wrapper to make its first fold, then after tucking the remaining ends in, we have a package accurately, compactly, neatly securely as well as rapidly and economically wrapped, and from which said coins can be released should it be desired for any purpose whatsoever, without trouble and inconvenience as is now the case.

It will be apparent that the invention is susceptible of various modifications in its details and hence is not restricted to the exact construction here shown and described.

The machines of the art are of such a complicated nature that they cost too much to build, and again such machines having magazines for loose coins of all denominations is very seldom used, again machines as have slides provided with compartments for a single coin in them, have been found impractical, as a machine to be in active use must handle all thicknesses of coins, both those that are new, as well as those that are worn, in fact the thickness of the metal composing the counter, must be no thicker than the thinnest coin it is supposed to handle, otherwise it will be readily seen, that the metal projecting above a very thin coin, would engage the second coin and thus arrest the machine in its action, and furthermore the magazine containing the coins must only have sufficient outlet or clearance at its lower end to permit a perfectly new coin to pass freely thereunder.

What I claim as new is:—

1. In a counting and packaging machine, the combination of a magazine to hold coins, a longitudinally movable counter operating beneath such magazine, said counter provided with an elongated opening having projections within said opening which conform to the circumference of a coin, by means of which coins are transferred from the magazine to the trough by the movement of the counter in either direction, means for ar-

resting each coin as transferred and enmassing the bulk, means for releasing said mass of coins and a retaining device for catching and holding said coins enmassed when released.

2. In a counting and packaging machine, the combination of an upwardly extending magazine having elongated openings, a longitudinally movable counter operating beneath such magazine, said counter provided with an elongated opening having projections within said opening which conform to the circumference of a coin, by means of which coins are transferred from the magazine to the trough by the movement of the counter in either direction, means for arresting each coin as transferred and enmassing the bulk, a spring latch to release the mass of coins, and a retaining device for catching and holding said coins enmassed when released.

3. In a counting and packaging machine, the combination of an upwardly extending magazine, the lower end of which extends to the counter, a longitudinally movable counter having a series of cavities or apertures which intersect one another, said cavities or apertures being in alinement with the lower end of said magazine, whereby a predetermined number of coins may be transferred from the magazine one after another in succession at each movement of the counter, one or more fingers to arrest the coins so transferred, and means for releasing the mass of coins so arrested, and a retaining device to catch and hold said coins when so released.

4. In a counting and packaging machine, the combination of a magazine for the coin, the lower end of which extends close to the face of the counter, a longitudinally movable counter having a series of cavities or apertures forming an elongated slot, said cavities extending in the direction of the movement of the counter whereby a predetermined number of coins may be discharged by the movement of the counter in either direction, a suitable trough provided to catch coins discharged by either a forward or backward movement of the counter, fingers extending into said trough, means for depressing said fingers, said trough provided at its lower free end with a gage for the wrapper, and a coin retainer for placing the coin in proper position within the same.

5. In a counting and packaging machine the combination of a magazine for the coins, a counter having means for discharging coins on each stroke of the same, a base

formed with openings separated by a web which supports the coins whereby the coins as dislodged from said base by the counter are discharged through one or the other of such openings, a trough having a flaring upper end that incloses the said openings, the lower end of said trough having means to properly position a wrapper by means of the projection and the notch, means for securing a coin retainer in position so that the same will position the coins within such wrapper.

6. The combination of a magazine for the coin, a counter to discharge the same therefrom, a base or support beneath the counter and in line of the discharge end of the magazine, and provided with apertures and a web the latter affording a base for the coins, a trough having its upper end expanding so as to catch coins from either aperture and guide them down said trough, the lower end of said trough having means for retaining a cylindrical wrapper, a coin retaining device to catch and hold the coins in the same with respect to the ends, means intermediate the two ends of the trough to arrest and hold any predetermined number of coins before depositing them in such wrapper.

7. The combination of a magazine of the character described, a longitudinally movable counter to operate in connection with the same said counter having a series of apertures forming an elongated slot, means for holding the coins in position, a trough, means for holding a wrapper in position, and means interposed intermediate of both ends of such trough whereby any predetermined number of coins may be arrested, before depositing the same in said wrapper.

8. In a counting and packing machine, the combination with a coin magazine, of a sliding counter formed with a plurality of intersecting apertures forming an elongated slot, a base formed with openings for discharging coins, said openings being separated by a web serving as a support for the coins, a receiving trough, means for supporting a wrapper and means for arresting the coins within the trough.

In testimony whereof I hereunto sign my name in the presence of two subscribing witnesses.

AUGUSTUS ABBOTT.

Witnesses:

J. B. MCGIRR,
C. H. MERRITT.