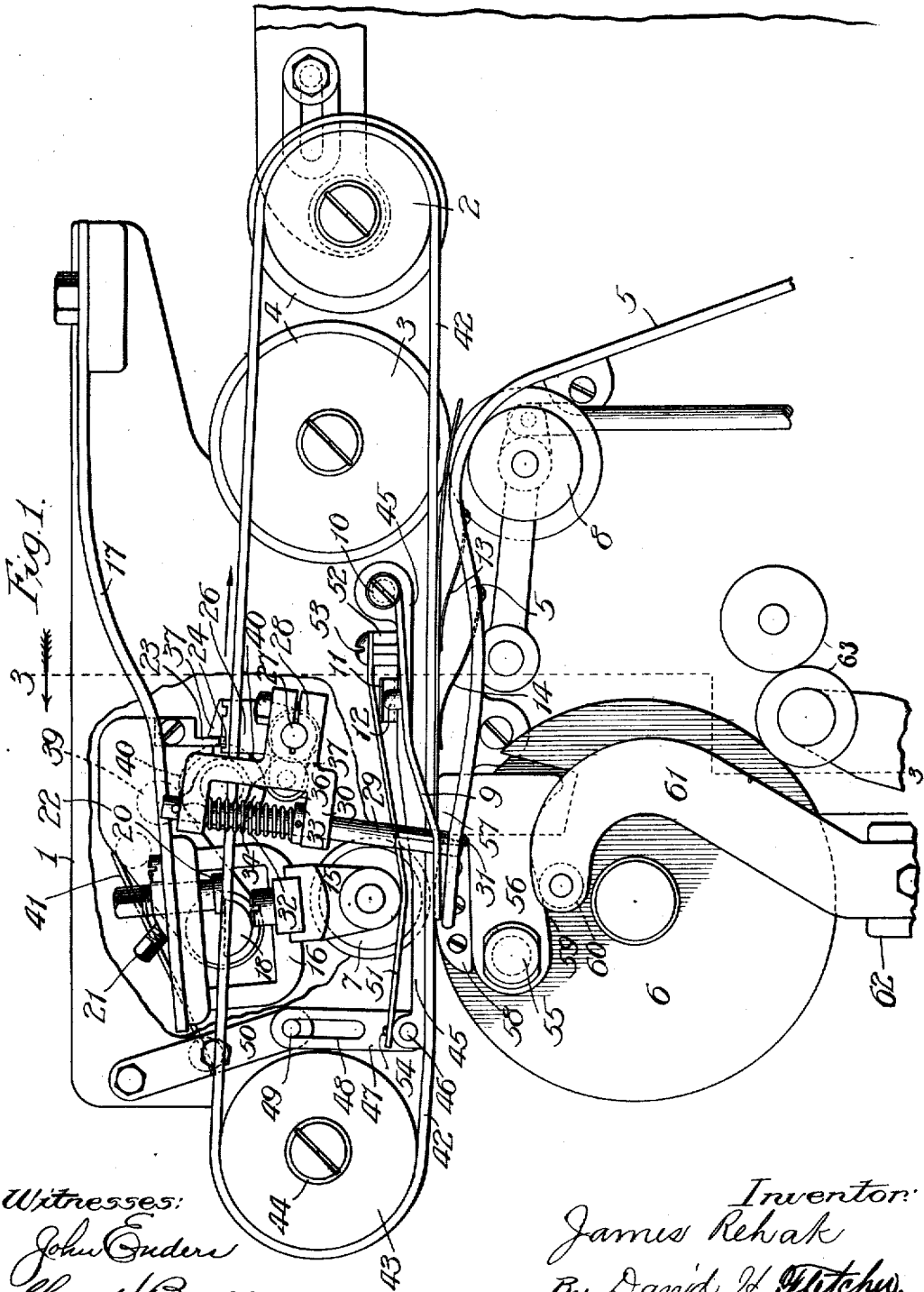


J. REHAK.  
 POSTMARKING MACHINE.  
 APPLICATION FILED DEC. 24, 1909.

1,012,158.

Patented Dec. 19, 1911.

3 SHEETS—SHEET 1.



Witnesses:  
 John Enders  
 Chas. H. Bull.

