

No. 766,134.

PATENTED JULY 26, 1904.

E. G. BATES.
NUMBERING MACHINE.

APPLICATION FILED NOV. 17, 1903.

NO MODEL.

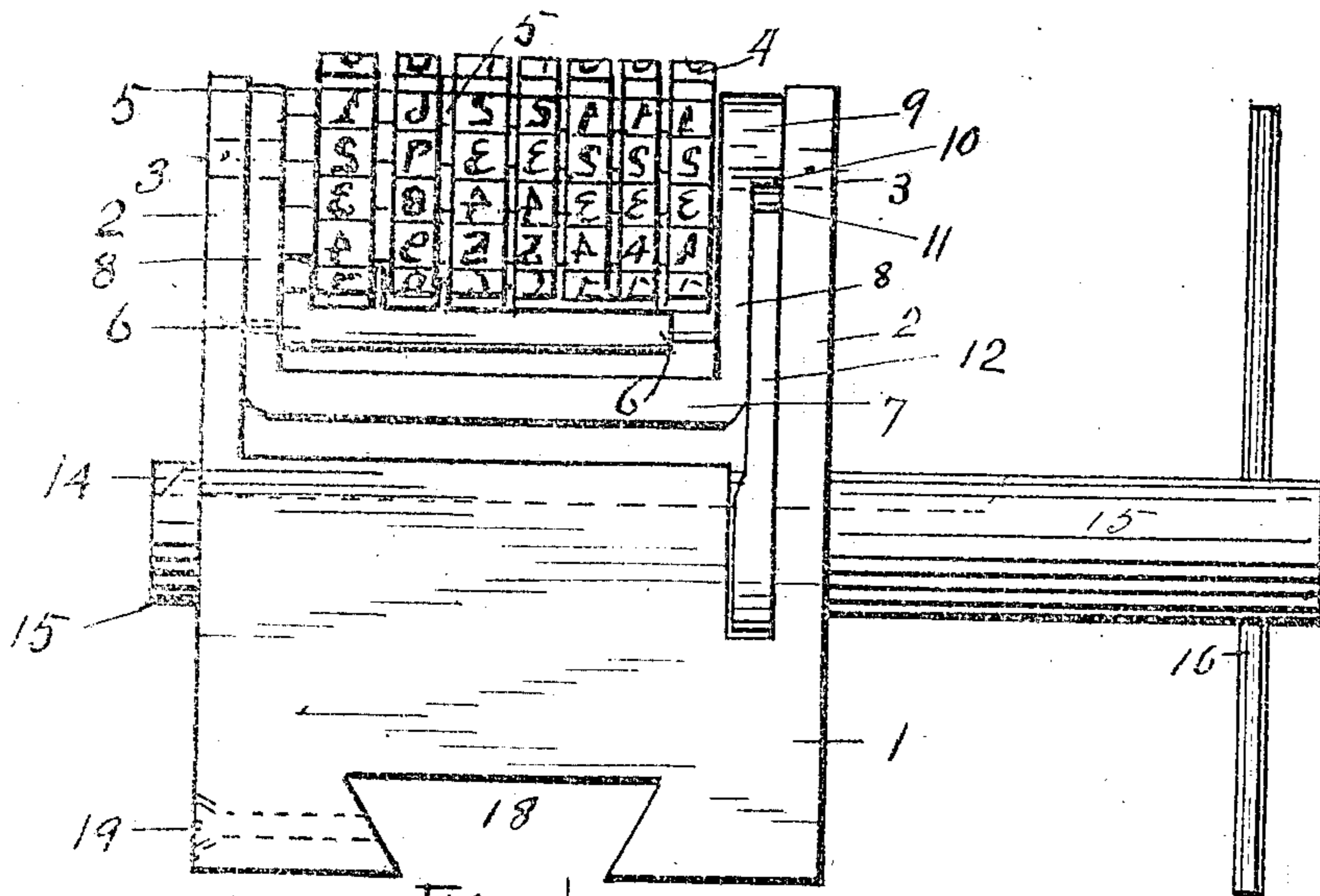


Fig. 1

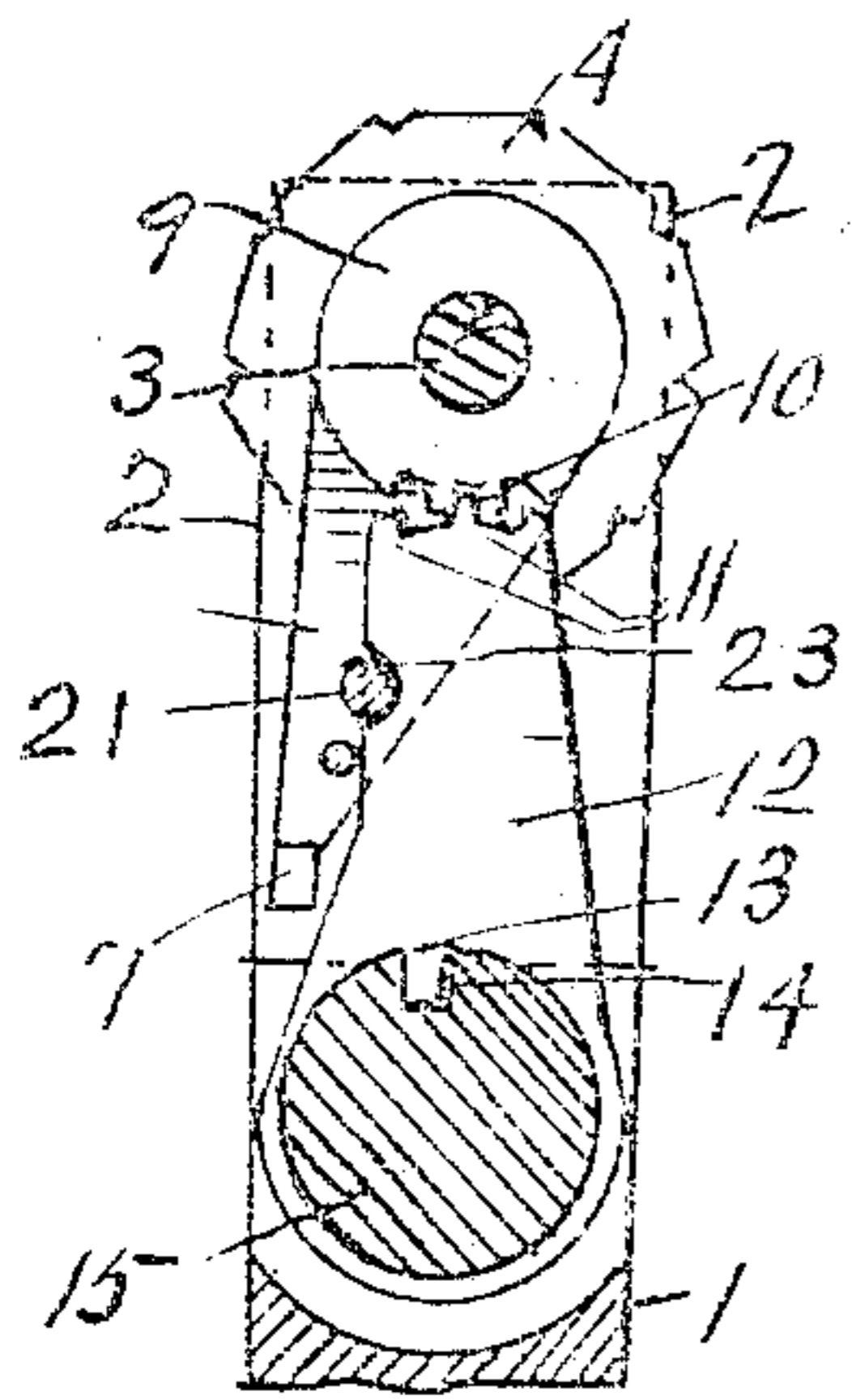


Fig. 3.

