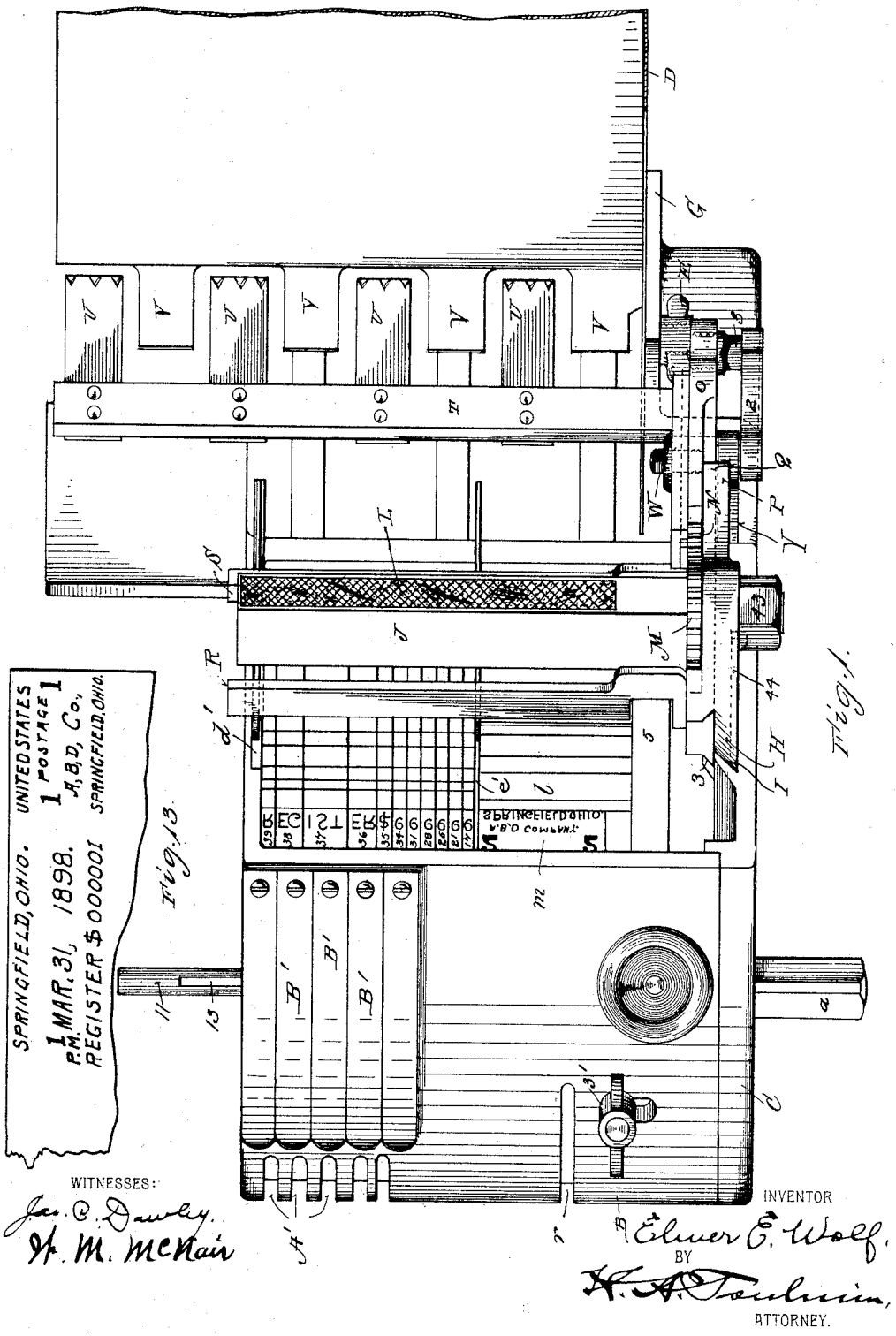
No. 618,158. Patented Jan. 24, 1899.

E. E. WOLF.

POSTAL DENOMINATING, REGISTERING, AND ADDING MACHINE.

(Application filed May 10, 1898.)

(No Model.) 7 Sheets—Sheet 1.



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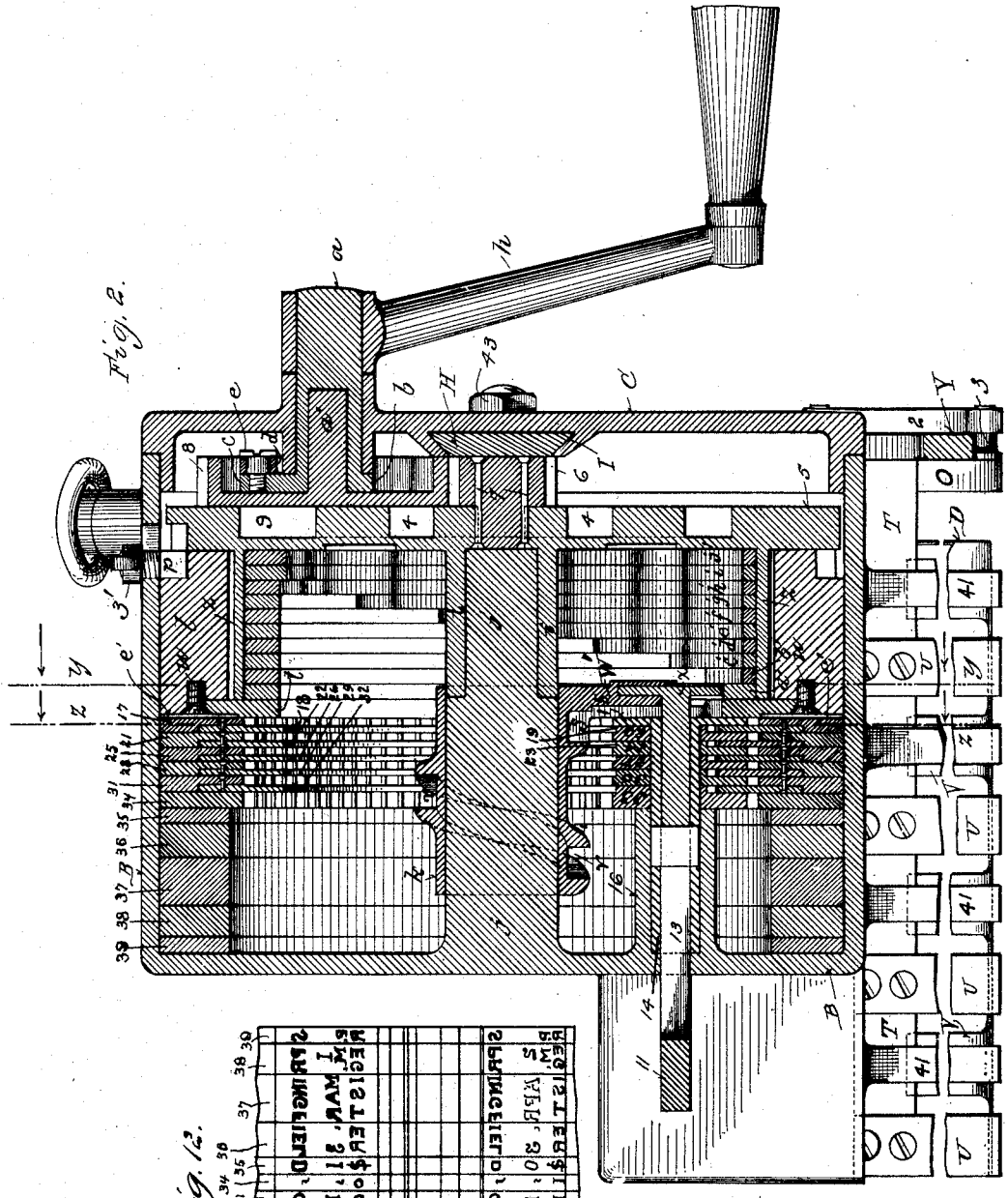


Fig. 2.

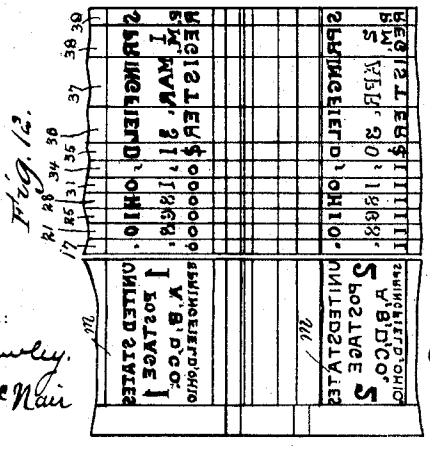


Fig. 12.

