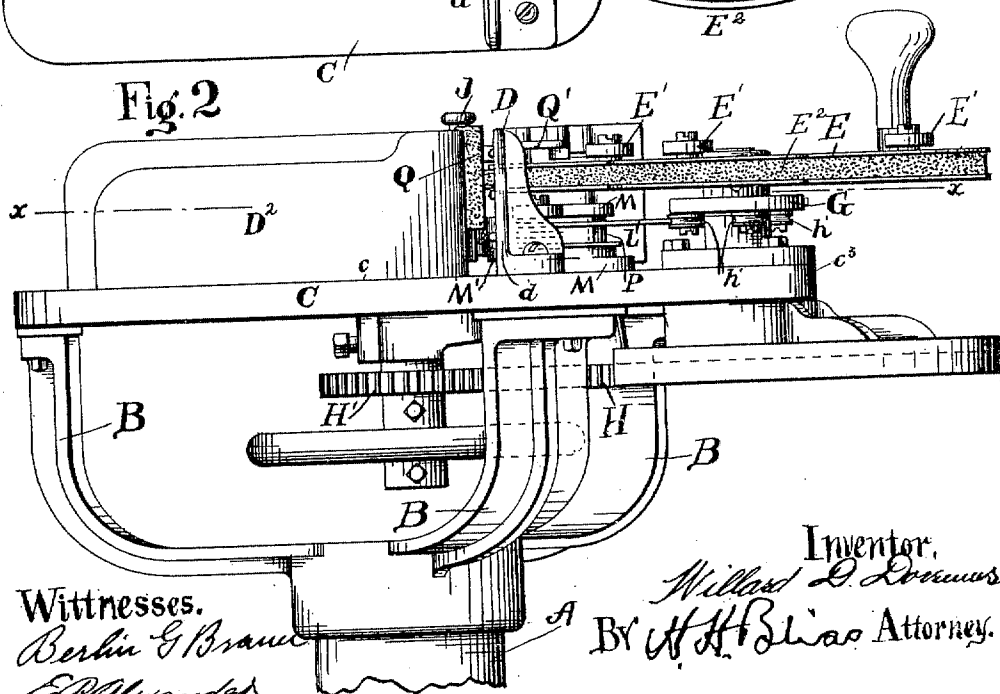
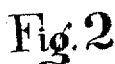


MAIL MARKING MACHINE.
APPLICATION FILED JAN. 24, 1903. RENEWED MAY 18, 1908.

Patented Jan. 24, 1911.

7 SHEETS—SHEET 1.

Fig.1



Witnesses.

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MAIL MARKING MACHINE.

APPLICATION FILED JAN. 24, 1903. RENEWED MAY 18, 1908.

Patented Jan. 24, 1911

7 SHEETS—SHEET 2.

982,415.

Fig. 3

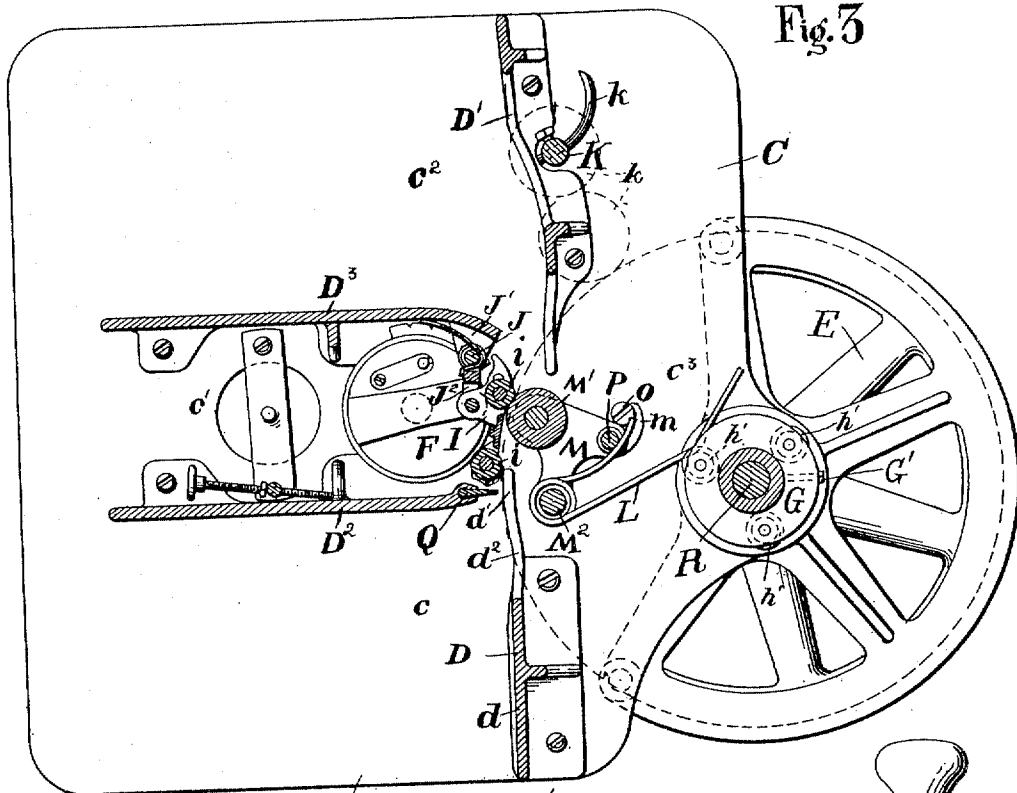
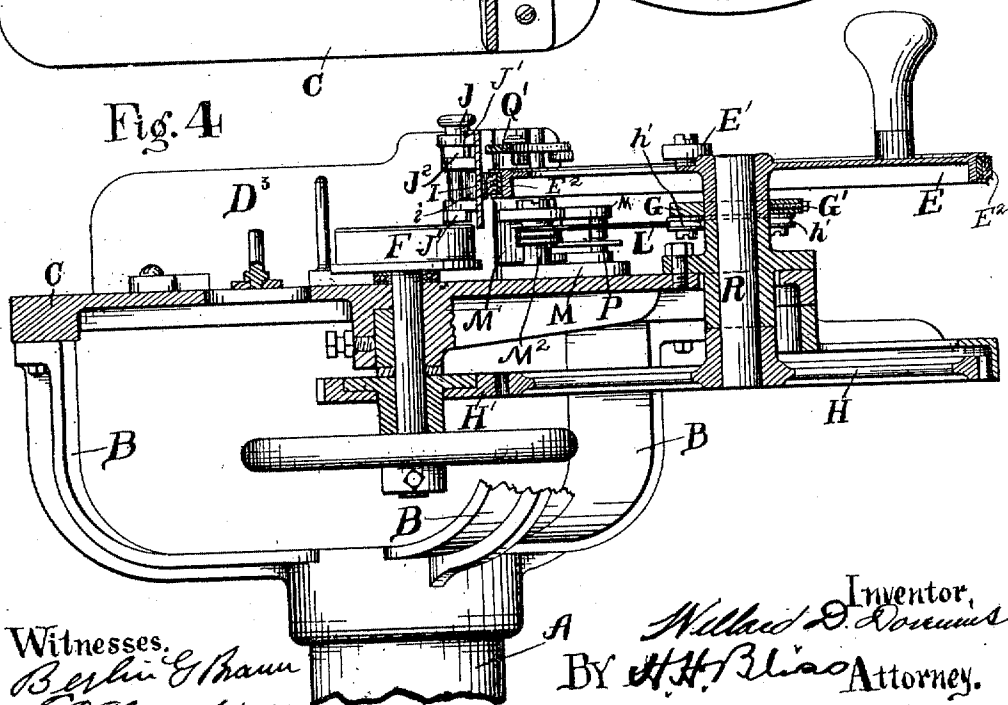


Fig. 4



Witnesses.

