

Nov. 30, 1943.

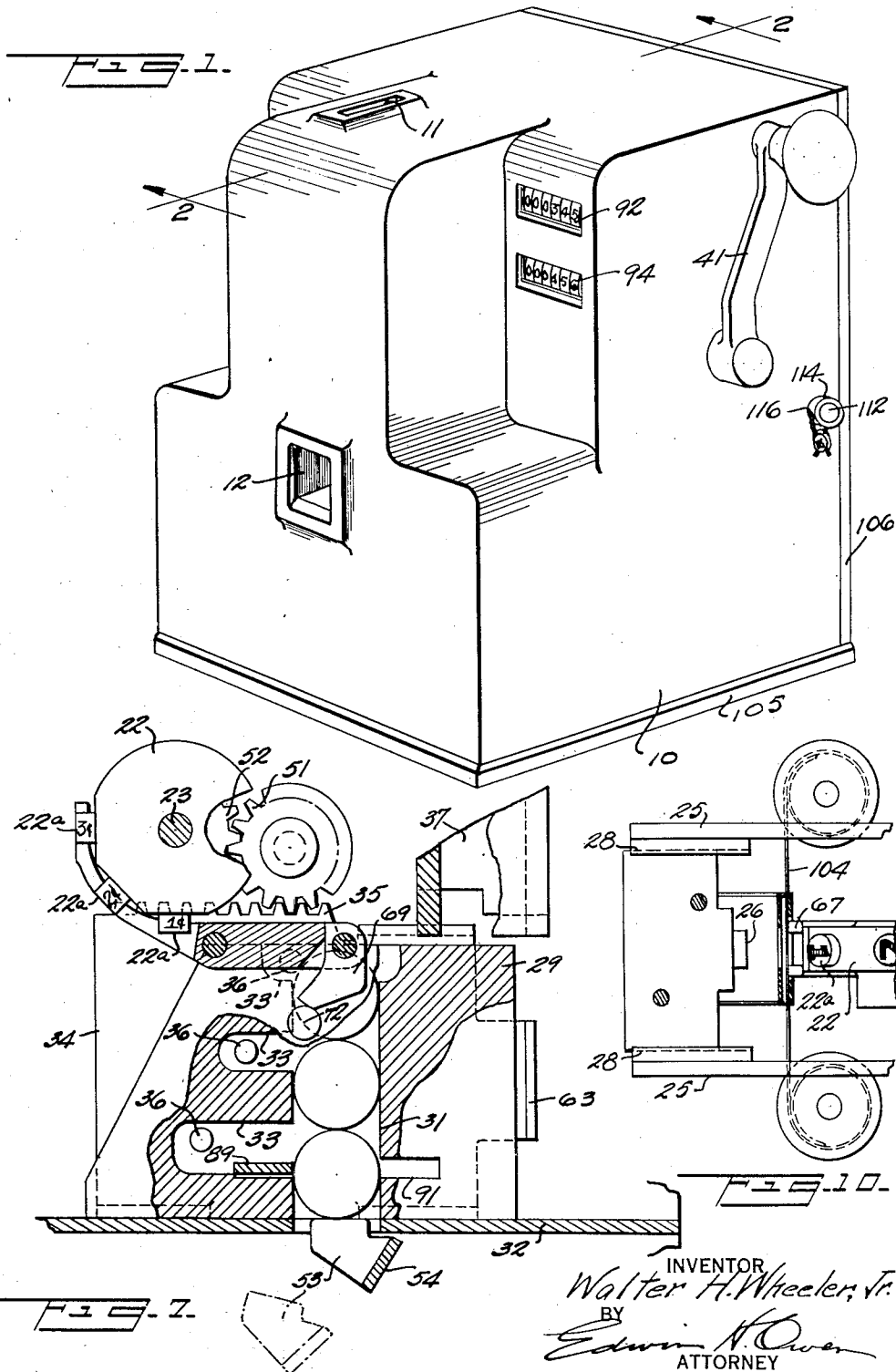
W. H. WHEELER, JR

2,335,718

VALUE STAMPING AND VENDING MACHINE

Filed March 19, 1942

5 Sheets-Sheet 1



Nov. 30, 1943.