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(No Model.) 7 Sheets—Sheet 3.

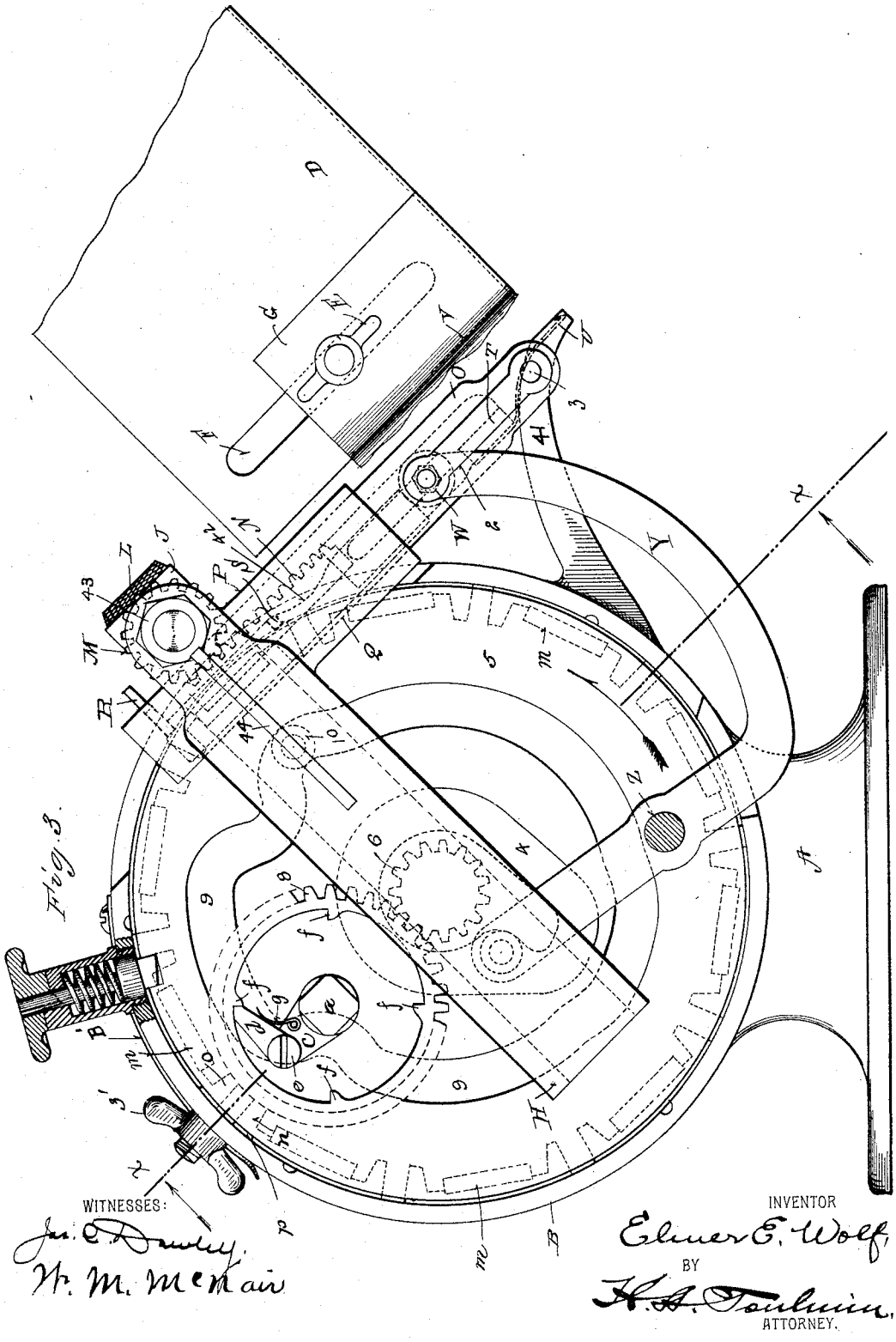


Fig. 3.

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(No Model.) 7 Sheets—Sheet 4.

Fig. 11.

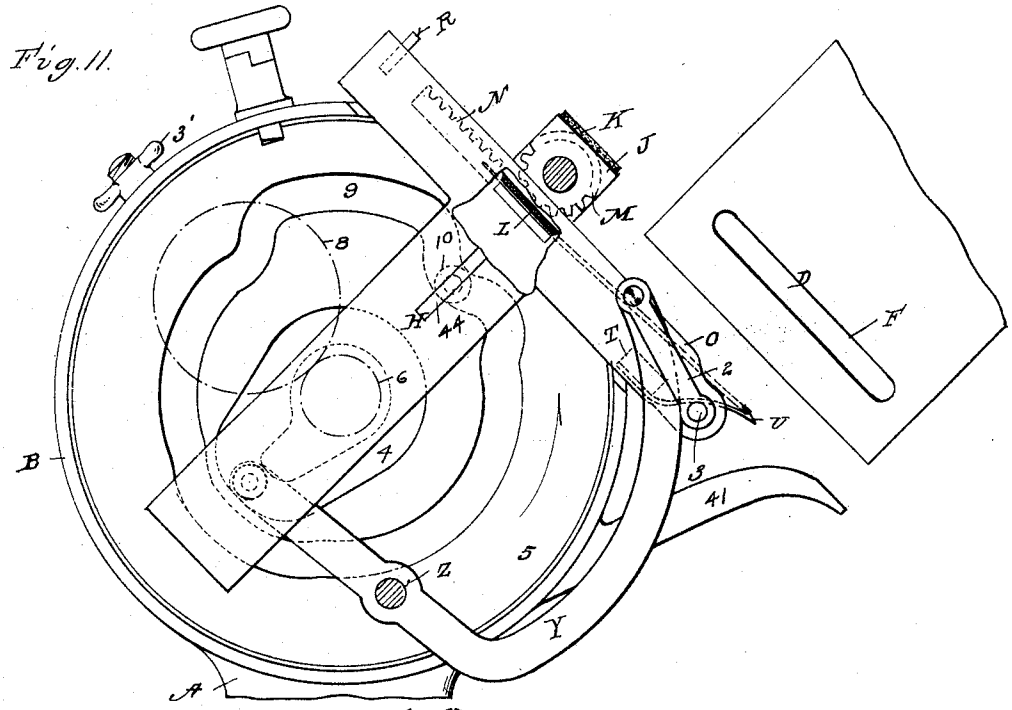
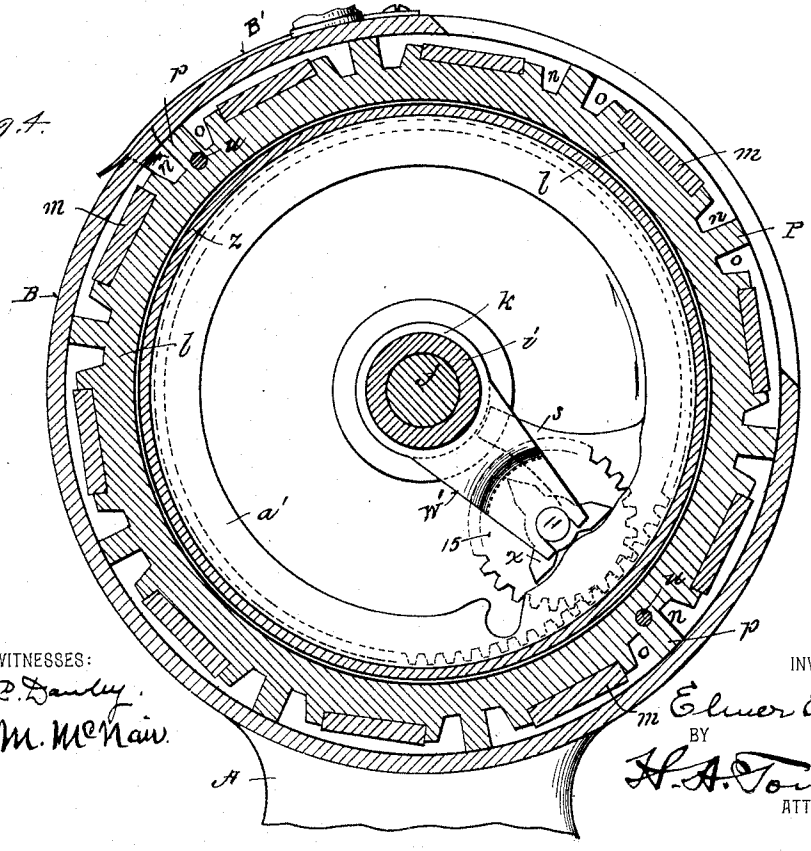


Fig. 4.



