

No. 751,736.

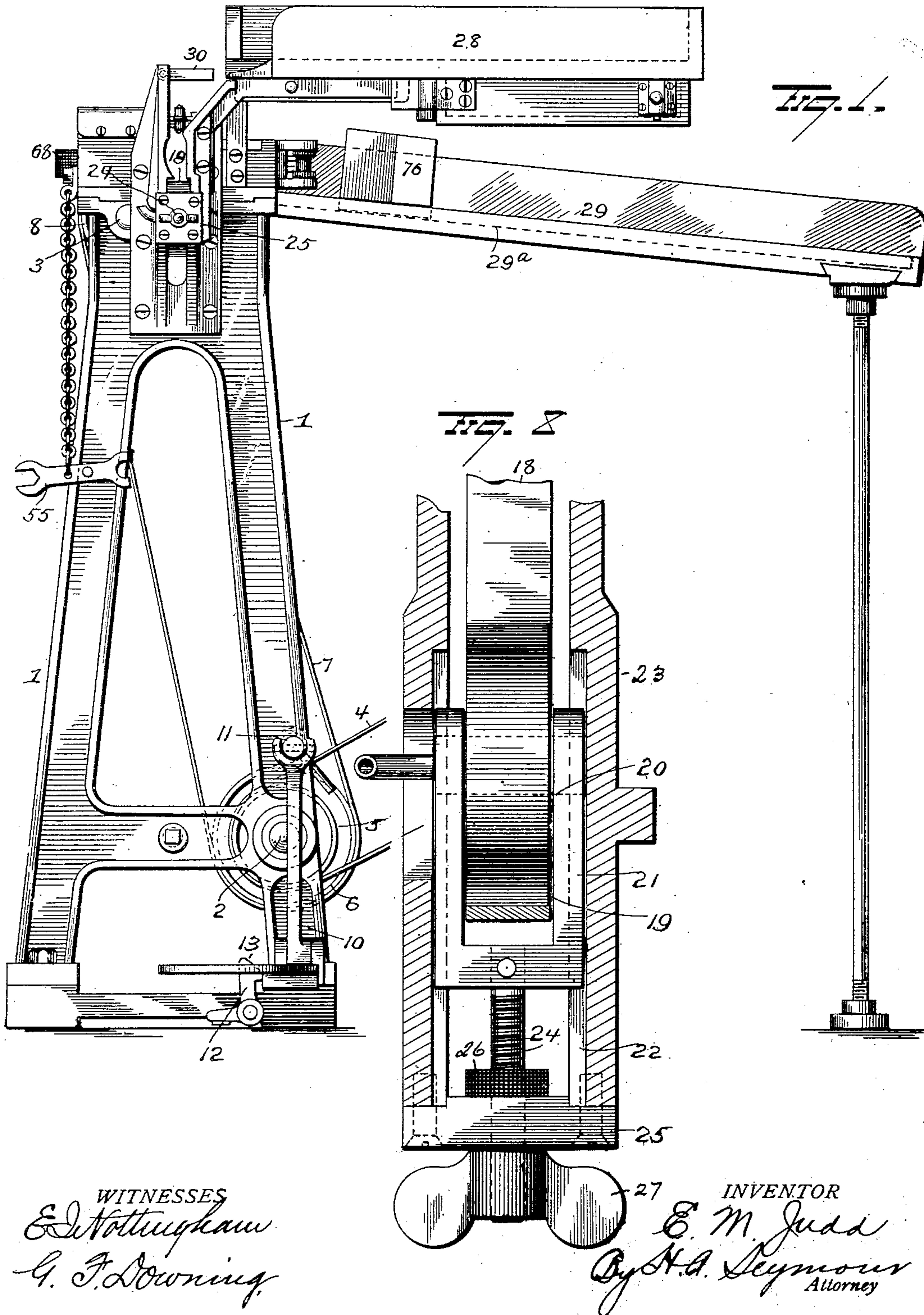
PATENTED FEB. 9, 1904.

E. M. JUDD.  
MAIL MARKING AND CANCELING DEVICE.

APPLICATION FILED JUNE 30, 1902.

NO MODEL.