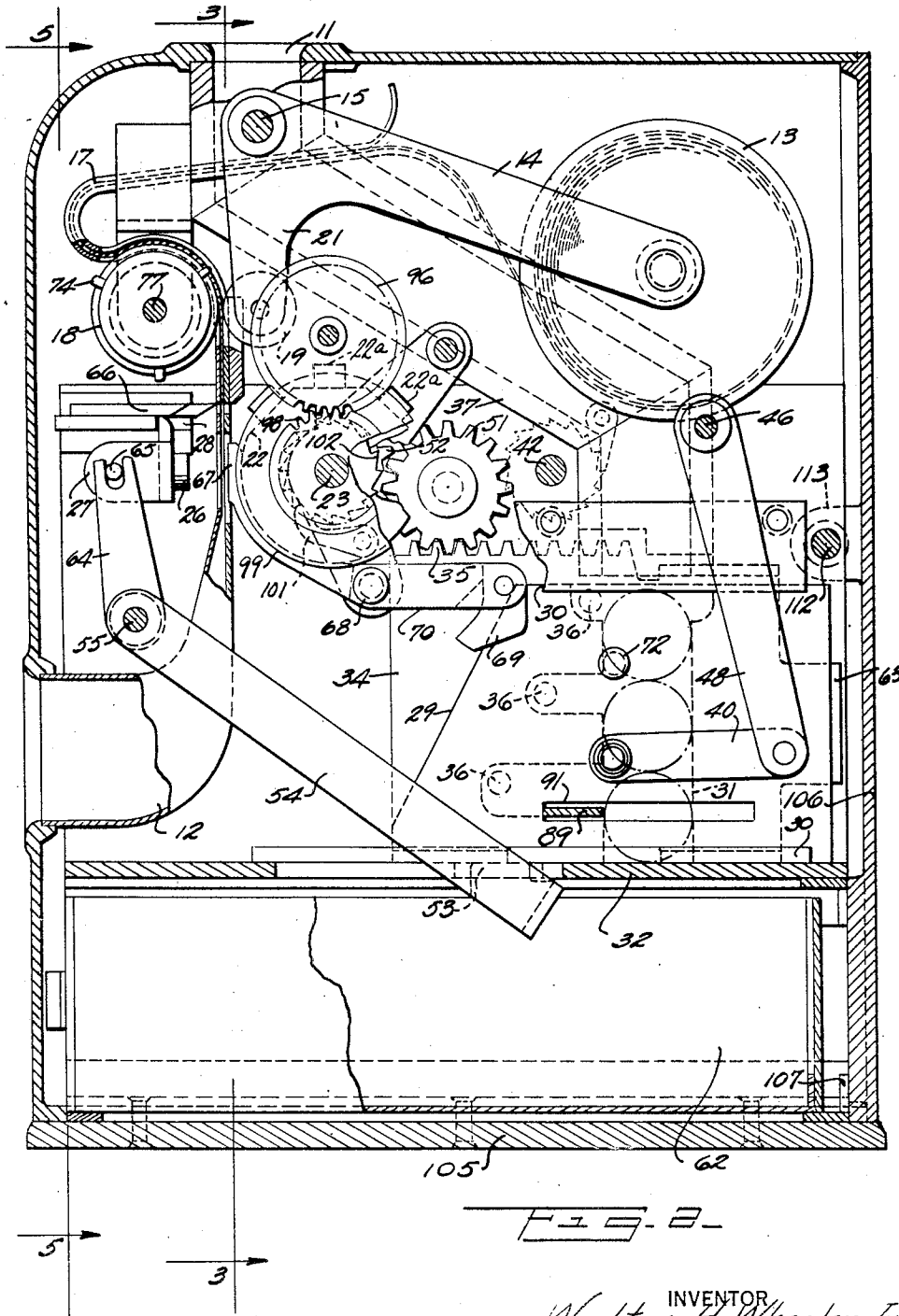
W. H. WHEELER, JR

2,335,718

VALUE STAMPING AND VENDING MACHINE

Filed March 19, 1942

5 Sheets-Sheet 2



INVENTOR
Walter H. Wheeler, Jr.
BY
Edwin H. Owen
ATTORNEY

Nov. 30, 1943.

