W. H. BOWES.

MACHINE FOR CANCELING STAMPS.

APPLICATION FILED JAN. 31, 1916.

1,287,202.

Patented Dec. 10, 1918.

3 SHEETS—SHEET 1.

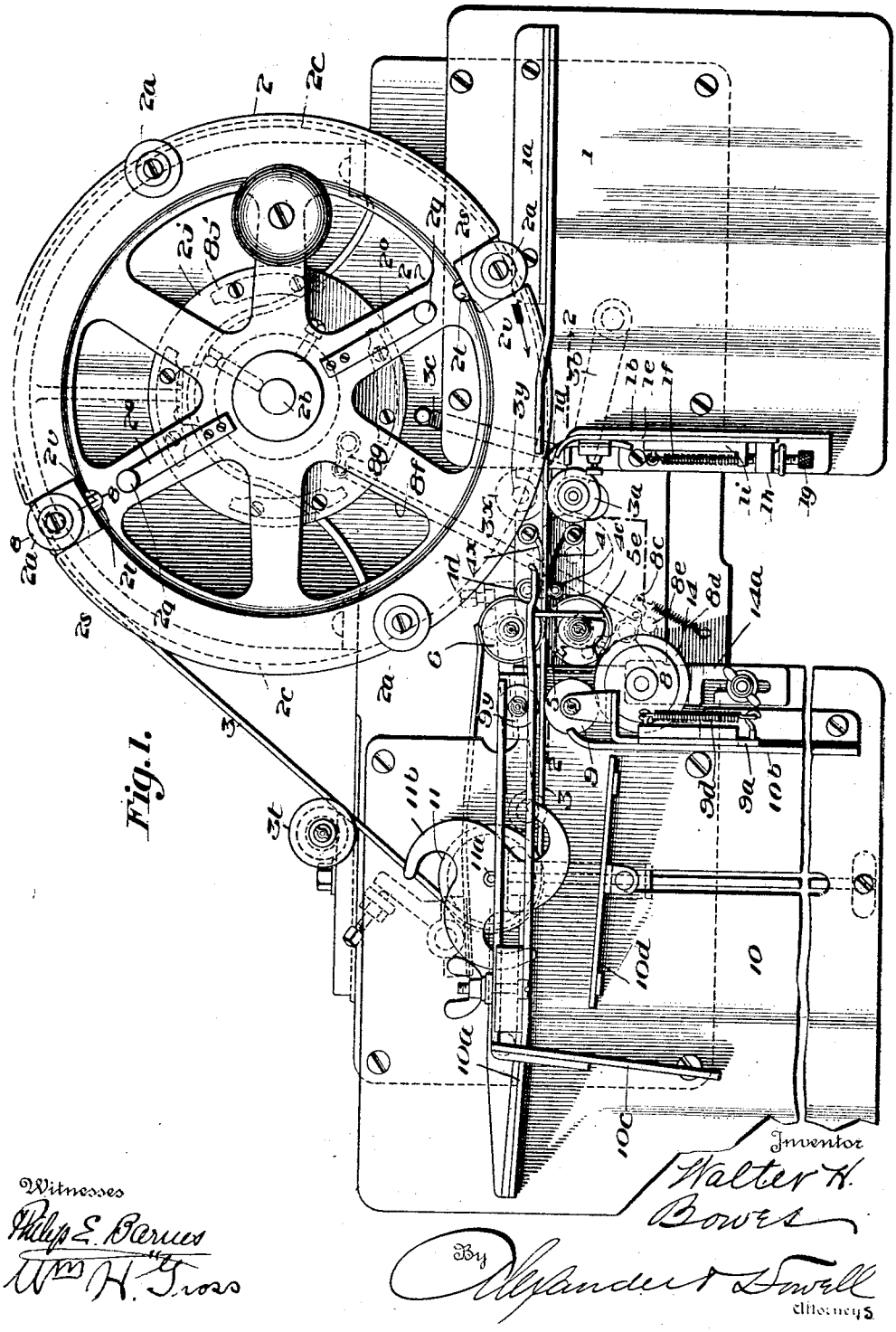


Fig. 1.

Witnesses

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3 SHEETS—SHEET 2.

Fig. 2.

