C. D. SHRADY.

MAILING MACHINE.

APPLICATION FILED JUNE 16, 1906.

1,115,600.

Patented Nov. 3, 1914.

9 SHEETS—SHEET 1.

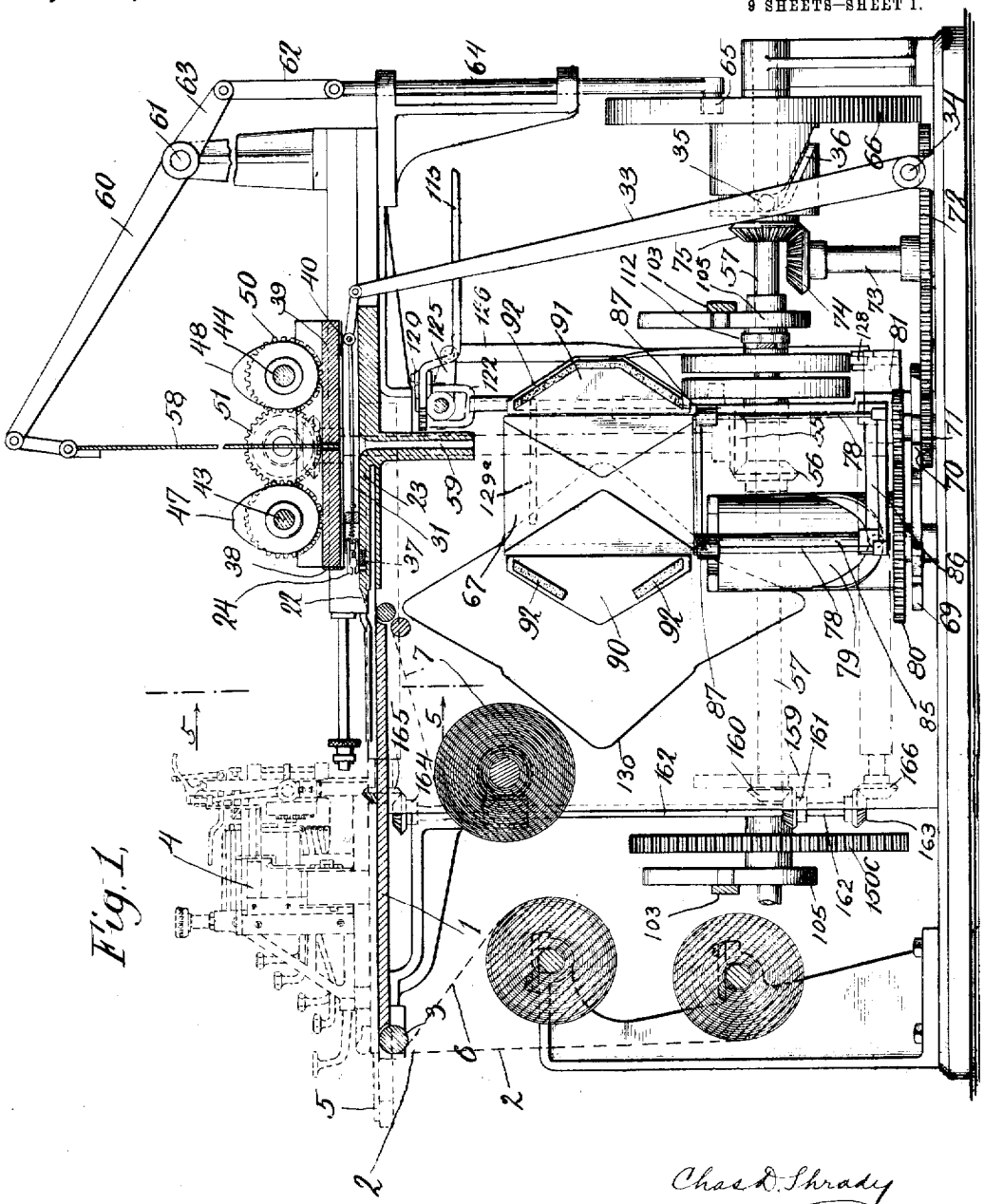


Fig. 1.

WITNESSES:

John O. Gempler

Timothy E. Raftery

Chas. D. Shrady

INVENTOR

BY Kenyon & Kenyon

his ATTORNEYS

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9 SHEETS—SHEET 2.

Fig. 14.

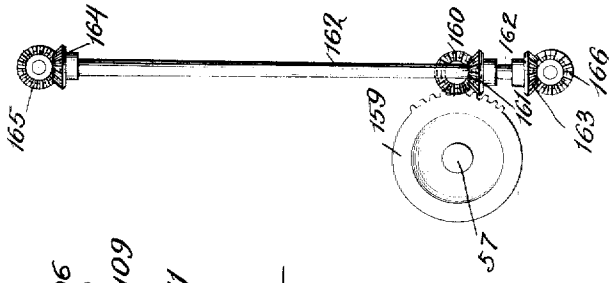
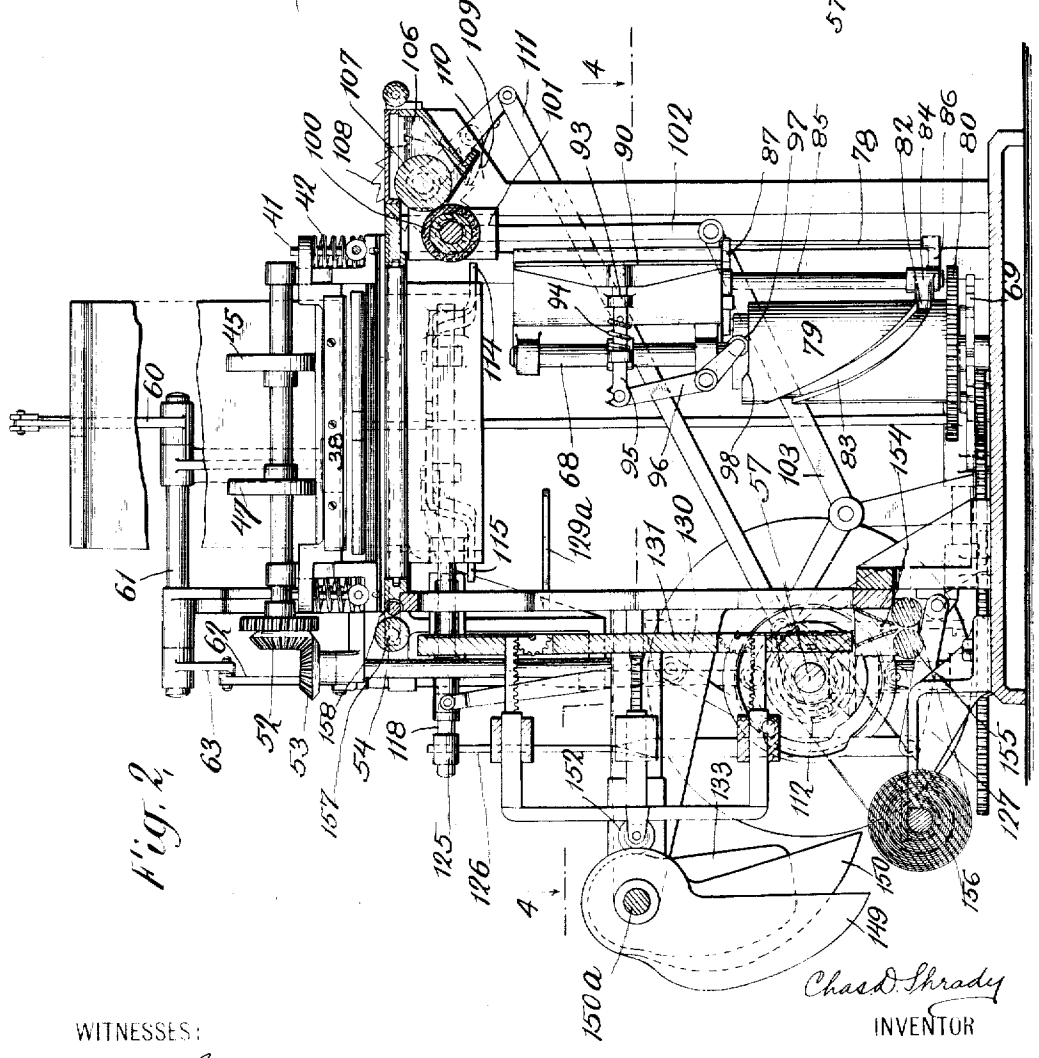


Fig. 2.



Chas. D. Shrady

INVENTOR

WITNESSES:

John A. Gempeler

Timothy E. Raftery

BY Kenyon & Kenyon

ATTORNEYS.

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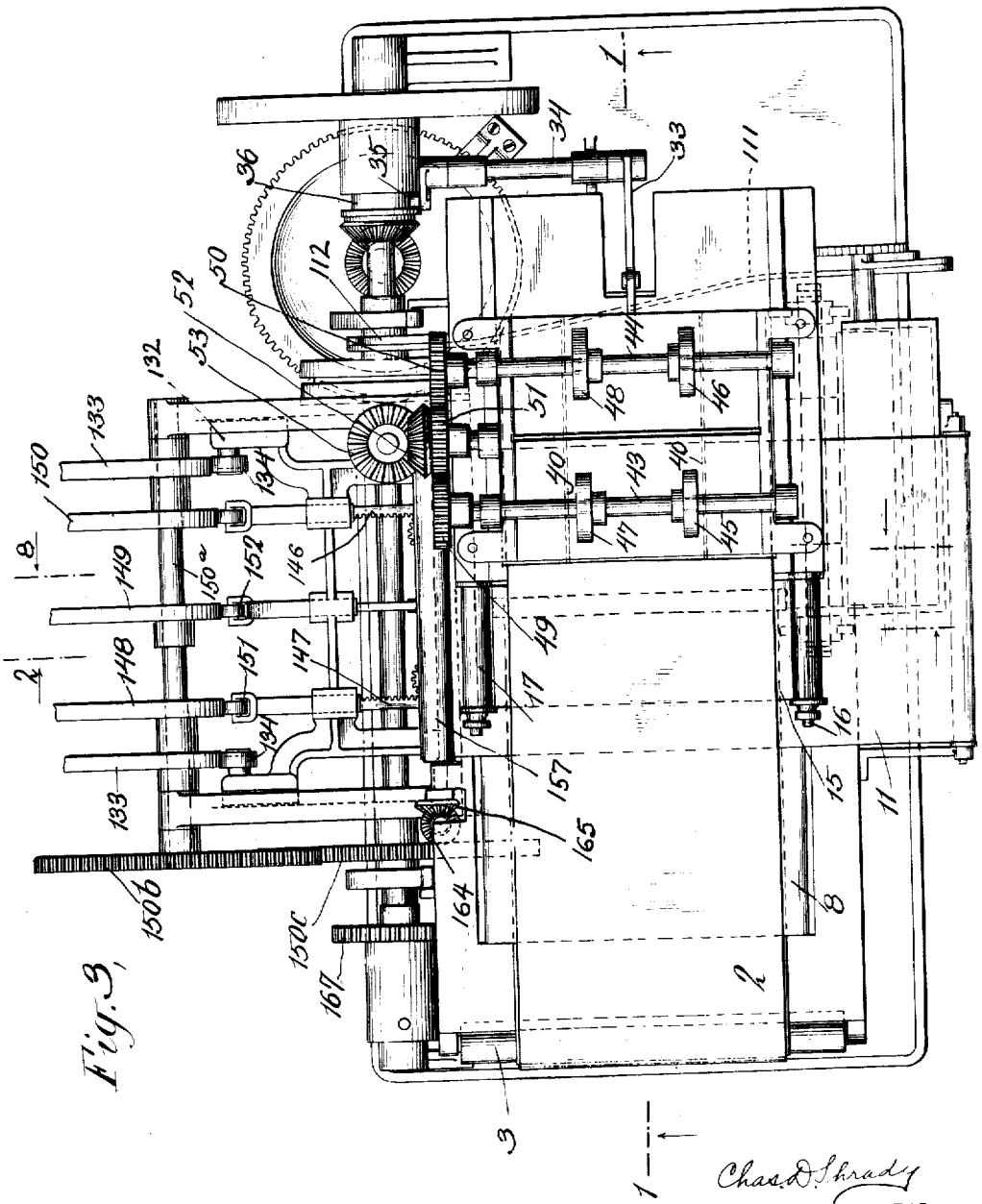


Fig. 3.

