

No. 652,451.

Patented June 26, 1900.

J. H. BARR.

MAIL MARKING MACHINE.

(Application filed Dec. 16, 1896. Renewed Nov. 28, 1899.)

(No Model.)

4 Sheets—Sheet 1.

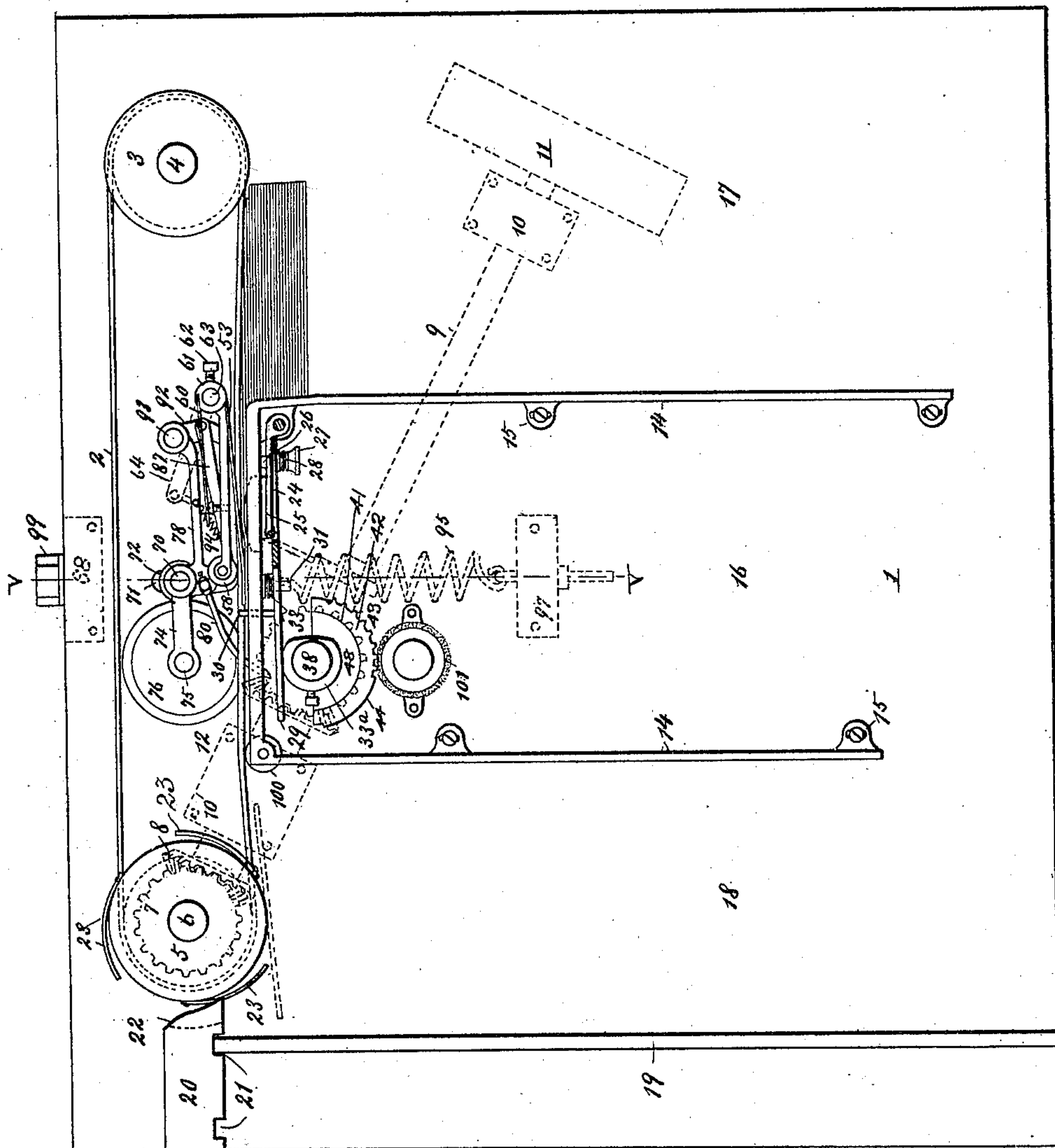


Fig. 1.

Witnesses:

P. G. Fischer
G. P. Thorpe

Inventor:

J. H. Barr

By Higdon & Higdon

Atty's

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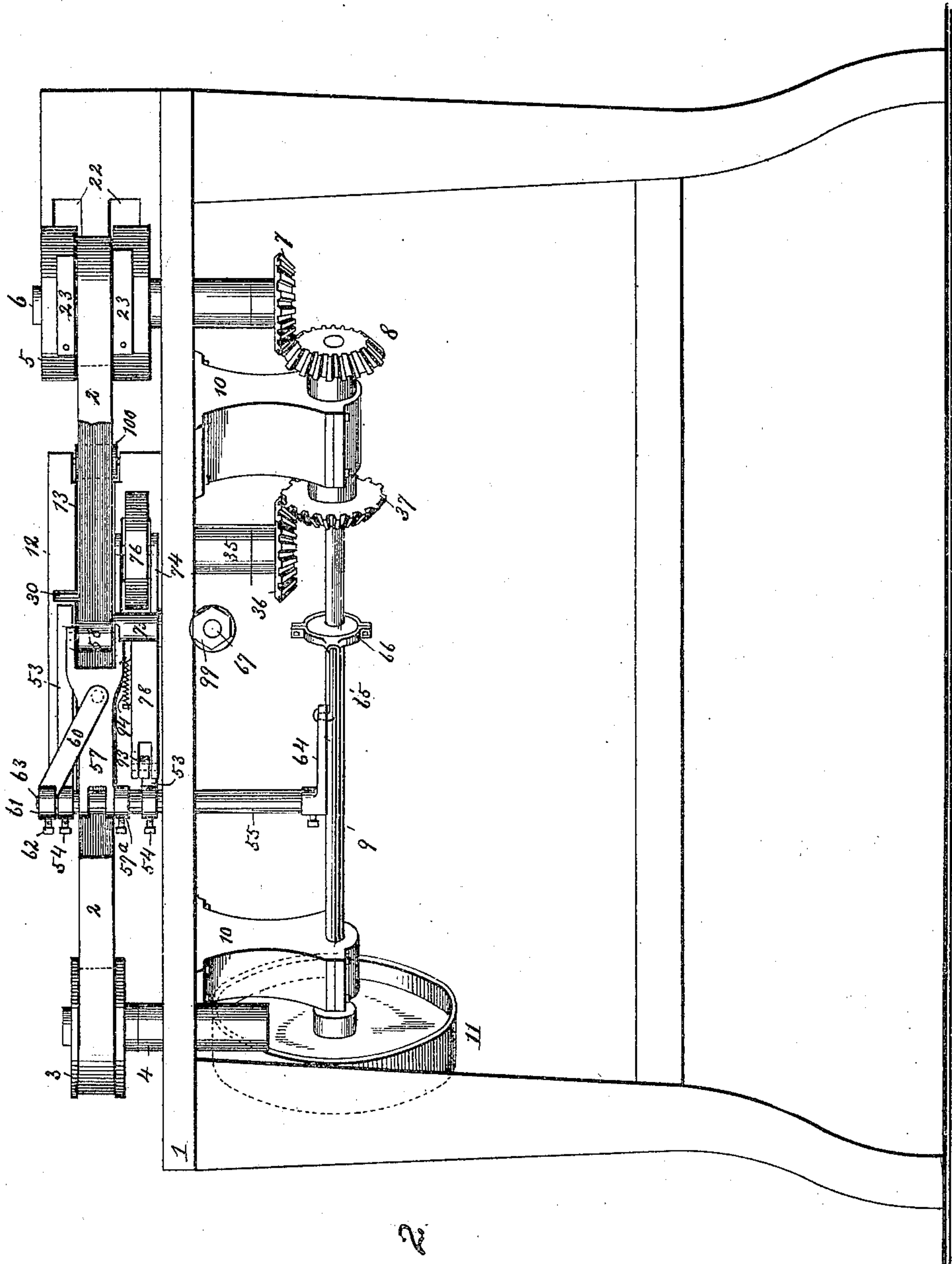


