April 6, 1943. L. A. THATCHER 2,315,828

COIN OPERATED MAILING MACHINE

Filed March 25, 1939 6 Sheets-Sheet 1

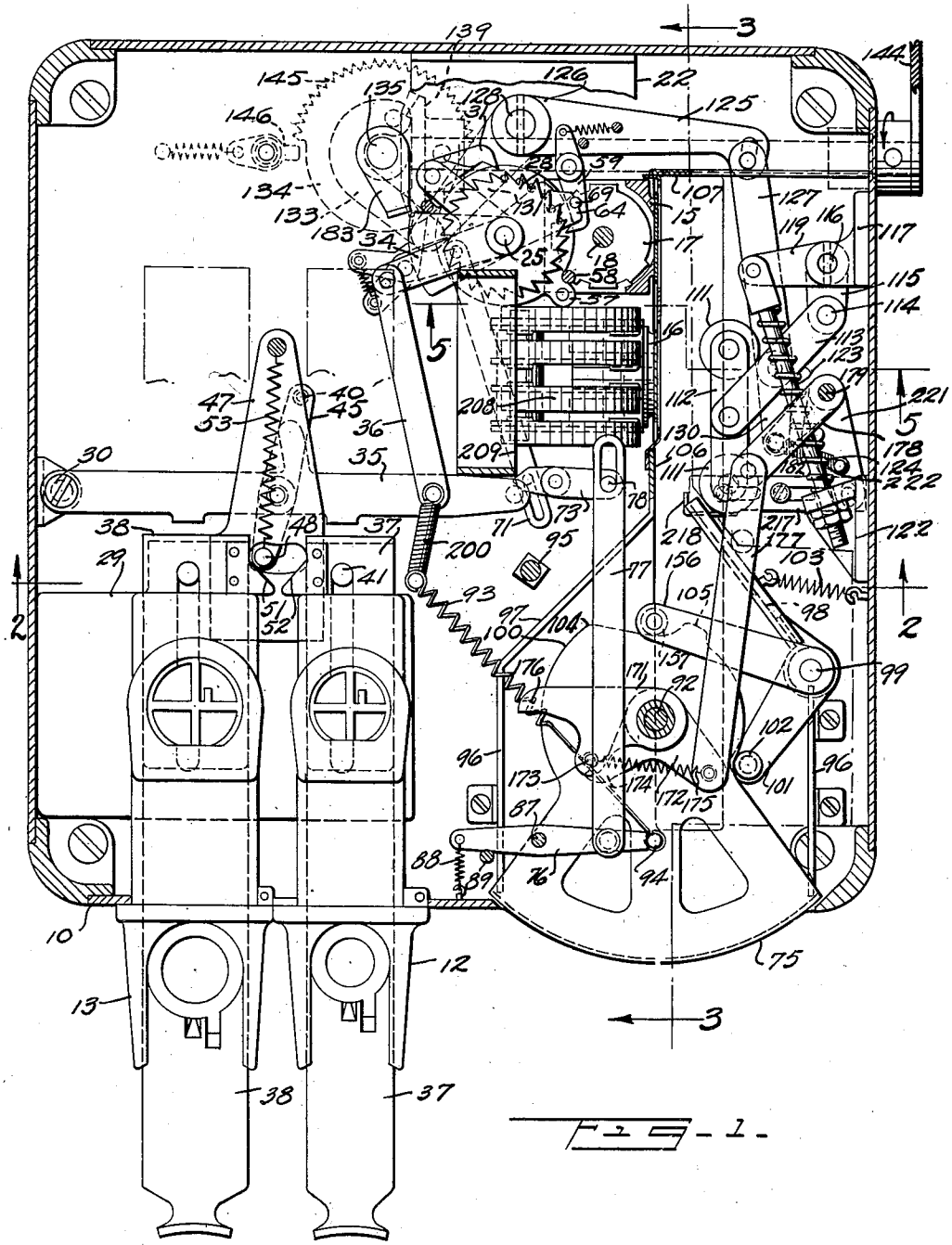


FIG. 1.

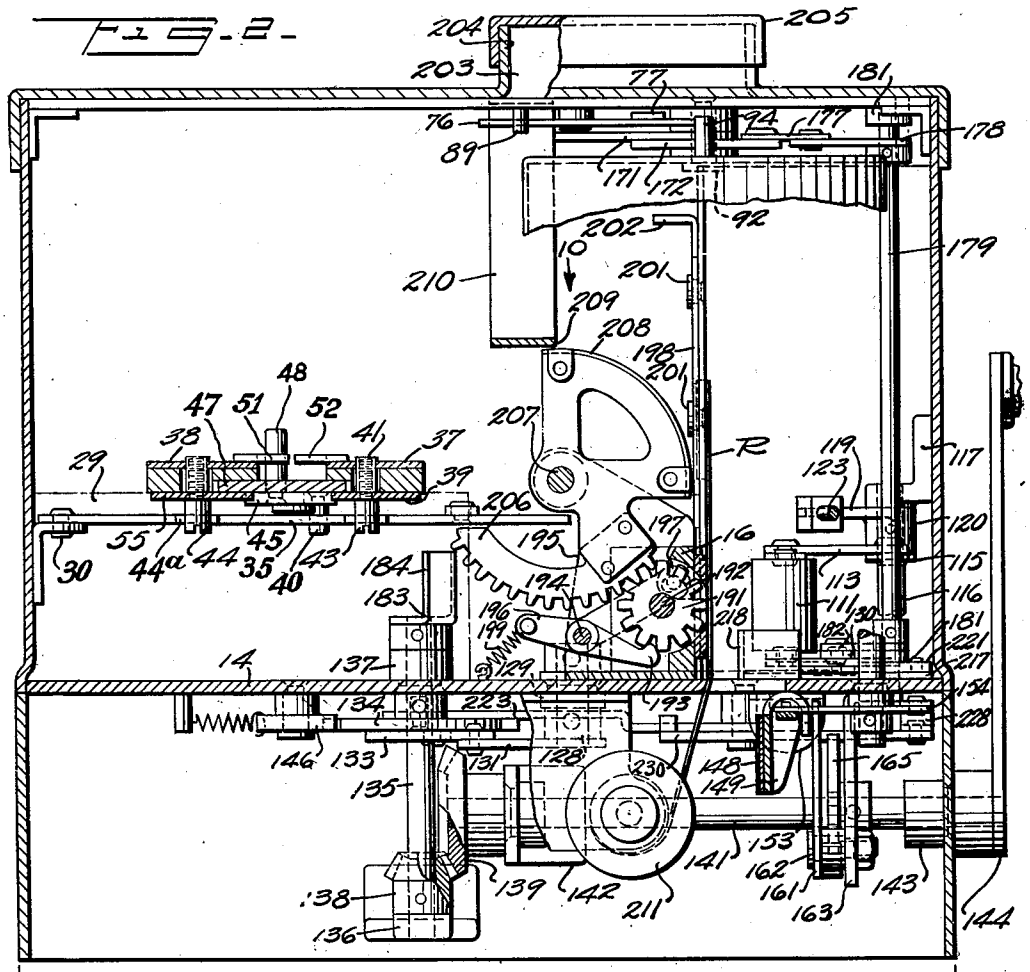
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COIN OPERATED MAILING MACHINE

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FIG. 2.



