

(No Model.)

G. B. FOWLER. ADDING MACHINE.

No. 432,266.

Patented July 15, 1890.

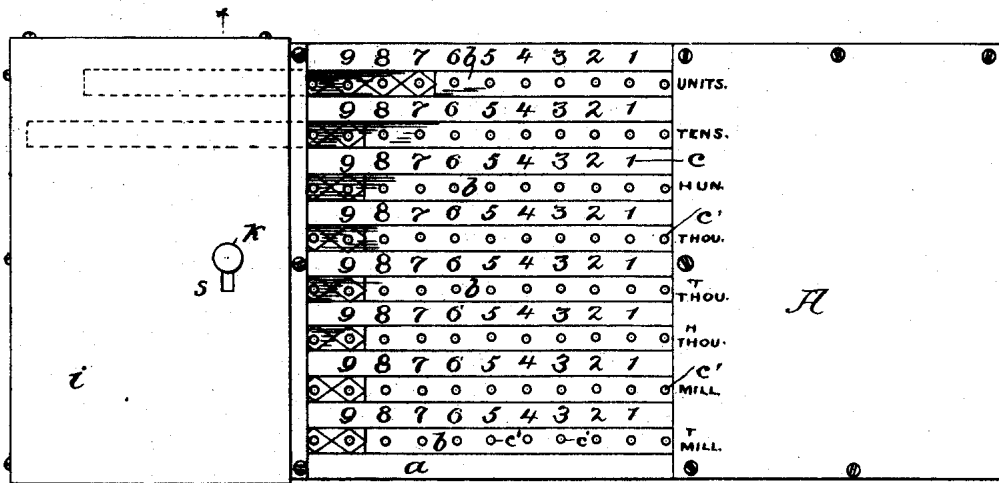


Fig. 1.

Fig. 4.

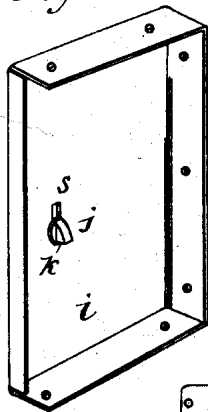


Fig. 2.

Fig. 5.

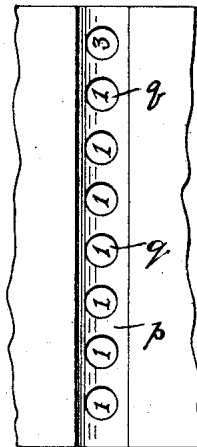
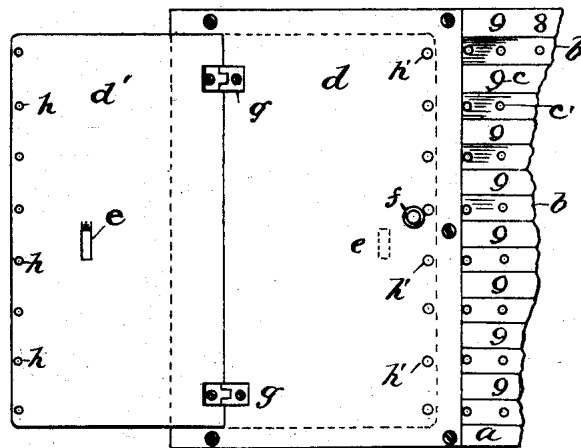


Fig. 3.



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ADDING-MACHINE.

SPECIFICATION forming part of Letters Patent No. 432,266, dated July 15, 1890.

Application filed March 7, 1890. Serial No. 342,952. (No model.)

To all whom it may concern:

Be it known that I, GEORGE B. FOWLER, a citizen of the United States, residing at Brooklyn, in the county of Kings and State of New York, have invented certain new and useful Improvements in Adding-Machines, of which the following is a true, full, and exact specification, reference being had to the drawings accompanying and forming a part of the same.

My invention relates to improvements in adding-machines in which sliding bars operate on a bed or frame provided with a series of numbers, &c.; and the object of my improvements is to provide a means for locking the several sliding bars at any point on the bed or frame and at any time during the process of calculation.

In the accompanying drawings, which fully illustrate the novel features of my improvements, Figure 1 is a plan view of my improved adding-machine. Fig. 2 is a transverse section of the same, taken on the line X X, of Fig. 1. Fig. 3 is a plan view of one end thereof with the locking-plate thrown back. Fig. 4 is a perspective view of the outer casing for the locking-plate, and Fig. 5 is a fragmentary view of the register on the under side of the machine.