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POSTAL DENOMINATING, REGISTERING, AND ADDING MACHINE.

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(No Model.) 7 Sheets—Sheet 5.

Fig. 5.

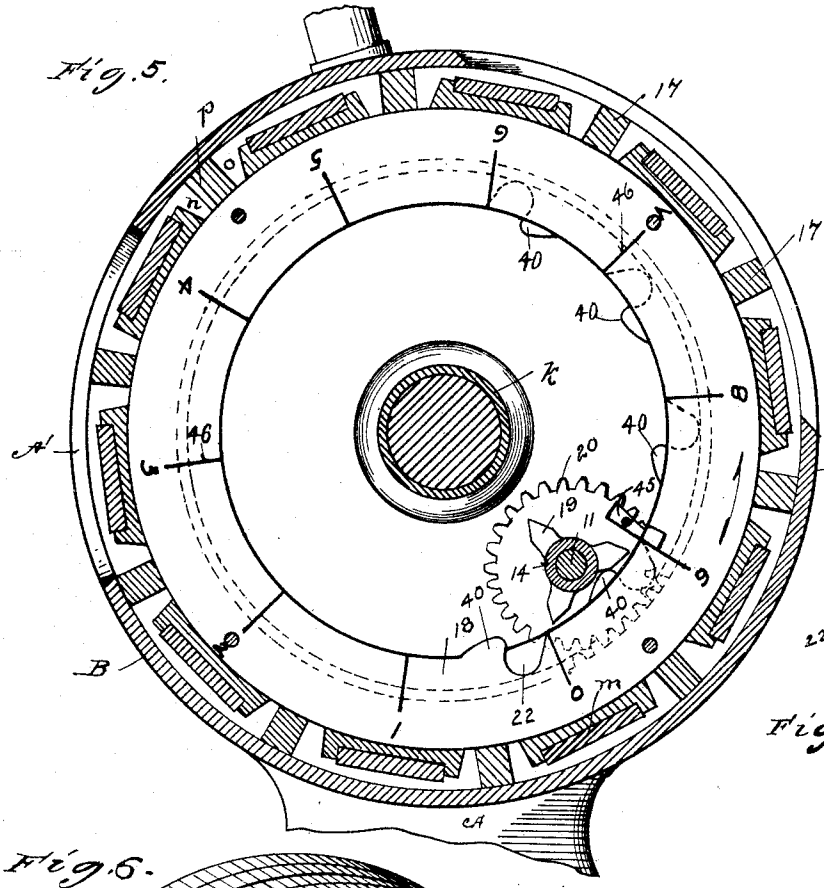


Fig. 5. a

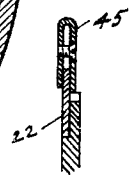
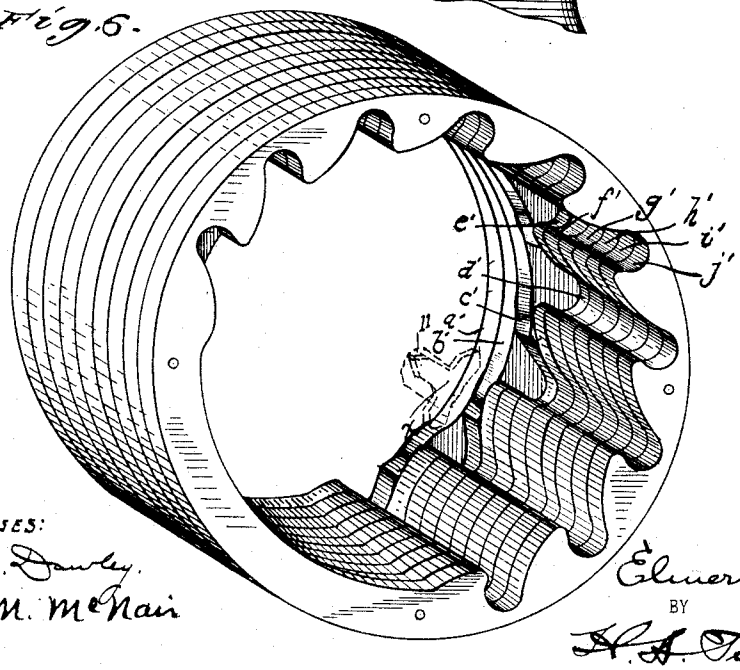


Fig. 6.



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POSTAL DENOMINATING, REGISTERING, AND ADDING MACHINE.

(Application filed May 10, 1898.)

(No Model.) 7 Sheets—Sheet 6.

Fig. 7.

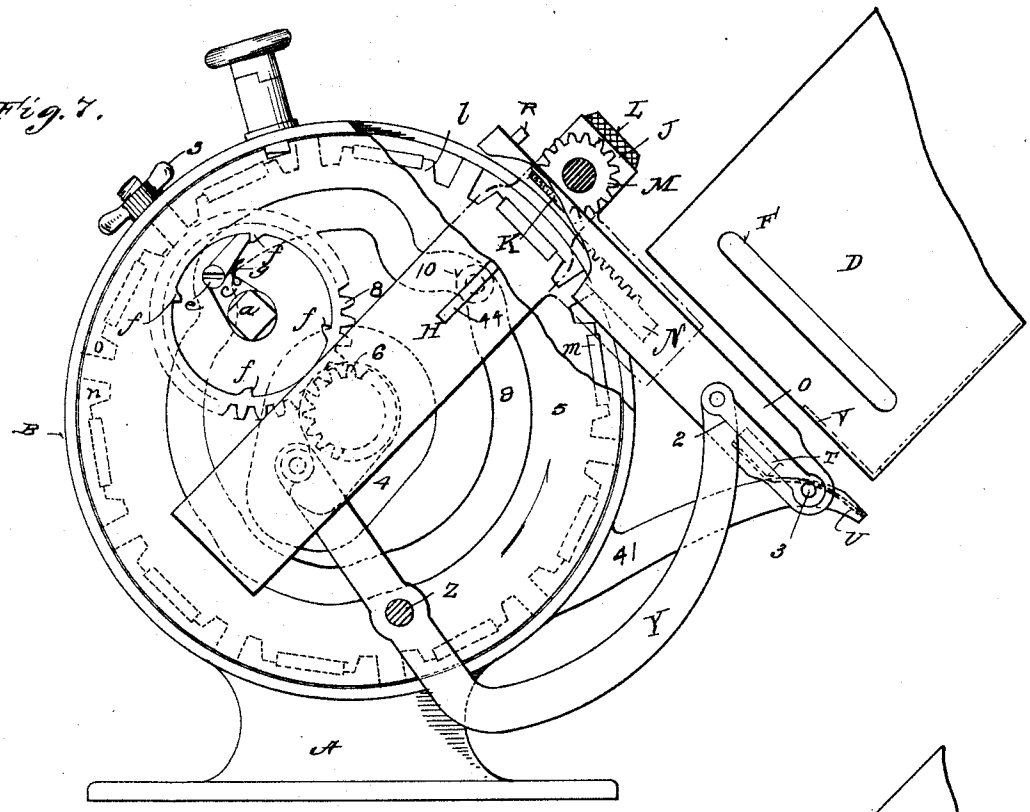
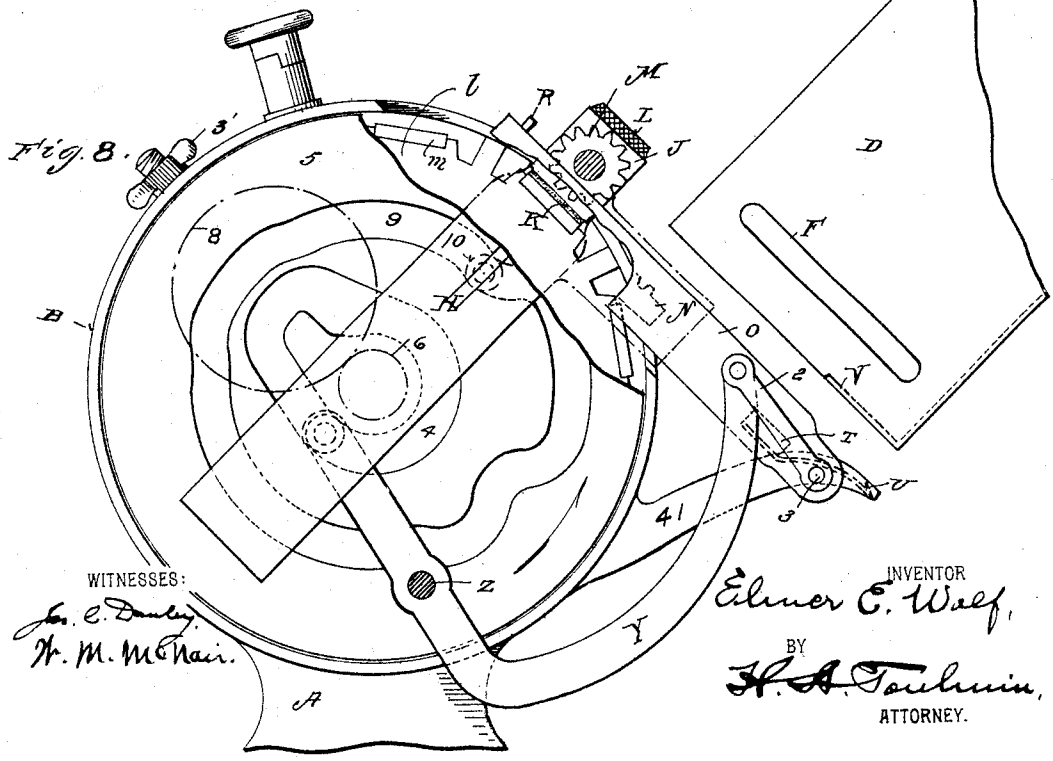