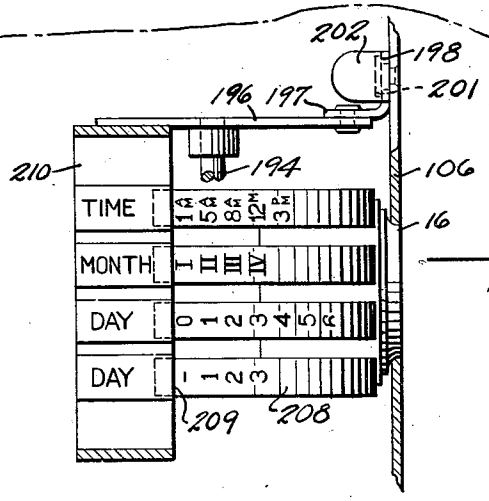


FIG. 10.

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COIN OPERATED MAILING MACHINE

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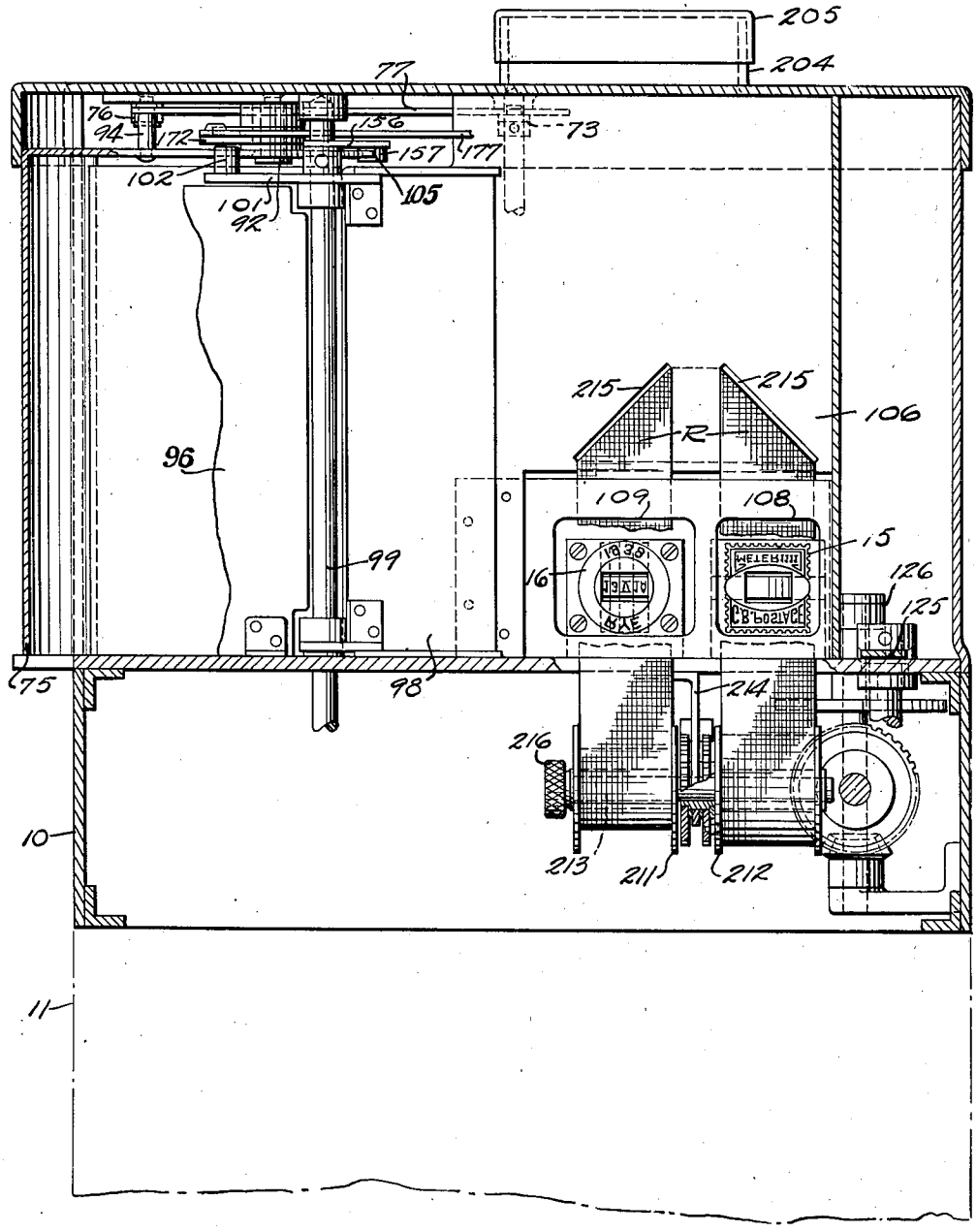


FIG. 3.