Fig. 2.

Witnesses:

F. G. Fischer
L. J. Thorpe

Inventor

J. H. Barr

By *Higdon & Higdon*
Attys.

No. 652,451.

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4 Sheets—Sheet 3,

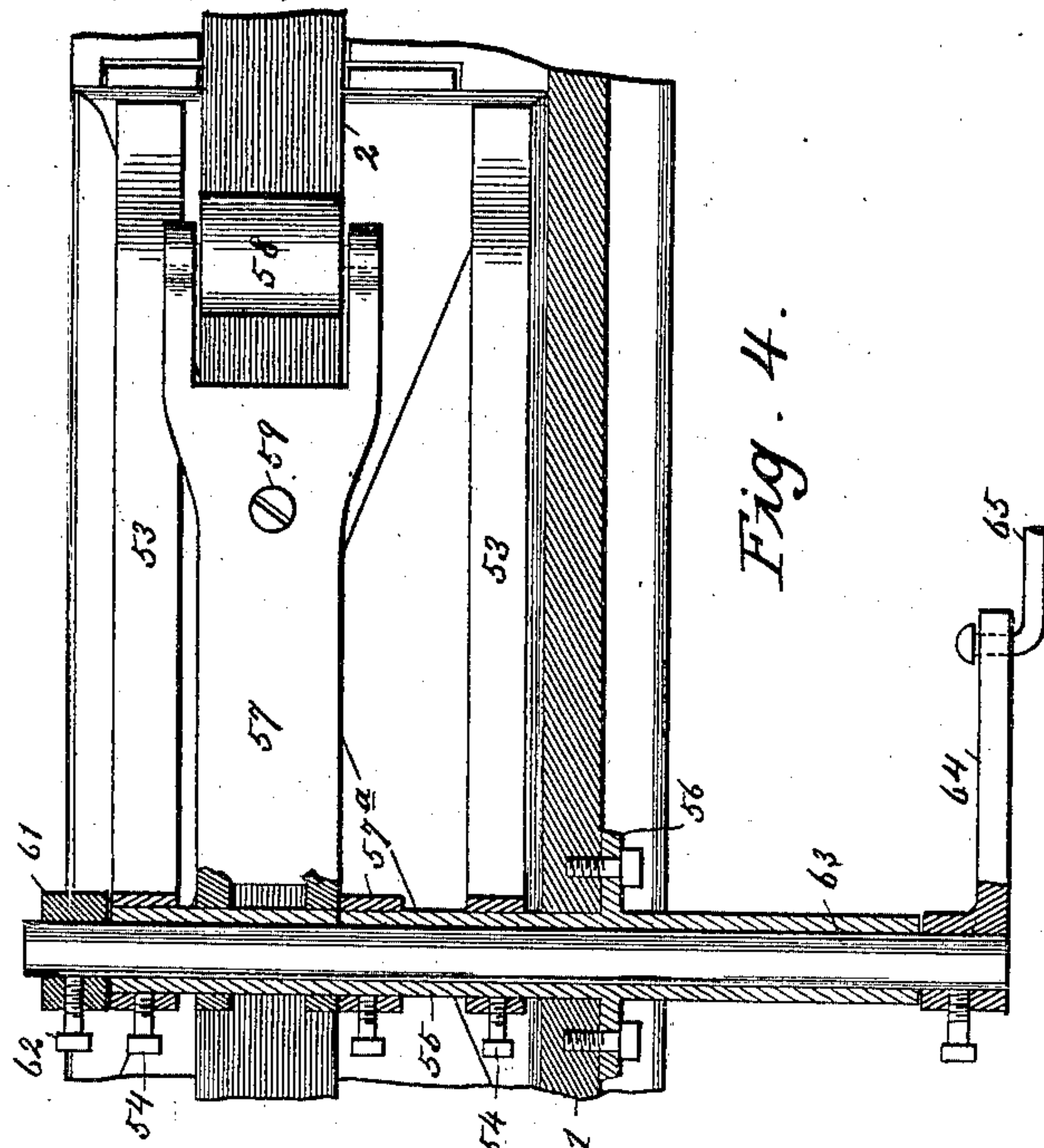


Fig. 4.

