

No. 676,083.

Patented June 11, 1901.

E. G. BATES.
NUMBERING AND DATING MACHINE.

(Application filed Aug. 18, 1898.)

4 Sheets—Sheet 1.

(No Model.)

Fig. 1^a

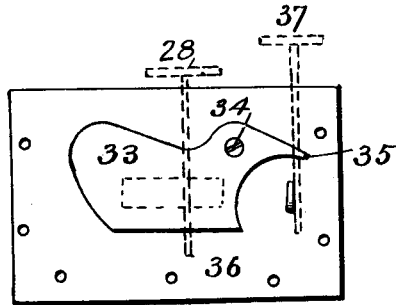


Fig. 1.

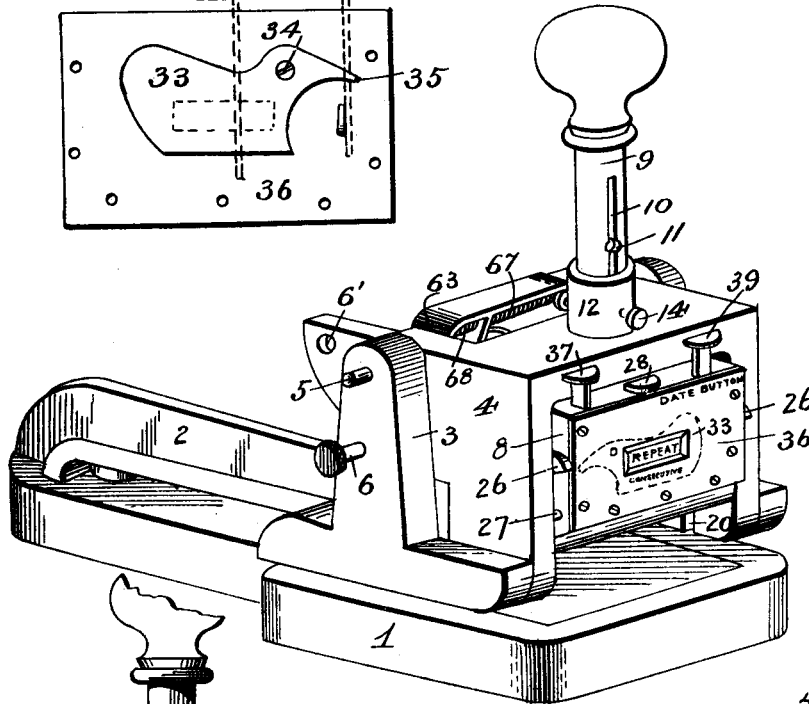


Fig. 20.

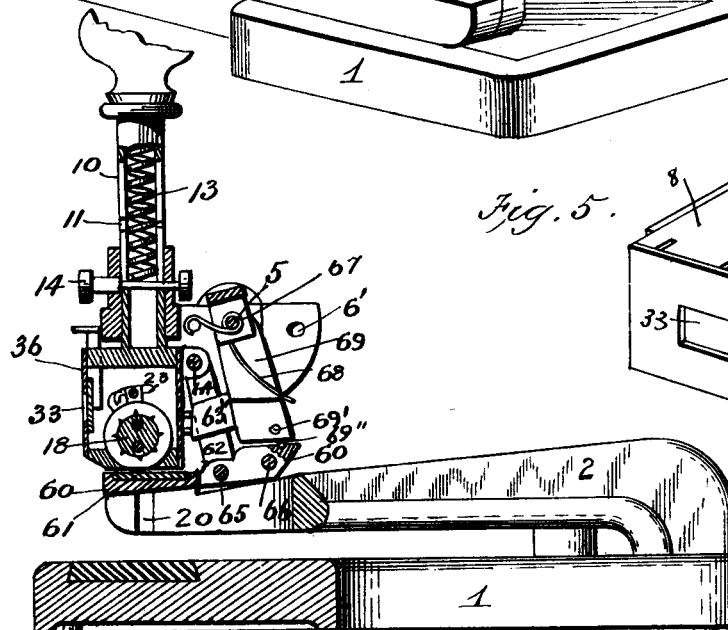
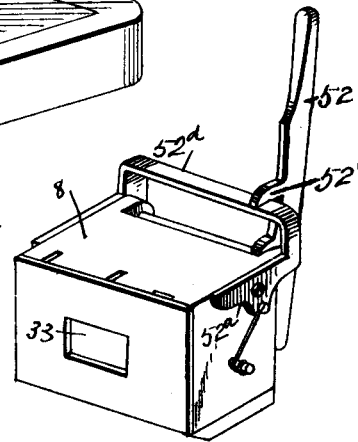


Fig. 5.



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4 Sheets—Sheet 2.

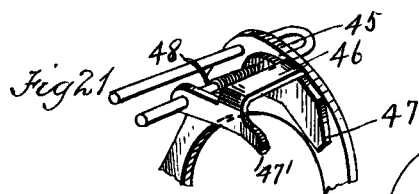


Fig. 2.

