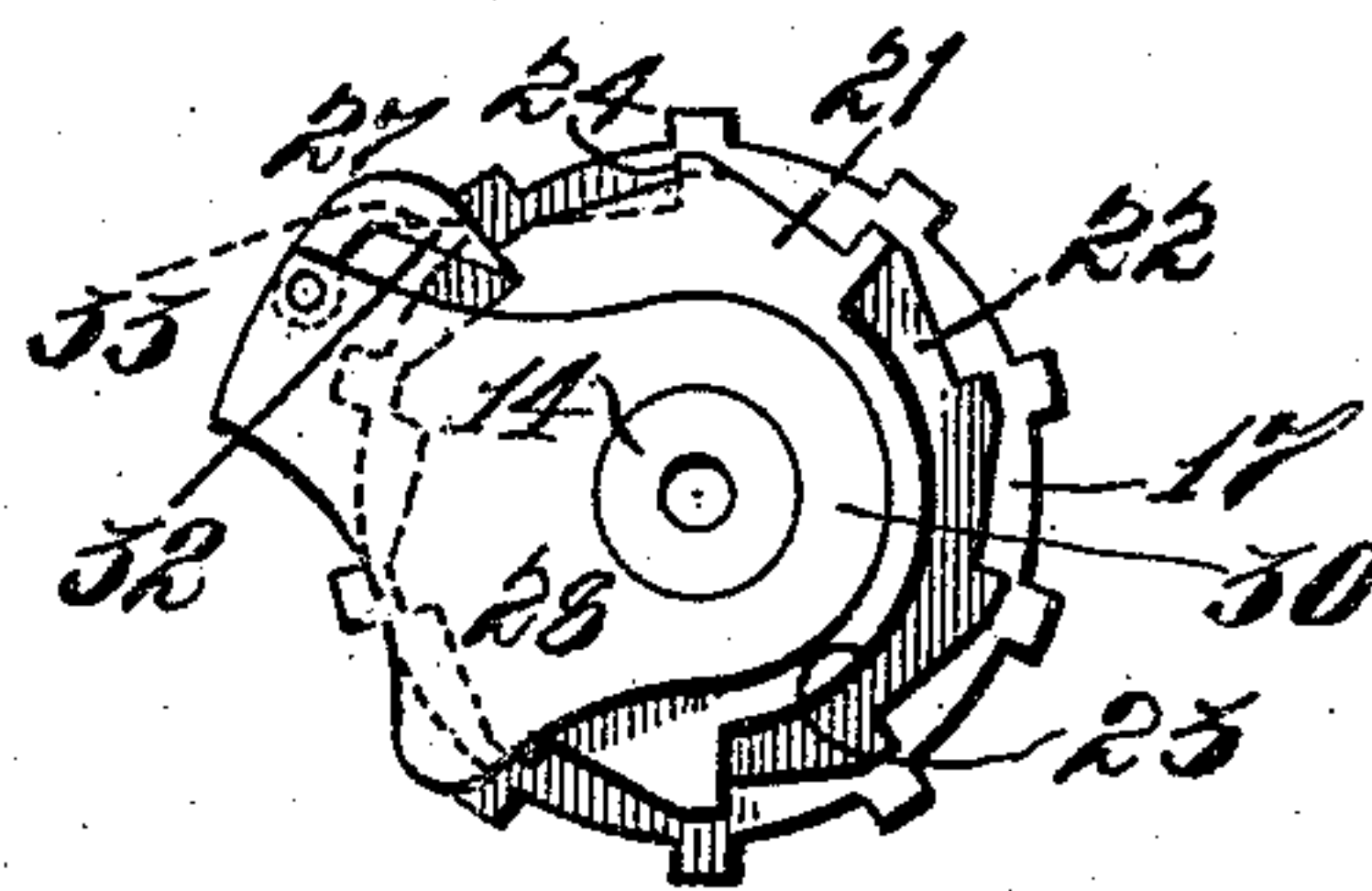
