

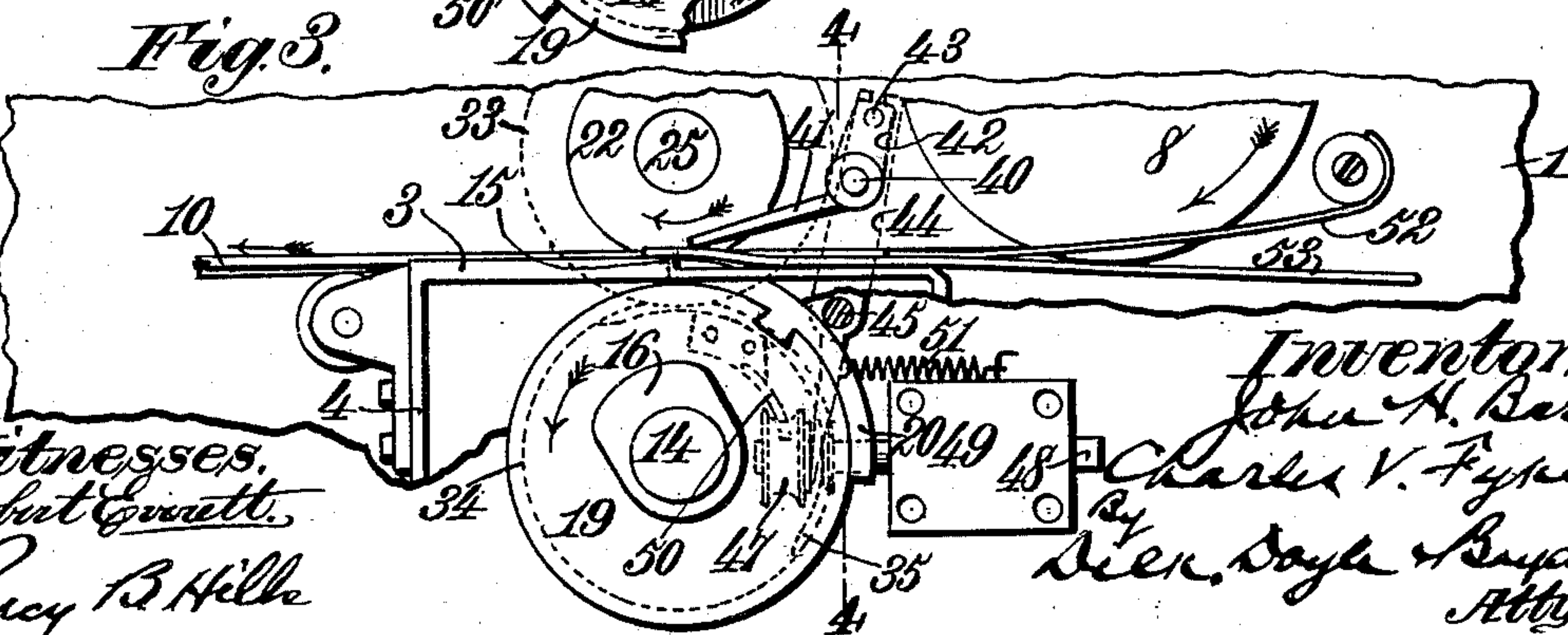
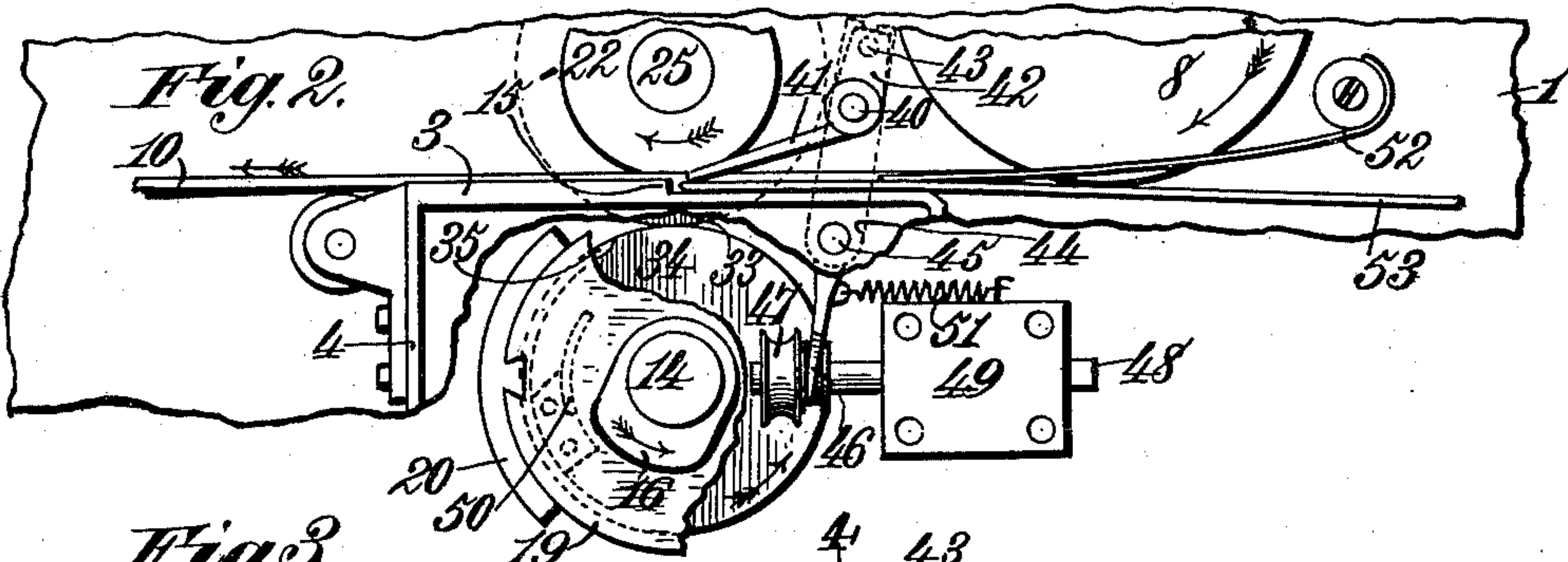