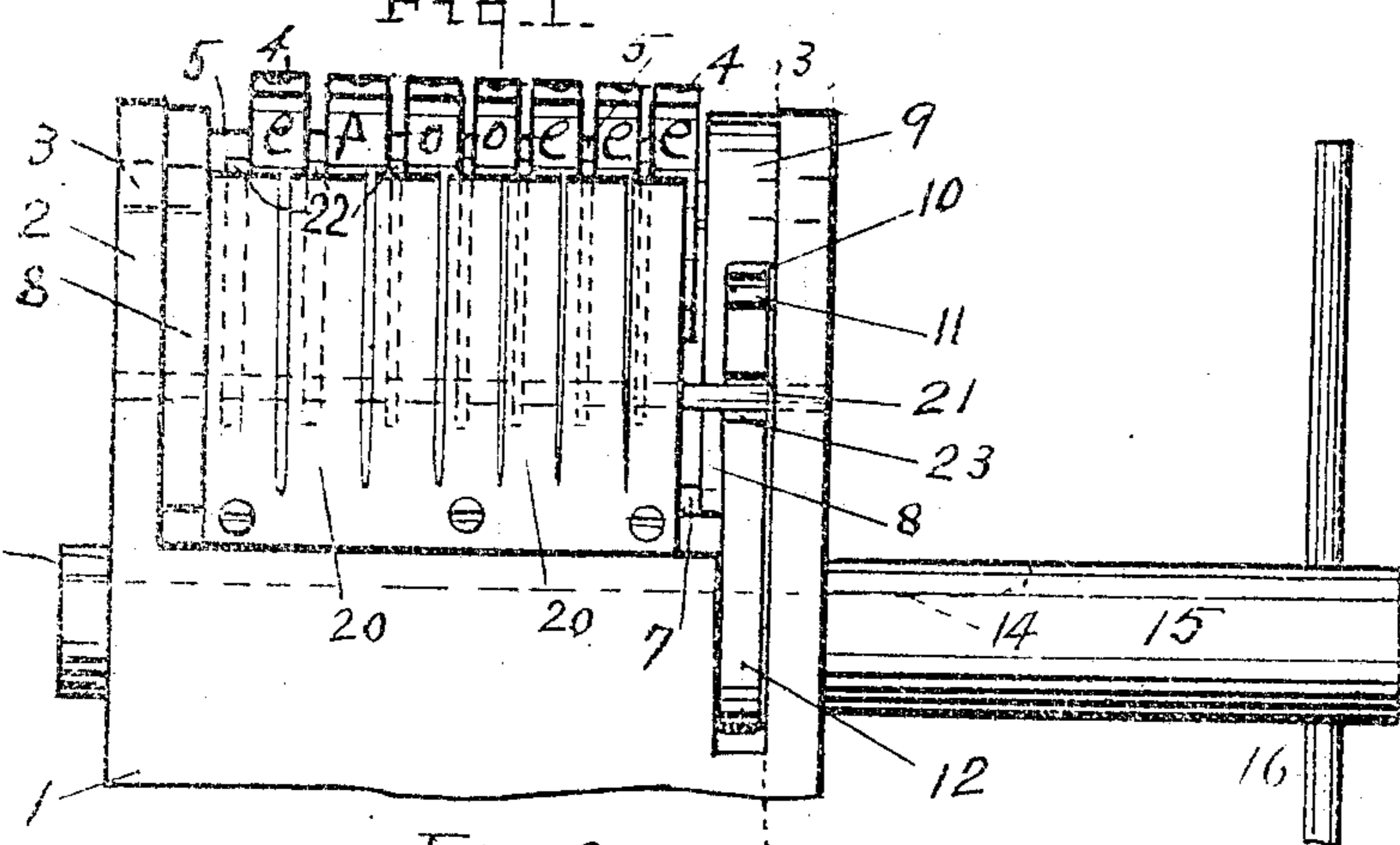


Fig. 2.