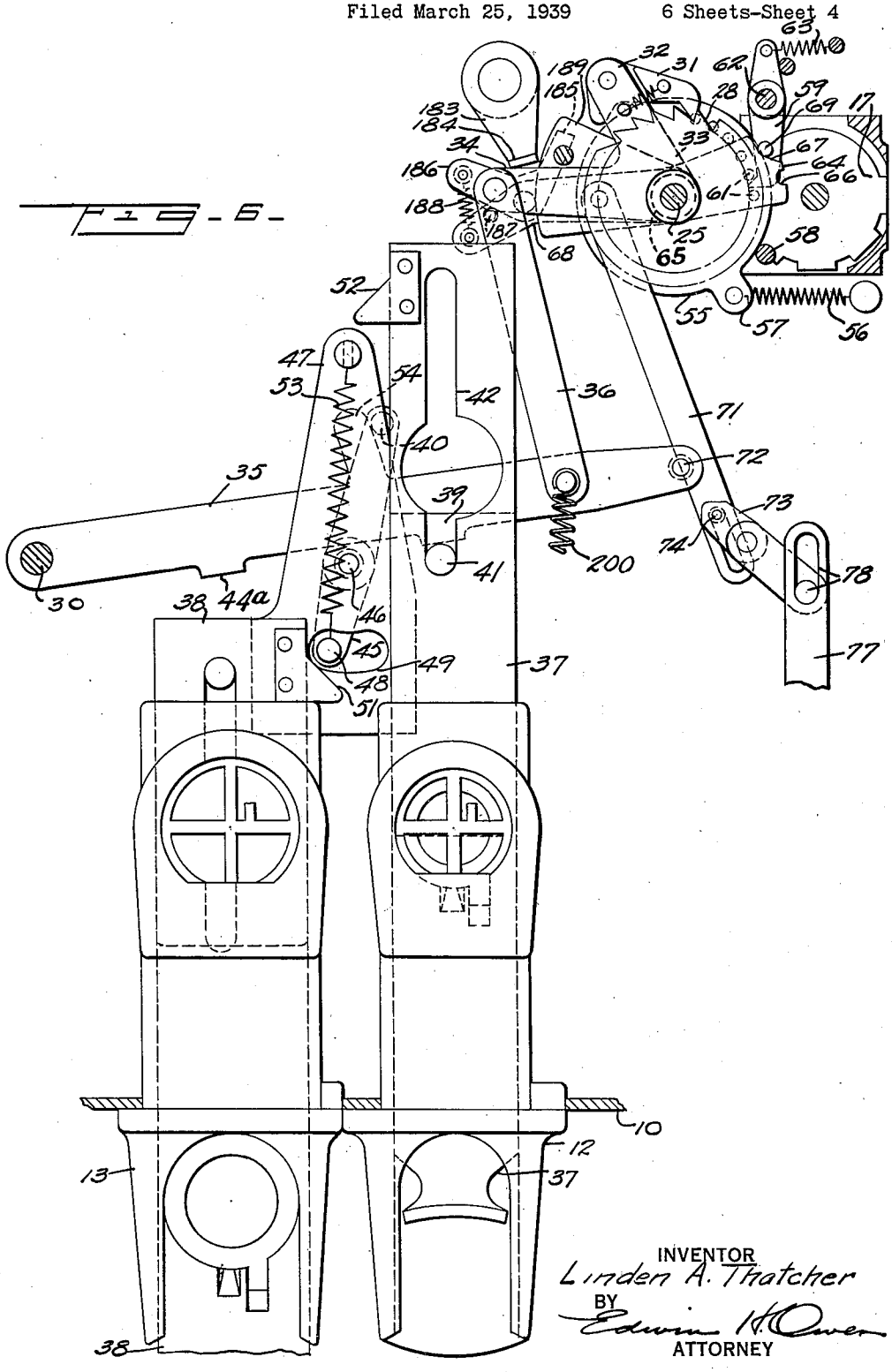
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COIN OPERATED MAILING MACHINE

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FIG. 6.



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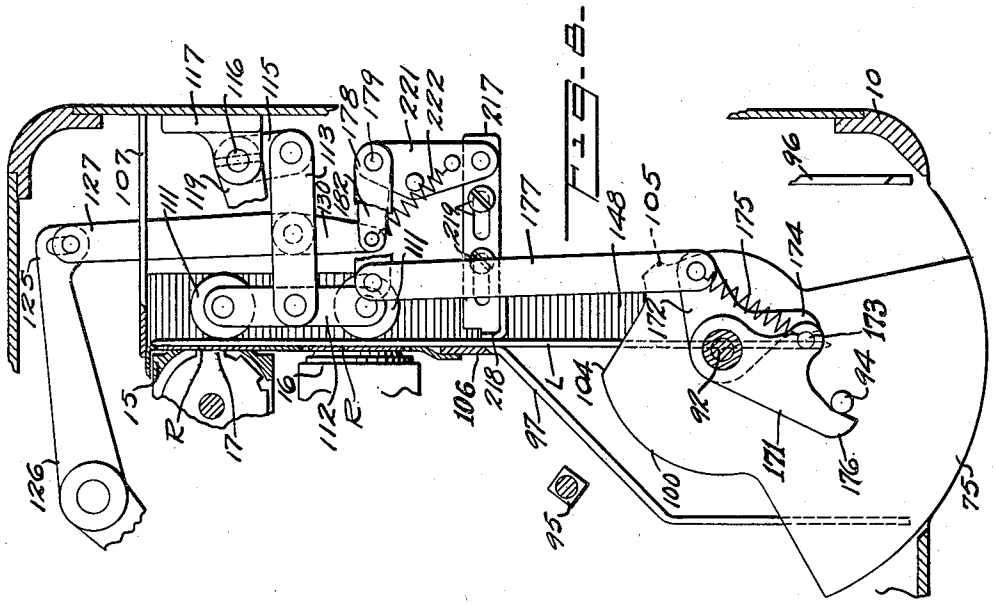


Fig. 8.

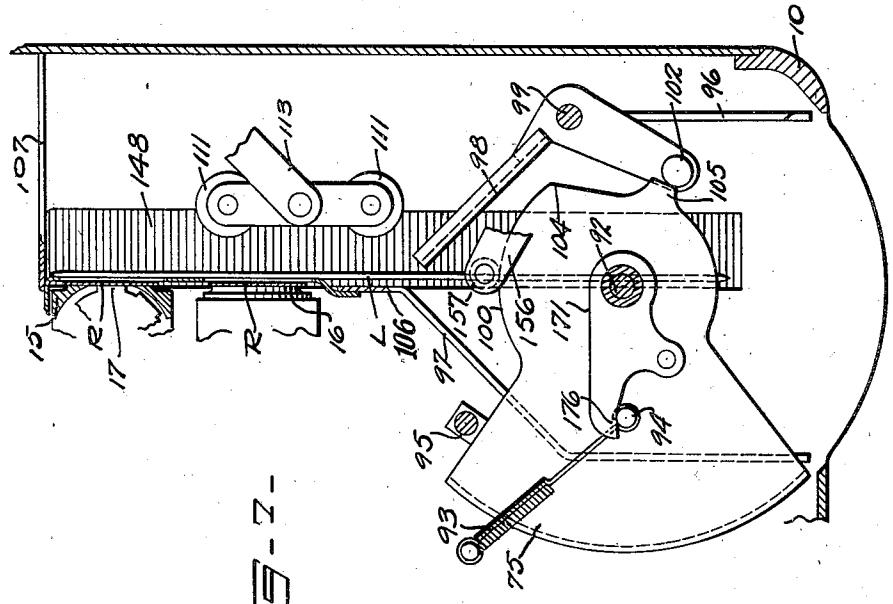


Fig. 7.