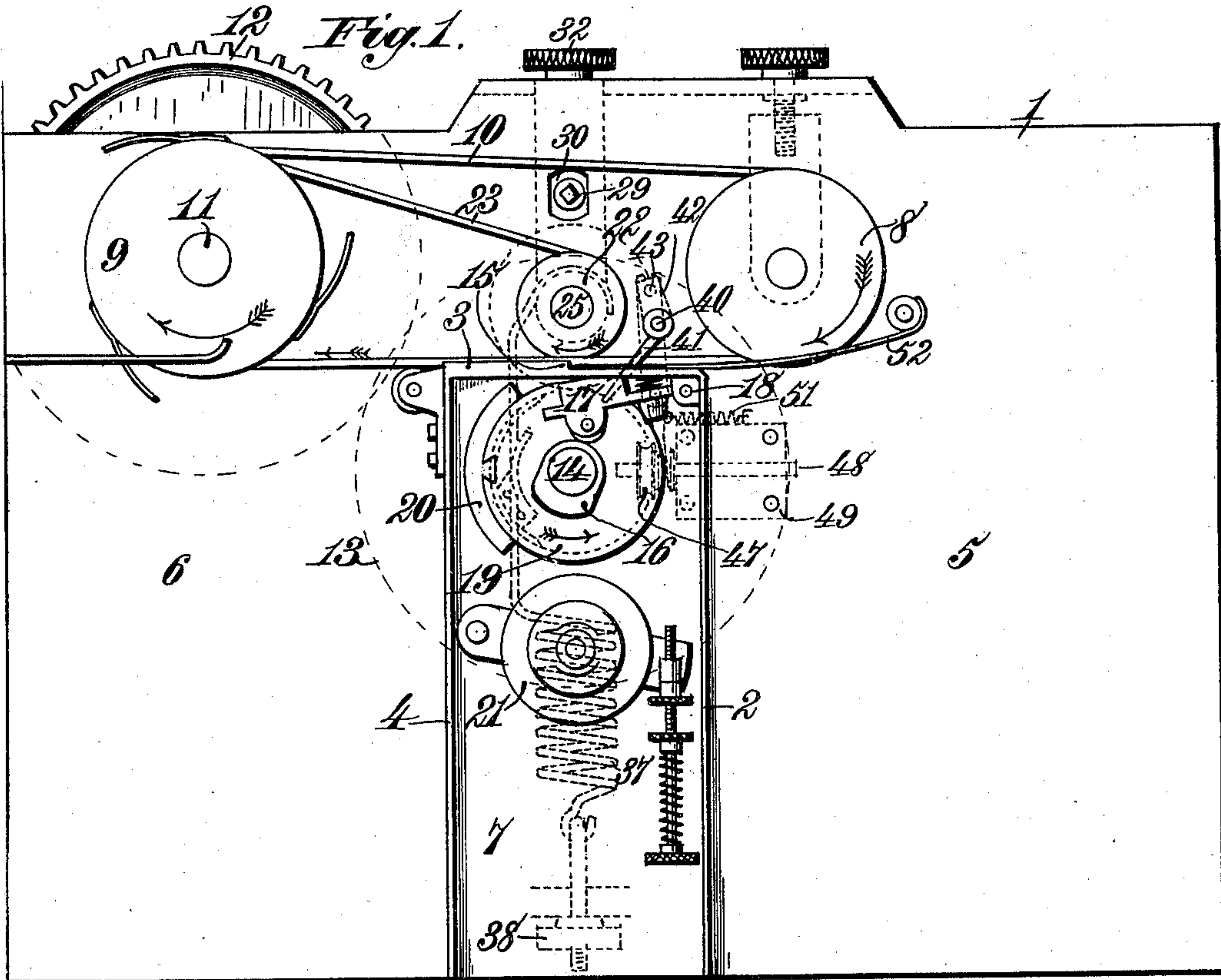
J. H. BARR & C. V. FYKE.