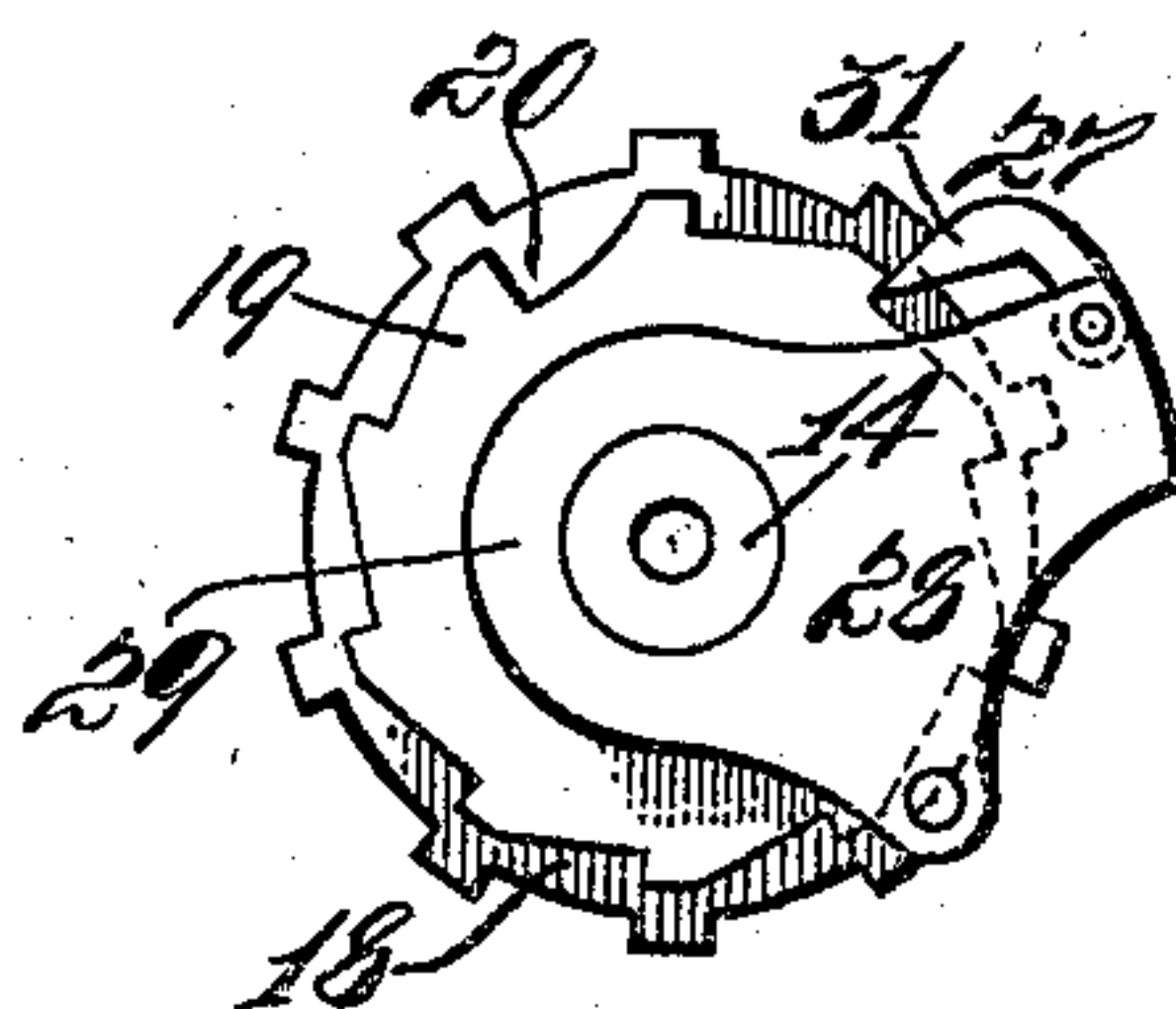
