

J. B. NEWBROUGH.

Calculator.

No. 21,621.

Patented Sept. 28, 1858.

Fig. 1

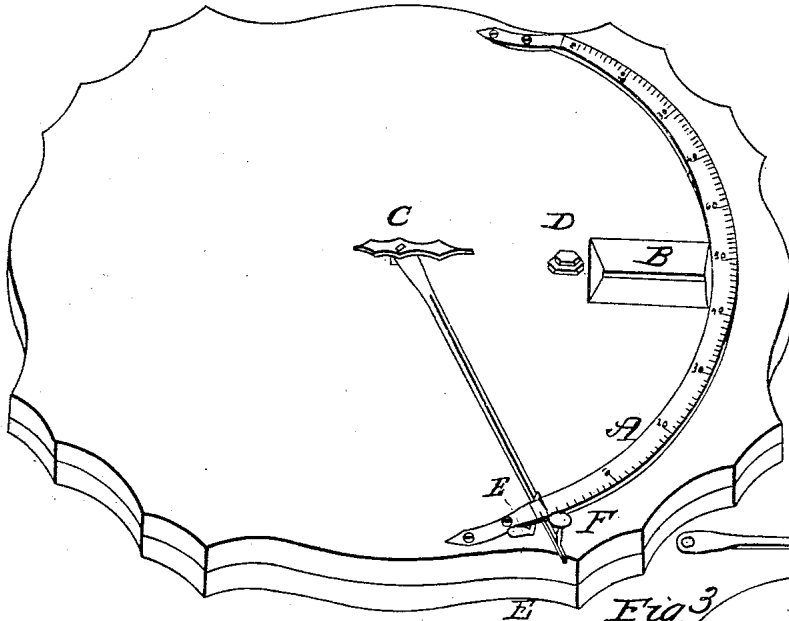


Fig. 4

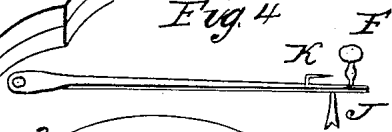


Fig. 3

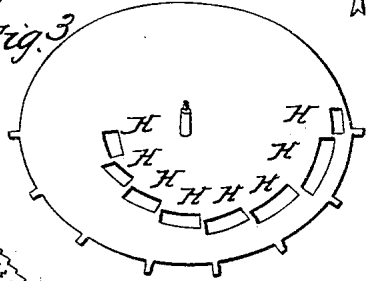
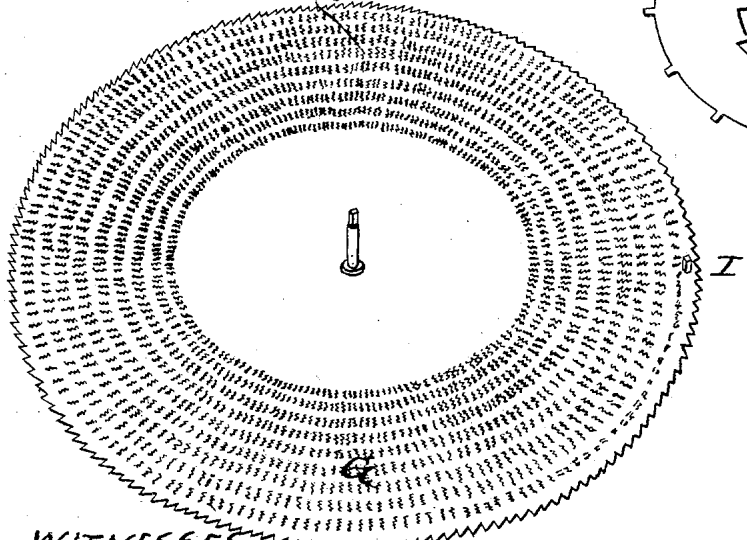


Fig. 2



WITNESSES
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UNITED STATES PATENT OFFICE.

JOHN B. NEWBROUGH, OF ST. LOUIS, MISSOURI.

MACHINE FOR ADDING NUMBERS.

Specification of Letters Patent No. 21,621, dated September 28, 1858.

To all whom it may concern:

Be it known that I, JOHN B. NEWBROUGH, of St. Louis, State of Missouri, have invented a new and useful Improvement in Counting-Machines; and I do declare that the following is a full and exact description thereof, reference being had to the accompanying drawings and to the letters marked thereon.

10 The nature of my invention consists in the arrangement of two wheels, or rather, a dial and a wheel, placed horizontal and parallel with each other, inside of a box; and, in combination, a lever or finger-piece
15 which operates on the dial or larger wheel, by passing through a slot in the box; a pointer being so fastened to the finger-piece that it will point to the figures of the index, marked on the outside of the box, thus making
20 the operation for adding numbers merely the moving back and forth of the finger-piece on the index to the numbers required to be added.

To enable others skilled in the art to make
25 and use my invention I will proceed to describe its construction and operation.

Figure 1, is a perspective view; A, an index, numbering from 0 to 99 inclusive; B, a slot through which the answer is seen; C, a
30 nut for turning the dial backward when setting the machine; D, a nut for suspending the obstructing wheel and also for setting the same before commencing to add; E, a catch to prevent the dial from turning backward while adding; F, finger-piece, or end
35 of the lever, by which the dial is turned while adding.

Fig. 2, a perspective view of the dial, which has a certain number of teeth on its periphery—thus being a ratchet wheel—; G, circles of figures, each circle containing numbers exactly equal to the number of teeth on the periphery, and each circle continuing to rise in numbers from where the
45 preceding circle was completed.

Fig. 3, a perspective view of the obstructing wheel, which is used for obstructing the eye from seeing but one circle on the dial at

one time; H, slots through which the dial is seen; this wheel is moved forward the
50 length of each slot, for every revolution of the dial, by a cog I, Fig. 2, coming against the cogs on the obstructing wheel.

Fig. 4, a view of the lever, by which the machine is worked; J, the prong which
55 catches in the teeth of the dial by passing through a slot in the box, underneath the index, A, Fig. 1; K, pointer or hand which slides along on the index to such numbers as are required to be added. 60

The manner of working my machine is as follows, viz: Seize the end of the lever or finger-piece with the thumb and forefinger of the right hand, draw it back to 0 on the index; with the thumb and finger of the
65 left hand set the obstructing wheel by turning it back until it is set, then by the nut C, Fig. 1, turn the dial back until it strikes the cogs of the obstructing wheel, but in order to turn the dial back, the right thumb must
70 press down the catch E, Fig. 1. Now for example,—add 7, 46, 18, 91 together,—move the lever along the index until the pointer rests on 7, now draw it back to 0, again
75 move it to 46, then draw back again to 0, then to 18, then to 0, then to 91; and the result 162 will be seen through the slot B, Fig. 1. Thus being able to add up two rows or columns of figures at one time, simply
80 by moving the finger-piece back and forth on the index; and, with a little practice, with as much rapidity as the figures can be read.

I do not claim as my invention the rotating dial and the manner of its movements; 85 but

I do claim as my invention—

The obstructing wheel containing a successive number of slots corresponding to the circles of figures on the dial; when arranged
90 as shown and described.

JOHN B. NEWBROUGH.

Signed in our presence—

THOMAS J. DAILY,
ERASTUS R. GREEN.