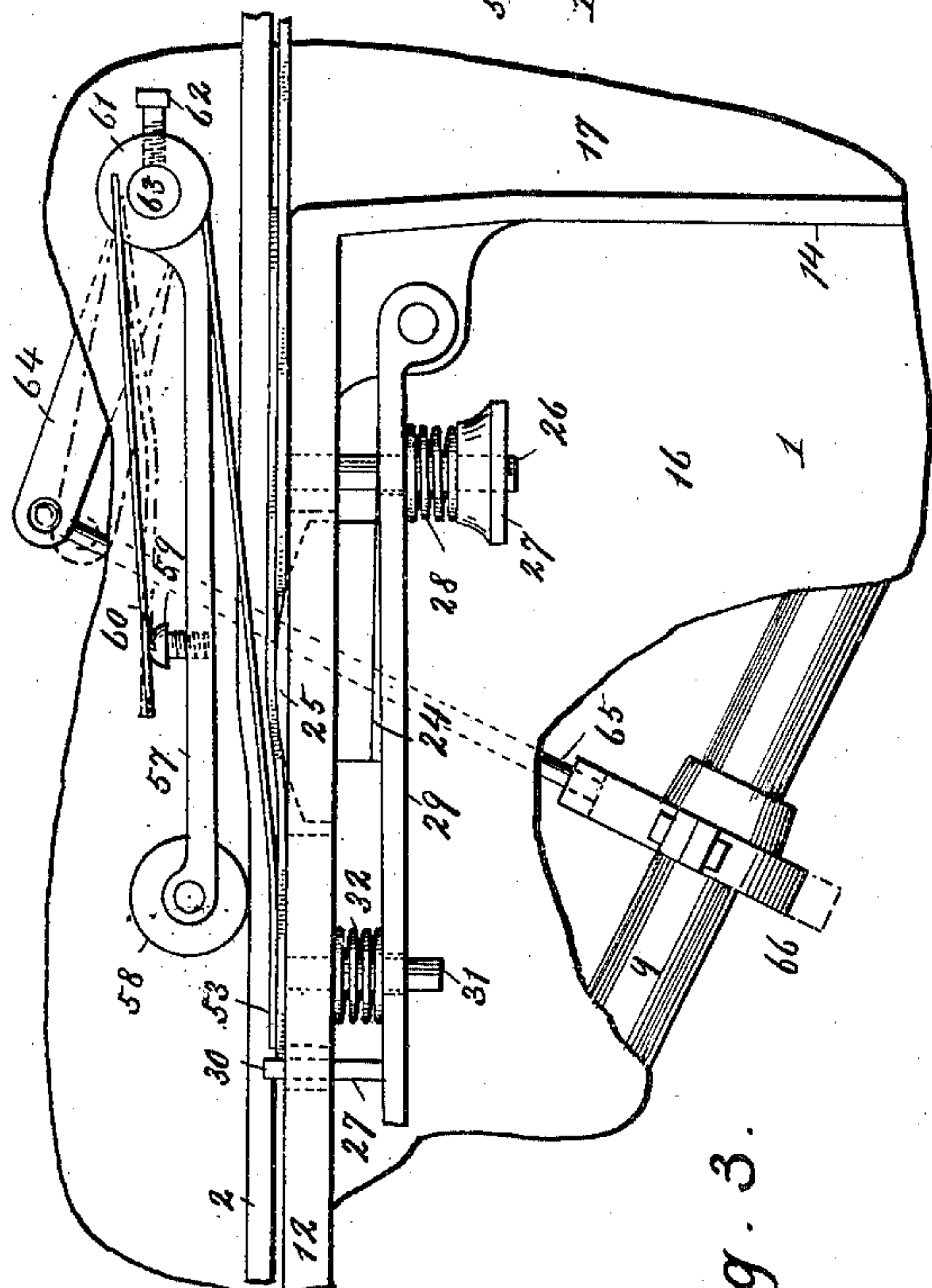


Fig. 3.

Witnesses:

F. G. Fischen
G. W. Horpe.

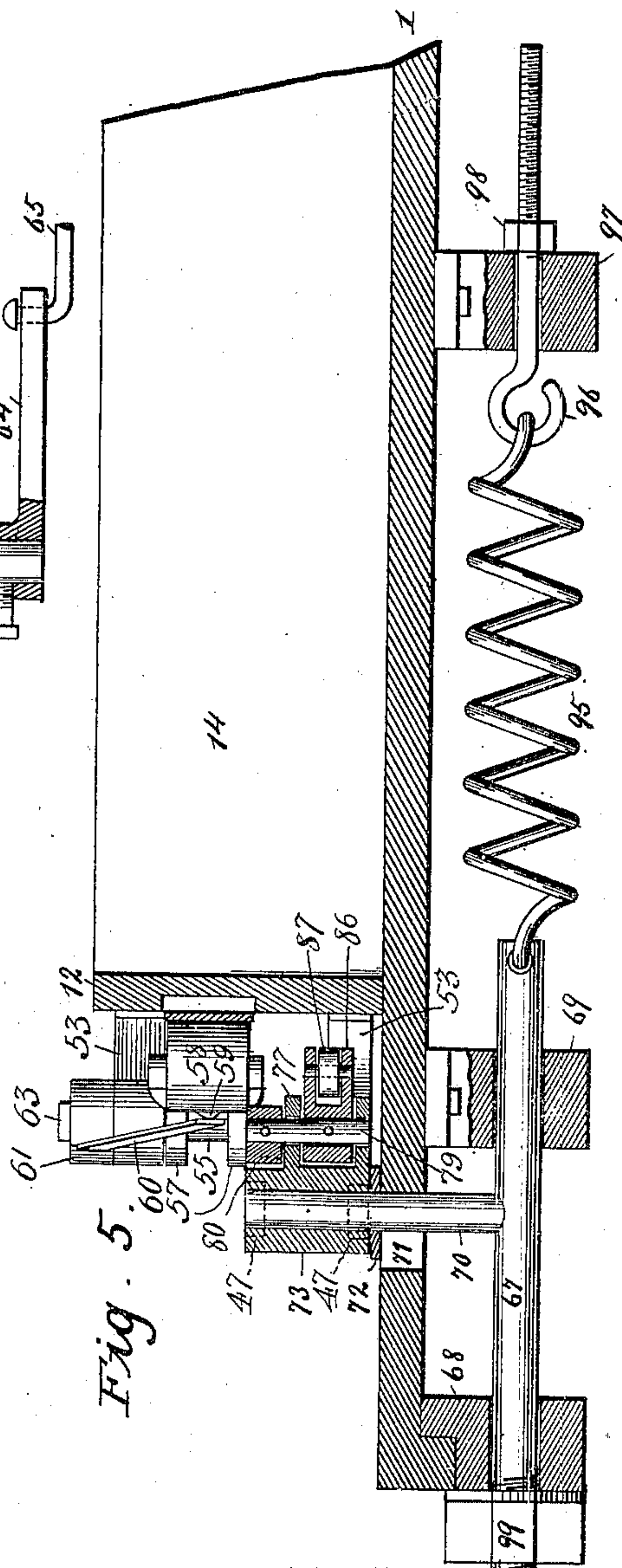


Fig. 5.

Inventor
J. H. Barr

By Sigdon & Sigdon
Attys.

No. 652,451.

Patented June 26, 1900.