Chas. D. Shrady

INVENTOR

WITNESSES:

John O. Gempler.

Timothy E. Raftery

BY Kenyon & Kenyon

his ATTORNEYS.

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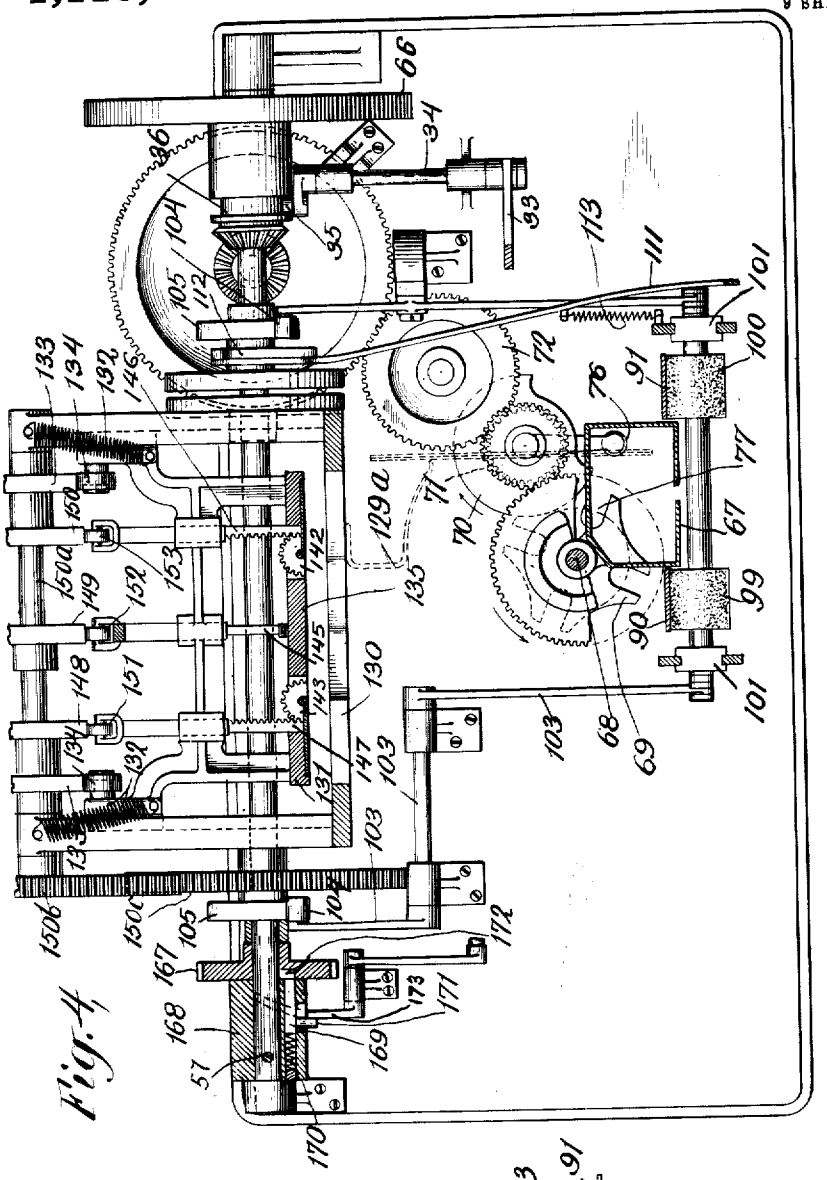


Fig. 4.

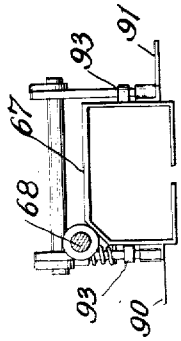


Fig. 15.

WITNESSES:

John O. Gempler.

Timothy E. Hoffroy

Chas D. Shrady

INVENTOR

BY Kenyon & Kenyon,

his ATTORNEYS

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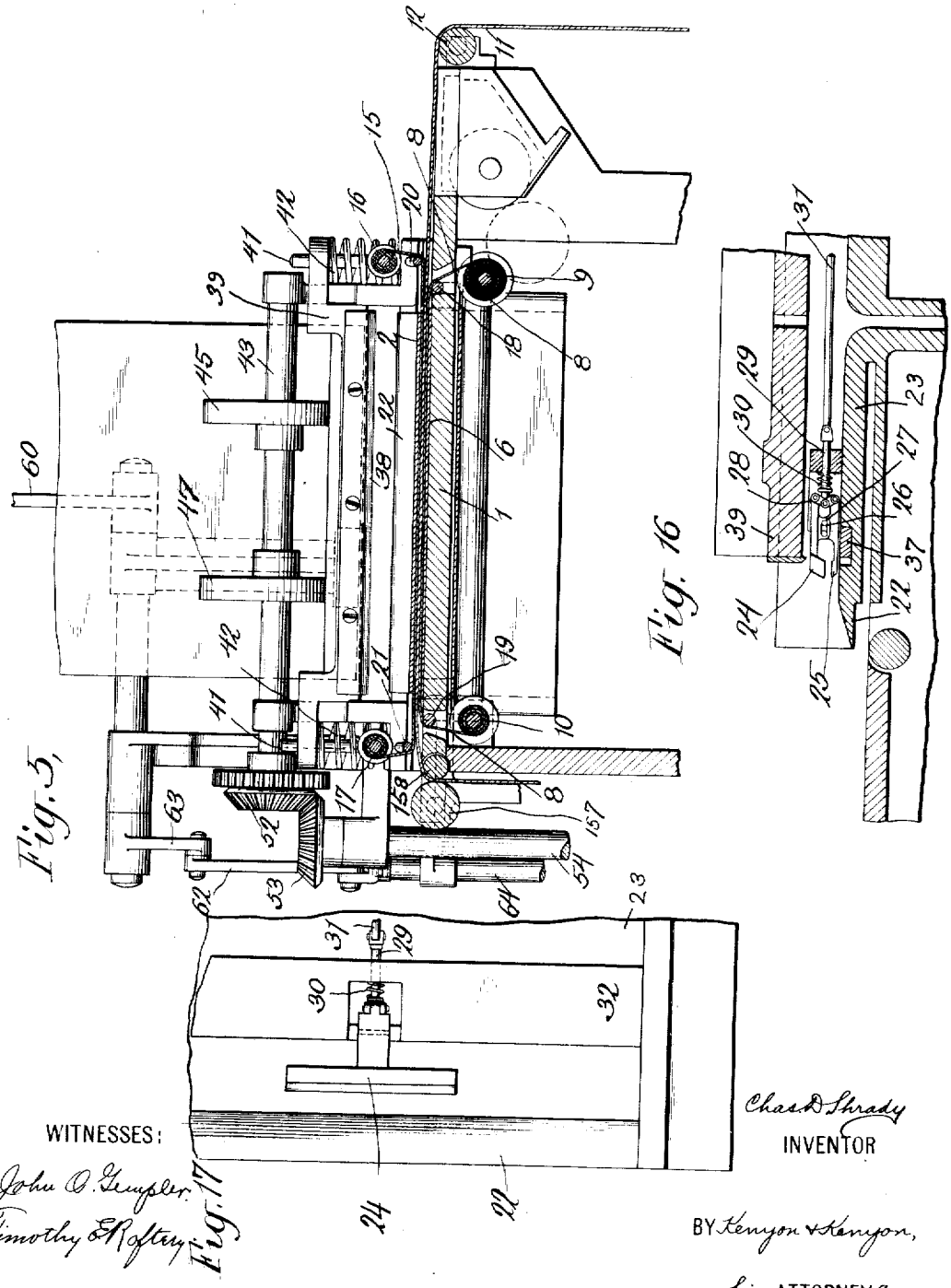


Fig. 5.

Fig. 16

Fig. 17

WITNESSES:

John O. Gempler.

Timothy E. Roftery.

Chas. D. Shrady

INVENTOR

BY Kenyon & Kenyon,

his ATTORNEYS.

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9 SHEETS—SHEET 6.

Fig. 18.

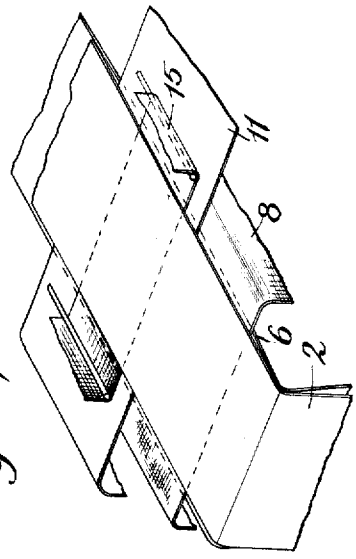


Fig. 6.

WITNESSES:

John O. Gempler

Timothy E. Raftery

Chas. D. Shrady

INVENTOR

BY Kenyon & Kenyon

his ATTORNEYS

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9 SHEETS—SHEET 7.

Fig. 8.

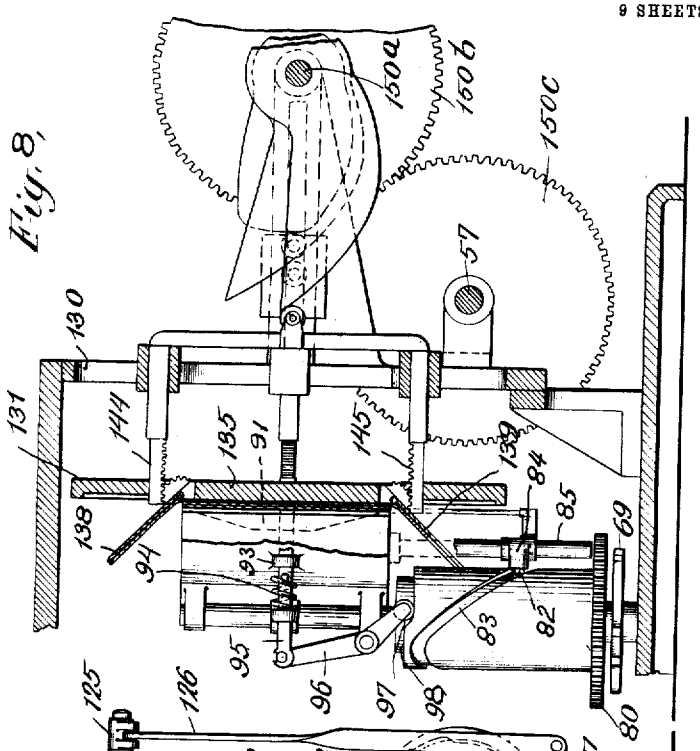


Fig. 7.

WITNESSES:

John A. Gempler

Timothy E. Raftery

Chas. D. Shrady

INVENTOR

BY

Kenyon & Kenyon,

his ATTORNEYS

C. D. SHRADY.

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9 SHEETS—SHEET 8.

