

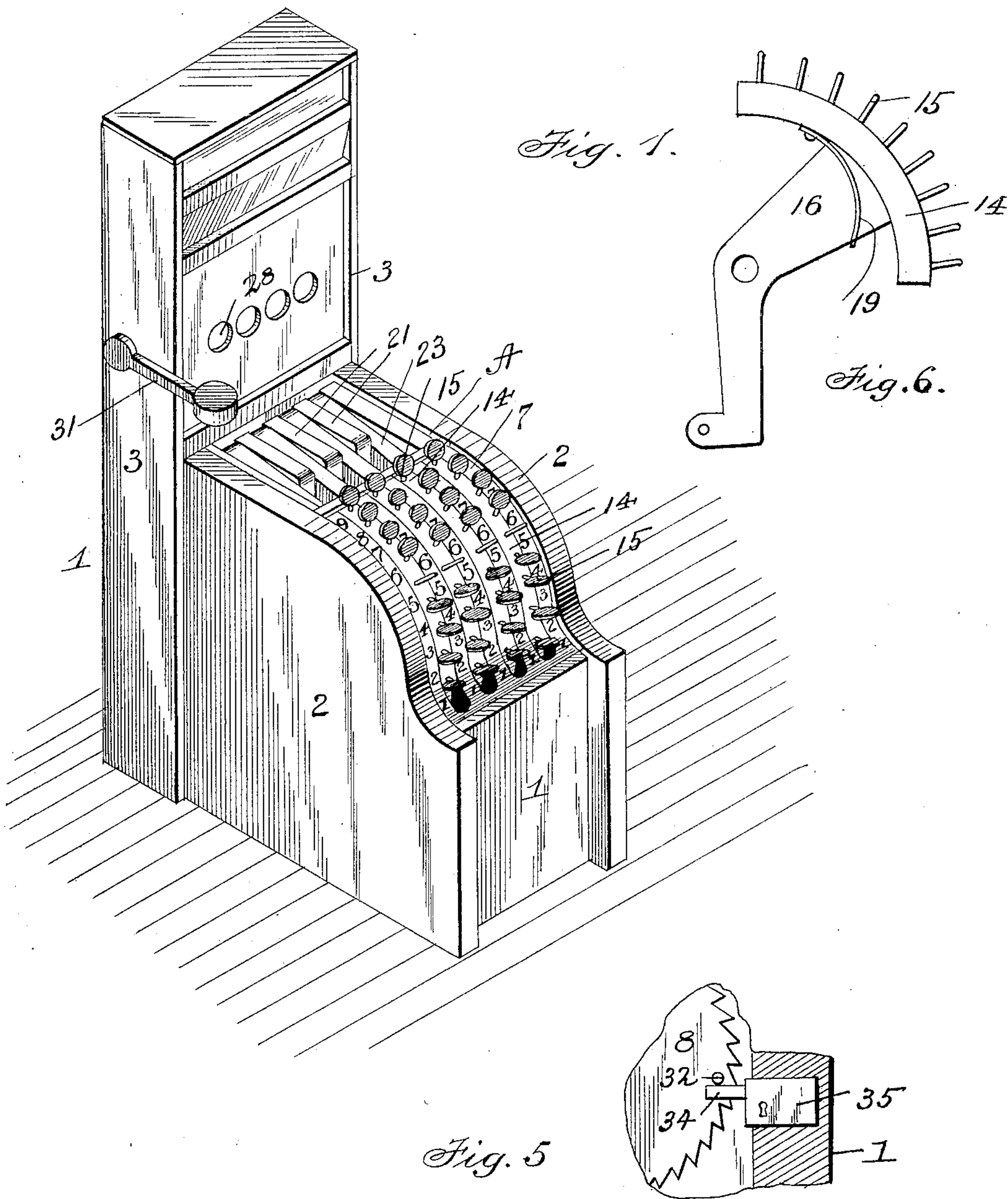
(No Model.)

2 Sheets—Sheet 1.

A. L. PLATT.
ADDING MACHINE.

No. 596,539.

Patented Jan. 4, 1898.



