No. 36,763. PATENTED OCT. 28, 1862.

G. BAILEY.

PRESS FOR STAMPING TICKETS, &c.

2 SHEETS—SHEET 1.

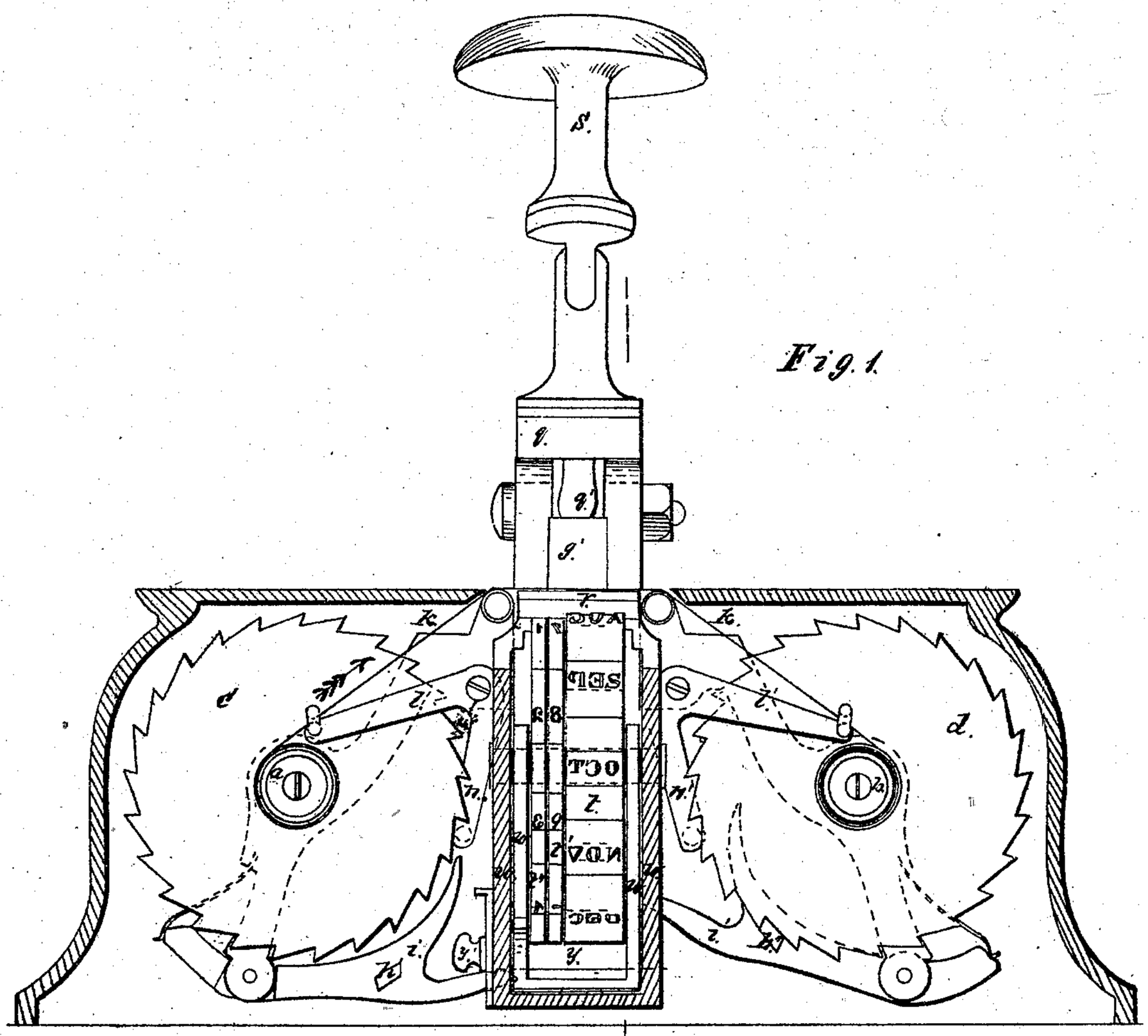

Fig. 1.