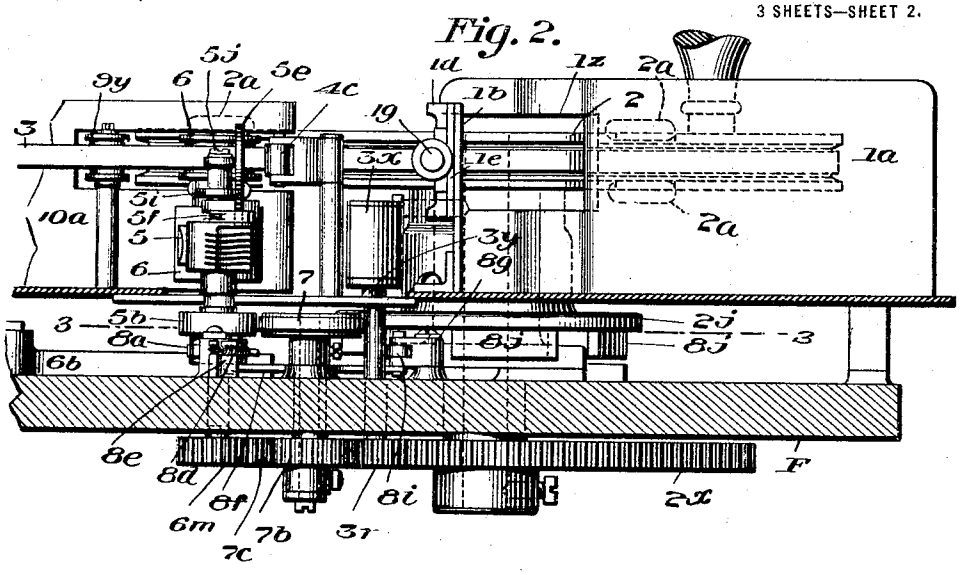
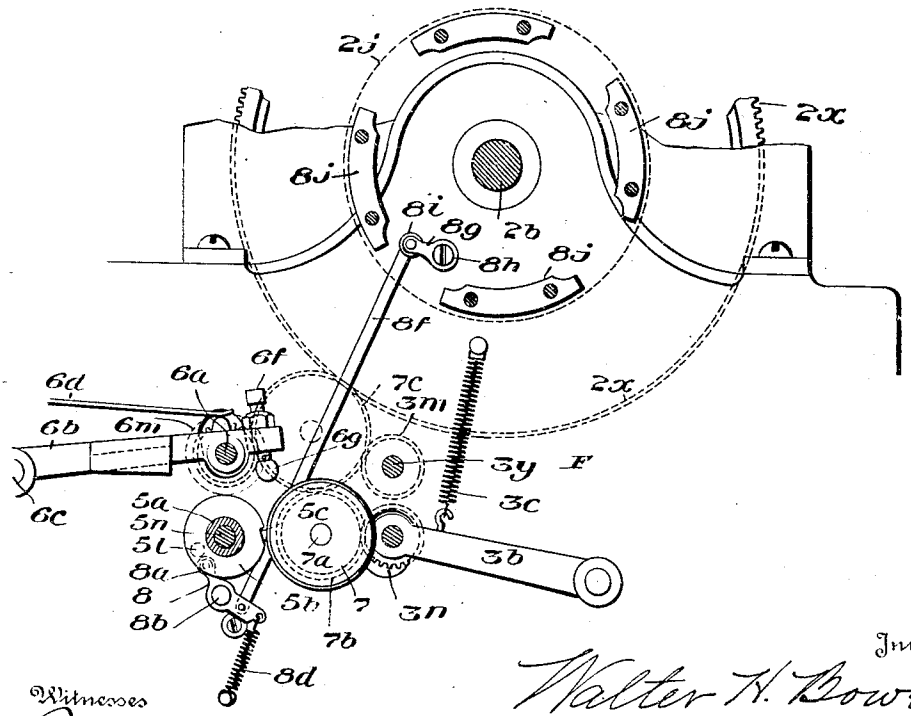


Fig. 3.



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3 SHEETS—SHEET 3.

Fig. 4.

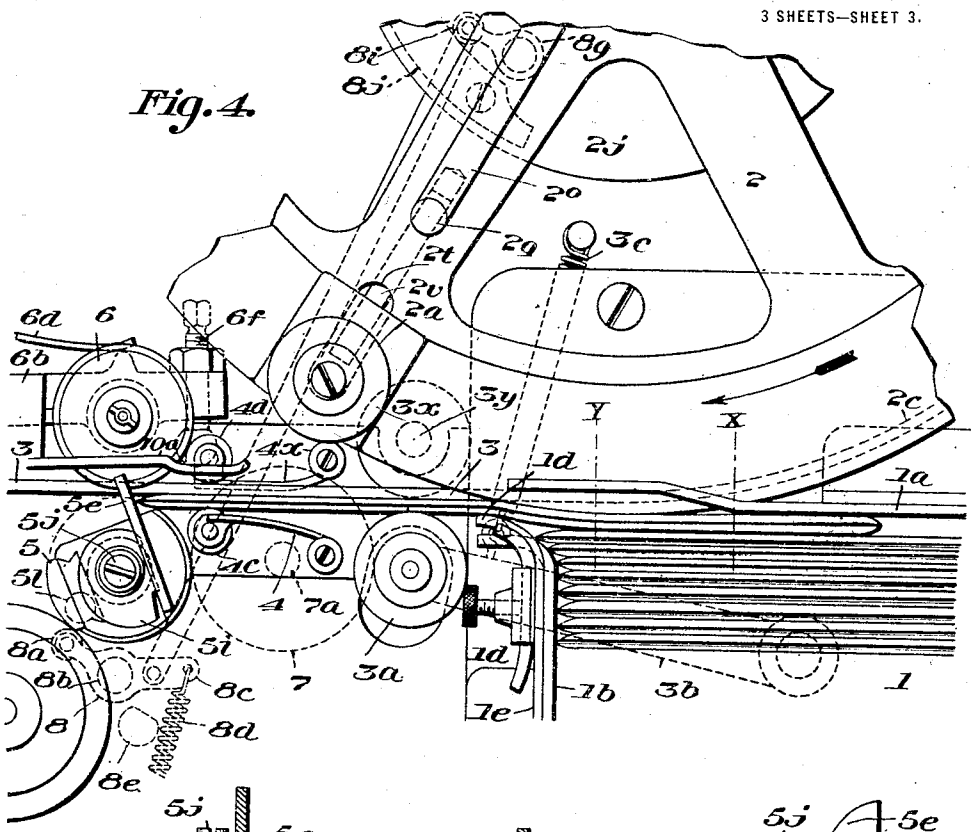


Fig. 5.