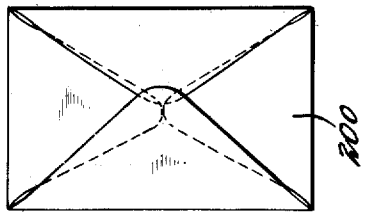


Fig. 13

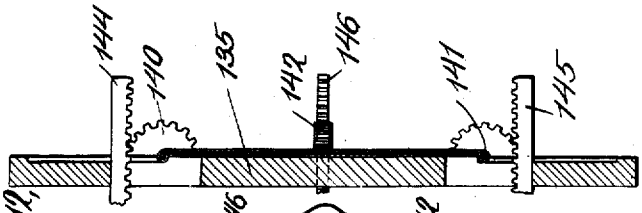


Fig. 12.

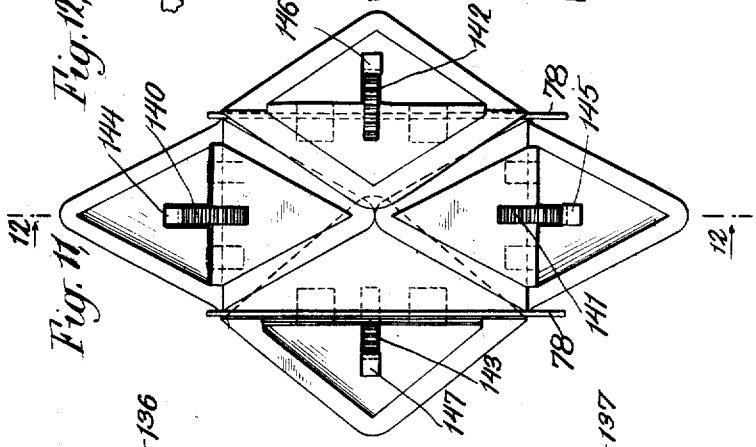


Fig. 11.

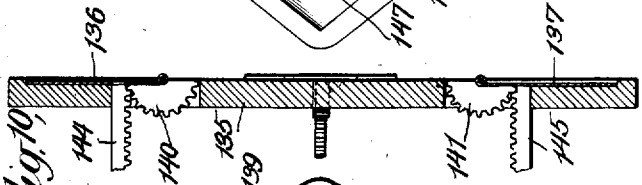


Fig. 10.

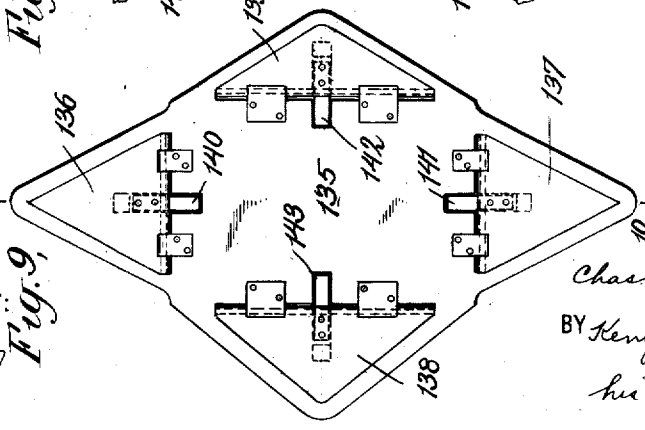


Fig. 9.

WITNESSES:

John A. Kempler.

Timothy E. Ryley.

INVENTOR

Chas D. Shrady

BY Kenyon & Kenyon,

his ATTORNEYS.

C. D. SHRADY.

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APPLICATION FILED JUNE 16, 1906.

1,115,600.

Patented Nov. 3, 1914.

9 SHEETS—SHEET 9.

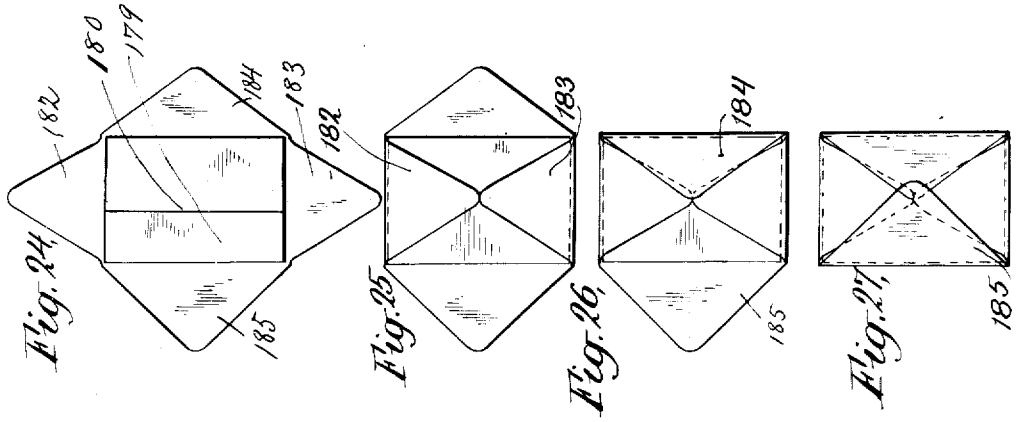


Fig. 24. Fig. 25. Fig. 26. Fig. 27.

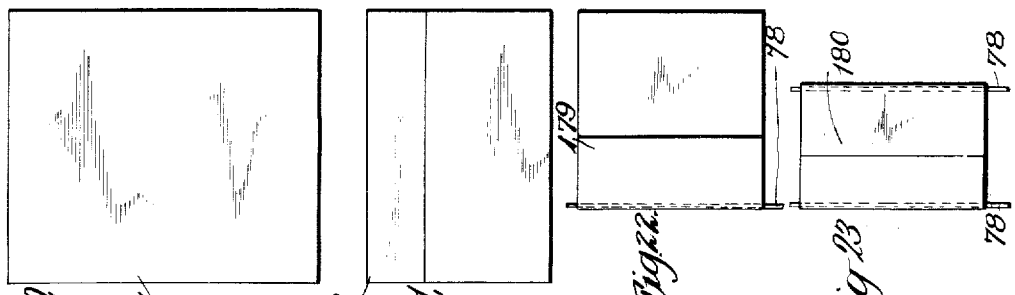


Fig. 20. Fig. 21. Fig. 22. Fig. 23.

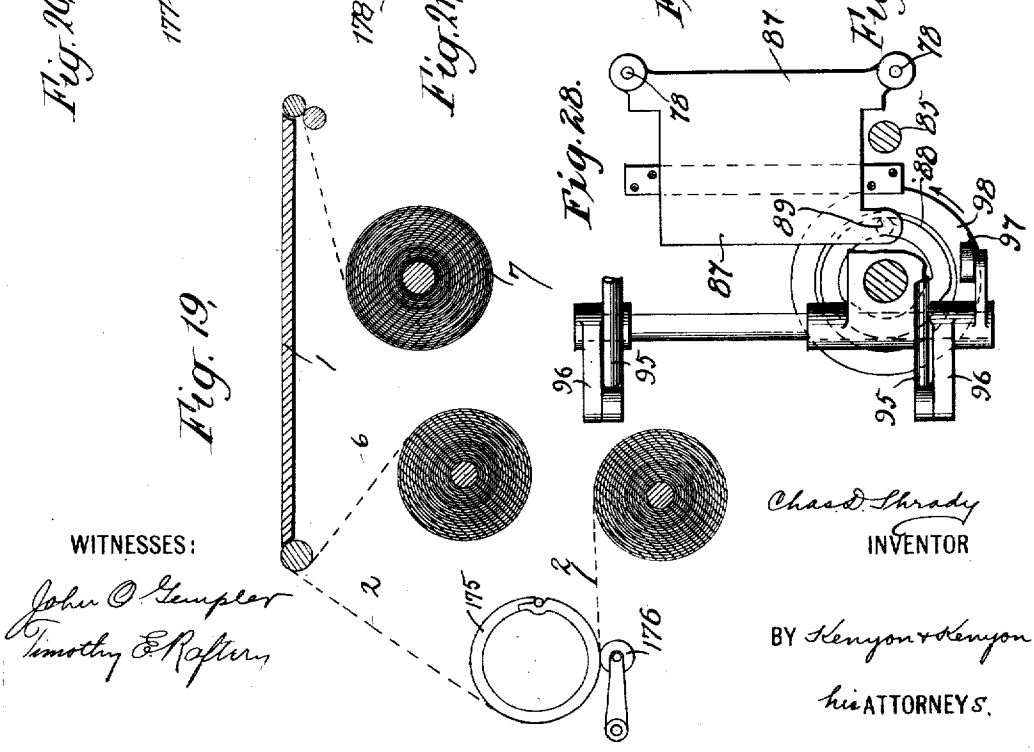


Fig. 28. Fig. 19.

WITNESSES:

John O. Gempler

Timothy E. Raftery

Chas. D. Shrady

INVENTOR

BY Kenyon & Kenyon

his ATTORNEYS.

UNITED STATES PATENT OFFICE.

CHARLES D. SHRADY, OF ALLENTOWN, PENNSYLVANIA.

MAILING-MACHINE.

1,115,600. Specification of Letters Patent. Patented Nov. 3, 1914.

Application filed June 16, 1906. Serial No. 321,967.

To all whom it may concern:

Be it known that I, CHARLES D. SHRADY, a citizen of the United States, and a resident of No. 132 North Fourth street, Allentown, county of Lehigh, and State of Pennsylvania, have invented a Mailing-Machine, of which the following is a specification.

My invention relates to mailing machines, and more particularly to that class of machines by means of which a circular may be printed, folded and inclosed in an envelop and the product delivered by the machine.

One of the objects of my invention is to provide a machine by means of which a letter sheet previously printed upon may be folded and inclosed in an envelop blank produced by the machine.

Another object of my invention is to provide means for feeding a web of paper from which letter sheets are produced, and with means for printing on the web together with means for folding the sheet and inclosing it in an envelop blank.

Another object of my invention is to provide a machine in which a letter sheet previouslyprinted upon is folded, and in which an envelop blank printed upon while in the machine, is adapted to be folded about said sheet.

Another object of my invention is to provide in a machine of the character described, recording means for keeping a record of the matter printed upon the letter sheet and of the matter printed upon the envelop blank.

A further object of my invention is to improve the construction of envelop blank cutting, gumming and folding mechanism.

A further object of my invention is to provide an improved machine for folding circulars and inclosing them in envelop blanks, which are gummed, and folded about the circulars by the machine.

With the above and other objects in view, my invention consists in the parts, improvements and combinations more particularly set out in the claims.

Referring now to the drawings attached to the specification—Figure 1 illustrates a central longitudinal section of the machine taken on the line 1—1 of Fig. 3. Fig. 2 illustrates a transverse section taken on the line 2—2 of Fig. 3. Fig. 3 is a plan view of the entire machine. Fig. 4 is a horizontal section through the machine taken on the line 4—4 of Fig. 2. Fig. 5 is a vertical section showing the associated webs taken on the line 5—5 of Fig. 1. Fig. 6 is a section illustrating certain parts of the cutting, gumming and folding mechanism. Fig. 7 is a similar view illustrating the wing folders. Fig. 8 is a view illustrating the envelop cutting and folding mechanism taken on the line 8—8 of Fig. 3. Figs. 9, 10, 11 and 12 illustrate the envelop cutting and folding die. Fig. 13 illustrates a complete envelop. Fig. 14 is a detail of the envelop web folding mechanism. Fig. 15 is a detail of the envelop carrier and gumming plates. Fig. 16 is a detail section illustrating the gripper used to feed the letter sheet web. Fig. 17 is another view of the gripper shown in Fig. 16. Fig. 18 is a view illustrating the superimposed webs. Fig. 19 is a view showing an alternative form of the invention. Figs. 20–23 illustrate the operation of folding the letter sheet. Figs. 24–27 illustrate the operation of folding the envelop blank. Fig. 28 is a detailed view showing the top of the cylinder 79 and its connected parts.

