

F. C. IELFIELD.  
 MAIL MARKING MACHINE.  
 APPLICATION FILED MAR. 1, 1912.

1,078,096.

Patented Nov. 11, 1913.

2 SHEETS—SHEET 1.

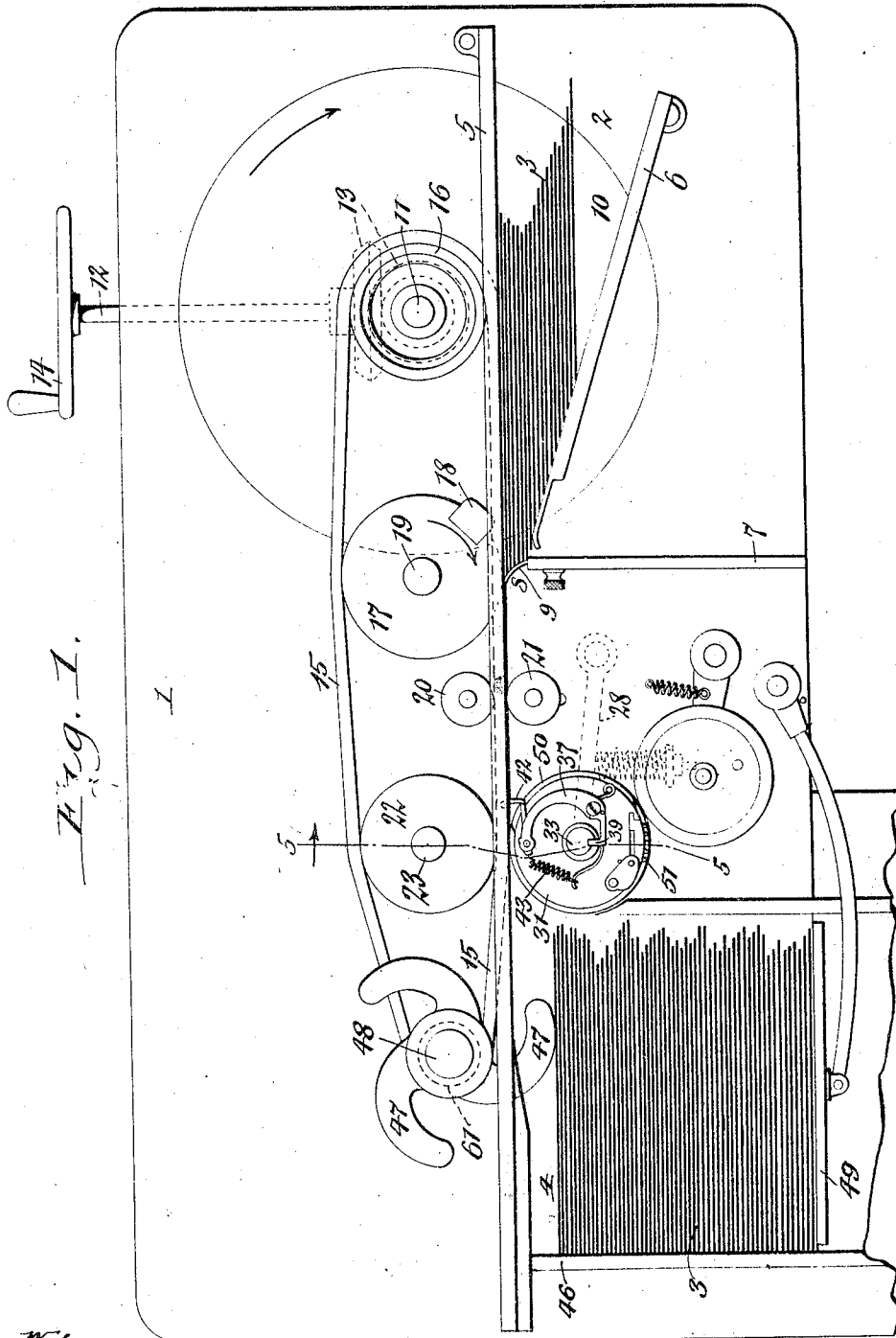


Fig. 1.