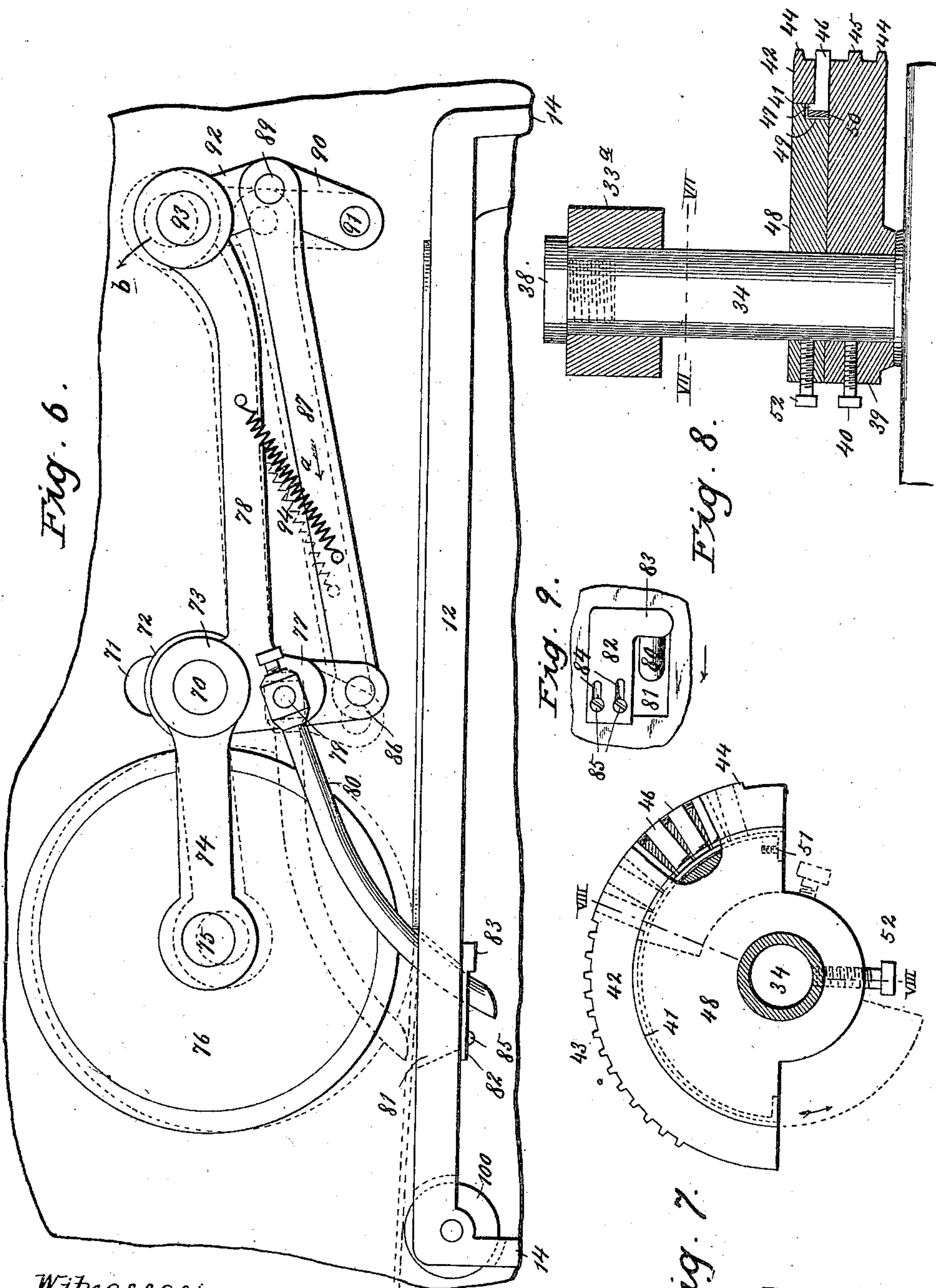
J. H. BARR.

MAIL MARKING MACHINE.

(Application filed Dec. 16, 1896. Renewed Nov. 28, 1899.)

(No Model.)

4 Sheets—Sheet 4.



Witnesses:

F. G. Fischer
G. Thorpe

Inventor

J. H. Barr

By *Rigdon & Rigdon*

Attys.

UNITED STATES PATENT OFFICE.

JOHN H. BARR, OF KANSAS CITY, KANSAS.

MAIL-MARKING MACHINE.

SPECIFICATION forming part of Letters Patent No. 652,451, dated June 26, 1900.

Application filed December 16, 1896. Renewed November 28, 1899. Serial No. 738,615. (No model.)

To all whom it may concern:

Be it known that I, JOHN H. BARR, of Kansas City, Wyandotte county, Kansas, have invented certain new and useful Improvements in Mail-Marking Machines, of which the following is a full, clear, and exact description, reference being had to the accompanying drawings, forming a part thereof.

This invention relates to that class of machines for canceling stamps and postmarking letters which embody as essential features of their construction an endless mail-feeding belt and a printing-cylinder which is adapted to make the required impression upon the mail-matter as it is successively presented by the belt; and it is designed especially as an improvement over the machine of like character on which a patent was issued to me December 3, 1896, No. 573,128.

The object in this connection is to produce a machine more simple and less expensive of construction and more positive and reliable in operation than that above referred to.

To these ends it consists in certain novel and peculiar features of construction and combinations of parts, as hereinafter described and claimed.

Referring to the drawings illustrative of the invention, Figure 1 represents a top plan view. Fig. 2 represents a rear view with the rear strand of the belt broken away. Fig. 3 represents, on an enlarged scale, a top plan view of a part of the machine. Fig. 4 represents a vertical section to illustrate more clearly part of the mechanism shown in Fig. 3. Fig. 5 represents a vertical section taken on the line V V of Fig. 1, part of the apparatus shown in Fig. 1, however, being omitted in Fig. 5. Fig. 6 is a top plan view, on a still greater scale, of a part of the mechanism of the machine. Fig. 7 is a horizontal section taken on the line VII VII of Fig. 8 and partly broken away. Fig. 8 is a vertical section taken on the line VIII VIII of Fig. 7. Fig. 9 is a detail view to illustrate clearly the relation between the impression-roller-actuating arm and adjusting-plate to receive the impact thereof after the passage of each letter or postal card.

Referring now to said drawings, wherein like reference-numerals refer to corresponding parts, 1 designates a table or bench, which

may be provided with supporting-legs, as shown, or supported in any other suitable or preferred manner.

2 designates an endless belt, which extends longitudinally of said table near its rear edge and engages at one end a grooved wheel 3, mounted rotatably upon a stub-shaft 4, secured to the table in any suitable manner, and at its opposite end a similar grooved wheel 5, except that the grooved wheel 5 is preferably of greater width, for a purpose which will hereinafter appear.