The frame of the machine is provided with a platen 1 over which the letter web 2 is fed, the web passing over the guiding roll 3. Suitable printing means are provided for printing upon the web. In the form illustrated upon the drawings, I make use of a typewriting machine 4, which is arranged on the upper side, *i. e.*, above the platen 1 and is supported and guided by the rails 5. The typewriting machine may thus be used to print upon the letter web and may be pushed along and over the platen, so as to print upon the material at any point of the platen. A record strip 6 receives a record of the printed impressions and is associated with the letter web, both passing over the guiding roll 3. The record strip is wound up by the reel 7. A wide transfer ribbon 8 impregnated with a copying compound is mounted on reels 9 and 10 and is guided between the letter web and the record ribbon, the transfer ribbon passing at right angles to the path of the letter web. See Fig. 5. An envelop web 11, upon which the postage stamps may be printed in advance, from which the envelop blanks are cut, is arranged at one end of the platen and is guided by the roller 12 and fed by the feed rolls over the end of the platen. As illustrated in the drawings, the envelop web is fed transversely to the line of movement of

the letter web. A narrow transfer ribbon 15 mounted on rolls 16 and 17 wide enough to provide for transferring names and addresses, is arranged between the letter web and the envelop web, so that when addresses are printed by the printing mechanism on the letter web at one end of the platen, these addresses are transferred to the envelop web, and a further transfer by means of the ribbon 8 is produced on the record ribbon 6. It will thus be observed that by shifting the printing mechanism 4, the body of the letter may be written at one portion of the platen 1, and the address may be put upon the letter and envelop blank at another portion of the platen 1, a record being kept of the printed matter by means of the transfer ribbons and record strip. Guide fingers 18 and 19 guide the transfer ribbon 8, and guide fingers 20 and 21 guide the transfer ribbon 15. As will be seen in Figs. 1, 16 and 17, after leaving the platen, the letter sheet passes over the incline 22 to a cutting and folding bed 23.

Suitable means are provided for feeding the letter web. In the best embodiment of the invention illustrated upon the drawings, I make use of feeding grippers. These grippers consist of gripping jaws 24 and 25, the jaw 24 being provided with a slot 26 pivotedly engaging a pin 27 on the jaw 25. A toggle 28 to which is attached a rod 29 is kept open by a spring 30, the rod 31 straightening the toggle by the friction on the part 23 and closing the jaws 24 and 25 when the toggle is pulled backwardly at the proper time. The gripper is mounted upon a sliding frame 32, which guides its movement. The gripper carriage is reciprocated by a lever 33 secured to shaft 34, mounted in the frame of the machine. A roller 35 is likewise connected to the lever 33 and engages a cam 36, mounted on the main drive shaft of the machine. For each rotation of the main drive shaft, the gripper grips the end of the letter web and feeds it under the cutting mechanism. The letter sheet is then cut and the gripper given a slight forward movement to operate the toggle to open the gripper and release the sheet. At the proper time the gripper makes its return movement.

The cutting and folding bed 23 is provided with a fixed knife blade 37, which cooperates with the movable knife 38. The movable knife is mounted upon a frame 39 that may also be provided with scoring blades 40. The cutting frame 39 is guided by means of pins 41 and is pressed upwardly by springs 42. (See Fig. 5.) Two cam shafts 43 and 44, (see also Figs. 1, 2 and 3) provided with cams 45, 46, 47 and 48, are arranged over the cutting die, the cams giving the die its downward movement. On the shaft 43 is secured a gear 49 and on the shaft 44 is secured a gear 50, the two shafts being simultaneously driven by means of an intermediate gear 51 on a short stub shaft. A bevel gear 52 on the stub shaft meshes with a bevel 53, the latter being mounted on a shaft 54, which carries a bevel gear 55 (see Fig. 1), engaging with the bevel 56 on the main drive shaft 57 of the machine. As the main drive shaft rotates the cutting bed reciprocates.

Suitable means are provided for giving the primary fold to the letter or circular. (See Figs. 1, 2 and 5.) As shown in the drawings, a folding blade 58 is mounted to reciprocate through a slot in the cutting die 39 and into the folding throat 59. The folding blade 58 is driven by the arm 60, secured to the rock shaft 61, pivoted in the machine frame. A link 62 is connected to a crank 63 attached to the rock shaft, and a rod 64 is connected to the link, the rod carrying a roll 65 engaging the cam 66 on the main drive shaft 57 of the machine.

Suitable means are provided for carrying the folded letter from the primary folding mechanism through the machine in order to present the folded letter to the wing folders and to the envelop blank folding mechanism. The form of carrier used for carrying the folded letter through the machine may be widely varied. In the best embodiment of my invention, I make use of a carrier mounted to rotate and I give it an intermittent rotating movement. As shown in the drawings, the carrier consists of an open frame 67, secured to the shaft 68, the shaft 68 being driven by an intermittently operated driving mechanism. This mechanism is so constructed as to hold the carrier stationary after it has been given its intermittent movement. As illustrated in the drawings, each movement of the carrier rotates it a quarter turn. I have illustrated a Geneva stop movement for producing this intermittent rotation. To the shaft 68 there is secured a Geneva stop 69, having suitable cut-out portions, with which engages a disk 70 mounted upon a shaft, to which is secured a gear 71. The gear 71 meshes with the gear 72 secured to a short shaft 73, carrying a bevel gear 74, which engages with a bevel gear 75, on the main drive shaft 57 of the machine. An arm carrying the roll 76 is secured to the shaft, which carries the gear 71. The roll 76 engaging the recess 77 gives the shaft 68 a quarter turn, and the disk 70 locks the shaft 68 after it has been so turned. (See Fig. 4.)

Suitable means are provided for holding the folded letter against the carrier 67. In the best embodiment of my invention, I make use of grippers 78, which may move into and out of coöperative relation with the front face of the carrier. The means for giving the grippers their movement may

be widely varied. In the best embodiment of my invention illustrated upon the drawings, I make use of a rotating cam 79, loosely mounted upon the shaft 68, which carries the carrier. To the cam 79 there is secured a gear 80, which meshes with a gear 81, the latter in turn being secured to the shaft carrying the gear 71. The gear 81 is driven through the gear 71, gear 72, shaft 73, bevel gears 74, 75 from the main drive shaft 57. A cam roll 82 engages the cam groove 83 in the cam 79, the cam groove thus reciprocating the arm 84, carrying the grippers 78. The arm 84 is provided with a sleeve freely sliding on the guiding rod 85. The grippers 78 are mounted in a frame 86 and are guided at their upper ends by the brackets 87. By means of the cam groove 83 the grippers are raised and lowered so as to be in front of and withdrawn from the face of the carrier 67. In the best embodiment of my invention, I prefer to give the brackets 87 a movement toward and from the face of the carrier so as to press the grippers 78 against the circular, which is in turn pressed against the face of the carrier. I make use of a cam groove 88, engaging a roller 89 attached to the brackets 87, for giving the grippers this in and out movement. These parts are clearly illustrated in Fig. 28.

Suitable means are provided for applying gum to the envelop blank. In the embodiment of my invention illustrated upon the drawings, I make use of gumming arms 90, 91, carrying gumming pads 92 (see Figs. 1, 2 and 4), which gumming arms are mounted upon carrier 67 by means of brackets 93. The arms 90, 91 are reciprocated toward and from the front face of the carrier by means of a spring 94, rods 95, bell crank 96, cam roll 97 and cam 98. By reason of this mechanism, the arms 90, 91 may be reciprocated into the plane of the front face of the carrier or withdrawn therefrom in the operation of receiving gum and in the subsequent operation of applying gum to the envelop blank; and so as to keep the arms out of contact with the circular when required. The gumming arms 90, 91 may be supplied with gum by a variety of means. As illustrated upon the drawings, I make use of gum applying rolls 99, 100 (see Figs. 2, 4 and 6), which are mounted in a carriage 101, that is reciprocated by a link 102, actuated by bell crank 103 carrying the roll 104 engaging the cam 105 on the main drive shaft 57 of the machine. The rolls 99, 100 take their gum from the gumming reservoir 106 in the front of which is mounted a fountain roll 107. The fountain roll 107 carries a ratchet 108 that is engaged by a pawl 109 (see Fig. 2), which is carried by the arm 110, which is rocked by the arm 111, which arm carries a cam roll actuated by the cam 112 on the main drive shaft of the machine. By this means the fountain roll 107 is intermittently rotated to present a fresh surface to the gumming rolls. A spring 113 keeps the rolls on the arm 111 in contact with the cam 112. After the gumming pads 92 have received their gum from the rolls 99, 100 and these rolls have gotten out of the way, the carrier 67 makes a quarter turn and arrives in a position to receive the once folded circular. After the circular has been clamped on the face of the carrier by means of the gripper finger 78 one or more side folds or secondary folds are given to the circular by means of suitable folding mechanism.

In the form of the invention illustrated in the drawings, I make use of wing folders 114, 115 to produce the secondary folds. (See Figs. 1, 2 and 7.) The wing folders are mounted upon pivots 116, 117 which are in turn mounted upon the rock shaft 118. By means of the segments 119 the wing folders 114, 115 are moved simultaneously, but the parts are so proportioned and adjusted that one of the wing folders produces its fold slightly in advance of the other, with the result that the folded ends of the circular overlap. The wing folders 114, 115 are given a movement in one plane by the link 120, sliding sleeve 121, bell crank 122, cam roll 123 and cam 124. As above stated, they are mounted upon the rock shaft 118, which is rocked so as to give the folders a movement in a plane transverse to the first plane by means of an arm 125 connected to the rock shaft 118, the arm being oscillated by the connecting rod 126, which is actuated by the lever 127 carrying the cam roll 128, engaging with the cam 129. By these means the wing folders 114, 115 are caused to pass between the gumming arms 90, 91 and the wings or side flaps of the folded circular (the gumming arms having been withdrawn back of the face of the carrier) and are thus enabled to fold the circular over upon the face of the carrier 67. It will be remembered that the circular is held in place on the carrier by the gripper fingers 78 during this operation.

A spring gripper finger 129^a is located in the path of movement of the folded circular, carried by the carrier on its passage from the wing folders to the envelop blank folding mechanism, the function of which finger is to prevent the opening of the folded circular in its passage to the envelop blank cutting and folding mechanism.

Suitable means are provided for presenting the envelop blank to the folded circular and folding it about the circular. In the embodiment of the invention illustrated upon the drawings, I produce an envelop blank by cutting it out of a suitable web and folding it about the letter sheet or circular.

The means for cutting the envelop blank

from its web comprise a fixed member, which is shown as a female cutting die 130 and a movable member carrying a male cutting die 131. The movable member is provided with slides 132 that travel in suitable slide ways and are actuated by means of cams 133, engaging rolls 134 on the movable member. (See Figs. 3, 4, 6, 9, 10, 11 and 12.) The movable member carries a presser plate 135. In the movable member are mounted the folding blades for folding the envelop flaps about the folded circular. Side folders 136 and 137 and top and bottom folders 138 and 139 are mounted in the movable member for this purpose. The folders, in the form illustrated, are hinged in the movable member and have secured thereto segments 140, 141, 142 and 143, respectively, which are in turn engaged by the racks 144, 145, 146 and 147, respectively. Cams 148, 149 and 150 engaging the rolls 151, 152 and 153 actuate the racks so as to oscillate the folding blades. These cams are mounted on a shaft 150^a which carries a gear 150^b, driven by a gear 150^c, the latter being on the main drive shaft of the machine. When the folded circular carried by the carrier 67 is presented in front of the envelop cutting and folding mechanism, the presser plate 135 and cutter advance, the gumming arms 90, 91 advancing to meet it, and the envelop blank is cut out, gummed and the end flaps folded about the circular, as shown in Fig. 8. After the end flaps are folded down the wires 78 are withdrawn, the envelop being held against the presser plate by the wing folders 136 and 137. The presser plate end folders then retreat and the side wing folders 138 and 139, fold the top and bottom flaps about the circular. On the completion of the return movement the folded envelop is delivered in the chute 154 by means of the delivery rolls 155. The waste strip of the envelop web is reeled up at 156. (See Fig. 2.)