Witnesses:  
 Mr. Ray Taylor  
 Leroy S. Hodges

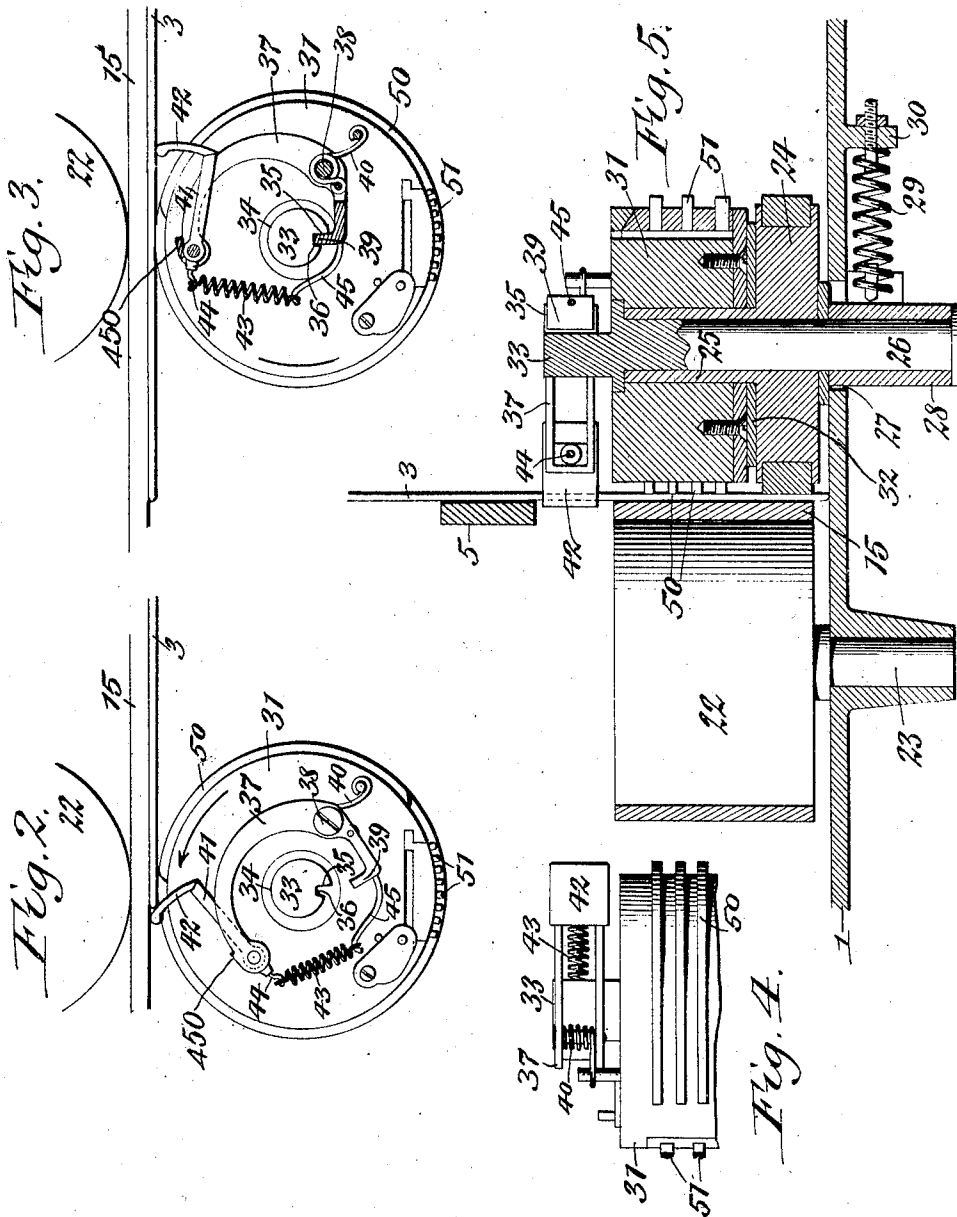
Fred C. Ielfield Inventor  
 by *Genes & Poff* Attorneys

