

UNITED STATES PATENT OFFICE.

P-121

MICHAEL BOUCHET, OF LOUISVILLE, KENTUCKY, ASSIGNOR OF ONE-HALF
TO BENNETT D. MATTINGLY, OF SAME PLACE.

ADDING-MACHINE.

SPECIFICATION forming part of Letters Patent No. 251,823, dated January 3, 1882.

Application filed March 31, 1881. (Model.)

To all whom it may concern:

Be it known that I, MICHAEL BOUCHET, of the city of Louisville, in the county of Jefferson and State of Kentucky, have invented a certain new and useful Improvement in Machines for Adding Figures; and I do hereby declare that the following is a full, clear, and exact description of the construction and operation of the same, reference being had to the accompanying drawings, forming part of this specification.

This my invention relates to a certain new and useful improvement in adding-machines, consisting, first, in a small frame of suitable size with a cog-roller working on bearings near the top of the frame, extending about three-fourths of the entire length of the frame, the remainder being made up by a stationary stud-pin secured in the frame, the end of which is made to answer as a journal-bearing for the first-named roller, which, when operated, is held in position at each movement by a pawl secured to the frame at the end. This last-named cog-roller is provided with a small indicator-pulley on the end next to the stud-pin, with a flange on the left side, and a face wide enough to receive a series of figures from 1 to 10. In connection with this last-named pulley, two others of similar dimensions, with flanges on the side and figures on the face, are made to work loosely on the stud-pin at the end of the roller, which roller and pulleys are operated by a series of cog-segments (nine in number) hinged to the ends of small levers which work loosely on a stationary rod near the base of the frame, each of which is provided with a spiral spring around the rod connecting with the levers, for the purpose of replacing them after being pressed down in its operation, which is done somewhat similar to that of an ordinary piano, the end of the levers being provided with connections, to which a set of vertical pins are hinged, the upper ends of which are each provided with a small button-shaped knob, with figures running up from 1 to 9, in addition to the cipher, and by pressing down any one of these knobs, which represent the figures in the column of the book, said figure will be turned up and shown on the first pulley, which represents units up to 10, and when above that number the next pulley, which represents tens, will be turned to indi-

cate the number of tens, and when above tens the third pulley, which represents hundreds, will be turned by the second to indicate the number of hundreds, and so on in like manner to any number of thousands. The cog-segments which operate the roller and first pulley are each provided with the required number of cogs to turn up the figure on the pulley indicated by the knob pressed down. The second and third pulleys are operated by the first by means of a trigger on the inside face, which catches a three-pointed device secured to the pinion which operates the second pulley, and thereby turns it one figure at a time with each revolution of the first pulley until a full revolution of the second is made, when the trigger on it catches a similar three-pointed device and turns the third pulley one figure at a time with each revolution of the second, thereby indicating hundreds, and when thus operated each pulley is held in position by means of another somewhat similar three-pointed device, which works against the flange of the pulleys for that purpose. These last-named pinions and three-pointed devices, by which the second and third pulleys are operated, are secured firmly together and made to work loosely on a small rod passing through the upper ends of vertical arms extending up from the prongs of a bifurcated lever hinged to the lever-rod below by means of arms extending down from the prongs, and is further provided with a spiral spring in front to replace it after being pressed down to ungear the pinions and set the pulleys, which always remain in gear; but when necessary to set them preparatory to commencing operations the right-hand part of this last-named lever extends down under the first pulley, with a catch on the end to hold it when set. The front of the parts has a small shaft working loosely in bearings, with two pins extending in under the three-pointed devices that hold the pulleys, and are pressed up by a spiral spring on the shaft. This shaft is further provided with an arm extending down and resting on a small block on the frame, to answer as a stand for holding up the lever; but when necessary to ungear the pinions it is tripped from the block and made to rest on a small projection on the edge. The upper end of this arm stands at an angle, and has a pin

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MICHAEL BOUCHET, OF LOUISVILLE, KENTUCKY, ASSIGNOR OF ONE-THIRD
TO M. F. MADDEN, OF SAME PLACE.