5 SHEETS—SHEET 1.



WITNESSES

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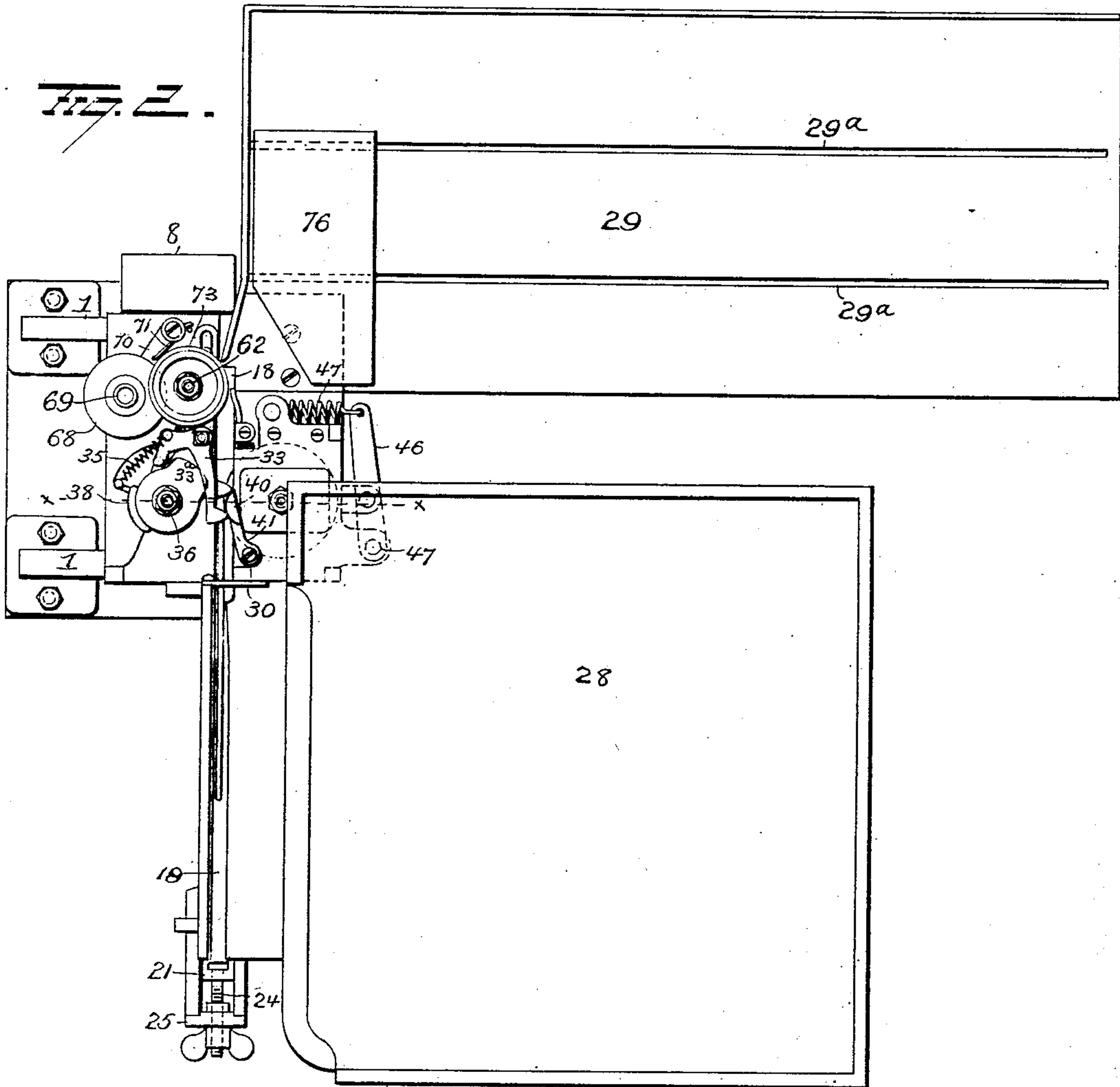
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5 SHEETS—SHEET 2.



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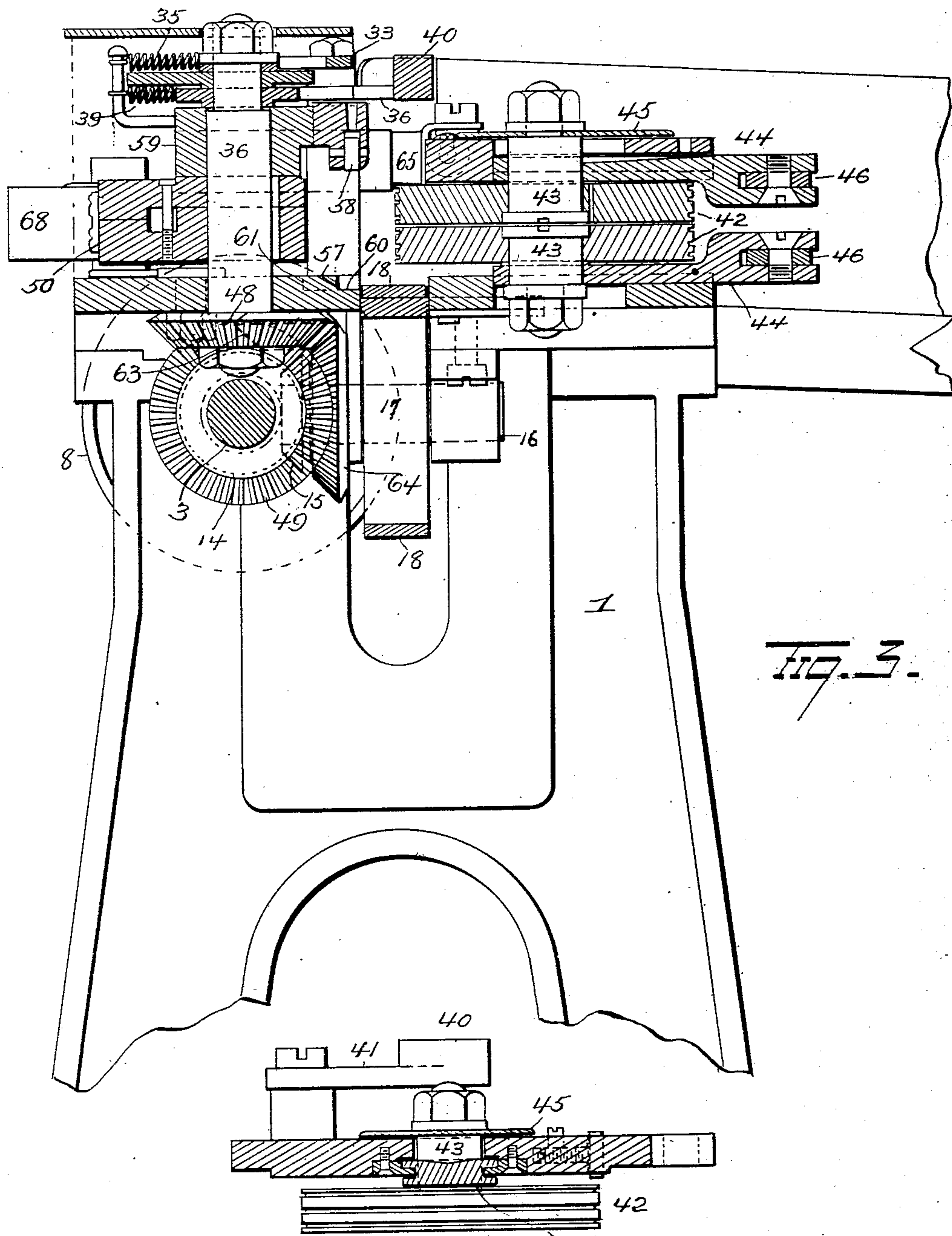
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5 SHEETS—SHEET 3.