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 m. Ray Taylor  
 Leroy S. Hodges

Inventor  
 F. C. Ielfield  
 by *[Signature]*  
 Attorneys.

# UNITED STATES PATENT OFFICE.

FRED C. IELFIELD, OF SILVER CREEK, NEW YORK, ASSIGNOR TO COLUMBIA POSTAL SUPPLY COMPANY, OF SILVER CREEK, NEW YORK, A CORPORATION OF NEW YORK.

## MAIL-MARKING MACHINE.

1,078,096.

Specification of Letters Patent.

Patented Nov. 11, 1913.

Application filed March 1, 1912. Serial No. 680,937.

*To all whom it may concern:*

Be it known that I, FRED C. IELFIELD, a citizen of the United States, residing at Silver Creek, in the county of Chautauqua and State of New York, have invented new and useful Improvements in Mail-Marking Machines, of which the following is a specification.

This invention relates to a mail marking machine for canceling, stamping or post marking letters, post cards and the like and has the object to provide a machine of this character which is comparatively simple in construction and reliable and rapid in operation and which will produce but a single post mark on each piece of mail matter regardless of the length of the same.

In the accompanying drawings consisting of 2 sheets: Figure 1 is a top plan view of a mail marking machine embodying my invention and showing the printing wheel in its inoperative position. Fig. 2 is a top plan view of the printing wheel and adjacent parts, on an enlarged scale, showing the printing wheel ready to begin a canceling operation. Fig. 3 is a view similar to Fig. 2, but partly in section, and showing the position of the printing parts when the printing wheel has completed one rotation and canceled the piece of mail matter which is of greater length than the circumference of the printing wheel. Fig. 4 is a fragmentary rear view of the upper part of the printing wheel and the letter operated controlling mechanism of the same. Fig. 5 is a vertical transverse section, on an enlarged scale, taken in line 5-5, Fig. 1.

Similar characters of reference indicate corresponding parts throughout the several views.

1 represents the feed table having a delivery portion 2 upon which the letters 3 to be canceled are stacked edgewise and a receiving portion 4 upon which the letters are stacked after they have been canceled or post marked. Extending lengthwise over the upper side of the table from the receiving to the delivery portions thereof is a longitudinal guide wall 5 against the rear part of which the uncanceled letters are pressed sidewise by means of a presser bar or follower 6 which may be operated in any suitable manner.

In front of the receiving part of the table and crosswise of the latter is arranged an

upright guide wall 7 which is separated at its inner end from the opposing face of the longitudinal guide wall by an intervening space, throat or passageway 8 through which the letters move from the receiving part of the table to the mechanism which marks the letters and stacks the same. At its inner edge the transverse guide wall 7 is provided with a flexible tongue 9 which projects into the path of the letters or other mail matter and operates as a separator which permits the passage of but one letter at a time forwardly to the printing and stacking mechanism while the remaining letters are retained on the receiving part of the table.

In order to assist in carrying the stack of uncanceled letters laterally toward the rear part of the longitudinal guide wall and in line with the throat between the same and the transverse guide wall the lower edges of the letters rest upon the upper side of a feed disk 10 which is flush with the upper side of the feed table and has its axis arranged on that side of the longitudinal wall opposite to the side which is engaged by the letters so that upon rotating this feed disk in the direction of the arrow indicated in Fig. 1 this disk by frictional contact on the lower edges of the letters will operate constantly to carry them laterally against the operative side of the longitudinal guide wall. The feed disk may be operated in any suitable manner but preferably by mounting the same on an upright shaft 11 which is journaled in any suitable manner on the table and turned by a horizontal shaft 12 connected at its inner end by means of a pair of intermeshing gear wheels 13 with the upright shaft 11, and a crank disk 14 arranged at the outer end of the driving shaft, as shown in Fig. 1.