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COIN OPERATED MAILING MACHINE

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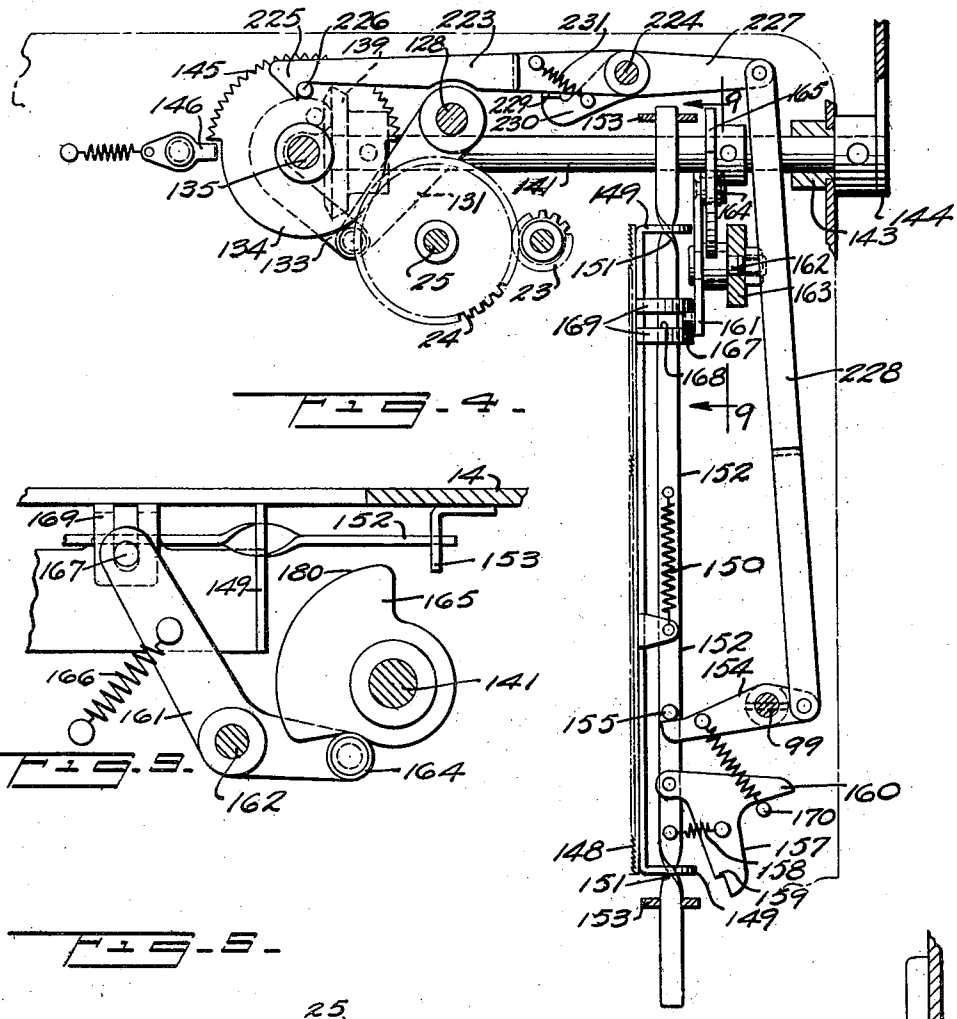
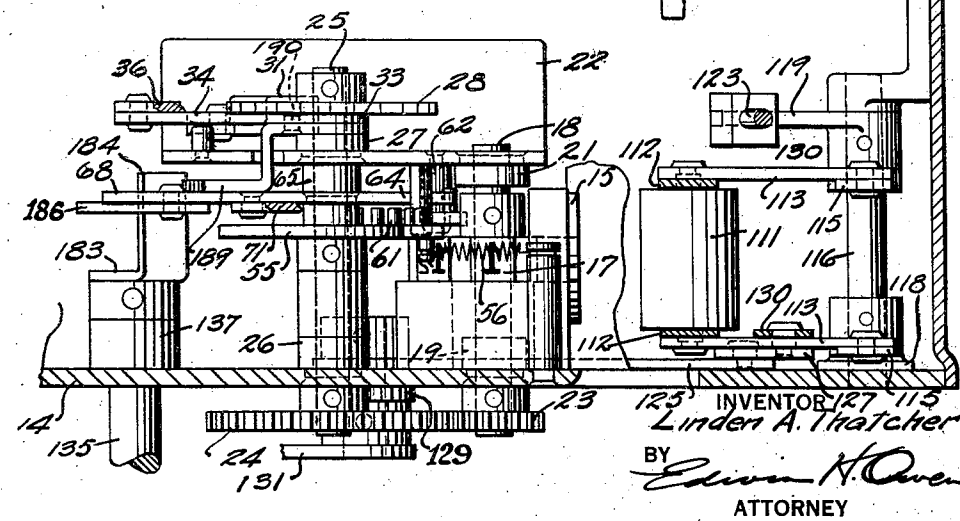


FIG. 4.

FIG. 3.

FIG. 5.



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Patented Apr. 6, 1943

2,315,828

UNITED STATES PATENT OFFICE

2,315,828

COIN OPERATED MAILING MACHINE

Linden A. Thatcher, Stamford, Conn., assignor to Pitney-Bowes Postage Meter Company, Stamford, Conn., a corporation of Delaware

Application March 25, 1939, Serial No. 264,055

2 Claims. (Cl. 101—273)

This invention relates to a coin operated machine for the printing of postage upon letters.

One object of the invention is to provide a novel form of printing device wherein the printing dies are fixedly positioned and wherein an impression is obtained by rolling a roller platen device across the back of a letter while the letter is positioned with the front face thereof opposite the type surfaces.

Another object of the invention is to provide a coin slide control means which through its sliding stroke is adapted to adjust a value printing die to a printing position in accordance with the value of the coin or coins inserted in one or more coin slides.

Another object of the invention is to provide adjustable date wheels for the postmark die and means to adjust said type wheels which are adapted to be conveniently manipulated from a position accessible through an opening in the casing of the machine.

Another object of the invention is to provide means whereby the letter is automatically moved to the proper printing relation with the printing dies before printing is effected.

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 plan view of the mechanism looking inside the upper cover of the casing with said casing in section;

Fig. 2 is a vertical sectional view taken substantially along the lines 2—2 of Fig. 1;

Fig. 3 is a vertical sectional view taken substantially along the lines 3—3 of Fig. 1;

Fig. 4 is a fragmentary detail view showing a plan view of the portion of the mechanism positioned beneath the floor of the machine;

Fig. 5 is a fragmentary detail sectional view on an enlarged scale taken along the line 5—5 of Fig. 1;

Fig. 6 is an enlarged detailed operation view showing the setting of the value printing member by means of one of the coin slides;

Fig. 7 is a fragmentary plan operational view showing the position of certain parts after the letter door has opened and showing a letter in position for printing;

Fig. 8 is a view similar to Fig. 7 showing the position of parts indicated in Fig. 7 during a printing operation;

Fig. 9 is a fragmentary sectional detail view taken along the lines 9—9 of Fig. 4; and

Fig. 10 is an enlarged plan view of the dater setting members looking in the direction of the arrow 10, Fig. 2.

Referring now to the drawings in detail, a casing 10 is arranged to entirely enclose the machine and is adapted to rest upon a suitable receptacle 11, into which the letters are adapted to be automatically deposited after printing. Coin slides 12 and 13, which may be of any conventional or commercial type, are mounted within the front wall of the casing 10 and are adapted to be manipulated from a position outside of the casing when a coin is placed therein. A floor 14, fixed within the casing structure at a position above the base thereof, has rigidly secured thereto an indicia printing die 15 and a postmark die 16. A value type wheel 17 is rotatably mounted within the indicia die 15, said type wheel being fixed to a shaft 18 suitably supported in bearings 19 and 21, Fig. 5, fixed within the floor 14 and a bracket 22 respectively. At the lower end of the shaft 18 is a pinion 23 which meshes with a gear 24 fixed to the lower end of a shaft 25. Shaft 25 is also carried in suitable bearings 26 and 27, secured within the floor 14 and bracket 22 respectively. A ratchet wheel 28 is fixed to the upper end of said shaft 25. Rotation of said ratchet wheel 28 will therefore effect rotation and setting of the value type wheels 17.