MAIL MARKING MACHINE.

(Application filed Jan. 29, 1901.)

(No Model.)

2 Sheets—Sheet 1.



Witnesses,  
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Lucy B. Hill

Inventors,  
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By Allen Doyle & Bryan  
Atty's.

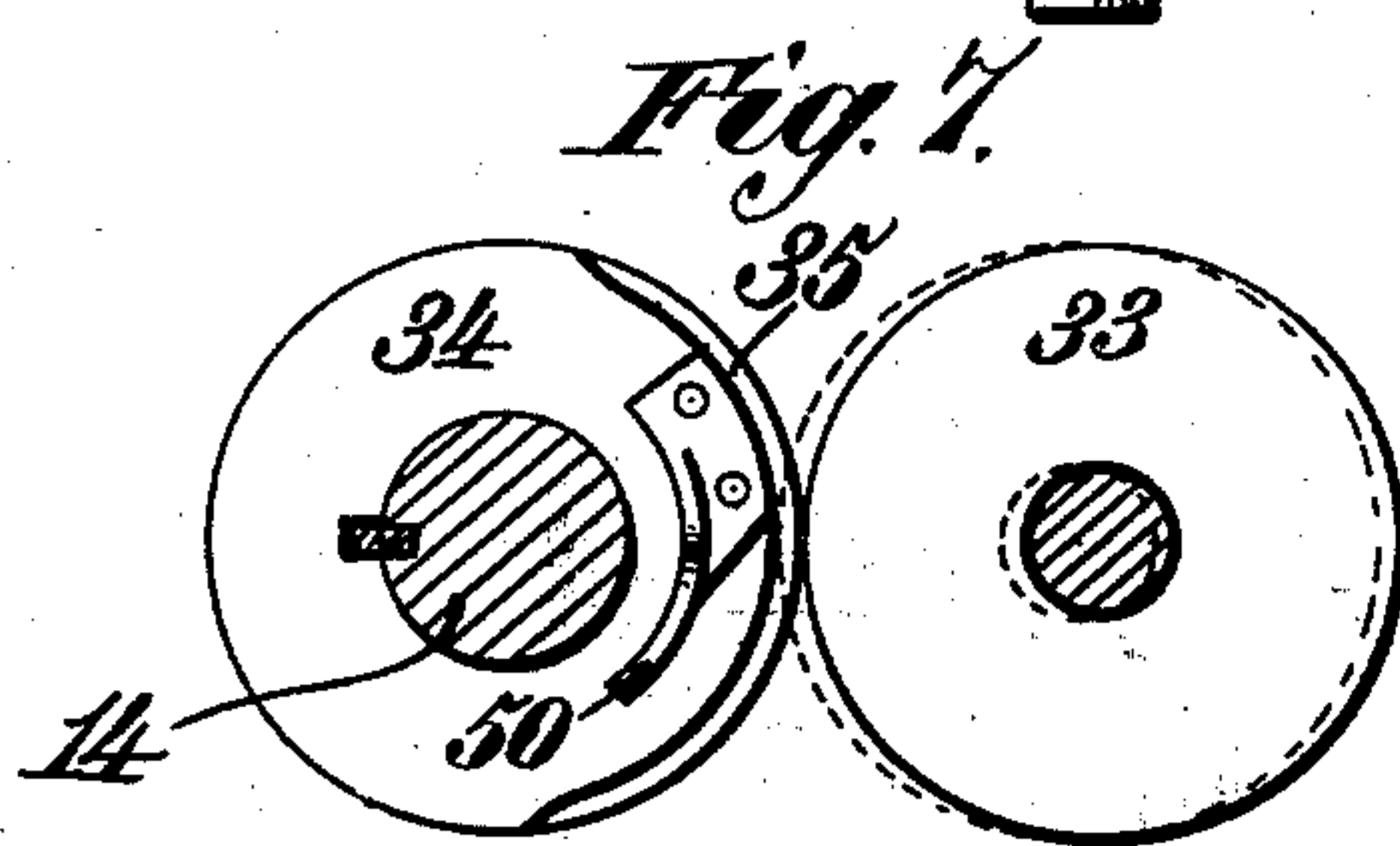