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MAIL MARKING MACHINE.

APPLICATION FILED JAN. 24, 1903. RENEWED MAY 18, 1908.

982,415.

Patented Jan. 24, 1911.

7 SHEETS—SHEET 3.

Fig. 5.

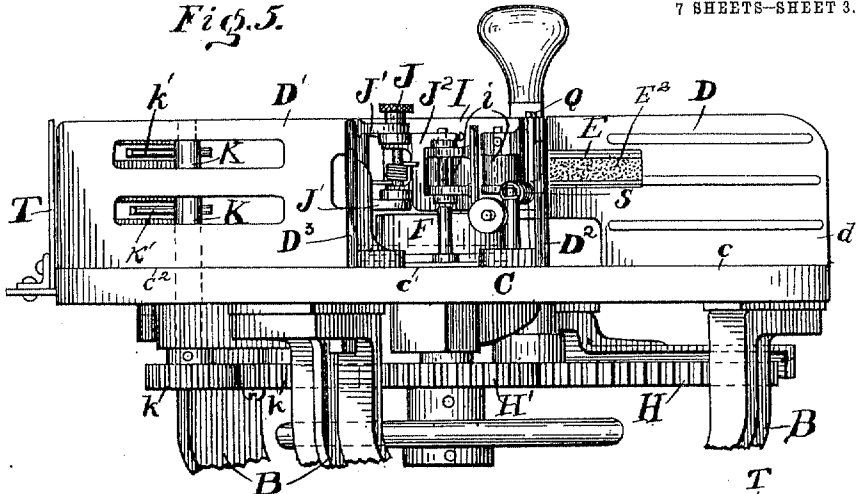
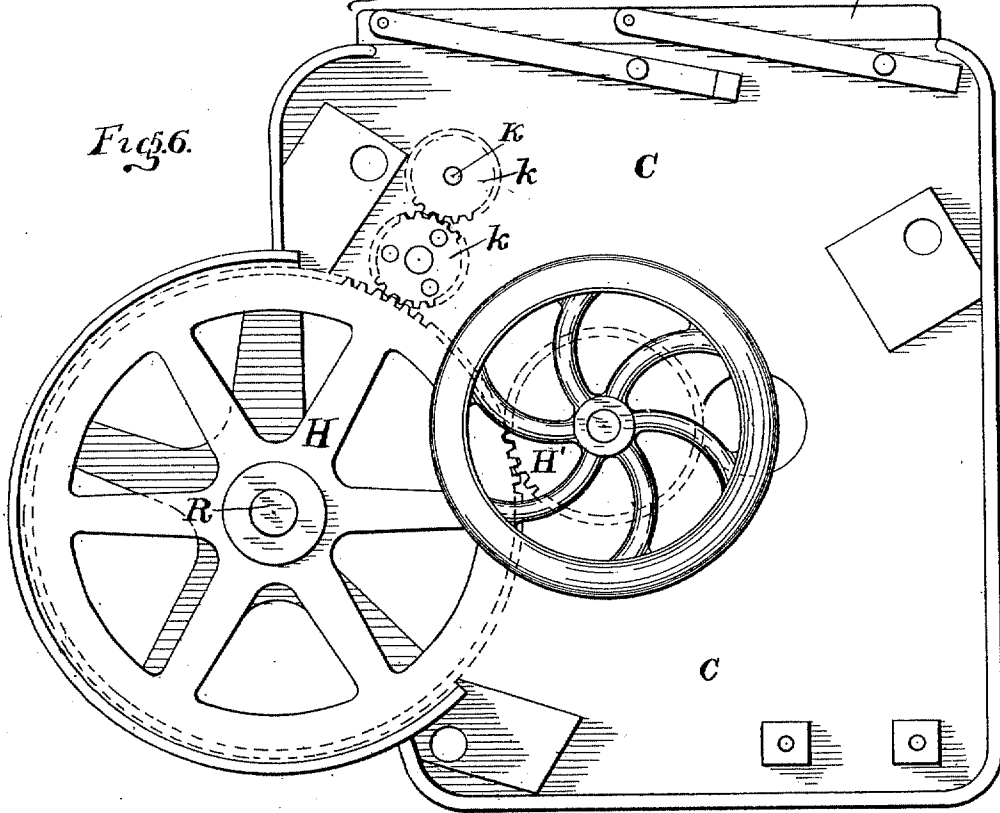


Fig. 6.



Witnesses.
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C. M. Maudslayi

Inventor
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By Atty. W. H. Bliss

APPLICATION FILED JAN. 24, 1903: RENEWED MAY 18, 1908.

Patented Jan. 24, 1911.

7 SHEETS--SHEET 4.

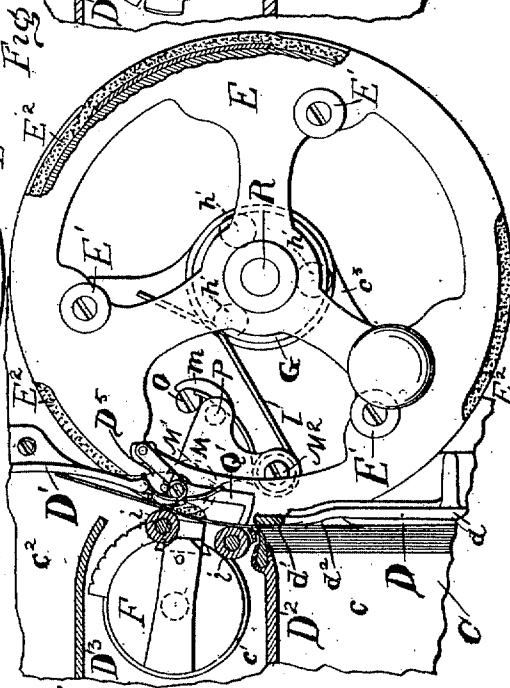
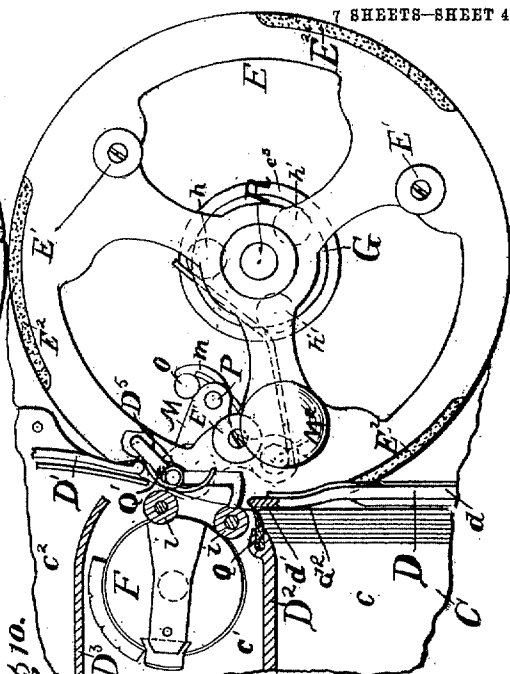


Fig. 7.