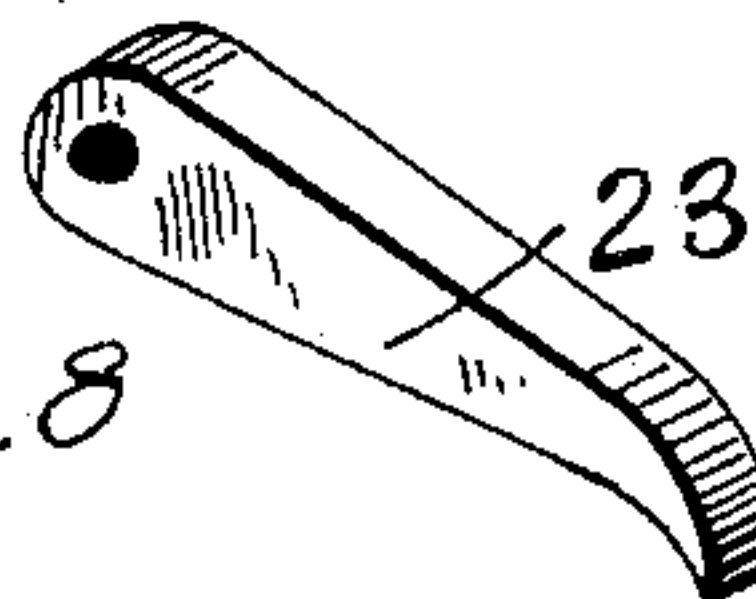
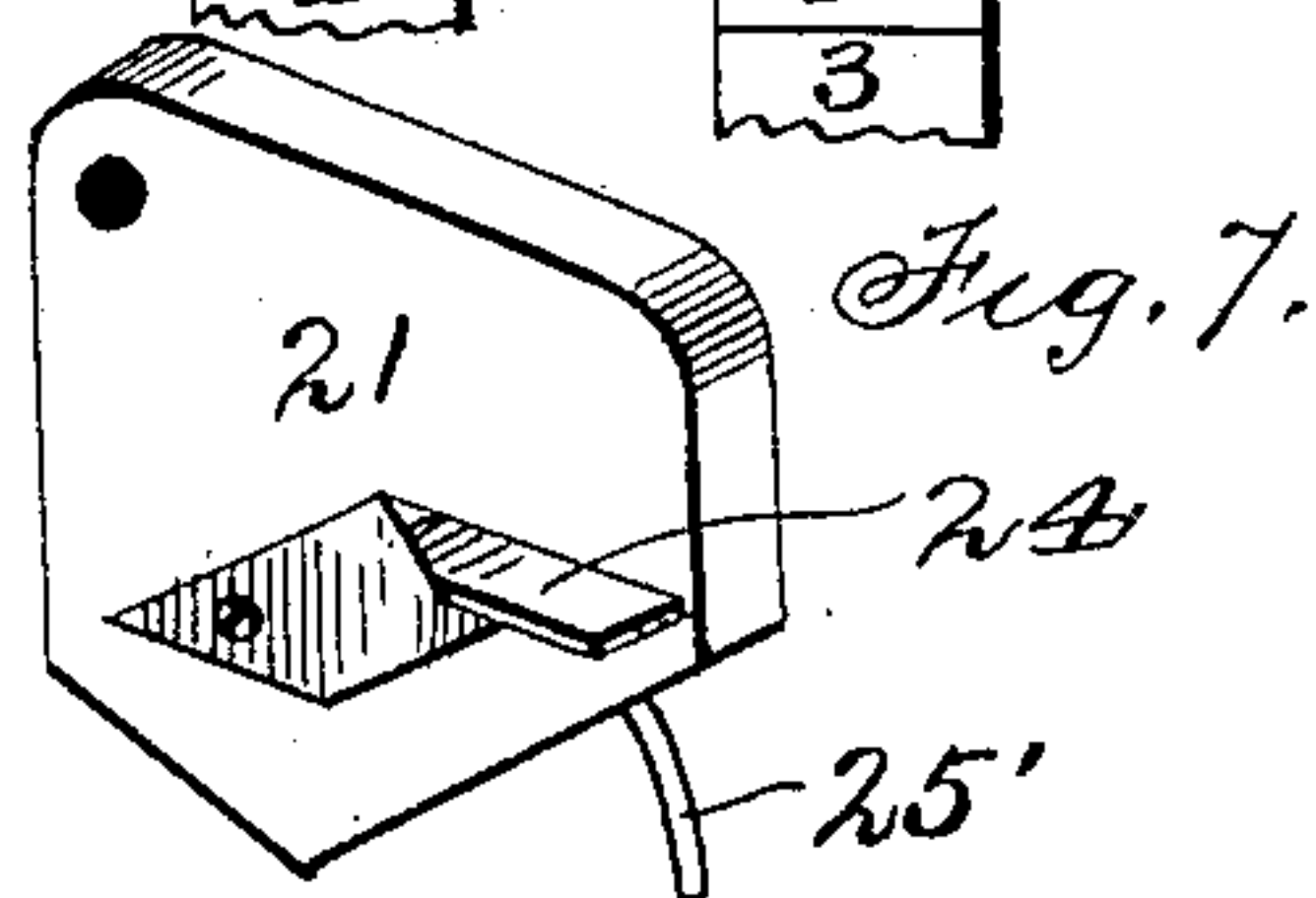