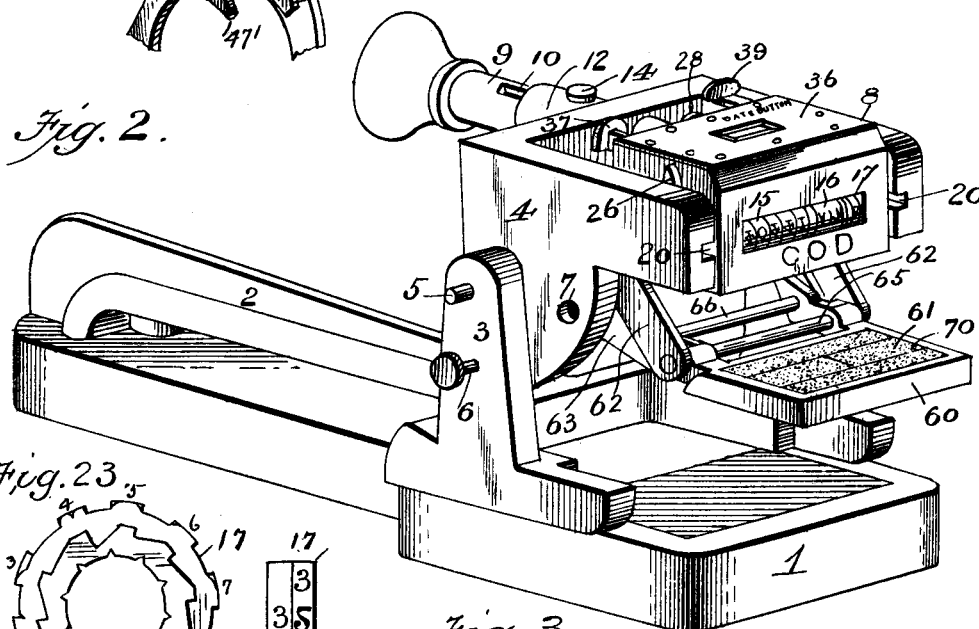


Fig. 3.

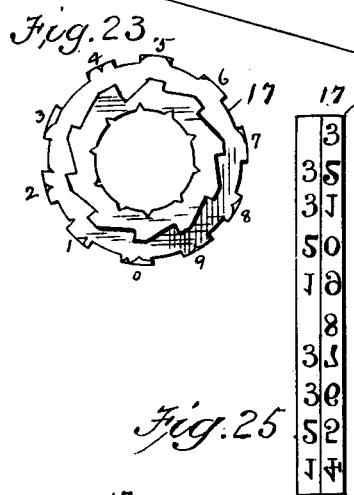
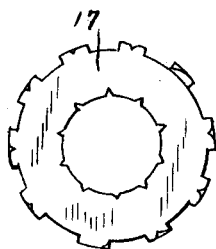
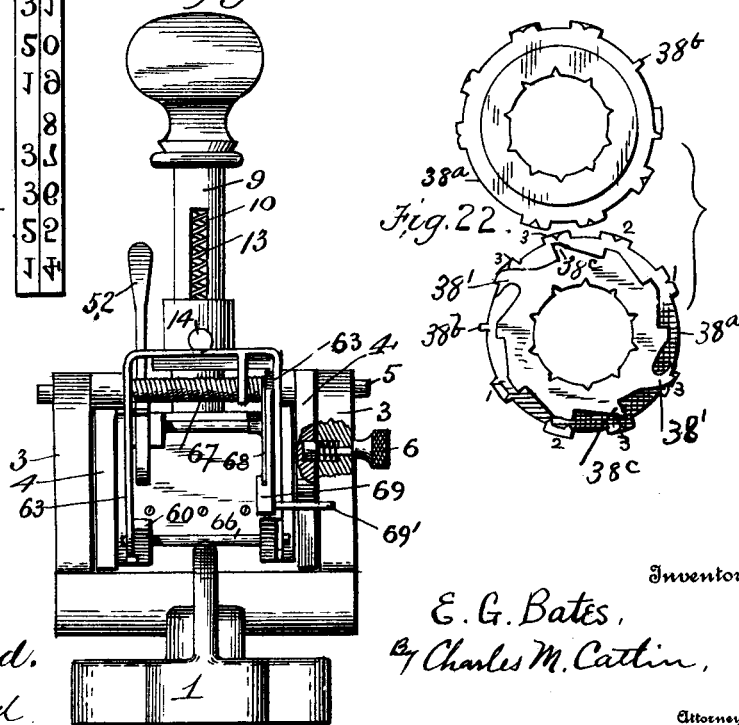


Fig. 25



Aug. 24.