Fig. 9.
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†

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MAIL MARKING MACHINE.

APPLICATION FILED JAN. 24, 1903. RENEWED MAY 18, 1908.

982,415.

Patented Jan. 24, 1911.

7 SHEETS—SHEET 5.

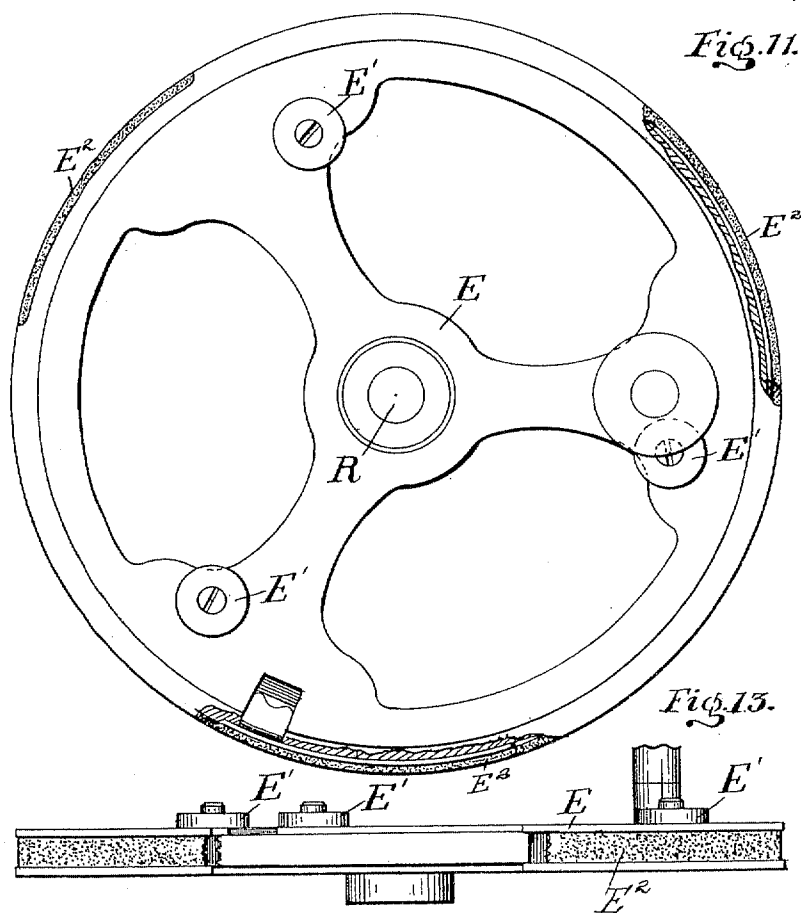


Fig. 12.

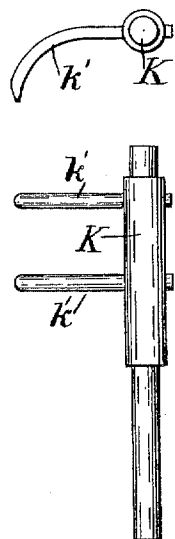


Fig. 13.

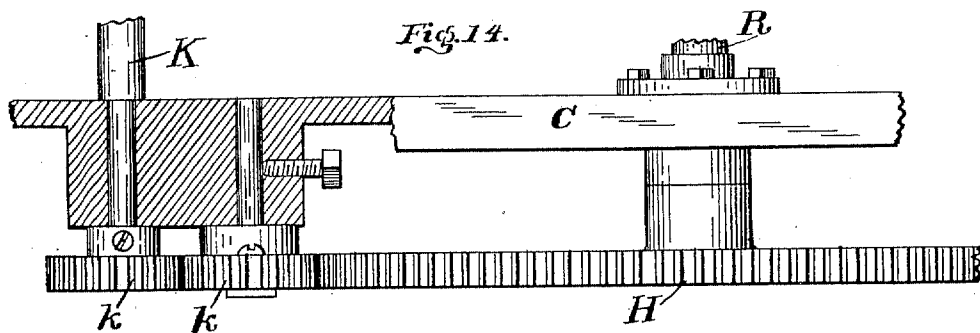


Fig. 14.

Witnesses.
Berlin & Brauer
E. H. Schuch

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Willard D. Doremus
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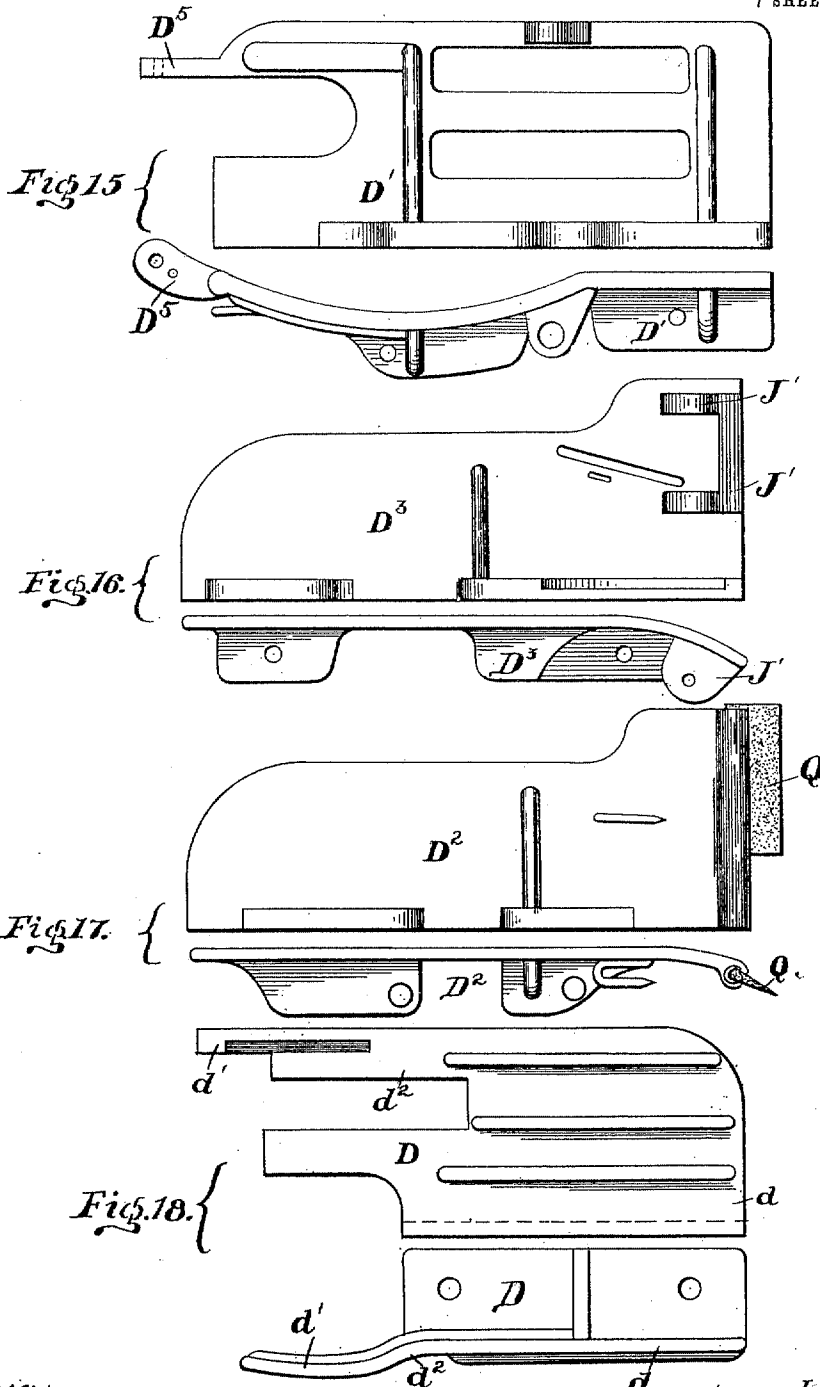
W. D. DOREMUS.
MAIL MARKING MACHINE.