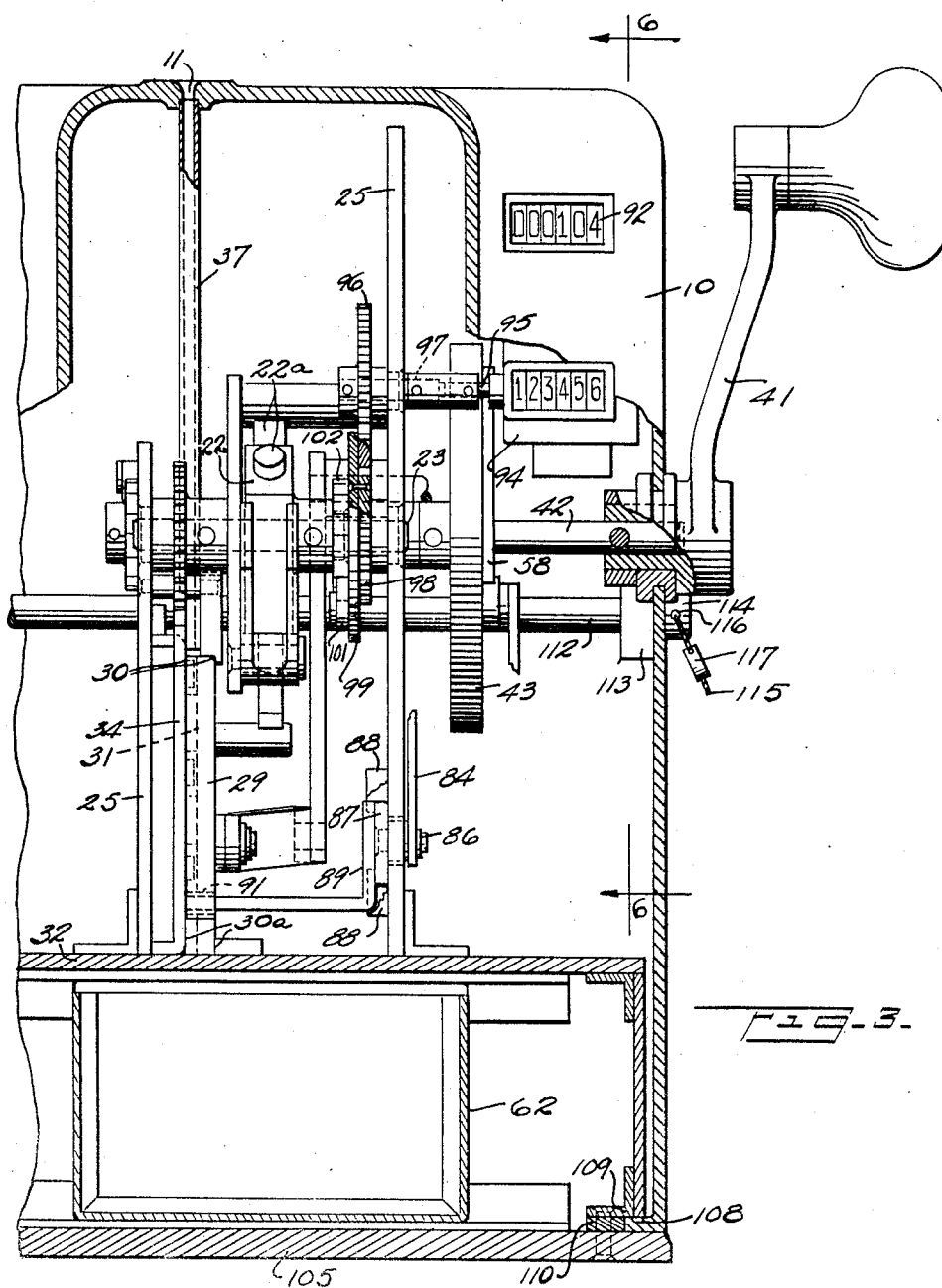
W. H. WHEELER, JR

2,335,718

VALUE STAMPING AND VENDING MACHINE

Filed March 19, 1942

5 Sheets-Sheet 3



INVENTOR
Walter H. Wheeler, Jr.
BY
Edwin H. Owen
ATTORNEY

Nov. 30, 1943.

