

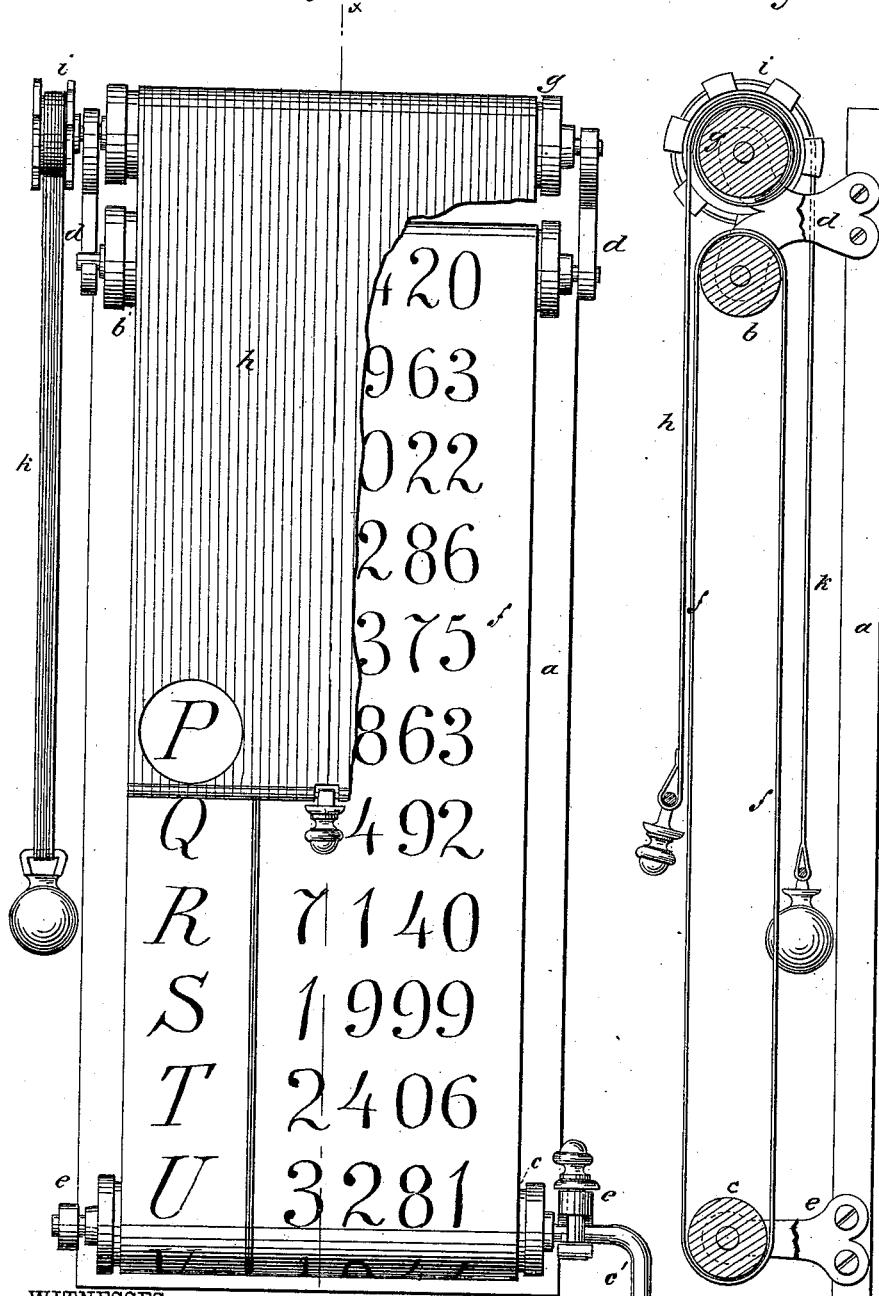
S. P. HALLECK.  
Device for Teaching Arithmetic.

No. 215,916.

Patented May 27, 1879.

Fig: 1.

Fig: 2.



WITNESSES:

*Chas. N. H. & Co.*  
*Sedgwick*

INVENTOR:

*S. P. Halleck*  
BY *Mumford*  
ATTORNEYS.

