

No. 801,327.

PATENTED OCT. 10, 1905.

E. MEIER.

ADDRESS PRINTING MACHINE.

APPLICATION FILED DEC. 22, 1903. RENEWED FEB. 25, 1905.

2 SHEETS—SHEET 1.

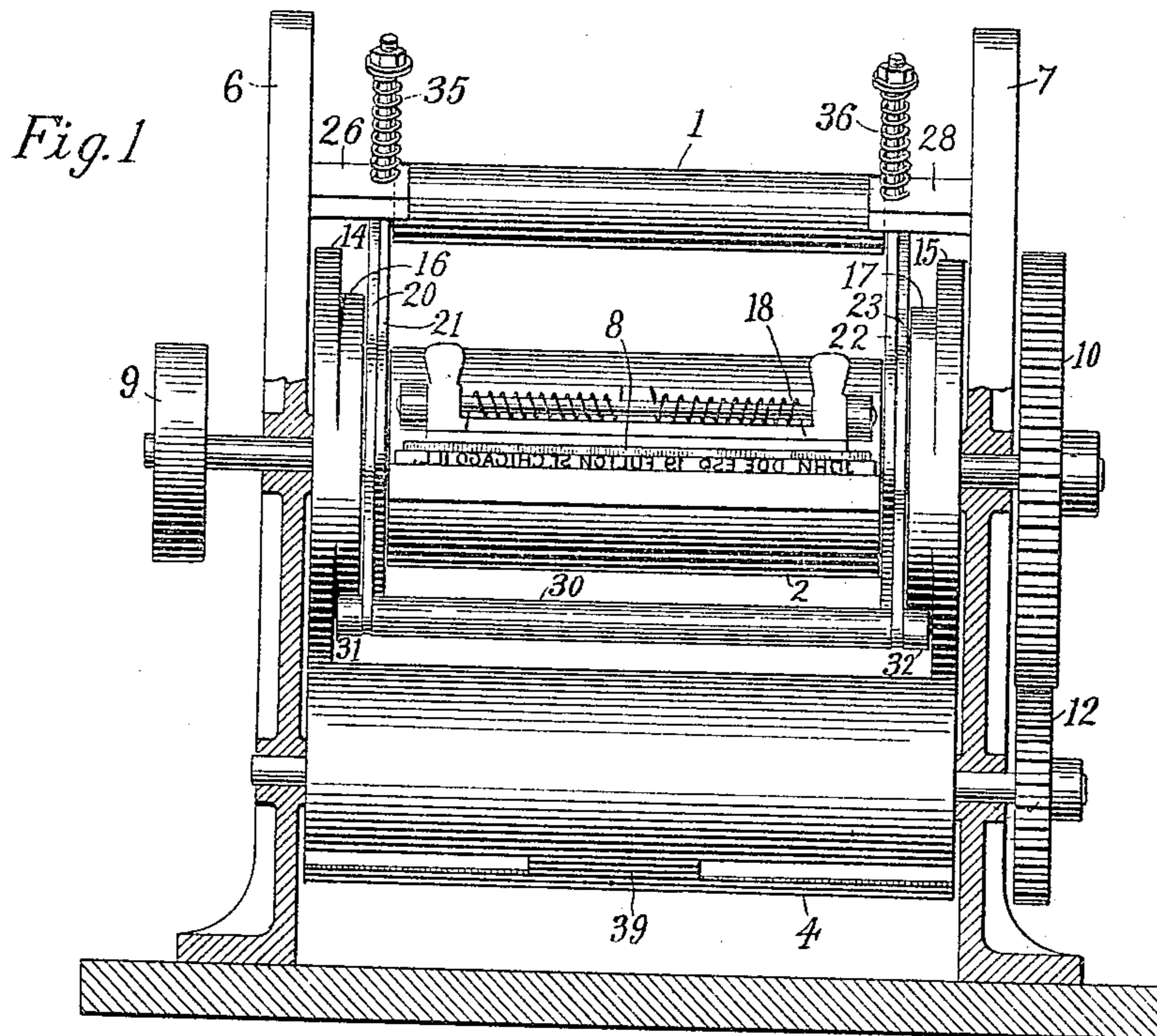
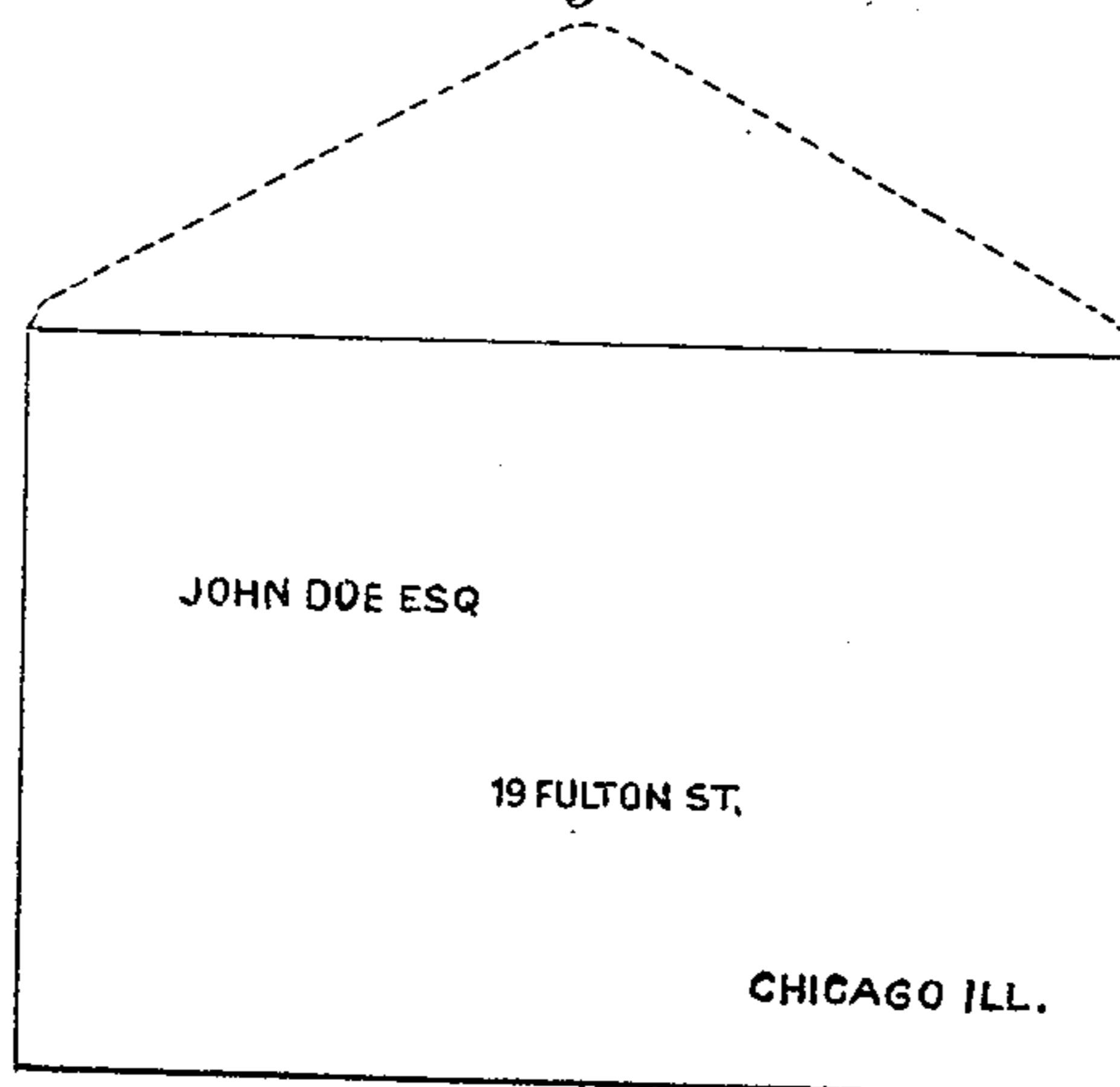