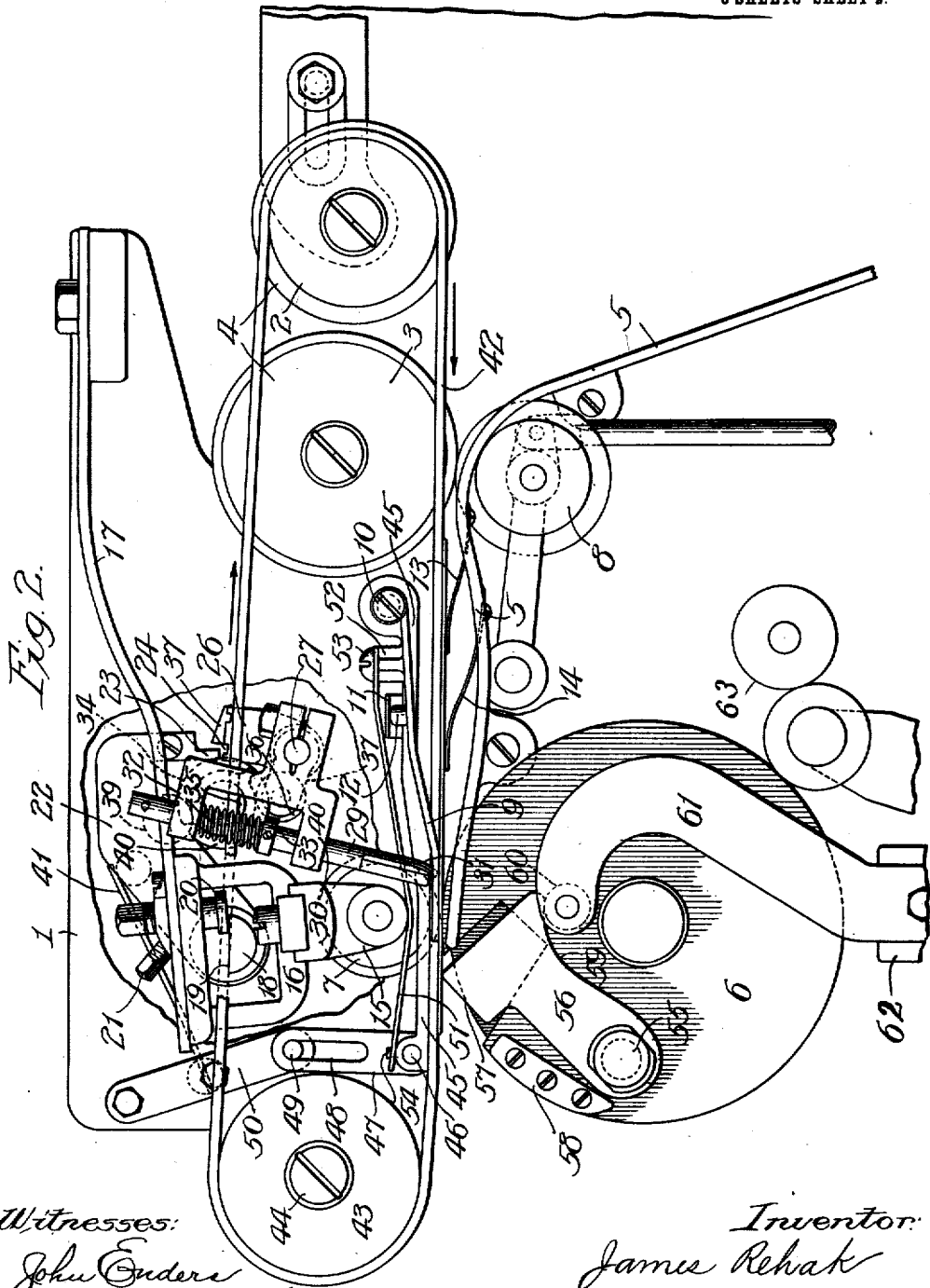
Inventor:  
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 3 SHEETS—SHEET 3.