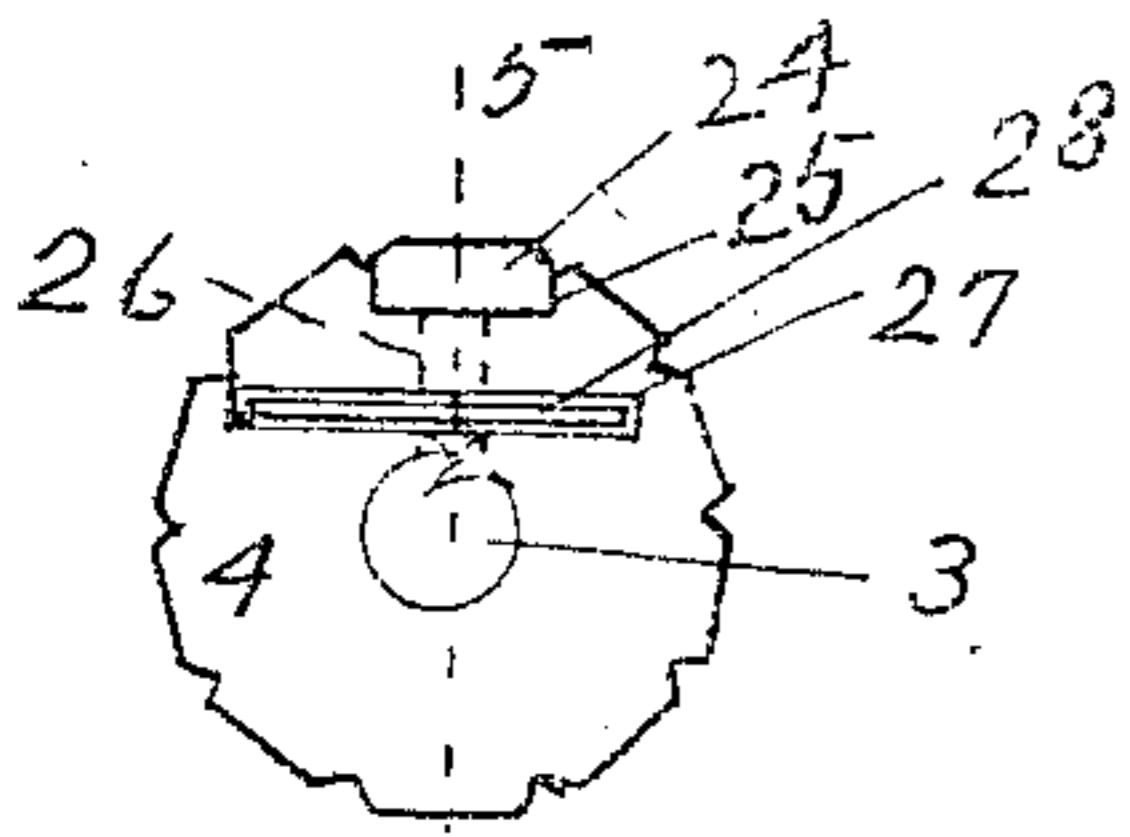


Fig. 4.