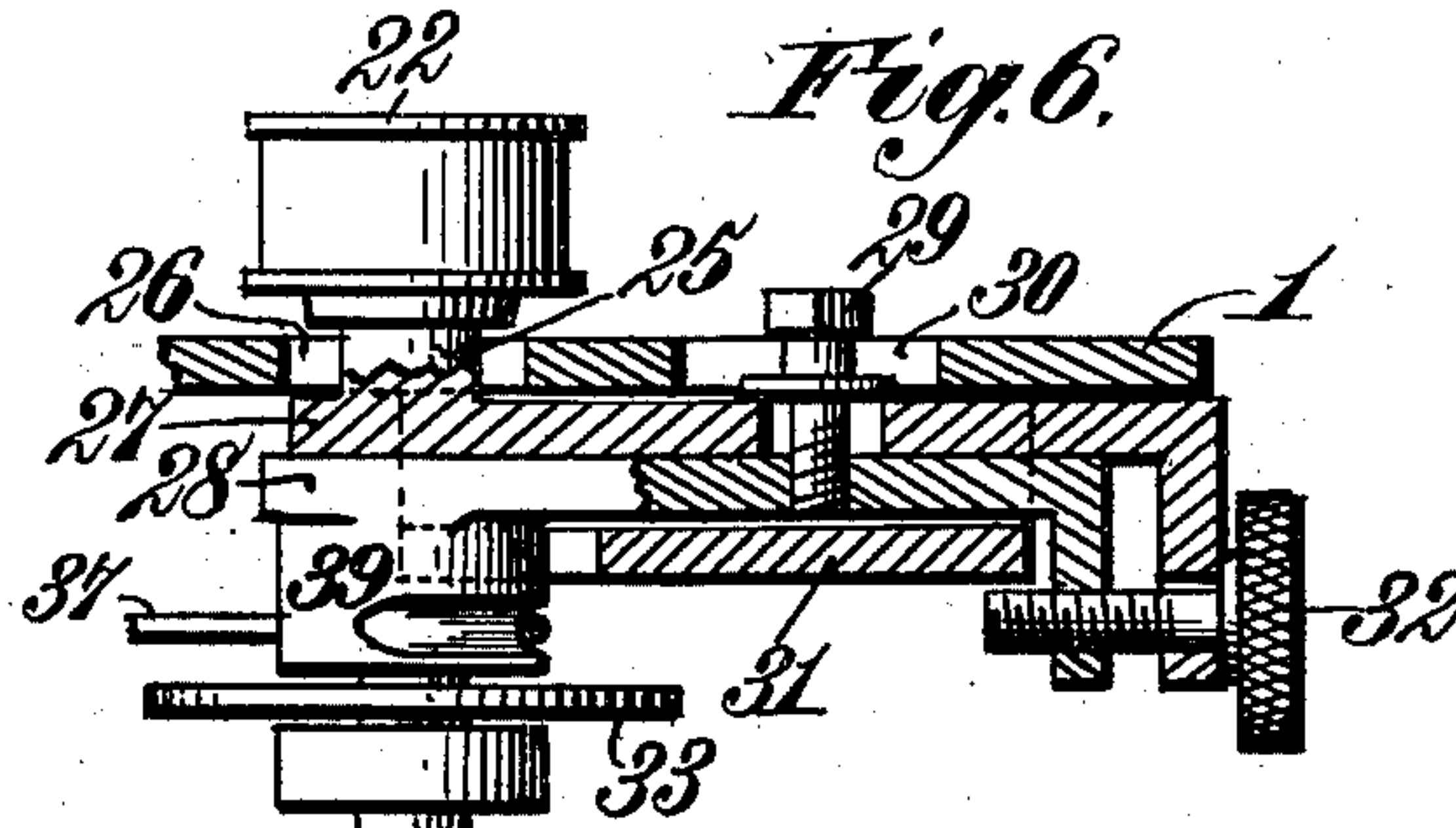
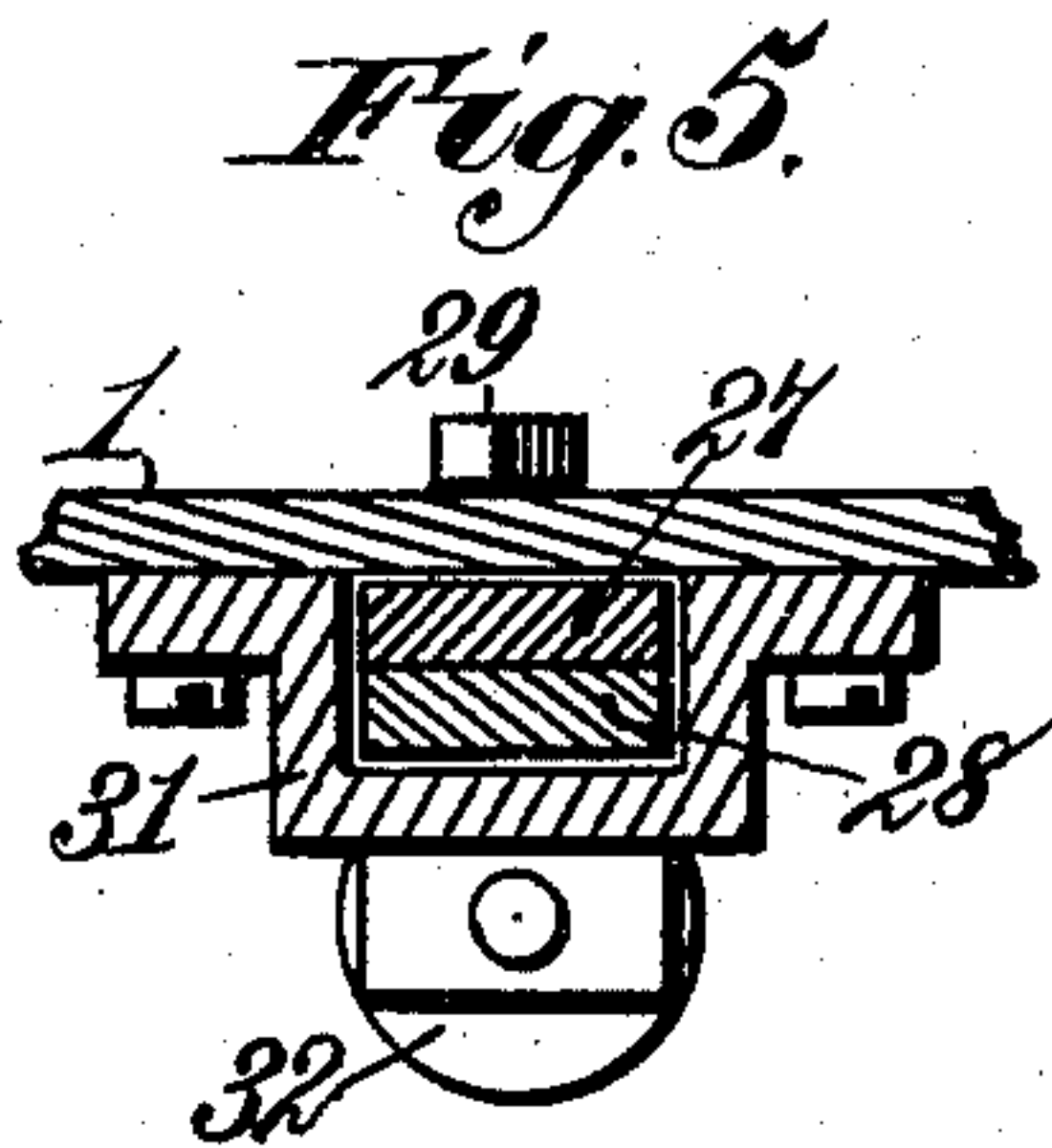
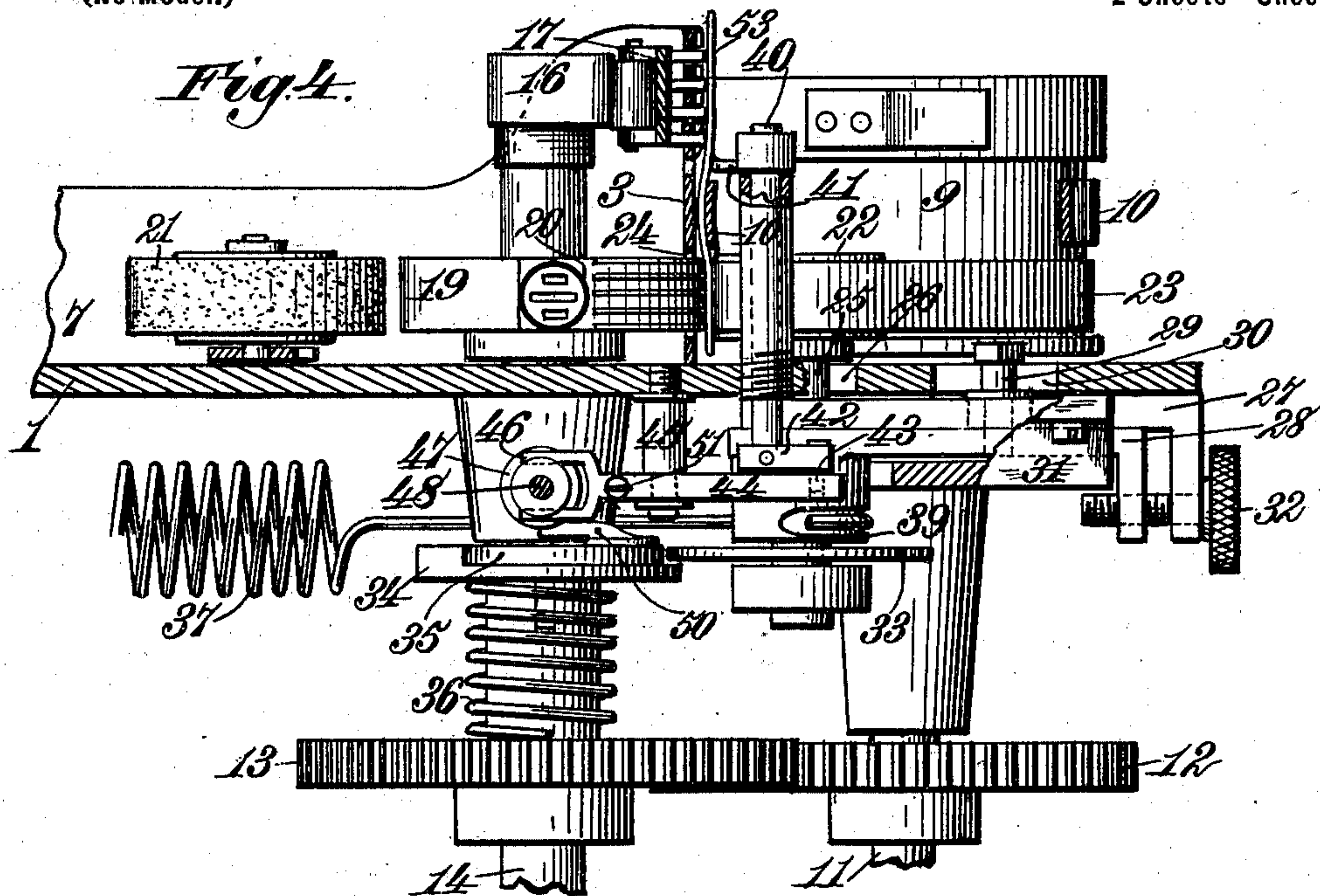
J. H. BARR & C. V. FYKE.