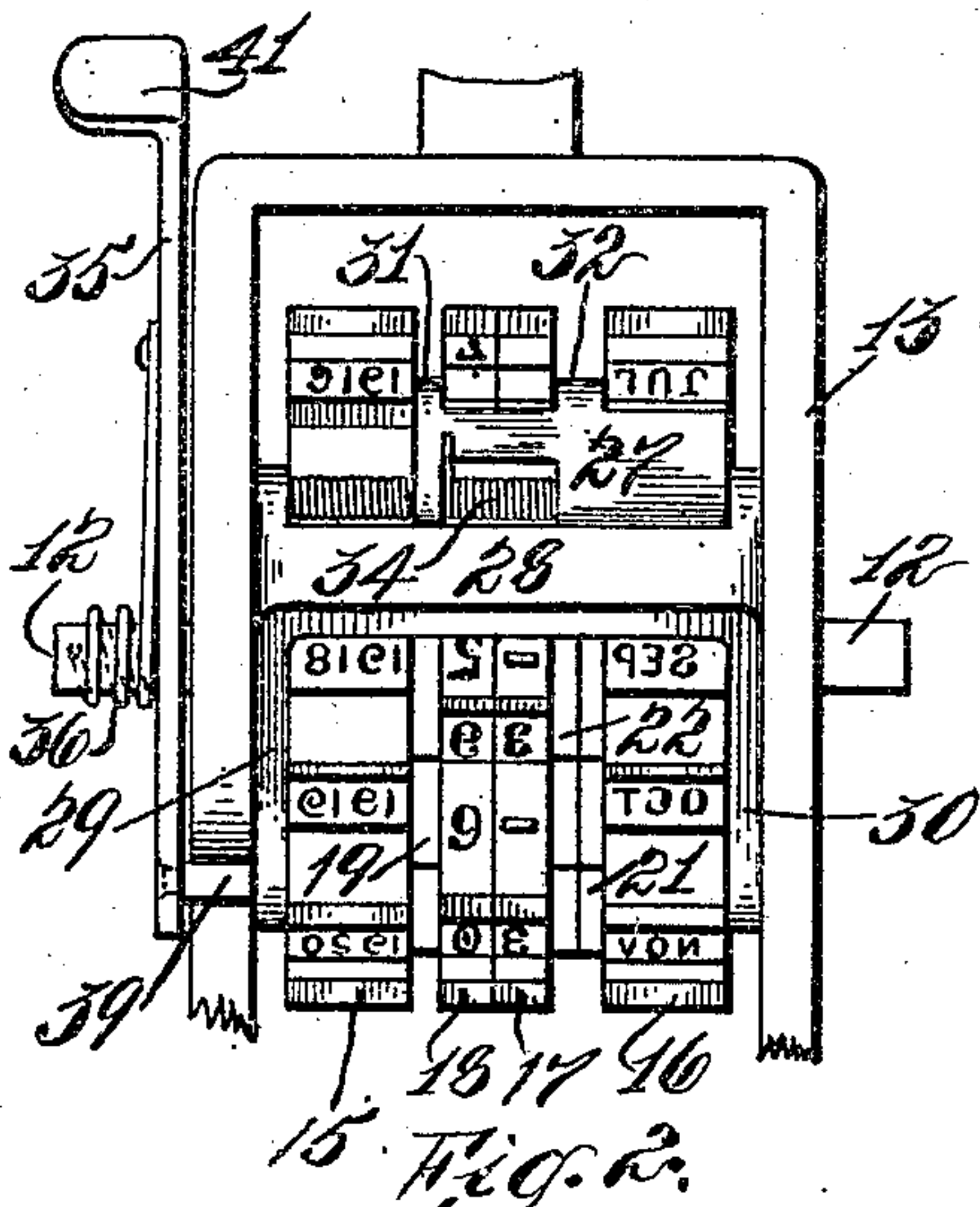
