(No Model.)

F. SWEET.

ADDING MACHINE.

No. 519,358. Patented May 8, 1894.

Fig. 1.

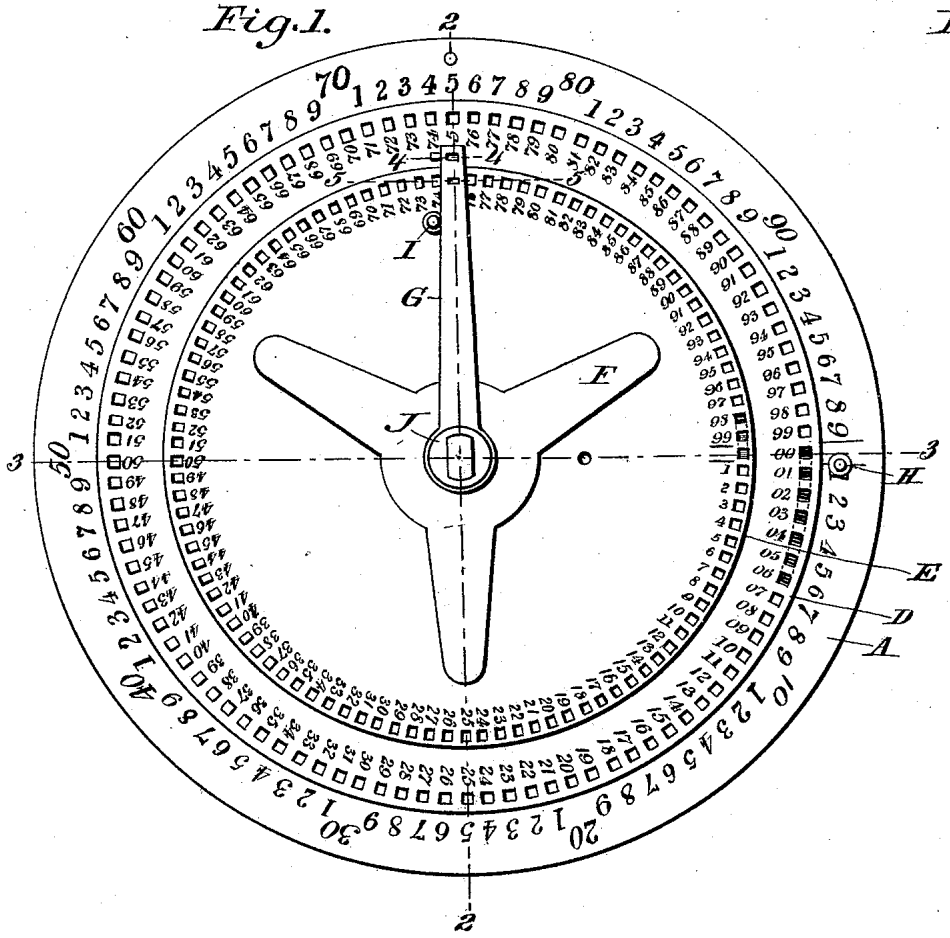


Fig. 2.

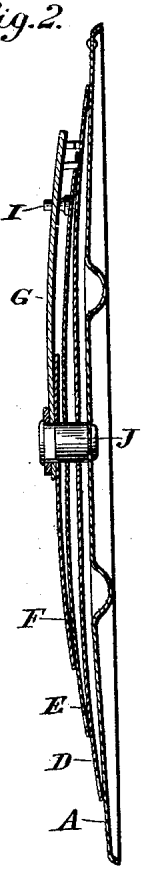


Fig. 3.

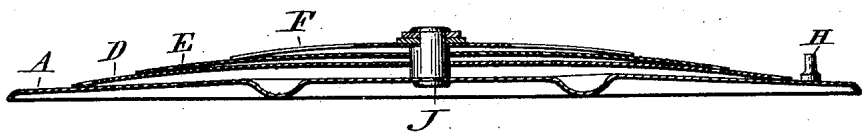


Fig. 4.

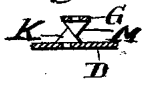
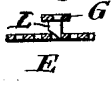


Fig. 5.



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FRANK SWEET, OF KIRKSVILLE, MISSOURI.

ADDING-MACHINE.

SPECIFICATION forming part of Letters Patent No. 519,358, dated May 8, 1894.

Application filed October 6, 1891. Serial No. 407,970. (No model.)

To all whom it may concern:

Be it known that I, FRANK SWEET, a citizen of the United States, residing at Kirksville, in the county of Adair and State of Missouri, have invented a new and useful Improvement in Adding-Machines, of which the following is a specification.