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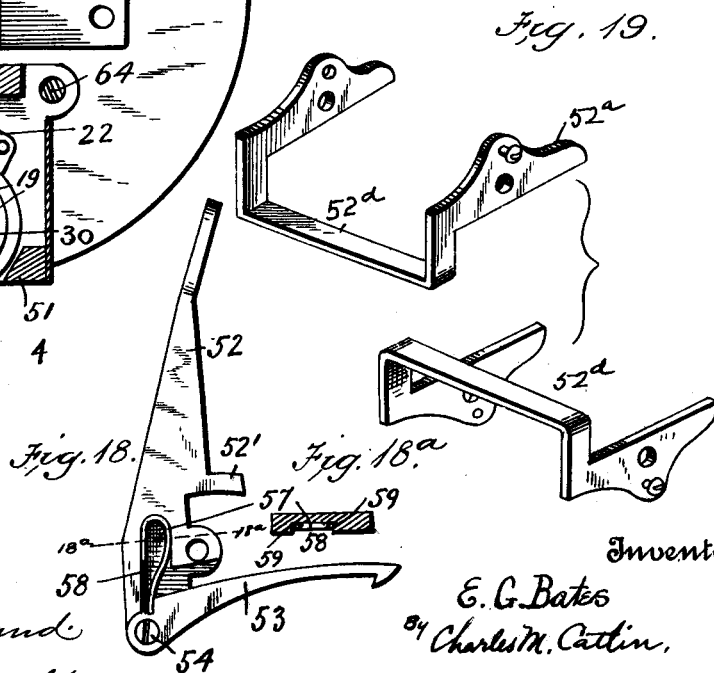
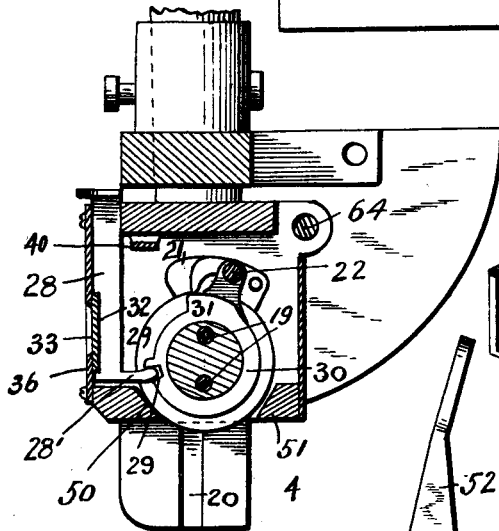
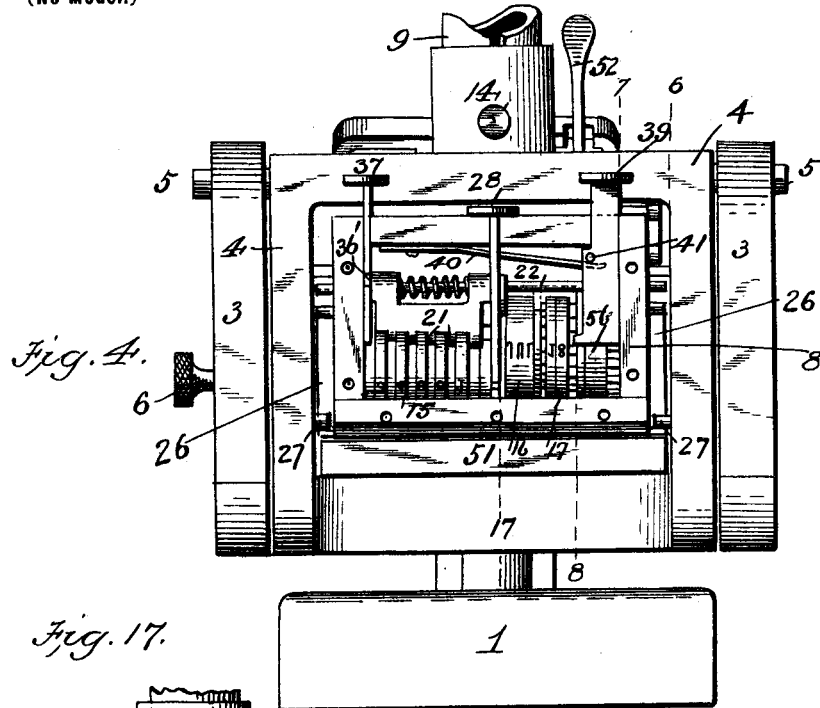
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4 Sheets—Sheet 3.



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(Application filed Aug. 18, 1898.)

4 Sheets—Sheet 4.

(No Model.)