APPLICATION FILED JAN. 24, 1903. RENEWED MAY 18, 1908.

982,415.

Patented Jan. 24, 1911.

7 SHEETS—SHEET 6.



Witnesses.
Berlin G. Mann.
C. H. Anderson.

By Atty. *W. D. Doremus*
W. D. Doremus

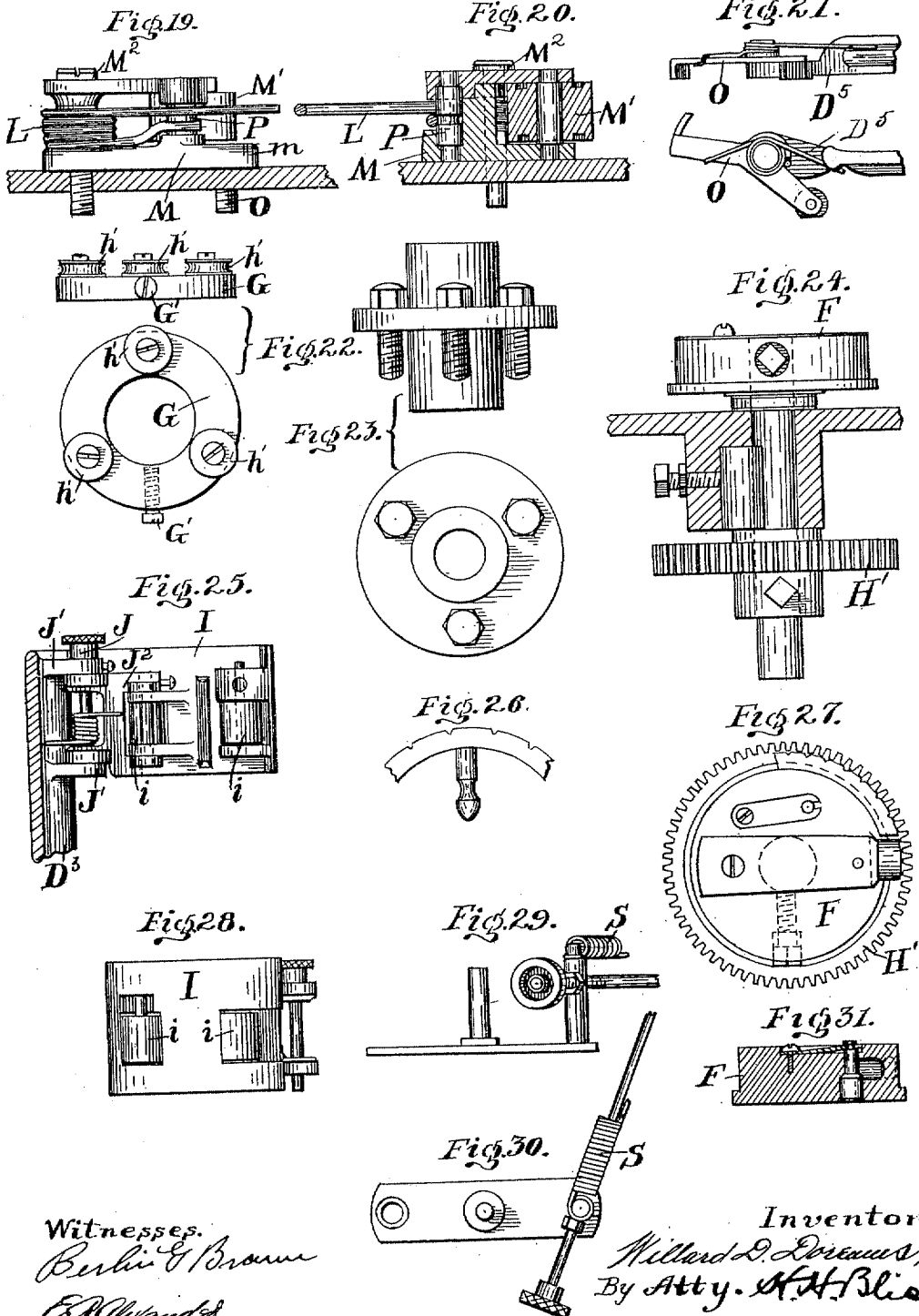
W. D. DOREMUS.
MAIL MARKING MACHINE.

APPLICATION FILED JAN. 24, 1903. RENEWED MAY 18, 1908.

982,415.

Patented Jan. 24, 1911.

7 SHEETS—SHEET 7.



Witnesses.
Berlin & Brown
E. H. Wood

Inventor.
Willard D. Doremus
By Atty. *H. H. Bliss*

UNITED STATES PATENT OFFICE.

WILLARD D. DOREMUS, OF WASHINGTON, DISTRICT OF COLUMBIA.

MAIL-MARKING MACHINE.

982,415.

Specification of Letters Patent.

Patented Jan. 24, 1911.

Application filed January 24, 1903, Serial No. 140,383. Renewed May 18, 1908. Serial No. 433,590.

To all whom it may concern:

Be it known that I, WILLARD D. DOREMUS, a citizen of the United States, residing at Washington, District of Columbia, have invented certain new and useful Improvements in Mail-Marking Machines, of which the following is a specification, reference being had therein to the accompanying drawing.

This invention relates to mail marking machines, and consists in certain novel features of construction and operation of parts, all as hereinafter more fully described and specifically pointed out in the claims.