The wheel 5 is mounted rigidly upon the upper end of a shaft 6, journaled in a bearing secured, preferably, to the under side of the table.

Mounted upon the lower end of the shaft 6 is a beveled gear 7, meshing with a similar beveled gear 8 upon the obliquely-arranged shaft 9, journaled in bearings 10, secured pendently to the table or in any other suitable manner. At its opposite end said shaft is provided with a belt-wheel 11 for connection with an electric motor (not shown) or other source of energy. Arranged parallel with and adjacent to the front strand of the belt is a guide-plate 12, and said guide-plate is provided with a longitudinal groove 13 in its rear face in order that the belt may play freely through the same without friction when no mail-matter is being operated upon. The provision of said groove therefore lengthens the life of the belt, as the latter might otherwise bear against the face of said plate when no mail-matter was interposed between them. The guide-plate is preferably about twice the length of an average-sized letter and is arranged about opposite the middle of the belt and is secured reliably and firmly in its vertical and longitudinal position by means of the forwardly-projecting and preferably-parallel arms 14, having slotted ears through which securing-bolts 15 engage the table. These arms 14 also serve to divide the table into a middle chamber 16 and two end chambers 17 and 18, the chamber 17 being for the reception of mail before it is stamped and postmarked and the chamber 18 for the reception of the mail-matter after being operated upon by the machine. The chamber 18 is also provided with a parallel and adjustable wall 19, against which the mail strikes

as it leaves the endless belt. Said wall 19 may be secured at its front end in any suitable manner; but at its rear end preferably engages one or another of the vertical grooves of a block 20, secured upon the table outward of the wheel 5, said vertical grooves being numbered 21. Said block at its inner end is arranged nearly in contact with the periphery of said wheel, so as to prevent any possibility of mail being carried to the rear of the chamber 18, and is provided with a pair of longitudinal notches or grooves 22 above and below the plane of the belt, through which the deflecting-arms 23, secured to and projecting from the periphery of the wheel 5, may freely pass. These arms are designed to make positive and reliable the disconnection of the mail-matter from the belt, as will hereinafter be pointed out in the description of the operation of the machine.

24 designates a lever, which is arranged adjacent to the front side of and is approximately parallel with the guide-plate 12 at all times, and it is pivoted to a rib projecting from said plate and one of said arms 14, as shown, so as to swing in a horizontal plane. At its front end and a short distance from the receiving end of the passage formed by and between the belt and the guide-plate said lever is provided with a shoe 25, projecting through and normally a slight distance beyond the rear face of the guide-plate, the latter being formed with an opening (not shown) for this purpose. The face of this shoe is preferably beveled or rounded, as shown, and may be, if desired, surrounded by one or more rubber bands in order to render its retarding function more positive and reliable, perhaps, though it is to be understood, of course, that these bands may be dispensed with and the shoe made of any material best suited for accomplishing this purpose. It is rounded or beveled, of course, so that when two letters adhere, and are therefore fed forward together by the belt, the one next the guide-plate will impinge endwise against said beveled surface and be arrested until the rear end of its companion against the belt clears or is carried beyond said retarding-shoe. Immediately this takes place the other letter is conveyed past said shoe by reason of frictional engagement with the belt, and this continued movement is rendered possible and made positive by reason of the fact that it is not in engagement with an abrupt shoulder or surface, but is in engagement with the beveled or curved surface of said shoe.

26 designates a threaded pin projecting forwardly from the guide-plate through said lever 24, near its pivoted end, and 27 a nut or collar upon its front end, and spirally encircling said pin and bearing at its opposite ends against said nut or collar and the lever 24, is an expansion-spring 28, which tends to hold the retarding-shoe always in the path of the mail-matter. By properly operating said nut or collar the pressure of said retarding-shoe

upon the letters may be made greater or lessened accordingly as circumstances may direct or conditions require.

29 designates a lever which is also pivoted at one end upon the rib of said guide-plate and preferably coincidental with the pivotal point of the lever 24, and said lever 29 also extends approximately parallel with the guide-plate at its front side and is adapted to swing in a horizontal plane. It is bifurcated at its rear end in order that the retarding-shoe-carrying lever may play back and forth through said bifurcation when necessary, and in advance of said shoe it is provided with a detent 30, which likewise projects rearwardly through the guide-plate and into the path of the mail-matter. This detent, in order that it may not interfere with the belt or its operation, occupies preferably a slightly-higher plane, as shown in Fig. 2, and its function is to check positively and reliably each piece of mail-matter until the printing-cylinder, to be described, has assumed a certain position. In other words, this detent is a time-stop which checks the progress of each letter until it is in such position with relation to the printing-cylinder that the latter will positively and reliably make the impression upon the letter at the proper point, irrespective of the length of the same.

31 designates a guide-pin projecting forwardly from the plate 12 through an opening in the lever 29, and 32 a spring spirally encircling said pin and bearing at its opposite ends against said plate and said lever in order to hold the latter normally retracted, that the detent may be out of the path of the advancing mail-matter. The pressure of said spring holds said lever always in contact with the rotating cam 33^a, mounted rigidly, by means of a set-screw or otherwise, upon the vertical shaft 34, extending through the table and journaled in a sleeve-bearing 35, secured to the under side of the table. Said shaft receives its motion from the gear-wheel 36, mounted upon its lower end and meshing continuously with a similar gear-wheel upon the shaft 9.

The upper end of the shaft 34, which is hollow, is closed by a screw plug or cap 38. This shaft is made hollow to receive lubricating material, which escapes through proper openings in the shaft to the bearing 35. This construction, however, is not shown, because it does not form a feature of the present invention.