Referring to the drawings, *a* represents a bed or platform having one end portion covered with a plate of metal *A*, which extends down and over the edge of the same, and is fastened thereto by a number of screws. The bed *a* is provided with a series of grooves *o*, and in these are fitted bars *b*, so as to have a horizontal movement therein. On the intervening spaces between the grooves are placed a series of numbers, ranging from 1 to 9, and in the sliding bars are formed holes at uniform points, corresponding to the numbers on the bed *a*, as will be seen at *c' c'*, &c. These holes, however, range from 1 to 18. On the under side of the sliding bars are also placed numbers running from 0 to 9. The bed has a transverse groove on its under side, as at *p*, and in this groove are holes *q*, eight in number, which extend through the bed, so that the numbers on the sliding bars are visible from the under side of the machine. The bars are moved back and forth by means of a pencil or other pointed instrument, which is inserted into the holes. The sliding bars

represent denominations from units to tens of millions, and as one after another are moved the combined result or addition will be visible by the figures appearing on the under side of the machine. Now, while the movement of the bars is perfectly reliable and the result invariably correct as at first registered, there are times when the calculation must be suspended and the machine laid aside for a greater or less period of time, and when this is necessary it is important that there should be some secure means of insuring the machine against handling by irresponsible parties or being disturbed by contact, in which case the sliding bars are apt to be moved and the result as at first found be changed. To attain this end is the purpose of my present improvement, and to render the locking device as simple in construction as possible, as well as reliable in its operation, I combine with the bed or frame of the machine a clamping-plate provided with pins or studs arranged so as to engage with the sliding bars, and provide means whereby the said locking-plate may be put into engagement therewith and be automatically released therefrom at any point in the operation of the machine. Thus the work of calculation may be suspended for any period of time and the machine laid by without any danger of the result being tampered with or be changed by irresponsible persons or by the shaking or handling of the machine.

Referring now to Figs. 2, 3, and 4, in which the locking mechanism is more fully shown, let *d* represent a metallic plate secured by means of screws to the upper surface of one end of the bed *a*. To the rear part of this plate is connected by hinges *g g* another plate *d'*. Along the edge of the hinged plate is placed a series of pins or studs *h*, and a corresponding number of holes *h'* are provided in the plate *d*. These holes are made so as to coincide with the holes in the sliding bars, so that when the hinged plate *d'* is clamped down, as will hereinafter be described, the pins *h* on the plate *d'* will be made to pass through the holes *h'* and into the holes *c'* in the sliding bars and hold them securely locked against any attempt to move them until the clamping-plate is released. A small spiral spring *f* is attached at one side of the plate *d*, which is compressed when the plate

d' is clamped down, and serves to throw the same upward when it is released, so that the pins will clear the holes. *i* is a metallic cover with downwardly-projecting edges adapted to fit over the hinged plate *d'* and hold it down in position. It is secured to the bed *a* by means of screws *r*. When it is bolted in place, the plate *d'* is allowed a little vertical play to admit of the ready engagement of such plate with the sliding bars.

A pin *j*, having an enlarged head *k*, projects through and is made to work in an elongated slot *s*, formed in the covering-plate *i*. The pin *j* has a latch-shaped or beveled extremity *t*, which bears upon the plate *d* when it is moved in one direction in the slot. A correspondingly-formed slot *e* is provided in the hinged plate *d'*, and both slots are similarly beveled at one end to conform to the bevel on the extremity of the pin *j*, so that the beveled end of the pin will ride easily up through the slots when it is moved in the direction to release the clamping-plate. When it is desired to suspend the operation of calculating and lock the bars with the registered amount indicated on the back of the machine, the pin *j* is moved to the end of the slot *s*, which movement forces the clamping-plate *d'* down, so as to cause the engagement of the pins with the sliding bars, the said pins passing through the holes in the plate *d* and into the holes in the bars, and so holding them in a locked position until the pin *j* is moved in an opposite direction, when the plate *d'*, being released from downward pressure, the spring *f* will force it up sufficiently to bring the pins out of the holes in the sliding bars. In Fig.

2 the bars are shown in a locked position. This locking mechanism is very simple in construction, and has been found indispensable to the effective use of the adding-machine.

What I claim as new, and desire to secure by Letters Patent, is—

1. The herein-described adding-machine, consisting of a grooved frame, sliding bars provided with perforations arranged to move in said grooves, in combination with a clamping-plate having a series of pins to engage with the perforations, and means for forcing said clamping-plate in and out of engagement therewith, as set forth.

2. In an adding-machine, a grooved frame and sliding bars provided with perforations, in combination with a spring-controlled clamping-plate hinged to said frame, and having studs or pins which engage the perforations in the sliding bars, as set forth.

3. In an adding-machine having a grooved frame and sliding bars provided with perforations, an end plate having a series of perforations coincident with the perforations in the said bars, a hinged clamping-plate provided with pins to pass through the perforations in the sliding bars, and a pin arranged to work through an outer slotted casing and pass through a slot in the hinged plate to force down the clamping-plate, with a spring for holding the said plate out of engagement with the sliding bars, as set forth.

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Witnesses:

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