Coin controlled value type setting

It will now be shown how the drive of said ratchet wheel 28 and the setting of the value type wheel are effected by means of the coin slides when one of said slides is pushed inward to deposit a coin, which had been previously inserted therein, into a suitable coin receptacle 29 positioned within the machine casing.

A pawl 31 is pivotally mounted upon one arm 32 of a bellcrank lever 33, which is rotatably mounted upon the shaft 25. Another arm 34 of said bellcrank 33 is connected with a coin slide actuated lever 35 by means of a link 36. In the drawings two coin units are shown, one for a low denomination, indicated by the reference character 12, and one for a higher denomination indicated by the reference character 13. The

unit of lower denomination is adapted to advance the ratchet wheel 28 in single steps, whereas the unit of higher denomination is adapted to advance said ratchet wheel in double steps. These steps may be varied in accordance with the denominations of coins which it is desired to use. The present machine, being designed for use in the British postal service, is provided with coin units which are adapted to receive a half-penny in the unit 12 and a penny in the unit 13. Each of said coin units is provided with a slide 37 for the unit 12 and a slide 38 for the unit 13, which slides are common to all units of this type and are adapted to be moved rearwardly into the machine when a coin of proper denomination is inserted therein. If the coin meets a required standard for which the unit is designed, the slide is adapted to be moved inward, as for example, to the position shown by slide 37, Fig. 6.

Below the slide 37 is a short slide 39 which has a pin 41 projecting upwardly therefrom and in alignment with a slotted portion 42 in the slide 37. During the forward movement of the upper slide, the pin 41, which normally is in contact with the forward end of the slot 42, will be engaged by the rearward end of said slot to thereby effect movement of the short slide 39 to the position indicated in Fig. 6. During the forward movement of said short slide 39, a downwardly projecting portion 43 of said pin 41 will engage the lever 35 at a position which will rock said lever about its pivot 30 a sufficient distance to cause the bellcrank 33 and pawl 31 to advance the ratchet wheel 28 one step and consequently advance the value type wheel one step or to the first value type portion or half-penny position.

In a like manner, the slide 38 of the coin unit 13 is adapted to be moved forward to cause a downwardly projecting pin portion 44 to engage with the lever 35 at 44a, which will effect a greater arc of movement of the lever 35 about the pivot 30 and consequently cause the pawl 31 to advance the ratchet wheel 28 two steps and advance the value type wheel two steps or to the one-penny position.

Means is provided to prevent the operation of one slide when the other is being operated. Said means comprises an off-center spring controlled lever 45, which is pivoted at 46 on a pin extending downwardly from a bracket 47 fixed to the coin units 12 and 13. A pin 48, projecting upwardly from said lever 45 and through a slot 49 in said bracket 47, lies either in the path of a cam lug 51 on the slide 38 or a cam lug 52 on the slide 12, and is maintained in either of said positions by means of a spring 53. As shown in Fig. 6, said pin 48 is in the path of the cam lug 51. In this position free movement of the slide 37 is permitted but movement of the slide 38 is obstructed. The latter condition results from the fact that a pin 40 on the lever 45 will engage an abutment lug 54 on lever 35, upon the initial movement of slide 38, owing to the camming action of lug 51 and its tendency to rock the lever 45. The pin 40 will engage the opposite side of the lug 54 if the slide 38 is manipulated first and an attempt is made to manipulate the other slide 37.

After each printing operation the value printing type wheel is normally returned to the blank position shown in Fig. 1. The means for maintaining said type wheel in its blank position comprises a disc member 55, Figs. 5 and 6, which is fixed to the ratchet wheel shaft 25 and is normally urged to rotate in a counter-clockwise direction by means of a spring 56. Movement of said disc member is limited in one direction by the engagement of an ear 57 thereon with a pin 58, which extends downwardly from the bracket 22, Fig. 5. In the setting of the value type wheels to the desired value, several operations of the coin slides may be required before the desired value type is in printing position. To hold the type wheel in position when each step of a setting operation is performed, a backstop pawl 59 is provided, as best shown in Fig. 6, which pawl is adapted to function in conjunction with a series of pins 61 projecting upwardly from the upper face of the disc member 55, Fig. 5. The pawl 59 is pivotally mounted upon a pin 62, which projects downwardly from the bracket 22, and is normally urged to rotate in a clockwise direction about said pin by means of a spring 63. The said pawl 59 is normally held out of engagement with the pin 61 by means of a cam member 64 as best shown in Fig. 1. The cam member 64 is fixed to a sleeve 65 Fig. 5, which sleeve is freely mounted upon the ratchet wheel shaft 25 and is provided with a notch 66 and cam portion 67 along one end thereof, and further has a tail portion 68.

In the position shown in Fig. 1, which illustrates the normal home position of the mechanism, the pawl 59 is shown in a position withdrawn from the path of the pins 61, with a pin 69 on said pawl lodged in the notch 66 of the cam member 64. When a setting operation occurs however, as indicated in Fig. 6, either of the slides, which in this instant is the slide 37, upon being pushed into the machine during a setting operation, will cause the said cam member 64 to be moved in a clockwise direction about its axis by means of the motion of a link member 71, Figs. 1 and 6, when a pin 72 on the outer end of lever 35 engages and rocks a rocker lever 73. As best shown in said Figs. 1 and 6, it will be seen that one end of the link 71 is connected with the tail portion 68 of the cam member 64, while the opposite end is connected with one end of the rocker lever 73 through a pin and slot connection 74. Normally the pin 72 on lever 35 will be in the position shown in Fig. 1, and upon movement of the lever 35 by means of the coin slide 37, said pin upon passing the end of the rocking lever 73 will effect the rocking action of said lever 73, which in turn will cause the link 71 to move and thereby rock the cam member 64 to the position shown in Fig. 6. Further setting operations by either of the two coin units may be continued until the desired value is set up in the type wheel 17.

Letter door and compartment

The rocking of the rocking lever 73 during an initial setting operation, as described above, also controls the opening of a letter slot door 75. Referring to Fig. 1, it will be seen that the rocker lever 73 is connected with a door stop lever 76 by means of a link 77, and upon rotation of the lever 73 through the engagement of pin 72 therewith, the door stop will be rocked. The door stop lever 76 is pivotally mounted upon a pin 87 and is normally urged into its stop position against a stop pin 89 by means of a spring 88. The door 75 is mounted on a vertical stud 92 and is adapted to be urged for movement in a clockwise direction by means of a spring 93. It is normally retained in a closed position however, by the engagement of a pin 94 thereon with the end of the stop lever 76. When the stop lever 76 is withdrawn from the path of the pin 94, as

a result of the rocking of the lever 73, in the manner described above, the door will be drawn to an open position by means of the spring 93 against a door stop 95, as indicated in the position shown in Fig. 7.