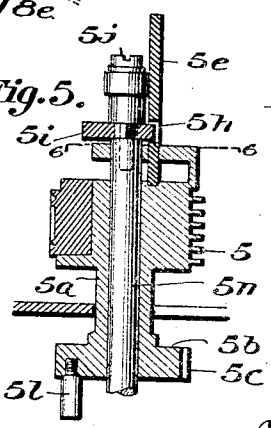


Fig. 6.

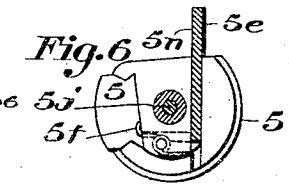


Fig. 7.

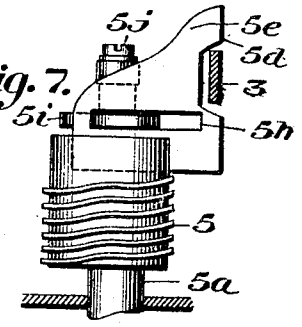
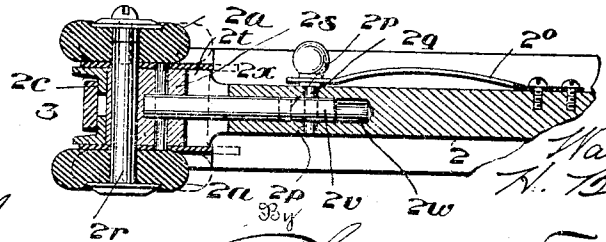


Fig. 8.



Witnesses

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UNITED STATES PATENT OFFICE.

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MACHINE FOR CANCELING STAMPS.

1,287,202. Specification of Letters Patent. Patented Dec. 10, 1918.

Application filed January 31, 1916. Serial No. 75,339.

To all whom it may concern:

Be it known that I, WALTER H. BOWES, a subject of the King of Great Britain, residing at New York, in the borough of Manhattan and State of New York, have invented certain new and useful Improvements in Machines for Canceling Stamps; and I hereby declare that the following is a full, clear, and exact description thereof, reference being had to the accompanying drawings, which form part of this specification.

This invention is a novel improvement in machines for use in post offices, banks, and large mercantile establishments, for canceling stamps and checks, or for counting or marking articles, such as letters, post-cards, checks, and the like, by a printing die or roller. In the following description for simplicity and brevity I will refer to all such matters merely as letters, thereby intending to include any and all objects which may be operated upon by such a machine.

The principal objects of the invention are to provide a machine which can if desired be easily operated by hand; and which will be rapid and reliable in operation. The invention provides novel means by which only one letter will or can be fed forward at a time; novel means by which each letter will cause an initial movement or start of the printing die; novel means by which the die when once started is caused to make a complete operative movement and is then arrested by a positive stop; novel means whereby the printing die will be freed from such positive stop before another letter reaches the printing point, so that all the work which has to be performed by a letter in passing through the machine is simply to give a slight initial rotary movement to the die; novel means whereby when the die is given such slight initial movement it is immediately taken control of by positively driven mechanism and caused to complete its revolution positively and is then brought to a rest by the stop; means for supporting the leading edge of the letter adjacent the die; means for separating the letters on a feed table and carrying one letter forward at a time to the die, and past the printing mechanism to the stacking devices; also novel means whereby if desired the machine can be readily adapted to handle unusually long letters if desired.

The invention in brief provides a very simple effective machine, including automatic feeding, printing and stacking mechanism, which can be easily operated by hand; and the letters will be started and fed forward one at a time to the printing die. The printing die will operate but once for each letter fed forward; each letter will initially start the die and the latter will uniformly print each letter regardless of its length, beginning at a point a uniform distance from the leading edge of such letter; while repeated or double printing on the letter will be prevented. The machine, while it can be operated by power, is particularly designed for use as a manually operated machine and when so operated has a speed and capacity equal to many of the high speed power machines now on the market. My novel machine is especially adaptable for use in small post offices where power machines would be too expensive, and is also useful in commercial offices for canceling checks or marking mail or like objects in any desired manner.

In the accompanying drawings I have illustrated one practical machine and will explain the invention as embodied in such machine, but I do not consider the invention restricted to such specific machine; and the essential combinations and novel construction of elements for which protection is desired will be summarized in the various claims appended to the following detailed description of the aforesaid machine.

In said drawings:

Figure 1 is a top plan view of the complete machine.

Fig. 2 is an enlarged sectional elevation on line 2—2 Fig. 1.

Fig. 3 is a detail sectional view on line 3—3, Fig. 2.

Fig. 4 is an enlarged detail view of the feeding end of the machine showing the parts in tripped position.

Fig. 5 is a detail vertical sectional view of the printing die.

Fig. 6 is a detail section on line 6—6 Fig. 5.

Fig. 7 is a front elevation of the printing die in untripped position.

Fig. 8 is an enlarged detail section on line 8—8 Fig. 1.