Fig. 8.



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POSTAL DENOMINATING, REGISTERING, AND ADDING MACHINE.

(Application filed May 10, 1898.)

(No Model.) 7 Sheets—Sheet 7.

Fig. 9.

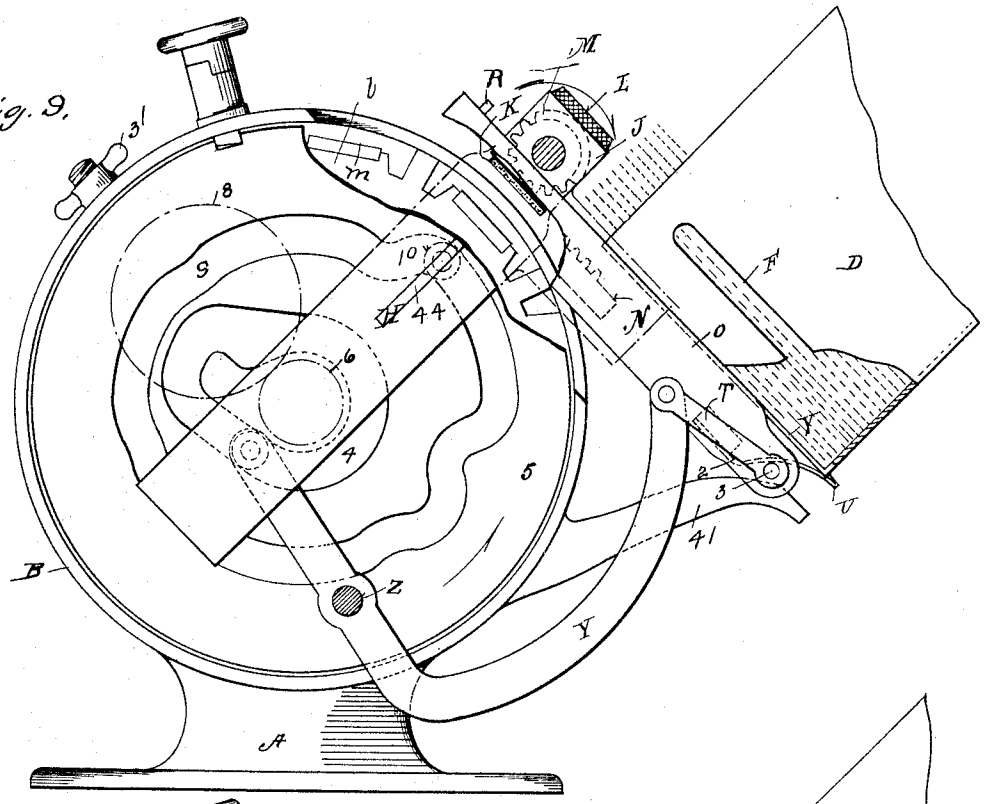
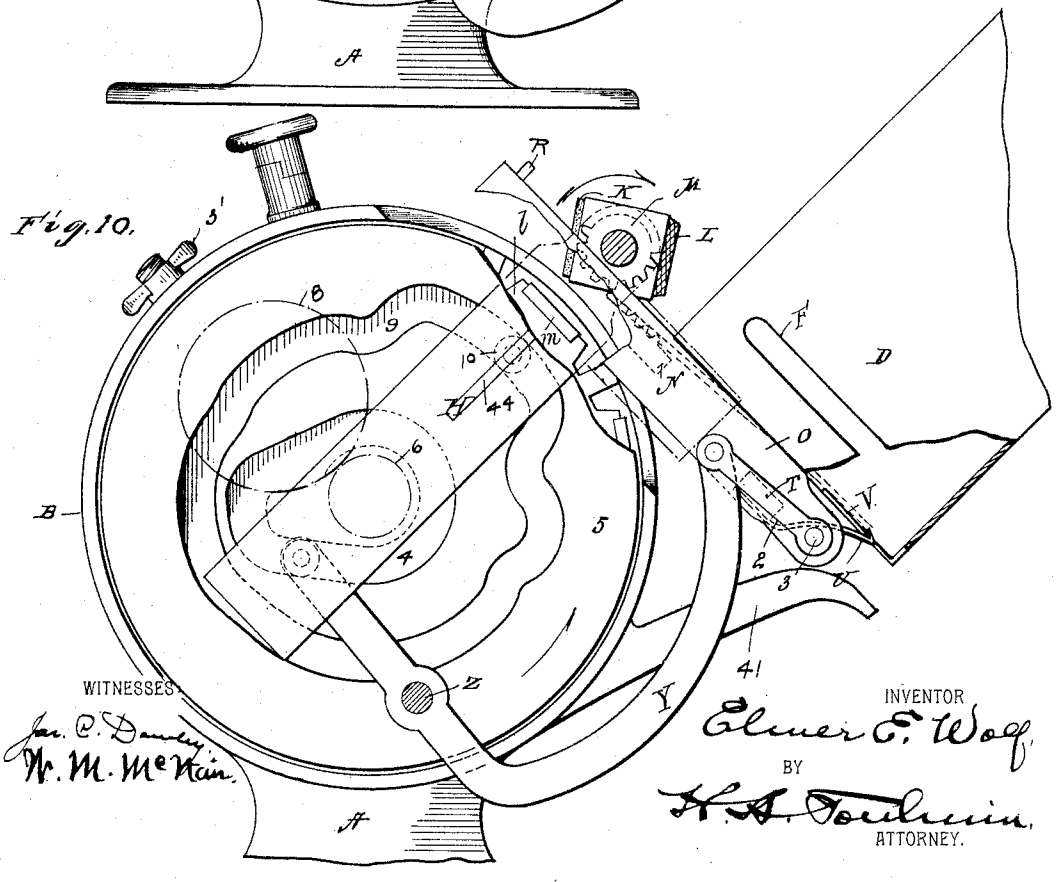


Fig. 10.



WITNESSES:

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UNITED STATES PATENT OFFICE.

ELMER E. WOLF, OF SPRINGFIELD, OHIO, ASSIGNOR TO WILLIAM A. SCOTT, OF SAME PLACE.

POSTAL DENOMINATING, REGISTERING, AND ADDING MACHINE.

SPECIFICATION forming part of Letters Patent No. 618,158, dated January 24, 1899.