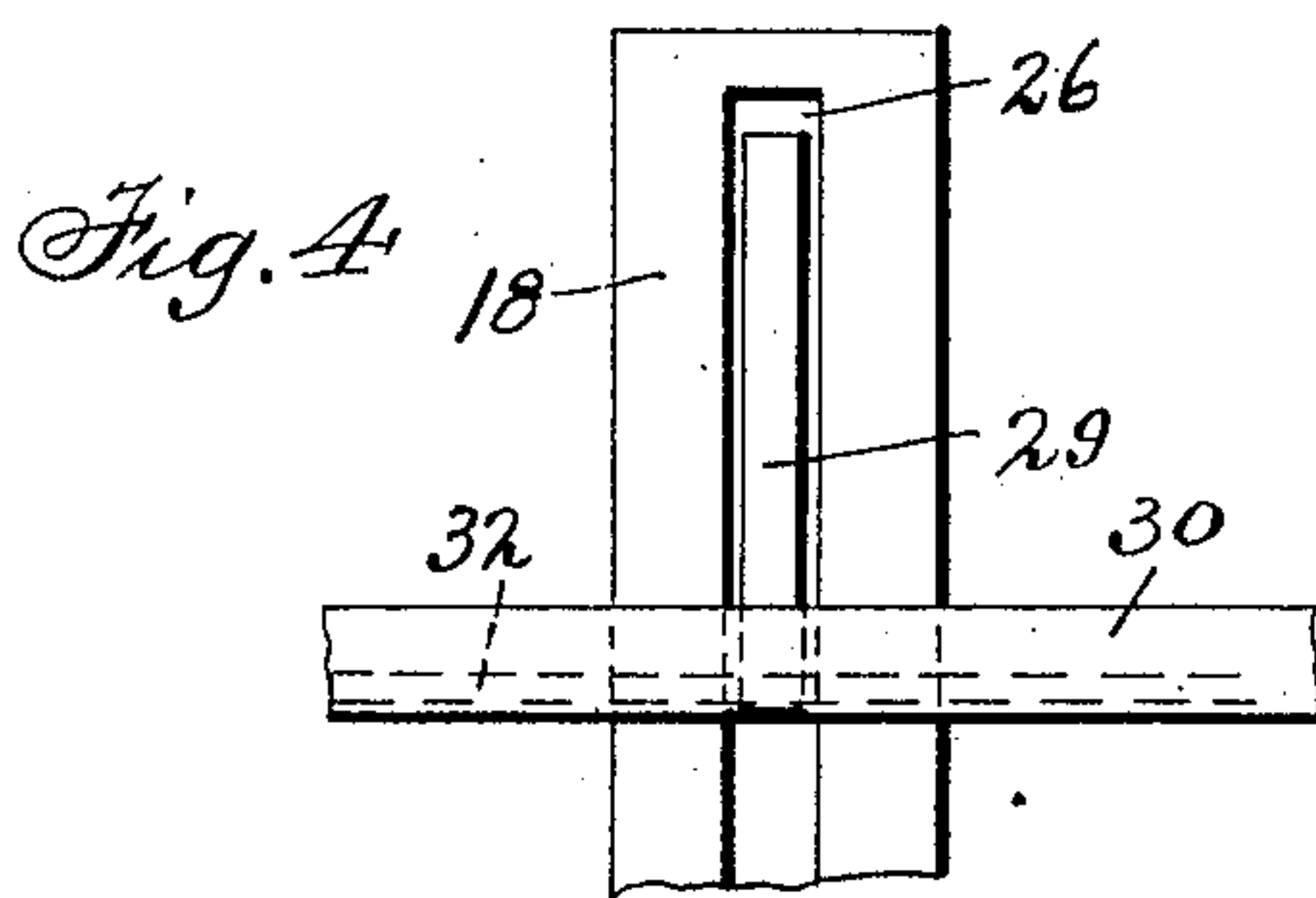
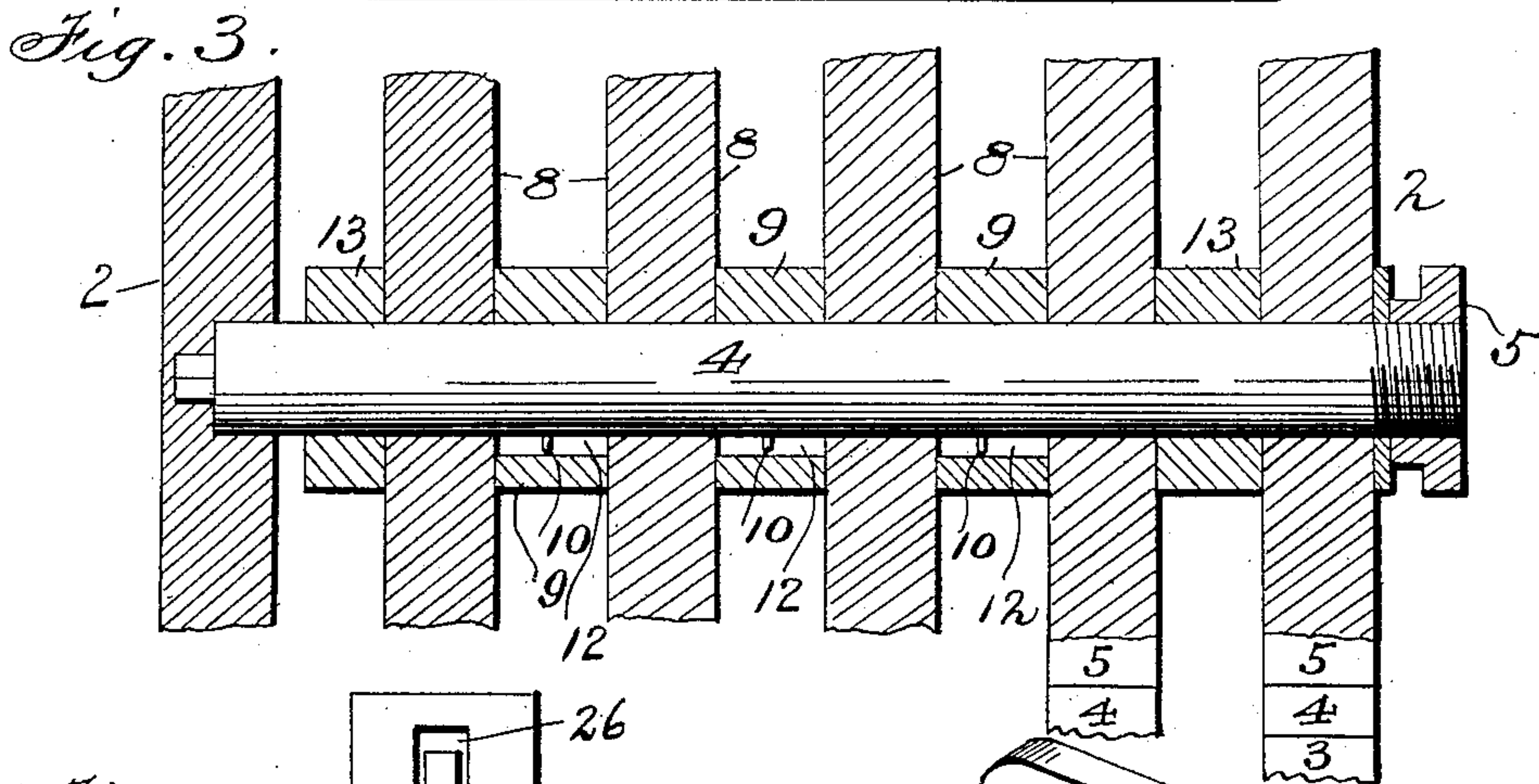