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*Fig. 5.*

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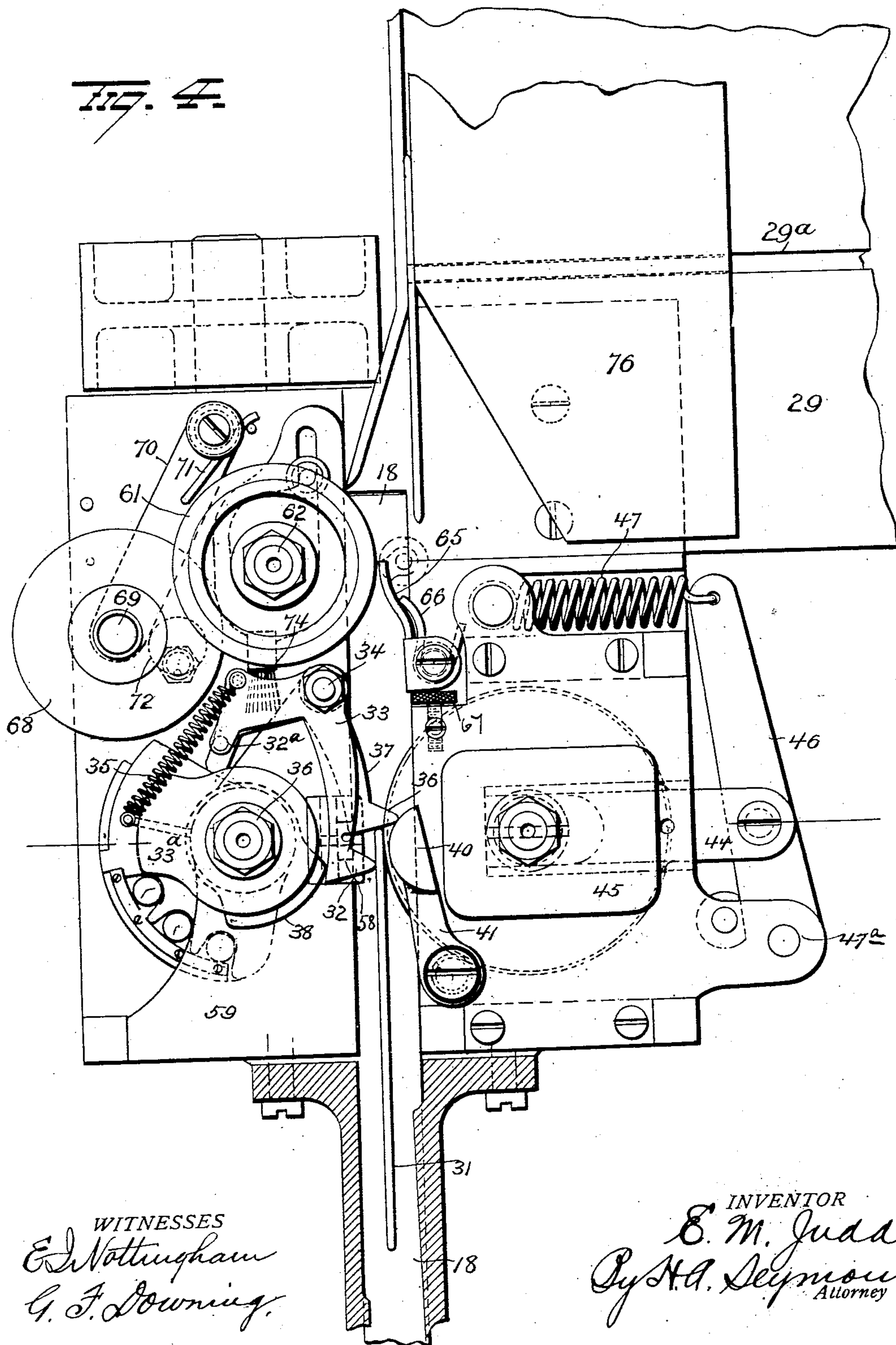
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6 SHEETS—SHEET 4.

NO MODEL.