Application filed May 10, 1898. Serial No. 680,315. (No model.)

To all whom it may concern:

Be it known that I, ELMER E. WOLF, a citizen of the United States, residing at Springfield, in the county of Clark and State of Ohio, have invented certain new and useful Improvements in Postal Denominating, Registering, and Adding Machines, of which the following is a specification, reference being had therein to the accompanying drawings.

This invention relates to a postal denominating, registering, and adding machine.

The general object of this invention is to do away in large measure with the use of postage-stamps on mail-matter and at the same time to register or keep and record an accurate account of the postal charges, which, for short, I will denominate "postage," due the Government on the mail-matter which the machine will operate upon.

Under the present system of issuing postage-stamps by the General Government the General Post-Office Department is burdened with a large annual expense for the production of the various denominations of postage-stamps, in the care of these stamps and their proper distribution through the country among the very great number of local post-offices, and in the extensive accounts necessary to be kept in order to keep a perfect record of the postage-stamp business of the Department. This stamp account and the management and care of the general business connected with the stamps also involve much labor and some expense in each of the numerous local post-offices. Now in the present state of the commercial world, particularly in those branches of it which deal with advertising through the mails, with the distribution of newspapers, periodicals, and other forms of mail-matter, large and increasing quantities of postage-stamps are used. The number of stamps consumed annually is very great, and the sum total of the denominations or amounts represented by the respective stamps is very great. It is also well known that while the general use of postage-stamps among the people is great in the aggregate and while each individual or ordinary firm uses but a comparatively small number of stamps, still there are many extensive business concerns each of which consumes postage-stamps to an extent which enormously increases the demand upon the General Government with all the ramifications of expense and care incident to such demand and each of which concerns expends large sums of money annually in clerk hire and incidentals connected with the putting of individual stamps upon the individual pieces of mail-matter. Hence to relieve the General Government, and particularly the General Post-Office Department, and also the various local post-offices, as well as such extensive and numerous business concerns, of as much as possible of the expense, care, labor, and details connected with this general postage subject is the object of this invention, and this object is carried out by changing the present system and introducing a new plan by means of this new machine.

Postponing for the moment a statement of the mechanical principles and general mechanism embodied in this machine, it is to be observed that pursuant to the use of it and this new plan it is proposed that the General Post-Office Department will supply selected local post-offices with this machine and that the latter post-offices in turn will place such machines with the firms or companies in their respective localities which heretofore have used large quantities of postage-stamps. These machines in the hands of these users will be employed to denominate, register, and date the respective pieces of their mail-matter in a rapid manner and in lieu of the present method of applying a postage-stamp to each piece.

The term "denomination" as here used refers to the figure or character representative of the postal rate, as one cent or two cents or five cents, &c.

The term "registering" as here used refers to the figure or character which shows the sum total of postage or postal charges on all the matter the machine has acted upon up to and including the last piece.

The term "dating" as here used refers to the designation of the town, State, division of the day—as P. M. or A. M.—the month, the day of the month, and the year. All of this data appears upon each piece of mail-matter the machine acts upon, while the machine

itself makes and keeps a record or registration of the sum total of the postal charges, so that each piece of mail-matter will show on its face the amount due the Government in postal charges since the machine was last set back to zero, while the machine itself will show the like amount, whereby the post-office authorities by inspecting the last piece of mail-matter or (more conveniently) the machine—as, for instance, gas companies inspect meters—will be unerringly informed of the sum due as postal charges to the Government from the user of the machine since the last account was taken.

Another general object of my invention is to set the machine so that when a certain amount of postage paid for has been used the machine will at once stop and all the operating and registering parts will be locked.

Another resulting advantage of the use of my machine is the saving of the cancellation of stamps, as now required.

In the accompanying drawings, on which like reference letters and numerals indicate corresponding parts, Figure 1 represents a plan view of my machine in its entirety; Fig. 2, a cross-sectional elevation on the line *x x* of Fig. 3, looking in the direction of the arrows; Fig. 3, an end elevation with the crank and end cap removed and with a portion broken away, showing the stop device; Fig. 4, a sectional elevation on the line *z z* of Fig. 2, looking in the direction of the arrows; Fig. 5, a sectional elevation on the line *z z* of Fig. 2, looking in the direction of the arrows; Fig. 5ª, a detail sectional view of a transferrable stop and one of the transfer-rings; Fig. 6, a detail perspective view of the operating-rings; Fig. 7, a similar view to Fig. 3, with the operating parts in their first or initial operating position; Fig. 8, a similar view of the same, showing the operating parts in their second or inking position; Fig. 9, a similar view of the same, showing the operating parts in their third position; Fig. 10, a similar view of the same, showing the operating parts in their fourth position; Fig. 11, a similar view of the same, showing the operating parts in their fifth or printing position. Fig. 12 is a detail view of the stamp-printing, time and date recording, and register-printing rings; and Fig. 13, a view of an envelop or piece of mail-matter denominated, registered, and dated by this machine and ready for mailing.

The letter A represents a suitable base upon which is mounted a casing B, inclosing the mechanism of the machine, as will hereinafter appear. A removable cap C closes the open end of said casing and is held in place in any desired manner. A suitable envelop-chute, which, it will be understood, may also be used for circulars, catalogues, packages, &c., is represented by the letter D. This chute may be adjusted to accommodate various sizes of envelops and packages by loosening the wing or thumb nut E, extending through a slot F in the chute and through an extension G from the cap which forms the support for said chute, and raising and lowering it, as desired. From this chute the envelops, &c., are elevated by an envelop grip and conveyer mechanism, in a manner hereinafter appearing, to what may be termed "character inking and press mechanism," which will now be described. This mechanism consists of a dovetailed cam-operated plunger H, mounted in a dovetail groove I, formed on the cap C. An inking and press roll J is carried by the plunger, on one face of which is an inking-pad K and on its opposite face a press-pad L. This roll is rotated to bring the required pad into operation by means of a gear M, engaging with a rack N, carried by an envelop grip and conveyer O, presently to be referred to.

It will be seen that the plunger H has a right-angle extension P, cast or otherwise secured thereto. This extension has a dovetailed groove Q, in which is slidably mounted the envelop grip and conveyer O, above referred to. A pair of locking-bars R and S project across the machine at right angles to this envelop grip and conveyer and are cast or otherwise secured thereto. These bars are adapted to engage with notches formed in what may be termed "denominating," "registering," and "dating" rings at predetermined intervals, for the purpose hereinafter appearing. A bar T is adjustably secured to the envelop grip and conveyer near its lower end and carries a number of envelop-grips U, and which may be formed of spring-steel or of any other suitable material. These envelop-grips pass between fingers V, which extend outward from the lower end of the chute D about the thickness of an envelop and are turned up at right angles to the bottom of the chute. The envelop-grips may be adjusted up and down by adjusting the cross-bar T by loosening a screw W, (shown in dotted lines in Fig. 1,) which passes through a slot in an upturned end of said bar and screws into the envelop grip and conveyer O. This adjustment is for the purpose of setting the envelop-grips to accommodate various-sized envelops, &c. In order to operate said envelop grip and conveyer, a rock-arm Y is employed, which is pivoted to the cap C at Z and at its other end has connected thereto a link 2, which link is also connected to the said envelop grip and conveyer by means of a stud, as shown at 3. The inner end of this rock-shaft Y is operated by a cam 4, cut in the face of a cam-driving disk 5, which causes the said grip and conveyer to raise and lower at the proper time.

Referring now to the cam-driving ring or driver 5 and its operating mechanism, it will be seen that there is secured to said driver a pinion 6 by means of rivets 7. This pinion is driven by a driving-gear 8, meshing therewith, and which gear has an extension *a'* in the nature of a stud-shaft, which extends within a crank-shaft *a*, supported by the cap

C. The inner end of this crank-shaft has a collar *b*, from which projects an extension *c*. To this extension is pivotally secured a detent *d* by means of a screw *e*. This detent is adapted to engage with lugs *f*, projecting from the overhanging rim of the driving-gear, when the crank-shaft is turned in one direction and ride over them when turned in the opposite direction. A spring *g* normally holds said detent against the inner face of the overhanging rim, thereby causing said detent to engage with the lugs *f*, as above stated. By turning the crank-shaft *a* by means of a crank *h* in the proper direction the driving-disk 5 will be driven, which, through the cam-groove 9, operating on the roller 10 secured to the plunger H of the character inking and pressing mechanism, causes it to move in and out at the proper times, and through the cam-groove 4, acting on the rock-arm Y, acts to raise and lower the envelop grip and conveyer mechanism. When the latter mechanism is operated, the inking and press roll is rotated by means of the rack N, whereby the inking-pad is brought into operation at one time and at another the press-pad, for the purpose hereinafter appearing. It will be observed that the driving-disk 5 has a hub *i*, which fits upon a turned-off portion on a stud *j*, extending inward from the casing B. The outer surface of this hub and the outer surface of the stud are in line with each other. This is for the purpose of permitting the sliding sleeve *k* of the shifting mechanism to slide back and forth on the stud *j* and the hub *i*, as desired, the same as though they were of one piece.