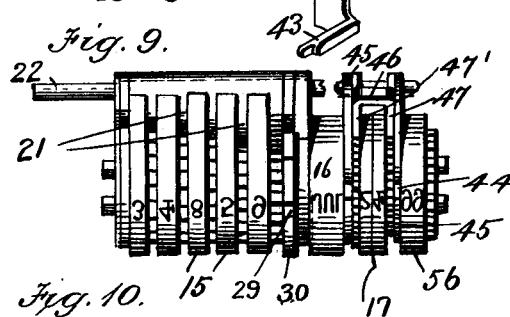
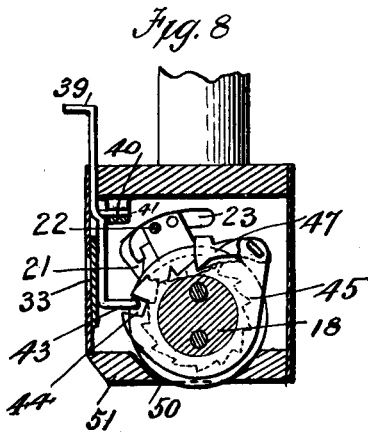
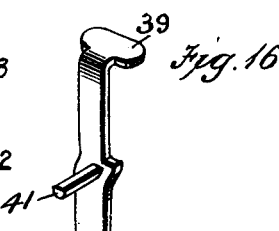
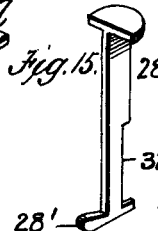
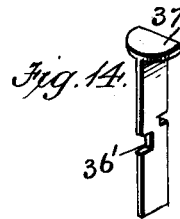
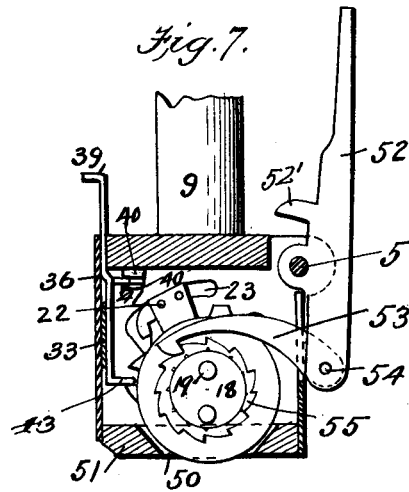
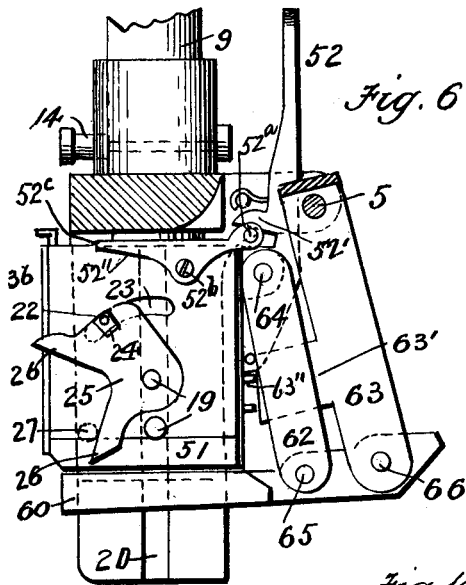


Fig. 12.

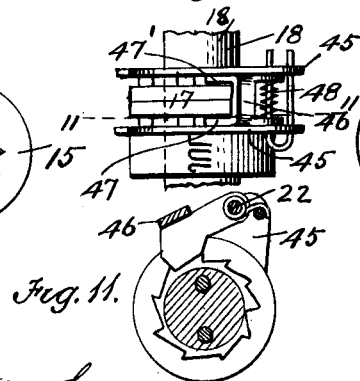
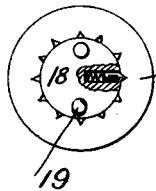


Fig. 11.

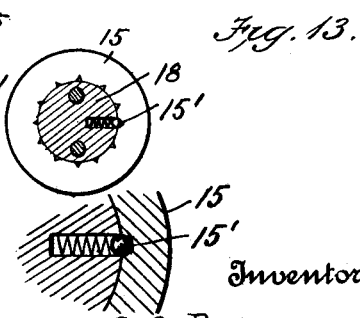


Fig. 13.

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UNITED STATES PATENT OFFICE.

EDWIN G. BATES, OF NEW YORK, N. Y., ASSIGNOR TO THE BATES MACHINE COMPANY, OF SAME PLACE.

NUMBERING AND DATING MACHINE.

SPECIFICATION forming part of Letters Patent No. 676,083, dated June 11, 1901.

Application filed August 18, 1898. Serial No. 688,904. (No model.)

To all whom it may concern:

Be it known that I, EDWIN G. BATES, a citizen of the United States, and a resident of New York, in the State of New York, have
5 invented certain new and useful Improvements in Numbering and Dating Machines, of which the following is a specification.

This invention relates to numbering and dating machines, preferably also having a die
10 for printing additional matter.