Fig. 6



Witnesses:

Raphael Ketter
Richard Wobse

Emil Meier, Inventor

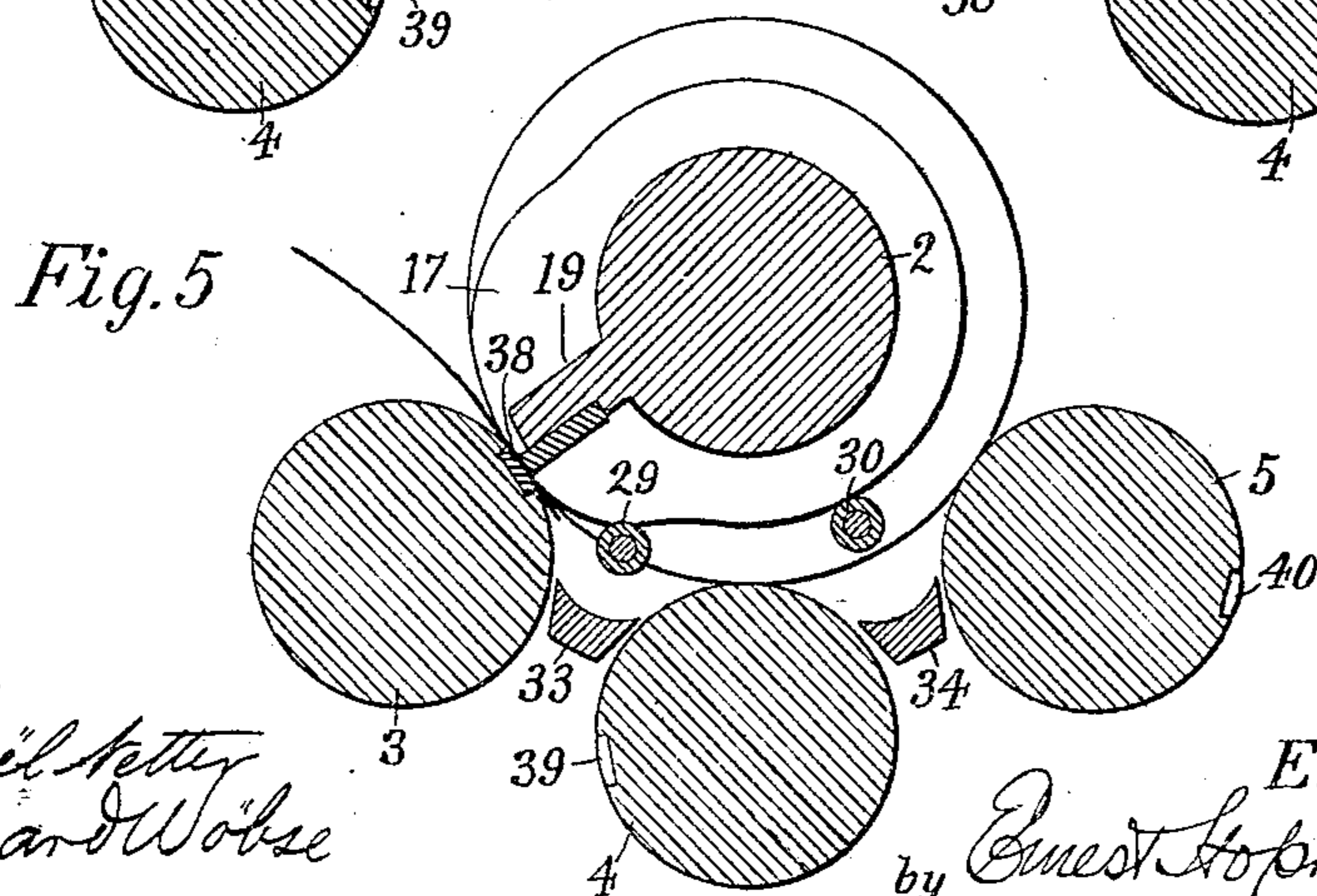
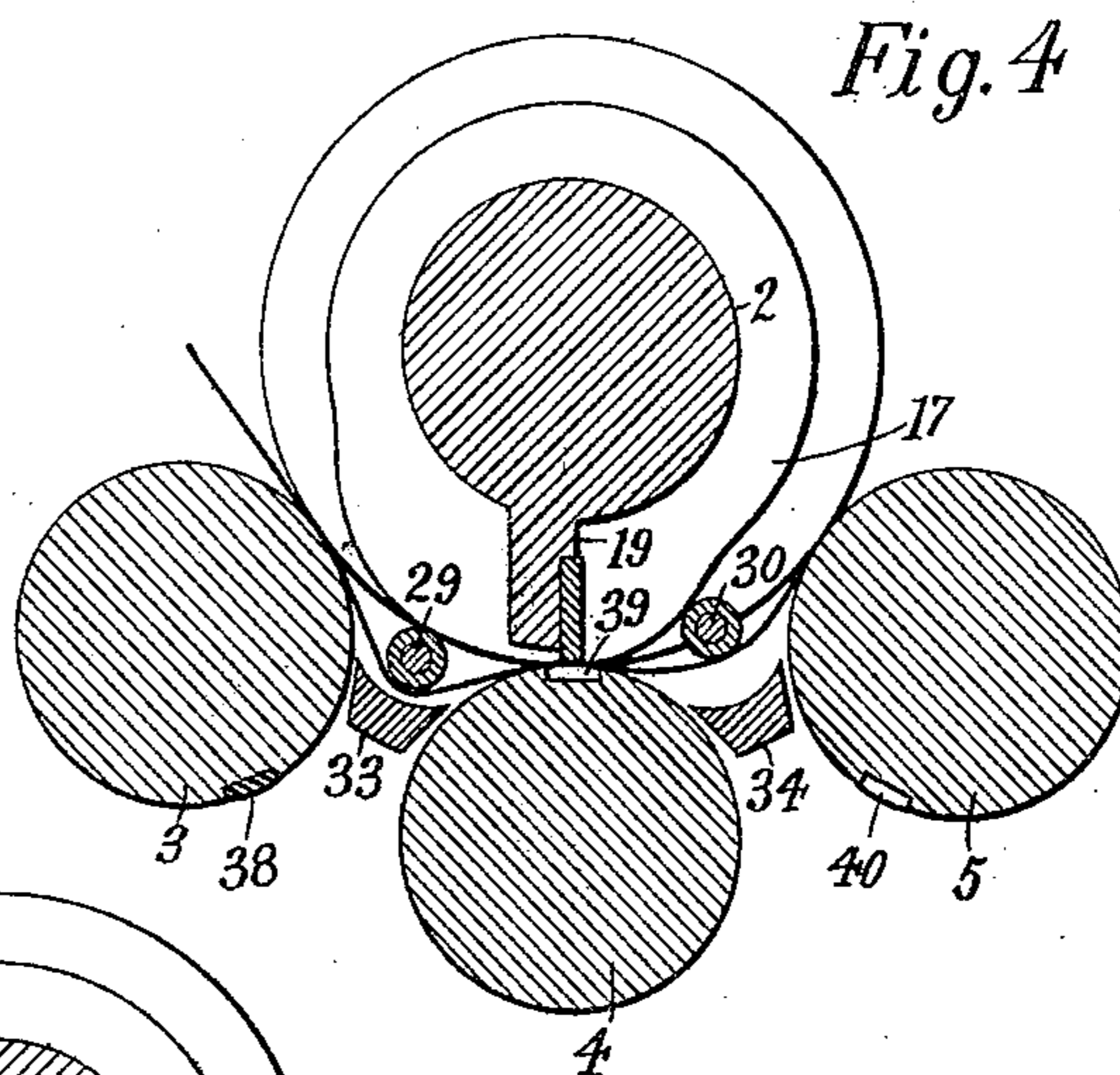
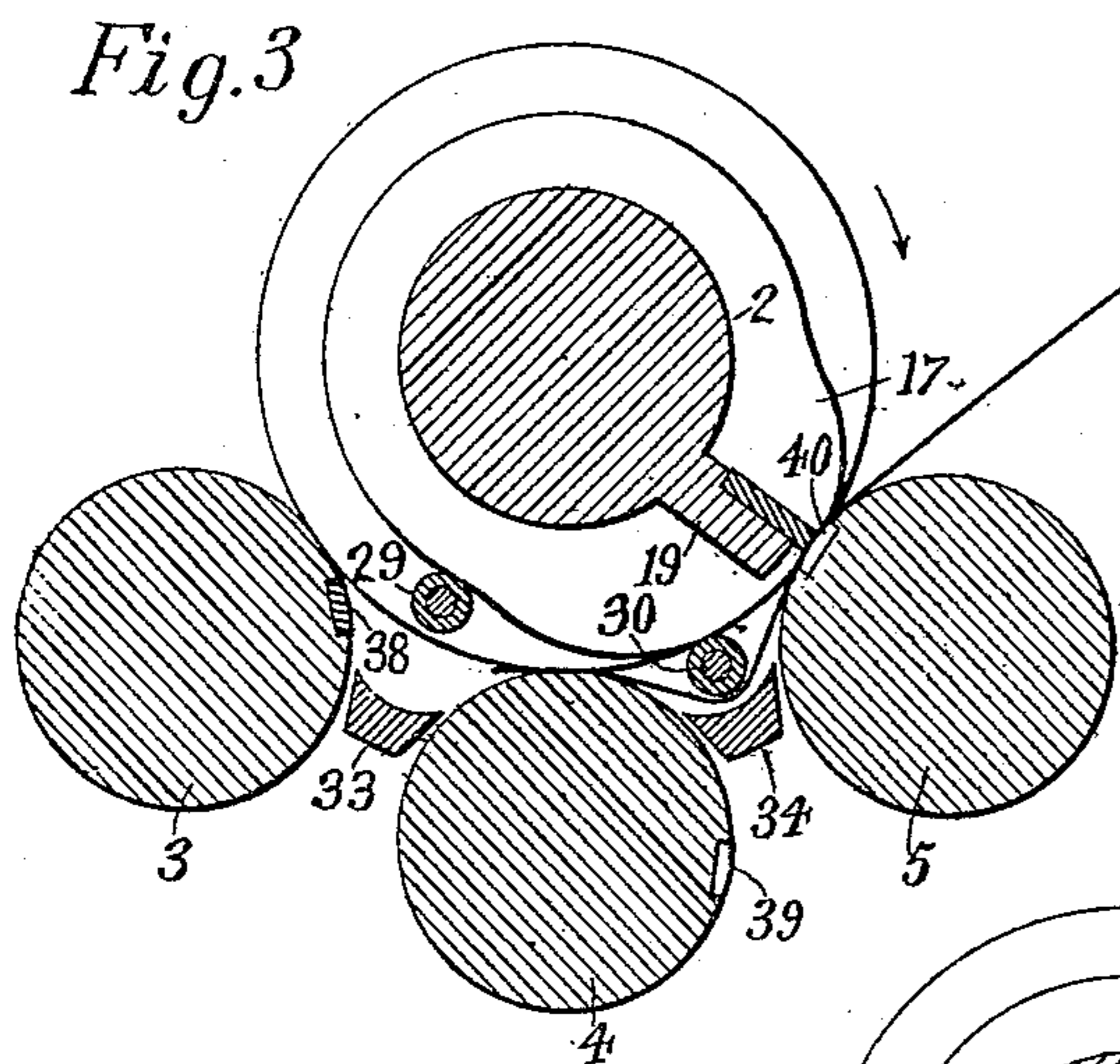