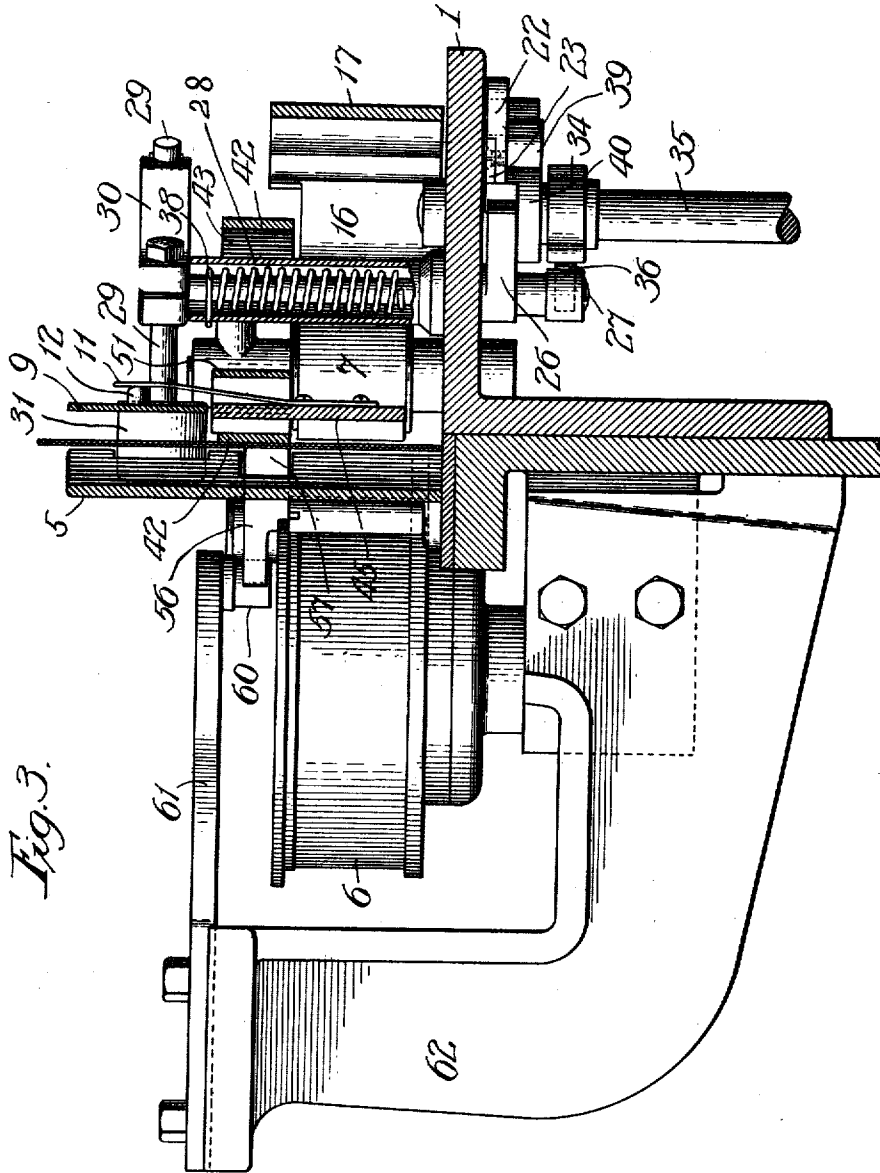


Fig. 3.

Witnesses:  
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# UNITED STATES PATENT OFFICE.

JAMES REHAK, OF HAWTHORNE, ILLINOIS, ASSIGNOR TO TIME MARKING MACHINE COMPANY, OF CHICAGO, ILLINOIS, A CORPORATION OF ILLINOIS.

## POSTMARKING-MACHINE.

1,012,158.

Specification of Letters Patent.

Patented Dec. 19, 1911.

Application filed December 24, 1909. Serial No. 534,794.

*To all whom it may concern:*

Be it known that I, JAMES REHAK, a citizen of the United States, residing at Hawthorne, in the county of Cook and State of Illinois, have invented certain new and useful Improvements in Postmarking-Machines, of which the following is a description, reference being had to the accompanying drawings, forming a part of this specification, in which corresponding letters of reference in the different figures indicate like parts.

My invention relates to stamp canceling and post-marking machines and my object is to provide satisfactory feeding means whereby mail-pieces may be controlled and brought into accurate registration with a continuously rotating marking die.