In the annexed drawings, similar letters of reference indicate corresponding parts in all the views, in which—

Figure 1 is a top plan view of the invention; Fig. 2 is a side elevation thereof; Fig. 3 is a horizontal sectional view on line *x, x* of Fig. 2; Fig. 4 is a vertical section on line *y, y* of Fig. 1; Fig. 5 is an end elevation; Fig. 6 is a bottom plan view; Figs. 7 to 10 show the several positions of the projecting, separating and marking devices, during the complete operation of the receiving, marking and delivering of a letter; Fig. 11 is a plan view partially in section of the friction wheel. Fig. 12 is a side elevation of the same. Fig. 13 shows in plan and side elevation the letter stacker. Fig. 14 is an enlarged side elevation showing the actuating gearing. Figs. 15, 16, 17, and 18 show the guide walls for directing the course of the letters through the machine. Fig. 19 is a side elevation, and Fig. 20 is a section of the yoke and control-spring for the friction roller *M'*. Fig. 21 shows in side elevation and in plan the letter stop which is arranged in the pathway of the letter through the machine. Fig. 22 is a detail of the roller carrier which is secured to the main drive shaft. Fig. 23 shows the bearing for the main drive shaft. Fig. 24 is a side elevation of the die carrier and its driving gear. Fig. 25 is a side elevation of the yielding guide plate *I* and the parts associated therewith. Fig. 26 is a side elevation of a portion of a marking die. Fig. 27 is a plan view of the parts shown in Fig. 24. Fig. 28 is a view of the yielding plate *I* from the opposite side of the plate from that shown in Fig. 25. Figs. 29 and 30 are details of the yielding

controlling devices for the inking roller. Fig. 31 is a sectional view of the die holder.

The operative parts of the machine are supported in any suitable way, there being in the construction illustrated a standard or post *A*, which at the bottom has a pedestal, legs or other suitable means for securing it to the floor, and at the upper end has bracket arms *B*, which extend upward. The essential operative parts are supported upon a bed or table, which is indicated as a whole by *C*, and can be regarded as divided into several parts, that at *c*, being a letter receiving table for initially receiving the letters to be canceled and stamped, a final receiving or delivery table at *c'*, and an intermediate space at *c''*, together with an extension at *c'''* for supporting some of the active parts. There are formed with or secured to the table *C* upwardly rising wall pieces or partitions as shown at *D'*, *D*, *D''*, *D'''*. That at *D* is at the inner end of the receiving table or chamber, that at *D'* is at the inner end of the final delivery chamber and those at *D''*, *D'''*, are respectively at the left side of the receiving compartment and at the right side of the delivery compartment. The lines of travel of the letters from the time they are placed upon the table section *c*, until they are removed from the delivery section *c'* will be readily understood, some of the figures in the drawing indicating the positions of letters respectively at different times, and the arrows 1, 2, 3, 4, 5, indicating the complete circuit or path of the latter. The walls *D''*, *D'''* at their inner ends come somewhat close to the transverse wall *D*, *D'*, but passages are left for the letters. The wall *D* is preferably shaped and constructed as shown, that is with a straight portion *d*, at its outer end, a curved portion *d''*, and an inner end portion *d'*. The wall *D'* is preferably curved outwardly from the main portion of the delivery table for a portion of its length to accommodate the bend of a letter in passing through the machine, the curve returning inwardly and continuing from thence on substantially a straight line to the outer end of said wall.

Carried upon and from the projection *C''*, of the bed *C* are a number of operative parts, first of which is the driving gear *H*, in mesh with the pinion *H'*, the latter being upon the same

shaft with the printing roller F, which, during the operation of the machine is always in motion, and in position to mark any passing mail-matter brought into contact therewith. Carried on the shaft with the gear H, is the friction wheel E. The periphery of the wheel E, is channeled to receive any suitable yielding frictional material or material adapted to bear upon the surface or face of a piece of mail-matter brought into contact therewith, while on the portion c' of the bed C. Said wheel E may be formed as shown in substantially a true circle around its peripheral face and provided with such rabbets as may be desired to expose and leave projecting the rubber surface to engage with the advancing mail-matter, with the rubber lying next the bottom of said peripheral channel or a flat expansion spring may be set in said channel below said rubber at the rabbeted portions of the periphery so as to throw said rubber or filler slightly beyond the true circle of said wheel E, the essential feature sought, being the normal activity of said wheel with relation to the mail-matter, and the availability thereof for the purpose of advancing said mail-matter more positively at certain times when predetermined portions of its periphery are brought into contact therewith, this effect being produced by having the periphery of said wheel in substantially a true circle with the rabbets at the upper and lower edges to expose said yielding material for such portion of its face as will cause it to operate positively upon a piece of mail-matter only at such intervals as when the marking die is about to enter the letter path. Upon the upper face of said wheel E, are placed at predetermined intervals suitable cams or bearing rollers E' . Carried upon the same shaft R, and below said wheel E, are a like number of friction cams or rollers h' , which are secured to the underside of a collar G secured upon said shaft by the set screw G' , said cams being adapted to abut against the free end of the spring L upon the pivoted yoke M, which carries the bearing or friction roller M' normally held in proximity to, but out of contact with the marking die or roller F. The yoke M is pivotally held in position upon the bed c^a upon a stud M^2 , about which is coiled the spring L, which latter bears at one end against the pin P, and projects outwardly into the path of the cam rollers h' , at the opposite or normally free end. The yoke M is formed substantially T-shape in plan view for convenience, being pivoted at one end, and at the outer opposite end is provided with a hook-shape extension m , adapted to engage with a stop or pin O secured in the bed c^3 and in line with said hook m . At one of the extremities of said yoke, and away from the pivot is said friction

roller M' , held normally free from the marking die, and capable of only a limited movement toward the same because of the hook m , and pin O before referred to. The marking roller F lies next back of said bearing roller M' , and in close coincidence though normally, said two parts are separated only enough to permit the passage between them of an ordinary piece of mail-matter, which will contact with both. Next back of the printing roller is the inking roller held normally in contact therewith by means of the spring S, shown in Fig. 1.

Held in close proximity to the wheel E is a vertical plate I, provided with two small rollers i, i , which bear normally against the peripheral face of the wheel E, said rollers and plate being held by the spring actuated arm J^2 , pivotally supported in the brackets J' of the vertical wall D^a by means of the pin J, so as to be more or less yielding to permit the passage of mail-matter of varying thicknesses between said plate I and the friction wheel E, while said plate I will cooperate with the walls D, and D' to hold the letter or other passing mail-matter in a vertical position for the operation thereon of the marking roller F.

In mesh with the pinion H which actuates the marking roller are two pinions k, k , which drive the post K, from which project the curved arms k' , which act as a stacker to project the letters away from the wall D' , after passing through the machine, and the continuous rotation of said arms will keep the letter path free after post-marking, and automatically stack the letters on the portion c^2 of the bed C carrying them in the direction indicated by the arrow 5.