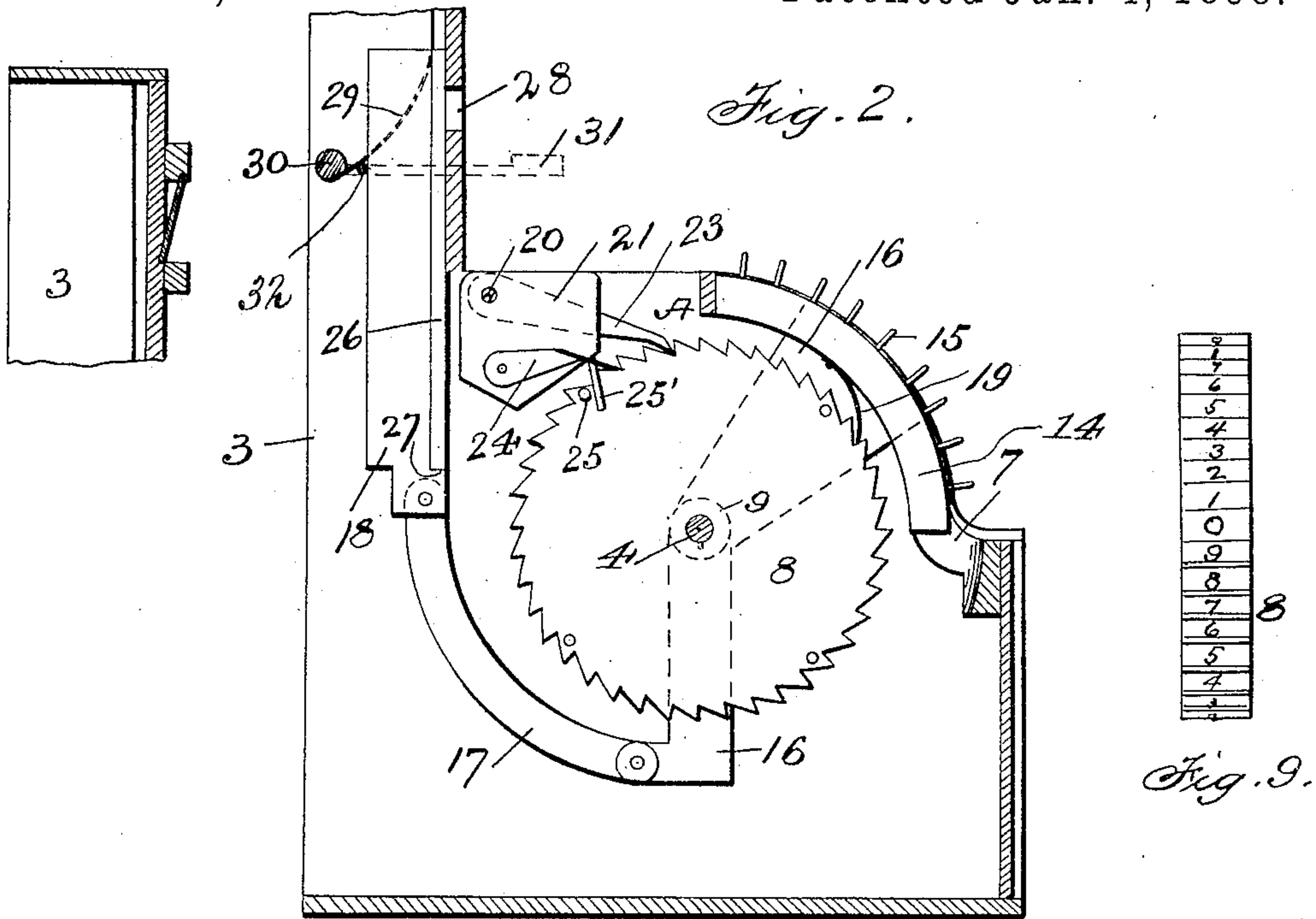
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UNITED STATES PATENT OFFICE.