Owing to the variation in the character of the mail-pieces, which may be thick or thin, heavy or light, stiff or flimsy, with rough or smooth paper, as occasion may require, it has heretofore been found impossible to provide feeding mechanism capable of conveying and presenting them in successive order to the marking die so as to insure accurate registration between the two. Various means have been devised for accomplishing this purpose, ranging in results from complete failure to indifferent success. It is my purpose to overcome these difficulties by providing a novel form of gripping mechanism mounted upon and adapted to be controlled by the marking die acting in conjunction with a stationary element so placed as to engage a cam-like surface upon the gripping device in a manner to cause the face of the latter to grip the mail-piece and to be moved in a straight line therewith until released; said gripping device being arranged to coact with a supplemental feed-belt provided with a yielding reinforcing element and a timing finger actuated by the moving mail-piece to release an impression roll at the instant the printing die is in position to properly contact with the mail-piece,—all of which is hereinafter more particularly described and definitely pointed out in the claims.

In the drawings—Figure 1 is a plan view of a portion of a post-marking machine embodying the elements of my invention; Fig. 2 is a like view showing the coacting parts in different positions, and Fig. 3 is a ver-

tical sectional view taken upon the line 3—3, 55 Fig. 1.

Referring to the drawings, 1 represents a portion of a horizontal table beneath which is located the usual driving mechanism and gear trains for actuating and controlling the several parts.

The main feeding mechanism consists of the usual feed rollers 2 and 3 mounted upon vertical shafts and provided with a facing 4 of rubber or other frictional material. A bent shield 5 extends from the forward or feeding end of the table, along and adjacent to the path of the letter to a point slightly beyond the meeting faces of the marking roller 6 and impression roller 7, which are of the usual type, mounted upon vertical shafts in the ordinary way and form the customary printing couple normally separated from contact with each other. A retarding roller 8 is arranged to project through an opening in the shield 5 into the path of the mail piece and is driven in an opposite direction from that of the feed rollers to prevent more than one letter at a time from entering the letter path. The feed rollers 2 and 3 are driven at a speed conforming to that of the printing die. A movable or yielding shield 9 is located upon the opposite side of the letter-path from the shield 5, and is pivotally mounted upon a stud 10 extending upwardly from the table. A spring 11, bearing against a stud 12 upon the shield 9, serves to press the free end of the latter into the path of the letter. This construction enables the shield 9 to yield to permit the passage of mail-pieces of varying thickness, while pressing against them with a yielding pressure in such a manner as to support the mail-pieces and prevent them from being crumpled if thin and flimsy. Additional light springs 13 and 14, respectively, are attached to the shield 5 and are extended into the path of the mail-pieces to serve as additional lateral supports therefor in the manner described.

The upper end of the shaft which drives the impression roller 7 is supported in a bearing 15, rigidly attached to a yoke 16 bolted to the free end of a spring 17, the opposite end of which is rigidly secured to the frame. Extending upwardly through an opening in the yoke is a rock-shaft 18, the lower portion of which has a bearing in

the frame. The upper end of said shaft is provided with a flat hardened steel face 19, Fig. 2, fitted to bear against a like hardened stud 20, the body of which is tapped into the yoke to provide for adjustment, being secured in place by means of a set-screw 21. An arm 22 is rigidly attached to the rock-shaft 18, the movement of which arm serves to oscillate said shaft against the action of the spring 17. A hardened metal shoulder 23, upon the outer end of the arm 22, is adapted to enter a notch 24 formed in the end of an arm 26, upon the lower end of a shaft 27, having its bearings in a hollow vertical stud 28, upon the frame. A trip-finger 29 is slidably mounted in bearings in a yoke 30 adjustably clamped to the upper end of the shaft 27, said finger being provided with a flat blade 31 arranged to extend across the letter-path when the head is in a normal position as shown in Fig. 1. Said finger is adapted to move longitudinally and is held normally projected, as shown in Fig. 1, by means of a light coiled spring 32, adapted to press against a collar 33 serving to limit the action of the spring. A cam 34, Fig. 3, is mounted upon a vertical shaft 35, which is adapted to rotate in harmony with the marking-die. Said cam is adapted to control the action of a friction roller 36 upon an arm 37 upon the lower end of the shaft 27, indicated in dotted lines. When the roller is upon the high portion of the cam the trip-finger is thereby held rigidly against movement so as to arrest a mail-piece which is advancing out of time with the marking die.