The printing-cylinder is constructed as follows—that is to say, 39 designates a semicircular plate, which is mounted rigidly upon the shaft 34 by means of the set-screw 40 below the plane of the belt, and it is of such diameter that it projects through an opening in the guide-plate 12 and bears against the opposing letter in the passage between said guide-plate and the belt once in each revolution of the shaft. In its upper side it is pro-

vided with a semicircular recess 41, so as to form or provide the upwardly-projecting semicircular flange 42. For a large portion of its periphery it is provided with vertical canceling-bars 43, which extend from the lower surface of said plate to the upper surface of its rib 42. In practice said bars in length about equal the length of a stamp. Rearward of said canceling bars or ribs with relation to its direction of rotation, as indicated by the arrow, Fig. 7, it is provided at its lower margin and at the upper margin of the flange with the horizontal ribs 44, and between said horizontal ribs and just a slight distance above the lower rib 44 the plate is integrally formed also with a rib or ribs 45, which is or are adapted to print in a horizontal line the name of the town or station where the machine is in operation. In other words, this rib or ribs is or are adapted to perform the postmarking function of the machine. Arranged also in a horizontal plane and about equally between the upper rib 44 and the postmarking rib or ribs 45 is a series of date-printing-type 46. They are arranged radially of the printing cylinder or plate and are provided at their rear or inner ends with the upwardly-projecting shoulders 47, which bear against the inner side of the flange 42 in order to maintain the faces of said type in the same plane as the other printing-surface of the cylinder or plate. To hold said type forward I provide devices as follows—that is to say, 48 designates a segmental plate, which is mounted upon the shaft 34 and fits snugly within the recess 41 of the plate 39. Said plate is formed with a semicircular groove 49 to receive the inner or shouldered ends of said type, and a semicircular spring 50 is secured at one end to said plate by the screw-bolt 51 and bears with a firm pressure against the inner ends of said type, so as to hold them continuously advanced to their utmost point. This spring, however, will yield slightly, so as to permit the type to accommodate themselves to any inequalities in the surface of the matter to receive the impression, that the date may always be distinct and legible. By this arrangement it will be observed also that the date may be readily changed, it being only necessary to slightly loosen the set-screw 52, which secures the plate 48 rigidly upon the shaft, and then revolve said plate in the direction indicated by the arrow, Fig. 7, until it assumes the position shown in dotted lines, Fig. 1. By so doing a space is provided between the flange 42 of the plate 39 and the hub of the plate 48 greater in width than the length of the type, and consequently the latter may be easily and quickly removed from position by grasping their rear ends or by pushing them inwardly through the radial openings in which they fit, and they or others may be easily replaced. After the type have been replaced the plate 48 is revolved in the opposite direction until it assumes its original position and is secured by means of the set-

screw 52, in the same operation the spring coming again into engagement with the inner ends of the type and holding them advanced. As the conveyer-belt is narrow, its pressure upon the middle of the mail-matter tends to bend or buckle it, no matter whether the guide-plate 12 is provided with the groove 13 or not, and in practice, as it is necessary to overcome this tendency, I prefer to employ a pair of springs 33. These springs at their free ends, as shown most clearly in Figs. 3 and 4, bear against the letter near its upper and lower edges at about the middle of the guide-plate 12 and at their opposite ends are formed with sleeves which impinge and are secured by the set-screws 54 upon the vertical bearing-sleeve 55, extending through the table and provided with a flange 56, bearing against its under side and secured thereto by means of screw-bolts or equivalent devices, as shown clearly in Fig. 4. The belt in advance of the retarding-shoe is also held forwardly with a yielding pressure by mechanism constructed as follows: 57 designates an arm which is mounted rotatably upon the sleeve 55 and is maintained in such position by the supporting-collar 57^a, fixed upon said sleeve. Said arm is bifurcated at its outer end, and journaled vertically therein is an antifriction pressure-roller 58, which engages the front strand of the belt at its rear side, as shown clearly. The arm is also provided with a rearwardly-projecting set-screw 59, which forms a bearing for the free end of a spring 60, secured at its opposite end to a collar 61, secured rigidly by means of the set-screw 62 or its equivalent upon the vertical shaft 63, journaled in the sleeve 55. In order that said spring 60 may be caused to apply a yielding pressure against the set-screw 59, and consequently against the belt, at regular periods, the shaft 63 carries a crank-arm 64, and said crank-arm is connected by the link 65 with the eccentric 66 upon the shaft 9, said eccentric being so disposed with relation to the printing-cylinder that it causes the spring 60 to apply pressure upon the belt just as the printing-cylinder is in engagement with the letter, that the latter may not under such pressure have any possible chance to slip or bend above said point of engagement. In other words, the eccentric periodically—viz., once in each revolution—causes its connected mechanism to assume the position shown in dotted lines, Fig. 3, and thereby intensify the pressure of the spring 60 upon the belt through the medium of the roller 58 at the same instant that the letter is engaged at its front side by the rotating printing-cylinder and the canceling and postmarking operation is in progress.

Referring now to the mechanism for providing a firm and yet a yielding—when necessary—impression-roller to act in opposition to the pressure of the printing-cylinder, or, in other words, to provide a backing for the letters as they are printed and at the impression-

point, 67 designates a sliding bolt, which extends from front to rear and is arranged about in the center of the table, being mounted in depending bearings 68 and 69. Between said bearings it is provided with an upwardly-projecting arm 70, which is adapted to move back and forth in the slot 71 in the table, through which it protrudes. A washer or wear-plate 72 is mounted upon said arm at the upper side of the table, and upon said washer and pivoted upon the upper end of said arm is a lever consisting of a hub portion 73 and arms projecting in several directions. One of said arms 74 is bifurcated, and journaled upon the pin 75, carried thereby, is the impression-roller, in the form of a roller 76, of equal radius, preferably, with the printing cylinder or plate. The lever is also provided with the short bifurcated arm 77, projecting forwardly, and with the long arm 78, which projects from said arm 77 in the opposite direction to the arm 74 and is bifurcated at its outer end.

79 designates a vertical pin mounted pivotally in the arm 77, and 80 a "pressure time-determining arm." This arm, as will fully appear, is the instrumentality, actuated or controlled by the advancing mail-matter, which determines the time when the impression-roller is, and permits it to be, pressed forward into engagement with the said mail-matter. Consequently, as it is never advanced except when the mail-matter is interposed between it and the printing-cylinder, it can never contact with the latter and as a result smear ink on the back of the mail-matter. Said arm is mounted rigidly upon the upper end of the pin 79 and projects at its front end through an opening 81 in the guide-plate 12 and below the belt, but above the impression-roller 76. Said arm preferably is curved, as shown in Fig. 6, and it is rounded or beveled at its free end in order that the letter or mail-matter may easily pass from engagement with it. It extends at an acute angle to the advancing mail-matter in order that it will be sufficiently sensitive, and thereby readily yield to the pressure and swing out of the way of each successive letter or card. As it may be found advisable at times, however, to make this pressure time-determining arm still more sensitive—for instance, to accommodate certain kinds or conditions of mail—I provide a plate 82 at the front side of the guide-plate 12, having a lug 83 projecting into the path of rearward movement of the pressure time-determining arm 80. The plate 82 is also provided with longitudinal slots 84, through which extend supporting and clamping screws 85, upon which the plate is longitudinally adjusted and by which it is secured firmly at any desired point. By this arrangement it is obvious that if a certain line of mail, due to dampness or other cause, is extremely flexible, the pressure of said arm may be made to accommodate such mail-matter by adjusting the plate in the direction indicated by the