MAIL MARKING MACHINE.

(Application filed Jan. 29, 1901.)

(No Model.)

2 Sheets—Sheet 2.



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# UNITED STATES PATENT OFFICE.

JOHN H. BARR AND CHARLES V. FYKE, OF KANSAS CITY, MISSOURI.

## MAIL-MARKING MACHINE.

SPECIFICATION forming part of Letters Patent No. 692,176, dated January 28, 1902.

Application filed January 29, 1901. Serial No. 45,253. (No model.)

*To all whom it may concern:*

Be it known that we, JOHN H. BARR and CHARLES V. FYKE, citizens of the United States, residing at Kansas City, in the county of Jackson, State of Missouri, have invented new and useful Improvements in Mail-Marking Machines, of which the following is a specification.

Our invention relates to mail-marking machines, and has for its object to provide certain improvements in that type of machine disclosed in Letters Patent No. 656,401, granted August 21, 1900, to Charles V. FYKE.

Specifically enumerated, our improvements consist, first, in novel mechanism for controlling the movement of the impression member to and from the printing position; secondly, in novel means for adjusting said printing member, and, thirdly, in providing novel auxiliary means for guiding and retaining the letters to be marked during their passage to the printing-point. These objects we accomplish in the manner and by the means hereinafter described and claimed, reference being had to the accompanying drawings, in which—

Figure 1 is a top plan view of a mail-marking machine embodying our improved construction. Fig. 2 is a similar view, on a larger scale, of the more important parts, the main table of the machine being partly broken away, a letter being shown in position to be canceled. Fig. 3 is a view similar to Fig. 2, a letter being shown in the act of being canceled. Fig. 4 is a vertical transverse sectional view taken on the line 4-4, Fig. 3. Figs. 5, 6, and 7 are detail views of the various parts.

Similar numerals of reference denote corresponding parts in the several views.

In the said drawings the reference-numeral 1 indicates the main table of the machine, having fixed thereon suitable partitions 2, 3, and 4 for dividing said table into a letter-feeding space 5, a letter-receiving space 6, and an intermediate space 7 for some of the mechanism. Located on the upper side of said table 1 are two pulleys 8 and 9, connected by a letter-feeding belt 10, the shaft 11 of pulley 9 being preferably power-driven and having mounted thereon gear-wheel 12, meshing with similar gear-wheel 13 on shaft 14, carrying the mail-marking mechanism hereinafter to be described. The partition 3 is provided

with a vertical shoulder 15 affording a stop for each letter, and there is also mounted on shaft 14 a cam 16, operating on a suitable releasing device 17, pivoted at 18 and adapted to be projected by said cam partially through horizontal slots in the partition 3 to release the front edge of each letter from its engagement with the shoulder 15. Also mounted on shaft 14 is a cylinder 19, carrying a suitable printing or canceling stamp 20, said stamp being inked from the inking-wheel 21, as will be readily understood. None of the above parts, however, forming any part of the present invention and all of the same being clearly described in the Letters Patent hereinbefore referred to, further detailed description of the same is deemed unnecessary.

Mounted on the upper side of the table 1, opposite the printing-cylinder 19 and on the opposite side of the partition 3 therefrom, is a wheel or pulley 22, the same being connected to and driven from the pulley 9 by a belt 23, that also acts as the impression-surface for the printing-stamp 20, the latter passing in its rotation through an aperture 24 in the partition 3, as clearly seen in Fig. 4. In order, however, that said printing-stamp 20 and impression-belt 23 may not contact with each other when no letters are passing through the machine, we have provided the following mechanism for normally retaining said belt away from said stamp: The wheel or pulley 22 is mounted on a short shaft 25, passing freely through an elongated slot 26 in the table 1 and carried by a plate 27 thereunder. Immediately beneath and in contact with said plate is a second plate 28, the two being longitudinally movable with respect to each other, but adapted to be clamped together by a set-screw 29, passing through an elongated slot 30 in the table 1, as clearly seen in Figs. 5 and 6. Said plates are retained in position by a suitable casting 31, bolted to the under side of the table 1, while their outer ends are turned downward and apertured to receive a suitable adjusting-screw 32, operating in conjunction with the set-screw 29 to effect an accurate adjustment of said plates with respect to each other. Rotatably mounted on a bearing formed by a reduced portion of a projection 39, formed integral with the plate 28 alone, is a wheel 33, whose periphery is adapted to con-



tact with the periphery of a wheel 34, vertically movable on but splined to shaft 14, carrying the printing-cylinder 19. The periphery of said wheel 34, however, is provided with a recess 35, extending around about one-third of its circumference and from its top edge to one-half its width, as clearly seen in Figs. 4 and 7. This wheel 34 is normally forced to its uppermost position on its shaft 14 by a suitable coiled spring 36, located between the same and the gear-wheel 13, and when in said uppermost position is so positioned with respect to the wheel 33 that the periphery of the latter will bear against the lower half of the periphery of said wheel 34, which forms the circumference of a true circle. When, however, said wheel 34 is depressed by mechanism presently to be described, the recessed portion 35 of the periphery thereof will be brought opposite to the wheel 33, and the latter, together with its plate 31, plate 28, and wheel 22 and its impression-belt 23, will move toward said wheel 34 during the time that the recessed portion 35 thereof is in contact with wheel 33, thus bringing the impression-belt 23 into operative relation with respect to printing-surface 20, as will be readily understood. This movement of the parts toward the printing-cylinder 19 is positively provided for by means of a coiled spring 37, having one end adjustably fixed to the under side of the table 1 by a set-screw 38 and its other end engaged with the projection 39, carrying wheel 33, as seen in Figs. 1, 4, and 6.