Referring now to the denominating mechanism, it will be seen that it consists of a ring *l*, in the outer surface of which is mounted a number of electrotype-plates *m*. (Shown particularly in dotted lines in Fig. 3.) These electrotype-plates each bear the words "United States postage" and the denomination of the stamp being used, such as "1" on one plate, "2" on another plate, and so on, according to the number of electrotypes and the denominations desired, and preferably the name of the firm and the place and State. Between these electrotypes are notches *n o* and a projecting tooth *p*. These teeth fit against the interior of the casing B and form bearings for said ring. When it is desired to use any particular denomination, the thumb-screw 3′ is loosened and slid out of engagement with the denominating-ring into engagement with the cam-driving disk, and said denominating-ring is rotated by engaging it through the slot *r* in the casing, as shown in Fig. 1, until the desired denomination is brought under the character inking and press mechanism above described, when it is again locked in position by the thumb-screw. This thumb-screw when slid into engagement with said driving-disk locks said disk and prevents any movement of the operating mechanism. By thus turning said denominating-ring the shifting mechanism is operated in order that the machine may be so adjusted that it will properly register the amount of postage being used, no matter what that amount may be. This is accomplished by means of a shifter *s*, extending from a ring *t*, secured to the denominating-ring *l* by means of screws *u* or otherwise. This shifter projects within a helical groove *v* on the sliding sleeve *k*. From this sliding sleeve projects a bifurcated extension W′, which extends over and engages with a primary operating-star X. This star is shifted by said bifurcated extension and engages with any one of a number of operating-rings *a′*, *b′*, *c′*, *d′*, *f′*, *g′*, *h′*, *i′*, and *j′*, respectively. These operating-rings are adapted to fit snugly within an annular flange *z*, projecting from the cam-disk 5, and turn with said disk. The first of these rings, *a′*, has one notch therein corresponding with "One cent" on the denominating-ring. Thus when one-cent stamps are being used the primary operating-star will engage with the notch in the ring *a′*, which will cause the said star to operate one-third of a revolution, since there are three points on the star, when the ring has made one complete revolution. The second of these rings, *b′*, has two notches corresponding with the two-cent denomination, and when said two-cent denomination is rotated to its position beneath the character printing and press mechanism the primary operating-star is shifted, through the shifting mechanism, into engagement with the said second ring, and by rotating the cam-driving ring once the said primary operating-star is turned two points or two-thirds of a revolution. Thus each ring which is acting to rotate the said star has a number of star-operating notches agreeing with the denomination being used.

I will now refer to the manner in which the registering mechanism is operated and how it is that no matter what the amount of postage being used still the total amount of postage will be recorded every time the machine is operated. The primary operating-star *x* is carried by a shaft 11, having a slot 13 therein. This shaft is adapted to slide in and be keyed to a gear-sleeve 14, extending from a gear 15, so that the primary operating-star may be moved to engage with all of the operating-rings, as above described, and at the same time will operate the gear-sleeve 14, which is carried in a sleeve 16, projecting from the casing B, as seen in Fig. 2. This gear engages with internal teeth of one of a number of registering-rings (each of which carries numbers on its periphery from "0" to "9," inclusive) which is designated 17. When the primary operating-star is rotated one-third of a revolution, the registering-ring will be rotated, through the gear 15, from "0" to "1." This "1" will be brought beneath the character inking and press machanism and will thus appear on the envelop next to the one-cent denomination being used. This registering-ring carries a transferring-ring 18, which engages with a star-wheel 19, formed on the face of or

secured to a second gear 20, which meshes with the second registering-ring 21. As the registering-ring 17 is being rotated from "9" to "0" a notch 22 (shown in Fig. 5) in the transferring-ring will be engaged by the star-wheel 19, and which will cause the star-wheel and its pinion to rotate one-third of a revolution. This will advance the second registering-ring from "0" to "1" simultaneously with the advance of the first registering-ring from "9" to "0," and consequently "10" will be the number registered. This represents ten cents in postage. The first registering-ring will again make a complete rotation, when the second ring will move from "1" to "2," which will indicate "20," and so on, registering each number up to "9" on each ring. When this is accomplished, the two rings 17 and 21 will be moved together around to zero again, and simultaneously with such movement the transferring-ring 22 will engage with a star-wheel 23, formed on the gear 24, which engages the next registering-ring 25 and through such star and gear will rotate said registering-ring from "0" to "1," thus indicating "100," or one dollar's worth of postage used. This same method of transferring is carried on through the transferring-ring 26, star-wheel and gear 27, and registering-ring 28, transferring-ring 29, star-wheel and its gear 30, and registering-ring 31, and transferring-ring 32, star-wheel and its gear 33, and registering-ring 34, up to "$9,999.99." Should it be desired to register a larger amount, more transferring-rings, star-wheels, and combined gears and registering-rings may be employed.

On the registering-ring 21 after each number appear the figure "8" and the letter "o" and so arranged that the "8" will come in line with the year-date after each register-number is in printing position. The letter "o" is also and at the same time brought into line with the other letters of the word "Ohio" and forms the last letter therein. The other figures of the year and the other letters of the word "Ohio" are similarly arranged on their respective registering-rings 31, 28, and 25. On the periphery of the registering-ring 34, after each figure, is a comma so arranged as to come in line with the word "Springfield," printed on the envelop, while the figure itself is properly in line with the other figures of the register-number.

Referring now to what may be termed the "dating-rings" 35, 36, 37, 38, and 39, it will be seen that they fit within the casing B. Upon the periphery of the ring 39 are formed at least two sets of characters consisting of the letters "S" "P" "R" and "S" "A" "R," respectively. The letter "S" being the first letter of the word "Springfield," the letter "P" standing for "past noon," and the letter "A" standing for "before noon." The letter "R" is the first letter of the word "Register," appearing on the envelop-stamp. (Shown in Fig. 14.) On the periphery of the dating-ring 38 appear a number of groups of letters and figures, each group consisting of the letters "pr," forming part of the word "Springfield," "M," which stands for "meridian," and "eg," being part of the word "Register," and in each group a figure or figures indicating the time of day—as, for instance, "2 A. M." or "P. M.," according to whether "A" or "P" is in printing position on the dating-ring 39. On the ring 37 appear a number of groups of letters—ten in the machine here illustrated—representing ten months of the year, and also the letters "ingf" in the word "Springfield" and the letters "ist" in the word "Register."

The letters in the word "Springfield" and in the word "Register" are unchanged in each group, while the month differs in each group in the order of the succession of months. In order to complete the full year, two of the groups are removed and two new groups are inserted in their place in any convenient manner, it being understood that each of these groups on each of these rings are formed of electrotypes in a similar manner to the denominating characters. On the dating-ring 36 appear at least three groups, in each of which groups the letters "iel" and the letters "er," forming a portion of the word "Springfield" and a portion of the word "Register," respectively, remain unchanged, while the figure forming a portion of the month-date changes from "1" up to "3," inclusive, and on the last dating-ring 35 appears the last letter of the word "Springfield" in each group, as also a succession of figures from "0" to "9," inclusive, there being as many groups as there are changes of figures and a character representing dollars. By referring to Fig. 1 it will be seen that the casing is slotted above each of these dating-rings, as shown at A', and that a number of spring-detents B' also engage with said dating-ring. These spring-detents hold the rings in their set position, and when it is desired to reset them to correspond with the time of day and the date the spring-detents are disengaged one at a time, and the ring so disengaged is freely rotated until the proper characters are brought in line with the denomination to be used. Thus it will be seen that with this invention the amount of postage being used is indicated, the month, the day of the month, and the time of day, as also the name of the post-office, together with the registered amount of postage used on each piece of mail-matter.