arrow, Fig. 9, thereby making the angle between the advancing mail-matter and the arm 80 still more acute, and rendering the latter more susceptible to the pressure applied by the mail. Consequently it is obvious that there will be no possible chance of the letter doubling or bending, due to too great a resistance on the part of the pressure time-determining arm, which latter swings with the passage of each letter or card to the position indicated in dotted lines, Fig. 6, and at the same time, through instrumentalities which will be presently described, permits the impression-roller to move forward and provide a backing or bearing surface for the letter as it is acted upon by the printing-cylinder, as hereinbefore stated. The instrumentalities by which this pressure time-determining arm permits the impression-roller to be advanced are arranged as follows—that is to say, 86 designates a bifurcated crank-arm, which is mounted rigidly upon and projects forwardly from the rotatable pin 79 in the bifurcated arm 77, and said arm 86 is pivotally connected at its front end by means of the link 87 with the pivotal pin 89 of a toggle, said toggle comprising the link 90, fulcrumed at its front end upon the pin 91, projecting upwardly from the table, and the link 92, projecting rearwardly and pivotally connected, as at 93, to the outer end of the arm 78, and preferably within its bifurcation, as shown clearly in Fig. 2. By this construction and arrangement it is obvious that as the pressure time-determining arm 80 is moved to the position indicated by dotted lines it overcomes the resistance of the retractile spring 94, connecting-arm 78, and link 87, and moves the latter in the direction indicated by the arrow *a* of Fig. 6, and thereby throws the pivots of the toggle in longitudinal alinement, and by such expansion of the toggle the outer end of the arm 78 is moved in the direction indicated by the arrow *b*, Fig. 6, and the impression-roller is swung forward against the advancing letter, so as to provide a bearing-surface for the same as it is acted upon by the printing cylinder or plate, the pressure with which this impression bears against the letter or card being determined by the stiff retractile spring 95, secured at its opposite ends to the front end of the sliding bolt 67, and to a bolt 96, extending forwardly through a bearing 97, depending from the table, and engaged by an adjusting-nut 98. By adjusting said nut it is apparent that the pressure of the impression-roller against the mail-matter may be increased or diminished. Immediately the letter or card clears the end of the pressure time-determining arm the weak spring 94 retracts, and thereby returns said arm to its original position to be engaged by the next letter or card, and at the same time retracts the toggle to the position shown in full lines, Fig. 6. This is easily accomplished, owing to the fact that the spring 94 possesses con-

siderable leverage and power need be exerted only sufficient to swing the impression-roller back to its original position away from the letter or card at the same instant that the postmarking and dating of the letter or card is completed. The spring 95 obviously holds the lever carrying said impression-roller advanced with a yielding pressure in order that the inequalities in the surface of a letter or in the thickness of the mail-matter may be automatically accommodated—that is to say, so that the pressure of the impression-roller against a postal card will be as positive and reliable as against a bulky or thick letter.

In order to relieve the arm 70 of the strain due to the tension of the spring—that is, to keep it from continual pounding against the front end of the slot 71—the rear end of the sliding bolt 67 is provided with a nut 99, which strikes against the rear face of the bearing 68.

To prevent the belt from pressing the letter into the groove 13 at the discharge end of the passage formed by and between the plate 12 and the belt, I preferably provide an anti-friction-roller 100, which is rotatably mounted in an opening in the rear end of the guide-plate, as shown clearly in Figs. 1 and 6, and in order that the printing-cylinder may be kept constantly inked an inking pad or roller 101 is arranged in frictional contact with it and is mounted at its front side that it may be conveniently accessible to the person in charge of the machine.

As the various operations have been described in detail it will not be necessary to recapitulate the entire operation, it being necessary simply to state that the mail-matter is inverted and arranged with its stamped end forward, and in this position is fed with a slight pressure by the operator against the belt at the rear end of the chamber 17. The belt by friction takes each letter successively through the passage, its progress being checked momentarily (though almost imperceptibly, because of the rapidity with which the machine operates) by the detent 30 until the flat side of the cam 33^a comes opposite the lever carrying the said detent. Immediately this takes place the detent is withdrawn by the expansive action of the spring 33, and at the same time, or possibly the fraction of an instant before, the eccentric, through the mechanism hereinafter described, intensifies the pressure of the roller 58 upon the belt in order to render more positive and reliable the instantaneous onward movement of the letter against the detent. Immediately thereafter the arm 80 is actuated by the letter and the impression-roller 76 thrown forward into engagement with it, synchronously with its engagement at the opposite or stamped side by the printing cylinder or plate. As the impression upon the letter is completed the printing-cylinder, by reason of its diminished diameter, releases it and imme-

diately its rear end clears the arm 80, the latter swings forwardly, as hereinbefore described, and throws the impression-roller to the rear, and at the same time the new position of the eccentric relieves the belt of the intensified pressure of the roller 58. Immediately afterward the next letter or card comes against the detent and the operation already described is repeated. As each letter clears the anti-friction-roller 100 or is discharged from the passage between the belt and the guide-plate into the chamber 18 one or another of the arms 23, projecting peripherally from the roller 5, engages said letter or card and pushes it forward away from the belt, as hereinbefore described.

It is obvious from the foregoing that as the postmarking operation takes place at the advanced end of a letter and because the time stop or detent checks the movement of such letter until the printing cylinder or plate is in the proper position for action it is immaterial how long or how short the letter may be and that the impression of the canceling-bars and the postmarking and dating devices will always be received by such letter upon its stamped end.

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

1. In a stamp-canceling and postmarking machine, a supporting-table, a rigid guide-plate, a traveling conveyer pressing the mail-matter against the guide-plate, and means to periodically intensify or increase the pressure of the belt upon the mail-matter, and the latter upon the guide-plate.

2. In a stamp-canceling and postmarking machine, a supporting-table, a rigid guide-plate, an endless traveling conveyer or belt, devices pressing said belt toward the guide-plate, and means to periodically intensify or increase such pressure.

3. In a stamp-canceling and postmarking machine, a supporting-table, a rigid guide-plate, a conveyer-belt, spring-actuated devices pressing said belt toward the guide-plate, and means to periodically intensify or increase such pressure.

4. In a stamp-canceling and postmarking machine, a supporting-table, a rigid guide-plate, a conveyer-belt, devices pressing the belt toward the guide-plate, and an eccentric for periodically causing the pressure of said devices to be intensified or increased.

5. In a stamp-canceling and postmarking machine, a supporting-table, a rigid guide-plate, a conveyer-belt, devices yieldingly pressing the belt toward the guide-plate, and means to periodically intensify or increase such pressure.