My invention relates to an improvement of an adding machine wherein two wheels or disks, numbered from 1 to 100, are made to revolve on a common central pivot by a metallic pencil, for the purpose of performing additions mechanically.

Figure 1 is a plan view of the entire machine, showing the outline of the stationary foundation A, the stop H, the disks D and E, with the disk spring F, the stationary latch G, and the catch I. Fig. 2 is a central sectional view through 2—2 Fig. 1. Fig. 3 is a cross sectional view through 3—3. Fig. 4 is a sectional view through 4—4. Fig. 5 is a sectional view through 5—5, showing the catch L, in the latch G, which holds the disk E from turning.

The foundation A, and the disks D and E. are each numbered near its outer circumference with figures 1 to 100, placed at regular distances around the entire disk. The disks D. and E have holes outside of the figures to insert the metallic pencil, for the purpose of turning the disk. The spring latch G which keeps the small disk from turning, is itself held stationary by the central pivot J.

The machine is set ready for operation by moving the two ciphers of the large disk D, round against the blank space on the foundation at the setting point or stop H, and moving the small disk E round until the blank space thereon is in line with them; in the position shown on the plan view. When thus set, the latch G will have its catch L shown in Fig. 5 in the hole of the small disk E opposite the number 75. When the large disk D has been turned one rotation, the raised point K on its face against the number 74, is brought round on the opposite side of the catch M, shown in Fig. 4, and raising the latch G allows the small disk E to be moved forward by the friction of the two disks caused by the spring F, to the distance of one figure space, thus registering the hundred on the small disk; while the units and tens of any amount, are constantly shown in the same line on the larger disk D, opposite the blank space on the foundation A.

The capacity of the machine is unlimited. It will add any and all numbers, either one or two columns at a time; and with absolute accuracy.

The machine may be secured to a board, or desk, with tacks, screws, or other suitable means, and operated with one hand leaving the other free to keep the place of the figures as they are added. To add two columns, the numbers 5,359, 3,675, 6,793; amounting to 15,827; place the pencil in the hole of the large movable disk D opposite 93 on the foundation A and carry as backward on a clock dial, to the stop at the setting point; then place the pencil in the hole of the large disk D, opposite 75 on the foundation A and carry to the stop as above; then place the pencil in the hole of the large disk D, opposite 59 on the foundation A, and likewise carry to the stop; when the sum on the two disks at the setting point will be 227. Write down the 27 in their places as the first two figures of the amount. Then place the pencil in the hole of the disk D, opposite 2 on said disk, and turn in the reverse direction from the above, that is, as forward on a clock dial, holding the top of the pencil outward so that it will strike the stop H at the setting point, leaving the figure 2 between the two blank spaces on the foundation, and on the smaller disk. In this manner both disks are set, and the proper number carried at one movement; for in carrying the disk D backward, the disk E is carried along with it by the friction caused by the spring F, until the catch I, strikes the latch G, which retains it at its proper place at the setting point. Then add the figures in the last two columns 53, 36, 67, in the manner above described, and the sum opposite the blank space on the foundation will be 158, which are the last figures of the sum, and should be written down, making the total amount 15,827. In like manner all operations in addition may be performed. In adding a single column at a time, it is not necessary to carry the pencil beyond 9 on the foundation; but operations are more quickly performed by adding two columns at a time.

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

1. In an adding machine, the base in combination with the disks or rings mounted thereon, the carrying mechanism between said disks or rings, means whereby the reverse movement of one of the said disks or rings carries with it another of said disks or rings until the latter reaches its zero point, where it is automatically stopped, substantially as described.

2. In an adding machine, the base in combination with the rings or disks mounted thereon, the carrying mechanism between said rings, means whereby the reverse movement of one of said rings or disks carries with it another of said rings or disks, and a projection on said latter ring or disk which contacts with a projection on said base when it reaches its zero point, substantially as described.

3. In an adding machine the base in combination with the disks or rings mounted thereon, one of said disks or rings frictionally carried by another of said disks or rings during its reverse movement, a catch on the first mentioned disk which contacts with the stationary arm mounted on said base, when said disk or ring reaches its zero point, substantially as described.

4. In an adding machine, the base in combination with the disks or rings mounted thereon, one of said disks or rings carried by another of said disks or rings during its reverse movement until a catch on the secondary disk or ring contacts with a stationary arm mounted on said base, when said secondary disk or ring, reaches its zero point: and a lug on said base for stopping said primary disk or ring when it reaches its zero point in its reverse movement, substantially as described.

FRANK SWEET.

Witnesses:
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