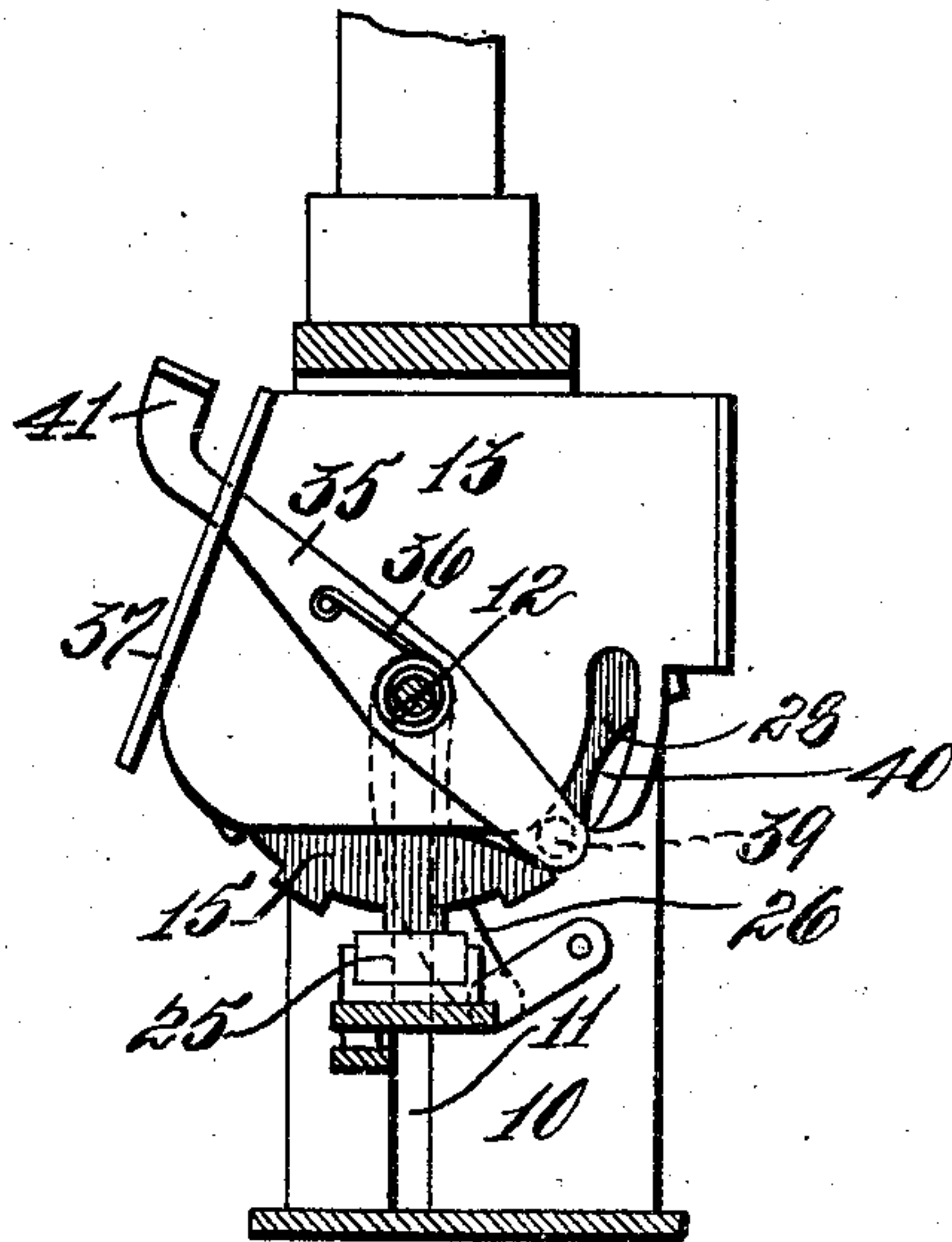