Lying in the path of an advancing letter when said letter is in position against the vertical wall D, is first a yielding separating device, which in the present instance consists of a piece of rubber Q held in a channel in the end of the wall D^2 , and is adapted to prevent the passage of more than one letter at a time through the marking mechanism. After passing the wall Q, a trip Q' is encountered, which trip lies normally in the path of the letter, but is supported upon an extension D^5 of the vertical wall D' opposite from the printing roller, and in such manner that the angular forward end lies normally in the path of an advancing letter, while the rear end projects outwardly and into the path of the cam rollers E' , so that said trip will be released only during the brief interval, in which said cam rollers E' may be passing during the revolution of the friction wheel E, at which time the yielding surface E^2 of said friction wheel E will bear against the first letter next the partition D, and carry it past said trip. Immediately after the trip has been released, and the letter advanced toward the printing roller, the free

end of the spring L will encounter the cam roller *h'* carried below the friction wheel E, and bearing thereon will increase the pressure of said spring, so as to positively hold the roller M' against the face of the advancing mail-matter, and cause it in turn, to contact positively with the marking die on the marking roller. The marking roller moves at such speed that the face of the die advances with the friction roller E, so that the post-mark is placed at the proper position without the possibility of smearing the mail-matter, after which the pressure of the spring L is gradually released until such time as the next piece of mail advances to the proper position for receiving the cancellation mark. Where unusually long letters are to be marked the delivery end of the bed plate may be lengthened by swinging out the vertical partition T, shown in Fig. 1, which is carried by means of extension brackets shown in dotted lines in said figure. The printing roller is inked by means of the ordinary inking roller held in proximity thereto and the printing die is set into the printing roller in any suitable and convenient manner well known to the art. Where letters of ordinary length are passed through the machine, they will be advanced by the yielding face of said wheel E, but in case letters of unusual length are to be marked, they will be advanced by the same means, and will be carried on by the contact of the metal edge of said wheel E, bearing upon one side, and the rollers *i, i*, bearing upon the opposite side with sufficient pressure to continue the motion thereto.

By having the die carrier mounted and moving independently of the letter-advancing devices, I am enabled to so construct the parts that only a single die is required, although high speed can be attained with the feeding mechanism, and hence a large number of letters can be rapidly passed in a given length of time. In the particular mechanism illustrated, the die carrier is of short radius, and the die itself makes several (in the present case, three) revolutions to one of the feed wheels so that three printing acts can be performed with the single die at each of the said revolutions of the feeder; and the same will be true even though the feeding mechanism be of modified form. In this respect, the machine differs from those that have been heretofore proposed, wherein the feeding mechanism and the printing mechanism were rigidly connected together, and arranged to rotate on a common axis on the same side of the letter channel; for, with such machines, it is necessary in order to attain economic speed in handling letters, to have a number of duplicate dies and cancelers, requiring a prohibitive amount of labor to change the dies, as for instance in changing dates, the hours

of the day, etc. Even with a single die, it is in many offices necessary to stop the machine many times during the day for the purpose of withdrawing printing characters and inserting others. And where the machines (such as the earlier ones proposed and above referred to) have required a series of several dies connected to and rotating with the printing mechanism, The labor and consumption of time have been correspondingly increased.

I am aware that mail-marking machines have heretofore been patented in which the feed wheel was provided with auxiliary fingers to aid in grasping the letter to pick it up, and aid in projecting the same through the marking devices, but I prefer the present construction because of its simplicity, and durability, and its capacity to yield itself readily to all the conditions, which arise in the practical handling and marking of mail-matter of varying thicknesses in large quantities. And it will be further seen that as concerns the letter stopping device Q', I have greatly simplified the apparatus by mounting it upon that side which is opposed to the printing die, and placing the trip upon or in direct connection with the feeding mechanism so that it can be timed without multiplicity of parts directly in purpose relation to the feed.

I am aware of the fact that in earlier constructions it has been proposed to vary the distance between the impression and printing rolls during the marking of a letter; that is, at the time that the impression die is marking the letter the distance between the rolls will be less than at other times during the passage of the letter through the machine. In the construction above described it will be understood that the distance between the impression and printing rolls is constant and is not varied and does not vary except when a piece of mail matter of unusual thickness is passed through the machine. The action of the rollers *h'* during their revolution about the axis of the shaft R is simply to increase the tension on the spring L so as to hold the pressure roller under a greater tension during the marking of the letter by the marking die than at any other time during its passage through the machine. The pressure with which the yielding rollers *i* are held in the letter path insures a sufficient gripping action upon the letter between the said rollers and the friction wheel E to cause it to move forward through the letter path, but at the time when the letter is to be marked by the impression die, it is desirable that the roller M' be held in position more firmly than at other times during the rotation of the die. This increased pressure with which the roll M' is held in its fixed position during the marking of the letter,

insures that the impression of the die will be clean and clear cut and that there will be no slipping of the letter between the die and the roller M' and the consequent blurring of the impression.

What I claim, is:—

1. In a machine of the described class, a metallic revoluble feed wheel provided with rigid and yielding peripheral faces alternating thereon, a letter channel, a stop in said letter channel, a trip on said feed wheel for actuating said stop, a marking die and pressure roller normally in the path of the letter, and means for increasing the pressure when the marking die is in operation.

2. In a machine of the class described, the combination with a feed table, a delivery table, a marking device normally in the path of the letters between said tables, a stop normally in said path, and means for releasing said stop, of a feed roller consisting of a single wheel presenting peripheral faces of alternating yielding and rigid material, said wheel having a portion of its periphery extending from the said feed table past the said marking device to the delivery table and adapted to bear continuously on the letter in its passage from the feed table to the delivery table.

3. In a machine of the described class, a feed table and a delivery table, a marking die normally in the letter path, a stop in said letter path, a trip adapted to release said stop, a pressure roll cooperating with the marking die, an intermediate spring bearing against the same, a cam bearing on said spring at predetermined intervals, and a feed roller with intermediate metallic and yielding faces timed to cooperate with said trip, die and pressure roll.

4. In a mail marking machine, the combination of a letter channel, a marking die revoluble normally in said channel, an impression roller, and a cooperating feed roll with a continuous grip intensified at predetermined intervals, said intensified portions being adapted to move with the letter past the marking die.

5. In a mail-marking machine, a marking roller revoluble on a fixed axis, a marking die thereon normally in the letter channel, a letter channel formed by vertical rigid walls, and a movable wall, a stop supported from one of said rigid walls on the side thereof opposite said letter channel and projecting into said letter channel, a feed roller with a continuous grip intensified at predetermined intervals and having a portion of its periphery in the letter path extending from one side of said marking die to the other side thereof, and adapted to advance the mail-matter from a receiving table only at such intervals and to press it against said movable wall.

6. In a mail-marking machine, a letter

channel formed of vertical partitions, a printing die normally in the letter path, pressure rollers, a stop and a feed wheel with continuous feed surface projecting into the letter path, a yielding material set in a peripheral channel of said feed wheel, and rabbets at intervals therein adapted to expose said yielding material.

7. In a mail-marking machine, a receiving table, marking devices, pressure roller cooperating therewith, a delivery section and a single feed roller adapted to bear positively upon mail-matter continuously during its passage from the receiving table to the delivery table, said roller being provided with a channel extending entirely around its peripheral face, with yielding material therein, and rabbets at proper intervals to expose said yielding material to contact with mail-matter.