The mechanism for intermittently depressing the wheel 34 will now be described, as follows: Fixed to the upper end of a vertical shaft 40, mounted in the table 1, is an arm or finger 41, adapted to normally project through a slot in the partition 3 and across the path of travel of the letters to be canceled. Said shaft 40 carries at its lower end beneath the table 1 a crank-arm 42, having a pin 43 near its outer end engaging the bifurcated end of a lever 44, pivoted intermediate its length on a stud 45, fixed to the under side of the table 1, said lever 44 being also vertically bifurcated at its other end at 46 to engage a small roller 47, rotatable and slidable longitudinally on a shaft 48, fixed in a suitable bearing 49. The roller 47 lies normally just above, but out of contact with, the upper surface of wheel 34, and the latter has fixed thereto a cam 50, which lies out of the path of travel of said roller 47 when the same is in the position shown in Fig. 1, but in said path when it is in the position shown in Figs. 2 and 3. A suitable retracting-spring 51 tends to retain the parts in the position shown in Fig. 1. It will thus be seen that when the finger 41 is in the position shown in Fig. 1 the roller 47 will lie out of the path of travel of the cam 50, but that when said arm or finger is moved to the position shown in Figs. 2, 3, and 4 the roller 47 will be moved inward over the wheel 34, so that the cam 50 will pass beneath said

roller 47, the result being that as said roller cannot yield vertically the said wheel 34 will be depressed against the tension of its spring 36, so that the recessed portion 35 thereof will come opposite to the wheel 33 and permit the latter and its parts to move toward printing-cylinder 19.

In order to guide and retain the letters in their initial movement between the feed-belt 10 and partition 3, we provide a flat spring-arm 52, normally bearing against the partition 3 above the belt 10 and adapted to yield to the passage of the letters to be canceled.

Having thus described our improved construction, the operation of the same will be understood to be as follows: With the parts in the position shown in Fig. 1, when a letter 53 to be canceled is fed edge on and stamp 20 down from the letter-feeding space 5 between the partition 3 on the one side and the belt 10 and spring-arm 52 on the other side, the same will be carried along by said belt until its front edge contacts with the shoulder 15 on said partition, by which it will be stopped. In this movement of the letter, however, it has forced the finger 41 to the position shown in Fig. 2, which, through the intermediate mechanism hereinbefore described, forces the roller 47 to a position over the wheel 34 in the path of travel of the cam 50. The rotation of the shaft 14 in the meantime will bring the cam 16 against the releasing device 17, thus forcing the latter through the apertures in partition 3 to force the front edge of the letter away from the shoulder 15 and permit it to be again carried along by the belt 10. While this is taking place, however, the cam 50 passes under roller 47, thus depressing wheel 34, so that the recessed portion 35 of the periphery thereof will register with wheel 33, which it does just before the front edge of the printing-stamp 20 reaches the printing position. Through the intermediate connections hereinbefore described the wheel or pulley 22 and its impression-belt 23 are thus permitted to be drawn toward the printing-cylinder 19 by the spring 37 and the necessary pressure exerted on the back of the letter to insure its being properly printed or canceled. It will be observed that while the cam 50 terminates abruptly some distance before the printing-stamp 20 will have passed the printing-point, still when the edge of wheel 33 has been once engaged over the edge on wheel 34, formed by the recess 35, as seen in Figs. 4 and 7, said wheel 34 will be retained in its depressed position until the rear end of recess 35 is reached by the wheel 33, when it will again resume its normal uppermost position, forcing the pulley 22 and belt 23 away from cylinder 19.

An important advantage obtained by the above-described mechanism is that the thinnest and lightest letter passing the finger 41 will be sufficient to shift the parts, as it is only necessary to overcome the tension of the light spring 51 to shift the roller 47 to its op-



erative position with respect to its cam 50, said roller being normally out of contact with wheel 34, the further rotation of the operative parts of the machine then automatically causing said wheel 34 to be depressed.

By employing the independent plates 27 and 28, the one carrying the shaft of the wheel or pulley 22 and the other carrying the shaft or wheel 33, and providing for their adjustment with respect to each other we are enabled to vary with accuracy the pressure of the impression-belt 23 on the backs of the letters to be canceled without in any way interfering with or varying the adjustment of the other parts of the mechanism.

Having thus described our invention, what we claim as new, and desire to secure by Letters Patent, is—

1. In a mail-marking machine, the combination with means for feeding the letters to be marked, a printing device, and an impression device, of connections between the two for normally keeping them away from the printing position, operative parts adapted to shift said connections, a finger in the letter-path, and mechanism operated by said finger to cause said operative parts to shift said connections and permit said printing and impression devices to assume the printing position when a letter is at the printing-point, substantially as set forth.