By referring again to the transferring-rings it will be observed that the star operated thereby is made to engage with its notch by means of a slightly-raised surface 40. After this star has been turned by engagement with the notch in this transferring-ring there is no way to turn the star backward or forward, and since it engages with one of the registering-rings through its gear it too cannot be moved. This is true of each of the registering-rings, and consequently no amount of tampering with them can change the register-number from a higher to a lower denomina-

tion. This is of great practical importance, as it prevents the Government from being cheated or robbed by registering less than the actual amount of postage used.

Referring now to the operation of this invention, it will be observed that the dovetailed plunger of the inking and press mechanism is operated in and out by the cam-groove 9 cut in the outer face of the disk. When this plunger is thrown to its in position, as indicated in Fig. 8, it will be understood that the locking-bars R and S engage with notches in the denomination-ring, the registering-rings, and the adding-rings, respectively. These notches are indicated by *n* and *o* on each set of rings and are for the purpose of permitting the rings to be locked in a fixed position when the envelop is being printed. The bars for preventing the envelops from being pressed against the stamp characters without operating the machine pass in through slots *d'* in the casing of the machine and one of said bars fits within an annular recess *e'* between the denomination-ring and the first registering-ring. When the machine is in the position indicated in Fig. 1, the characters to be impressed upon the mailable matter are in position to be inked, and when the roller 10 has advanced along the cam-groove to the position indicated in Fig. 8 the characters are being inked. When the operating parts are in the position shown in Fig. 9, the inking and press roll has been moved from the printing characters and the cam 4 has so operated upon the rock-arm Y as to cause the envelop grip and conveyer, which has been advanced close to the letter-chute, to grip a letter by means of the grips U, which project underneath the lower edge of an envelop and advance the same to the proper position for inking. This movement of the envelop grip and conveyer causes the inking and press roll to be rotated through the rack N, secured to said grip and conveyer mechanism engaging with the gear M of said roll, and brings the press-pad in the proper position for pressing the envelops against the inked characters. This causes the proper impression to be made on the envelop. As the cam-driving disk is still further operated, the rock-arm will permit the envelop grip and conveyer to return to the position shown in Fig. 7. When in this position, it will be observed that the envelop-grips U are behind projections 41, which projections extend from the casing B, as clearly seen in Figs. 3 and 7 to 11, inclusive. These projections I term "strippers," inasmuch as they act to strip the envelop from the envelop-grips, so that the envelop may drop between said strippers and the lower end of the chute into any suitable receptacle, as may be desired. In order that the inking and press roll may be rotated without striking the envelop, the conveyer mechanism is cut out, as shown at 42 in dotted lines in Fig. 3. The letter-chute stands at such an angle that the envelops placed therein feed down of their own weight as fast as an envelop has been removed therefrom. Thus no matter how rapidly the machine may be operated there is always an envelop awaiting the return of the envelop-grips, and hence the operation of stamping the letters is carried on with great regularity and speed.

In order that the nut 43 may be held in its set position, I provide a bar 44, which fits in a groove within the plunger H. This prevents the inking and press roll from becoming loose, which might otherwise occur if the nut 43 were not locked in position, and also prevents the inking-roll from being removed in order to tamper with the machine.

Referring now to the device for locking the machine after a predetermined amount of postage has been used, it will be observed that in Fig. 5 is illustrated a clamp 45, adapted to be clamped to any one of the transferring-rings, the one illustrated being 18. When the ring bearing this clamp has made nearly a complete revolution, the clamp will strike the star-wheel 19 and prevent further rotation. Inasmuch therefore as all the transferring-rings and registering-rings of the registering mechanism, as also the operating mechanism, are interconnected, when one part is stopped the whole machine will be stopped. This is of great practical importance, as, for instance, when a certain amount of postage has been paid for the machine may be set to stop when such amount has been used up. In order to know where to set the stop a scale 46 is provided on the side of the first transferring-ring 18. (Shown in Fig. 5.) This scale acts as a guide in setting the stop on any of the rings. If the stop were placed at 9 on the first ring, the machine would stop when nine cents had been indicated on the mail-matter. If set on the next transfering-ring opposite the scale 9 on the first ring, then the machine would register ninety-nine cents, and so on, according to which registering-ring the clamp may be placed upon.

In order to change the clamp from one transferring-ring to another, the cap C is removed, together with the cam-disk and the operating-rings, when access to the interior of the machine may be had. The opening of this machine in this manner is wholly controlled by the Post Office authorities, and consequently no one but the proper person can change the clamp.

Having thus fully described my invention, what I claim as new, and desire to secure by Letters Patent, is—

1. A postal denominating registering and adding machine comprising denomination-printing mechanism, registering mechanism and feeding mechanism for feeding mail-matter to said denomination-printing mechanism.

2. A postal denominating registering and adding machine comprising denomination-printing mechanism, having a plurality of denominations, adding and registering mechanism for adding and registering the amount

of postage used and feeding mechanism having mail-matter-gripping devices, for feeding mail-matter to said denominations.

3. A postal denominating, registering and adding machine comprising a denomination-printing mechanism having a plurality of denominations and locking means therefor, adding and registering mechanism having one or more registering-rings for adding and registering the amount of postage used, and feeding mechanism having mail-matter gripping and elevating devices for feeding mail-matter to one of said denominations on said denominating-ring.

4. In a postal denominating registering and adding machine, the combination with a casing, of a denomination-printing mechanism having a plurality of denominations thereon, and a locking device therefor, adding and registering mechanism having a plurality of registering-rings with transferring means for transferring from one to another, and feeding mechanism having mail-matter gripping and elevating devices carrying means for operating an inking and compression roll with inking and compression pads thereon, for properly feeding the mail-matter.

5. In a postal denominating registering and adding machine, the combination with a casing, of a denomination-printing mechanism having a plurality of denominations and rotatably mounted therein, a locking device for locking said ring when set to print the desired denomination, adding and registering mechanism having a plurality of registering-rings also rotatably mounted in said casing and having registering characters on their periphery, from which mail-matter may receive impressions, transferring-rings secured to said registering-rings and adapted to transfer from one to the other, and feeding mechanism having mail-matter gripping and elevating devices.

6. In a postal denominating, registering and adding machine, the combination with a casing, of a denomination-printing mechanism consisting of a ring having a plurality of denominations thereon with one or more notches between each denomination rotatably mounted therein, a locking device for locking said ring when set to print the desired denomination, adding and registering mechanism having a plurality of registering-rings also mounted in said casing, and having sets of registering characters on their periphery, one or more notches between each of said registering characters matching the notches of said denomination-ring, transferring-rings secured to said registering-rings and adapted to transfer from one registering-ring to the other, and feeding mechanism having mail-matter gripping, elevating, inking and pressing devices.

7. In a postal denominating, registering and adding machine, the combination with a casing of a denomination-printing mechanism consisting of a ring having a plurality of denominations thereon with one or more notches between them and a plurality of bearing-teeth rotatably mounted in said casing, a locking device for locking said ring when rotated to present the desired denomination to printing position, and a shifter carried by said adding and registering mechanism having a plurality of registering-rings and also mounted in said casing and having sets of registering characters on their periphery, one or more notches between each of said sets of registering characters matching the notches in said denominating-ring, and having teeth on their interior, transferring-rings secured to said registering-rings and adapted to transfer from one registering-ring to the other, gear-wheels engaging said interior teeth and a rotatable shifting device shifted by said shifter and adapted to engage and drive one of said gears, the rotary movement of said shifting device varying according to the denomination being used, and feeding mechanism having mail-matter gripping, elevating, inking and press roll operating devices.

8. In a postal denominating, registering and adding machine, the combination with a casing, of a denomination-printing mechanism having one or more denominations thereon and mounted in the casing, registering mechanism and a driving device also mounted therein, one or more operating-rings driven by said driving device and adapted to operate said registering mechanism, and mail-matter-feed mechanism for presenting mail-matter to said denomination-printing mechanism.

9. In a postal denominating, registering and adding machine, the combination with a casing, of a denomination-printing mechanism having a plurality of denominations thereon and rotatably mounted in said casing, registering mechanism and a driving device also mounted therein, a plurality of operating-rings driven by said driving device or disk, shifting mechanism between said registering mechanism and said operating-rings, a shiftable operating device adapted to be shifted by said shifting mechanism into engagement with an operating-ring for operating said registering mechanism, and mail-matter-feed mechanism having one or more mail-matter grips for presenting said mail-matter to said denomination-printing mechanism.

