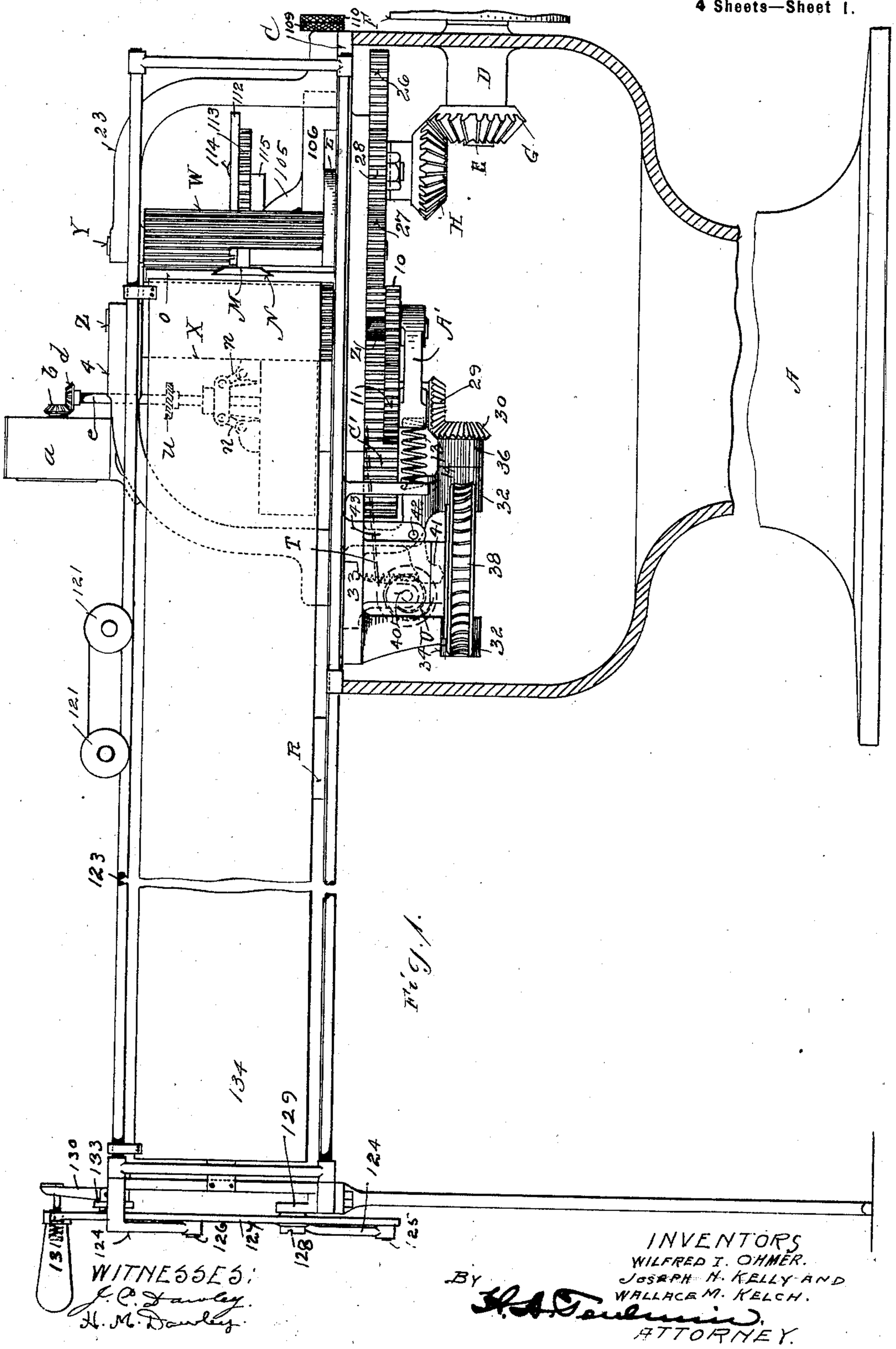
No. 663,664. Patented Dec. 11, 1900.

W. I. OHMER, J. N. KELLY & W. M. KELCH.

LETTER CANCELING MACHINE.

(No Model.) (Application filed Apr. 4, 1899.) 4 Sheets—Sheet 1.



WITNESSES:
J. C. Dawley.
H. M. Dawley.

INVENTORS
WILFRED I. OHMER.
JOSEPH N. KELLY AND
WALLACE M. KELCH.
BY H. A. Toulmin.
ATTORNEY.