ADDING-MACHINE.

SPECIFICATION forming part of Letters Patent No. 314,561, dated March 31, 1885.

Application filed April 4, 1884. (No model.)

To all whom it may concern:

Be it known that I, MICHAEL BOUCHET, a citizen of the United States, residing at Louisville, in the county of Jefferson and State of Kentucky, have invented certain new and useful Improvements in Adding - Machines, of which the following is a description.

The object of my invention is to provide a machine for adding figures that will be cheap, durable, reliable, and not liable to get out of order, by means of which much valuable time and labor is saved, thereby assisting book-keepers and others in adding their accounts.

My present invention is in the nature of an improvement upon the adding-machine for which Letters Patent No. 251,823 were granted me January 3, 1882, in which the addition is performed by a series of curved rack-bars acting upon a toothed roller or elongated pinion, and which rack-bars are provided with teeth which give a variable throw to the elongated pinion to turn a numbered wheel one figure, two figures, three figures, &c., up to nine, according to which rack-bar is operated upon.

My invention consists in certain features of improvement, which I will first describe, and then point out in the claims.

Figure 1 is a perspective view of the front of the machine, with the case and other parts removed in order to show the interior arrangement of the several parts. Fig. 2 is a perspective view of the machine, taken from the back to show the operating-racks and foot-rest of the levers. Fig. 3 is a top view of the numbered wheels and the pinion in front of same. Fig. 4 is an enlarged view in perspective of one of the small operating-pinions, showing the three-pointed device on its end. Fig. 5 is a perspective view of a set of operating levers and racks, showing the arrangement of the several parts. Fig. 6 is a perspective view of the first number-wheel (indicating units) and part of the toothed roller or elongated pinion. Fig. 7 is a perspective view of the second number-wheel, (indicating tens.) Fig. 8 is a perspective view of the third number-wheel, (indicating hundreds.)

A represents the frame, which is made of metal and of the form shown in the drawings.

B, Fig. 2, is a raised bar on the bottom of the machine forming a support for the back end of the levers.

C, C, Figs. 1 and 2, are standards secured to the bottom of the machine, and D is a round bar passing through them, forming a support for the front ends of the operating-levers, and to which the arms F are hinged. (See Fig. 5.)

E are the operating levers, which are fulcrumed or jointed to the arms F, and just above their fulcrums have upwardly-extending curved rack-bars L, with teeth upon the inner side of the curve. These racks engage with the elongated pinion or toothed roller I. The outer ends of the levers E are provided with vertical studs K, having push-buttons on top, each of which is designated by a different number to correspond with the number of teeth of its rack, and thus giving a throw to the toothed roller I sufficient to turn the number-wheels a distance to measure the same number of spaces as indicated by the number on the push-button. The stud *k* and the end of the lever carrying the stud are held up and the rack L is held away from the toothed roller I by the action of a spring, G, for each of them. When stud *k* is depressed, lever E is rocked on the fulcrum joint connecting it to arm F, and this initial motion throws rack L into engagement with the toothed roller I. Immediately following the initial movement the lever E and arm F move together, rocking upon the rod D, and the rack, being in engagement with the toothed roller I, turns the same a distance represented by the number of the push-button on that lever. After the toothed roller has been moved, a pawl, P, Fig. 1, engages with a ratchet, Q, on said roller and holds it to its place, and as soon as pressure on the stud K is removed the spring G rocks the rack L out of engagement with the toothed roller and pulls down the rack and arm F about the rod D as a center, allowing the curved ends of arms F to drop down on bar B.