15 represents a carrying belt having its operative stretch extending lengthwise along the underside of the longitudinal guide wall and substantially flush with the operative vertical face thereof and passing at its rear turn around a driving pulley 16 mounted on the upper end of the upright shaft 11 while its front turn passes around a delivery pulley 17 arranged on the rear side of the longitudinal guide wall transversely in line with the stacking part of the table.

The pieces of mail matter may be fed off one at a time from the delivery stack and

through the throat by means of a feeding device of any suitable construction, for instance, by means of a rotating feed wheel 17 arranged opposite the separator and provided on one part of its periphery with a wiper 18 of rubber or other elastic material which latter engages with the letters once during each rotation of the feed wheel and feeds one letter at a time from the supply stack forwardly through the throat. This feed wheel is mounted on the upper end of a shaft 19 which latter may be rotated in any suitable manner in the direction of the arrow shown on this wheel.

As the letters are discharged forwardly from the supply stack by means of the feeding wheel and the carrying belt engaging therewith the same pass forwardly between a pair of guide rollers 20, 21 one of which engages with the inner side of the operative stretch of the belt while the other engages with the outer side of this stretch when no letter is present on this belt but presses a letter against the outer side of the belt when one is being fed forwardly from the supply stack.

After the letters pass the guide rollers the same are delivered to the printing mechanism whereby a mail or post mark is produced on the same in accordance with my invention. This printing mechanism is constructed as follows:—22 represents an impression roller which engages with the inner side of the operative stretch of the carrier belt in rear of the delivery roller 61 and mounted on the upper end of a pivot pin 23 which is arranged on the adjacent part of the feed table. This impression roller may be rotated by engaging diametrically opposite sides of the same with the inner sides of both stretches of the carrier belt, as shown in Figs. 1 and 5, although the same may be driven by any other suitable means if desired. 24 represents a driving wheel having an elastic rim on its periphery which engages with the lower part of the outer face of the operative stretch of the carrier belt transversely in line with the impression roller and provided with an upwardly projecting cylindrical hub 25. This driving wheel and its hub are journaled on an upright arbor or pivot pin 26 which is normally stationary but is capable of moving laterally away from the operative stretch of the belt and the impression roller in order to adapt the driving wheel and the parts associated therewith to letters varying in thickness. For this purpose the arbor projects downwardly through the transverse slot 27 in the table and is mounted on the front end of a horizontally swinging rock arm 28 which is pivoted at its rear end on the underside of the table. The driving wheel is held yieldingly in engagement with the face of the operative stretch of the car-