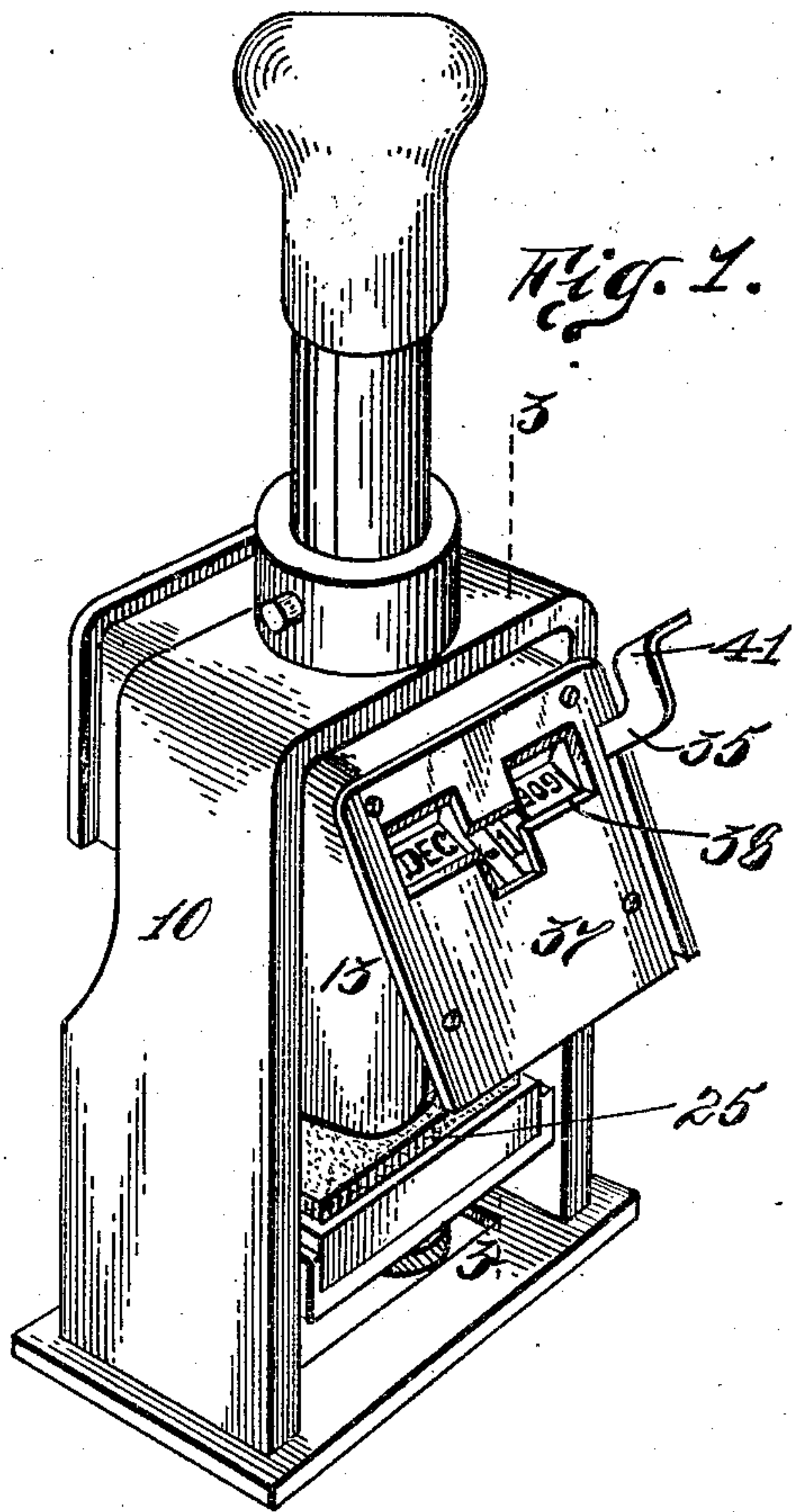