For the sake of compactness, the levers E and their immediate attachments are arranged in pairs, with the exception of the first one, representing units, and shown on the right of Fig. 2. Thus in Fig. 5 the parts marked with

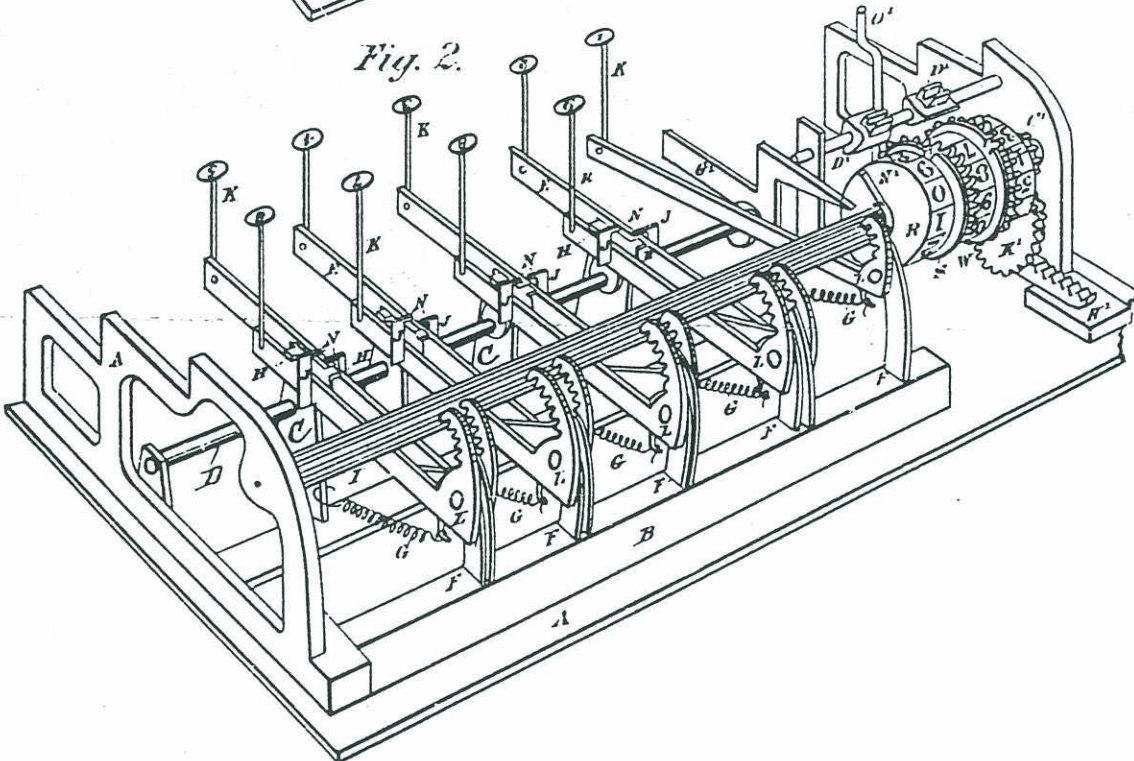
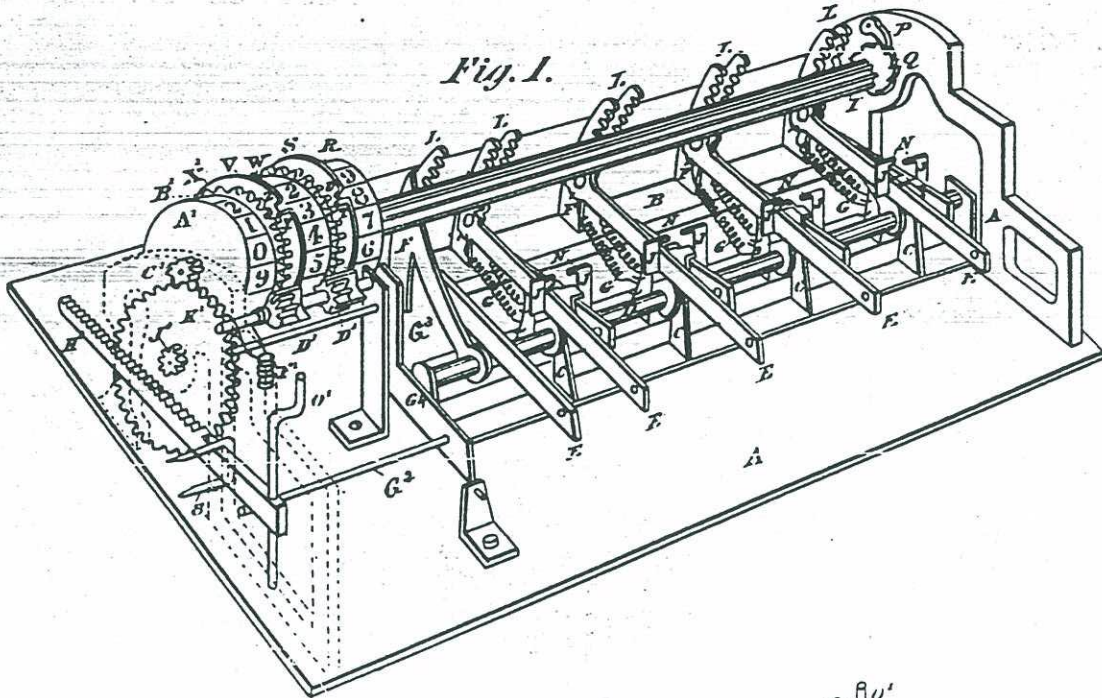
(No Model.)