The envelop web is preferably fed intermittently by means of feed rolls 157 and 158 (see Fig. 2), which are actuated at the same time the delivery rolls 155 are actuated. Spur gear 159 (see Fig. 1), with part of its teeth cut away, intermittently drives a shaft on which is mounted the bevel gear 160 which engages the bevel gear 161 on shaft 162. The shaft 162 carries the bevel gears 163, 164, driving the bevels 165 and 166, the bevel gear 165 actuating the feed rolls 157, 158, and the bevel gear 166 actuating the delivery rolls 155.

The main shaft 57 of the machine is driven by a motor through a single revolution clutch. This clutch is illustrated in Fig. 4. A gear 167 is loosely mounted on the shaft 57, and the sleeve 168 is rigidly secured to said shaft. A key 169 pressed forward by a spring 170, carries an arm 171 which may engage a recess 172 in the gear 167. When the operator places his foot upon the treadle and rocks the cam 173 into engagement with the arm 171, and thus retracts the key 169, the motor drives the gear 167 without driving the shaft 57. The shaft may thus be caused to give a single revolution.

Referring to the form of the invention illustrated in Fig. 19, the letter web first passes through a mimeograph or copying press, comprising a printing roll 175 and a platen or impression roll 176, then over the platen 1, so that the typewriting machine 4 may be used to write the name and address, the body of the letter being printed by the copying press. In printing circulars by means of the mimeograph, in my invention, I prefer to first place a stencil sheet beneath the typewriting machine 4, and by means of the typewriter, write the body of the circular, excluding the name and address, on the stencil sheet, thus transferring the writing to the letter web and making the stencil in one operation. The stencil sheet is then put in the mimeograph on the printing roller 175, and as the letter web passes through the mimeograph, the body of the circular is repeatedly printed on the letter web. When the letter web reaches the platen 1, the typewriting machine supplies the name and address at the head of each letter. These addresses are also transferred to the record strip 6. The record strip 6, which is reeled upon the reel 7, will thus keep a copy of the body of the letter and also of the names and addresses to which the letter is to be sent. The steps in the folding operation may be readily understood by referring to Figs. 20 to 27. The letter sheet 177 receives a single transverse fold so as to form the product 178. The grippers 78 holding the once folded letter sheet against the carrier and the wing folders produce the folds 179 and 180 successively. The envelop blank 181, first has the end flaps 182, 183 folded about the circular, then the bottom flap 184, and finally the top flap 185 is folded down upon the envelop.

With the above description of the construction of my improved mailing machine, its operation will be readily understood. The operator writes the address on the letter sheet, which operation at the same time transfers the address to the envelop blank. He then writes the body of the letter on the letter sheet. Records of the printed matter are preserved in the machine. He then places his foot on the treadle and permits the shaft 57 to make one revolution. This may be done while he is writing the next letter. The letter is thus severed from its web, folded, cross-folded, and the envelop blank cut out from its web, gummed and folded about the letter sheet and the product 200 (Fig. 13) delivered from the machine.

My invention in its broader aspects is not

limited to the particular constructions and relative arrangements of the parts herein shown and described nor to any particular form of apparatus by which the invention may be carried into effect, as many changes may be made in the construction and relative arrangement of the parts as required to adapt the apparatus to the circumstances of the particular application of the invention or to meet the personal views of the mechanical engineer employed to carry the invention into effect without departing from the main principles of the invention and without sacrificing its chief advantages.

Having thus described my invention, what I claim and desire to secure by Letters Patent, is:

1. In a machine of the character described, suitable means for printing, means for producing a letter sheet, means for folding said sheet, means for producing an independent envelop blank and inclosing said sheet therein, a driving shaft and connections between said producing and folding means and said shaft whereby said means are operated in predetermined succession in combination with means for intermitting the operation of said shaft-driven means.

2. In a machine of the character described, suitable means for printing including a platen, and independently movable type in coöperative position with respect to said platen in combination with means for producing a letter sheet, means for folding said sheet, means for producing an envelop blank, and inclosing the letter sheet in the envelop blank, a driving shaft, connections between said producing and folding means and said shaft whereby each shaft-driven means is operated in predetermined succession, and means for intermittently rotating said shaft.

3. In a machine of the character described, suitable means for printing in combination with means for producing a letter sheet, means for folding said sheet, means for producing an independent envelop blank, means for folding said envelop blank, means for presenting said letter sheet and envelop blank to receive an impression from said printing means, a driving shaft and connections between said producing and folding means and said shaft whereby said means are operated in predetermined succession.

4. In a machine of the character described, suitable means for printing including a platen and a changeable impression device in combination with means for producing a letter sheet, means for folding said sheet, means for producing an envelop blank and inclosing said sheet in said envelop blank, a driving shaft, connections between said producing and folding means and said shaft whereby said means are operated in predetermined succession, and means for intermittently rotating said shaft.

5. In a mailing machine, the combination of means for feeding a web of paper, a platen over which said web is fed, a typewriting machine adapted to print upon said web, means for associating a record strip with said web, means for cutting a letter sheet from said web, means for folding said sheet, means for producing an envelop blank and means for folding said blank about said sheet.

6. In a mailing machine, the combination of means for feeding a web of paper, a platen over which said web is fed, a typewriting machine adapted to print upon said web, means for associating a record strip with said web, means for associating a transfer ribbon between said web and said record strip, means for cutting a letter sheet from said web, means for folding said sheet, means for supporting and guiding an envelop web, means for cutting an envelop blank from said web and means for folding said envelop blank about said sheet.

7. In a mailing machine, the combination of means for feeding a web of paper, a platen over which said web is fed, means for associating a record strip with said web, means for associating a transfer ribbon between said web and said record strip, means for feeding an envelop web, means for associating a transfer ribbon with said envelop web, means for cutting a letter sheet from said first named web, means for cutting an envelop blank from said last named web and means for inclosing said letter sheet in said envelop blank.

8. In a mailing machine, the combination of means for feeding a web of paper, a platen over which said web is fed, means for associating a record strip with said web, means for associating a transfer ribbon between said web and said record strip, means for feeding an envelop web, means for associating a transfer ribbon with said envelop web, means for supporting and guiding a typewriting machine over said platen whereby said machine is adapted to print upon said letter web and upon said envelop web, means for cutting a letter sheet from said first named web, means for cutting an envelop blank from said last named web and means for inclosing said letter in said envelop blank.

9. In a mailing machine, the combination of a platen, printing mechanism arranged above said platen, gripping mechanism for intermittently feeding the web of paper over said platen, cutting mechanism for cutting a letter sheet from said web, folding mechanism for folding said sheet and means for inclosing said folded sheet in an envelop.

10. In a mailing machine, the combina-

tion of a platen, means for feeding a web of paper over said platen, means for printing on said roll while on said platen, cutting mechanism for cutting a letter sheet from said web after it has been printed upon by said printing means, folding mechanism for imparting an initial fold to said letter sheet, a carrier for receiving said folded sheet, one or more wing folders for imparting one or more secondary folds to said sheet, while carried by said carrier and means for inclosing said sheet in an envelop.

11. In a mailing machine, the combination of a platen, printing mechanism arranged in suitable coöperative position with respect to said platen, means for feeding a web of paper over said platen, cutting mechanism for cutting a letter sheet from said web, folding mechanism for imparting an initial fold to said letter sheet, a carrier for receiving said folded sheet, one or more wing folders for imparting one or more secondary folds to said sheet, while carried by said carrier and means for folding an envelop blank about said folded sheet.

12. In a mailing machine, the combination of a platen, printing mechanism arranged in suitable coöperative position with respect to said platen, means for feeding a web of paper over said platen, cutting mechanism for cutting a letter sheet from said web, folding mechanism for imparting an initial fold to said letter sheet, a carrier for receiving said folded sheet, one or more wing folders for imparting one or more secondary folds to said sheet, while carried by said carrier, means for feeding an envelop web, means for cutting an envelop blank from said web and means for folding said envelop blank about said folded sheet.

13. In a mailing machine, the combination of a platen, printing mechanism arranged in suitable coöperative position with respect to said platen, means for feeding a web of paper over said platen, cutting mechanism for cutting a letter sheet from said web, folding mechanism for imparting an initial fold to said letter sheet, a carrier for receiving said folded sheet, means for intermittently rotating said carrier, one or more wing folders for imparting one or more secondary folds to said sheet, while carried by said carrier and means for inclosing said folded sheet in an envelop.

14. In a mailing machine, the combination of a platen, printing mechanism arranged in suitable coöperative position with respect to said platen, means for feeding a web of paper over said platen, cutting mechanism for cutting a letter sheet from said web, folding mechanism for imparting an initial fold to said letter sheet, a carrier for receiving said folded sheet, means for intermittently rotating said carrier, one or more wing folders for imparting one or more secondary folds to said sheet, while carried by said carrier and means for folding an envelop blank about said folded sheet.

15. In a mailing machine, the combination of a platen, printing mechanism arranged in suitable coöperative position with respect to said platen, means for feeding a web of paper over said platen, cutting mechanism for cutting a letter sheet from said web, folding mechanism for imparting an initial fold to said letter sheet, a carrier for receiving said folded sheet, means for intermittently rotating said carrier, one or more wing folders for imparting one or more secondary folds to said sheet, while carried by said carrier, means for feeding an envelop web, means for cutting an envelop blank from said web and means for folding said envelop blank about said folded sheet.

16. In a mailing machine, the combination of a platen, printing mechanism arranged in suitable coöperative position with respect to said platen, means for feeding a letter sheet over said platen, folding mechanism for imparting a primary fold to said letter sheet, a carrier for receiving said folded sheet, grippers for holding said sheet against said carrier, means for intermittently rotating said carrier, wing folders for imparting one or more secondary folds to said sheet, means for imparting movements to said wing folders in transverse planes and means for folding an envelop blank about said folded sheet.

17. In a mailing machine, the combination of a platen, printing mechanism arranged in suitable coöperative position with respect to said platen, means for feeding a letter sheet over said platen, folding mechanism for imparting a primary fold to said letter sheet, a carrier for receiving said folded sheet, grippers for holding said sheet against said carrier, means for intermittently rotating said carrier, wing folders for imparting one or more secondary folds to said sheet, a shaft on which said wing folders are mounted, means for rocking said shaft, means for reciprocating said wing folders with relation to said shaft and means for folding an envelop blank about said folded sheet.

18. In a mailing machine, the combination of a platen, printing mechanism arranged in suitable coöperative position with respect to said platen, means for feeding a web of paper over said platen, cutting mechanism for cutting a letter sheet from said web, folding mechanism for imparting an initial fold to said letter sheet, a carrier for receiving said folded sheet, envelop blank folding mechanism, means whereby said carrier presents said folded sheet to said envelop, blank folding mechanism and means for actuating said last named folding mech-

anism to fold an envelop blank about said folded sheet.