rier belt by means of a spring 29 bearing at one end against the rock arm and at its other end against a lug 30 depending from the underside of the table. This driving wheel is rotated continuously by frictional contact with the carrier belt or with the letter passing forwardly between the belt and said wheel. 31 represents a printing wheel provided in its central part with a cylindrical bore which receives the hub of the driving wheel. At its lower end the printing wheel rests upon the upper side of the driving wheel and a frictional contact is maintained between the driving and printing wheels so that when the latter is free it will be turned frictionally by the driving wheel. This frictional driving connection is preferably produced by arranging a washer or ring 32 of fiber on the hub of the driving wheel and between the upper side of the latter and the lower side of the printing wheel, as best shown in Fig. 5. On the periphery of the printing wheel the same is provided with stamps, types or printing surfaces 50, 51 of any suitable character for producing canceling lines, dates, names or other marks on the letter, this type face extending only part way around the periphery of the printing wheel leaving the remaining portions of this periphery blank. Centrally above the printing wheel is arranged a stationary post 33 which is preferably formed integrally with the arbor at the upper end thereof and has its periphery constructed to form a volute or cam-shaped surface 34, a radial stop shoulder 35 at the outer end of this volute surface, and a notch or recess 36 between said stop shoulder and the inner end of said volute surface. To the upper side of the printing wheel a stop lever 37 is pivoted by means of a pin or screw 38 or otherwise which lever is provided on its rear arm with an inwardly projecting catch or nose 39 which is adapted to engage with the stop shoulder and notch on the arbor and arrest the rotary movement of the printing wheel. The stop lever is yieldingly turned for holding its catch in engagement with said stop shoulder and notch by means of a spring 40 which preferably surrounds the pivot pin 38 of this lever and is connected at one end with the rear arm thereof and at its other end with the upper side of the printing wheel. On the free end of the other arm of the stop lever is mounted a trip lever which comprises an arm 41 pivoted at its front end to the free end of the front arm of the stop lever while its rear end is provided with a laterally projecting finger 42 which is adapted to project across the letter path adjacent to the printing wheel and the impression roller. The trip lever is yieldingly held in its operative projected position by means of a spring 43 connecting a hook or tail 44 on the trip lever with a hook or tail 45 on

the rear arm of the stop lever, as shown in Figs. 1, 2 and 3. The movement of the trip lever under the action of the spring 43 is limited by means of a stop 450 arranged on the stop lever in position to be engaged by the arm of the trip lever, as shown in Fig. 2.

When no letter has been fed forward by the feeding mechanism to the printing position the catch of the stop lever engages with the shoulder and notch of the arbor and the trip lever projects with its finger across the letter path and the printing wheel is held against forward rotation and in a position in which the front end of its type surface is near the letter path, as shown in Fig. 1. When a letter is fed forward to the printing position its front end engages with the finger of the trip lever and pushes the same forwardly, thereby shifting the stop lever so as to disengage the catch of the same from the stop shoulder and notch of the arbor, as shown in Fig. 2. The printing wheel is now released or unlocked from the arbor and immediately begins its forward rotary movement owing to the frictional connection between the same and the driving wheel, whereby the letter or other piece of mail matter as it passes forwardly between the type of the printing wheel and the carrier belt receives an impression of the type of the printing wheel. At the end of one complete rotation of the printing wheel the front end of its type again stands close to the letter path and the catch of the stop lever engages with the stop shoulder of the arbor so as to arrest the forward movement of the printing wheel and this catch also engages with the notch of the arbor owing to the pressure of this spring 40 so as to prevent the printing wheel from rebounding upon engaging with the stop shoulder, thereby holding the printing wheel reliably in place and in readiness to begin its next forward rotation for printing the next following letter which is fed to the printing position.

If the letter which is moving forwardly between the printing wheel and the carrier belt is of a length less than the circumference of the printing wheel the trip lever will remain in its projected position relatively to the stop lever so that when the printing wheel reaches the end of a rotation the finger of the trip lever will project across the path of the letters preparatory to intercepting the next following letter which is fed forward and to be shifted thereby for operating the mechanism which controls the printing wheel so as to permit the latter to rotate and produce a stamp or impression on the letter. If, however, the letter which is passing forwardly between the printing wheel and the carrier belt is longer than the circumference of the printing wheel the catch of the stop lever will engage with the stop shoulder and notch of the arbor and arrest the printing

wheel at the end of one rotation in the same manner as before described but the finger of the trip lever will engage with the side of the letter which has not yet passed with its rear end forwardly beyond the finger, thereby causing the trip lever to be held out of the letter path by the letter, as shown in Fig. 3, this being possible owing to the spring 43 which permits the trip lever to yield at this time upon engaging the side of the letter. As soon, however, as the rear edge of the respective letter passes forwardly beyond the trip finger the latter will be immediately projected across the letter path by means of the spring 43 and in readiness to intercept the next following letter. It will thus be noted that but one impression of the type of the printing wheel is produced on the letter regardless of the length of the same, thereby avoiding wear on the machine, reducing the consumption of ink and also avoiding undue noise.