2 Sheets—Sheet 1.

M. BOUCHET.
ADDING MACHINE.

No. 314,561.

Patented Mar. 31, 1885.



WITNESSES.

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(No Model.)

2 Sheets—Sheet 2.

M. BOUCHET.
ADDING MACHINE.

No. 314,561.

Patented Mar. 31, 1885.

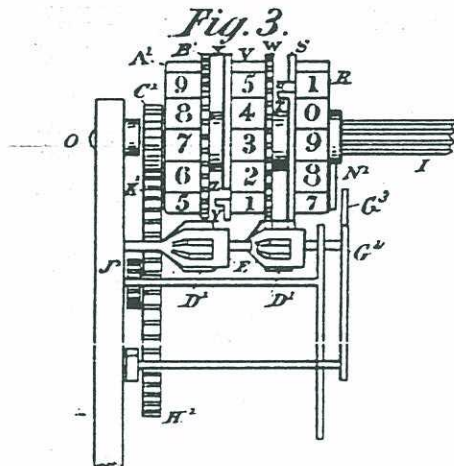


Fig. 7.

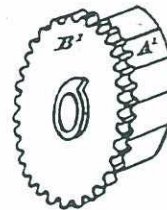


Fig. 8.

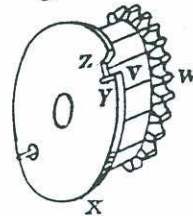


Fig. 6.

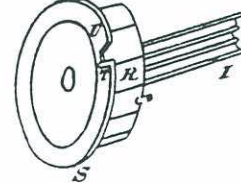
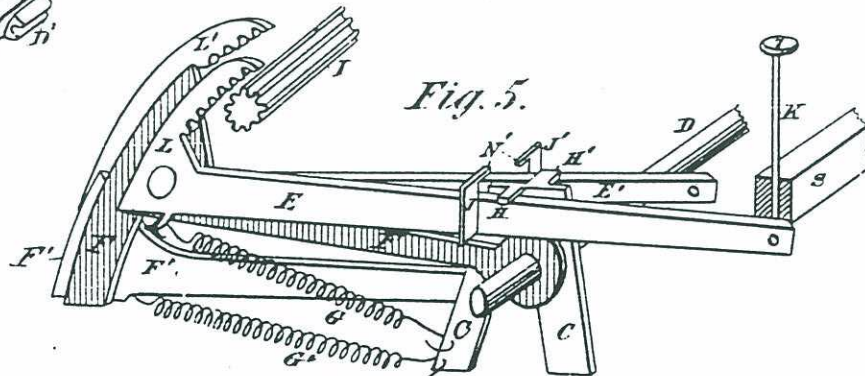


Fig. 4.



Fig. 5.



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