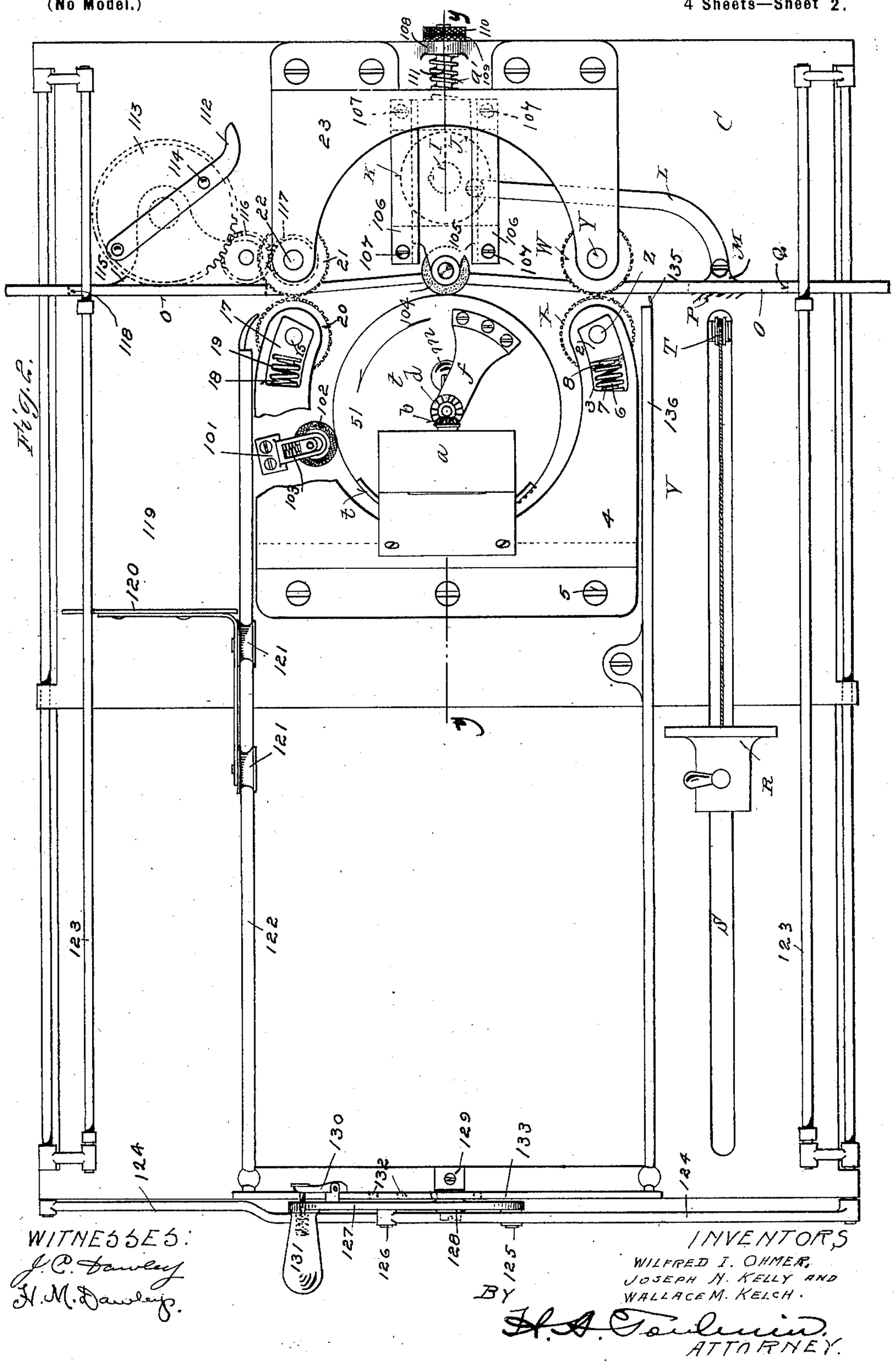
No. 663,664. Patented Dec. 11, 1900.

W. I. OHMER, J. N. KELLY & W. M. KELCH.

LETTER CANCELING MACHINE.

(Application filed Apr. 4, 1899.)

(No Model.) 4 Sheets—Sheet 2.



No. 663,664. Patented Dec. 11, 1900.

W. I. OHMER, J. N. KELLY & W. M. KELCH.

LETTER CANCELING MACHINE.

(Application filed Apr. 4, 1899.)

(No Model.) 4 Sheets—Sheet 3.

Fig. 3.

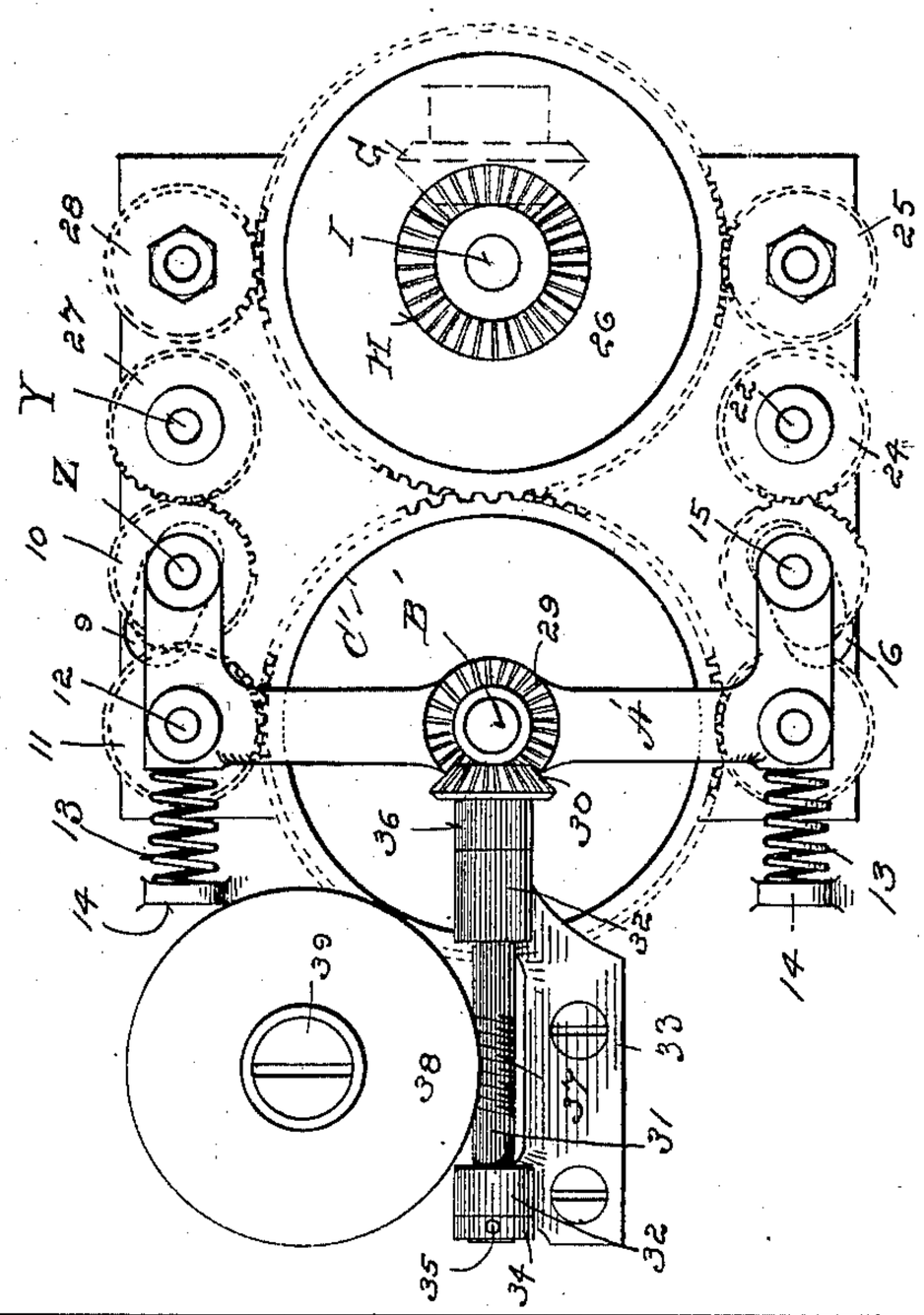


Fig. 4.