# UNITED STATES PATENT OFFICE.

SAMUEL P. HALLECK, OF ORISKANY, NEW YORK.

## IMPROVEMENT IN DEVICES FOR TEACHING ARITHMETIC.

Specification forming part of Letters Patent No. **215,916**, dated May 27, 1879; application filed February 20, 1879.

*To all whom it may concern:*

Be it known that I, SAMUEL P. HALLECK, of Oriskany, in the county of Oneida and State of New York, have invented a new and Improved Apparatus for Teaching Arithmetic, of which the following is a specification.

My invention is an apparatus adapted for use in schools and families, for the purpose of teaching and practice in the fundamental rules of arithmetic—viz., addition, subtraction, multiplication, and division.

The object I have in view is to save time and labor for the teacher by furnishing an apparatus that displays a series of figures which may be readily shifted and changed to present new combinations, and which serve as examples for the scholar, and to furnish with the apparatus a key, by which the answer or solution of the examples displayed may be readily found.

The invention consists in combining with rollers a notated rolling curtain, a cut-off curtain, a spool, and a weighted tape, as herein-after described.

In the accompanying drawings, Figure 1 is a front elevation of my apparatus, showing the cut-off curtain partially broken open. Fig. 2 is a vertical section on line *x x* of Fig. 1.

Similar letters of reference indicate corresponding parts.

The operative parts of the apparatus are shown as supported upon a strip or wooden board, *a*, which is to be attached to a wall or other support in an elevated position; or the piece *a* may be dispensed with, and the parts next described attached directly to the wall.

An upper horizontal roller, *b*, and lower roller, *c*, are supported, respectively, in brackets *d d* and *e e*, so as to turn loosely, and fitted so that they can be readily removed from their supporting-brackets. The rollers *b c* carry an endless curtain, *f*, of muslin or similar flexible material. Roller *c* is furnished with a crank-handle, *c'*, whereby it may be turned and curtain *f* caused to travel around the rollers.

Upon the surface of *f* are columns of figures, painted or otherwise affixed, in large size, and so as to show prominently. These figures are arranged on straight lines across the curtain, and at the left of each line, slightly detached,

is placed a letter or figure painted upon curtain *f*.

Above roller *b*, held in brackets *d d*, is a roller, *g*, that carries a cut-off curtain, *h*, which is of a width and length to cover *f* when drawn down.

The arbor of roller *g* is fitted with a spool, *i*, for a weighted tape, *k*, that sustains *h* in any position it may be drawn down, and serves as a means for raising *h*.

The apparatus is to be used as next described. Supposing the curtain *h* drawn entirely up, and the lesson to be addition, the figures in sight on the face of the curtain then are all to be added. These may be copied on a slate by the scholar, or not. To make a shorter example, the cut-off *h* will be drawn down to any point, thereby cutting off a portion.

The left-hand column of letters or figures is used by the teacher to find the answer on the key, which is done by noting the figure in that column at the bottom of curtain *f*. Then by referring to that number in the key the answer will be found, it being, of course, understood that the key is properly prepared in accordance with the figures on the curtain.

The key will also be arranged to give the answer with the cut-off at any letter. Thus, when the bottom is at U and cut-off at P, the answer is 16318. By shifting the endless curtain the figures are instantly changed, and a new combination displayed.

The same figures may be used for the other rules, and combinations of the same; and the teacher will thereby be saved the time and work of placing figures on a blackboard. A further advantage is that the figures will be correctly formed, and the scholar will be taught in that respect at the same time.

Additional curtains are to be furnished with the apparatus, containing, for instance, figures in one or two columns for young scholars, figures arranged to indicate dollars and cents, and other variations, so that the curtain in use can be taken off and another substituted.

I do not limit myself in respect to the arrangement of the figures on the curtain, as such arrangement will be arbitrary only so

far as it is necessary or desirable to use a key-chart.

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

The combination, with the rollers *b c g*, of the notated roller-curtain *f*, the cut-off cur-

tain *h*, the spool *i* on the arbor of roller *g*, and the weighted tape *k*, as and for the purpose specified.

SAMUEL P. HALLECK.

Witnesses:

LUTHER G. WILLIAMS,  
HENRY M. ASHBY.