In the drawings, Figure 1 is a perspective view of the machine in its normal condition. Fig. 1^a is a rear view of the face-plate and its shutter. Fig. 2 is a perspective view of the
15 machine, the head being turned back to extend the ink-pad for reinking. Fig. 3 is an end view looking from the left of Fig. 1. Fig. 4 is an end view, enlarged, looking from the right of Fig. 1. Fig. 5 is a side view with
20 parts broken away. Fig. 6 is a sectional view on line 6 of Fig. 4. Fig. 7 is a similar view on line 7. Fig. 8 is a sectional view of the head on line 8 of Fig. 4. Fig. 9 is a front view of the printing-wheels removed from the
25 machine. Fig. 10 is a side view of the date-wheels and pawl device for advancing them. Fig. 11 is a section on line 11 11 on Fig. 10. Fig. 12 is an end view of the printing-wheel axis with wheels thereon, a part being broken
30 away to show an old means for holding the wheels in position. Fig. 13 is a like view of an improved form of holding device. Figs. 14, 15, and 16 are perspective views of three push-buttons. Fig. 17 is a sectional view on
35 line 17 of Fig. 4. Fig. 18 is a side view of a pawl and lever. Fig. 19 shows perspectives of an ink-pad-lifting device in two positions. Fig. 20 is a perspective view showing a modified lever connected to the head. Fig. 21 is
40 a partial perspective of the step-pawl for the day-of-the-month-printing wheels. Fig. 22 shows side views of both sides of one of said wheels. Fig. 23 shows a side view of the other of said wheels on the ratchet side. Fig. 24
45 is a side view of the same on the opposite side, and Fig. 25 is a plan view of the date-number wheels developed to show the arrangement of figures on their peripheries.

This machine is designed especially to aid
50 in systematizing the auditing of "C. O. D." and charge or other accounts, printing any

wording required by means of an engraved die-plate, in conjunction with the number and date of the transaction; but the utility of the machine is not limited to the uses named. 55

1 is a base having an arm 2 with standards 3, supporting the frame or body 4, with sides and top but open at the bottom, pivoted at 5 to the standards.

6 is a pin which normally engages hole 7 in 60 a rearwardly-extending wing of the frame and holds said frame in the position shown in Fig. 1—that is, in the position which it must occupy when the machine is used.

8 is the printing-head, carried by frame 4 65 and having a tubular handle 9 with a slot 10 enlarged at 11, the handle being adapted to be reciprocated in the sleeve 12 of frame 4, being normally raised by spring 13.

14 is a pin having a part of small diameter, 70 which passes through slot 10, and a part which can only enter the slot at enlargement 11. The lower end of spring 13 rests on the pin.

The head 8 comprises a suitable frame in which are a set of automatic numbering- 75 wheels 15, a month-printing wheel 16, and day-of-the-month-printing wheels 17, which form a second set of number-wheels, and year-wheels 56, all mounted on a non-rotary axis 18, from the ends of which project pins 80 19, adapted to hold the axis from rotation and to travel up and down in grooves 20 of frame 4 when the head is moved in the act of printing. Heretofore I have held the printing-
85 wheels in any position to which they were set on the axis by pointed pins in holes in the axis and pressed out by springs to engage notches in the wheels 15, as shown in Fig. 12; but I find that round balls 15', of steel or other suitable material, as shown in Fig. 13, are 90 preferable to the pins. Said number-wheels 15 are advanced in a usual manner by the stepped pawls 21, pivoted on rod 22, the ends of which project through curved slots 23 in the ends of the frame of the head. Each pro- 95 jecting end of pin 22 is engaged by a notch 24 in a plate 25, pivoted on the upper pin 19 between the head and frame 4 and having prongs 26, spreading toward the front of the machine. Between the prongs on the inside 100 of frame 4 are pins or projections 27, which as the head moves up and down turn plates

25, advancing and returning the stepped pawls, and in one condition of button 28 advancing one or more of the number-wheels, so as to print numbers consecutively. If it
 5 be desired to print the same number repeatedly instead of numbers consecutively, the button 28 is depressed to the position shown in Figs. 1, 4, and 17. The button has a projection 28', which engages a notch 29 in a ring
 10 30, movable on the axis 18 and having a cam projection 31, which as the ring is turned moves under the stepped pawl-plate, as shown in Fig. 17, and holds the pawls away from their ratchet-wheels, thus preventing the
 15 turning of the number-wheels by the act of printing. The push button or bar 28 has a notch 32 in its front edge which engages the indicating-plate 33 on the side of pivot 34 away from point 35. In Fig. 1^a the positions
 20 of buttons 28 37 relative to the plate are indicated in dotted lines.

The front of the head is provided with a removable face-plate 36, having a single central opening, behind which is the indicating
 25 plate or shutter 33, having on its front side the words "Consecutive" and "Repeat" (see Fig. 1) so located that when one is visible the other is hid by the face-plate. End 35 of plate 33 is engaged by notch 36' of push-button 37, Fig. 14. When button 37 is up,
 30 the word "Repeat" is visible, as in Fig. 1. When said button is down, the plate is shifted so that the word "Consecutive" is visible and "Repeat" is hidden to indicate the character of numbering the machine is set to
 35 print, and by the shifting of said plate button 28 is raised, turning ring 30 and carrying cam 31 from under the stepped pawl-plate, so that the machine will print numbers consecutively.