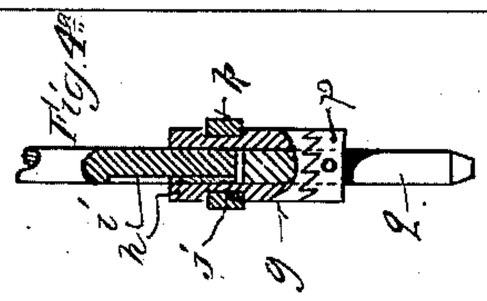


Fig. 4a.

Fig. 5.

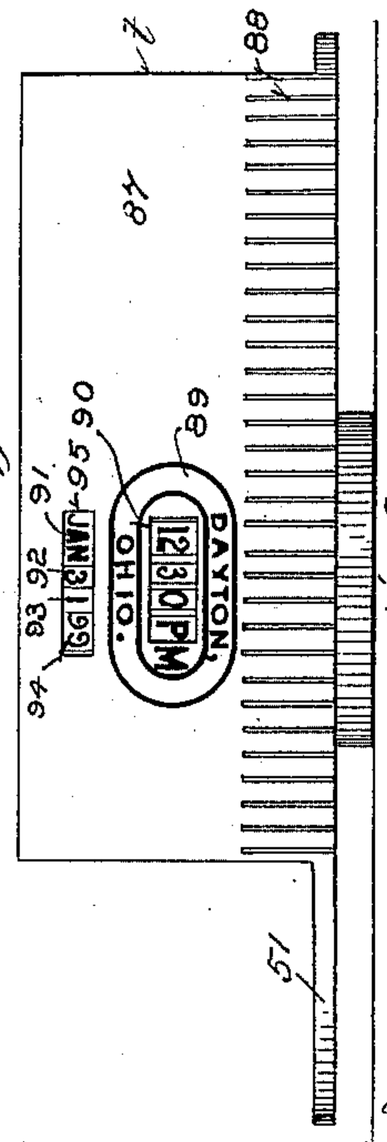
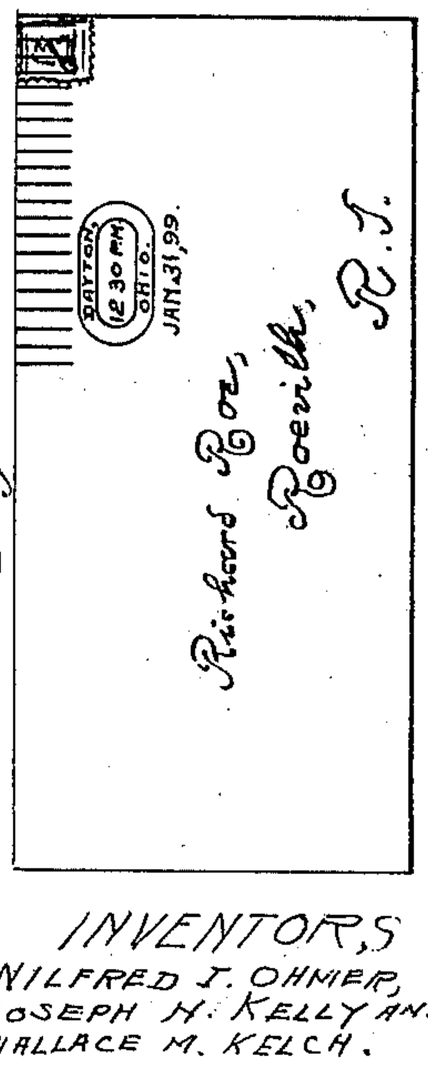


Fig. 6.



WITNESSES:
J. C. Dawley.
W. M. Dawley.