B. B. CONRAD.  
 DATING MACHINE.  
 APPLICATION FILED MAR. 1, 1909.

928,740.

Patented July 20, 1909.

2 SHEETS—SHEET 1.



Witnesses:  
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 attorneys.





# UNITED STATES PATENT OFFICE.

BENJAMIN B. CONRAD, OF BROOKLYN, NEW YORK, ASSIGNOR TO AMERICAN NUMBERING MACHINE COMPANY, OF BROOKLYN, NEW YORK, A CORPORATION OF NEW YORK.

## DATING-MACHINE.

No. 928,740.

Specification of Letters Patent.

Patented July 20, 1909.

Application filed March 1, 1909. Serial No. 480,770.

*To all whom it may concern:*

Be it known that I, BENJAMIN B. CONRAD, a citizen of the United States, residing at Brooklyn, in the county of Kings, city and State of New York, have invented certain new and useful Improvements in Dating-Machines, of which the following is a clear, full, and exact description.

This invention relates to dating machines, particularly such as carry their own ink pads, from which the printing wheels are removed by the reciprocation of the numbering head, and more particularly to high grade machines of this character which are supplied with a lever or similar mechanism for automatically advancing the units and tens wheels in proper relation one to the other upon the actuation of said lever.

The object of this invention is to construct such a machine so that it will act as a printing machine for the date and a calendar for the man who has the machine on his desk.

A further object is to improve the mechanism for causing the proper advance of the number wheels.

The scope of my invention will be pointed out in the claims.

In carrying out my invention I provide a machine with the usual frame, gage plate, numbering head plunger handle, and ink pad. The month, year and date wheels are provided with two sets of characters each; a set of printing characters, and a set of indicating characters so arranged with relation to each other and with relation to an apertured plate at the front of the numbering head, that the indicating numbers corresponding to the printing numbers will appear at the aperture particularly as shown in Fig. 1 to be hereinafter described, and as shown, described and claimed on my U. S. Patent No. 907,128, dated December 22nd, 1908. The apertured plate is also provided with a slot through which a lever of the pawl actuating mechanism is guided. The pawl mechanism for the date wheels comprises a pawl plate having three simultaneously actuated pawls, preferably integral, and the tens wheels is provided with a double set of ratchet wheels, the units wheel remaining as usual.

In the accompanying drawings, Figure 1 is a perspective view of a dating-stamp having my improved numbering device attached thereto. Fig. 2 is an enlarged detail rear

view of the wheel carrying frame, showing the arrangement of the printing wheels and cooperating parts. Fig. 3 is a vertical sectional view taken on a line 3—3 in Fig. 1, showing the numbering wheels' operating lever. Fig. 4 is a detail side view, looking from the left in Fig. 2, of the units numbering wheel, the years printing wheel being omitted. Fig. 5 is a similar view, looking from the right in Fig. 2, of the tens numbering wheel, the months printing wheel being omitted. Fig. 6 is a diagrammatic perspective view of the units and tens numbering wheels and their operating ratchet wheels, the said wheels and ratchets being illustrated as a rack in order to better illustrate the respective position of the numerals and special features of the ratchet wheels. Fig. 7 is a diagrammatic view of the units and tens wheels, the said wheels being separated to better illustrate their operation. In this view the wheels are shown in a position to print the number 1. Fig. 8 is a diagrammatic view of the tens wheel showing the position of the tens wheel when the units wheel is in a position to print the numeral 6. Fig. 9 is a diagrammatic view, similar to Fig. 8, showing the wheels in a position to print the numeral 31, and Fig. 10 is a detail perspective view of the pawl which forms part of my improvement.

Referring to Fig. 1: 10 indicates the main frame of a hand-stamp, the sides of the said frame being provided with guide-ways 11, one only being shown in Fig. 3, each guide-way 11 being adapted to receive a pin 12, two of which are carried by the wheel-frame 13. The pins 12 are adapted to retain a shaft 14 (see Figs. 4 and 5) in position in the frame 13. Upon the shaft 14 are loosely mounted a years printing wheel 15, month printing wheel 16, a units wheel 17 and a tens wheel 18 (see Fig. 2). As this manner of mounting is well known in this art, a detailed illustration thereof has been omitted. To operate the tens wheel 18, I provide a ratchet gear 19 having a recess 20 therein, the said ratchet being secured to the said wheel. To operate the units wheel 17 I provide two ratchet gears 21 and 22, the ratchet 22 having the same number of teeth as the wheel 17 has numeral type. The teeth of the ratchet 21 are interrupted and where the teeth are omitted I provide a depression 23 (see Fig. 5). The tooth 24 of the ratchet



21 is carried above the adjacent tooth of the ratchet 22, as shown, for the purpose of raising the operating pawl for a reason to be hereinafter explained. The type on the printing wheels are inked by a pad 25, the said pad being brought into contact with the type, and carried away therefrom, by means of a link 26 as the frame 13 is operated. This action is well known in this art and needs no further description.