6. In a stamp-canceling and postmarking machine, a supporting-table, a guide-plate, an endless conveyer-belt, a device engaging said belt at the side opposite from said guide-plate, a rock-shaft, a spring carried thereby and normally pressing said device against

said belt, and means to periodically rock said shaft and thereby cause said spring to intensify or increase its pressure upon said device, substantially as described.

5 7. In a stamp-canceling and postmarking machine, a supporting-table, a guide-plate, an endless conveyer-belt, a device engaging said belt at the opposite side from said guide-plate, a rock-shaft, a spring carried thereby, 10 and normally pressing said device against said belt, and an eccentric connected to said shaft and adapted once in each revolution to cause said shaft to intensify or increase the pressure of said spring against said device, 15 substantially as described.

8. In a stamp-canceling and postmarking machine, a supporting-table, a rigid guide-plate, a conveyer-belt, a swinging arm having a roller at the opposite side of the belt from 20 the guide-plate, a shaft provided with a spring which presses the roller against the belt, and means to periodically operate said shaft, and thereby intensify the pressure of said roller against the belt.

25 9. In a stamp-canceling and postmarking machine, a supporting-table, a guide-plate thereon, an endless traveling belt arranged opposite the guide-plate and adapted to engage the mail-matter longitudinally near its 30 middle, and springs bearing against the mail-matter above and below said belt, to prevent the latter from buckling or bending the mail as it passes through the machine, substantially as described.

35 10. In a stamp-canceling and postmarking machine, a supporting-table, an apertured guide-plate thereon, a rotating shaft, a printing-cylinder thereon, to project through said aperture, an endless conveyer-belt adjacent 40 to and at the opposite side of the guide-plate, devices for holding said belt with a yielding pressure toward the guide-plate, and means to intensify or increase the pressure of said devices against the belt at about the same instant that the printing-cylinder makes its impression upon the mail-matter, substantially 45 as described.

11. In a stamp-canceling and postmarking machine, a supporting-table, a guide-plate 50 thereon, a rotating shaft below the same, a vertical shaft geared to the rotating shaft and projecting up through the table, a printing cylinder or plate thereon, and adapted to project through an opening in the guide-plate, 55 an endless conveyer-belt at the opposite side of said guide-plate from the vertical shaft, spring-actuated devices holding the belt yieldingly toward said guide-belt, and an eccentric operatively connected to said devices and 60 mounted upon the first-named shaft and disposed so as to intensify the pressure of said spring-actuated devices against the belt synchronously with the printing operation, substantially as described.

65 12. In a stamp-canceling and postmarking machine, a supporting-table, a guide-plate, an endless conveyer-belt, a printing-cylinder

periodically projecting through said guide-plate at one side of the belt, an impression-roller at the opposite side of the belt, a lever 70 carrying the same, a toggle-joint between said lever and a fixed point on the table, and a mail-actuated pressure time-determining arm connected to said toggle and adapted to periodically expand it and thereby throw the 75 impression-roller against the letter at the same instant it is engaged at the opposite side by the printing cylinder or plate.

13. In a stamp-canceling and postmarking machine, a supporting-table, a guide-plate, 80 an endless conveyer-belt, a printing-cylinder periodically projecting through said guide-plate at one side of the belt, an impression-roller at the opposite side of the belt, a lever carrying the same, a toggle-joint between said 85 lever and a fixed point on the table, and means to cause said toggle to resume its contracted position, substantially as and for the purpose set forth.

14. In a stamp-canceling and postmarking 90 machine, a supporting-table, a guide-plate, an endless conveyer-belt, a printing-cylinder periodically projecting through said guide-plate at one side of the belt, an impression-roller at the opposite side of the belt, a lever 95 carrying the same, a toggle-joint between said lever and a fixed point on the table, a rocking arm linked to said toggle at its middle, a mail-actuated pressure time-determining arm rigidly connected to move with said rocking 100 arm, and a retractile spring connecting the impression-roller-carrying lever and the said link, in order to hold said toggle normally contracted, substantially as described.

15. In a stamp-canceling and postmarking 105 machine, a supporting-table, a guide-plate, an endless conveyer-belt arranged opposite and adjacent to said guide-plate, a yieldingly-advanced sliding bolt, a lever pivotally mounted thereon, an impression-roller carried by 110 said lever, and means, under the control of the advancing mail-matter to operate said lever and throw the impression-roller against such actuating mail-matter, substantially as described. 115

16. In a stamp-canceling and postmarking machine, a supporting-table, a guide-plate, an endless conveyer-belt, a yieldingly-advanced sliding bolt, a lever mounted thereon, an impression-roller carried thereby, devices 120 under the control of the advancing mail-matter to operate said lever and throw the impression-roller against such mail-matter, and means to return said lever to its original position after the mail-matter has relieved said 125 devices of its control, substantially as described.

17. In a stamp-canceling and postmarking machine, a rotating shaft, a printing-cylinder mounted thereon, comprising a segmental 130 plate provided with printing-surfaces projecting from its periphery and provided with a segmental recess in its upper side, and with a series of radial passages communicating

with said recess, type engaging said passages and having their printing ends in the plane of the printing-surfaces of the cylinder, and provided with shoulders at their rear ends
 5 which engage the shoulder formed by recessing the cylinder, and a spring bearing against said type and holding them in their advanced position, substantially as described.

18. In a stamp-canceling and postmarking
 10 machine, a rotating shaft, a printing-cylinder mounted thereon, comprising a segmental plate provided with printing-surfaces project-
 15 ing from its periphery and provided with a segmental recess in its upper side, and with a series of radial passages communicating
 20 with said recess, type engaging said passages and having their printing ends in the plane of the printing-surfaces of the cylinder, and provided with shoulders at their rear ends
 25 which engage the shoulder formed by recessing the cylinder, a segmental plate fitting in said recess and also mounted upon said shaft, and provided with a peripheral groove or recess which receives the shouldered end of
 said type, and a spring carried by said plate

within said groove or recess and bearing against the shouldered ends of said type, substantially as described.

19. In a machine of the character described, the combination of a table, a guide-plate, a
 30 conveyer-belt traveling around fixed axes and arranged parallel with the guide-plate, a printing-cylinder opposed thereto at the opposite side of the belt, an impression-roller
 35 and a mail-actuated pressure time-determining arm to cause the impression-roller to swing forward against the actuating mail-piece synchronously with the printing operation, with means to intensify the pressure of
 40 the belt upon the mail-matter as the printing operation begins and to maintain such pressure until the printing operation ends, for the purpose set forth.

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

JOHN H. BARR.

Witnesses:

A. L. GREER,
 G. Y. THORPE.