INVENTORS,
WILFRED I. OHMER,
JOSEPH N. KELLY AND
WALLACE M. KELCH.
BY H. A. Toulmin
ATTORNEY

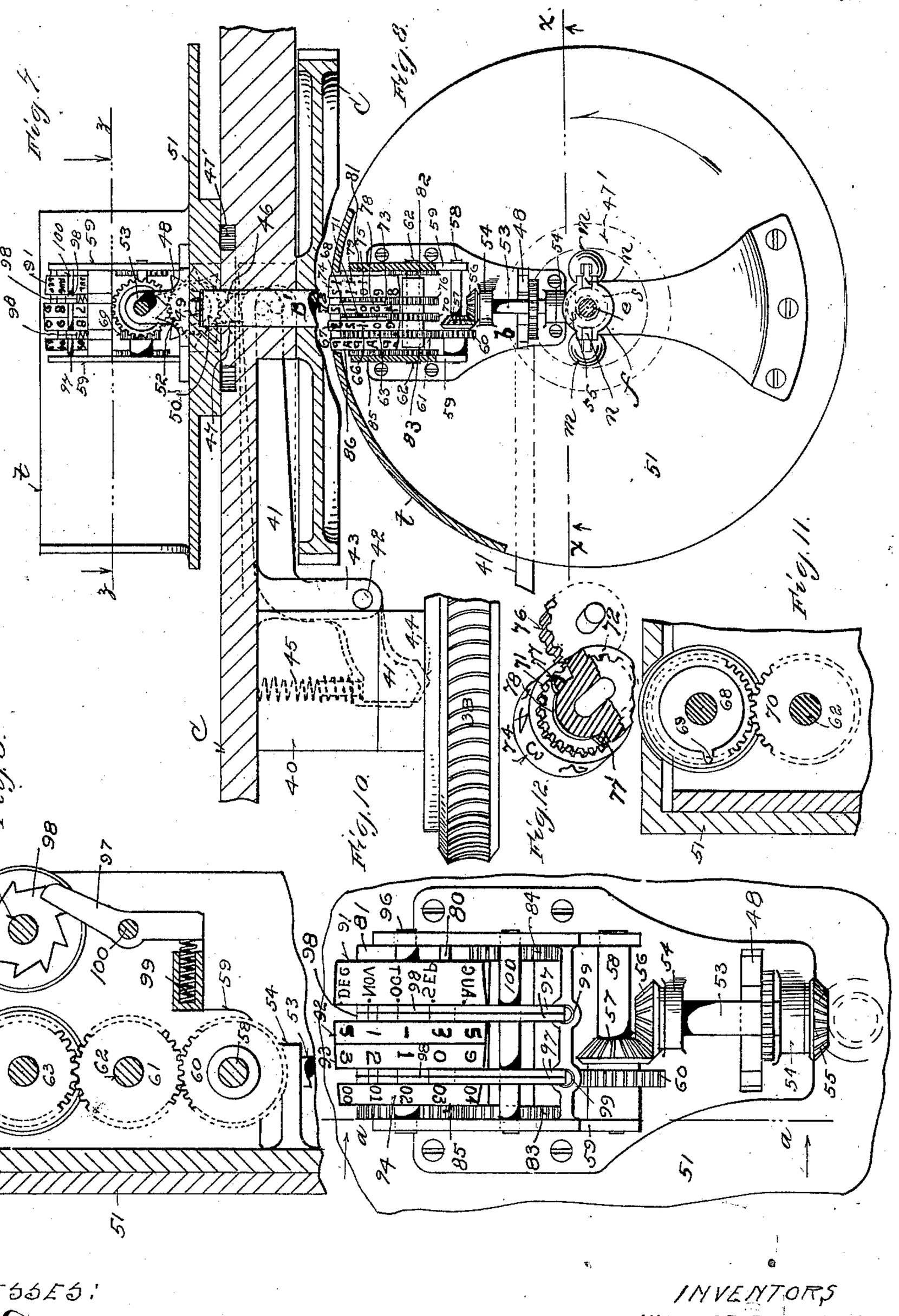
No. 663,664. Patented Dec. 11, 1900.

W. I. OHMER, J. N. KELLY & W. M. KELCH.

LETTER CANCELING MACHINE.

(Application filed Apr. 4, 1899.)

(No Model.) 4 Sheets—Sheet 4.



WITNESSES:
J. C. Dawley.
H. M. Dawley.

INVENTORS,
WILFRED I. OHMER,
JOSEPH N. KELLY AND
WALLACE M. KELCH.
BY
H. A. Toulmin,
ATTORNEY.

UNITED STATES PATENT OFFICE.

WILFRED I. OHMER, JOSEPH N. KELLY, AND WALLACE M. KELCH, OF DAYTON, OHIO; SAID KELLY AND KELCH ASSIGNORS TO SAID OHMER.

LETTER-CANCELING MACHINE.

SPECIFICATION forming part of Letters Patent No. 663,664, dated December 11, 1900.

Application filed April 4, 1899. Serial No. 711,753. (No model.)

To all whom it may concern:

Be it known that we, WILFRED I. OHMER, JOSEPH N. KELLY, and WALLACE M. KELCH, citizens of the United States, residing at Dayton, in the county of Montgomery and State of Ohio, have invented certain new and useful Improvements in Letter-Canceling Machines, of which the following is a specification, reference being had therein to the accompanying drawings.

This invention relates to certain new and useful improvements in machines for canceling and stamping the time, date, and place on mail-matter.

The principal object of this invention is to provide a rapid and efficient machine which while canceling the mail-matter will at the same time print or stamp on such mail-matter the time, date, and place, the time-printing mechanism being adapted to be operated by a clock when the machine is not in use and to act in unison with, but disconnected from, said clock when operating upon mail-matter.

This invention also relates to details of construction and arrangement hereinafter appearing, and particularly pointed out in the claims.

In the accompanying drawings, on which like reference characters indicate corresponding parts, Figure 1 is a side elevation of our improved machine, partly in section; Fig. 2, a plan view of the same; Fig. 3, an inverted plan view of the base of the machine, showing a portion of the operating mechanism; Fig. 4, a partial detail sectional view on the line *x x* of Fig. 8; Fig. 4ª, a detail view, partly in section, and showing the manner in which the clock-driven shaft *e* is connected with the shaft *q;* Fig. 5, a front elevation of the printing and canceling plate; Fig. 6, a canceled and stamped piece of mail-matter; Fig. 7, a detail partial longitudinal sectional view, the section being taken on the line *y y* of Fig. 2; Fig. 8, a horizontal sectional view of the printing-head on the line *z z* of Fig. 7; Fig. 9, a detail sectional view on the line *a a* of Fig. 10; Fig. 10, a detail plan view of a portion of the printing-head; Fig. 11, a detail sectional view on the line *b b* of Fig. 8 looking in the direction of the arrows; and Fig. 12 a detail perspective view of one of the time-printing rings, its transferring-plate, and associated gears.