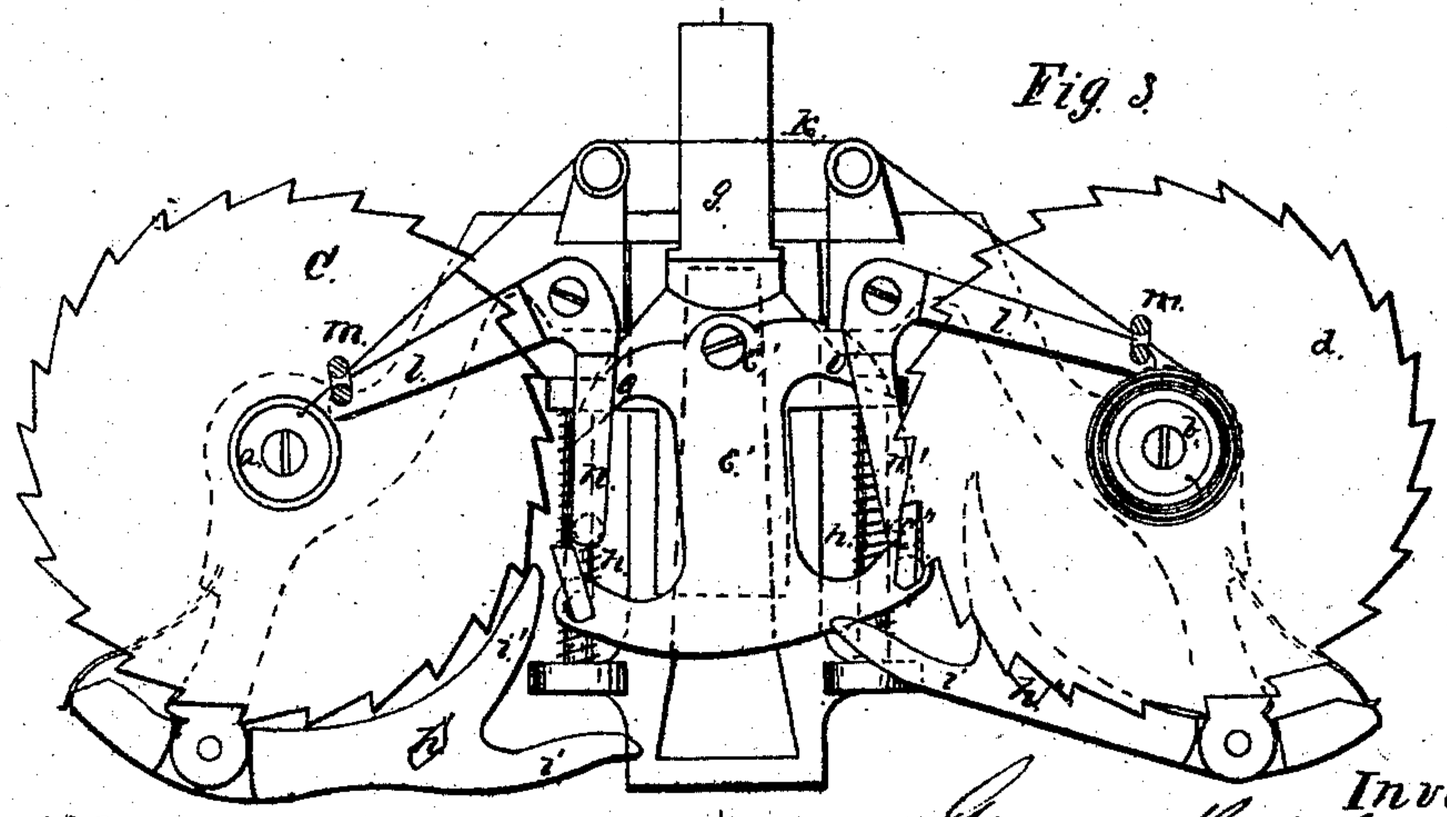

Fig. 3.

Witnesses

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2 SHEETS—SHEET 2.