8. In a mail-marking machine, a marking die normally in the path of the letter, an opposing pressure roller also normally in said path, vertical partitions and a yielding vertical wall forming a letter channel, pressure rollers carried by said vertical wall, and a feed wheel presenting a continuous grip intensified at predetermined intervals when said printing die and pressure roller are in position for operation upon a letter in said letter channel.

9. In a mail-marking machine, a revoluble marking roller carried on a fixed axis, a marking die thereon continuously rotating in the letter path, a yielding pressure roller in line with the letter path, means for increasing the tension of said pressure roller at predetermined times, rigid and flexible vertical walls forming a letter path, a stop normally projecting into said letter path carried from one of said vertical walls on the side of the letter channel opposite said marking die, a feed wheel with continuous grip, and means adapted to retract said stop.

10. In a machine of the described class, a metallic revoluble feed wheel, a metallic yielding opposing wall on the opposite side of the letter path, pressure rollers carried by said opposing wall bearing on the periphery of said feed wheel, a marking die, normally in the path of the letter, a yielding pressure roller in opposition to said marking die, actuating means for increasing the pressure of said roller against the marking die, a stop pivoted on the side of the letter path with said pressure roller, and a cam on said feed wheel in line with the free end thereof adapted to release the same at predetermined intervals.

11. In a machine of the described class, a substantially circular revoluble feed wheel, alternate metallic and yielding peripheral sections around the face thereof, a stop projecting into the letter path at one end with

its opposite end extending over said feed wheel, cams on said feed wheel adapted to contact with the free end of said stop at predetermined intervals, a yielding pressure wall on the opposite side of the letter path, bearing rolls carried thereby bearing normally on the periphery of said feed wheel, a printing die normally in the path of the letter, and a spring actuated pressure roller in proximity thereto adapted to bear upon the opposite side of the mail-matter passing through the machine.

12. In a machine of the described class, a feed wheel, with feed surface of metal, and yielding material alternating in substantially the same circle, actuating cams carried by said feed wheel, a stop projecting into the letter path at one end, and into the line of travel of said cams at the opposite end, a vertical wall opposing said feed wheel at the opposite side of the letter path and recessed to receive one end of said stop, bearing rolls carried by said vertical wall adapted to bear normally against said feed wheel, a marking die normally in the path of the letter, a pressure roller opposed thereto, and tension devices for increasing the pressure thereof during the passage of a piece of mail-matter.

13. In a machine of the described class, a feed wheel with a peripheral feed surface presenting alternate metal and yielding material in substantially the same circle, a letter channel, a marking die revoluble in said channel, a stop normally lying therein, a pressure roller in coincidence with said marking die, means for increasing the tension thereof, and a releasing device for said stop timed with the yielding face of said feed wheel.

14. In a mail marking machine of the class described, the combination with a receiving table, a marking device, a letter channel, a stop normally extending into said letter channel, and a releasing device adapted to move said stop from said letter channel, of a feed wheel with peripheral feed surfaces presenting alternate rigid and yielding material in substantially the same circle, the portions of said periphery in the letter path extending from one side of said marking device to the other side thereof, and adapted to bear upon a letter during its entire passage through the letter channel.

15. In a machine of the described class, a letter channel, a feed roller with alternate peripheral faces of metal and yielding material, a marking die, a pressure roller cooperating with, and in proximity to said marking die, spring bearing on said pressure roller, cams secured to a collar on the same axis with said feed roller, and abutting against the free end of said spring at predetermined intervals.

16. In a machine of the described class, a letter channel, a feed roller with alternate peripheral faces of metal and yielding material, pressure rollers cooperating therewith to grip the letter, a marking die revoluble normally in the letter path, a pressure roller in proximity to said marking die and cooperating therewith, a spring actuating said pressure roller, a cam revoluble with said feed roller adapted to bear on said spring, and a stop to limit the forward thrust of said roller under said spring pressure.

17. In a machine of the described class, a letter channel, a feed roller, revoluble in the letter path, provided with a rigid and a yielding face adapted to bear continuously on a letter in its passage through the machine, a marking roller on a fixed shaft, a marking die thereon normally in the letter channel, pressure roller in coincidence with said marking die, a yoke carrying said roller, an actuating spring adapted to thrust said pressure roller toward said marking die, a projection extending from said yoke, and a stop to limit the forward thrust of said pressure roller.

18. In a machine of the described class, a feed roller, pressure rollers bearing against the peripheral face thereof, a letter channel, a spring actuated stop projecting into said channel, and hung from one of the walls thereof above the feed roller, trip on said feed roller adapted to open said channel by contact with the free end of the stop, a marking die normally revoluble in the letter channel below said feed roller, a pressure roller in coincidence with said marking die, and means for increasing the resistance of said lower pressure roller at predetermined times.

19. In a machine of the described class, a continuously operative feed roller in the letter path, a yielding separating device, and a stop normally in said letter path, rigid partitions forming one side of said letter path, spring held opposing partition forming the opposite side of said letter path, bearing rolls in said spring held partition normally in contact with said feed roll, a marking die in the letter path, a pressure roller, means for releasing said stop and for increasing the pressure of said roller at predetermined intervals.

20. In a mail marking machine, a letter channel, a marking die adapted to enter said channel, a pressure roller normally held yieldingly against a fixed stop at a given fixed distance from the periphery of the said marking die, and means for intermittently increasing the pressure of the said pressure roller against the said stop.

21. The combination with the means for advancing the letters, of a printing couple comprising a die movable toward and from

the letter path, and an opposing impression roll normally held in the letter path against a fixed stop with its periphery at a given fixed distance from the periphery of the said movable die, means for yieldingly holding said roller against said stop, and means for intermittently increasing the efficiency of the holding devices.

22. In a machine of the described class, the combination of a marking die, feed mechanism insuring uniform speed for the marking die, and the mail-matter being marked, an impression roller held normally during the complete operation of marking a letter in the letter path at a fixed distance from said marking die, and means for intermittently increasing the pressure with which said roller is held in position, substantially as set forth.

23. In a mail-marking machine, a printing couple having both members normally in the letter path, feed mechanism for insuring uniform speed of the marking die, and mail matter, and means for increasing the pressure upon one member of the printing couple without moving it relative to the other member thereof when the marking die is marking a letter.

24. In a machine of the class described, the combination of a marking die, feed mechanism insuring proper uniform speed of the marking die and the mail matter, an impression roller held normally in the letter path, a stop for limiting the movement of the said impression roller toward said marking die, and means for increasing the pressure with which said impression roller is held against said stop when the marking die is marking a letter.

25. In a machine for marking mail-matter, the combination of means for advancing mail-matter, and a marking die at uniform speed, an impression roller held normally in the letter path revoluble by contact with said mail-matter and bodily movable relatively to said marking die, a stop for limiting the movement of said impression roller toward said marking die, means for holding said impression roller against said stop, and means for increasing the efficiency of said impression roller when the marking die is marking a letter, substantially as set forth.

26. In a mail-marking machine, the combination of a continuously operating feed, and a continuously rotating marking device in the letter path, of an impression roller, the operative surface of which is normally in the letter path, a yielding support for said impression roller, a fixed stop against which the said support normally bears, and means for increasing the efficiency of said impression roller when the marking die is marking a letter, substantially as set forth.