The letter A represents a suitable base or pedestal cupped out or recessed at its upper end, as shown at B. Upon this pedestal is mounted a base or platform C, and projecting beneath said platform and within said recess is a large portion of the operating mechanism, hereinafter referred to. Through a boss or hub D within said recess extends a driving-shaft E, which preferably has mounted on its outer end a driving-pulley F, while on its inner end is mounted a miter-gear G, adapted to mesh with a miter-driven gear H, mounted on the lower end of a main driven shaft I, which extends through the base or platform C, above referred to. On the upper end of said driving-shaft is mounted a crank-plate J, preferably let into the recess K in the base. To this crank-plate is pivotally connected a pitman L at one end, while the other end of said pitman is connected with a feed-plate M, which is mounted in a dovetail groove N in a cross-partition O, extending across the machine, as seen in Fig. 2. From the plate M project teeth P, which slant inward toward the center of the machine and project through a slot Q in said partition, such slot being of sufficient length to permit the plate and teeth to travel backward and forward for the purpose of engaging mail-matter which is brought into contact with said feed-plate by means of a follower-plate R, mounted upon the platform C over the slot S, such follower-plate being adapted to be secured to the base in any desired position. To this follower-plate is secured one end of a rope or cable which extends over a pulley T in the forward end of the slot and is secured to a drum T, mounted beneath the base or platform, such drum being operated upon to cause it to rotate by a spring U, and such spring being put under tension when the follower-plate is drawn to the rear of the slot S. The passage V we will term the "feeding-passage," for the reason that the mail is placed therein and is adapted to be fed along into engagement with the feeding-plate, which ad-

vances such mail-matter, one at a time, into engagement with corrugated feed-rolls W and X, respectively, such feed-rolls being mounted upon shafts Y and Z, respectively. It will be observed that the feed-roll shaft Z is mounted at its upper end in a movable bearing 2, carried in a slot 3 in a bracket 4, screwed or otherwise secured to the base or platform C. Between this movable or yieldable bearing is placed a spring 6, mounted upon centering-studs 7 and 8, projecting into the slot from the yieldable bearing and bracket, respectively. This feed-roll shaft projects through a slot 9 in the base and is mounted in one end of a double bell-crank lever A′, which is pivotally mounted upon a shaft B′. Between this bell-crank lever and the base and also mounted upon the feed-roll shaft X is rigidly mounted a spur-gear 10, (see Fig. 3,) which meshes with an idler-gear 11, carried upon a stud 12, projecting from the double bell-crank lever A′. This idler-gear meshes with a large driving-gear C′, which is also mounted upon the shaft B′. A pair of springs 13 are interposed between this bell-crank lever and brackets 14, which permit the lever to pivot about its center, thus allowing the lower end of the feed-roll shaft Z to yield in a manner similar to its upper end, so that as mail of varying thicknesses is passed between the feed-rolls they will spread apart sufficiently to accommodate it. On the opposite end of the double bell-crank lever is mounted one end of a delivering-roll shaft 15, which extends upward through a slot 16 in the platform and at its upper end into a yielding bearing 17, which is mounted in a slot 18, also within the bracket 4. Between this yieldable bearing and the inner end of the slot is mounted a spring 19 in a similar manner to the spring 6. It will be observed that these slots for the accommodation of the feed-roll shaft and the delivering-roll shaft are slightly curved. They are thus formed for the reason that the bearings in the double bell-crank lever are moved in the arc of a circle. Opposite the yielding delivering-roll 20, (see Fig. 2,) mounted on its shaft 15, is a similar delivering-roll 21, carried by the shaft 22, having a bearing at its upper end in a bracket 23 and at its lower end extending through the platform to receive upon it a spur-gear 24, (see Fig. 3,) which meshes with an idler-gear 25, engaging with the main driven gear 26, mounted on its shaft I. Referring again to the feed-roll W, it will be seen that its shaft has a bearing at its upper end in the bracket 23 and extends through the base and has mounted upon it a gear 27, meshing with an idler-gear 28, which also engages with the main driving-gear 26 in a manner similar to the delivering-roll shaft 22. Thus both of these shafts are operated from the same driving gear through their respective idler-gears 25 and 28. The main driven gear 26 meshes with the gear C′, which is of the same size as the gear 26, and since the yieldably-mounted feed-roll and yieldably-mounted delivering-roll are connected with said gear C′ they, too, are given the proper speed to match with their respective adjacent rolls.

We have seen the manner in which the feed-rolls and delivering-rolls are operated, and we will now refer to the printing mechanism and the manner in which the time-indicating mechanism may be operated either through a clock or by power employed in operating the machine.

Referring to Figs. 1 and 3, it will be observed that on the lower end of the shaft B′ is mounted a miter-gear 29, which meshes with a similar miter-gear 30, carried on the end of the worm-shaft 31, such worm-shaft having its bearing at 32 in the bracket 33. On the opposite end of the shaft is mounted a collar 34, held in place by means of a pin 35. This collar prevents the shifting of the shaft in the bracket in one direction, while the hub 36 of the miter-gear 30 and the bearing 32 prevent the shaft from shifting in the opposite direction. Upon the shaft 31 is formed worm-screw threads 37, which are adapted to engage with a worm-gear 38, mounted on a stud 39, screwed into the bracket 40, projecting downward from the base C. Above said worm-gear is mounted a lever 41 upon a bearing 42, carried by a bracket 43, projecting downward from the base. This lever at its lower end rides upon the upper face of the worm-gear, above described, and drops into a notch 44 therein by reason of the lever being pressed or held normally in engagement with said worm-wheel by means of a spring 45 interposed between the base and lever. The other end of said lever carries a rigidly-mounted stud 46, which projects up through a hole or opening in the table 47 and into an annular groove 47′ and stands in the path of a star-wheel 48 when the lever drops into the notch of the worm-wheel, so that as the star-wheel rotates with a plate 51 it will come into contact with the stud 46, such stud being elevated by the lever for this purpose. This will cause the star-wheel to rotate on its axis, it being understood that such star-wheel also extends into the annular groove 47′ and is mounted on a shaft 49, (see Fig. 10,) supported in a bearing 50, carried by the rotatably-mounted plate 51. Secured to this shaft or mounted integral with the star-wheel is a gear-wheel 52, which meshes with another gear-wheel mounted directly above it upon a shaft 53, carried in brackets 54, extending upward from the rotatable plate 51. On each end of this shaft is mounted a miter-gear 55 and 56, respectively. The miter-gear 56 meshes with a corresponding miter-gear 57, carried by a shaft 58, mounted in brackets 59, secured to the rotatable plate 51. Upon this shaft is also mounted a spur-gear 60, which meshes with another spur-gear 61, mounted on a shaft 62, also supported by the bracket 59. The spur-gear 61 engages with a spur-gear 63, formed on the minute unit wheel or ring 66 (see Figs. 8 and 9) and rotates