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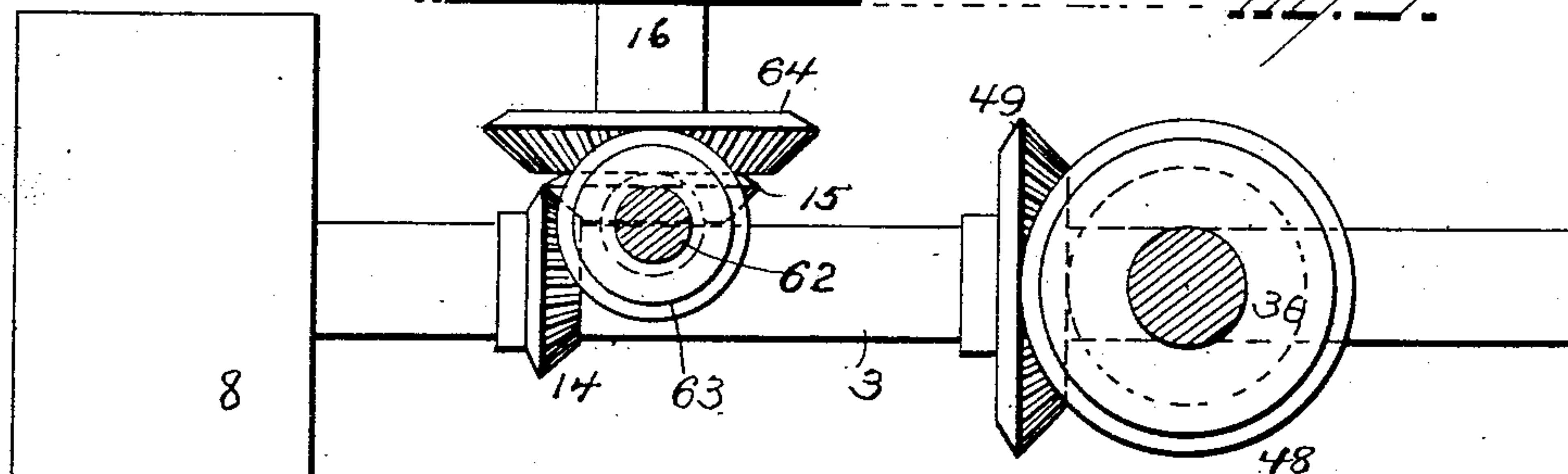
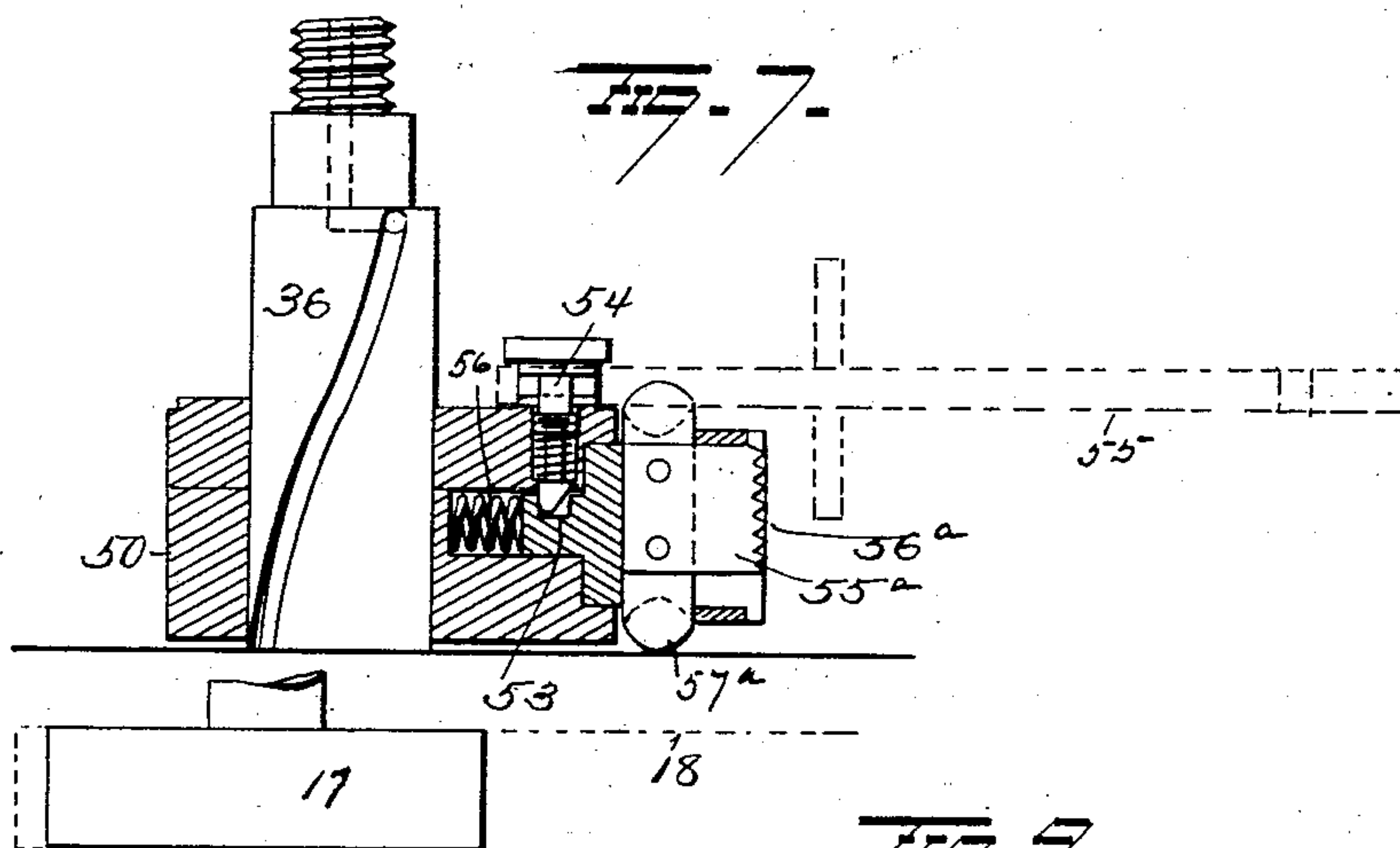
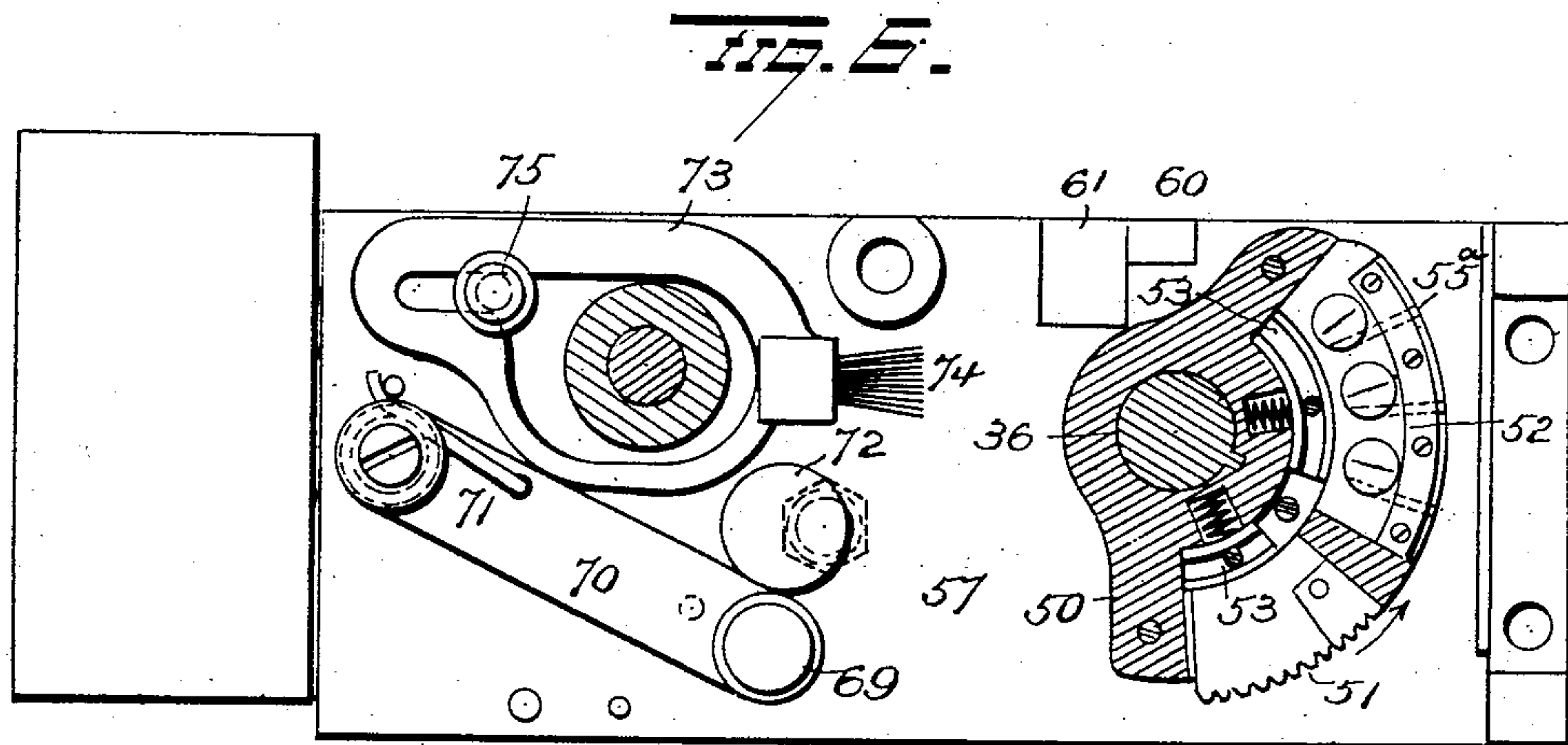
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NO MODEL.