To operate the wheels 17 and 18, with the aid of their attached ratchets, I provide a double pawl 27 which is carried by a swing-frame 28, the side members 29 and 30 of which are pivotally mounted on the shaft 14. The double pawl 27 consists of nose 31, which is adapted to advance the wheel 18, a pawl 32, of the same length, which is adapted to advance the wheel 17 by means of the ratchet 21, and a shorter nose 33 which is also adapted to advance the said wheel 17 under certain conditions. It may here be stated that the cycle of operation of the tens wheel 17 is divided into two phases; one phase being the time during which the longer nose 32 operates the wheel 17 by advancing the ratchet 21, and the other phase being the time during which the shorter nose operates the wheel by advancing the ratchet 22. It is during the latter phase that the tens on the wheel 17 are brought into position for printing. This feature will be hereinafter explained.

As has been stated, the pawl 27 is carried by the swing frame 28, the said pawl being kept in contact with the teeth of the ratchets by a spring 34 (see Fig. 2); to operate the swing-frame 28 I provide a lever 35 which is loosely mounted on one of the pins 12 (see Figs. 2 and 3) and opposed by a spring 36. The lever 35, at its forward end, passes through the front plate 37, which has an opening 38 for the purpose of ascertaining what numerals, or month, are in a printing position. The opposite end of the lever 35 is provided with a pin 39, the said pin being in engagement with the member 29 of the swing frame 28 as shown. The side of the wheel frame 13 is cut away, as at 40, to permit of the movement of the frame 28 by the lever 36.

The operation of the device is as follows. The months wheel 16 and years wheel 15 are rotated manually; the proper month and year will of course be brought into printing position by the user. By referring to Fig. 7, it will be seen that the numeral 1 is in a position for printing, when the frame 13 has been forced downwardly, and that both of the long noses 31 and 32, are in engagement with the teeth of their respective ratchets. It will also be seen that the depression 23 is on the right of the shaft 14. To bring the numeral 2 in position for printing, the outer end 41 of the lever 35 is pressed downwardly, whereby the frame 28 is swung up-

wardly, thereby causing the pawl 27 to carry the wheels 17 and 18 one point over. When the lever 35 is released the spring 36 will return the said lever and frame 28 to their normal position. It may here be stated that the wheel 18 carries type from 1 to zero (0), but the wheel 17 carries only the type 3, 3, 2 and 1. For the sake of clearness, the said type is indicated on the sides of their respective projections in Figs. 7, 8 and 9. The projections on the wheel 17 which are not provided with the above mentioned type, are provided with a dash (—) as shown; Fig. 6 clearly illustrates the relative position of the type on both wheels when the numeral 1 is in position for printing. When the wheel 18 has been moved, to bring 2 in position for printing, the wheel 17 will also have been moved one point, due to the fact that both noses 31 and 32 are in engagement with their ratchets. The wheel 17 will move every time the wheel 18 is moved up to and including the time that the numeral 6 is brought into the printing position. At this point the wheel 17 will be positioned as shown in Fig. 8 with the depression 23 to the left of the shaft 14. From 6 to 9 inclusive the wheel 17 will not advance due to the fact that the long nose 32 will work back and forth in the depression 23, and the short nose 33 will be kept out of contact with the teeth of the ratchet 22 by the longer nose 31. When the pawl 27 has been returned, after having brought 9 into position, the nose 31 will drop into the depression 20 sufficiently to permit the short nose 33 to engage the tooth 42 (see Fig. 8) of the ratchet 22 whereby, when the zero (0) in the wheel 18 is brought into position, the 1 in the tens wheels will also be brought into position, thereby printing 10. From 10 to 19 inclusive the wheel 18 will operate only. To print 20 both wheels will move by the action described for 10. From 20 to 29 inclusive the wheel 18 will alone move; to print 30 both wheels will move. When advancing the wheel 17 for 10, 20 and 30 the short nose 33 will engage the teeth 42, 43 and 44 respectively. After having brought 30 into position the tooth 45, of the ratchet 21, will occupy the position previously occupied by the tooth 42 (see Fig. 8) consequently to produce 31 both wheels will again move and assume a position as indicated in Fig. 9. When 31 has been produced the wheel 18 will have assumed its normal, or starting point, but it becomes necessary to turn the wheel 17 one point in order to restore the wheels so that the numeral 1 can be again printed; to restore or remove the wheel 17 without removing the wheel 18 is the function of the tooth 24 hereinbefore referred to. After having produced 31 the pawl 27 will return to its normal position, but due to the height of the tooth 24, or rather the surface adjacent thereto, the nose 31 will be lifted high