19. In a mailing machine, the combination of a platen, printing mechanism arranged in suitable coöperative position with respect to said platen, means for feeding a web of paper over said platen, cutting mechanism for cutting a letter sheet from said web, folding mechanism for imparting an initial fold to said letter sheet, a carrier for receiving said folded sheet, envelop blank folding mechanism, means for intermittently rotating said carrier, whereby said carrier presents said folded sheet to said envelop blank folding mechanism and means for actuating said last named folding mechanism to fold an envelop blank about said folded sheet.

20. In a mailing machine, the combination of a platen, printing mechanism arranged in suitable coöperative position with respect to said platen, means for feeding a web of paper over said platen, cutting mechanism for cutting a letter sheet from said web, folding mechanism for imparting an initial fold to said letter sheet, a carrier for receiving said folded sheet, envelop blank folding mechanism, means for intermittently rotating said carrier, whereby said carrier presents said folded sheet to said envelop blank folding mechanism, envelop blank gumming mechanism and means for actuating said last named folding mechanism to fold an envelop blank about said folded sheet.

21. In a mailing machine, the combination of a platen, printing mechanism arranged in suitable coöperative position with respect to said platen, means for feeding a web of paper over said platen, cutting mechanism for cutting a letter sheet from said web, folding mechanism for imparting an initial fold to said letter sheet, a carrier for receiving said folded sheet, envelop blank folding mechanism, means for intermittently rotating said carrier, whereby said carrier presents said folded sheet to said envelop blank folding mechanism, envelop blank gumming mechanism mounted on said carrier and means for actuating said last named folding mechanism to fold an envelop blank about said folded sheet.

22. In a mailing machine, the combination of a platen, printing mechanism arranged in suitable coöperative position with respect to said platen, means for feeding a web of paper over said platen, cutting mechanism for cutting a letter sheet from said web, folding mechanism for imparting an initial fold to said letter sheet, a carrier for receiving said folded sheet, envelop blank folding mechanism, means for intermittently rotating said carrier, whereby said carrier presents said folded sheet to said envelop blank folding mechanism, envelop blank gumming mechanism mounted on said carrier, gumming rolls for applying gum to said gumming mechanism and means for actuating said last named folding mechanism to fold an envelop blank about said folded sheet.

23. In a mailing machine, the combination of a platen, printing mechanism arranged in suitable coöperative position with respect to said platen, means for feeding a web of paper over said platen, cutting mechanism for cutting a letter sheet from said web, folding mechanism for imparting an initial fold to said letter sheet, a carrier for receiving said folded sheet, one or more folding wings for imparting on or more secondary folds to said folded sheet, envelop blank folding mechanism, means whereby said carrier presents said folded sheet to said envelop blank folding mechanism and means for actuating said last named folding mechanism to fold an envelop blank about said folded sheet.

24. In a mailing machine, the combination of a platen, printing mechanism arranged in suitable coöperative position with respect to said platen, means for feeding a web of paper over said platen, cutting mechanism for cutting a letter sheet from said web, folding mechanism for imparting an initial fold to said letter sheet, a carrier for receiving said folded sheet, one or more folding wings for imparting one or more secondary folds to said folded sheet, envelop blank folding mechanism, means for intermittently rotating said carrier, whereby said carrier presents said folded sheet to said envelop blank folding mechanism and means for actuating said last named folding mechanism to fold an envelop blank about said folded sheet.

25. In a mailing machine, the combination of a platen, printing mechanism arranged in suitable coöperative position with respect to said platen, means for feeding a web of paper over said platen, cutting mechanism for cutting a letter sheet from said web, folding mechanism for imparting an initial fold to said letter sheet, a carrier for receiving said folded sheet, one or more folding wings for imparting one or more secondary folds to said folded sheet, envelop blank folding mechanism, means for intermittently rotating said carrier, whereby said carrier presents said folded sheet to said envelop blank folding mechanism, envelop blank gumming mechanism and means for actuating said last named folding mechanism to fold an envelop blank about said folded sheet.

26. In a mailing machine, the combination of a platen, printing mechanism arranged in suitable coöperative position with respect to said platen, means for feeding a web of paper over said platen, cutting mech-

anism for cutting a letter sheet from said web, folding mechanism for imparting an initial fold to said letter sheet, a carrier for receiving said folded sheet, one or more folding wings for imparting one or more secondary folds to said folded sheet, envelop blank folding mechanism, means for intermittently rotating said carrier, whereby said envelop blank folding mechanism, envelop blank gumming mechanism mounted on said carrier and means for actuating said last named folding mechanism to fold an envelop blank about said folded sheet.

27. In a mailing machine, the combination of a platen, printing mechanism arranged in suitable coöperative position with respect to said platen, means for feeding a web of paper over said platen, cutting mechanism for cutting a letter sheet from said web, folding mechanism for imparting an initial fold to said letter sheet, a carrier for receiving said folded sheet, one or more folding wings for imparting one or more secondary folds to said folded sheet, envelop blank folding mechanism, means for intermittently rotating said carrier, whereby said carrier presents said folded sheet to said envelop blank folding mechanism, envelop blank gumming mechanism mounted on said carrier, gumming rolls for applying gum to said gumming mechanism, and means for actuating said last named folding mechanism to fold an envelop blank about said folded sheet.

28. In a mailing machine, the combination of a platen, printing mechanism arranged in suitable coöperative position with respect to said platen, means for feeding a web of paper over said platen, cutting mechanism for cutting a letter sheet from said web, folding mechanism for imparting an initial fold to said letter sheet, a carrier for receiving said folded sheet, envelop blank cutting mechanism, envelop blank folding mechanism, means whereby said carrier presents said folded sheet to said envelop blank folding mechanism and means for actuating said last named folding mechanism to fold an envelop blank about said folded sheet.

29. In a mailing machine, the combination of a platen, printing mechanism arranged in suitable coöperative position with respect to said platen, means for feeding a web of paper over said platen, cutting mechanism for cutting a letter sheet from said web, folding mechanism for imparting an initial fold to said letter sheet, a carrier for receiving said folded sheet, envelop blank cutting mechanism, envelop blank folding mechanism, means for intermittently rotating said carrier, whereby said carrier presents said folded sheet to said envelop blank folding mechanism and means for actuating said last named folding mechanism to fold an envelop blank about said folded sheet.

30. In a mailing machine, the combination of a platen, printing mechanism arranged in suitable coöperative position with respect to said platen, means for feeding a web of paper over said platen, cutting mechanism for cutting a letter sheet from said web, folding mechanism for imparting an initial fold to said letter sheet, a carrier for receiving said folded sheet, envelop blank cutting mechanism, envelop blank folding mechanism, means for intermittently rotating said carrier, whereby said carrier presents said folded sheet to said envelop blank folding mechanism, envelop gumming mechanism and means for actuating said last named folding mechanism to fold an envelop blank about said folded sheet.

31. In a mailing machine, the combination of a platen, printing mechanism arranged in suitable coöperative position with respect to said platen, means for feeding a web of paper over said platen, cutting mechanism for cutting a letter sheet from said web, folding mechanism for imparting an initial fold to said letter sheet, a carrier for receiving said folded sheet, envelop blank cutting mechanism, envelop blank folding mechanism, means for intermittently rotating said carrier, whereby said carrier presents said folded sheet to said envelop blank folding mechanism, envelop blank gumming mechanism mounted on said carrier and means for actuating said last named folding mechanism to fold an envelop blank about said folded sheet.

32. In a mailing machine, the combination of a platen, printing mechanism arranged in suitable coöperative position with respect to said platen, means for feeding a web of paper over said platen, cutting mechanism for cutting a letter sheet from said web, folding mechanism for imparting an initial fold to said letter sheet, a carrier for receiving said folded sheet, envelop blank cutting mechanism, envelop blank folding mechanism, means for intermittently rotating said carrier, whereby said carrier presents said folded sheet to said envelop blank folding mechanism, envelop blank gumming mechanism mounted on said carrier, gumming rolls for supplying gum to said gumming mechanism and means for actuating said last named folding mechanism to fold an envelop blank about said folded sheet.

33. In a mailing machine, the combination of a platen, printing mechanism arranged in suitable coöperative position with respect to said platen, means for feeding a web of paper over said platen, cutting mechanism for cutting a letter sheet from said web, folding mechanism for imparting an initial

fold to said letter sheet, a carrier for receiving said folded sheet, one or more folding wings for imparting one or more secondary folds to said folded sheet, envelop blank cutting mechanism, envelop blank folding mechanism, means whereby said carrier presents said folded sheet to said envelop blank folding mechanism and means for actuating said last named folding mechanism to fold an envelop blank about said folded sheet.

34. In a mailing machine, the combination of a platen, printing mechanism arranged in suitable coöperative position with respect to said platen, means for feeding a web of paper over said platen, cutting mechanism for cutting a letter sheet from said web, folding mechanism for imparting an initial fold to said letter sheet, a carrier for receiving said folded sheet, one or more folding wings for imparting one or more secondary folds to said folded sheet, envelop blank cutting mechanism, envelop blank folding mechanism, means for intermittently rotating said carrier, whereby said carrier presents said folded sheet to said envelop blank folding mechanism and means for actuating said last named folding mechanism to fold an envelop blank about said folded sheet.

35. In a mailing machine, the combination of a platen, printing mechanism arranged in suitable coöperative position with respect to said platen, means for feeding a web of paper over said platen, cutting mechanism for cutting a letter sheet from said web, folding mechanism for imparting an initial fold to said letter sheet, a carrier for receiving said folded sheet, one or more folding wings for imparting one or more secondary folds to said folded sheet, envelop blank cutting mechanism, envelop blank folding mechanism, means for intermittently rotating said carrier, whereby said carrier presents said folded sheet to said envelop blank folding mechanism, envelop blank gumming mechanism and means for actuating said last named folding mechanism to fold an envelop blank about said folded sheet.

36. In a mailing machine, the combination of a platen, printing mechanism arranged in suitable coöperative position with respect to said platen, means for feeding a web of paper over said platen, cutting mechanism for cutting a letter sheet from said web, folding mechanism for imparting an initial fold to said letter sheet, a carrier for receiving said folded sheet, one or more folding wings for imparting one or more secondary folds to said folded sheet, envelop blank cutting mechanism, envelop blank folding mechanism, means for intermittently rotating said carrier, whereby said carrier presents said folded sheet to said envelop blank folding mechanism, envelop blank gumming mechanism mounted on said carrier and means for actuating said last named folding mechanism to fold an envelop blank about said folded sheet.

37. In a mailing machine, the combination of a platen, printing mechanism arranged in suitable coöperative position with respect to said platen, means for feeding a web of paper over said platen, cutting mechanism for cutting a letter sheet from said web, folding mechanism for imparting an initial fold to said letter sheet, a carrier for receiving said folded sheet, one or more folding wings for imparting one or more secondary folds to said folded sheet, envelop blank cutting mechanism, envelop blank folding mechanism, means for intermittently rotating said carrier, whereby said carrier presents said folded sheet to said envelop blank folding mechanism, envelop blank gumming mechanism mounted on said carrier, gumming rolls for applying gum to said gumming mechanism and means for actuating said last named folding mechanism to fold an envelop blank about said folded sheet.

38. In a mailing machine, the combination of a platen, a printing mechanism arranged in suitable coöperative position with respect to said platen, meansfor feeding a web of paper over said platen, cutting mechanism for cutting a letter sheet from said web, folding mechanism for imparting an initial fold to said letter sheet, a carrier for receiving said folded sheet, envelop blank cutting mechanism comprising two members, envelop blank folding mechanism mounted on and moving, with one of said members, means whereby said carrier presents said folded sheet to said envelop blank folding mechanism and means for actuating said last named folding mechanism to fold an envelop blank about said folded sheet.