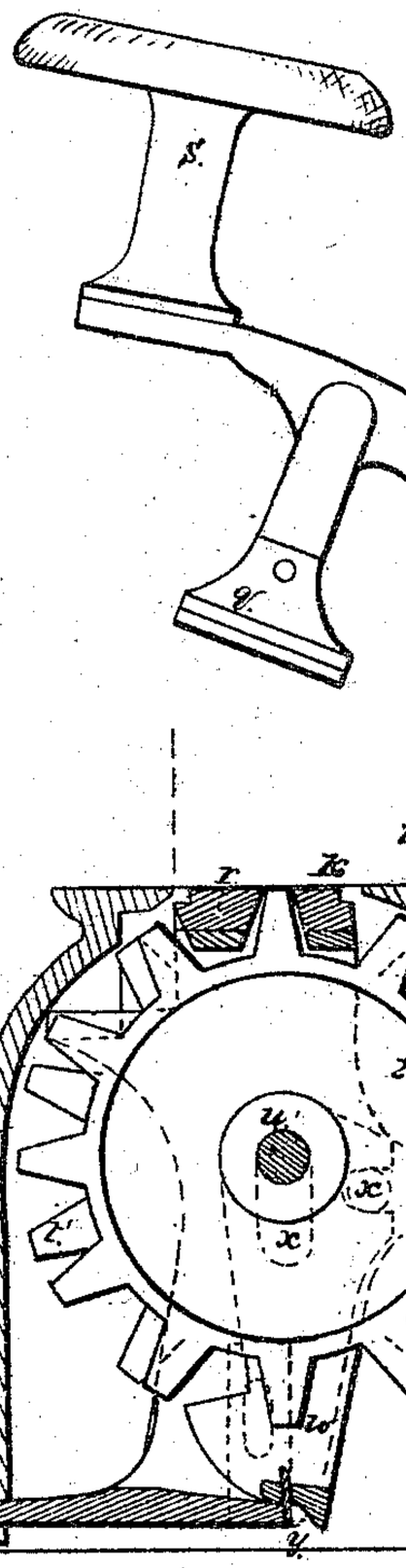

Fig 2.

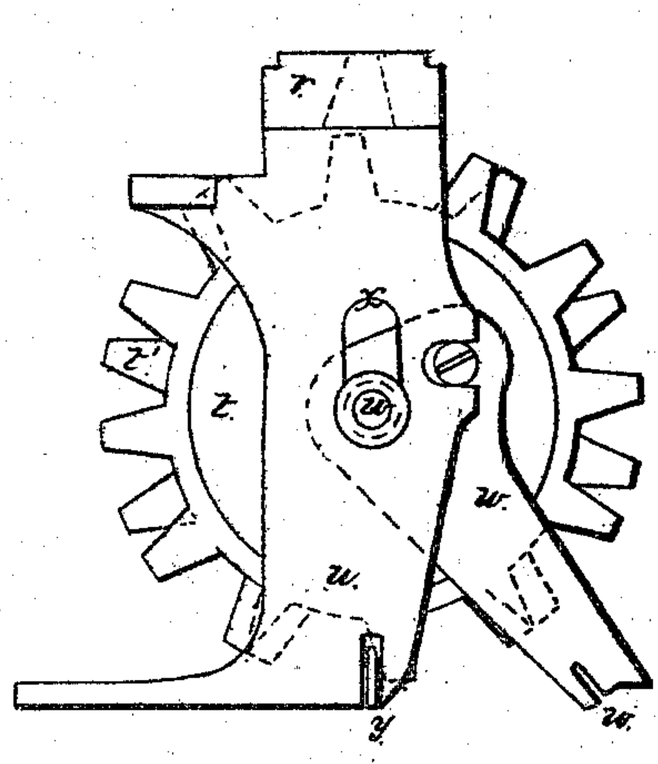

Fig 4.

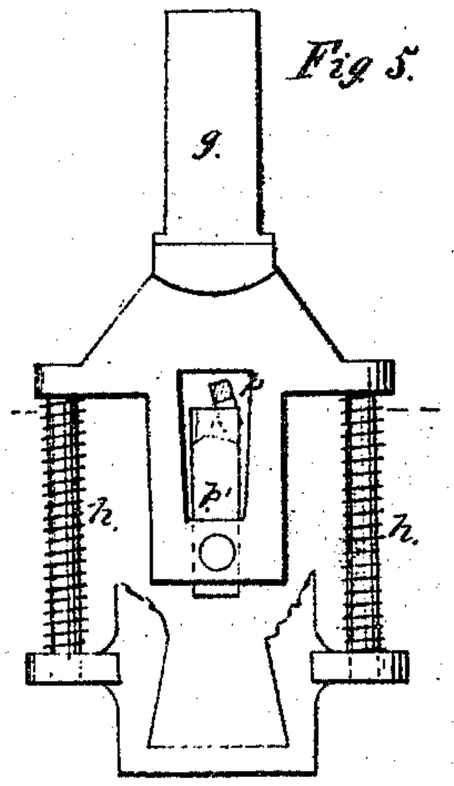

Fig 5.