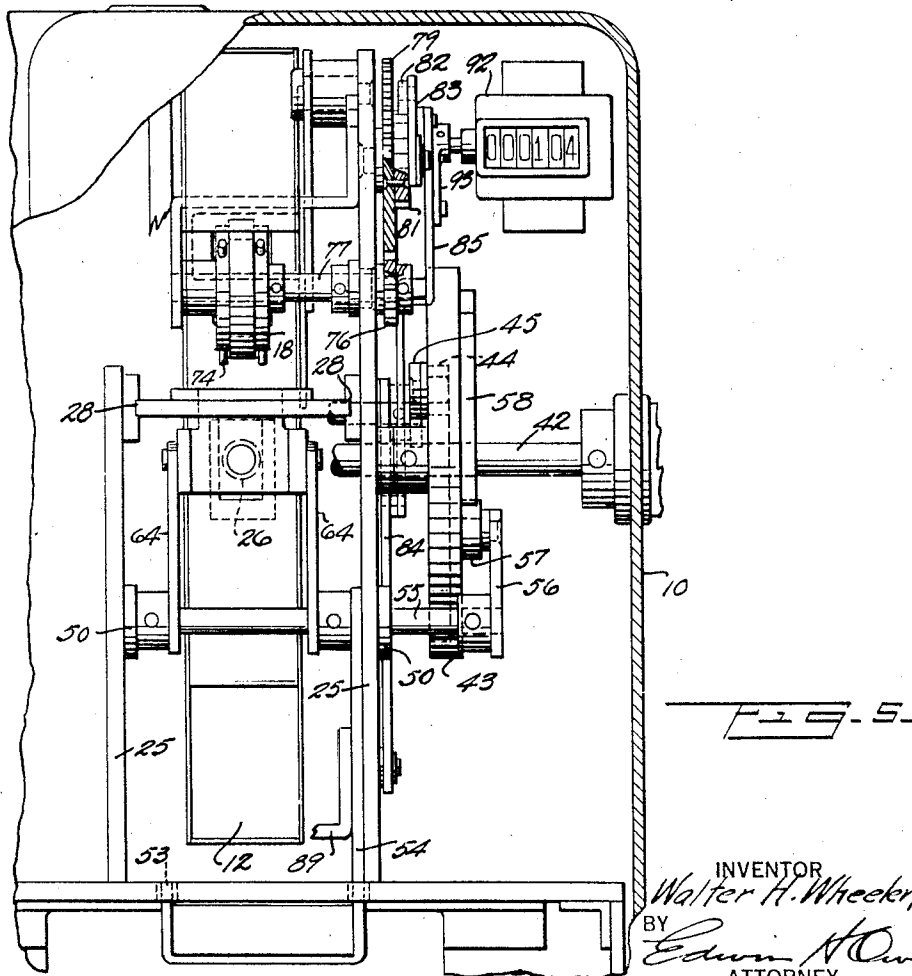
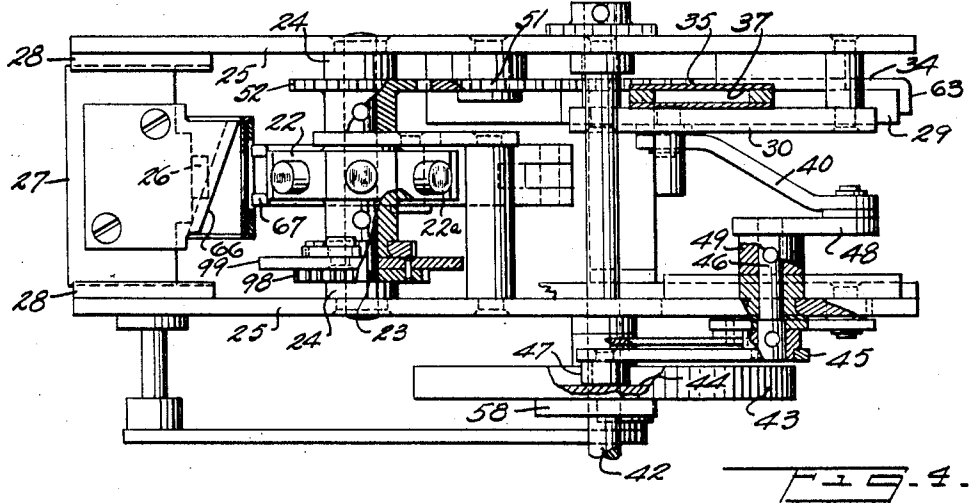
W. H. WHEELER, JR

2,335,718

VALUE STAMPING AND VENDING MACHINE

Filed March 19, 1942

5 Sheets-Sheet 4



INVENTOR

INVENTOR
Walter H. Wheeler, Jr.

BY

Edwin H. Owen
ATTORNEY

ATTORNEY

Nov. 30, 1943.