As stated, for simplicity I herein refer to the objects on which the machine operates merely as letters, but it should be under-

stood that any objects, such as letters, checks, cards, papers, etc., which may be passed through the machine, are to be considered as if explicity referred to wherever the word "letters" is employed.

The letters to be marked are placed vertically edgewise on a table 1, flatwise against a guide 1^a, and endwise against a guide 1^b as usual, and the letters may be forwarded toward guide 1^a by any suitable mechanism, not shown.

The letters are successively removed from the table 1 by the action of feeders 2^a on a feed wheel 2, which is attached to a shaft 2^b suitably journaled in a bearing on the base or top plate F of the frame upon which the operative parts are mounted.

As shown in the drawings the periphery of the wheel 2 is deeply grooved as at 2^c for the reception and guidance of a feed belt 3 hereinafter referred to. The feeders 2^a are preferably in the form of rubber disks or bands which may be secured to or adjacent the periphery of the wheel in any suitable manner, so that they project slightly beyond the periphery of the wheel 2 as indicated in Figs. 1 and 8, and are adapted to successively engage the innermost letter resting against the guide 1^a and frictionally move the same inward past the guide 1^b, as the wheel 2 is rotated in the direction of the arrow, toward the marking devices. Preferably I arrange the feeders 2^a in pairs one above and one below the belt 3, which passes between the feeding disks of each pair as shown (Fig. 8).

In the example shown there are four sets of feed disks 2^a arranged at quite a distance apart or about 90° apart on the feed wheel 2. This will enable four pieces of matter to be fed from the table 1 for each rotation of the wheel 2.

By increasing or diminishing the number of feeders 2^a on the wheel 2 the number of pieces of mail fed during each rotation of the wheel can be varied. The feeders 2^a should be spaced so far apart around the periphery of the wheel as would insure that the longest letter to be handled would be fed forward before a second letter comes to the feeding point, thus preventing any "repeat" action of the marking devices on the letter.

I propose in some instances to make the feeders detachable or adjustable on the wheel 2 so that if it is desired to reduce the number of pieces of mail fed for each rotation of the wheel or to adapt the machine to operate on an unusually long piece of mail one or more of the feeding disks may be removed or put out of operation.

As indicated in Figs. 1 and 8 two sets of diametrically opposed feeders 2^a may be made adjustable radially of the wheel, so that they can be projected to operative position or retracted out of operative position. As shown in Fig. 8 each pair of adjustable feeders 2^a may be secured, by a stud or pin 2^r, to a slide 2^s mounted in a slot 2^t in wheel 2 adjacent the periphery thereof, this slide having a shank 2^v engaging a socket 2^w in the wheel; and the shank 2^v may be provided with openings 2^p adapted to be engaged by a pin 2^q pressed downward by a spring 2^o. By disengaging the pin 2^q from the shank 2^v the slide 2^s may be adjusted either to operative position as shown in full lines Fig. 8, or to inoperative position as indicated in dotted lines in said figure. When these adjustable rollers 2^a are retracted then only two pieces of mail would be fed forward for each rotation of the wheel 2 and consequently the machine would be capacitated to handle much longer letters but less rapidly.

The inner end of the guide 1^a is slotted as at 1^z so as to permit the periphery of the wheel 2, the feeders 2^a thereon and the belt 3 to project through the slot slightly beyond the front face of the guide 1^a so that the feeders 2^a will contact the innermost piece of mail matter resting against the guide 1^a.

The feeders 2^a will impinge against the innermost piece of mail lying against the guide 1^a and will push this piece of mail forward past the inner end of the guide 1^b which is provided with any suitable separating device, such as a wiper 1^d, adjustably attached to a slide 1^e attached to the outer side of the guide 1^b and which is moved inward under yieldable pressure by means of a spring 1^f attached to a fixed point at one end and its other end is connected to the slide 1^e so as to press the wiper 1^d yieldably toward and close to the face of the belt 3 at a point just slightly in rear of the guide 1^b. The inward movement of the wiper is controllable by a screw 1^g tapped through a lug 1^h and engaging the fixed stationary member 1^i on the guide 1^b by which the slide 1^e is guided. This wiper 1^d will prevent more than one piece of mail being moved forward from the table at a time; but the feeders 2^a will have sufficient frictional contact with the innermost piece of mail to move the latter edgewise past the wiper 1^d and into the bite of the feed rollers 3^a, 3^x.

The feed roller 3^a is mounted on a swingable arm 3^b which is yieldingly pressed toward the belt 3 (Fig. 3) by means of a spring 3^c attached to the arm 3^b and a fixed part of the frame as indicated in the drawings. The roller 3^x is rotatably mounted on a stub shaft 3^y journaled in bearings on the top plate or base F of the machine opposite the roller 3^a as shown, and shaft 3^y may be positively driven as hereinafter explained.

The rollers 3^a, 3^x and belt 3 forward the mail edgewise toward the printing die 5 (see Fig. 4) and the forward edge of the piece of mail is guided to and between the

printing member 5 and impression member 6 by means of fingers 4, 4^x which are arranged beside the adjacent run of the belt 3. The finger 4 is preferably provided with a roller 4^c, on its rear end opposite a roller 4^d on the rear guide 10^a so as to support the forward edge of the mail vertically and at the same time create no frictional resistance to its forward passage.