Directly back of the door, in the position shown in Fig. 1, is a compartment which is sufficiently large for the insertion of an operator's hand therein. Said compartment is enclosed by walls 96—96 which lie at right angles to the front wall of the casing, also by angularly disposed walls 97 and 98. The angular wall 98 is hinged upon a shaft 99 and the free end thereof is adapted to be adjusted to one of two positions, the one position being that shown in Fig. 1 and the other being that shown in Fig. 7. Adjustment of said wall 98 to either of the above named positions is accomplished by means of an arm 101 which is fixed to the wall structure 98 and has a roller 102 thereon. Said wall 98 and arm 101 are normally urged to rotate in a clockwise direction about the shaft 99 by means of a spring 103 whereby the roller 102 is maintained in continuous engagement with the cam edge of a cam member 104, formed as a part of the upper portion of the door structure 75. When the door opens, as in the manner explained above, the cam 104 will slide over the roller 102 and when said door finally reaches its stop position, a projection 105 on said cam will have moved the roller 102 and arm 101 outward to cause the free end of the wall 98 to move inward. In said latter position the free end of the wall is spaced a predetermined distance from the inner end of the wall 97, which distance is maintained while the door remains open to provide a gauge for the purpose of limiting the thickness of letters inserted therebetween when moving said letters to a printing position.

Another wall 106 forms a continuation of the wall 97 and provides a backing means against which the letters may bear during a printing operation. A back wall 107 is also provided, which will will also act as a stop for the leading end of the letter to correctly position said letter for the printing of the stamp impressions thereon. Suitable openings 108—109 are provided in the side wall 106 through which the indicia die 15 and the postmark die 16 may project.

Printing device

Printing is accomplished by means of a pair of platen rollers 111—111, which are rotatably mounted in supporting bars 112—112 positioned at either side thereof and the whole is linked to arms 115—115 of a bellcrank structure 120 by toggle links 113—113. The bellcrank structure 120 is mounted upon a shaft 116 which shaft is supported in bearings provided by means of the bracket 117 secured to one side wall and bracket 118 fixed to the floor 14. An arm 119, which forms a part of the bellcrank structure 120, is linked with an anchor post 122 by means of a tie-rod 123. Said tie rod is arranged for axially slidable movement within the anchor 122 in one direction against the pressure of a compression spring 124 around said tie rod.

The lower toggle link 113 is also linked to one arm 125 of a bell crank 126 by means of a link 127. Said bellcrank 126 is fixed to a shaft 128, which shaft is suitably mounted in bearing 129. The other arm 131 of said bell crank 126 is secured to one end of a hook shaped lever 133. The other end of said hooked lever is secured to a disc 134, which disc is fixed to a shaft 135. Said shaft 135 is suitably mounted in bearings 136—137 and has a bevel pinion 138 secured thereto, which pinion meshes with a bevel gear 139. The gear 139 is carried by a drive shaft 141, which shaft is supported in suitable bearings 142—143 and is provided with a crank 144 at the outer end thereof. Said crank is arranged to provide for 180 degrees rotation of the shaft 135, which, owing to the ratio of the gears 138—139, will require a stroke of 90 degrees for the crank 144. By means of teeth 145 on the disc 134 and a pawl 146 which is adapted to engage said teeth 145, the said crank 144 must complete a full stroke before it may be returned to its initial starting position.

During the operating stroke of the crank 144, the disc 134 and hooked lever 133 joined thereto will be rotated in a counter-clockwise direction to also effect rotation of the bell crank 126 in a counter-clockwise direction. The arm 125 of said bell crank 126 will therefore pull the link 127 rearward and effect the rocking of the toggle link 113 to cause the platen rollers to move into contact with and across the back of the letter as shown in Fig. 2.

Movable letter platform

After the door 75 opens a letter L is inserted. The lower edge of the letter normally rests upon a preferably corrugated surface of a movable platform 148, such as shown in Fig. 7. The said platform 148 is movable to provide for the release of the letter into a letter drop or receptacle 11 after a printing operation is effected, and is further movable in an endwise direction to place the leading end of the letter against the back stop wall 107 before printing is effected. The structure of said platform 148 is best shown in Fig. 4, in which it is indicated in a letter releasing position after a printing operation is effected. Said platform 148 is supported by the engagement of two end flanges 149—149 with screw portions 151—151 of a supporting rod 152. The rod 152 is supported in brackets 153—153 and is adapted to receive endwise movement when the door 75 is opened, which movement will cause the screw portions 151—151 thereof to rock the platform 148 to a horizontal position. Said endwise movement of the rod 152 is effected by means of the engagement of the end of a lever 154 with a pin 155, projecting from said rod 152, when the lever 154 is rocked. The lever 154 is fixed to the shaft 99, previously described. At the upper end of said shaft 99 is a lever 156, Fig. 1, which has a roller 157 at the end thereof engaging the edge of the cam 104, which cam forms part of the door structure 75, as previously described. Upon the rocking of said door to its open position, the cam 104 will effect movement of the lever 156 in a clockwise direction, thereby rocking said shaft 99 and effecting a like movement of the lever 154, Fig. 4. Movement of said latter lever 154 in a clockwise direction will therefore effect the endwise movement of the rod 152 to rock the platform 148 to its horizontal position. Upon movement of said rod, a latch 157, Fig. 4, will be drawn toward the rod by means of spring 158 to effect the latching of a shoulder portion 159 thereof with the edge of one flange 149 of said platform 148. The platform will thus remain in its horizontal position while the latch 157 remains in engagement with the flange 149.

If the operator should fail to insert the letter L entirely to the back stop wall 107, means is provided to give the letter an initial rearward movement before a printing operation occurs, to there-

by ensure that the said letter will have its forward or leading end in contact with the back stop wall. Said means, which is best shown in Figs. 4 and 9, comprises a bell crank 161 which is pivotally mounted upon a stud 162 carried by bracket 163. A roller 164, mounted at the end of one arm of said bell crank 161, is normally maintained in engagement with a cam 165 by the tension of a spring 166. A pin 167, at the end of the other arm of said bell crank 161, normally lies within a groove 168 provided in a curved overhang portion 169 of the platform 148. Upon rotation of the cam 165, which is fixed to the drive shaft 141, the bell crank 161 will be rocked in a clockwise direction to thereby effect a rearward movement of the platform 148. By means of the engagement of the roller 164 with the dwell 180 on said cam 165, the platform will be maintained in its rearward position until a printing operation is completed.