W. H. WHEELER, JR

2,335,718

VALUE STAMPING AND VENDING MACHINE

Filed March 19, 1942

5 Sheets-Sheet 5

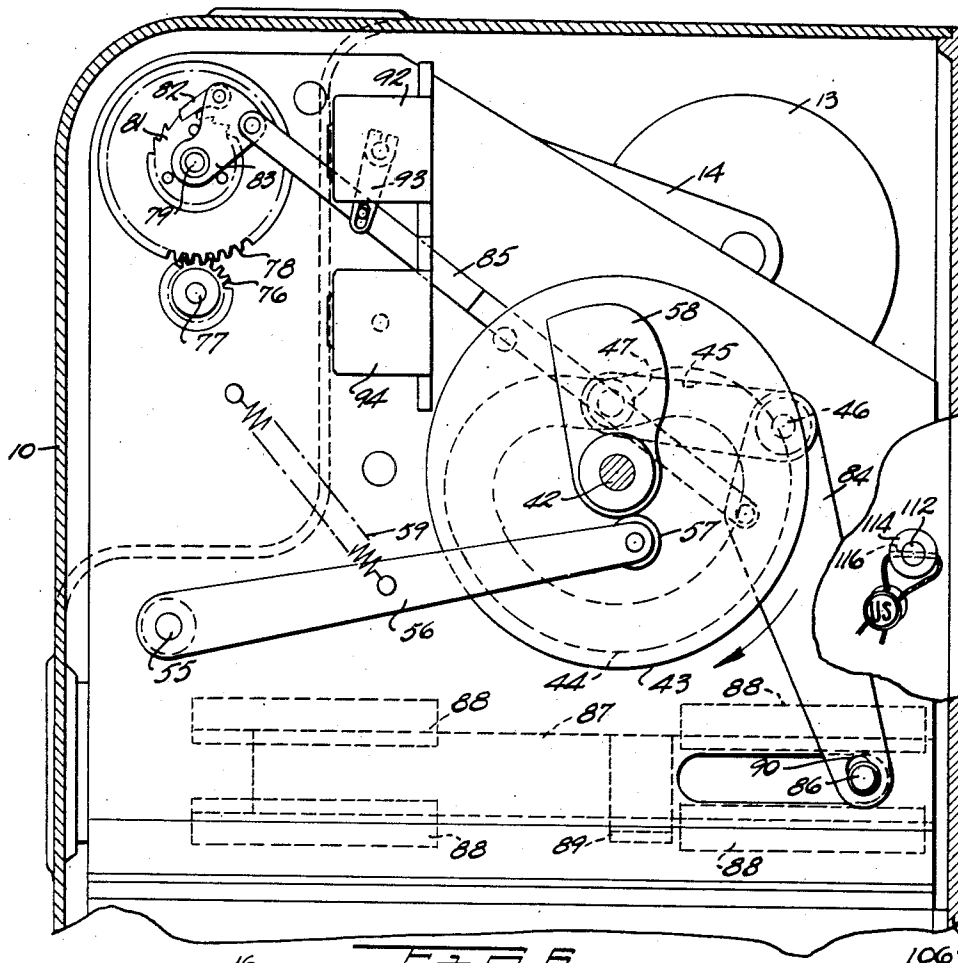


FIG. 6.

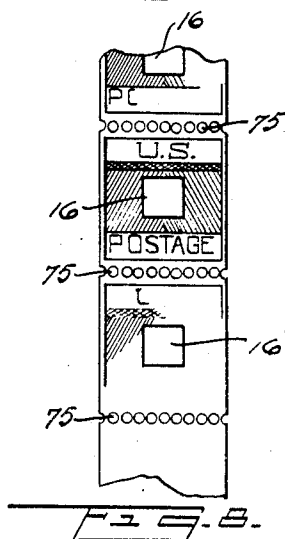


FIG. 7.

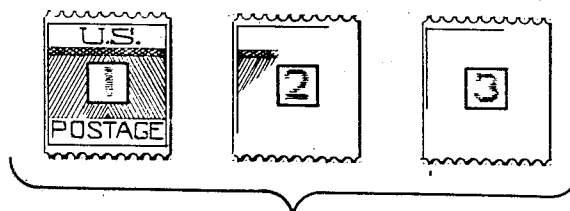


FIG. 8.

INVENTOR
Walter H. Wheeler, Jr.
BY
Edwin H. Owen
ATTORNEY

UNITED STATES PATENT OFFICE

2,335,718

VALUE STAMPING AND VENDING MACHINE

Walter H. Wheeler, Jr., Stamford, Conn., assignor to Pitney-Bowes Postage Meter Co., Stamford, Conn., a corporation of Delaware

Application March 19, 1942, Serial No. 435,273

3 Claims. (Cl. 194—79)

This invention relates to a coin operated value stamping and postage stamp vending machine.

In contrast with known types of coin operated postage stamp vending machines which vend the one, two and three cent varieties of postage stamps, and coin operated postage printing machines which print postage directly on letters inserted therein, the device of this invention provides for the stamping of a value amount upon government engraved stamps, said stamps normally having a blank space thereon for the reception of the value stamp.

A machine of the character of this invention has a considerable advantage over stamp vending machines now in common use in that a single roll of identical engraved stamps is used, whereas, several rolls of stamps of differing values are required in stamp vending machines. Another advantage is that it is possible to receive a stamp of any desired denomination, within the range of the denominations provided, so long as there is at least one stamp remaining in the machine. In the common types of postage stamp vending machines, one or more denominations may have been exhausted before it was found convenient to reload the machine, thus limiting the machine to a choice of stamps which may not have been desired by a customer.

It is the principal object of this invention, therefore, to provide in a coin operated machine, a roll of government engraved postage stamps, each stamp having a blank space thereon, and to further provide means for stamping a value within said blank space in accordance with the value of the coins inserted in the machine.

It is another object to provide in a coin operated postage stamp vending machine, means whereby postage stamps of varying values may be received from a single roll of government engraved stamps.

It is another object to provide in a value stamping machine, means whereby feeding of stamps is controlled to provide accurate registration of a value stamping die within a blank space of an engraved stamp.

With the above and other objects in view, which will appear as the description proceeds, the invention resides in the combination and arrangement of parts and in the details of construction hereinafter described and claimed, it being understood that various changes in the precise embodiment of the invention herein disclosed may be made within the scope of what is claimed without departing from the spirit of the invention.