The wheels 17 for printing the days of the month, which form a second set of number-wheels on the axis 18, are advanced daily by manually depressing the date-button 39, which
 45 is normally held up by spring 40 pressing on pin 41. The button 39 has a projection 43, which engages a notch 44, Fig. 8, in one of the rings 45, adapted to turn on axis 18. Said rings carry a pawl-plate 46 with pawls
 50 47 47' for advancing the date number-wheels 17. 48 is a spring pressing the pawls toward the ratchet-wheels. Pawl 47' is slightly shorter than pawl 47 and does not operate its ratchet except when pawl 47 drops into a deep
 55 notch in its ratchet, or when the last plain tooth 38^c of one of the groups of teeth, which tooth in each group is a little higher than the first three teeth of the group, but not quite as high as teeth 38', is in position to be engaged by said pawl, or finally when either
 60 of the long gooseneck-shaped teeth 38' is in position such that the notch on its outer end will be engaged by said shorter pawl 47'. When a month has less than thirty-one days
 65 and the last day is printed, button 39 is depressed one or more times to bring the wheels

in position to print "1" for the beginning of a new month. The units date-wheel has a plain ratchet, which, however, has a single deep notch, (see Figs. 11 and 23,) and the
 70 numbers on the peripheries run from "0" to "9." The other date-wheel has a ratchet with two groups of ratchet-teeth of ordinary form and two elongated teeth 38' at diametrical points, and the numbers on the periphery are in two groups, each group reading
 75 "1" "2" "3" "3," with a space between groups. (See Fig. 25.) The spaces between groups may be blank, as at 38^a, Fig. 22, or may have a dash-printing device, as at 38^b. 80 If numeral "1" of the units-wheel and one of the spaces between the groups of figures on the tens-wheel be in printing position, at each depression of the printing-head the long pawl 47 will move the ratchet of the units-wheel 85 and said units-wheel one space, the tens-wheel remaining stationary until "9" has been printed. At the next movement the long pawl 47 falls into the deep notch of its wheel, allowing the shorter pawl to engage the tens-wheel ratchet, so that both wheels are advanced together in the usual manner, and so on until "30" has been printed. Up to this point the short pawl 47' has operated on the first three plain teeth of one of the groups on
 95 the tens-wheel ratchet. The last—that is, the fourth—plain tooth of each group being higher than the first three teeth of the group, at the next operation pawl 47' engages the tooth, notwithstanding the fact that the
 100 longer pawl 47 does not fall into a deep notch, the result being that the next operation advances both wheels and sets up "31" in the printing-line. At the next operation the short pawl catches in the ratchet-tooth on the outer
 105 end of the next and longer tooth 38', the end of this tooth being at such height that when engaged by the shorter pawl it holds the longer pawl 47 from its ratchet. The next movement, therefore, advances the tens-wheel, the units-wheel remaining stationary, thus leaving the "1" of the units-wheel only in printing position. At the next movement the shorter pawl does not engage a ratchet-tooth, but moves into the space under the
 115 long tooth 38^c without advancing its wheel, and so on at each operation until the long pawl again reaches the deep notch of its ratchet. This lowers pawl 47', so that it will advance its wheel, (using the first plain tooth of the group,) and so on, as above described.

Lever 52 has a projection 52', which engages a lever 52'', pivoted at 52^b to the head. When lever 52 is moved to advance the year-wheel, projection 52' strikes a pin 52^a, projecting horizontally from lever 52'', turning the lever on its pivot 52^b, causing the end 52^a to move against the top of body 4, thus moving the numbering-head downward, which movement through links 62 63, to be described, carries the ink-pad away from the wheels before the wheel advanced by lever 52
 125
 130

and pawl 53 begins to move. Evidently the utility of lever 52" is not limited to a machine having but one lever 52.

54 is the pivot of pawls 53 and is moved forward by the bent and approximately U-shaped spring 57, which is firmly and easily secured in place by being pressed into a depression 68, having undercut or grooved edges 59, Fig. 18.

10 Instead of lever 52", pivoted to one side of the head, I may use the device shown in Fig. 19, the sides of which are to be pivoted to opposite sides of the head, and the cross-bar 52^d serves the same purpose as pin 52^a. This form of lever is preferred when several handles 52 are employed.

60 is a holder for the ink-pad (or preferably for several pads) 61. The holder is supported and operated by links 62 63, the former being pivoted to the head at 64 and the latter pivoted on the fixed pin 5 in standards 3. The lower ends of the links are pivoted to the pad-holder, respectively, at 65 and 66. The two links or arms 63 are connected at 25 the top. By depressing the head in the act of printing the link 62 throws the pad back out of the way of the printing-surface. Link 63 has an extension 63', which strikes against the head or against projecting pins 63" on the head, thereby forming means for preventing the ink-pad holder swinging too far front under the head.