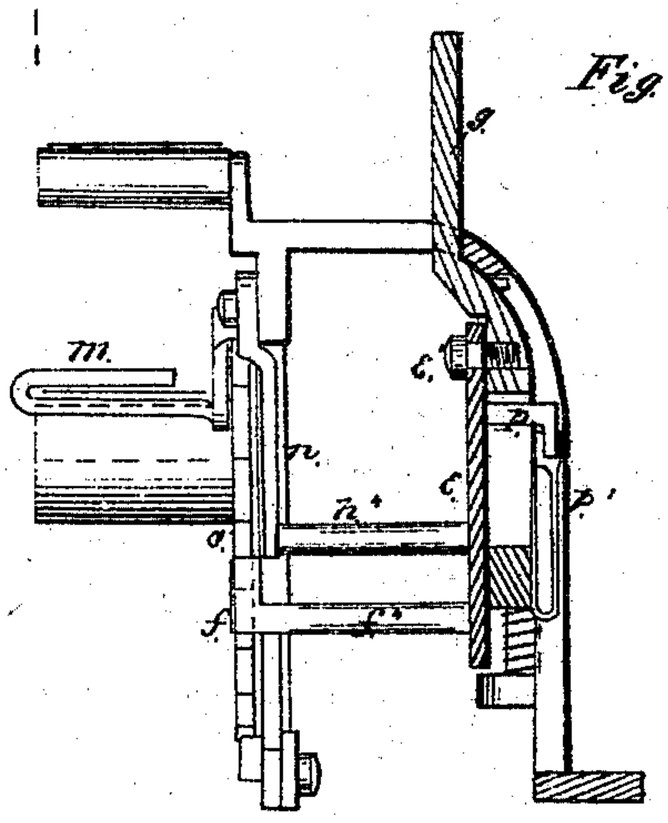

Fig 6.

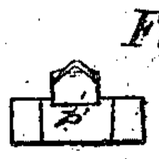

Fig 7.

Witnesses.

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UNITED STATES PATENT OFFICE.

GEORGE BAILEY, OF BUFFALO, NEW YORK.

IMPROVEMENT IN PRESSES FOR STAMPING TICKETS, &c.

Specification forming part of Letters Patent No. **36,763,** dated October 28, 1862.

To all whom it may concern:

Be it known that I, GEORGE BAILEY, of Buffalo, Erie county, New York, have invented certain new and useful Improvements in Hand Stamping-Presses for Tickets, &c.; and I do hereby declare that the following is a full, clear, and exact description of the same, reference being made to the annexed drawings, making a part of this specification, in which similar letters indicate similar parts throughout the figures.

The object of my invention is, principally, to insure a more perfect working of the inking apparatus, as well as a convenient method of changing dates and numbers in the fixed form of types upon the bed of the stamp-press.

In the class of stamp-presses upon which my improvements are based the inking is effected by a ribbon saturated with properly-prepared ink. This ribbon lies over the type, and the paper being placed upon it the platen is brought down, and pressure applied to cause the ink to be given off the paper. As it will only come off by pressure, all portions of the paper, except over the type, remain untouched. The ribbon is attached by each end to two drums, winding from one off to the other. The proper winding and unwinding of the inking-ribbon and the reversing of the motion of the drums by the act of stamping constitute a chief feature of my invention. It is important that the ribbon be regularly advanced after each impression of the stamp, as when this is not the case the inking will soon become bad, and the ribbon itself worn through and rendered useless long before it is actually exhausted of its ink. By my improvement at each impression the inking-ribbon is slightly moved along by reason of the motion imparted to one of the drums. This motion is continued until all the ribbon is transferred from one drum to the other. A certain mechanism then comes into play and effects a reversion, so that the empty drum now begins to wind from the full one, and so on until the ink is completely exhausted, when a new ribbon must be introduced.