The printing die 5 is mounted on the upper end of a sleeve 5^a which is journaled upon a stud 5^n secured to the top plate or base F of the machine; and on the lower end of this sleeve is a friction disk 5^b which is provided at one point with a peripheral notch 5^c. The disk 5^b is adapted to contact with a driven friction gear 7 (Figs. 2 and 3) which is attached to a shaft 7^a journaled in the plate F. Shaft 7^a has a gear 7^b on its lower end meshing with an idler pinion 7^c which in turn meshes with a gear 2^x attached to the lower end of the shaft 2^b so that the gear 7 will be rotated when the wheel 2 is operated. When the notch 5^c is opposite gear 7 (see Fig. 3) there will be no contact between the peripheries of the disk 5^b and gear 7, consequently the die will not be rotated; but a very slight turning movement of the die 5 will suffice to bring the periphery of the disk 5^b into contact with the periphery of the gear 7 whereupon the die will be positively turned by action of said gearing.

The disk 5^b carries a pin 5^i on its under side which is adapted to be engaged by the end 8^a of a stop member 8 which is pivoted on a stud 8^b on the frame and is normally held in position to engage the pin 5^i by means of a spring 8^d attached to the end 8^c of the stop member and to a suitable fixed point.

In normal position the pin 5^i is engaged with the stop 8 and the notch 5^c in the friction disk 5^b lies directly opposite the friction gear 7, and because of this notch there is no contact between the friction gear 7 and disk 5^b, consequently the die is not rotated. But the die is adapted to be given a slight initial rotary movement by the passing letter when the stop 8 is moved out of engaging position as hereinafter described, and the slight initial rotation of the die by the letter brings the periphery of the disk 5^b into contact with gear 7 whereupon the die will be rotated until the notch 5^c again comes opposite gear 7; but during such rotation of the die the stop 8 is returned to engaging position so that the die will be positively stopped at the proper point and cannot be carried on by momentum so as to improperly bring the following edge of the notch 5^c in to engagement with the gear 7. The stop 8 may be arrested in position to engage the pin 5^i by a stop pin 8^e. (Fig. 4).

On the upper end of the die is mounted a transverse slidable trip member 5^e which is adapted to be projected in one direction by means of a spring 5^f and this member has an end 5^d which is adapted to project over the upper edge of the belt 3 (Figs. 1 and 7) in position to be struck by the forward end of a letter moving toward the die and impression rollers under the action of the belt 3 and feed rollers 3^a, 3^x. When a moving letter strikes this trip member 5^e it imparts a slight rotary movement to the die sufficient to bring the periphery of the friction disk 5^b into contact with friction gear 7 whereupon the die is actuated as above described and caused to mark the letter as it passes.

This trip member 5^e has a slot 5^h in it the ends of which are adapted to engage the periphery of a cam plate 5^i fixedly attached to the upper end of the stud 5^n; and this cam is so shaped that as the die rotates and thereby causes the trip member 5^e to swing around the shaft 5^n said trip member will be first retracted out of the way of the piece of mail matter but after a piece of mail has passed and as the die completes its rotation the spring 5^f will cause trip member 5^e to move inwardly so that its ends 5^d will project over the belt 3 and into the path of a following letter. Thus as a letter is fed to the die it first engages the end of the trip member and gives an initial movement to the printing die sufficient to bring the disk 5^b into contact with the gear 7 so as to cause the die to be positively rotated once and mark the letter as it passes. The cam member 5^i can be detachably attached to the shaft 5 by means of a cap screw 5^j as shown, and by unfastening such screw the cam plate and die can be readily removed.

The impression roller 6 is mounted on a shaft 6^a journaled in a swingable arm 6^b pivoted at 6^c and pressed inward toward the printing roller by a spring 6^d, the inward movement of the impression roller toward the die being limited by the adjustable stop screw 6^f tapped through the arm 6^b and engaging a stop lug 6^g, see Fig. 3.

The letter after passing between the die and impression roller is directed by the belt 3 to and between the belt and a feed roller 9, which may be mounted on a slide 9^a attached to the rear side guide 10^b on the receiving table 10, the slide 9 being pressed inwardly by means of a spring 9^d as indicated in Fig. 1. If desired a roller 9^y may be arranged opposite the roller 9 mounted on a stud attached to the base.

The shaft 6^a of the impression roller may be positively driven if desired by means of a pinion 6^m attached to the shaft 6^a meshing with the gear 7^c. The feed roller 3^x may also be positively driven if desired by means of a pinion 3^m on the shaft 3^y meshing with the gear 7^c as indicated in Fig. 3. The feed roller 3^a may also if desired be positively driven by means of a pinion 3^n on its lower

end meshing with the gear 7^b as indicated in Fig. 3.

The belt 3 passes on beyond roller 9 to a pulley 11 journaled on a stub 11^a, attached to the top plate of the machine, and the belt returns past an idler guide pulley 3^t to the wheel 2. Attached to the pulley 11 are stacker fingers 11^b which are adapted to operate through a slot in the rear guide plate 10^a on the table 10 so as to stack the mail brought forward onto this table; the rearward movement of the letter will be arrested by means of a guide 10^c attached to the table. The guides 10^b and 10^c may be adjustable as indicated in the drawings. The forward movement of the mail on table 10 may be arrested by an adjustable stacking board 10^d which may be automatically operated in the usual manner.

