

M. M. SMITH & F. W. POTTS.

ADDING-PENCIL.

No. 175,775.

Patented April 4, 1876.

Fig. 1

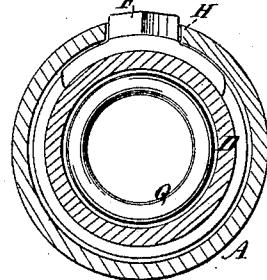


Fig. 5

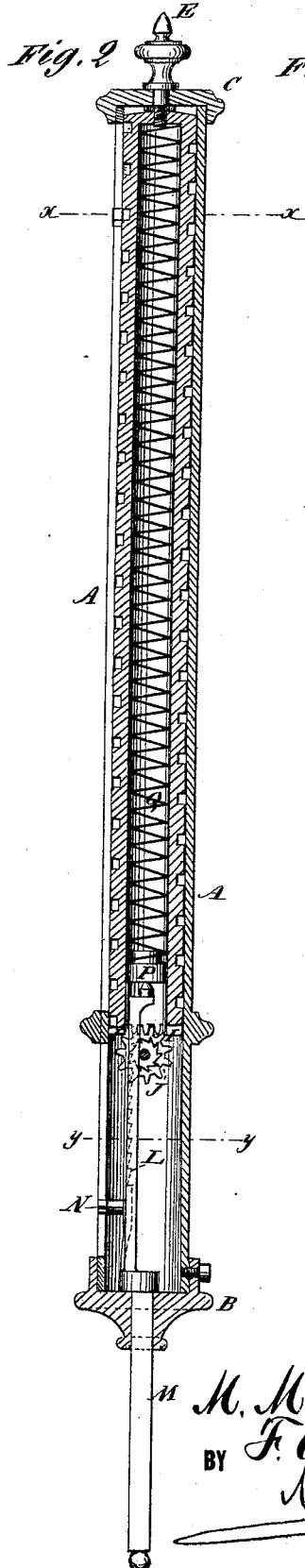
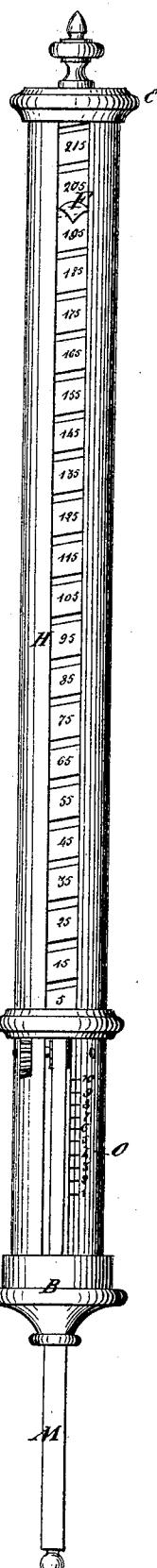
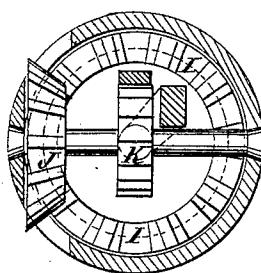
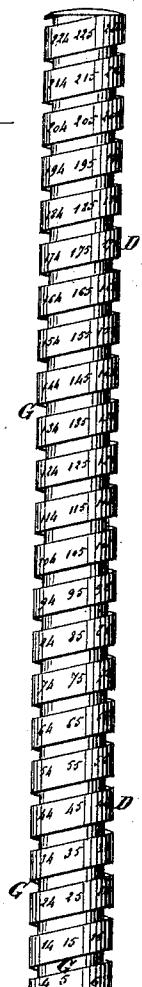


Fig. 3



WITNESSES:

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UNITED STATES PATENT OFFICE

MARSHALL M. SMITH AND FLETCHER W. POTTS, OF VERDI, NEVADA.

IMPROVEMENT IN ADDING-PENCILS.

Specification forming part of Letters Patent No. 175,775, dated April 4, 1876; application filed August 28, 1875.

To all whom it may concern:

Be it known that we, MARSHALL M. SMITH and FLETCHER W. POTTS, of Verdi, in the county of Washoe and State of Nevada, have invented a new and Improved Adding-Pencil, of which the following is a specification:

The invention consists of a spirally-grooved revolving cylinder in a slotted case, numbered consecutively in the coil up from the lower end, ten numbers to each coil, and carrying an index by the groove, with contrivances in the lower part of this case to revolve the cylinder, by pressing a pointer into the case against a spring, as many numbers as a pointer in the pencil-point is pushed back along a scale at the lower end, and carrying the index along the spiral column a corresponding number of figures. The pencil is then relieved of the pressure and the spring forces it out again, when it is ready to repeat the operation.

In adding a column of figures, the pencil is placed on the figures to be added, and pushed back in the case till its pointer registers with the corresponding figure on the scale, and this turns the cylinder so as to raise the index a corresponding number of figures on the spiral column, thus adding to said column a number equal to the one on the paper touched by the point.

Figure 1 is a side elevation of our improved adding-pencil. Fig. 2 is a sectional elevation. Fig. 3 is a side elevation of the grooved revolving cylinder. Fig. 4 is a section on line *x x* of Fig. 2, and Fig. 5 is a section on line *y y*.

Similar letters of reference indicate corresponding parts.

A is a hollow cylindrical pencil-case, with end caps B and C. D is the spirally-grooved cylinder, which is fitted on the upper part of the case so as to be revolved by the thumb-bit E at the top. It is numbered from the bottom up consecutively on the coils, carries the index F in its groove G and in the groove H of the case, and is hollow in the center, and

gears, by cogs I at the lower end, with the wheel J, which is turned by the ratchet-wheel K, the latter being turned by the ratchet-bar L, which is a part of the pencil-point M, and carries the pointer N along the scale O, when the pointer is pressed in the case by bearing the latter down on the point. The upper end of the ratchet-bar bears against the follow-block P in the hollow of the cylinder, above which is the spring Q, for forcing the point down when the pencil is lifted.

When the ratchet-bar slides down it passes over the ratchet-wheel without turning it, to leave the index F at the point to which it was raised.

When the index has been raised to the total of the column added, it is moved back, to begin anew, by the thumb-bit E.

Different arrangements of gears may be employed for rotating the cylinder by the pushing up of the pencil-point, and we do not limit ourselves to the particular arrangement shown.

Having thus described our invention, we claim as new and desire to secure by Letters Patent—

1. The combination of rotating spirally grooved and numbered cylinder D, slotted case A, index F, and a longitudinally-sliding pencil-point, M, geared with the cylinder, for operating it, substantially in the manner described.

2. The combination of pointer N and scale O with the sliding pencil point M, rotating grooved and numbered cylinder D, index F, and slotted case A, substantially as specified.

3. The ratchet-pawl L, wheels J K, spring Q, and follower P, combined with the sliding pencil-point M, rotating cylinder D, and the slotted case A, substantially as specified.

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Witnesses:

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