5 SHEETS—SHEET 5.



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# UNITED STATES PATENT OFFICE.

EDWARD M. JUDD, OF WALLINGFORD, CONNECTICUT.

## MAIL-MARKING AND CANCELING DEVICE.

SPECIFICATION forming part of Letters Patent No. 751,736, dated February 9, 1904.

Application filed June 30, 1902. Serial No. 113,774. (No model.)

*To all whom it may concern:*

Be it known that I, EDWARD M. JUDD, of Wallingford, in the county of New Haven and State of Connecticut, have invented certain  
5 new and useful Improvements in Mail-Marking and Canceling Devices; and I do hereby declare the following to be a full, clear, and exact description of the invention, such as will enable others skilled in the art to which  
10 it appertains to make and use the same.

My invention relates to an improvement in mail-marking and stamp-canceling machines, and is designed more particularly as an improvement on the machine disclosed in Patent  
15 No. 641,018, granted to me January 9, 1900, the object of the present invention being to simplify to a large extent the mechanism for feeding the envelopes to the marking and canceling devices.

A further object is to provide means for effecting a positive postmarking of the envelop and cancellation of the stamps thereon  
20 irrespective of the thickness of the contents or irregularities or inequalities in the thickness of the contents of the envelopes.

A further object is to provide means for regulating the feed of the envelopes, whereby the progress of the line of envelopes being fed is positively checked until the one engaged  
30 by the canceling devices has progressed sufficiently far to insure a cancellation of the stamps thereon and a postmarking of the envelop.

With these ends in view my invention consists in the parts and combinations of parts and details of construction as will be more fully described, and pointed out in the claims.

In the accompanying drawings, Figure 1 is a view in side elevation of my improved machine. Fig. 2 is a plan view of the same. Fig. 3 is a view in vertical section on the line  $x-x$  of Fig. 2. Fig. 4 is an enlarged view in plan, partly in section, showing the feeding and canceling device, the top plates covering some of  
45 the parts being removed. Fig. 5 is a view in side elevation, partly in section, of one of the envelop-supporting rollers and its carrying frame. Fig. 6 is a view in horizontal section through the rotary block carrying the post-marking and stamp-canceling devices, and also  
50

showing the brush for clearing the type and cutters and the adjustable support for the inking-roller. Fig. 7 is a view in vertical section through the rotary block, showing one of the cutters in elevation. Fig. 8 is a view in  
55 elevation of a section of the feeding-belt, showing the belt-carrying frame in section; and Fig. 9 is a view in elevation of the gearing for actuating the several parts.