39. In a mailing machine, the combination of a platen, printing mechanism arranged in suitable coöperative position with respect to said platen, means for feeding a web of paper over said platen, cutting mechanism for cutting a letter sheet from said web, folding mechanism for imparting an initial fold to said letter sheet, a carrier for receiving said folded sheet, envelop blank cutting mechanism comprising two members, envelop blank folding mechanism mounted on and moving with one of said members, means for intermittently rotating said carrier, whereby said carrier presents said folded sheet to said envelop blank folding mechanism and means for actuating said last named folding mechanism to fold an envelop blank about said folded sheet.

40. In a mailing machine, the combination of a platen, printing mechanism arranged in suitable coöperative position with

respect to said platen, means for feeding a web of paper over said platen, cutting mechanism for cutting a letter sheet from said web, folding mechanism for imparting an initial fold to said letter sheet, a carrier for receiving said folded sheet, envelop blank cutting mechanism comprising two members, envelop blank folding mechanism mounted on and moving with one of said members, means for intermediately rotating said carrier, whereby said carrier presents said folded sheet to said envelop blank folding mechanism, envelop gumming mechanism and means for actuating said last named folding mechanism to fold an envelop blank about said folded sheet.

41. In a mailing machine, the combination of a platen, printing mechanism arranged in suitable coöperative position with respect to said platen, means for feeding a web of paper over said platen, cutting mechanism for cutting a letter sheet from said web, folding mechanism for imparting an initial fold to said letter sheet, a carrier for receiving said folded sheet, envelop blank cutting mechanism comprising two members, envelop blank folding mechanism mounted on and moving with one of said members, means for intermittently rotating said carrier, whereby said carrier presents said folded sheet to said envelop blank folding mechanism, envelop blank gumming mechanism mounted on said carrier and means for actuating said last named folding mechanism to fold an envelop blank about said folded sheet.

42. In a mailing machine, the combination of a platen, printing mechanism arranged in suitable coöperative position with respect to said platen, means for feeding a web of paper over said platen, cutting mechanism for cutting a letter sheet from said web, folding mechanism for imparting an receiving said folded sheet, envelop blank initial fold to said letter sheet, a carrier for cutting mechanism comprising two members, envelop blank folding mechanism mounted on and moving with one of said members, means for intermittently rotating said carrier, whereby said carrier presents said folded sheet to said envelop blank folding mechanism, envelop blank gumming mechanism mounted on said carrier, gumming rolls for supplying gum to said gumming mechanism and means for actuating said last named folding mechanism to fold an envelop blank about said folded sheet.

43. In a mailing machine, the combination of a platen, printing mechanism arranged in suitable coöperative position with respect to said platen, means for feeding a web of paper over said platen, cutting mechanism for cutting a letter sheet from said web, folding mechanism for imparting an initial fold to said letter sheet, a carrier for receiving said folded sheet, one or more folding wings for imparting one or more secondary folds to said folded sheet, envelop blank cutting mechanism comprising two members, envelop blank folding mechanism mounted on and moving with one of said members, means whereby said carrier presents said folded sheet to said envelop blank folding mechanism and means for actuating said last named folding mechanism to fold an envelop blank about said folded sheet.

44. In a mailing machine, the combination of a platen, printing mechanism arranged in suitable coöperative position with respect to said platen, means for feeding a web of paper over said platen, cutting mechanism for cutting a letter sheet from said web, folding mechanism for imparting an initial fold to said letter sheet, a carrier for receiving said folded sheet, one or more folding wings for imparting one or more secondary folds to said folded sheet, envelop blank cutting mechanism comprising two members, envelop blank folding mechanism mounted on and moving with one of said members, means for intermittently rotating said carrier, whereby said carrier presents said folded sheet to said envelop blank folding mechanism, envelop blank gumming mechanism and means for actuating said last named folding mechanism to fold an envelop blank about said folded sheet.

45. In a mailing machine, the combination of a platen, printing mechanism arranged in suitable coöperative position with respect to said platen, means for feeding a web of paper over said platen, cutting mechanism for cutting a letter sheet from said web, folding mechanism for imparting an initial fold to said letter sheet, a carrier for receiving said folded sheet, cutting mechanism comprising two members, envelop blank folding mechanism comprising folding blades pivoted in one of said members, means whereby said carrier presents said folded sheet to said envelop blank folding mechanism and means for actuating said last named folding mechanism to fold an envelop blank about said folded sheet.

46. In a mailing machine, the combination of a platen, printing mechanism arranged in suitable coöperative position with respect to said platen, means for feeding a web of paper over said platen, cutting mechanism for cutting a letter sheet from said web, folding mechanism for imparting an initial fold to said letter sheet, a carrier for receiving said folded sheet, cutting mechanism comprising two members, envelop blank folding mechanism comprising folding blades mounted in one of said members, means for intermittently rotating said carrier, whereby said carrier presents said folded sheet to said envelop blank folding mechanism, envelop blank gumming mecha-

nism and means for actuating said last named folding mechanism to fold an envelop blank about said folded sheet.

47. In a mailing machine, the combination of a platen, printing mechanism arranged in suitable coöperative position with respect to said platen, means for feeding a web of paper over said platen, cutting mechanism for cutting a letter sheet from said web, folding mechanism for imparting an initial fold to said letter sheet, a carrier for receiving said folded sheet, one or more folding wings for imparting one or more secondary folds to said folded sheet, cutting mechanism compising two members, envelop blank folding mechanism comprising folding blades pivoted in one of said members, means whereby said carrier presents said folded sheet to said envelop blank folding mechanism and means for actuating said last named folding mechanism to fold an envelop blank about said folded sheet.

48. In a mailing machine, the combination of a platen, printing mechanism arranged in suitable coöperative position with respect to said platen, means for feeding a web of paper over said platen, cutting mechanism for cutting a letter sheet from said web, folding mechanism for imparting an initial fold to said letter sheet, a carrier for receiving said folded sheet, one or more folding wings for imparting one or more secondary folds to said folded sheet, cutting mechanism comprising two members, envelop blank folding mechanism comprising folding blades pivoted in one of said members, means for actuating said folding blades, means for intermittently rotating said carrier, whereby said carrier presents said folded sheet to said envelop blank folding mechanism, envelop blank gumming mechanism and means for actuating said last named folding mechanism to fold an envelop blank about said folded sheet.

49. In a mailing machine, the combination of a platen, printing mechanism arranged in suitable coöperative position with respect to said platen, means for feeding a web of paper over said platen, cutting mechanism for cutting a letter sheet from said web, folding mechanism for imparting an initial fold to said letter sheet, a carrier for receiving said folded sheet, cutting mechanism comprising two members, one of said members including a presser plate adapted to press the body of an envelop blank toward said carrier, envelop blank folding mechanism comprising folding blades pivoted in one of said members, means whereby said carrier presents said folded sheet to said envelop blank folding mechanism and means for actuating said last named folding mechanism to fold an envelop blank about said folded sheet.

50. In a mailing machine, the combination of a platen, printing mechanism arranged in suitable coöperative position with respect to said platen, means for feeding a web of paper over said platen, cutting mechanism for cutting a letter sheet from said web, folding mechanism for imparting an initial fold to said letter sheet, a carrier for receiving said folded sheet, cutting mechanism comprising two members, one of said members including a presser plate adapted to press the body of an envelop blank toward said carrier, envelop blank folding mechanism comprising folding blades pivoted in one of said members, means for intermittently rotating said carrier, whereby said carrier presents said folded sheet to said envelop blank folding mechanism and means for actuating said last named folding mechanism to fold an envelop blank about said folded sheet.

51. In a mailing machine, the combination of a platen, printing mechanism arranged in suitable coöperative position with respect to said platen, means for feeding a web of paper over said platen, cutting mechanism for cutting a letter sheet from said web, folding mechanism for imparting an initial fold to said letter sheet, a carrier for receiving said folded sheet, cutting mechanism comprising two members, one of said members including a presser plate adapted to press the body of an envelop blank toward said carrier, envelop blank folding mechanism comprising folding blades mounted in one of said members, means for intermittently rotating said carrier, whereby said carrier presents said folded sheet to said envelop blank folding mechanism, envelop blank gumming mechanism and means for actuating said last named folding mechanism to fold an envelop blank about said folded sheet.

52. In a mailing machine, the combination of a platen, printing mechanism arranged in suitable coöperative position with respect to said platen, means for feeding a web of paper over said platen, cutting mechanism for cutting a letter sheet from said web, folding mechanism for imparting an initial fold to said letter sheet, a carrier for receiving said folded sheet, cutting mechanism comprising two members, one of said members including a presser plate adapted to press the body of an envelop blank toward said carrier, envelop blank folding mechanism comprising folding blades pivoted in one of said members, means for intermittently rotating said carrier, whereby said carrier presents said folded sheet to said envelop blank folding mechanism, envelop blank gumming mechanism mounted on said carrier and means for actuating said last named folding mechanism to fold an envelop blank about said folded sheet.

53. In a mailing machine, the combination

of a platen, printing mechanism arranged in suitable coöperative position with respect to said platen, means for feeding a web of paper over said platen, cutting mechanism for cutting a letter sheet from said web, folding mechanism for imparting an initial fold to said letter sheet, a carrier for receiving said folded sheet, cutting mechanism comprising two members, one of said members including a presser plate adapted to press the body of an envelop blank toward said carrier, envelop blank folding mechanism comprising folding blades pivoted in one of said members, means for intermittently actuating said carrier, whereby said carrier presents said folded sheet to said envelop blank folding mechanism, envelop blank gumming mechanism mounted on said carrier, gumming rolls for applying gum to said gumming mechanism, and means for actuating said last named folding mechanism to fold an envelop blank about said folded sheet.

54. In a mailing machine, the combination of a platen, printing mechanism arranged in suitable coöperative position with respect to said platen, means for feeding a web of paper over said platen, cutting mechanism for cutting a letter sheet from said web, folding mechanism for imparting an initial fold to said letter sheet, a carrier for receiving said folded sheet, one or more folding wings for imparting one or more secondary folds to said folded sheet, cutting mechanism comprising two members, one of said members including a presser plate adapted to press the body of an envelop blank toward said carrier, envelop blank folding mechanism comprising folding blades pivoted in one of said members, means whereby said carrier presents said folded sheet to said envelop blank folding mechanism and means for actuating said last named folding mechanism to fold an envelop blank about said folded sheet.

55. In a mailing machine, the combination of a platen, printing mechanism arranged in suitable coöperative position with respect to said platen, means for feeding a web of paper over said platen, cutting mechanism for cutting a letter sheet from said web, folding mechanism for imparting an initial fold to said letter sheet, a carrier for receiving said folded sheet, one or more folding wings for imparting one or more secondary folds to said folded sheet, cutting mechanism comprising two members, one of said members including a presser plate adapted to press the body of an envelop blank toward said carrier, envelop blank folding mechanism comprising folding blades pivoted in one of said members, means for intermittently rotating said carrier, whereby said carrier presents said folded sheet to said envelop blank folding mechanism and means for actuating said last named folding mechanism to fold an envelop blank about said folded sheet.

56. In a mailing machine, the combination of a platen, printing mechanism arranged in suitable coöperative position with respect to said platen, means for feeding a web of paper over said platen, cutting mechanism for cutting a letter sheet from said web, folding mechanism for imparting an initial fold to said letter sheet, a carrier for receiving said folded sheet, one or more folding wings for imparting one or more secondary folds to said folded sheet, cutting mechanism comprising two members, one of said members including a presser plate adapted to press the body of an envelop blank toward said carrier, envelop blank folding mechanism comprising folding blades pivoted in one of said members, means for intermittently rotating said carrier, whereby said carrier presents said folded sheet to said envelop blank folding mechanism, envelop blank gumming mechanism and means for actuating said last named folding mechanism to fold an envelop blank about said folded sheet.