said minute-wheel with a regular and even speed—say once around for every ten minutes. To indicate minutes, we have numbered the wheel from "0" to "9," inclusive, as shown at 67, on its periphery, and as such wheel travels once around it will return to its starting-point or "0" again. A transmitting-plate 68 carries a tooth 69, (see Fig. 11,) which is adapted to engage with a gear 70, loosely mounted on the shaft 62. This gear is of sufficient width to mesh with a gear 71, projecting from a tens minute printing wheel or ring 72, so that as the wheel 70 is rotated one notch the tens minute-wheel will also be rotated one number, it being understood that the periphery of said ring has numbers from "1" to "5," inclusive, formed thereon, as shown at 73. Thus as the minute-ring makes one complete revolution the tens minute-ring will move from one number to the next number. In this manner the two minute-rings will indicate the minutes from "1" to "59," inclusive, and in order to indicate the hours we have provided an hour-ring 74, from one face of which projects a gear 75, which is adapted to mesh with a loosely-mounted gear 76 on the shaft 62. As the tens minute-ring makes a half-revolution the tooth 77 on the transferring-plate 78, secured to the tens minute-ring, will engage with the gear 76 to rotate it one notch and through its engagement with the hour-ring will rotate it from one hour to the next hour of higher denomination, the numbers indicating the hours being arranged around on the periphery of the hour-ring 74, as shown at 79. When the tens minute-ring makes another half-revolution, another tooth 77′ on its transferring-plate will again engage the loosely-mounted gear 76 to rotate it another notch, and thereby again rotate the hour-ring one hour. It will be understood that the tens minute-ring is provided with two sets of figures from "1" to "5," inclusive, on its periphery. When the hour-ring has made one complete revolution, a tooth 80 on its transferring-plate 81 will engage in the gear 82, rigidly mounted on the shaft 62, (see Figs. 8 and 10 particularly,) thus rotating the gear one notch and through it the shaft a slight amount. Near the other end of the shaft is also rigidly mounted a gear-wheel 83, which meshes with a gear-wheel 85, projecting from the "A" and "P" wheel 86, which carries on its outer periphery a succession of "A" and "P" characters. Thus as the hour wheel or ring makes one complete revolution the "A" and "P" wheel will be operated to indicate whether it is forenoon or afternoon. From the above description it will be understood that these time-wheels operate together in such a manner that they bring into position for printing the hours and minutes, so that no change in such mechanism is required by hand; but it is automatically accomplished by the machine itself. The machine is also timed so that it will run or operate these rings with the same speed as though they were operated by a clock. We will now refer to the manner in which they may be operated by a clock, so that when the machine is not in use the time mechanism will still be so manipulated that it will indicate the proper time when the machine is again started.

By referring to Fig. 4 it will be observed that on the top of the bracket 4 is mounted a clock *a*, which carries a miter-gear *b*, mounted on a stud *c*, projecting from the clock-driven mechanism and adapted to be operated thereby. The miter-gear *b* meshes with a corresponding miter-gear *d*, mounted on the upper end of the shaft *e*, carried in a bracket *f* upon the rotatable plate 51. This shaft extends within the sliding sleeve *g*, provided with a spline *h* and an annular groove *j* therein, in which a collar *k* is fitted. This collar has links *l* pivoted thereto and also two balls *m*. These balls are pivotally connected with the bracket *f* by links *n*. The lower end of the sleeve *g* is provided with clutch-teeth which match in clutch-teeth in a collar *p*, pinned or otherwise secured to the shaft *q*, the upper end of which shaft projects within the sleeve *g*, which acts as a bearing therefor, while its lower end is mounted in a step-bearing *r* in the rotatable plate 51. Upon the shaft *r* is rigidly mounted a miter-gear *s*, which meshes with the miter-gear 55, carried by the time-mechanism-operating shaft 49. As the printing-head *t*, together with its plate or base 51, is rotated by the driving mechanism for operating the machine, as above described, the balls *m*, which we will term the "governor-balls," will be rotated very rapidly, as usually not less that one hundred and eighty pieces of mail-matter are passed through the machine per minute. This will cause the balls to fly outward and raise the sleeve *g* to disengage its lower clutch-teeth from the clutch-teeth on the collar *p*, thus disconnecting the shaft driven by the clock mechanism from engagement with the shaft *q*, so that such shaft will merely idly rotate when the machine is in operation. The instant, however, the motion of the machine is slackened or stopped altogether the governor-balls will permit the sleeve *g* to descend into engagement with the collar *p*, and since such sleeve is keyed to the shaft *e* the movement of the clock will be transmitted to the shaft *q*, and through its connection with the time-mechanism-operating shaft 49 will cause the time mechanism to continue to operate. In order to set the hands of the clock, we provide a chased collar *u*, which is secured to the shaft *e* by means of a pin *v*, so that such shaft may be turned backward or forward, as desired. Should the clock be removed for any cause this same collar may be taken hold of to set the time printing characters to indicate the proper time, or if the clock breaks down the time-printing mechanism may still be made to indicate the proper time before stamping mail-matter.