A preferred embodiment of the invention is illustrated in the accompanying drawings, wherein:

Fig. 1 is a general perspective view of the machine, enclosed within a casing;

Fig. 2 is a part sectional and part elevational view looking inside the right side wall of the machine at a position substantially along the line 2—2 of Fig. 1;

Fig. 3 is a partial front view with part shown in section, taken along the line 3—3 of Fig. 2;

Fig. 4 is a plan view of a portion of the operating mechanism with part in section;

Fig. 5 is a partial front view with part in section, taken along the line 5—5 of Fig. 2;

Fig. 6 is a side elevation with part in section, taken along the line 6—6 of Fig. 3;

Fig. 7 is a detail view of the coin controlling mechanism with parts shown in section and further showing the operation of the value setting of the stamping die;

Fig. 8 is a detail view showing a portion of a strip of stamps, indicating the government engraving thereon and the blank portion which is provided for receiving the value impression;

Fig. 9 illustrates three separate stamps, each of which has a value stamped thereon; and

Fig. 10 is a detail view showing the provision of an inking means for the value dies to effect printing of the values of the stamps.

Referring to the drawings in detail, the machine is enclosed within a casing 10 and has a coin slot 11 provided at the top and a stamp delivery receptacle 12 at the front thereof.

A roll of stamps 13 is mounted upon a support 14, which support is adapted to pivot about a pin 15. The stamps are government engraved, but instead of having a value printed thereon, there is included at some convenient location, as for instance the center of the stamp, a blank space, as indicated at 16, Fig. 8. Said stamps are guided from the roll 13 through a guide 17 past a stamp feed roll 18, and to the stamp delivery receptacle 12. A pressure roller 19 carried by an arm 21 on the support 14, is urged toward the stamp feed roll 18 to thereby cooperate with the feed roll 18 in the feeding of stamps to a value stamping position.

A value stamping die member 22 is supported upon a shaft 23, which shaft is rotatably mounted in bearings 24—24, carried by a frame structure comprising walls 25—25. A plurality of value stamping dies 22a project from the die member 22 and are adapted to be adjusted to a stamping position directly opposite the blank space 16 of

a stamp. An impression member 26 is supported on a slidable block 27, and is adapted to be moved into engagement with the stamp to force the stamp against the stamping die, and thereby impress the die value within the blank portion 16 of the stamp. The block 27 is suitably guided within ways 28—28 carried by the frame 25. In the machine disclosed in the drawings, the several stamping dies represent the values of 1¢, 2¢ and 3¢, but further values may be included as desired.

By means of a coin controlled device one, two or three 1¢ coins are adapted to be used as interponents and cooperate with other mechanism during any one cycle to effect the adjustment of the stamping die which agrees with the value of the coins for the subsequent stamping of the value impression on the stamp. Said coin controlling device comprises a carriage 29, Fig. 7, which has a vertical slot 31 therein, and is suitably guided along its upper edges 30 and lower edges 30a, as best shown in Fig. 3, to move along a floor 32. Slots 33 extend sidewardly from the vertical coin slot 31.

Adjacent the coin carriage 29, is a slidable plate 34, which is suitably guided and is provided with rack teeth 35 along the upper edge thereof. Pins 36 project from one surface of the plate 34 in a staggered vertical relation and extend into the slots 33 in the coin carriage 29, as shown in Fig. 7.

Coins, when inserted in the coin slot 11, are guided through a coin chute 37, Fig. 2, which terminates directly over the vertical coin slot 31 in the carriage 29. One, two or three coins may be inserted into the coin slot 11 for the stamping of a one cent, two cent, or three cent value impression respectively. As shown in Fig. 7, three coins have entered the coin slot 31, which, during a cycle of operation, will be adapted to effect the adjustment of the three-cent stamping die 22a to a stamping position.

Horizontal reciprocation is provided for the carriage 29 during a cycle of operation, and is effected through the rotation of a manually operated crank 41, Figs. 1 and 3. Said crank 41 is fixed to a shaft 42, which shaft is supported by the walls 25—25. Fixed to said shaft 42 is a cam 43, having a cam slot 44 within one face thereof. A lever 45, Fig. 6, has one end fixed to a short shaft 46, Fig. 4, mounted in a bearing 49 in one wall of the supporting structure 25, and has a roller 47 mounted at the outer end thereof, which roller is adapted to ride within the cam slot 44. Also fixed to the shaft 46 is a lever 48, Figs. 2 and 4, which is connected with the coin carriage 29 by means of a connecting link 40. During a full revolution of the cam 43, the lever 45 will be rocked, which in turn will rock the shaft 46 and lever 48, to effect reciprocation of the coin carriage 29 through the connecting link 40. During such reciprocation of the carriage 29, the coins therein will be moved sideward to the left, as viewed from Fig. 7, and the uppermost pin 36 will be engaged by the uppermost coin to move the slide plate 34 and rack 35 a predetermined distance.