ALBERT L. PLATT, OF CLINTON, ILLINOIS, ASSIGNOR OF TWO-THIRDS TO
JOHN M. WILCOX AND FRED BALL, OF SAME PLACE.

ADDING-MACHINE.

SPECIFICATION forming part of Letters Patent No. 596,539, dated January 4, 1898.

Application filed March 10, 1897. Serial No. 626,851. (No model.)

To all whom it may concern:

Be it known that I, ALBERT L. PLATT, a citizen of the United States, and a resident of Clinton, in the county of DeWitt and State of Illinois, have invented certain new and useful Improvements in Adding-Machines; and I do hereby declare that the following is a full, clear, and exact description of the invention, which will enable others skilled in the art to which it appertains to make and use the same, reference being had to the accompanying drawings, which form a part of this specification.

My invention relates to adding-machines by which a number of figures or columns of figures may be added and the total exhibited in a rapid and efficient manner; and the invention consists in the novel construction and combination of parts hereinafter fully described and claimed.

In the accompanying drawings, Figure 1 is a perspective view of an adding-machine constructed in accordance with my invention. Fig. 2 is a vertical sectional view of the same. Fig. 3 is a detail elevation of the shaft on which the adding-wheels and key-arms are mounted. Fig. 4 is a detail elevation showing the spring for holding the sliding plates in position with the totals added. Figs. 5, 6, 7, and 8 are detail views. Fig. 9 is a front view of one of the ratchet-wheels.

In the said drawings the reference-numeral 1 designates a casing having curved sides 2 and is open at the top. At the rear this casing is provided with a rectangular extension 3, which projects up above the top of the said casing. Extending transversely through the casing is a shaft 4, one end of which is made angular and fits in a correspondingly-shaped socket in one of the sides of the casing, and the other end is screw-threaded and provided with a thumb-nut 5, for a purpose hereinafter explained. Secured to the front of the casing are a number of curved stationary plates 7, having numbers thereon running consecutively from "1" to "9," beginning at the bottom. Mounted upon the shaft 4 and rotatable thereon are a number of adding-wheels 8, which vary in number according to the number of columns to be added. These

wheels are formed with forty peripheral ratchets having marked thereon "0," "1," "2," "3," "4," "5," "6," "7," "8," and "9," and, as before stated, there are fifty of said ciphers and figures. Located between said wheels are non-rotatable collars 9, which are held against rotation by screws or pins 10, secured to the shaft and passing through slots or elongated holes 12 in the collars, so as to allow the latter to have a slight lateral movement on the shaft.

The numeral 13 designates two washers on said shaft, at opposite ends thereof, one of which bears against the side of the casing, while the other abuts against one of the end adding-wheels. By means of the thumb-screw the tension of the adding-wheels may be regulated by causing them to bind more or less tightly against the collars 9. This regulation is allowed by the lateral movement of the collars upon the shaft. Also mounted and rotatable upon the said shaft are a number of key-arms 14, corresponding in number with the adding-wheels. Each of these key-arms is provided with nine keys 15, by which it is operated. Said key-arms are also provided with an arm 16, provided with a curved weight 17, pivotally connected therewith and with a sliding block 18, by which the key-arms are returned to normal position after having been depressed. Secured to the inner side of each key-arm is a spring-pawl 19, which engages with the ratchets of the adding-wheel at the left thereof. When the key-arms are depressed, these spring-pawls engage with said ratchets and rotate the adding-wheels a distance corresponding with the movement of the key-arms.

Pivoted on a transverse shaft 20 at the rear of the casing are a number of blocks 21, one for each adding-wheel. Also, pivoted to said shaft 20 are pawls 23, which engage with the ratchets and prevent backward movement of the wheels. Pivoted to said blocks are dogs 24, which engage with the ratchets of the next adding-wheel to the left and are for the purpose of moving the said wheel one point forward each time. The next wheel to the right moves forward ten or more points. This is accomplished by pins 25, one for each

of the sections on the adding-wheels, which pins are located opposite the ratchets marked "9." As said adding-wheels are rotated said pins strike curved studs 25, secured to the blocks, raising the latter and causing the dogs to move the adding-wheels one point.