Referring now to the printing-head *t*, (see

Figs. 2, 5, and 8 particularly,) it will be seen that it consists of a circular plate 51, rotatably mounted upon the base or platform C and driven by the shaft V′, which projects within said rotatable plate and is rigidly secured thereto. A flange 87 projects from the base 51 and carries a canceling-plate 88 and the place and State characters, as shown at 89, together with the letter "M." Between the name of the place and State and at one side of the letter "M" is mounted the "A" and "P" wheel, "P" being exposed, as also the "units and tens" minute-wheels and the "hour-wheel" above described, such wheels projecting slightly through the slot 90 in the flange 87. Slightly above the name of the State may be seen the name of the month and the year, such characters being mounted on the month-ring 91, day-of-the-month rings 92 and 93, and a ring for indicating the year, as illustrated at 94, the characters carried by such ring projecting slightly through the slot 95. These dating-rings are mounted upon a shaft 96, (see Fig. 10,) and each of them is held in position by means of a pawl and ratchet 97 and 98, respectively, (see Fig. 9,) such ratchets being in pairs and projecting slightly from the adjacent faces of the adjacent rings and one of each pair being engaged by one of the pawls 97. In this way one spring 99 may answer for each pair of pawls, such spring being located beneath the rear end of the pawl, so as to normally hold the inner end of the pawl in engagement with said ratchet-wheel, said pawl being pivoted upon the shaft or pin 100. (See Figs. 9 and 10.) These dating-rings are moved by hand to present the proper date to the slot or opening 95 and are held from turning while the machine is in operation by the spring-held pawl above described.

In order to ink the printing-head, it will be observed that upon the base we have mounted a bracket 101, carrying an inking-roll 102. This inking-roll is yieldably mounted by reason of the spring 103 being interposed between the bearing and the rear end of the slot *x* in said bracket. (See Fig. 2.)

In order to provide a back or support against which the mail-matter may rest while being canceled or stamped, it will be seen that we employ a roller 104, rotatably supported in a yielding bracket 105, which is mounted in ways or guides 106, screwed to the platform or base by means of screws 107. A spring *a′* is interposed between said yieldable bracket and a fixed bracket 108. Nuts 109 and 110 are adapted to screw into a stud 111, projecting from said bracket, such studs projecting through the fixed bracket and a nut being screwed against the outer face of such fixed bracket. The outer edges of such nuts are turned around and knurled, as illustrated, the nut 110 acting to bind the nut 109 in its adjusted position. A mail-matter kicker 112, in the form of a bar curved at one end and secured to the gear 113 by means of rivets 114 or in any other suitable manner, is mounted upon a bracket 115, carried by the partition O. Upon this bracket is mounted an idler gear 116, which engages with the gear 117, (shown in dotted lines in Fig. 12,) beneath the delivering-roll 21. By this means the kicker is caused to rotate, and the curved end of the bar 112 projects through a slot 118 in the partition O. In the delivering-space 119 is mounted a mail-holding plate 120, which carries a pair of rolls 121, adapted to be mounted upon the upper edge of the partition 122, such partition acting as a track therefor.

The manner in which the delivering-space and receiving-space are made to accommodate longer mail-matter is the same as in our application marked "A," Serial No. 711,752, filed April 4, 1899, and filed even date with this application, the same consisting of a pair of side rails 123, swingingly supported above the base and adapted to be adjusted in or out by means of connecting-bars 124, which are connected with their respective studs 125 and 126, projecting from the lever 127, pivotally supported upon a stud 128, projecting from a bracket 129, carried by the base or platform. A pivoted detent 130 engages with the handle 131 at one end and with the notches 132 (shown in dotted lines) in a bar 133, no claim for which is made herein. By pressing on the detent 130 it is released from engagement with the notches 132 and may be shifted back and forth along the bar 133 to the desired position. This will cause the side rails to be swung in or out, according to which direction the lever 127 moves. Side plates hang downward from the side rails and are held in position by being secured thereto. As the side rails are swung in or out over the platform these side plates will narrow the feeding-space and delivering-space or widen such spaces, as desired. Spring-bars 135 project beyond the partition 136 to prevent more than one piece of mail-matter passing into the feed-rolls at one time.

We will now describe the operation of the machine.

Let it be supposed that a bunch of mail-matter has been placed in the feeding-space in front of the follower-plate R. The plate is released from the platform and through the spring U keeps such mail-matter constantly in contact with the feed-plate M, and as fast as one piece of mail-matter is advanced to the feed-rolls W another piece of mail-matter is ready to take its place. The feed-rolls W and X advance such mail-matter between the printing-head *t* and the press-roll 104, both of which are constantly rotating, and the printing-head prints upon such mail-matter the date, time, the name of the place, and the State, and at the same time the canceling-strip 88 acts to cancel the postage on such mail-matter. The mail-matter is next carried into engagement with the delivering-rolls 20 and 21, which deliver it into the delivering-space 119. At such times as the mail-matter

enters the delivering-space the kicker is rotated into contact therewith and kicks it out of the path of the next piece of mail-matter, by which action the holder 120 is moved slightly down the delivering-space.

By the mechanism here described the mail-matter is canceled very rapidly and is specially designed for use in the largest post-offices where the greatest amount of mail-matter is handled. Of course it will be understood that during each minute, for instance, a great many pieces of mail-matter may be passed through the machine. All such mail-matter as passes through the machine in each minute will bear the time-stamp of that minute—that is, the time-stamp does not vary for each second of time. Our machine, however, is intended to make a certain number of revolutions per minute, so that it will travel in unison with the clock mechanism when the governor mechanism releases such clock mechanism from engagement with the time-printing mechanism, and to that end the speed of the machine is gaged to run at a certain number of revolutions per minute. Thus it will be seen that in our machine we print the various data upon the mail-matter while the same is in motion in passing through the machine, and that while the machine is in operation the time-printing device is operated by the mechanism of the machine other than the clock mechanism, and that the said time-printing mechanism automatically breaks off from operative connection with the clock mechanism when our machine is in operation, so that said time-printing mechanism is set or operated during the operation of the machine in a manner which enables it to keep time, whereby although becoming disconnected from the clock mechanism at one instant of time it will resume its connection therewith later on without having lost time. In this machine, therefore, there is an intermittent connection between the time-printing devices and the clock mechanism, though without loss of time by the former during the interval of disconnection, while in our application marked "A," Serial No. 711,752, filed April 4, 1899, there is in contradistinction a continuous operation and connection between the clock mechanism and the time-printing devices.