27. In a mail-marking machine, the combination of a continuously operating feed

and a continuously rotating marking device, both in the letter path, of an impression roller, the operative surface of which is normally in the letter path, a yielding support for said impression roller, a fixed stop against which the said support normally bears, and means for increasing the efficiency of said impression roller when the marking device is marking a letter, substantially as set forth.

28. In a mail-marking machine, the combination of a continuously operating feed, and a continuously operating marking device, both of which are revoluble in the letter path, of an impression roller, the operative surface of which is a substantially unbroken circle normally in the letter path, a yielding support for said impression roller, a fixed stop against which the said support normally bears, and means for increasing the efficiency of said impression roller when the marking device is marking a letter, substantially as set forth.

29. In a mail marking machine, the combination of a continuously operating feed, a continuously operating marking device revoluble in the letter path, of an impression roller, the operative surface of which is a continuous unbroken circle normally in the letter path, a yielding support for said impression roller, a fixed stop against which the said support normally bears, and means for increasing the pressure with which said support is held against said stop when the said marking device is marking a letter.

30. In a mail marking machine, the combination of a marking device revoluble in the letter path, an impression roller, and a letter feed mechanism comprising a wheel having a substantially circular letter engaging face formed in sections of relatively greater efficiency alternating with sections of relatively less efficiency, and having the portion of its periphery in the letter path extending from one side of said marking couple to the other side thereof.

31. In a mail marking machine, the combination of a marking device in the letter path, a pressure roller normally in the letter path, a feed table, a delivery table, and a feed wheel having a substantially continuous circular letter engaging space formed in sections of relatively greater efficiency alternating with sections of relatively less efficiency, and having the portion of its periphery in the letter path extending from said feed table at one side of said marking device to the delivery table at the other side of said marking device.

32. In a mail marking machine, the combination of a marking device, an impression roller, direct acting means for increasing the efficiency of said impression roller while maintaining it normally in fixed position in the letter path, and a feed wheel having a

circular face formed in sections of relatively greater efficiency alternating with sections of relatively lesser efficiency, the operative surfaces of all of said sections remaining continuously, substantially, in the peripheral circle of the wheel, substantially as set forth.

33. In a mail marking machine, the combination of a marking device, an impression roller normally held in the letter path against a fixed stop, said stop being adapted to limit the movement of said impression roller toward said marking device, means for increasing the efficiency of said impression roller, and a feed wheel having a circular face formed in sections of relatively greater efficiency alternating with sections of relatively lesser efficiency, the operative surfaces of all of said sections remaining substantially, in the peripheral circle of the wheel, substantially as set forth.

34. In a machine of the described class, a feed table, and a delivery table, a marking die normally in the letter path, a pressure roller, and means for automatically increasing the efficiency thereof while maintaining it normally in fixed position in the letter path, operated independently of a letter, but adapted to increase the pressure of said roller on said letter when the marking die is marking a letter, substantially as set forth.

35. In a machine of the described class, a printing couple, both members revoluble normally in the letter path, feed mechanism for insuring uniform speed of the marking die and mail-matter, the feed wheel adapted to engage with and advance a letter along the letter path, and means operated by rotation of the feed wheel for intermittently increasing the efficiency of said marking couple, substantially as set forth.

36. In a machine for marking mail-matter, the combination of means for advancing mail-matter and a marking die at uniform speed, an impression roller held normally in the letter path in fixed position relatively to said marking die and revoluble by contact with said mail-matter, a feed wheel adapted to engage with and to advance a letter along the letter path, and means controlled by rotation of the feed wheel for intermittently increasing the efficiency of said impression roller, substantially as set forth.

37. In a mail marking machine, the combination of a continuously operating feed, and a continuously rotating marking device in the letter path, of an impression roller, the operative surface of which is a substantially, unbroken circle rotating normally in the letter path, a yielding support for said impression roller arranged to hold it normally in fixed position relatively to said marking device, and means for increasing the efficiency of said impression roller when the marking device is marking a letter, substantially as set forth.

38. In a mail marking machine, the combination of a continuously operating feed, and a continuously rotating marking device, both in the letter path, of an impression roller, the operative surface of which is a substantially, continuous, unbroken circle rotating normally in the letter path, a yielding support for said impression roller, a stop for limiting the movement of said impression roller toward said marking device, and means for increasing the efficiency of said impression roller when the said marking device is marking a letter, substantially as set forth.

39. In a machine of the described class, a marking couple, a feed wheel on the same side of the letter path with the pressure roller, a stop pivotally supported on the same side of the letter path, a yielding opposing member on the opposite side of said path cooperating with said stop to automatically close said letter path and with said feed wheel to advance said letter, and means controlled by the feed wheel for intermittently withdrawing said stop, substantially as set forth.

40. In a machine of the described class, a printing couple, a letter path with a vertical wall on the side of said letter path opposite the marking roller, a letter stopping device supported on said vertical wall on the same side of the letter path, a yielding abutment for said stop on the opposite side of the letter path, and a feed wheel carrying means for withdrawing said stop at predetermined intervals and arranged to cooperate with said yielding abutment to advance the letter along the letter path, substantially as set forth.

41. The combination of the printing couple, the letter guiding devices adjacent to the couple, and forming a letter channel, through which the letter passes between the members of the couple, and a feed wheel having the portion of its periphery in the letter path extending from one side of said printing couple to the other side thereof and adapted to press the letter against parts forming the letter channel or guide from the time it enters said channel until it leaves it, said feed wheel having a substantially circular peripheral letter engaging face formed in sections of relatively greater frictional efficiency alternating with sections of lesser frictional efficiency, the operative surfaces of all of said sections remaining continuously, substantially, in the peripheral circle of the wheel.

42. In a machine of the class described, the combination of the printing couple, the yielding guide wall arranged adjacent to said printing couple and directly above it, the feed wheel having its periphery arranged to cooperate with said yielding wall both to form a letter channel for guiding the

letter and to advance the letter through said channel, the letter stop normally in the letter path and cooperating with said yielding guide wall to check the travel of the letters, and means carried by said feed wheel for withdrawing said stop at predetermined intervals, substantially as set forth.

43. In a machine of the class described, the combination with a letter channel and means for advancing a letter through said channel, of a marking die and pressure roller normally in the path of the letter, said pressure roller being normally held fixed against movement toward said marking die and means for increasing the pressure with which said pressure roller is held in its normal position when the marking die is marking the letter.

44. In a mail marking machine, the combination of a frame, guiding and supporting

devices on the frame forming a passage along which the pieces of mail move, the canceling die and the impression roller arranged on opposite sides of said passage, a rotary feeding device arranged to one side of said passage and having an intermittent friction surface to engage the pieces of mail, a movable stop device arranged on the same side of the passage as the feeding device, and means carried by the feeding device in definite relation to the parts of its friction surface for directly engaging the stop and moving it into inoperative position, substantially as set forth.

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

WILLARD D. DOREMUS.

Witnesses:

N. CURTIS LAMMOND,
E. R. ALEXANDER.