A friction roller 39 upon the arm 22 is adapted to bear against a cam 40, Fig. 3, upon the shaft 35, said roller being held in contact with the cam by means of a spring 41. The cam 40 is also timed with the marking-die so as to hold the impression roller away from the marker except during the passage of the mail-piece, said impression roller being released an instant after the release of the trip-finger. The low parts of the two cams should be substantially opposite and so adjusted that the roller 36 may ride off from the high part of the cam 34 in advance of a like movement by the roller 39. In reversing, however, the rise upon the cam 40 should precede that upon the other. The outward movement of the arm 22 by the cam 40 serves to rock the shaft 18 against the part 20 thereby withdrawing the impression roller against the action of the spring 17.

The roller 36 is caused to press against the face of the cam 34 by means of a coiled spring 38 upon the shaft 27, thereby holding the arm 26 in such a position as to permit the part 23 to enter the notch 24 and lock the trip-finger against premature movement during an instant of time when such movement would be undesirable.

The body of the feed roller 2 is extended above the part 4, which acts as a feeding surface, sufficiently to provide for the mounting thereon of a raised auxiliary feed-belt 42, which is also trained around a roller 43 journaled upon a stud 44 upon the frame. The lower edge of the belt 42 is in substantially the same plane as the top of the marking die, and the belt and die are driven at the same speed.

A metal backing plate 45 has its forward end pivoted upon the stud 10 immediately below the shield 9. The upper edge of the plate is upon a line with that of the belt while the lower edge is upon a level with that of the impression roller 7, said plate being cut away to receive said roller. The opposite end of the plate is pivoted at 46 to a link 47 having a slot 48 therein, through which is projected a pin 49 upon a bracket 50 attached to the frame. The link permits a movement of the plate in one direction while limiting it in another. A flat spring 51 has one end attached to a projection 52 upon the back of the plate by means of a screw 53, while the other end bears against a projection upon the opposite end of the plate, as shown, being held in place by means of a stud 54, which is passed through an opening in the spring large enough to permit the requisite play when the spring is flexed. The middle portion of the spring is arranged to bear against the part 15 in which the impression roller is journaled, so as to press the face of a considerable portion of the plate 45 against the back of the belt 42. It will be noted that the portion of said plate commencing at the forward end is cut away or so formed as to stand away from the back of the belt, being brought into contact with it upon the line where the shield 9 converges with that of the belt, the purpose of which will be hereinafter explained.

Pivoted upon a stud 55 upon the top of the marking roller 6 is a gripping cam 56, which is provided with a contact surface 57 adapted to project beyond the periphery of the marking roller, being limited in its outward movement by means of a stop 58 attached to said roller. The cam surface 59 upon the back of the part 56 is adjusted to bear against a friction roller 60 upon the under face of a rigid arm 61 attached to a bracket 62 extending upwardly from beneath the frame plate.

The usual inking rollers 63 serve to ink the marking die.

The operation of said device is as follows: When a nail-piece is fed to the machine it is advanced by the feed rollers 2 and 3 until the forward end is brought into contact with the trip-finger 31 as indicated in Fig. 1, the intermediate portions of the letter being supported laterally by means of the springs 13 and 14 and the belt 42. When the roller

36 rides off from the high portion of the cam 34, the trip-finger is released, and an instant thereafter the roller 39 rides off the high part of the cam 40 which permits the impression roller 7 to be pressed against the mail-piece by the spring 17. At the same instant the face 57 of the gripping cam is brought into contact with the mail-piece while the marking-die is in a registering position. The cam surface 59 is of such a contour as to cause the gripping face 57 to press the mail-piece against the belt 42 and thence to be moved in a straight line therewith until it reaches the position indicated in Fig. 2, when it is released from contact. In the meantime the flat faced portion of the plate 45 is pressed by the spring 51 against the inner face of the belt, so that a relatively large surface of the latter is brought into frictional contact with the mail-piece, which is thereby carried through with certainty in a way to prevent blurring of the mark while insuring accurate registration. In the meantime the spring 32 upon the trip finger permits the latter to yield longitudinally, as indicated in Fig. 2, thereby enabling it to stand at a very acute angle to the letter path so as to enable it to resume its normal position in the shortest instant of time and be in a position to arrest the next succeeding mail-piece.