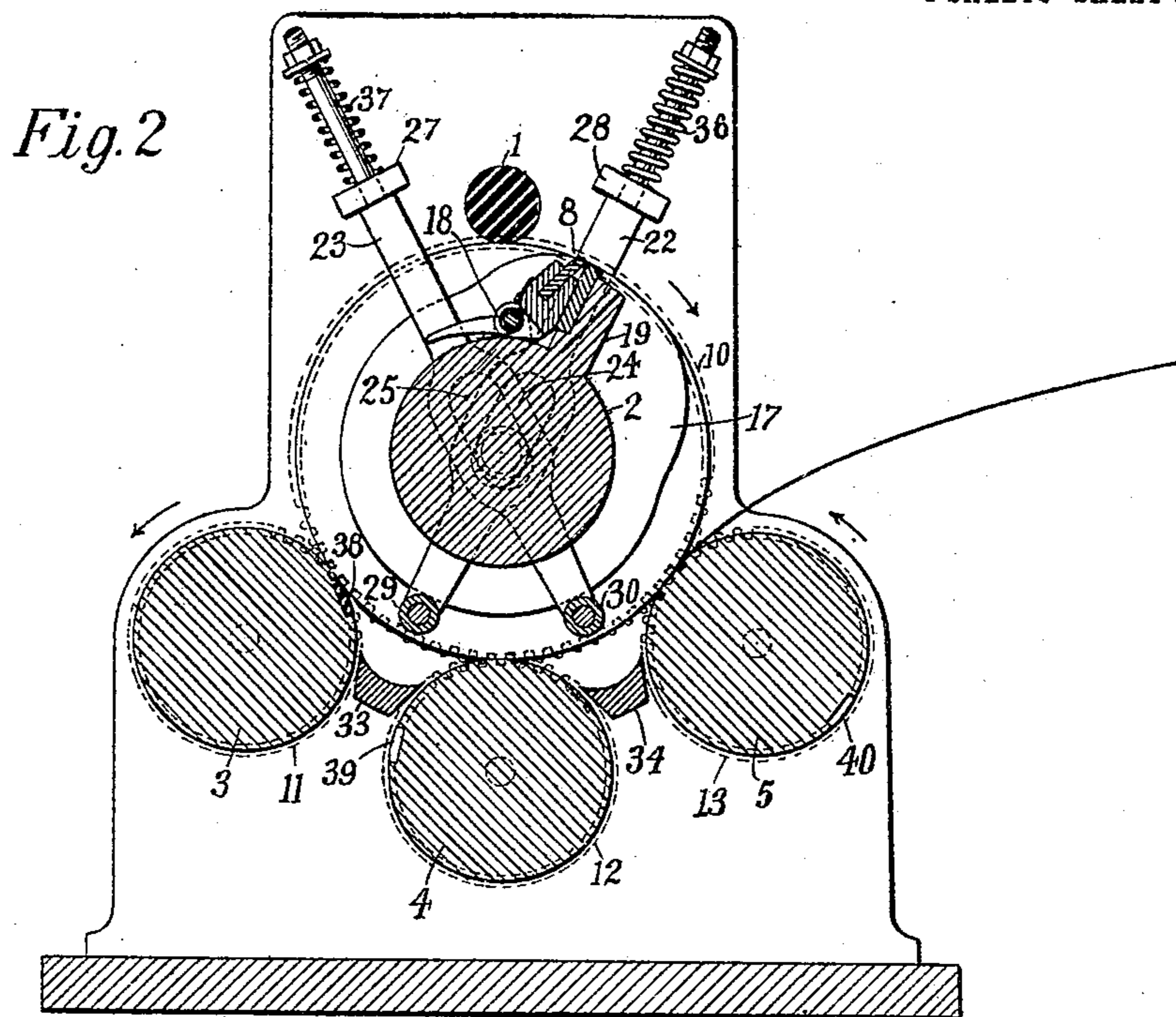
by *Ernest Hopfmeier* his Atty

