W. F. BAADE.

ARITHMETIC CASES.

No. 182,515. Patented Sept. 26, 1876.

Figure 1.

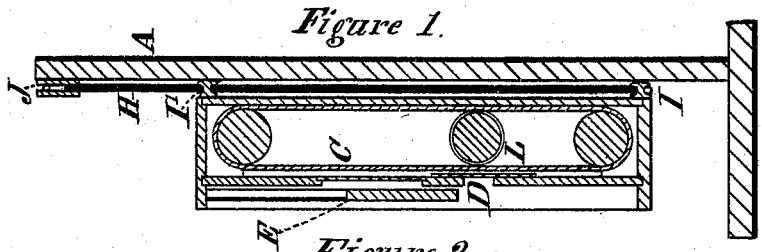


Figure 2

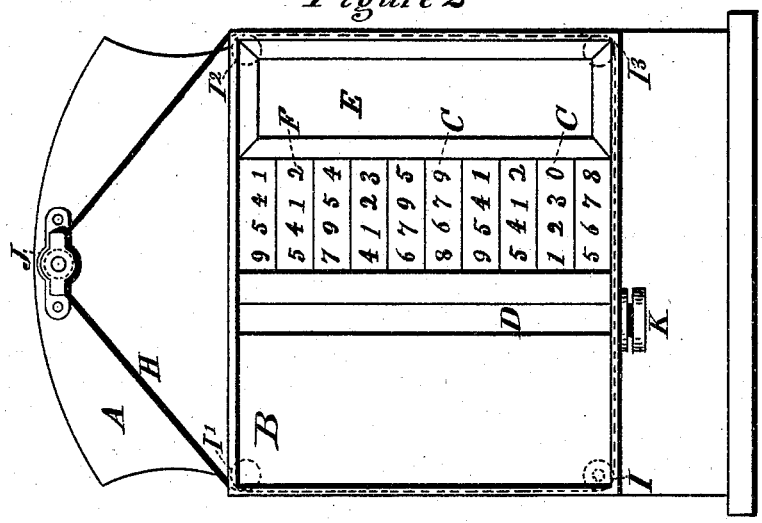
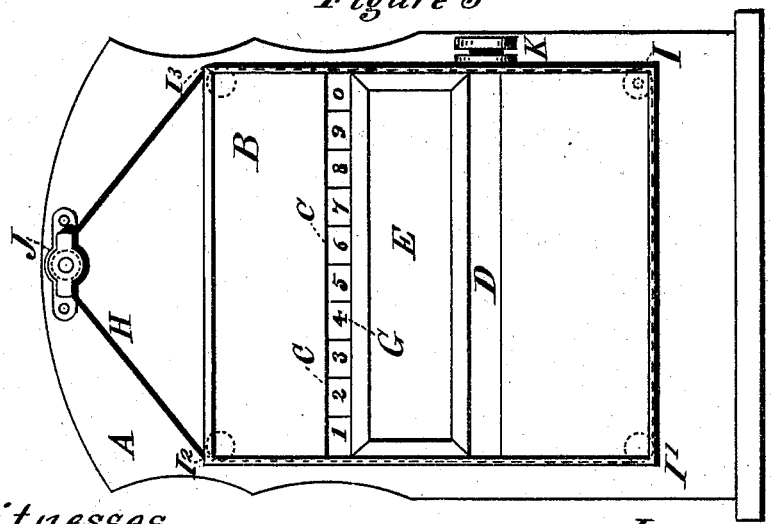


Figure 3



Witnesses.

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UNITED STATES PATENT OFFICE.

WILLIAM F. BAADE, OF BUFFALO, NEW YORK.

IMPROVEMENT IN ARITHMETIC-CASES.

Specification forming part of Letters Patent No. **182,515**, dated September 26, 1876; application filed March 11, 1875.

To all whom it may concern:

Be it known that I, WILLIAM F. BAADE, of the city of Buffalo, in the county of Erie and State of New York, have invented certain new and useful Improvements in Arithmetic-Cases, of which the following is a specification:

My invention relates to that class of arithmetic-cases which are composed of a series of endless belts, having printed, or otherwise impressed upon them, one or more rows of figures arranged consecutively, or otherwise, from a cipher up to nine, part of which are arranged lengthwise of the belts, and part crosswise, so that horizontal rows or vertical columns of figures may be presented according to the position of the belts.

My invention consists in the combination of said belts impressed as above specified, with a case for holding them, and a convenient device for partly turning it, so that vertical columns or horizontal rows of figures, which may be varied, as desired, by moving said belts, and thereby present examples in addition, multiplication, division, and subtraction.

In the accompanying drawings, Figure 1 represents a vertical cross-section through the case and supporting-frame; Fig. 2, a front elevation, showing the case in position for representing vertical columns of figures. Fig. 3 is also a front elevation, representing the case partly turned so as to present horizontal rows of figures.

A, in said drawings, is the support for the case, and B represents the case. C are the endless belts. They are moved in the same manner as shown in Patent No. 156,868, dated November 17, 1874, for an alphabet-case, which need not be described here. D is the elastic diaphragm upon which pressure is made, and K the knob or handle for turning or moving the belts. E is a sliding cover for exposing or covering the figures or numbers. F, in Fig. 2, represents the figures arranged crosswise of the belts, by means of which various combinations of numbers may be presented, from which examples in addition, multiplication, division, and subtraction may be given. By this arrangement the belts will run crosswise of the supporting-frame A, as shown in Fig. 2.

G, in Fig. 3, represents the figures or numbers as arranged lengthwise of said belts, so that rows of two or more figures may be shown for the purposes of instruction in the reading of different combinations of numbers. H represents a card for hanging the case B to the supporting-frame A. It is fastened permanently to the grooved pulley I on the case B, and is passed over the pulleys I^1, I^2, and I^3, so as to slide easily over the loose grooved pulley J on the case-supporter A.

This arrangement enables the operator or teacher to change the position of the case, as and for the purposes above mentioned.

K is the knob or handle for moving the belts by turning the roller L.

I claim as my invention—

The case-supporter A, loose pulley J, cord H, pulleys or pins I I^1 I^2 I^3, and case B, substantially as and for the purposes specified.

WILLIAM F. BAADE.

Witnesses:

JAMES SANGSTER,

A. N. SAMUELS.