2. In a mail-marking machine, the combination with means for feeding the letters to be marked, a printing-cylinder, and an impression-surface, of connections therebetween for normally keeping said impression-surface away from its operative position with respect to the printing-cylinder, operative parts adapted to shift said connections, a finger in the letter-path, and mechanism operated by said finger to cause said operative parts to shift said connections and permit said impression-surface to assume the printing position when a letter is at the printing-point, substantially as set forth.

3. In a mail-marking machine, the combination with means for feeding the letters to be marked, of a rotating printing-cylinder, a bodily-movable impression-surface, wheels connected with said printing-cylinder and impression-surface and contacting with each other to normally retain the impression-surface away from the printing position, one of said wheels being recessed on a portion of its periphery normally out of the path of rotation of the other wheel, a spring for exerting a tension on the impression member toward the printing position, a finger in the letter-path, and mechanism operated by said finger to shift one of said wheels so that the recessed portion on one of them will lie in the path of the other wheel, whereby the impression-surface will assume the printing position when a letter is at the printing-point, substantially as set forth.

4. In a mail-marking machine, the combination with means for feeding the letters to

be marked, a printing-cylinder, a shaft rotating the same, a bodily-movable impression-surface normally out of operative position, of a wheel on the printing-cylinder shaft having its periphery provided with a recessed portion, a wheel bodily movable with the impression-surface and normally contacting with the unrecessed portion of the periphery of the printing-shaft wheel, a finger in the letter-path, mechanism operated thereby to shift the relative positions of said wheels so that the impression-surface wheel will contact with the recessed portion of the periphery of the printing-shaft wheel, and means for constantly pressing the impression-surface and its parts toward its operative position, substantially as set forth.

5. In a mail-marking machine, the combination with means for feeding the letters to be marked, of a printing-cylinder, a rotary shaft carrying the same, a vertically-movable wheel on said shaft having a portion of its periphery recessed, a spring for normally retaining said wheel in one position, a bodily-movable impression-surface, a wheel connected therewith and normally contacting with the unrecessed portion of the periphery of the printing-shaft wheel, means for constantly forcing the impression-surface toward the printing position, a finger in the letter-path, and mechanism operated thereby to bodily move the printing-shaft wheel so that its recessed portion will contact with the impression-surface wheel, whereby said impression-surface may be moved to the printing position when a letter is at the printing-point, substantially as set forth.

6. In a mail-marking machine, the combination with means for feeding the letters to be marked, a printing-cylinder, a bodily-movable impression-surface, a shaft for said printing-cylinder, a vertically-movable wheel on said shaft controlling by its position the movement of the impression-surface to and from the printing position, means for normally retaining said wheel in its uppermost position, and a cam on the upper surface of said wheel, of a roller movable horizontally but not vertically and above the upper surface of said wheel, a finger lying across the letter-path, and intermediate connections between the two, whereby the movement of the finger by the entering letter will move said roller horizontally above said wheel and into the path of travel of the cam thereon to depress said wheel and thus permit the impression-surface to occupy the printing position, substantially as set forth.

7. In a mail-marking machine, the combination with means for feeding the letters to be marked, a printing-cylinder, a bodily-movable impression-surface, a shaft for said printing-cylinder, a vertically-movable wheel on said shaft controlling by its position the movement of the impression-surface to and from the printing position, a spring for normally retaining said wheel in its uppermost posi-



tion, and a cam on the upper surface of said wheel, of a roller movable horizontally but not vertically and above the upper surface of said wheel, a lever pivoted intermediate its length and engaging said roller at one end, a crank-arm engaging the other end of said lever, a vertical shaft to which said crank-arm is fixed, and a finger attached to said shaft and adapted to lie normally across the letter-path and to be deflected by the passage of the letters, the said roller lying out of the path of travel of the cam on the printing-shaft wheel when said finger is in its normal position but shifted into said path of travel by the deflection of said finger to force its wheel to a position for permitting the impression-surface to occupy the printing position, substantially as set forth.

8. In a mail-marking machine, the combination with means for feeding the letters to be marked, a printing-cylinder, a shaft therefor, a bodily-movable impression member, and mechanism on said printing-shaft for controlling the position of said impression member, of intermediate connections between said impression member and controlling mechanism consisting of a movable plate carrying said impression member, a second movable plate,

a wheel mounted in said second plate and contacting with the controlling mechanism, and connections between said plates for adjustably securing the same together, substantially as set forth.

9. In a mail-marking machine, the combination with a vertical partition, and an endless feed-belt, between which the letters pass in their passage to the printing-point, of a spring-arm projecting from the belt side of and across the letter-path and located above said belt, the same adapted to yield to the letters and to retain their upper edges in contact with the partition during their passage to the printing position, substantially as set forth.

In testimony whereof we have hereunto set our hands in the presence of the subscribing witnesses.

JOHN H. BARR.  
CHARLES V. FYKE.

Witnesses for John H. Barr:

W. F. FYKE,  
E. M. FUQUA.

Witnesses for Charles V. Fyke:

PERCY B. HILLS,  
HUGH M. STERLING.