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2 SHEETS—SHEET 2.



Witnesses:

Raphael Ketter
Richard Wobse

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UNITED STATES PATENT OFFICE.

EMIL MEIER, OF NEW YORK, N. Y.

ADDRESS-PRINTING MACHINE.

No. 801,327.

Specification of Letters Patent.

Patented Oct. 10, 1905.

Application filed December 22, 1903. Renewed February 25, 1905. Serial No. 247,251.

To all whom it may concern:

Be it known that I, EMIL MEIER, a citizen of the United States, residing at 303½ Adelphi street, borough of Brooklyn, county of Kings, city and State of New York, have invented a new and useful Improvement in Address-Printing Machines, of which the following is a specification.

My invention relates to printing-machines, and particularly to that class known as "address-printing" machines, and has for its objects simplicity of construction and rapidity and facility of operation.

According to my invention I provide means whereby the type moves forward to print and the web moves backward to produce the requisite spacing, and I employ a number of relatively moving parts for carrying the type and the platens and for effecting a continuous feed of the web, and I further employ a single line of type carrying the complete address and provide automatic means for moving the web in such manner that the name, address, and location shall be successively printed from the same line of type on different lines or at different spacing on the web.

Also according to my invention the impression plates or platens are arranged to successively receive a predetermined length of impression of the type, and means are provided for holding the web out of contact with the portion of the type not used in that particular impression. Means are also provided whereby a continuous guide-surface for the web is effected throughout the operation of the apparatus, and means are also provided whereby the parts of the apparatus are rotated at the same relative speed for the printing and feeding operation.

I will now describe the drawings illustrating a device embodying my invention and will thereafter point out the novel features in claims.

Figure 1 is an end view, partially in section, of a device embodying my invention. Figs. 2, 3, 4, and 5 are diagrammatic sectional views of the several positions of the parts for the several impressions, and Fig. 6 is an envelop with the address printed thereon by my device.

In the embodiment of my invention I have illustrated a machine wherein the parts are particularly arranged for addressing envelops, and it consists of a series of rollers 1, 2, 3, 4, and 5 on shafts suitably supported in standards 6 and 7 upon a convenient base.

The roller 1 is designed as an ink-roller,

the roller 2 as the type-roller, and the rollers 3, 4, and 5 as the feed and platen rollers. To one end of the type-roller shaft is attached a power-pulley 9 and to the other end thereof a gear-wheel 10, that meshes with gears 11, 12, and 13 on the feed and platen rolls. The relationship of type-roll gear to the feed and platen roll gears is preferably two to one, which I have found in practice to produce the best uniform results. The type-roll is preferably constructed in form of a spool, wherein the enlargements or shoulders 14 and 15 act as a feed-roll. The shoulders are provided with cams 16 17, preferably arranged on the inner side thereof, and the type-holder or slug is preferably located upon a vane 19 of the type-roll and held in place by means of a spring-clamp 18, which is provided with a projecting vane 8, that projects slightly beyond the plane of the surface of the type and which is constructed of some partially-elastic material, such as felt or rubber, and which is adapted to hold the unused portion of the web out of contact with the type by depressing it on either side of the platens or into the longitudinal slot on the feed-rod. Between the type-holder and the cams are located diagonally-arranged bars 20 21 22 23, provided with slots 24 25 therein for bridging the type-roll shaft. These bars are supported in projections 26 27 28 from the standards 6 and 7 and are provided with depressing or retarding rollers 29 and 30, extending completely across the machine in the spaces between the type and platen rolls and having rollers 31 32, that operate upon the cam-surfaces. The upper ends of these bars are provided with resilient retracting means 35 36 37, located between the standard projections and the restraining-rollers in contact with the cam-surfaces. I also provide guide-surfaces 33 and 34, approximately bridging the distance between the feed-rolls, that are arranged to present concave guide-surfaces to the web and with the feed-rollers form a sinuous guide-surface therefor.