57. In a mailing machine, the combination of a platen, printing mechanism arranged in suitable coöperative position with respect to said platen, means for feeding a web of paper over said platen, cutting mechanism for cutting a letter sheet from said web, folding mechanism for imparting an initial fold to said letter sheet, a carrier for receiving said folded sheet, one or more folding wings for imparting one or more secondary folds to said folded sheet, cutting mechanism comprising two members, one of said members including a presser plate adapted to press the body of an envelop blank toward said carrier, envelop blank folding mechanism comprising folding blades pivoted in one of said members, means for intermittently rotating said carrier, whereby said carrier presents said folded sheet to said envelop blank folding mechanism, envelop blank gumming mechanism mounted on said carrier and means for actuating said last named folding mechanism to fold an envelop blank about said folded sheet.

58. In a mailing machine, the combination of a platen, printing mechanism arranged in suitable coöperative position with respect to said platen, means for feeding a web of paper over said platen, cutting mechanism for cutting a letter sheet from said web, folding mechanism for imparting an initial fold to said letter sheet, a carrier for receiving said folded sheet, one or more folding wings for imparting one or more secondary folds to said folded sheet, cut-

ting mechanism comprising two members, one of said members including a presser plate adapted to press the body of an envelop blank toward said carrier, envelop blank folding mechanism comprising folding blades pivoted in one of said members, means for intermittently rotating said carrier, whereby said carrier presents said folded sheet to said envelop blank folding mechanism, envelop blank gumming mechanism mounted on said carrier, gumming rolls for applying gum to said gumming mechanism and means for actuating said last named folding mechanism to fold an envelop blank about said folded sheet.

59. In a machine of the class described, means for producing a letter sheet, means for folding said sheet, means for producing an independent envelop blank and inclosing said sheet therein, means for printing upon said letter sheet and envelop blank before said sheet is folded, a driving shaft, connections between said producing and folding and inclosing means and said shaft whereby said means are operated in predetermined succession, and means for intermittently rotating said shaft.

60. In a mailing machine, the combination of a platen, printing mechanism mounted in suitable coöperative position with respect to said platen, means for feeding a letter sheet over said platen, means for folding said sheet and means for folding an envelop blank about said folded sheet.

61. In a mailing machine, the combination of means for feeding a web of paper, printing mechanism for printing on said web, a platen over which said web is fed, a typewriting machine supported in suitable coöperative position with respect to said platen, means for cutting a letter sheet from said web, means for folding said sheet and means for folding an envelop blank about said sheet.

62. In a mailing machine, the combination of means for feeding a web of paper, printing mechanism for printing on said web located in suitable coöperative position with respect thereto, means for cutting a letter sheet from said web, means for folding said sheet, a carrier for receiving said folded sheet, means for preventing the opening of the folded circular while carried by the carrier and means for folding an envelop blank about said folded sheet.

63. In a mailing machine, the combination of means for feeding a web of paper, a platen over which said web is fed, a typewriting machine adapted to print upon said web supported in coöperative position with respect to said platen, means for associating a record strip with said web, means for cutting a letter sheet from said web, means for folding said sheet, independent means for producing an envelop blank, means for folding said blank about said sheet, a power shaft for the mailing machine, a single revolution clutch whereby said shaft is enabled to make a single revolution, means under the control of the operator for throwing in said clutch, the parts being so constructed and arranged that the operator may write the body of the letter by means of the typewriting machine, and a letter sheet may be severed from its web, folded, and an envelop blank produced and folded about said sheet.

64. In a mailing machine, the combination of a platen, printing mechanism arranged in coöperative position above said platen, gripping mechanism for intermittently feeding the web of paper over said platen, cutting mechanism for cutting a letter sheet from said web, folding mechanism for folding said sheet, means for inclosing said folded sheet in an envelop, a power shaft for said mailing machine, and a single revolution clutch under the control of the operator for said shaft.

65. In a mailing machine, the combination of a platen, printing mechanism arranged in suitable coöperative position with respect to said platen, means for feeding a web of paper over said platen, cutting mechanism for cutting a letter sheet from said web, folding mechanism for imparting an initial fold to said letter sheet, a carrier for receiving said folded sheet, means for intermittently rotating said carrier, one or more wing folders for imparting one or more secondary folds to said sheet, while carried by said carrier, means for inclosing said folded sheet in an envelop, a power shaft for said mailing machine, and a single revolution clutch under control of the operator for said shaft.

66. In a machine of the character described, means for producing a letter sheet, means for producing an independent envelop blank, means for simultaneously printing on both said blanks, means for folding the letter sheet, and inclosing said sheet in said envelop blank, a driving shaft, connections between said producing and folding and inclosing means and said shaft whereby said means are operated in succession and means for intermittently rotating said shaft.

67. In a mailing machine the combination of a platen, printing mechanism in suitable coöperative position with respect to said platen, means for feeding a letter sheet web over said platen, means for feeding an envelop blank over said platen, means for folding said sheet, and means for folding the envelop blank about said folded sheet.

68. In a mailing machine the combination of a platen, means for feeding a letter sheet

web over said platen, means for feeding an envelop blank over said platen simultaneously with the letter sheet, means for printing on both simultaneously, means for folding said sheet and means for folding the envelop blank about said folded sheet.

69. In a machine of the class described means for feeding a letter sheet web, means for cutting said web into letter sheets, means for feeding an envelop web, means for printing upon said letter web and envelop web, means for cutting envelop blanks from said envelop web, means for applying an adhesive to the envelop blanks, means for folding the letter sheets, means for folding the end flaps of the envelop blanks about the letter sheets, means for folding the top and bottom flaps of the envelop blanks about the letter sheets to complete the envelops and seal the letter sheets therein.

70. In a machine of the class described means for feeding a letter sheet web, means for cutting said web into letter sheets, means for feeding an envelop web, means for cutting envelop blanks from said envelop web, means for applying an adhesive to the envelop blanks, means for folding the letter sheets, means for folding the end flaps of the envelop blanks about the letter sheets, means for folding the top and bottom flaps of the envelop blanks about the letter sheets to complete the envelops and seal the letter sheets therein.

71. In a machine of the class described. means for feeding an envelop web, means for cutting envelop blanks from said web, means for printing on a letter web, means for cutting printed sheets from the letter web, means in operative relation therewith for folding the letter sheets and feeding them from the printing means to the envelop blanks, means for folding the end flaps of the envelop blanks about the letter sheets, means for folding the top and bottom flaps of the envelop blanks about the letter sheets to complete the envelops, and means for operating said feeding, cutting and folding means in predetermined order.

72. In a machine of the class described, means for feeding a letter sheet web, means operatively connected therewith for cutting said web into letter sheets, means for folding said letter sheets, typewriting apparatus coöperating with said aforementioned means for writing upon an envelop web, means operatively connected with said typewriting apparatus for cutting said envelop web into envelop blanks and feeding the envelop blanks in operative relation to the letter sheets, and means operatively connected with all the above-mentioned means for applying an adhesive to the envelop blanks, folding the end flaps of the envelop blanks about the letter sheets, and folding the top and bottom flaps of the envelop blanks about the folded letter sheets to complete the envelops and seal the letter sheets therein.

73. In a machine of the class described means for feeding letter sheets, means for feeding an envelop web, means for printing upon said letter sheets, means for cutting envelop blanks from said envelop web, means for applying an adhesive to the envelop blanks, means for folding the letter sheets and feeding them from the printing means to the envelop blanks, means for folding the end flaps of the envelop blanks about the letter sheets, means for folding the top and bottom flaps of the envelop blanks about the letter sheets to complete the envelops and seal the letter sheets therein.

74. In a machine of the class described, means for feeding a letter sheet web, means operatively connected therewith for cutting said web into letter sheets, typewriting apparatus coöperating with said aforementioned means for writing upon envelop blanks, means operatively connected with said typewriting apparatus for feeding the envelop blanks into operative relation to the letter sheets, and apparatus operatively connected with the above-mentioned means for folding the letter sheets and folding the envelop blanks about the letter sheets and folding the top and bottom flaps of the envelop blanks about the folded letter sheets to complete the envelops about the letter sheets.

75. In a machine of the class described, means for feeding a letter sheet web, means operatively connected therewith for cutting said web into letter sheets, means for folding said letter sheets after they are cut, means for feeding envelop blanks into operative relation to said letter sheets, means coöperating with said aforementioned means for folding the end flaps of the envelop blanks about the letter sheets and for folding the top and bottom flaps of the envelop blanks about the letter sheets to complete the envelops with the letter sheets therein.

76. In a machine of the class described, means for producing a written letter sheet, means for producing a copy thereof, means for taking said sheet from the producing means and folding the same means for forming an envelop and means for inclosing the folded letter sheet in the envelop.

77. In a machine of the class described, means for feeding a letter web, means for printing on said web, means in operative relation thereto for feeding a copy web and producing a copy of the letter upon the copy web, means for cutting letter sheets from

the web in operative relation to said printing means, means for taking the letter sheets and forming envelops about the same and mechanical connections between said cutting means and forming means whereby they may be operated from the same source of power.

78. In a machine of the class described, means for producing a written letter sheet, means in operative relation thereto for producing a copy thereof and means in operative relation to said producing means for taking the letter sheet and folding an envelop blank about the same, substantially as described.

79. In a machine of the class described, means for feeding a letter web, means for printing on said web, means in operative relation thereto for feeding a copy web and producing a copy of the letter upon the copy web, means in operative relation to the printing means for cutting letter sheets from the web, means for taking said cut sheets from the cutting means and folding them, means for feeding an envelop web, means in operative relation thereto for cutting envelop blanks therefrom and means for taking the envelop blank from the cutting means and folding the blank about the letter and sealing the envelop.

In testimony whereof, I have signed my name to this specification, in the presence of two subscribing witnesses.

CHARLES D. SHRADY.

Witnesses:
GEO. M. HARRIS,
WM. F. BISSING.

the web in operative relation to said printing means, means for taking the letter sheets and forming envelops about the same and mechanical connections between said cutting means and forming means whereby they may be operated from the same source of power.

78. In a machine of the class described, means for producing a written letter sheet, means in operative relation thereto for producing a copy thereof and means in operative relation to said producing means for taking the letter sheet and folding an envelop blank about the same, substantially as described.

79. In a machine of the class described, means for feeding a letter web, means for printing on said web, means in operative relation thereto for feeding a copy web and producing a copy of the letter upon the copy web, means in operative relation to the printing means for cutting letter sheets from the web, means for taking said cut sheets from the cutting means and folding them, means for feeding an envelop web, means in operative relation thereto for cutting envelop blanks therefrom and means for taking the envelop blank from the cutting means and folding the blank about the letter and sealing the envelop.

In testimony whereof, I have signed my name to this specification, in the presence of two subscribing witnesses.

CHARLES D. SHRADY.

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Corrections in Letters Patent No. 1,115,600.

It is hereby certified that in Letters Patent No. 1,115,600 granted November 3, 1914, upon the application of Charles D. Shrady, of Allentown, Pennsylvania, for an improvement in "Mailing-Machines," errors appear in the printed specification requiring correction as follows: Page 10, line 10, for the word "intermediately" read *intermittently;* same page, transpose lines 44 and 45; page 11, line 15, for the word "compising" read *comprising;* and that the said Letters Patent should be read with these corrections therein that the same may conform to the record of the case in the Patent Office.

Signed and sealed this 8th day of December, A. D., 1914.

[SEAL.]

J. T. NEWTON,
Acting Commissioner of Patents.

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[SEAL.]

J. T. NEWTON,

Acting Commissioner of Patents.