By placing the belt pulley or roller 43 considerably beyond the impression roller and utilizing the reinforcing plate 45 behind the belt to act as a buffer for the positively controlled gripping cam, the mail-piece may be moved in a straight line during the period required for it to pass the die, thereby insuring uniform pressure upon it and lessening the danger of injury to the mail-piece or to its contents, if it be a letter, which is liable to occur when it is forced out of the direct path while under pressure.

Attempts have heretofore been made to utilize an auxiliary belt above the level of the marking die in conjunction with a spring controlled gripper upon the die roller, but without means for reinforcing the belt or for causing a continuous positive gripping action while pressing the mail piece against a relatively large flat friction surface. The result has been a very objectionable tendency to tilt the mail piece upon contact of its forward end with the die so as to cause the mark to be at a considerable angle to its edge instead of parallel therewith as it should be, which difficulty is overcome by my improvement.

Having thus described my invention, I claim:

1. In a mail marking machine, the combination with a rotary marking die and feed-belt, of a feed-cam having one end pivotally mounted upon the top of the marking die near its periphery while the other

end is free, the rear face of said feed-cam having a cam surface adapted to engage a stationary roller, a stationary cam-roller eccentric to the axis of the marking die for engaging said cam surface upon each revolution of the die to cause the free end of said feed cam to move in a substantially straight line in the path of a mail-piece to press the latter against said feed-belt during a portion of the cycle of the marking die and a spring-pressed backing extending throughout the length of travel of the free end of said feed-cam.

2. A mail marking machine in which is combined a feed mechanism, a supplemental feed-belt, a rotary marking die and impression roller comprising a printing couple, a time-stop, a gripping cam pivotally mounted upon the marking roller, the cam portion thereof being shaped to cause the gripping face of the same to move for a predetermined distance in a substantially straight line parallel to the plane of said belt, a stationary cam roller for engaging said cam to cause its gripping face to press a mail-piece against said belt and a spring-pressed backing element having a substantially straight face arranged to reinforce the belt along the entire path in which said gripping element is caused to move in alignment therewith.

3. A mail marking machine having in combination a rotary marking die and an impression roller constituting a printing couple, feeding mechanism, an auxiliary feed-belt located above the level of the marking die, a spring-pressed backing element extending in a substantially straight line along said belt, the axis of said marking die being located in a plane between the ends of said backing element, a gripping cam mounted upon said marking die, and a stationary cam-roller for forcing the gripping face of said cam into the letter path and causing its gripping face to move in a straight line parallel to the belt, and opposed to the pressure of said backing element while in gripping contact with said mail-piece.

4. A mail marking machine in which is combined feed mechanism, a supplemental feed-belt, a rotary marking-roll and impression roller comprising a printing couple, a time-stop, a gripping cam pivotally mounted upon the marking roller, a stationary cam-roller for forcing the acting face of said cam against the mail-piece to press the latter against said feed-belt and move therewith in a straight line for a predetermined distance, and a substantially straight faced yielding backing for said belt to resist the positive pressure of said cam during the continuance of its movement in a straight line whereby the grip upon the mail-piece may be uniform for a predetermined period.

5 A mail marking machine having in combination a rotary marking die and an impression roller constituting a printing couple, feeding mechanism, an auxiliary  
 5 feed-belt located above the level of the marking die, a spring-pressed backing element extending in a straight line along said belt, the middle portion thereof being substantially opposite to said marking die, a  
 10 gripping cam pivotally mounted upon said marking die and a stationary cam roller for positively forcing the active face of said cam into the letter path and causing said face to move in a straight line parallel to  
 15 the belt while in gripping contact with the mail-piece.

6. In a mail marking machine, the combination of a rotary marking die, feeding mechanism, an auxiliary feed-belt located  
 20 above the level of the marking die, a back-

ing-plate having its forward end pivoted to a stationary support, said plate being located behind and in contact with the belt opposite to said marking die, a spring for pressing said plate against the back of the  
 25 belt, a positively acting gripping cam mounted upon said marking die to press mail-pieces against said belt, tripping mechanism, and means for releasing the same synchronously with the movement of the  
 30 marking die into a printing position.

In testimony whereof, I have signed this specification in the presence of two subscribing witnesses, this 22d day of December, 1909.

JAMES REHAK.

Witnesses:

D. H. FLETCHER,  
 CARRIE E. JORDAN.

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