67 is a spring which normally throws the pad-holder under the head.

35 68 is a spring pressing inward on the lower end of arm 69, pivoted on pin 5.

Arm 69 serves to lock the ink-pad against the bottom of the head when the latter is in an upright position. (See Figs. 3 and 5.) 40 When the head is being thrown back to the position of Fig. 2, pin 69', projecting from said arm, will strike one of the standards 3, stopping the swinging movement of arm 69, but allowing the holder to move from under the said arm, after which the head and holder can move into the relative positions shown in Fig. 2.

On the lower end of arm 69 is a small pin or projection 69", which when said arm is in locking position, Fig. 5, engages a shallow depression in the top of an arm of the ink-pad holder for the purpose of preventing arm 69 being accidentally swung outward; but this pin being short and the depression shallow 55 the pin will be crowded out of the depression when arm 69 is arrested, as above described.

To ink the pad, press down the handle and press pin 14 into enlargement 11 of slot 10, Fig. 1. Then throw the handle backward, as 60 in Fig. 2, and press pin 6 into hole 6' in body 4. This exposes the pad in horizontal position for inking, as shown in Fig. 2.

I may divide the pad-holder by partitions 70 and place pads 61 in the subdivisions for 65 different-colored inks—*e. g.*, red under the number-wheels and blue under the date-wheels.

Having described my invention, I claim—

1. The combination with a frame having standards, 3, a body pivotally supported on said standards having top and sides but open at the bottom, a printing-head supported by said pivotally-supported body and having a handle passing through the top of the body, a spring normally holding the head and handle up, means normally holding said pivoted body from turning on its pivot but adapted to release the body when desired, an ink-pad, and means operated by turning said body on its pivot for exposing the pad in approximately horizontal position for inking.

2. The combination with a frame having standards, 3, a body pivotally supported on said standards having top and sides but open at the bottom, a printing-head supported in said body having a handle passing through the top of the body, a spring normally holding the head and handle up, said handle having a slot with enlargement near its center, a movable pin supported by said body and having a part adapted to enter said slot at the enlargement only, a pin in one of the standards normally engaging a hole in said body to hold the body and the printing-head in upright position.

3. The combination of a base having standards, a body 4 pivoted between the standards, said body having two holes 6', 7 at equal distances from the pivot, a locking-pin in one of the standards to enter one of the holes when said body is in an upright position and to enter the other hole when the body is turned to a horizontal position, a printing-head carried by said body 4, means for holding the head partially depressed, an ink-pad holder and pad, and means operated by depressing the head and turning it to horizontal position for moving the ink-pad from under the head into position to be inked.

4. The combination of a base having standards, a body 4 pivoted between the standards, said body having two holes 6', 7 at equal distances from the pivot, a locking-pin in one of the standards to enter one of the holes when said body is in an upright position and to enter the other hole when the body is turned to a horizontal position, a printing-head carried by said body 4, means for holding the head partially depressed, an ink-pad holder and pad, links 62 pivoted to the pad-holder and to the printing-head, links 63 pivoted to the pad-holder and to a fixed pivot for moving the ink-pad into position to be inked.

5. The combination with a numbering-head, normally in vertical position, the ink-pad holder, supporting and operating links for the pad-holder, a spring normally throwing the pad-holder forward under the head, a locking-arm, a spring normally holding said arm so as to engage and lock the pad-holder, and means operated by turning the head to horizontal position for disengaging the locking-arm.

6. The combination with the numbering-

head, normally in vertical position, standards 3, body 4, pivot 5 therefor, the ink-pad holder, supporting and operating links for the pad-holder, a spring normally throwing the pad-holder forward under the head, a locking-arm, a spring normally holding said arm so as to engage and lock the pad-holder, a pin 69' projecting from said arm in position to strike standard 3 and withdraw said arm from engagement with the pad-holder when the head is moved to horizontal position.

7. The combination of standards, body 4 pivoted thereto, a printing-head adapted to reciprocate in said body, an ink-pad holder, links 62, 63 and spring 67 for moving the holder, and means to limit the forward movement of the holder under the head.

8. The combination of standards, a body 4, pivoted therein, and a printing-head having number-wheels, a non-rotary axis therefor, pins projecting from the ends of the axis, there being grooves in body 4 in which said pins move, and means for advancing the number-wheels.

9. The combination of standards, a body 4 pivoted therein, and a printing-head having number-wheels, a non-rotary axis therefor, pins projecting from the ends of the axis, there being grooves in body 4 in which said pins move, plate 25 having separated horns 26, a projection 27 of said body 4 between said horns for turning the plate when the head is reciprocated, the printing-head having stepped pawls for advancing the number-wheels, and plate 25 connected to the stepped pawls so as to move them when the head is reciprocated.