In order that the letters may trip the die so as to initially start it, in the manner described, it is necessary that the stop 8 should be disengaged from the pin 5^i; for this purpose I provide means for automatically moving the stop out of engaging position just prior to the moment that the leading edge of a letter could contact with the trip 5^e. For this purpose a rod 8^f is pivotally connected at one end to the arm 8^c of the stop member, and its other end is pivotally connected to the free end of a lever 8^g pivoted on a pin 8^h on the table adjacent the shaft 2^b; and this arm 8^h preferably has a roller 8^i on its outer end which roller is adapted to be engaged by any one of a series of cams 8^j attached to a disk 2^j keyed to a shaft 2^b so as to rotate with the said shaft and wheel 2. These cams 8^j are so located on the disk 2^j with relation to the feeders 2^a, that after any feeder has engaged a letter and moved the same forward off the table 1, and just before the forward edge of such letter can contact with the trip 5^e, the related cam 8^j engages the roller 8^i and swings lever 8^g so as to rock the stop member and move the end 8^a out of engagement with the pin 5^i (Fig. 4.) and the cam 8^j is sufficiently long to hold such stop member out of engaging position until the forward end of the letter has engaged the trip and started the die in the manner above described. The only work that is required of the letter is to impart a very slight initial rotary movement to the die; and the only thing that the letter has to overcome is the inertia of the die, which is very slight because the die is light and when properly lubricated a thin letter, card, or sheet, would be sufficient to impart such initial movement to the die particularly as the leading edge of such letter is stiffened at the engaging point by the belt 3 and the rollers 4^c and 4^d. The letter does not have to actuate any of the mechanism for releasing the positive stop, as in the ordinary mail marking machines, and such stop mechanism is automatically and positively shifted out of position by the actuating cams at the proper moment.

The die may be supplied with ink by any suitable means; an ink supply roll 14 being shown mounted on an adjustable bracket or guide 14^a. In the machine shown, the ink roll 14 is only moved by contact with the die, and as the die is only rotated once for each piece of mail matter there will be no over supply of ink.

The speed of rotation of which this machine is capable depends upon the diameter of the wheel 2, and the number of feeders carried by said wheel. The wheel shown has four sets of feeders, consequently it will feed four short letters for each rotation. The number of feeders on the wheel might be more or less, but the feeders should be so far apart that the letters will not be fed so rapidly as to cause one letter to be fed forward before the preceding letter has entirely passed the wiper 1^d.

While the machine is primarily designed for canceling stamps, letters, checks, etc., it might also be adapted for counting the letters, &c., by a suitable registering mechanism operated from the die or at the point where the die is used.

An important practical feature of this machine is that the die is not operated except and unless a letter is present to start it, although the positive stop is withdrawn from the die each time a feeder on the feed wheel passes the feeding point. If for any reason there should be no letter present, or a feeder should fail to take a letter, then, although the stop would be removed, the die would not be operated and therefore there would be no over-inking of the die or false marking. In other words in my machine the die is not rotated each time a letter should be at the printing point, but is rotated whenever a letter actually reaches the printing point.

Another important practical feature of my invention is that the cams 8^j, which may be of any suitable construction, are so proportioned and arranged, relatively to the possible length of effective feeding movement of the feeders past the table 1, (indicated by the space between the dotted lines x—y in Fig. 4) that no matter whether such feeders start a letter at the beginning, middle or end of such feeding movement, the positive stop will be held out of engagement long enough to allow such letter to initially start the die so that all letters will be uniformly printed. Thus if it should happen that one feeder picks up a letter at the point x (Fig. 4) while another should only pick up a letter at the point y (Fig. 4), or at any intermediate point, nevertheless such letter will initially operate the die so that when the machine is operating each letter will be properly marked whether such letter be initially started earlier or later in the move-

ment of the feeders between the points *x* and *y;* but the cams will always permit the positive stop to reëngage and stop the die after each complete rotation thereof.

What I claim is:

1. In a machine for canceling stamps, a feed wheel having a circumferential peripheral groove, spaced frictional feeders attached to the wheel and projecting beyond the periphery thereof adapted to coöperate with the belt in feeding the letters, and a feed belt of less thickness than the depth of said groove; with printing mechanism adjacent the run of said belt and past which letters are directed by said belt.

2. In a machine for canceling stamps, etc., a feed wheel having a plurality of frictional feeding devices on its periphery adapted to feed letters by friction; some of these devices being adjustable into or out of operative position, whereby the number of letters fed during each rotation of the wheel may be varied, with printing mechanism and means for directing letters forwarded by the feed wheel past said mechanism.

3. In a machine for canceling stamps, etc., a feed wheel having a circumferential channel in its periphery, a feed belt engaging said channel, and frictional feeders on the periphery of said wheel, some of said feeders being adjustable into or out of operative position to vary the number of letters which may be fed at each rotation of said wheel, with printing mechanism adjacent the run of said belt and to and past which letters are directed by said belt.

4. In a machine for canceling stamps, etc., a feed wheel having a circumferential channel in its periphery, a feed belt engaging said channel, and frictional feeders on said wheel at opposite sides of the channel, some of said feeders being adjustable into or out of operative position, whereby the number of letters fed at each rotation of said wheel may be varied, with printing mechanism adjacent the run of said belt and to and past which letters are directed by said belt.