As shown in Fig. 7, three coins are in an operating position within the coin slot 31, with the uppermost coin engaging pin 36 and having moved the plate 34 to rotate the value die member 22 to the three-cent stamping position. Such rotation is effected through the drive of a gear 51 by means of the rack 35, which gear meshes with an associated gear 52 on the shaft 23, which sup-

ports the stamping die member 22. It will be seen therefore, that when there are three coins present, the uppermost pin 36 will be immediately engaged by the uppermost coin, and the rack 35 will be moved a distance sufficient to rotate the value stamping member 22 to place the three-cent die in the stamping position shown in Fig. 7. When there is only one coin present, the coin carriage 29 moves a greater distance before the coin engages and moves the lowermost pin 36. The shorter movement of the rack 35 provides sufficient rotation of the value stamping member 22 to move the one cent stamping die to a stamping position. In a like manner, when two coins are present, the uppermost coin will engage the intermediate pin 36 and move the rack and stamping members a sufficient distance to place the two-cent stamping die in a stamping position.

Upon reaching the end of the forward stroke, the coins in the coin carriage will rest upon a lug 53, formed at the end of a lever 54, which lever is fixed to a shaft 55. See Figs. 2, 5 and 7. Said shaft 55 is supported in suitable bearings 50—50 carried by the walls 25—25 of the supporting structure, and has a lever 56 fixed to one end thereof, as shown in Figs. 5 and 6. A roller 57, mounted at the end of the lever 56 is urged into engagement with a cam member 58 by a spring 59. The cam member 58 is fixed to the shaft 42 and is rotated therewith by means of the crank 41.

When the coin carriage 29 has moved to the limit of its forward stroke, the stamping member 22 will have been properly set in its stamping position, and the coins, which up to this time had been acting as interponents, will have completed their part in the operation of the device and are in position to be released for deposit in a coin box 62, beneath the floor portion 32. The release of the coins is effected by the engagement of the cam portion of the cam member 58 with the roller 57, whereby the lever 56, shaft 55 and lever 54 are rocked to withdraw the lug 53 from the path of the coins. The coins are then free to drop by gravity into a coin box 62.

After the release of the coins, the carriage 29 is returned by the link and lever connections 40 and 48 respectively, and the rack 35 is returned therewith, when the right edge of the coin carriage 29, as viewed from Fig. 7, engages with a flanged end 63 on the slide plate 34. The stamping dies are restored to a neutral position during the return movement of the slide plate 34.

When the shaft 55 is rocked by means of lever 56 through cam 58, a lever 64, which is fixed to the shaft 55, is also rocked therewith. Said lever 64 has a forked end in engagement with a pin 65, which projects sidewardly from the impression member supporting block 27 and will be rocked to force the impression member 26 against the stamping die to effect the stamping of the value impression on the blank surface of the stamp. Also, during the forward movement of the impression member 26, a knife 66 which is supported on the block 27, is moved therewith to effect the severing of a stamp.

In order to insure the release of the stamp from the stamping die before the die is returned to neutral position, a stripper member 67, Fig. 2, is adapted to be rocked against the inner surface of stamp. Said stripper member 67 is positioned at one end of a lever 70, which lever is pivotally mounted at 68 and has a lug 69 pivotally depend-

ing from the opposite end thereof. A pin 72, projecting sidewardly from the coin carriage 29, is adapted to ride past the end of the pivotal lug 69 during the forward stroke of the carriage 29, but on the return stroke said pin 72 will engage the end of the lug, which lug is adapted to become blocked, in the manner shown in Fig. 7, to effect rocking of the lever 79 about the pivot 68. On the return stroke of the coin carriage 29, therefore, the pin 72 will effect the rocking of the stripper member 67 and the release of the stamp from the stamping die, whereupon said stamp will fall into the receptacle 12.

Tape feeding is controlled to provide accurate registration of the stamping in the blank space 16 and is effected during the forward motion of the coin carriage 29. Feeding is further controlled by means of the lowermost coin in the coin slot. The feeding means comprises pins 74, projecting from the roller 18, which are adapted to engage perforations 75 in the stamp strip. As best shown in Figs. 5 and 6, a pinion 76 is fixed to a shaft 77, which supports the stamp feed roll 18. Meshing with said pinion 77 is a gear 78, carried by shaft 79, which shaft is supported in one wall 25 of the frame structure. A ratchet wheel 81 is fixed to said gear 78 and is adapted to be driven by means of a pawl 82 supported upon a rocker arm 83. Said arm 83 is freely mounted upon the shaft 79 and is linked to a lever 84 by means of a link 85. The lever 84 is pivotally supported on shaft 46 and the free end thereof has a slot 90 which is engaged by a pin 86, Figs. 3 and 6, projecting sidewardly from a slide 87, which slide is suitably mounted in ways 88. Fixed to said slide 87 is a strap 89, which is bent laterally to permit the end thereof to pass through a slot 91 in the coin carriage and is disposed directly in the path of the lowermost coin.