1 represents the supporting-frame of any  
60 desired construction carrying the counter-shaft 2 and the main shaft 3, the former of which receives its power through a belt 4 and pulley 5 and transmits motion through pulley 6 and belt 7 to the pulley 8 on the main shaft  
65 3 of the machine. The shaft 2 carries fast and loose pulleys 5, and the belt 4 is shifted from one to the other by the shifter 9, actuated by the bell-crank lever 10, the upper arm of which latter engages the longitudinally-sliding  
70 rod 11, carrying the shifter 9. The lever 10 is held normally in position to retain the belt on the fixed pulley 5 by a spring, (not shown,) but may be shifted to stop the machine by pressure applied to the treadle or horizontal  
75 member of the bell-crank lever 10, and the latter may be retained in such position by the smaller spring-actuated bell-crank lever 12, having a catch 13, adapted to engage and overlap the horizontal member of the bell-crank  
80 10 when the latter is depressed.

To release bell-crank 10, it is simply necessary to apply pressure to the horizontal member of the bell-crank 12, which disconnects the  
85 latter from the bell-crank 10, thus permitting the spring to restore the parts to their normal positions and start up the machine.

The shaft 3 is mounted in the frame 1 at the upper end of the latter and is provided at a point intermediate its ends with the bevel-  
90 pinion 14, which meshes with bevel-pinion 15 on shaft 16. This shaft 16 carries the belt-driving pulley 17, around which the endless feed-belt 18 passes, the latter being supported at its outer extremity on the roller 19, mounted on shaft 20, which latter is secured to the  
95 adjustable U-shaped yoke 21. This yoke 21 is slidably mounted on the shoulders 22 of the feed-trough frame 23 and is secured at its outer end to the screw 24, which passes through  
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the end wall 25 of said feed-trough frame. This screw carries the lock-nut 26, located adjacent to the inner face of end wall 25, and the thumb-nut 27, located outside the end wall, and by means of these two nuts and the screw the tension of the feed-belt can be nicely adjusted. This feed-belt forms the bottom of the feed-trough 22, which, as shown in Figs. 1 and 2, extends horizontally from a position adjacent to the table 28, from which the mail-matter is fed to the trough, to a point adjacent to the table 29, onto which the mail-matter is delivered after having passed the postmarking and canceling devices. This trough, as clearly shown in Fig. 1, is open at its top, with its side adjacent to the table 28 abruptly inclined to form a slide over which the letters fall to the endless belt 18. The lower portion of the trough from the base of the incline to the belt is of sufficient width to receive any ordinary envelop, but is not of sufficient width to permit the smallest envelop ordinarily used to fall flat. Hence when the envelops are fed into the trough with the stamped edge toward the belt they rest in this position in their passage through the machine. If an envelop should fall on one end, it would be fed until it engaged the abutment 30, (see Figs. 1 and 2,) which being stationary simply restrains the upper end of the envelop until the latter turns on its edge by the movement of the belt.

The envelops 31 as they fall into the trough 23 are carried by the belt 18 until they come into contact with stop 32, which, as clearly shown in Fig. 4, is at the front end of the bell-crank lever 33. This lever 33 is pivoted at 34 to the frame of the machine and is provided at the free end of its rear arm or member with a depending pin 32<sup>a</sup>, located in line with the cam 33<sup>a</sup>, the front end of the lever 33, with its stop 32, being normally held in the path of the envelops being fed by the spring 35.

The cam 33<sup>a</sup> is rigidly secured on vertical shaft 36, which carries the postmarking and canceling devices, to be hereinafter referred to, and makes one revolution to one revolution of the said devices. Hence as cam 33<sup>a</sup> revolves it engages depending pin 32<sup>a</sup>, carried by lever 33, and withdraws stop 32 from the path of the envelop, thus permitting the envelop that had been previously stopped by stop 32 to pass on until it engages the stop 36. As cam 33<sup>a</sup> disengages pin 32<sup>a</sup> it releases lever 33 and permits the stop 32 thereon to move forwardly into contact with the face of the envelop that has progressed to the stop 36, as shown in Fig. 2, so that the next envelop in line will be fed up by the belt up to and in contact with stop 32. Stop 36 is also formed on the end of a bell-crank lever 37, which is similar to lever 33, except that it is located in a plane with the cam 38 and is engaged thereby. The lever 37 is normally held in position with its stop in the path of movement of the envelops by the spring 39, (see

Fig. 3,) and is moved out of said path by the cam 38, carried by the shaft 36. Hence at the proper time in the operation of the machine cam 38 engages the rear arm or member of lever 37, moves stop 36 out of the path of the envelop next in line, and permits it to proceed. The two stops 32 and 36 are limited in their forward movements by the block 40, carried on the arm 41, secured to the frame of the machine.

After the envelop has been liberated by stop 36 it passes through the machine with its rear face in contact with the rollers 42. These rollers are each mounted on a short stub-shaft 43, carried by the sliding arms 44, each arm being grooved at its sides, as shown in Fig. 5, to receive the plates 45, secured to fixed parts of the frame. Each arm 44 is pivoted at its outer or front end to a lever 45, each of which is pivoted at 47<sup>a</sup> to the frame of the machine and connected at its free end to a spring 47, the tendency of which is to hold the rollers 42 in contact with the envelops and force or yieldingly hold them in position to be engaged by the postmarking and stamp-canceling devices. While I might use a single roller in place of two independently-mounted yielding rollers, I prefer the latter for the reason that it frequently happens that in letters or packages the bulk of the inclosed matter is at one edge of the envelop and does not wholly or partly extend over that portion of the envelop covered by the stamps. Hence with a single roller of a width to support the envelop against the pressure of the postmarking and stamp-canceling devices the roller would probably engage the thicker portion of the envelop, and thus leave the stamped edge unsupported. With a plurality of supporting-rollers they readily accommodate themselves to inequalities in the thickness of the envelop and force the latter irrespective of the position of its contents into a position to be engaged by the postmarking and canceling devices.