10. In a postal denominating, registering and adding machine, the combination with a casing, of a denomination-printing mechanism having a plurality of denominations thereon with one or more notches between them, and adapted to be rotated therein, registering mechanism and a driving device or disk also mounted therein, said registering mechanism having a plurality of rings with sets of registering characters thereon and having one or more notches between each set, driving-rings secured to and driven by said driving device, said driving-rings having a varying number of notches therein corresponding respectively with the denomina-

tions, an operating device between said driving-rings and said registering mechanism adapted to be shifted to engage with any one of said driving-rings, to drive said registering mechanism accordingly, and mail-matter-feeding mechanism having mail-matter-feeding grips for presenting mail-matter to said denominating-ring and locking-bars for engaging with said denomination and registering rings.

11. In a postal denominating, registering and adding machine, the combination with a casing, of a denomination-printing mechanism rotatably mounted therein and having a plurality of denominations thereon with notches and bearing-teeth between them, and a locking device for locking said rotatable denomination-printing mechanism in any desired position, a driving device having one or more cam-grooves therein, and means for operating it, a plurality of driving-rings having a varying number of notches corresponding to the respective denominations and secured to said operating device, registering mechanism having a plurality of registering-rings with sets of registering characters thereon, and notches and bearing-teeth between said sets being mounted in said casing, transferring-rings secured to said registering-rings an operating device between said registering mechanism and said driving-rings and adapted to drive the former, said operating device being adapted to be shifted to engage with any of the driving-rings whereby the denomination used will be added and registered, and a mail-matter-feeding mechanism adapted to grip and present said mail-matter and having locking-bars carried thereby and adapted to engage with said notches in said denomination and registering rings at suitable intervals.

12. In a postal denominating, registering and adding machine, the combination with a casing having a stud or projection extending inward therefrom of a denomination-printing mechanism rotatably mounted therein and having a plurality of denominations thereon and a locking device for locking said denomination-printing mechanism in any desired position, a shifter carried by said mechanism, a driving device having inking and press mechanism and mail-matter grip and conveyer mechanism, operating cam-surfaces on said operating device as also driving-rings each having notches corresponding with the respective denominations, registering mechanism mounted in said casing having rings with sets of registering devices in their periphery and driving-teeth on their interior, a shiftable sleeve or collar having a helical groove and mounted on said stud or projection, said groove adapted to receive said shifter carried by said denomination-printing mechanism, a shiftable star-wheel carried by said sleeve and adapted to be shifted into engagement with any one of said driving-rings through the rotation of said denomination-printing mechanism, a driven gear driven by said shiftable star-wheel and meshing with one of said registering-rings, transferring means between said registering-rings for transferring from one to the other, and inking and press mechanism adapted to be operated by its said cam and mail-matter grip and conveyer mechanism having mail-matter grips, locking-bars, and an inking and pressing roll operating rack adapted to present such gripped mail-matter to be acted on by the printing mechanism and lock the printing and registering rings when moved by its operating-cam.

13. In a postal denominating, registering and adding machine, the combination with a casing having denomination-printing mechanism, registering-rings and operating-rings mounted therein, of a shiftable sleeve mounted thereon having a helical groove, and a shifter projecting within said groove and carried by said denomination-printing mechanism, to shift said sleeve on said stud, and a rotatable device adapted to be shifted into engagement with one of said operating-rings to drive said registering-rings.

14. In a postal denominating registering and adding machine, the combination with a casing having denomination-printing mechanism, registering mechanism and operating-rings mounted therein, of a slidable shiftable sleeve having a helical groove mounted on a stud extending from said casing, and carrying a bifurcated arm or extension, a shiftable star projecting within said bifurcated extension and a shifter secured to said denomination and printing mechanism and adapted to shift said sleeve when said denomination-printing mechanism is adjusted to engage with one of said operating-rings corresponding with the denomination being used.

15. In a postal denominating, registering and adding machine, the combination with a casing having denomination-printing mechanism, registering mechanism and operating-rings mounted in said casing, a stud and a projecting sleeve from said casing, a shifting sleeve mounted on said stud having a bifurcated arm or extension, a gear having a sleeve mounted in said sleeve projection, a primary operating-star having a shank slidable in said gear-sleeve and fitting within said bifurcated arm and adapted to rotate said gear, and a shifter carried by said denomination-printing mechanism and adapted to project within a helical groove on said shifting sleeve to shift it to cause the primary operating-star to engage with the operating-ring corresponding with the denomination being used.

16. In a postal denominating, registering and adding machine, the combination with a casing having denomination-printing mechanism, registering mechanism and operating-rings mounted in said casing, a stud and a projecting sleeve from said casing, a shiftable sleeve mounted on said stud and having a helical groove on its periphery, and a bifur-

cated arm, a pinion having a sleeve mounted in said projecting sleeve, one or more gears mounted on said gear-sleeve and meshing with the rings of said registering mechanism and forming a part thereof, secondary star-wheels formed on or secured to said gears, transferring-rings engaging said star-wheels for transferring from one ring to another, a primary operating-star having a shank fitting within said sleeved gear and slidably keyed thereto, said primary star fitting within said bifurcated arm, and a shifter secured to the denomination and printing mechanism and adapted to extend within said helical groove and shift said sleeve and said primary operating-star into engagement with one of said operating-rings corresponding with the denomination being used.

17. In a postal denominating, registering and adding machine, the combination with a casing having denomination-printing, registering and dating mechanisms mounted therein, and slots extending through it opposite said denomination-printing and dating mechanisms, and locking means for locking said mechanisms in their set positions.

18. In a postal denominating, registering and adding machine, the combination with a casing, of denomination-printing dating and registering mechanisms mounted therein, said casing having slots respectively opposite each dating mechanism and opposite said denomination and printing mechanism, spring-detents carried by said casing and engaging with said dating mechanism to lock the same and a thumb-screw, to lock the said denomination-printing mechanism.

19. In a postal denominating registering and adding machine, the combination with a casing having a central projection extending inward from one end thereof, said projection having a reduced part, of a sleeve-carrying operating mechanism and mounted on said reduced portion said sleeve being substantially flush with the unreduced portion of the projection, and a shifting collar mounted upon said flush surfaces.

20. In a postal denominating, registering and adding machine, the combination with a casing having denomination mechanism therein, of operating mechanism, inking and press mechanism operated thereby, and mail-matter-feeding mechanism also operated by said operating mechanism, whereby said denomination mechanism is inked and whereby said mail-matter is denominated.

21. In a postal denominating, registering and adding machine, the combination with a casing having denomination mechanism therein, of operating mechanism having a plurality of cam-surfaces, character-inking and press mechanism mounted in said casing and operated by one of said cam-surfaces, mail-matter grip and conveyer mechanism carried by said character-inking and press mechanism and adapted to be operated independently of said character-inking and press mechanism by another of said cam-surfaces.

22. In a postal denominating registering and adding machine, the combination with a casing having denomination mechanism therein, of operating mechanism having a plurality of cam-surfaces, character-inking and press mechanism slidably mounted in one end of said casing and operated by one of said cam-surfaces, a mail-matter grip and conveyer slidably mounted in said character-inking and press mechanism and independently operated by another of said cam-surfaces and having a rack to engage a gear on said inking and press roll and adapted to rotate said roll in position for inking said denomination mechanism and for pressing said mail-matter.

23. In a postal denominating, registering and adding machine, the combination with a casing having denomination mechanism therein, of operating mechanism having a plurality of cam-surfaces, character-inking and press mechanism slidably mounted in the cap of said casing and carrying a roller engaging with one of said cam-surfaces to operate it, said last-named mechanism carrying an inking and press roll, a mail-matter grip and conveyer slidably mounted in said character-inking and press mechanism and having a rack for engaging and operating said inking and press roll and a rock-arm pivotally connected to said mail-matter grip and conveyer at one end and at its other end engaging with another of said cam-surfaces whereby said mail-matter grip and conveyer is operated.

In testimony whereof I affix my signature in presence of two witnesses.

ELMER E. WOLF.

Witnesses:
W. M. McNAIR,
JAS. C. DAWLEY.