Located in the extension at the rear of the casing are a number of vertically-movable display-plates 26, which rest loosely on a shoulder 27 at the lower ends of the blocks 18, numbered from "0" to "9," beginning at the top, which numbers appear at the display-openings 28 at the front of the extension. These plates as they are elevated by the key-arms and connections are held in place by springs 29. These springs pass through slots in the blocks 18, and one end of each is secured to a transverse rotatable shaft 30, passing through the extension and provided at one end with a key 31. These springs also rest against a rod 32, and when the key is depressed they will be wound around the said shaft sufficiently to allow their free ends to move out of contact with the display-plates and allow the latter to fall, so that "0" will appear at the display-openings.

Located above the display-openings is an inclined mirror, upon which the figures on the ratchet-wheels, which appear at the point marked A, will be reflected.

The operation of the machine is as follows: The adding-wheels are all turned so that "0" will appear at the opening A and the display-plates will be lowered. Supposing now it be desired to add up, say, "5" and "7," then the finger is placed on the key of the key-arm at the right of the machine opposite the figure "5" on the partition at the right and the key-arm is depressed to the bottom of the partition. This will cause the adding-wheel on the right, which is the units-wheel, to be moved five points. At the same time the display-plate corresponding with said wheel will be elevated, so as to show "5" at its opening, showing that the key-wheel has been moved the proper distance. The key is then released, when it will be returned to normal position. The "7" key is then similarly operated, when the adding-wheel will be turned seven more points, and the next adding-wheel will be moved one point by the pawl, pin, and stud, so that at the opening A will appear the figure "2" on the units-wheel and the figure "1" on the tens-wheel.

It will be understood that the first wheel on the right is the units-wheel, the next the tens-wheel, the next the hundreds, and so on.

For the purpose of stopping the rotation of the last wheel at the left after it has counted up to nine I provide it with a pin 32^a, with which engages a bolt 34 of an ordinary lock 35, secured to the casing. When this bolt is

shot, the pin will come in contact therewith and prevent the wheel from rotating.

The device may be provided with a cash-drawer, if desired, and be used as a cash-register.

Having thus fully described my invention, what I claim is—

1. The combination with the casing, the shaft, the adding-wheels rotatably mounted thereon, having peripheral ratchets marked from "0" to "9," and the partitions marked from "1" to "9" of the oscillating key-arms provided with keys, and the springs secured thereto engaging with said ratchets, substantially as described.

2. The combination with the casing, the extension, the shaft, the adding-wheels rotatably mounted thereon provided with ratchets marked from "0" to "9" and the stationary partitions marked from "1" to "9," of the oscillating key-arms provided with keys, the springs secured to said key-arms and engaging with the ratchets, the arms connected with the key-arms, the curved weights and the vertically-movable blocks, substantially as described.

3. The combination with the casing, the extension, the shaft, the adding-wheels rotatably mounted thereon provided with peripheral ratchets marked from "0" to "9," and the stationary partitions marked from "1" to "9," of the oscillating key-arms provided with keys, the springs secured to said key-arms and engaging with the ratchets, the arms, connected with the key-arms, the curved weights, the vertically-movable slotted blocks provided with shoulders, the display-plates resting upon said shoulders, the rotatable shaft, the springs secured thereto and bearing against said plates, the rod, and the key on the end of said shaft, substantially as described.

4. In an adding-machine, the combination with the casing, the extension, the shaft in the casing, the adding-wheel on said shaft having peripheral ratchets, the pins on said wheels, the stationary partitions, the pivoted blocks, the studs secured thereto, and the dogs pivoted to said blocks, of the oscillating key-arms, the keys, the springs secured to said key-arms, the arm connected with said key-arms, the curved weights, the slotted blocks formed with shoulders, the display-plates, the rotatable shaft, the springs secured thereto, the rod and the key, substantially as described.

In testimony that I claim the foregoing as my own I have hereunto affixed my signature in presence of two witnesses.

ALBERT L. PLATT.

Witnesses:

W. A. SLICK,
MINNIE DEWEY.