The postmarking and canceling devices are located to the rear of the belt 18 and comprise a block 50 of any suitable size and shape mounted upon the vertical shaft 36, which, as before stated, also carries the cams 33<sup>a</sup> and 38. This shaft is provided with a bevel-pinion 48, which meshes with a pinion 49 on the main shaft 3. This block 50 is preferably formed in the segment of a circle, as shown in Fig. 6, and is cut away or recessed on its curved face to receive the frames 51 and 52, the former of which carries blocks or type for marking the name of the mailing office and the day and hour of mailing, while the frame 52 carries the canceling devices. These frames, as shown, are wedge shape in plan, and each is provided at its inner end with a slot 53, adapted to receive the spring-catch 54, which removably locks the frames in place. Each spring-catch is provided with a head under



which the tool 55 (shown in Fig. 1) can be inserted, as indicated in dotted lines in Fig. 7, for withdrawing the catches from the frames. When the catches are withdrawn, the springs 5 56 eject the frames sufficiently to permit them to be readily grasped and removed. The canceling-frame 52 is provided on its outer curved face with a series of parallel horizontal ridges which project sufficiently to print a series of 10 parallel lines over the faces of the stamps, and located at intervals in this frame 52 are the vertical cutters or abraders 55<sup>a</sup>. These cutters or abraders, as clearly shown in Fig. 7, rest within recesses in the frame 52, and each is provided at its outer end with a series of teeth 56<sup>a</sup>, which 15 are of a depth sufficient to cut through the face of the stamp without mutilating the envelop, and at its rear end with a post 57<sup>a</sup>, which projects above and below the block 50 and is provided with rounded or curved ends. The lower 20 ends of these posts rest on the plate 57, and located in the path of the movement of the posts is the roller 58, (see Fig. 3,) which latter is designed to engage the upper ends of the 25 posts 57 and force them downwardly, one at each revolution of the block 50.

The roller 58 is carried by the plate 59 of the frame of the machine and projects below said plate, while the portion of plate 57 below 30 the roller is provided with a V-shaped recess 60, the lowest point 61 of the recess being under the axis of the roller. From this construction it will be seen that as the block 55<sup>a</sup>, carrying the cutters or abraders, is rotated 35 the upper ends of the posts coming into contact with the roller 58 force the cutters down one side of the inclined recess, while the opposite upward-inclined side of the recess elevates the post and cutter to its normal position. With the block 50 rotating at, say, one 40 hundred and eighty revolutions a minute, it will be seen that the movements of the several cutters are very rapid and each operates to cut a slight line through the stamp on the 45 envelop, and thus so mutilate it as to render its reuse practically impossible where ordinary precautions are taken to prevent the use of canceled stamps.

The stamp-canceling devices are located in 50 advance of the postmarking stamps and are so arranged with relation to the cams 33<sup>a</sup> and 38 that when the stop 36 is withdrawn to permit the envelop to proceed the canceling devices are in a position to cancel stamps properly placed on the envelop and to print the 55 postmarks on the face of the envelop adjacent to the stamps.

The mail is sorted and fed to the belt by hand, and the envelops are so placed as to 60 bring the stamps on the lower front corner of the envelop, and when so arranged the stamps are in position to be canceled, as above described.

The postmarking and canceling devices as- 65 sist the belt in moving the envelops through

the trough and after (or before) passing beyond block 50 is engaged by the feed-roller 61. This roller 61 is mounted on shaft 62, which carries the bevel-pinion 63, meshing with pinion 64 on the feed-belt-actuating shaft 70 16, and is faced with leather, rubber, or other suitable material which will engage the envelops with sufficient friction to forcibly push them onto the receiving-table 29.

Located opposite the feed-roller 61 is the 75 stop 65, pivotally mounted on the frame of the machine and yieldingly held in position adjacent to the face of the feed-roller 61 by the spring 66, the screw 67 being employed for adjusting the stop so as to prevent actual 80 contact with feed-roller 61.

68 is the ink-pad, cylindrical in shape and mounted on the stud 69, carried by the pivoted arm 70. This arm is pivoted to the frame of the machine and is provided with a spring 85 71, the tendency of which is to hold the arm 70 into contact with the cam 72. This cam is preferably integral with a stud secured to the frame of the machine. Hence by loosening the stud and turning the cam the position of 90 arm 70 and the pad carried thereby may be regulated at will. This pad is preferably made of felt, and as it wears away it can be fed forwardly to compensate for the wear by simply changing the position of cam 72, and 95 when the machine is in operation it rests so as to engage the type and ink them at each revolution of the block 50.

Located in advance of the ink-pad and its arm 70 is the frame 73, carrying the brush 100 74, which is located in the path of the type and cutters or abraders and operates to prevent the accumulation of ink or paper cut from the faces of the stamps. The frame 73 is adjustably secured in place by the screw 75, 105 and, as shown, is made in skeleton form, so as to embrace the shaft carrying feed-roller 61.

The envelops as they pass through the machine are acted upon by the postmarking and canceling devices, and as soon as one envelop 110 passes the stop 36 another takes its place and remains there until the stop is removed. The envelop after it leaves the stop 36 is carried along by the belt 18 and feed-wheel 61 and is forcibly pushed by the latter onto the re- 115 ceiving-table 29 behind the sliding block 76. This block is provided with ribs on its under-surface which rest in grooves 29<sup>a</sup> in the table and is so constructed as to slide easily on said table, which, as shown in Fig. 1, is inclined 120 downwardly from its rear toward its front end. As the next envelop is ejected from the machine it passes behind the one previously ejected and moves the block forwardly, and so on during the operation of the machine, the 125 block 76 operating to hold the envelops together.

It is evident that many slight changes might be made in the relative arrangement of parts herein shown and described without depart- 130



ing from the spirit and scope of my invention. Hence I would have it understood that I do not wish to confine myself to the exact construction of parts shown and described; but,

5 Having fully described my invention, what I claim as new, and desire to secure by Letters Patent, is—

1. In a mail-marking machine the combination with a table, a trough at one edge thereof, 10 and an endless feed-belt forming the bottom of the trough, of stamp-canceling device comprising cutters mounted on a rotating support located to one side of the feed-belt, the said cutters having a longitudinal movement 15 in said support, means for moving the cutters longitudinally, and a yielding device located in a plane with the cutters and adapted to form a support for the envelop while the cutters are cutting or abrading the stamp.