Door closing means

Door closing means is provided to close the door during a machine cycle of operation. Said means comprises a pair of levers 171 and 172, Figs. 1 and 8, which are freely mounted upon the shaft 92. The lever 171 has a pin 173 projecting downwardly therefrom against which a finger portion 174 of said lever 172 is maintained by means of a spring 175. The lever 171 also has a finger portion 176 which is engaged by the pin 94 on the door 75 when the door is in the open position, as shown in Fig. 7. The lever 172 is connected with a lever 178 by means of a link 177. Said lever 178 is fixed to a shaft 179, which shaft is mounted in bearings 181—181 in the roof and floor of the casing structure. Also fixed to said shaft 179 is a lever 182, which lever is joined to the previously described link 127 by a link 130. Therefore, upon movement of the link 127 to effect movement of the platen rollers, in the manner previously described, the said lever 182 will be rocked in a clockwise direction to rock the shaft 179 and consequently effect the rocking of lever 172 in a counter-clockwise direction. Rocking of said latter lever 172 will, through the pull of the spring 175, cause the finger 176 of lever 171 to move the pin 94, and consequently said door 75, in a counter-clockwise direction to close said door. If the operator should happen to have his hand in the opening between the walls 96—96 while the door is closing, the spring connection 175 will yield to thus prevent injury to the operator.

The resetting of the door stop 76 is accomplished near the end of the cycle of operation. Included in the mechanism which is provided for accomplishing this resetting operation, is a rocker arm 183, Fig. 2 which is fixed to the driven shaft 135. A wing 184 projects upward from said arm 183, and when the crank 144 is moved forwardly, the arm 183 will be rocked in a counter-clockwise direction. On the return stroke of said arm 183, the wing portion 184 will engage the en 185 of a rocker lever 186 which is pivotally mounted on the tail portion 68 of the cam member 64. Said lever 186 is normally urged against a stop pin 187 by means of a spring 188 and, by means of said latter connection, is adapted to yield upon the movement of the wing portion 184 of arm 183 past the end 185 on the forward stroke of the crank 144. On the return stroke of the crank 144, the wing portion 184 will engage with the end 185 of the lever 186, to rock the cam member 64 to its home position. Also, through the connection of the link 71 with the tail portion 68, the rocking of the cam member 64 will effect the return of said link 71 and lever 73 to their home positions. The return of said lever 73 to its home position will thus free the link 77, which is connected through the pin and slot connection 78 to the outer end thereof, and permit the stop lever 76 to be returned to its stop position through the action of spring 88.

Upon movement of the cam member 64 to its home position the pawl 59 is released from engagement with the pins 61 and the disc 55 is adapted to return to its normal home position under the influence of spring 56. This will consequently restore the type wheel 17 to its normal home position.

To prevent the manual operation of the crank 144 during a value setting operation a shutter member 189, Figs. 5 and 6 is provided, which shutter is fixed to the bellcrank 33 by means of a rivet 190. Said bellcrank 33, it will be recalled, is rocked during each operation of a coin slide through the lever and link connections 35 and 36. The shutter 189 is also freely positioned on the shaft 25 and the shutter end thereof is adapted to move into the path of the wing portion 184 of arm 183, as shown in Fig. 6, when a coin slide is operated. Any attempt to move the crank 144 under the above condition will be blocked by the engagement of the wing 184 with said shutter. When the coin slide is withdrawn, the shutter 189 will also be withdrawn from the path of the wing 184, as shown in Fig. 1. Withdrawal of the coin slides may be effected by means of a spring 200.

Date setting device

Means is also provided for simplifying the operation of setting the date and hour type in the postmark die 16, Fig. 2. A series of type wheels 191 are mounted upon a shaft 192 within the postmark die 16. The type portions of said type wheels are preferably shaped in the form of gear teeth and have type provided thereon in the order indicated in Fig. 3, i. e. the first two type wheels at the left indicate the days, the third type wheel contains twelve roman numerals indicating the month, and the fourth type wheel may if it is deemed necessary, contain hour type. Each of said type wheels is normally maintained in a locked position by means of a bail 193, which bail is fixed to a shaft 194, suitably supported in a bracket 195. A lever 196, also fixed to said shaft 194 has one end secured to a wing 197 of a vertically disposed and manually operable slide member 198. Said lever 196 is further urged for movement about the axis of said shaft 194 in a counter-clockwise direction by means of a spring 199, which action also urges the bail 193 into locked engagement with the teeth of the type wheels 191. The slide 198 is suitably mounted upon pins 201—201 and is provided with a depresser finger 202, which finger is adapted to be conveniently reached through an opening 203 in the roof of the casing. The said opening 203 is in the form of a hand hole which is provided by means of a flanged portion 204 and is normally covered by means of a hood 205.

Each type wheel 191 has a gear sector 206 associated therewith, which sectors are mounted upon a shaft 207 supported by the bracket 195. Also fixed to each sector 206 is an index sector 208, whereby the gear sectors may be manually rocked to set the type wheels 191 to their desired positions. The peripheral surface of each index sector is marked with the characters des-

ignating the characters of the type wheels, as shown in Fig. 10, and are so arranged that when the sector is moved to bring any of the characters in alignment with a straight edge portion 209, of a bracket 210, the said characters will appear in printing position on the said type wheels 191.

To perform a setting operation, the finger 202 on slide 198 is depressed to release the bail 193 from contact between the teeth or type members of the wheels 191, to thereby permit the manipulation of the index sectors by the operator to bring the desired type characters into printing position. Upon the release of the depressor finger 202, the bail 193 will again move into locking engagement with the type wheels 191.

Inking

Any suitable form of inking means may be provided, a preferred form however being a ribbon inking device. Said inking device comprises two ribbon spools 211—212, Fig. 3, which are rotatably mounted upon a shaft 213, carried by a bracket 214. One of said spools 212 is the supply spool, and the ribbon R is led therefrom upwardly at a vertical direction across the face of the indicia and value printing type 15, then is suitably woven through angular openings 215—215 of a plate which forms the side wall 106, and passes downwardly across the postmark die face 16 to the spool 211. As indicated in the drawings, a thumb knob 216 is provided on the receiving spool 211, whereby the ribbon may be advanced on said spool whenever desired. Any conventional automatic ribbon feeding device may be provided if desired.

Letter clamp

Means may also be provided for clamping a letter by applying pressure to the back thereof during a printing cycle of operation if desired. Said means which is best shown in Figs. 1 and 8, comprises a pressure bar 217 having a foot 218 thereon, and is mounted so as to permit horizontally slidable movement by means of pin and slot connections 219—219. Said bar 217 is secured to one end of a lever 221, which is freely mouned upon the shaft 179, and is yieldably connected with one end of lever 182 by means of a spring 222. When the lever 182 is rocked during a printing operation, the pressure foot 218 will be moved into engagement with the letter L, and upon engaging same the spring 222 will yield while the printing stroke of the platen rollers is effected.