Upon operating the machine, the coin carriage 29 is moved in a manner previously described, the lowermost coin moving therewith and engaging the strap 89. The strap 89 and slide 87 are thus moved, which in turn effects a rocking of the lever 84, Fig. 6, and through link 85, effects the rocking of the arm 83 and pawl 82, and the partial rotation of the ratchet wheel 81. The gear 78 and pinion 76 are thus rotated, which in turn effect the rotation of the stamp feed roll 18 and the feed of the tape. It will be seen that the feed of the tape is effected during the period of the setting of the stamping die member 22. By means of this arrangement, there can be no printing of a stamp unless a coin has been inserted in the machine.

An operations counter 92 is provided, which counter is connected with the link 85 by means of a lever 93. Upon each forward movement of the link 85, during a tape feeding operation, the lever 93 is rocked to effect a count of one operation on said operations counter 92.

A value counter 94, Fig. 3, is also provided, which counter has a shaft 95 projecting therefrom coupled with a shaft 97 projecting from a gear 96. Meshing with said gear 96 is a gear 98, on shaft 23. Said pinion 98 has a disc 99 fixed thereto, which disc is adapted to support a pawl 101, as shown in Fig. 2. A ratchet wheel 102 rotates with the shaft 23 and the stamping member 22, and the pawl 101, which is normally in engagement therewith, will effect rotation of the disc 99, pinion 98 and gear 96, to consequently rotate the shaft 95 and set the stamp value in the value counter 94.

In the above description, the value die member 22 is referred to as a stamping member, but it is to be understood that the same may function either as a printing unit or an embossing unit.

When used as a printing unit, suitable inking means, such as shown in Fig. 10, is provided. As here shown, a ribbon inking means is provided at 104, which is adapted to cooperate with the value die member 22 in printing the values in the blank spaces of the engraved stamps.

Provision is made to prevent access to any portion of the machine inside the casing 10, except by an authorized person. This is accomplished by providing a preferably cast base 105 and back plate 106, the two being either cast integral, or being separate members and secured by riveting same to an angle member 107, as shown in Fig. 2. The casing 10 is provided with an inwardly disposed flange 108, and the case is provided with gibs 109, overhanging a strap 110 to provide ways for the said side flanges 108, as best shown in Fig. 3. A rod 112, headed at one end, is adapted to be inserted through suitable openings in the casing and through supporting lugs 113, projecting inwardly from the rear wall 106, the leading end finally projecting through a boss 114, as shown in Fig. 1. A wire 115 is then passed through openings 116 in the boss and rod, and sealed with a lead seal 117. This completely encloses and seals the machine to prevent tampering, and, when opened by an authorized person, permits free access to the mechanism when the cover is removed. The coin box 62 is accessible for removal and the stamp roll 13 is accessible for loading when the casing is removed.

Having described the invention, what is claimed is:

1. A coin operated value stamping and postage stamp vending machine in combination; means to support a roll of government engraved postage stamps, each stamp having a blank value stamping space thereon; stamping means including adjustable value stamping dies and impression means, whereby a value is adapted to be stamped in the blank portion of a stamp; stamp feeding means; coin controlled devices including means actuated thereby for selecting a value die which agrees with the value of the coins received by said devices; and a drive connected with the coin controlled devices, stamp feeding and stamping means, to effect value die setting, stamp feeding and stamping operations respectively; whereby postage stamps of varying values may be received from a single roll of stamps.

2. A coin operated value stamping and postage stamp vending machine in combination, means to support a roll of government engraved postage stamps, each stamp having a blank value stamping space thereon, an adjustable printing member having a plurality of varying valued printing dies thereon, impression means, a drive, coin controlled means including a coin receiver connected with the printing member and drive, whereby, upon actuation of the drive the printing member will be adjusted to select a value agreeing with the value of the coins in the receiver, and means controlled by the drive to effect printing of the selected value in a centrally disposed position within the blank space of the postage stamp, whereby postage stamps of varying values may be received from a single roll of stamps.

3. A coin operated value stamping and postage stamp vending machine in combination, means

to support a roll of government engraved postage stamps, each stamp having a blank value stamping space thereon, a rotatable printing member having a plurality of value printing dies thereon, impression means, a drive, coin controlled means including a coin receiver connected with the rotatable printing member and drive, whereby, upon actuation of the drive the printing member

will be adjusted to select a value agreeing with the value of the coins in the receiver, and means controlled by the drive to effect printing of the selected value in a centrally disposed position within the blank space of a postage stamp, whereby postage stamps of varying values may be received from a single roll of stamps.

WALTER H. WHEELER, JR.