As the canceled or marked letters issue from the printing mechanism they pass to the receiving part 4 of the feed table and engage at their front ends with a transverse stop wall or abutment 46 on the same. In order to stack the letters on this part of the table the same are engaged successively by the rotatable arms 47 of a stacking wheel which is mounted preferably on the same shaft 48 which carries the delivery pulley 61 of the carrier belt. As the letters are stacked on the receiving table the same are backed by means of a movable follower 49 which may be mounted upon the table in any suitable manner.

I claim as my invention:

1. A mail marking machine comprising a printing wheel, a normally stationary stop, a stop lever pivoted on said wheel and adapted to engage said stop, and a trip lever pivoted on said stop lever and adapted to be engaged by a letter to be marked.
2. A mail marking machine comprising a printing wheel, a normally stationary arbor on which said wheel is journaled and which is provided with a stop shoulder, a stop lever pivoted on the printing wheel adapted to engage said shoulder, and a trip lever pivoted on the stop lever and adapted to be engaged by a letter to be marked.
3. A mail marking machine comprising a printing wheel, a normally stationary arbor on which said wheel is journaled and which is provided with a stop shoulder, a stop lever pivoted on the printing wheel and provided on one of its arms with a catch adapted to engage said stop shoulder, and a trip lever pivoted on the other arm of said stop lever and adapted to be engaged by a letter to be marked.
4. A mail marking machine comprising a printing wheel, a normally stationary arbor on which said wheel is journaled and which

is provided with a stop shoulder, a stop lever pivoted on the printing wheel and provided on one of its arms with a catch adapted to engage said stop shoulder, a trip lever pivoted on the other arm of said stop lever and provided with a laterally projecting finger adapted to be engaged by a letter to be marked.

5. A mail marking machine comprising a printing wheel, a normally stationary arbor on which said wheel is journaled and which is provided with a stop shoulder, a stop lever pivoted on the printing wheel and provided on one of its arms with a catch adapted to engage said stop shoulder, a trip lever pivoted on the other arm of said stop lever and provided with a laterally projecting finger adapted to be engaged by a letter to be marked, a spring for holding the stop lever yieldingly in engagement with said stop shoulder, a spring for holding the trip lever yieldingly in the letter path, and a stop for limiting the movement of said trip lever under the action of the spring engaging the same.

6. A mail marking machine comprising a carrier belt, a driving wheel engaging with said belt and provided with a hub, a printing wheel mounted on said hub and engaging its lower end frictionally with said driving wheel and also bearing against said belt, a stationary arbor on which said driving wheel and its hub are journaled and

provided with a stop shoulder, and a letter operated means adapted to cooperate with said shoulder for controlling the rotation of said printing wheel.

7. A mail marking machine comprising a carrier belt, a driving wheel engaging with said belt and provided with a hub, a printing wheel mounted on said hub and engaging its lower end frictionally with said driving wheel and also bearing against said belt, a stationary arbor on which said driving wheel and its hub are journaled and provided with a stop shoulder, a stop lever pivoted on said printing wheel and adapted to engage said stop shoulder, and a trip lever pivoted on said stop lever and adapted to be engaged by a letter to be marked.

8. A mail marking machine comprising a printing wheel, a normally stationary post provided on its periphery with a volute face, a stop shoulder at the outer end of said face and a recess between the inner end of said face and said stop shoulder, and a letter controlled stop lever pivoted on the printing wheel and having a catch adapted to engage said shoulder and notch.

Witness my hand this 28th day of February, 1912.

FRED C. IELFIELD.

Witnesses:

GEO. H. SHOFNER,  
THEO STEWART.