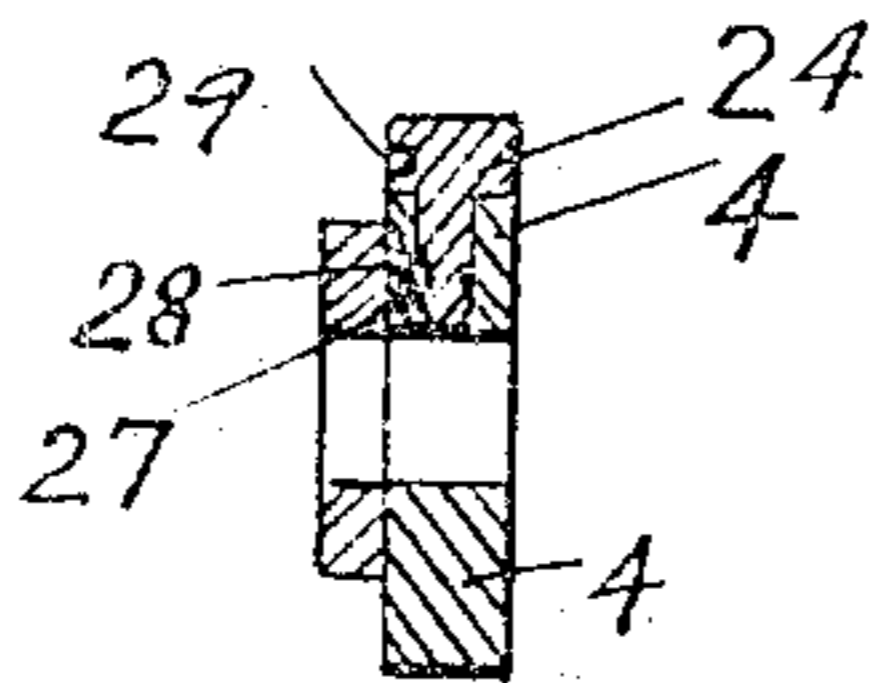


Fig. 5.