enough to clear the teeth of the ratchet wheel 19 when the pawl 27 is brought forward (see Fig. 9). When the pawl 27 is brought forward the nose 32 will advance the wheel 17 only. The wheels will now be in their normal position as indicated in Fig. 7. By means of this novel combination of ratchets and the pawl I am not only able to progress the wheels for single and compound numbers but I am also able to restore the wheels to the starting point by the same movement used to progress the said wheels. The form of retaining pawl illustrated in Figs. 7, 8 and 9 is well known in this art.

In carrying out this invention, details of construction may be varied from those shown, and yet the essence of the invention be retained; some parts might be employed without others, and new features thereof might be combined with elements old in the art in divers ways, although the herein described type is regarded as embodying substantial improvements over such modifications.

As many changes could be made in the above construction, and many apparently widely different embodiments of the invention could be made without departing from the scope thereof, it is intended that all matter contained in the above description or shown in the accompanying drawings shall be interpreted in an illustrative and not in a limiting sense. It is furthermore desired to be understood that the language used in the following claims is intended to cover all the generic and specific features of the invention herein described, and all statements of the scope of the invention which as a matter of language might be said to fall therebetween.

I claim as my invention:

1. A dating machine comprising a pair of wheels for printing the units and tens of the date, one wheel having printing characters from 0 to 9, the other wheel having blank spaces and printing characters from 1 to 3, and means for advancing a number of the blank spaces during the advance of the units wheel for the first ten days, for advancing the units wheel but not the tens for a second revolution of the units wheel, for advancing the tens and units wheel together at the beginning of the third operation, but not during the same.

2. A dating machine comprising a pair of

wheels for printing the units and tens of the date, one wheel having printing characters from 0 to 9, the other wheel having blank spaces and printing characters from 1 to 3, and means for advancing a number of the blank spaces during the advance of the units wheel for the first ten days, for advancing the units wheel but not the tens for a second revolution of the units wheel, for advancing the tens and units wheel together at the beginning of the third operation, but not during the same, and means for holding the units wheel stationary while the tens wheel passes from 3 as in "31," to "blank" as in "1."

3. A dating machine comprising a pair of wheels for printing the units and tens of the date, one wheel having printing characters from 0 to 9, the other having a number of blank characters and characters 1, 2, 3, the units wheel having a ratchet with a deep notch, the tens wheel having a double ratchet, a pawl mechanism, the double ratchet and pawl mechanism being adapted to advance the tens wheel in stages, to wit: a plurality of times in the first stage, and not more than twice in any other stage, each stage being the time taken for the revolution of the units wheel.

4. A dating machine comprising a pair of wheels for printing the units and tens of the date, one wheel having printing characters from 0 to 9, the other having a number of blank characters and characters 1, 2, 3, the units wheel having a ratchet with a deep notch, the tens wheel having a double ratchet, a pawl mechanism, the double ratchet and pawl mechanism being adapted to advance the tens wheel in stages, to wit: a plurality of times in the first stage, and not more than twice in any other stage, each stage being the time taken for the revolution of the units wheel, said double ratchet comprised of one set of equal notches and teeth, the other set having a long recess, a number of equal teeth, one extra deep notch, said pawl mechanism comprising a plate having three pawls, all moving together.

Signed at Brooklyn New York this 19th day of February 1909.

BENJAMIN B. CONRAD.

Witnesses:

CARRIE E. WYLIE,  
HOWARD C. BLACKNELL.