The feed-rolls are provided with platens 38, 39, and 40, presenting a convex surface preferably conforming to the periphery of the feed-rolls, and are arranged in slots longitudinally thereof and so spaced relatively to the rotation of the feed-rolls as to receive the successive imprints of the parts of the address, and such successive sectional imprints are arranged to take in the full width of length of the type.

In the performance of my invention the web is fed face up, with the flap in the rear, between the type-roll and the first feed and platen roll 5, which for convenience I shall term the "name-roll," as the name of the address is impressed upon the envelop on the platen of this roll, and likewise I term the rolls 4 and 3 the "address" and "location" rolls, respectively. The feed of the web continues until the line of type that is revolving comes into contact with the platen of the name-roll and impresses the name on the web, the address and location portions of the type in this operation being over the longitudinal slot in the roll, and the unused web is firmly held by means of the elastic vane on the type-holder out of contact with the type by depressing it into the longitudinal slot, and while the printing of the name is being accomplished the cams 16 and 17 depress the roller 30, thereby forcing the forward end of the web downward upon the concave surface of the guide 34, and thereby causing it to travel over a greater distance than the distance traveled by the type on the type-roll, and thereby retarding the web and presenting another line or space at a lower level on the web to receive the impression of the address when the address-platen 4 and the type meet in their rotation. As soon as the address is printed the roller 29 is depressed by the cams 16 and 17 in their rotary motion and the web is again depressed upon the concave surface of the guide 33, so that it is forced to travel a greater distance than the distance traveled by the type on the type-roll, and another line or space at a still lower level for printing the location of the address is presented, and as soon as the type comes in contact with the location-platen 3 the location of the address is imprinted on the web and that portion of the web not used in this impression is held out of contact with the type by the elastic vane on the type-holder.

It will be observed that my printing device is automatic and that the method employed therein (the printing of addresses from a single line of type and the employment of mechanism whereby the web is retarded to present the same a second time to the same line of type at a different spacing) can be employed in any multiplication by the interposition and proper relationship of rolls and gearing. It is obvious that various modifications may be made in the construction and relationship of the parts of my device herein described within the spirit and scope of my invention.

What I claim, and desire to secure by Letters Patent, is—

1. In an addressing-machine, the combination with means for holding a line of type, of means for impressing upon the paper a part only of the type-line, then effecting relative line-spacing movements between the paper

and the type, and then impressing upon the paper only a different part of said type-line.

2. In an addressing-machine, the combination with means for holding a line of type, of means for impressing upon the paper a part only of the type-line, then effecting relative line-spacing movement between the paper and the type, then impressing upon the paper a second part only of said type-line, then effecting a second relative line-spacing movement between the paper and the type, and then impressing upon the paper only a third part of said type-line.

3. In an addressing-machine, the combination with means for holding a line of type, of a succession of platen-sections opposite to successive parts of the type-line, and means for bringing said platen-sections into operation *seriatim* and for effecting line-feeding movement between impressions.

4. In an addressing-machine, the combination with means for holding a line of type, of means for inking the type and for printing therefrom a succession of lines one whereof consists only of impressions from some of the types and another consists only of impressions from others of the types.

5. In an addressing-machine, the combination with means for holding a line of type, of means for inking the type and for printing therefrom three successive lines, the first whereof consists only of impressions taken from the first types upon the line, the third whereof consists only of impressions taken from last types on the line, and the second whereof consists only of impressions taken from the intermediate types upon the line.

6. An addressing mechanism comprising a single-line type-slug and means for printing therefrom a succession of lines one whereof consists only of impressions from some of the types and another consists only of impressions from others of the types.

7. In an addressing-machine, the combination with means for holding a line of type, of a platen-section shorter than the line, means for effecting an impression, and a fender for pressing the paper away from that portion of the types not coacting with said platen-section.