10. The combination with the number-wheels, stepped pawls, non-rotary axis, and pins 19 projecting from the end of the axis, and a body with grooves in which said pins slide, of plate 25 pivoted on one of said pins, and connected to the stepped pawls so as to move them.

11. The combination in a numbering-machine, of number-printing wheels, means for advancing the wheels for consecutive printing, means to change the printing from consecutive to another order, a face-plate having a sight-opening, an indicator-plate pivoted at the rear of the face-plate and having a plurality of words thereon indicating the character of numbering the machine is set to print, one of which words is visible at the sight-opening in one position of the pivoted plate, and the other of which is visible in another position of said plate, and push-buttons on opposite sides of the pivot of said pivoted plate each engaging said pivoted plate for moving it on its pivot from one of its positions to the other.

12. The combination with the body 8, of a numbering-machine, number-printing wheels and means for controlling them, of a face-plate, having a sight-opening, an indicating-plate pivoted to the face-plate and covering the opening, push-buttons engaging the piv-

oted plate on opposite sides of its pivot, said push-buttons being in grooves in the body 8 and being held therein by the face-plate.

13. The combination with the body 8, of a numbering-machine, number-printing wheels and means for controlling them, of a face-plate, having a sight-opening, an indicating-plate pivoted to the face-plate and covering the opening, push-buttons having notches engaging the pivoted plate on opposite sides of its pivot, said push-buttons being in grooves in the body 8 and being held therein by the face-plate.

14. The combination of body 8, number-printing wheels therein, a stepped pawl-plate for advancing them, means operated in the act of printing for moving said pawl-plate, a cam which in one of its positions prevents the pawls operating, and in another position allows the pawls to operate, and two push-buttons, one being connected to the cam to move it in one direction, and the other connected to move it in the opposite direction.

15. The combination of body 8, number-printing wheels therein, an axis on which the wheels are movable, a stepped pawl-plate for advancing them, means operated in the act of printing for moving said pawl-plate, a cam-ring movable on said axis and which in one of its positions prevents the pawls operating, and in another position allows the pawls to operate, and two push-buttons, one being connected to the cam to move it in one direction, and the other connected to move it in the opposite direction.

16. The combination of body 8, a face-plate having a sight-opening, an indicator-plate movable over said opening, number-printing wheels therein, a stepped pawl-plate for advancing them, means operated in the act of printing for moving said pawl-plate, a cam which in one of its positions prevents the pawls operating, and in another position allows the pawls to operate, and two push-buttons one being connected to the cam to move it in one direction, and the other connected to move it in the opposite direction, the indicator-plate being also moved by said two push-buttons.

17. The combination with the body 8, number-printing wheels, stepped pawls therefor and means for moving them in the act of printing, of a separate set of number-wheels on the same axis, stepped pawls for the separate set of number-wheels, a face-plate having an opening therein, a pivoted indicating-plate, push-buttons operating on said indicating-plate on opposite sides of its pivot, said push-buttons also operating a device to change the order of printing the numbers.

18. The combination of lever 52 having a depression 58 with grooved edges 59, of a bent spring held therein, and a pawl pivoted to the lever and pressed by said spring.

19. The combination with the numbering-head, a pawl-operating lever pivoted to the head and having a projection, as 52', a lever

pivoted to the head having a part adapted when moved to depress the head, and having a part in the path of projection 52' so as to be moved thereby, an ink-pad holder, and means operated by downward movement of the head for moving the ink-pad holder.

20. In a numbering-machine the combination of a printing-wheel, a lever 52 and device moved thereby to advance said wheel, said lever having a projection, a lever pivoted to the head and moved by said projection said movement depressing the head, and an ink-pad moved from the printing-wheel before the latter begins to turn.

21. The combination of a units number-wheel having figures on its periphery from "0" to "9," a ratchet for said wheel, a tens-wheel having numbers in two groups both running "1, 2, 3, 3" with spaces between groups, a ratchet for the tens-wheel, stepped pawls the longer of which engages the ratchet of the units-wheel, a ratchet for the tens-wheel having regular teeth to advance said wheels as many times as there are figures in one of said groups by the shorter pawl, and said ratchet

gated teeth in position to be engaged by said shorter pawl after the last figure of a group has been used, said elongated teeth being of such length as to hold the longer pawl from its ratchet, whereby the units-wheel will be left in position to print "1," and the tens-wheel will present a space to the paper being printed.

22. The combination of a units number-wheel with figures on its periphery from "0" to "9," a tens-wheel having figures in groups running "1, 2, 3, 3" with spaces between groups, and means for advancing said wheels to print from "1" to "31" and then repeat, as set forth.

23. A figure-wheel having figures on its periphery in a plurality of groups each beginning at "1" and running consecutively to the highest number in the group, the last figure of each group being in duplicate, as set forth.

Signed this 22d day of July, 1898.

EDWIN G. BATES.

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