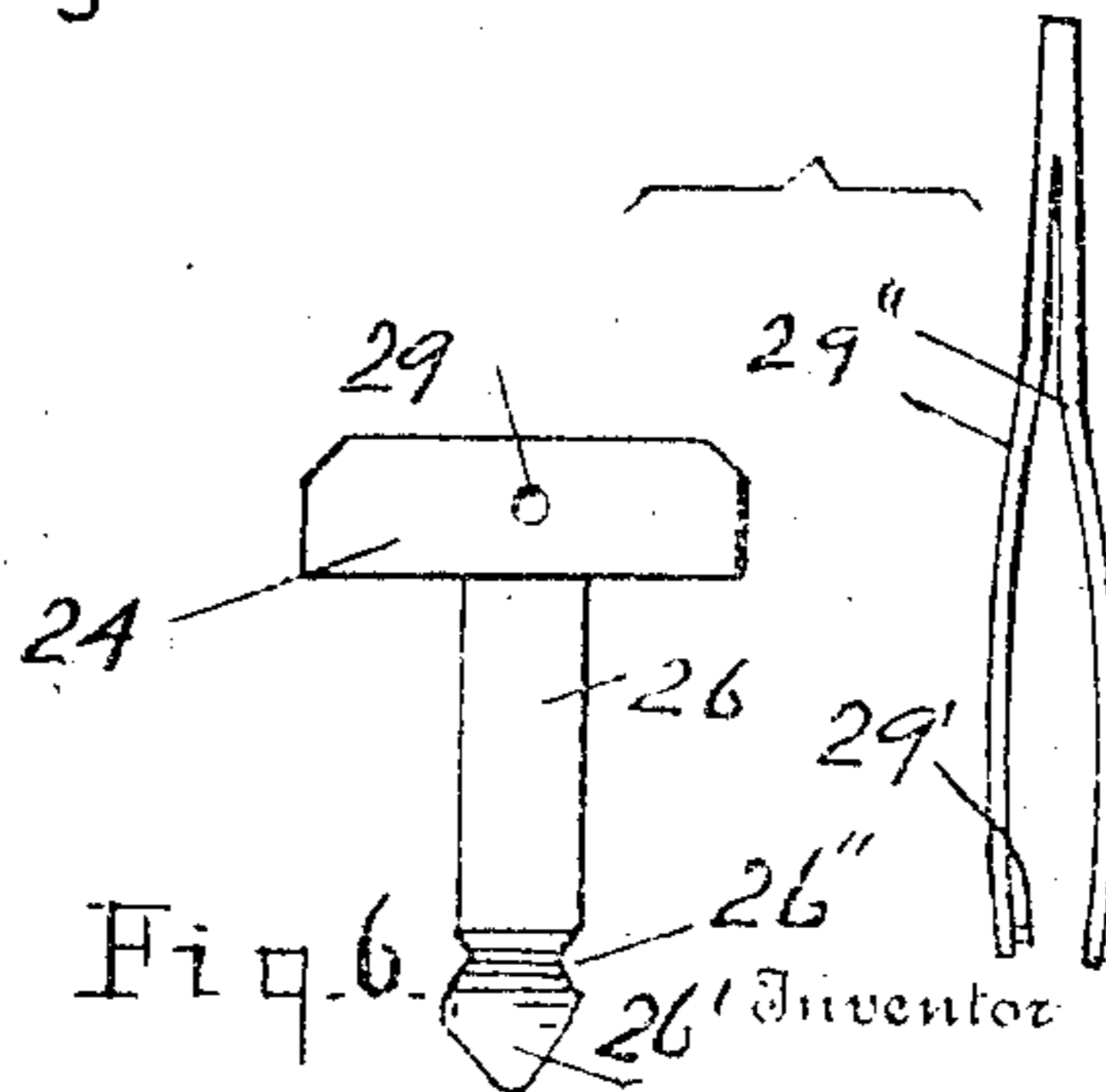


Fig. 6.

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2 Witnesses

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UNITED STATES PATENT OFFICE.

EDWIN G. BATES, OF NEW YORK, N. Y., ASSIGNOR TO THE BATES MACHINE COMPANY, OF NEW YORK, N. Y., A CORPORATION OF NEW JERSEY.

NUMBERING-MACHINE.

SPECIFICATION forming part of Letters Patent No. 766,134, dated July 26, 1904.

Application filed November 17, 1903. Serial No. 181,548. (No model.)

To all whom it may concern:

Be it known that I, EDWIN G. BATES, a resident of New York, in the county and State of New York, have invented certain new and useful Improvements in Numbering-Machines; and I do hereby declare the following to be a full, clear, and exact description of the invention, such as will enable others skilled in the art to which it pertains to make and use the same.

This invention relates to numbering-machines.

The main object of the invention is to provide improved actuating means and to improve the type-wheels, as set forth.

In the accompanying drawings, Figure 1 is a front view of the machine on an enlarged scale. Fig. 2 is a rear view partly broken away. Fig. 3 is a sectional view on line 3 3 of Fig. 2. Fig. 4 is a side view of a numbering-wheel with its ratchet omitted. Fig. 5 is a sectional view on line 5 5 of Fig. 4; and Fig. 6 is an enlarged side view of a removable type and, on a reduced scale, a tool for handling it.

Numeral 1 denotes a metal body, the sides of which preferably taper, the body being thicker at top than at the bottom. (See Fig. 3.) The body has standards 2, which support the grooved shaft 3 of the number or like printing wheel, each of which has a ratchet 5 secured to it, as usual.

Numeral 6 denotes a well-known form of stepped pawl, being shown with teeth to engage the ratchets of the first four wheels 4, whereby the first four wheels will be automatically brought into use, as usual in this class of machines. Succeeding wheels will be or may be advanced manually as needed. The stepped pawl-plate is supported in a swing-frame 7, which has arms 8, supported and adapted to turn on said shaft 8. At one end of the frame 7 arm 8 has a side extension 9, having teeth 10 on its inner side, which teeth are swing-propelling means and are engaged by similar teeth on the end of arm 12, which arm has a tooth 13, engaging a tooth 14 in an auxiliary operating-shaft 15, which occupies an opening in body 1 below the swing 7. As shown, the body has a thickness at the top

about equal to the diameter of the wheels and is thinner at the bottom. The shaft which is in the same vertical plane as the main shaft and within said thin body has suitable means, as handle 11, whereby the auxiliary shaft and arm 12 can be turned forward and backward through an arc sufficient to operate the stepped pawls to advance the wheels operated by said pawls, as above stated. The use of the auxiliary shaft 15, supporting it within the body itself, is very advantageous and particularly in cases where circumstances require a machine of as small thickness as practicable. In the present construction all the operating means except the projecting part of the operating-shaft do not extend beyond the body.