20 2. In a mail-marking machine the combination with a horizontal endless feed-belt, and a postmarking and canceling device in a plane above the belt, of a horizontally-moving stop over the belt in advance of the marking and 25 canceling devices, a horizontal feed-roller in a plane above and adjacent to the discharge end of said feed-belt, and a cam moving with the postmarking and canceling devices for moving the stop laterally.

30 3. In a mail-marking device, the combination with an endless feed-belt, of a marking or canceling device, and envelop-supporting roller, each mounted on an axis perpendicular to the feed-belt and located above the latter, 35 a pair of stops also above the belt and in advance of the marking or canceling device, and cams moving with the canceling device and adapted to move the stops out of the path of the envelops.

40 4. In a mail-marking machine, the combination with a horizontal endless feed-belt, and envelop-supporting and stamp-canceling devices located in plane above said belt, of an abutment located above the belt and in advance 45 of the canceling device for turning envelops that may be standing on end.

5. In a mail-marking machine, the combination with a device for feeding the envelops, and a marking or canceling device located in 50 a plane above the feeding device and with its marking or canceling face at right angles to the upper face of the feeding device, of two spring-restrained stops located over the belt, one in advance of the other, and means for 55 alternately removing the stops from the path of the envelop on the belt.

6. In a mail-marking machine, the combination with a horizontally-rotating marking or canceling device, and a device for feeding the 60 envelops thereto, the said feeding device being in a plane below the canceling device, of two horizontally-moving stops, both located in planes above the feeding device, and means moving with the canceling device for alter-

nately withdrawing the stops from the path of 65 the envelops.

7. In a mail-marking machine, the combination with a stamp-canceling device and plurality of yielding rollers for supporting the 70 envelop while the latter is engaged by the canceling device and means for feeding the envelops to said canceling device, of a stop located over the feeding device and in a position to stop the envelop adjacent to the canceling device, means moving with the canceling device for withdrawing the stop from 75 the path of the envelop, and a roller located in rear of the canceling device for ejecting the canceled envelop onto a receiving-table.

8. In a mail-marking machine, the combination 80 with a feeding device, a horizontally-rotating stamp-canceling device located in a plane above the feeding device, and a plurality of spring-sustained horizontal rollers located opposite the canceling device and above the 85 feeding device for supporting the envelops while the latter are being acted upon by the canceling device, of two independent stops also located above the feeding device and in advance of the canceling device, and means 90 for alternately withdrawing said stops from the path of the envelops.

9. In a mail-marking machine, the combination with a feeding device, of a canceling device comprising a block mounted on a revolving shaft perpendicular to the upper face of 95 the feeding device and carrying removable postmarking stamps or type, cams on said shaft, and spring-actuated stops located over the feeding device and adapted to be retracted 100 by the cams.

10. In a mail-marking machine, the combination with a feeding device, of a canceling device comprising a block mounted on a rotary shaft and carrying removable postmark- 105 ing stamps or type, cutters slidingly mounted in said block and means carried by the frame of the machine for vertically reciprocating each cutter once at each revolution of the block. 110

11. In a mail-marking machine, the combination with a feeding device, of a canceling device comprising a block mounted on a rotary shaft, a cutter mounted in said block and projecting above and below the latter, and 115 means for engaging said projecting ends once at each revolution of the block for vertically reciprocating the cutter.

12. In a mail-marking machine, the combination with a feeding device, of a canceling 120 device comprising a block mounted on a rotary shaft, a reciprocating cutter mounted in said block and projecting above and below same, a plate located under the block and provided with a groove or recess at a point 125 traversed by the cutter during the revolution of the block, and a roller located above said groove or recess and adapted to engage the



upper projecting end of the cutter and force it downwardly into the groove.

13. In a mail-marking machine, the combination with a block mounted on a rotary shaft and provided with recesses, removable frames carrying type and cutters, located in said recesses and spring-catches for locking the frame in place.

14. In a mail-marking device, the combination with an endless feed-belt, a canceling device and movable stop, of a feed-wheel in rear of the canceling device and adjacent to the inner end of the feed-belt, and a yielding abutment located opposite the feed-wheel, the said canceling device, stop, feed-wheel and abutment being in planes above the upper surface of the feed-belt.

15. In a mail-marking machine, the combination with an endless feed-belt, a canceling device and cooperating yieldingly-supported rollers, of a feed-wheel in rear of the canceling device and adjacent to the inner end of the belt, and a yielding and adjustable abutment cooperating with said feed-wheel, the said canceling device, rollers, feed-wheel and abutment being in planes above the feed-belt.

16. In a mail-marking machine, the combi-

nation with a feed-belt, canceling device and feed-roller in rear of the canceling device and adjacent to the inner end of the feed-belt, the said canceling devices and roller resting in planes above the feed-belt, of an inclined table at the discharge end of the feed-belt, and a sliding block on said table.

17. In a mail-marking machine, the combination with a horizontal endless belt and a horizontally-rotating block located in a plane above the belt and carrying canceling stamps or type, of an adjustable brush and an adjustable inking pad or roller located in the path traveled by the canceling stamps or type.

18. In a mail-marking machine, the combination with a feeding device and envelop-supporting and stamp-canceling devices, of a fixed abutment located in advance of the canceling device and over the feeding device for turning envelops that may be standing on end.

In testimony whereof I have signed this specification in the presence of two subscribing witnesses.

EDWARD M. JUDD.

Witnesses:

S. G. NOTTINGHAM,

A. W. BRIGHT.