8. In an addressing-machine the combination with means for holding a line of type, of a succession of platen-sections having a step-wise relation for coaction with successive portions of the type-line, inking means, means for effecting impressions, line-feeding means, and a yielding fender for pressing the paper away from the type.

9. In an addressing-machine, the combination with type-line-holding means, of a succession of platens, means for causing them to operate successively, and line-spacing devices effective between impressions.

10. In an addressing-machine, the combination of a type-line carrier, a succession of platens in position for coöperation with the

type, means for moving the type-line carrier and platens, and means for guiding the paper between the platens away from and back to the type-line carrier.

11. In an addressing-machine, the combination of a revoluble type-line carrier, a succession of revoluble platen-sections for coöperation therewith, said platen-sections having stepwise relation, and means for effecting line-spacing movement of the paper between platen-sections.

12. In an addressing-machine, the combination of a revoluble type-line carrier, yielding means for fending the paper away from the type, a succession of revoluble platen-sections geared to said type-line carrier, said platen-sections having stepwise relation, and means for retarding the paper relatively to the type-line carrier between platen-sections.

13. An addressing-machine comprising a movable line of type, means for moving the same forward to print, and means for effecting impressions of different portions of the line in successive lines upon the paper, including means for moving the paper backward relatively to the type-line to produce desired line-spacing.

14. An addressing-machine comprising a revoluble means for holding a type-line, a succession of feed-rolls each provided with a platen-section, the platen-sections having stepwise relation, and means between the feed-rolls for moving the paper backward relatively to the type-line, to produce line-spacing.

15. An addressing-machine comprising a revoluble type-bearing member, a succession of feed-rolls and platen-sections, and paper-retarding means between said rolls and movable to and from effective position.

16. An addressing-machine comprising a revoluble type-bearing member, a succession of feed-rolls and platen-sections, and paper-retarding means between said rolls; said type-bearing member, feed-rolls, platen-sections and paper-retarding means being operatively connected.

17. An addressing-machine comprising a revoluble type-bearing member, a succession of feed-rolls each having a platen portion, and coöperative paper-deflectors between adjoining feed-rolls; one of said deflectors being movable by said revoluble type-bearing member.

18. An addressing-machine comprising a revoluble type-bearing member, a succession of feed-rolls each having a platen portion, and inner and outer paper-deflectors between adjoining feed-rolls; the inner deflector being movable to and from effective position, and the outer deflector being stationary; and a cam upon said type-bearing member for controlling said movable deflector.

19. An addressing-machine comprising a revoluble type-bearing member, three succes-

sive feed-rolls each having a platen-section, the sections having stepwise relation, paper-deflecting rolls between the feed-rolls, arms whereon said deflecting-rolls are mounted, a cam upon said type-bearing member for operating said arms to move said deflecting-rolls to effective position, and stationary deflectors outside of said deflecting-rolls.

20. An addressing-machine comprising means for holding a type-line and means for printing in stepwise relation successive portions of the type-line.

21. In an addressing-machine, the combination with paper-feeding means, of a slug of type and means for successively printing upon the paper successive portions, each of a predetermined length, of said type-slug.

22. In an addressing-machine, the combination of a slug of type, means for successively printing upon the paper three successive portions, each of a predetermined length, of said type-slug, and means for effective relative feeding movement of the paper between impressions.

23. In an addressing-machine, the combination of a slug of type, a series of platen-sections having stepwise relation, means for moving the type forward to print, and means for effecting a relative backward movement of the paper to produce line-spacing.

24. An addressing-machine comprising a rotating type-bearing member, feed-rolls rotating relatively thereto and rollers operated by the rotating member to move the web backward relatively to the rotating type-bearing member.

25. An addressing-machine comprising a rotating type-bearing member, feed-rolls rotating relatively thereto and provided with impression-platens and means for retarding the feeding of the web operated by the rotating type-bearing member.

26. An addressing-machine comprising a rotating type-bearing member provided with cams, feed-rolls and platens rotating relatively thereto, means for feeding the web between the type and platens and automatic retarding means controlled by the cams on the type-bearing member.

27. An addressing-machine comprising a rotating type-bearing cam member, platen-bearing rotating feed members and retarding spring-retracted members controlled by the cam member and bridging the shaft thereof.

28. An addressing-machine comprising a rotating type-bearing member provided with projecting holding means, rotating feed members and retarding members controlled by the type-bearing member.

In witness whereof I have hereunto set my hand this 12th day of December, 1903.

EMIL MEIER.

Witnesses:

THOMAS J. SURPLESS,
H. RICHARD WÖBSE.