Crank locking device

A crank locking device is also provided which prevents the operation of the crank 144 until the letter door 75 opens. Said device includes a hooked arm 223, Fig. 4, which is pivotally mounted upon a stud 224 and has a hooked end 225, normally engaging a pin 226 projecting from the disc 134. A lever 227, also freely mounted upon the stud 224, is connected with lever 154 by means of a link 228. Upon rotating the shaft 99, as above described, the lever 227 is rotated in a clockwise direction and by means of a shoe 229 on an arm 230, which forms a part of said lever 227 and is engaged with the hooked arm 223, the said arm 223 is rocked to release the hooked end thereof from engagement with the pin 226. When the pin 226 engages the beveled portion of the hooked end 225 of arm 223 on the return stroke of the disc 134, the said arm will yield under the tension of a spring 231.

Operation

In the operation of the machine, a coin is inserted in either of the coin slides 12 or 13, after which either slide 37 or 38 may be moved inward to deposit the coin within the machine. Movement of the coin slide will effect the operation of the value type wheel setting mechanism in a manner shown in Fig. 6. If the slide 37 of the unit 12 is actuated, the pawl 31 will drive the ratchet wheel 28 in a clockwise direction the distance of one tooth space, which in turn will advance the value type wheel 17 one unit of space or from one type face to the next. This operation may be continued by the insertion of further coins in the unit 12 and pushing the slide inward after the insertion of each coin, which operations will continue to advance the ratchet wheel 28 in single steps of movement. If however a coin is inserted in the unit 13, the slide 38 and parts associated therewith will cause the actuating lever 35 to be moved through a greater angle than effected by the slide 37, and thereby effect the setting of the ratchet wheel 28 in units of distance twice that effected by the slide 37.

Also upon the initial movement of either of the slide members to an actuating position, the pin 72 on lever 35 will rock the lever 73 to effect disengagement of the door stop lever 76 from the pin 94 on said door, whereupon the door will be pulled to an open position by means of the spring 93. During the opening movement of said door, two elements are controlled by means of a cam member 104. One of said elements is the letter supporting platform 148, which is normally in the dropped or open position shown in Fig. 2 and is raised to a letter supporting position before the door is completely opened. Said control is effected by means of the engagement of the raised portion 100 of the cam with the roller 157 to rock the lever 156 and shaft 99, which finally causes a lever 154, Fig. 4, to rock the platform supporting rod 152 rearwardly. This will effect rotation of the platform to a horizontal position as the screw portion 151—151 is moved through the screw openings in the end flanges 149—149 of the said platform. The second element which is controlled by the movement of the door is the letter gauge means or wall 98 which is rocked inwardly from the position of Fig. 1 to that shown in Fig. 7, by means of the engagement of the raised portion 105 of the cam 104 with the roller 102 of lever 101, the said lever 101 being directly attached to the wall 98.

The door now being open, a letter is adapted to be inserted within the opening between the walls 96—96 and moved back into the slot, formed between the wall 106 and the end of the gauge wall 98, to a printing position. The opening between the walls 96—96 is sufficiently large for a person to insert his hand, so as to conveniently move the leading end of the letter in correct printing position against the back stop wall 107.

After a letter is inserted, the machine is ready for a printing operation. The operator therefore grips the crank 144 and pulls same forwardly through an arc of about 90 degrees, which action effects a drive of the bevel gear unit, Fig. 2, indicated at 138—139, to rotate the shaft 135 and effect rocking of the lever 125, Fig. 1. The rocking of said lever 125 will in turn effect movement of the toggle links 113—113, and also will rock the shaft 179 through lever 182 which is connected with the link 130. By means of the motion of links 113—113, the platen rollers 111—111 are moved into engagement with the back

of the letter and are further rolled thereacross under presence of spring 124, to press the letter firmly against the type sections of the indicia and postmark dies 15 and 16 respectively. The crank 144 is reciprocated forwardly then rearwardly, therefore, the platen rollers 111—111 will receive a forwardly and rearwardly stroke across the back of the letter. To prevent the letter from moving during a printing operation, pressure is applied to the letter by means of the pressure foot 218.

Movement of the shaft 179 will effect the rocking of lever 178 which is secured thereto, and, through the link 177, levers 171—172 and spring 175, the door will be drawn to a closed position.

On the return stroke of said crank 144 the various mechanisms are restored to their normal home positions. Pawl 59 which had been maintained in a ratcheting position with respect to the pins 61 on the disc 55, Fig. 6, is released when the cam portion 67 of the cam member 64 is rocked past the pin 69 on said pawl. This is effected when the end 185 of lever 186 is engaged by the wing 184 of the rocker arm 183 on its return stroke in a counter-clockwise direction. The latter operation thus effects the rocking of the cam member 64 which, through link 71, lever 73 and link 77 secured thereto, will effect the resetting of the door stop lever 76 to a stop position behind the pin 94.

On the forward stroke of the crank 144, the cam 165, Figs. 4 and 9, through the assistance of the bell crank 161, will effect a rearward movement of the platform 148 a predetermined distance, to provide for rearward movement of the letter against the back stop. This insures that the said letter is in a proper position for printing if the operator should not properly insert the letter in the machine. During the period after the roller 164, Fig. 9, leaves the dwell 180 of the cam 165, which occurs at the end of the cycle of machine operation, the platform 148 is moved forwardly by the action of the bell-crank 161. During said latter movement, a tail portion 160 on the latch lever 157, Fig. 4, will engage a pin 170, to thereby rock the latch about its pivot and break the engagement thereof with the flange 149, whereupon the platform 148 is rocked downwardly to the position of Fig. 2, when the rod 152 is moved forward under the influence of spring 150 to thereby permit the letter to fall into the letter receiving receptacle 11. The letter is of course free to drop by this time due to the pressure foot 218 and hinged wall 98 having been returned to their normal positions. The forward motion of the rod 152 will also effect the rocking of lever 154 through pin 155 and thereby effect the setting of the hooked end 225 of the arm 223 in a latching position with relation to the pin 226. This will lock the crank until a new selection is made by means of the coin slides.

Having described the invention, what is claimed is:

1. In a device of the character described for printing a stamp impression upon letters, a printing die, a platen member, means for supporting a letter on edge in a vertically disposed position between the printing die and platen member, a stop positioned in the path of the leading edge of the letter, said letter supporting means having longitudinal movement toward the stop to advance the leading edge of a letter thereagainst before printing, and having rocking movement to release the letter therefrom to space therebelow after printing, and a drive including connections with said letter supporting means to effect each of the advancing and rocking movements.

2. In a device of the character described for printing a stamp impression upon letters, a printing die having a vertically disposed die face, a platen member, means for supporting a letter on edge adjacent the printing die, a stop positioned in the path of the leading edge of the letter, means to effect forward motion of the letter supporting means to advance the leading edge of a letter against the stop before printing, and means to effect rocking motion of the letter supporting means along a longitudinal axis to release the letter therefrom to space therebelow after printing, and a drive including connections with said letter supporting means to effect each of the advancing and rocking movements.

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