The letters *a* and *b* represent the drums upon which the inking-ribbon is wound. These are supported upon a frame placed within the base-plate of the stamp and revolve beneath the bed. Each drum has a ratchet-wheel, *c d*, attached, the notches of which are cut in opposite directions. Between these ratchet-wheels are two pawls affixed to the opposite ends of a vibrating plate in such manner that when one pawl is engaged the opposite will be disengaged, and it is by the shifting of these pawls from one ratchet-wheel to the other that the inking-ribbon is made to travel back and forth, as described. At *e* is shown the plate vibrating upon a pin, as *e'*. The pawls are at *f* and *f'*, Figs. 3 and 6. The plate *e* is placed back of the ratchet-wheels, as seen in Fig. 6 in section. Consequently the pawls are at the ends of two arms, *f''*, which project forward far enough to take into the ratchet-teeth. The pin *e'* secures the plate *e* to a slide-bar, *g*, which has an up-and-down motion given to it by the act of stamping. The slide-bar is shown detached in Fig. 5. When forced down, it is against the pressure of two springs, *h*, the recoil of which raises it again. As *e* is carried up, one of the ratchet-wheels (according to which of the pawls is engaged) will be moved one notch. In the drawings the ratchet-wheel *d* is that one being operated upon by the pawl *f'*. At h^2 and *h''* are two back catches or stops to hold the ratchet-wheels in position. The stop is a pin affixed to the side of a hooked lever, *i i'*, each forked end being placed in the path of one of the pawls, so that when the pawls are engaged or disengaged they will effect the like operation for the stops, since the stop must be disengaged from that ratchet and drum from which the ribbon is being unwound, as seen in the ratchet *c*. The plate *e*, it will be seen, inclines toward the ratchet *d*, thus engaging the pawl *f'*. It is now made to incline toward the ratchet *c*, and as this change is produced on the downstroke of the pawl-plate the arm *f''*, Fig. 6, will strike the fork *i*, Figs. 1 and 3, and disengage the stop *h'*, while on the upstroke the arm to the pawl *f* will strike the fork *i'* and engage the stop *h'* with *c*.

The means by which the shifting of the pawls is effected is as follows: The inking-ribbon is shown at *k* in the several figures. In Fig. 1 the ribbon is shown as about equally divided on the drums *a* and *b*, and is being unwound from *a* in the direction of *b*. In Fig. 3 it is shown as being all on drum *b*, and

the parts are in that position by which the change of pawls will be effected by the next stroke of the stamp, and *a* will then begin to wind from *b*. At *l* and *l'* are two cranked levers supported between the two wheels. One arm of the levers terminates near the drum, and has projecting from it a guide-piece, which is a bent wire to form a narrow slot, as seen at *m* in Fig. 6, through which the ribbon *k* passes on its way from one drum to the other. The two arms on the other side of the axis-pin stand nearly vertical, as shown at *n* and *n'*. From the lower end of these a pin projects back as far as the plate *e*, as seen at *n''*, Fig. 6. The plate *e* has two arms branching from its upper end, as seen at *o* and *o'*, Fig. 3. These arms stand directly over the pin *n''* in the cranked levers, and would strike said pins at every descent of the plate *e* were they not kept out of the way by the inking-ribbon so long as there is any on both drums; but so soon as either drum is unwound the pin *n''*, Fig. 6, on one of the cranked levers interferes with the the arms *o* and immediately effects the shifting of the pawl to the ratchet-wheel attached to the empty drums, and thus reverses the motion. As the plate *e* inclines from the perpendicular when either pawl is engaged, there must be some contrivance to keep it in position. At *p*, Fig. 6, a bent pin is shown extending from the back. The crooked end of the pin acts upon a springs, *p'*, on the end of which there is an angle-piece, shaped as seen in Fig. 7. The plate is thus kept inclined in either direction, according to which side of the spring *p'* the pin *p* stands.

The platen of the stamp is affixed to a handle or lever, as shown at *q*, in the usual manner. Immediately beneath, at *r*, is the form of type upon which the inking-ribbon *k* lies. The lever *q'* rests upon the top of the slide *g*, as seen in Fig. 2, the slide keeping the handle always elevated by the force of the coil-springs *h*. The operation of this portion of the stamp is as follows: The ticket, letter, or other article on which the impression is to be made is laid lightly on the inking-ribbon which overlies the form of types. The lever *q* is then brought down by means of a smart blow given by the palm of the hand upon the knob *s*, so as to cause the face of the platen *q* to be brought down upon the paper with the requisite force. The ink from the ribbon will then be given off to the paper wherever it receives pressure, and as this is only on the surface of the types the letters are thereby printed. The bringing down of the lever causes the slide *g* to desend, carrying down the pawl-plate *e*, and causing the pawl *f'* or *f*, as case may be, to engage a ratchet-tooth. The hand being raised from the knob, the upward movement of the slide takes place, and the ratchet-wheel is accordingly moved one notch, and the inking-ribbon receives accordingly a slight movement past the type-bed. The proper tension of the ribbon is effected by the force required to turn the drum from which it is being unwound, and which tension is regulated by a friction-spring or other equivalent device. As the ribbon is being unwound the shifting-lever gradually approaches the center, since the diameter of the roll diminishes until all is unrolled, as shown in Fig. 3, when the stop *n''* on the cranked end *n* will stand directly in the path of the travel of the arm *o*, so that at the next downstroke of the stamp that arm will strike and shift the plate *e*, causing the pawl *f'* to be disengaged from *d*, and pawl *f* to engage *c*, shifting at the same time the back checks *h'* and *h''*, as already described. The inking-ribbon will then unwind from *b*, while being rewound on *a*. This goes on until the arm *n'* of the opposite cranked lever is brought into range with the arm *o'*, which takes place as soon as the drum *b* is empty and the pawls are shifted, as already described.