The frame 1 at its bottom is provided with an undercut groove 18, adapted to fit a similarly-shaped bar in a suitable support. (Not shown.) 19 denotes a fastening-screw therefor.

Referring to Fig. 2, 20 denotes springs normally holding wheels 4 from accidental movement. 21 is a pin extending across the frame and supporting wheel-holding pawl 22. 23 is a notch in arm 12, in which said pin 21 rests when arm 12 has moved to the end of its path in that direction.

In this machine, especially when more than five number-wheels are used, I employ in the first three wheels following the units-wheel any suitable drop-cipher, preferably that shown in my Patent No. 721,276, in which the drop-cipher is controlled by a groove in the number-wheel shaft. The following wheels are not provided with drop-ciphers, but with stationary though removable type-blocks on which ciphers or other characters are formed. Such a wheel is shown in Figs. 4, 5.

Numeral 24 denotes the block in notch 25 of the wheel and having a straight shank 26, which extends into a radial hole in the wheel. As indicated above, the removable block when in the notch is stationary and is not a "drop-cipher" block. One face of the wheel has a groove 27, in which is secured a spring 28, which crosses said hole near a side thereof, and the end 26' of the shank is tapered and is grooved at 26'', whereby the spring automati-

ically engages the shank when it is pushed in and holds it and the block in place, and the spring is automatically disconnected by a pull on the block. The head of the block has 5 means by which the block can be securely grasped by tweezers—for example, a small hole 29 in the block to receive a corresponding pin 29' on one leg 29'' of the tweezers. Hole 29 is so located that it is not covered 10 when the block is in the notch. The groove of shaft 3 is useful for operating the drop-ciphers; but the type-blocks 24 do not require such groove in the shaft.

What I claim is—

15 1. In a numbering-machine having number-wheels, a shaft therefor, and means for advancing the wheels, said means having a pawl-carrying swing centered on the same shaft as said wheels, an auxiliary shaft located outside 20 of the periphery of the number-wheels, the auxiliary shaft being geared to the swing for advancing the wheels.

2. In a numbering-machine having number-wheels, a shaft therefor, and means for ad- 25 vancing the wheels, said means consisting of a swing centered on the same shaft as said wheels and adapted to turn on said shaft, said swing having a gear-segment, an auxiliary shaft located outside the periphery of the num- 30 ber-wheels, the auxiliary shaft being geared to the swing-gear.

3. In a numbering-machine having wheels, a shaft, a swing centered loosely on said shaft, swing-propelling means, an auxiliary shaft 35 located outside of the periphery of the wheels and geared to the swing.

4. The combination of number-wheels, a thin supporting-body, a shaft for the wheels in said body, stepped pawls, a body carrying 40 said pawls and centered loosely on said shaft, an auxiliary shaft in the vertical plane of the first shaft, means for moving the auxiliary shaft, and an operating connection between the said shaft and the body carrying the 45 stepped pawls.

5. A number-wheel having a notch in its periphery, a stationary but removable block in its notch, a shank for the block, a hole in the wheel for the shank, a groove in the wheel 50 intersecting said hole, and a spring in the groove, the spring automatically engaging with and automatically disengaging from the shank by the mere act of inserting or removing the block.

In testimony whereof I have signed this 55 specification in the presence of two subscribing witnesses.

EDWIN G. BATES.

Witnesses:

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