G. W. Edelman,

Calculating Machine.

No. 4,902. Patented Dec. 22, 1846.

Fig 1.

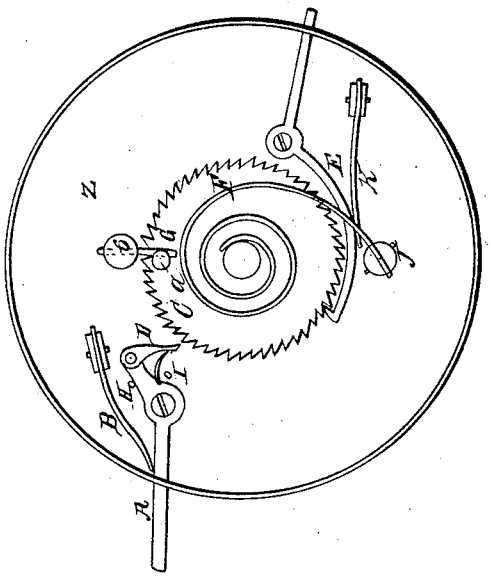
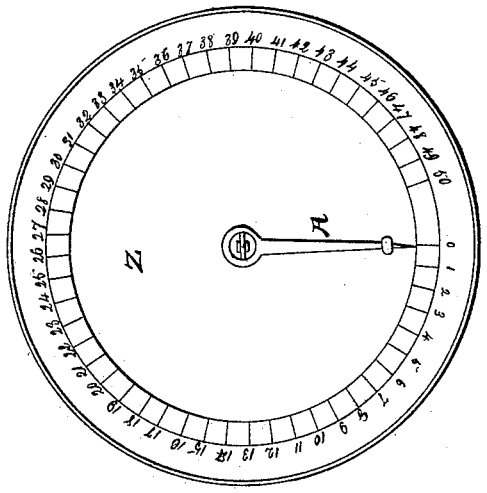


Fig 2.



UNITED STATES PATENT OFFICE.

GEO. W. EDELMAN, OF PHILADELPHIA, PENNSYLVANIA.

MACHINE FOR CALCULATING.

Specification of Letters Patent No. 4,902, dated December 22, 1846.

To all whom it may concern:

Be it known that I, GEORGE W. EDELMAN, of the city and county of Philadelphia and State of Pennsylvania, have invented a new and useful Machine for Counting; and I do hereby declare that the following is a full, clear, and exact description of the construction and operation of the same.

This instrument, which the undersigned calls the decimator, is in the general form of a watch having a hand or index and a circle on the face divided into equal parts numbered from zero to 40, 50, or any other extent, which may be deemed necessary. The index being placed at the zero point can be moved forward over one space at a time, by pressing upon a trigger projecting at the side of the instrument. There is also another projecting point by which the index may at any time be thrown back to the zero point. These movements are effected as follows. Place the decimator in the left hand, with the back against the palm of the hand, and the trigger marked A Figure 1, projecting between the forefinger and the thumb. Grasp the instrument while in this position, so as to leave the forefinger at liberty for pressing trigger A as occasion requires. After pressing said trigger and hearing a click, the forefinger must be taken off, when the trigger will fly back and be ready for another pressure and so on, until the work is completed or the index has performed a revolution, when it is thrown back to the zero point, by pressing the liberating latch E. Handling the decimator thus, then by pressure on the trigger marked A Fig. 1, in drawing, ordinarily held at rest and in place by the spring B, one tooth of the wheel C is caught by the latch D and the wheel caused to revolve to the extent of one of the teeth into which its circumference is divided, the proper extent of motion for which purpose in the trigger is secured by a screw upon the shank of which it moves as a fulcrum and by two stops marked H and I, when the pressure of the finger upon the trigger is removed the spring B throws the trigger back to its original position. During the movement above described another latch E falls into a tooth of the wheel and sustains it in the position thus acquired, this latch being likewise furnished with a stop J and spring K by which its position and limit of motion are controlled, said latch being secured by a screw, upon the shank of which it moves as a fulcrum, by pressing the small projecting point L. A spiral spring F coiled around the axis of the wheel C holds it against the latch E and also moves it back to its original position after a required series of movements of the trigger A has been made. By pressure upon the projecting point L, the wheel is released from latch E, when the spiral spring causes it to revolve until checked by the stop G, which is composed of a pin, *a*, projecting from the wheel, C, which by the action of the spiral spring, F, is made to strike upon and rest against an arm or projection which is fixed in position by being inserted at right angles into another pin, *b*, firmly attached to the side or dial disk, thus restoring the index to the starting point.

Upon the axis of the wheel, C, is placed an index or hand A Fig. 2, which points to the circular graduated scale numbered in this figure from 1 to 50 inclusive, the arbor or axis being squared for the purpose and the hand secured by a screw. Around the whole is a metallic frame supporting a center plate Z, upon which the works are sustained on one side, and which serves as a dial with its graduation upon the other, the latter being covered with a glass for its protection, through which the position of the index may be noted, while the frame is covered with a plate of metal for the protection of the works. The trigger or projecting points pass through the surrounding frame or case so as to be moved conveniently by the fingers, when the instrument is used.

The mode of using the decimator in the process of addition is as follows,—The index is made to start at zero. As the tens in any column of figures are successively counted up, the trigger marked A is pressed and the index moves forward over one space at a time. In this manner the number of tens in the column is pointed out upon the dial plate; and this number, with the units of excess, gives at once the sum of the column. This sum is written down with a pencil in the proper columns, and after restoring the index to the zero point by pressing the projecting point L, the same course is pursued with the tens column and so of the rest. It is easy with many persons to cast up the hundreds in two columns at a time. In this case no difference is presented

in the use of the instrument except that it counts hundreds instead of tens.

What I claim as my invention is—

The combination, with the liberating latch E and stop G hereinbefore described, of the several mechanical devices herein described for operating the count wheel, so as to adapt the instrument to the purpose of counting in the process of addition without requiring the eyes to be turned from the figures.

GEO. W. EDELMAN.

Witnesses:

JOHN THOMPSON,

H. C. THOMPSON.