5. In combination; printing devices; a feed wheel having a circumferential channel, a feed belt of less thickness than the depth of the channel and engaging the channel in the wheel and operated thereby and extending past the printing devices; feeders attached to the periphery of the wheel and adapted to cause letters to start forward so that they may be moved on by and with the belt; and feed rollers coöperating with said belt to forward letters to the printing devices.

6. In combination, a feed table, and printing devices; with a feed wheel having a circumferential channel, a feed belt engaging the channel in the wheel to be operated thereby and extending past the printing devices; and projecting frictional feeders on the periphery of said wheel adapted to start the letters from the feed table so that they may be effectively engaged by the belt and fed thereby to and past the printing devices.

7. In combination, a feed table, and printing devices; with a feed wheel having a circumferential channel, a feed belt engaging the channel in the wheel to be operated thereby and extending past the printing devices; frictional feeders on the periphery of said wheel adapted to start the letters from the feed table to be engaged by the belt and fed thereby to and past said printing devices; some of said feeders being adjustable into or out of operative position; and feed rollers coöperating with said belt to forward letters to the printing devices.

8. In combination, a feed table, a printing member adapted to be initially started by a letter, a feed wheel and coöperating devices for moving letters from the feed table to the printing member, a stop for arresting the printing member in inoperative position until started by a letter, and means actuated by and from the feed wheel for disengaging said stop before the forward edge of a letter can contact the printing member.

9. In combination, a feed table, a printing member adapted to be initially started by a letter, a feed wheel and a belt coöperating therewith for moving letters from the feed table to the printing member, a stop for arresting the printing member in inoperative position until started by a letter, means actuated by and from the feed wheel for disengaging said stop before the forward edge of a letter can contact with the member, and means for driving the member through a cycle of operations after it is initially started.

10. In a mail marking machine, the combination of a printing member adapted to be initially started by a letter, a feed wheel, a feed belt actuated by said wheel and extending past the printing member, and means coöperating with said belt to feed the letters past the printing member; with a stop for arresting the printing member in inoperative position until started by a letter, and means actuated by and from the feed wheel for positively disengaging the stop before the forward edge of a letter can contact with the printing member.

11. In a mail marking machine, the combination of a printing die adapted to be given an initial start by a letter, a feed wheel having peripheral feeders, a feed belt actuated by said wheel and extending past the printing die, and means coöperating with said belt to feed the letters past the printing die; with a stop for arresting the printing die in inoperative position until started by a letter, means for positively disengaging the stop before the forward edge of a letter can contact with the die,

and means for driving the member through a cycle of operations after it is initially started.

12. In a mail marking machine, the combination of a printing member and co-acting impression member; a feed wheel, frictional devices on the feed wheel for moving letters, and a feed belt actuated by said wheel and extending past the printing member; with a stop for arresting the printing member in inoperative position until started by a letter, and means for positively disengaging the stop before the forward edge of a letter can contact with the printing member.

13. In a mail marking machine, the combination of a printing die adapted to be given an initial start by a letter and co-acting impression member; a feed wheel, frictional devices on the feed wheel for moving letters, and a feed belt actuated by said wheel and extending past the printing devices; with a positive stop for arresting the printing die in inoperative position until started by a letter, means for positively disengaging the stop before the forward edge of a letter can contact with the die, and means for driving the member through a cycle of operations after it is initially started.

14. In a machine for canceling stamps, etc., the combination of a feed table, a delivery table, a printing member intermediate the feed and delivery tables adapted to be given an initial start by a letter, a feed wheel adjacent the feed table, a belt extending around the feed wheel past the printing member, a stop for normally holding the printing member in inoperative position, movable cams, means operated by said cams for moving the stop out of operative position before a letter reaches the printing member, and means whereby the printing member after being initially started by the letter is caused to make a complete rotation.

15. In a machine for canceling stamps, etc., the combination of a feed table, a delivery table, a printing member intermediate the feed and delivery tables adapted to be given an initial start by a letter, a feed wheel adjacent the feed table provided with peripheral feeders, and a belt extending around the feed wheel past the printing member; with a stop for normally holding the printing member in inoperative position, cams operated by the feed wheel, connections operated by said cams for moving the stop out of operative position before a letter reaches the printing member, a notched frictional disk connected with the printing member, and a frictional gear adjacent said disk adapted to engage and operate the latter after the printing member is initially started by the letter.

16. In a machine for canceling stamps, etc., the combination of a feed table, a delivery table, a stacker thereon, a printing member intermediate the feed and delivery tables adapted to be given an initial start by a letter, a feed wheel adjacent the feed table provided with peripheral feeders, and a belt extending around the feed wheel past the printing member to the stacker; with a stop for normally holding the printing member in inoperative position, cams operated by the feed wheel, connections operated by said cams for moving the stop out of operative position before a letter reaches the printing member, and means whereby the printing member after being initially started by the letter is caused to make a complete rotation.

17. In a machine for canceling stamps etc., the combination of a feed table, a delivery table, a stacker thereon, a printing member intermediate the feed and delivery tables adapted to be given an initial start by a letter, a feed wheel adjacent the feed table provided with peripheral feeders, and a belt extending around the feed wheel past the printing member to the stacker; with a stop for normally holding the printing member in inoperative position, cams operated by the feed wheel, connections operated by said cams for moving the stop out of operative position before a letter reaches the printing member, and means whereby the printing member after being initially started by the letter is caused to make a complete rotation; said means comprising a notched frictional disk on the printing member, and a frictional gear adjacent said disk adapted to engage and operate the latter after the printing member is initially started by the letter.