The type on the bed of the machine, except those for the dates, is usually a form of fixed matter, as a stereotype or electrotype, being commonly a business card of the party using the stamp, and is held in place in an opening in the bed, as seen at *r* in section, Fig. 2. As the days of the month require to be removed and replaced daily and the names of the months on the first of each month, it is most convenient to have the type for those on a revolving wheel, and such a wheel is shown at *t* in Figs. 1, 2, 4. The types for the months are on a separate wheel, while those for the numbers of days of the month are on two others, as at *t' t''*, all revolving on one axis. The type are on arms placed radially from the circumference of the wheels, as shown. On the stereotype-plate *r* there is an opening by which these movable type are inserted and removed, as shown in Fig. 2. This is accomplished by raising and lowering the type-wheels on their axis-pin. The type-wheels are suspended between the plates *u*, standing parallel and framed together. This frame is screwed to the under side of the bed-plate in such manner that the type-wheels will be directly under the opening in the stereotype-plate, as shown in Fig. 2. The type-wheels are raised and lowered by a pair of crank-shaped plates, *w*. The axis-pin of *t* is held by these crank-plates, as shown at *w'*, Fig. 4, while its two ends project through a guide-slot, *x*, in the plates *w*. The crank-shaft *x'* is also held in the plate *u*.

In Figs. 2 and 4 are shown the two positions of the type-wheels. In Fig. 2 it is represented raised, with a set of types on the arms elevated into place in the stereotype-plate. In Fig. 4 it is shown lowered, and when so lowered the legs of the crank *w* are moved from their perpendicular position between the plates *u* and turn on the crank-shaft *x'*. The type-wheels then stand clear of the stereotype-plate and can be freely revolved.

In order to set the type, turn the wheel having the names of the months upon it until the proper one is under the opening in the type-

plate *r*. Next, move the number until the proper combination is found to give the date. Across the bottom of the plate *u* there is a bar, which slides up and down and forms a gage-plate and locking-bar to keep the cranks in position when the type-wheels are up. The bar is shown at *y*, and it plays in a slot in the frame *u*, and is held in position by a clamping-nut, *y'*, Fig. 1, which screws into a piece turned up against the side of *u*. The loosening of this nut allows the bar to move up and down. In the end of the crank *w* at *w''*, Fig. 4, is also a slot, as shown. When the type-wheel is raised, this slot comes in line with that in *u*, the bar being first lowered out of the way. The bar is then raised and enters *w''*, and, being held by the clamp-nut, the type-wheel is firmly held in position. To use the bar as a gage, the type-wheels having been lowered, as in Fig. 4, the bar *y* is raised again in the slots in *u*. The different wheels are then turned until the type for the month and the numbers indicating the day of the month are brought to a near position to the opening in the stereotype-plate *r*. The series of arms directly opposite to these are next brought to bear against the bar *y*, and this brings the arms on the three wheels in a line, so that the type above will readily enter the type-plate on the raising of the wheel.

At *z*, Fig. 2, is shown a guide-plate screwed to the bed back of the form of type, and in such manner that it can be brought to or from it, as desired. The object of this plate is simply to secure the printing to be done on the proper part of the letter or ticket.

I claim—

1. The combination, with the inking-ribbon and pawls, of two shifting-levers or other equivalent device, so arranged in respect to the plate or arm to which said pawls are attached as to effect the shifting or reversing of the direction of travel of the inking-ribbon, in the manner substantially as described herein.

2. In combination with the stamp-press and inking-ribbon, a set of numbering or dating type-wheels arranged and operating substantially in the manner set forth.

In witness whereof I have hereunto subscribed my name.

GEO. BAILEY.

Witnesses:

J. P. PINSSON,

S. H. MAYNARD.