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

1. In a canceling and stamping machine, the combination with a base or platform having a pair of feed-roll shafts and a pair of delivering-roll shafts mounted thereon at right angles thereto, mechanism for driving said shafts, feed-rolls mounted on said feed-roll shafts, and delivering-rolls mounted on said delivering-roll shafts, a rotatable printing-head mounted on said base or platform, a canceling-strip carried on the periphery of said printing-head, dating mechanism and time-printing mechanism carried by said head, clock mechanism to drive the latter at one time, and driven by the movement of the machine at another time.

2. In a machine for canceling and stamping mail-matter, the combination with a base or platform, of a pair of vertical feed-rolls, and a pair of vertical delivering-rolls mounted thereon, a pivoted yoke carrying one end of one of said feed-roll bearings and one end of one of said delivering-roll bearings, a bracket carrying bearings for the other end of said respective rolls, springs adapted to operate on said upper bearings and on said yoke for the lower bearings, substantially as shown and described.

3. In a machine for canceling and stamping mail-matter, the combination with a base or platform, of a shaft extending through said base, a driving-gear and pivoted yoke mounted thereon, a feeding-roll shaft and a delivering-roll shaft, each of which carries a driving-pinion at its lower end, and mounted in said yoke, one of which engages with said feed-roll-shaft-driving gear, and both of which engage with and are driven by said first-named driving-gear, a pair of brackets carried by said base and a pair of springs interposed between said brackets and said pivoted yoke, substantially as shown and described.

4. In a machine for canceling and stamping mail-matter, the combination with a base or platform, of a pair of driving-shafts mounted therein, one of which has a driving-gear, and main driving-gear mounted thereon; a feed-roll shaft and a delivering-roll shaft driven by said main driving-gear and the other of which has a driving-gear and a miter-gear mounted thereon, a feed-roll shaft and a delivering-roll shaft driven by said last-named gear, a worm-shaft adapted to be driven by said miter-gear, and a worm-gear meshing with said worm-shaft; a rotatable printing-head mounted on the upper end of said last-named driving-shaft and adapted to be driven thereby, time-printing mechanism carried by said head and a lever between said time-printing mechanism and said worm-gear adapted to operate said mechanism, all substantially as shown and described.

5. In a machine for canceling and stamping mail-matter, the combination with a base or platform, of a pair of driving-shafts mounted thereon, one of which has a driving-gear, a main driving-gear mounted thereon, a feed-roll shaft driven by said main driving-gear and the other of which has a driving-gear and a miter-gear mounted thereon, a feed-roll shaft and a delivering-roll shaft driven by said last-named driving-gear, a worm-shaft adapted to be driven by said miter-gear and a worm-gear meshing with the worm-shaft; a rotatable printing-head mounted on the upper end of said last-named driving-shaft and adapted to be driven thereby, time-printing mechanism carried by said head and a lever between said time-printing mechanism and said worm-gear adapted to operate said mech-

anism, all substantially as shown and described.

6. In a machine for canceling and stamping mail-matter, the combination with a base or platform, of a driving-shaft extending through said base, a printing-head mounted on said shaft and adapted to be driven thereby, a miter-gear also mounted on said shaft, a worm-shaft driven by said miter-gear, a worm-gear meshing with said miter-shaft and having a notch on its upper face, a pivoted lever mounted in the path of said notch, printing mechanism carried by said head and adapted to be operated by said lever when the machine is operating, a clock-operated mechanism adapted to operate said time-printing mechanism when the machine is at rest, and to be disengaged from said mechanism when the machine is in operation, substantially as shown and described.

7. In a machine for canceling and stamping mail-matter, the combination with a base or platform, of a driving-shaft, carried thereby, a printing-head rigidly mounted thereon and adapted to be driven thereby, time-printing mechanism carried by said head, a clock carried by said machine, means for connecting said clock with said time-printing mechanism to operate it at one time and for disengaging therewith at another, and means interposed between said time-printing mechanism and said machine for operating said mechanism when disconnected from said clock, all substantially as shown and described.

8. In a machine for canceling and stamping mail-matter, the combination with a base or platform, of a driving-shaft carried thereby, a printing-head mounted on and driven by said shaft, time-printing mechanism carried in said head, consisting of hour-rings, units and tens rings and "A" and "P" rings; means for transferring time from the units minute-ring to the tens minute-ring and from the latter ring to the hour-ring, and means for connecting said latter ring with said "A" and "P" wheel to operate it; a driving-shaft connected with said time-printing mechanism, carrying a star-wheel rigidly mounted thereon, a worm-gear driven by said first-named driving-shaft, a lever adapted to be rocked by said worm-gear to operate said star-wheel, a bracket carried by said printing-head, a shaft projecting through said bracket and having a miter-gear mounted on its upper end to engage with a clock-driven gear, a sliding sleeve on its lower end, governor-balls connected with said sliding sleeve and with said bracket and adapted to slide said sleeve thereon, a shaft at its lower end mounted in the base and its upper end projecting within said sleeve, and a clutch-collar rigidly mounted on said last-named shaft and adapted to engage with said last-named sleeve, when the machine is at rest, and its shaft engaging with said time-operating shaft to drive the time mechanism, when the governor mechanism permits the sliding sleeve to engage with said collar, all substantially as shown and described.

9. In a machine for canceling and stamping mail-matter, the combination with a suitable base, of feeding devices and delivering devices for keeping the mail in constant motion through the machine, and printing mechanism for indicating the time of cancellation, the place and date of canceling the stamp, time or clock mechanism, and an intermediate device by which said time-printing devices are operated by said clock mechanism when the machine is inactive, and by which said printing devices are operated independent of said clock when said machine is active.

In testimony whereof we affix our signatures in presence of two witnesses.

WILFRED I. OHMER.
JOSEPH N. KELLY.
WALLACE M. KELCH.

Witnesses:
JOSEPH LEITSCHUH,
CHARLES W. ELLIFF.