18. In a mail marking machine, the combination of a printing member adapted to be given an initial start by a letter and co-acting impression member; a feed wheel, frictional devices on the feed wheel for moving letters from the feed table, and a feed belt actuated by said wheel and extending past the printing member; with a stop for arresting the printing member in inoperative position until started by a letter, means for positively disengaging the stop before the forward edge of a letter can contact with the printing member, and devices adjacent the printing member for supporting the leading edge of the letter just before it contacts with the printing member.

19. In a machine for canceling stamps etc., the combination of a feed table, a delivery table, a printing member intermediate the feed and delivery tables adapted to be given an initial start by a letter, a feed wheel adjacent the feed table, a belt extending around the feed wheel past the printing member, and devices adjacent the printing member for supporting the leading edge of

a letter just before it contacts with the printing member; with a stop for normally holding the printing member in inoperative position, movable cams, connections operated by said cams for moving the stop out of operative position before a letter reaches the printing member, and means whereby the printing member after being initially started by the letter is caused to make a complete rotation.

20. In a machine for canceling stamps etc., the combination of a feed table, a delivery table, a printing member intermediate the feed and delivery tables adapted to be given an initial start by a letter, a feed wheel adjacent the feed table provided with peripheral feeders, a belt extending around the feed wheel past the printing member, and devices adjacent the printing member for supporting the leading edge of the letter just before it contacts with the printing member; with a stop for normally holding the printing member in inoperative position, cams operated by the feed wheel, connections operated by said cams for moving the stop out of operative position before a letter reaches the printing member, a notched frictional disk connected with the printing member, and a frictional gear adjacent said disk adapted to engage and operate the latter after the printing member is initially started by the letter.

21. In a machine for canceling stamps, etc., the combination of a feed table, a delivery table, a printing member adapted to be given an initial start by a letter intermediate the feed and delivery tables, a feed wheel adjacent the feed table provided with peripheral feeders, a belt extending around the feed wheel past the printing member, separating devices adjacent the feed table, feeding rollers intermediate the separating devices and the printing member, and means for supporting the forward edge of the letter adjacent the printing member; with a stop for normally holding the printing member in inoperative position, movable cams, connections operated by said cams for moving the stop out of operative position before a letter reaches the printing member, and means whereby the printing member after being initially started by the letter is caused to make a complete rotation.

22. A feed wheel for mail marking machines having a slot adjacent its periphery, a slide mounted in said slot, a feed device mounted on said slide, and means for locking the slide in projected or retracted position, with printing mechanism and means for directing letters forwarded by the feed wheel past said mechanism.

23. In a machine for canceling stamps, etc., the combination of a feed table, a delivery table, a stacker thereon, a printing member intermediate the feed and delivery tables adapted to be given an initial start by a letter, a feed wheel adjacent the feed table provided with peripheral feeders, a belt extending around the feed wheel past the printing member to the stacker, a stop for normally holding the printing member in inoperative position, cams operated by the feed wheel, connections operated by said cams for moving the stop out of operative position before a letter reaches the printing member, a notched frictional disk connected with the printing member, and a frictional gear adjacent said disk adapted to engage and operate the latter after the printing member is initially started by the letter; with separating devices adjacent the feed table, feeding rollers intermediate the separating devices and the printing member, and means for supporting the forward edge of the letter adjacent the printing member.

24. A feed wheel for mail marking machines having slots adjacent its periphery, slides mounted in said slots, frictional feeders mounted on said slides, and means for locking the slides in projected or retracted position, with printing mechanism and means for directing letters forwarded by the feed wheel past said mechanism.

25. In combination, a member adapted to be given an initial start by a letter, means for moving letters successively toward said member, a stop for arresting the member in inoperative position until started by a letter, and means for positively disengaging said stop before the forward edge of a letter could contact with the member whether a letter be present or not; the member remaining inactive until initially moved by a letter.

26. In combination, a member adapted to be given an initial start by a letter, means for moving letters successively toward said member, a stop for arresting the member in inoperative position until started by a letter, means for positively disengaging said stop before the forward edge of a letter could contact with the member whether a letter be present or not, and means whereby the member will be positively operated through one cycle of operations when it is initially moved by a letter.

27. In combination, a printing member adapted to be given an initial start by a letter, means for moving letters successively toward said printing member, a stop for arresting the printing member in inoperative position until started by a letter, means for positively disengaging said stop before the forward edge of the letter can contact with the printing member whether the letter be present or not, the die remaining inactive until and unless it is initially moved by a letter although the positive stop be momentarily disengaged.

28. In combination, a printing member

adapted to be given an initial start by a letter, means for moving letters successively toward said printing member, a stop for arresting the printing member in inoperative position until started by a letter, means for positively disengaging said stop before the forward edge of a letter can contact with the printing member whether the letter be present or not, and means whereby the die will be positively operated through one cycle of operations when it is initially moved by a letter, but such die will not be operated if a letter is not present although the positive stop be momentarily disengaged.

In testimony that I claim the foregoing as my own, I affix my signature.

WALTER H. BOWES.

Copies of this patent may be obtained for five cents each, by addressing the "Commissioner of Patents, Washington, D. C."