(No Model.)

E. P. CLARK & D. L. WREN.

ABACUS.

No. 378,866. Patented Mar. 6, 1888.

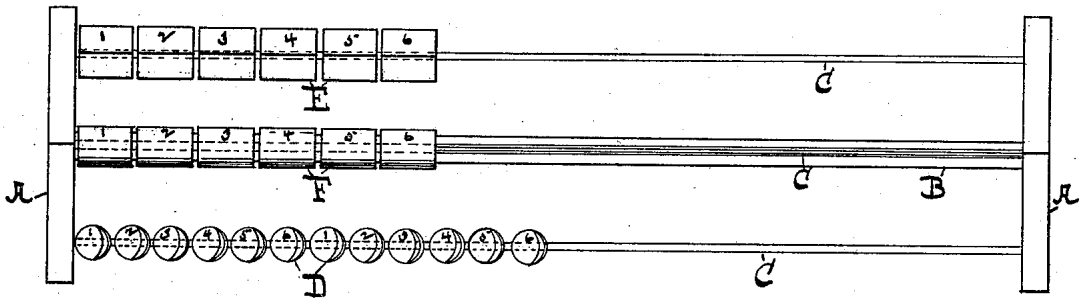

FIG. 1.

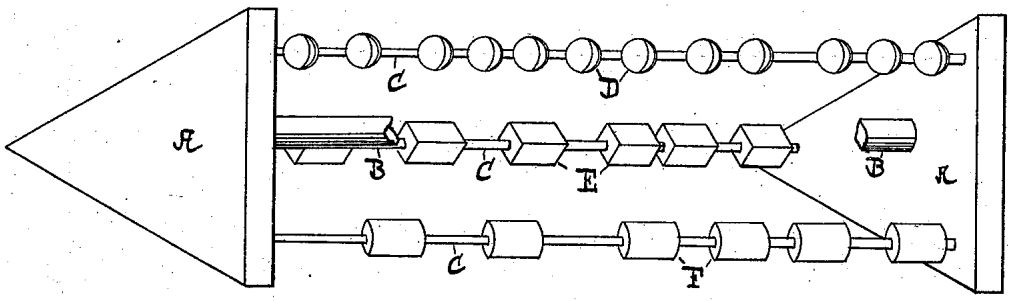

FIG. 2.

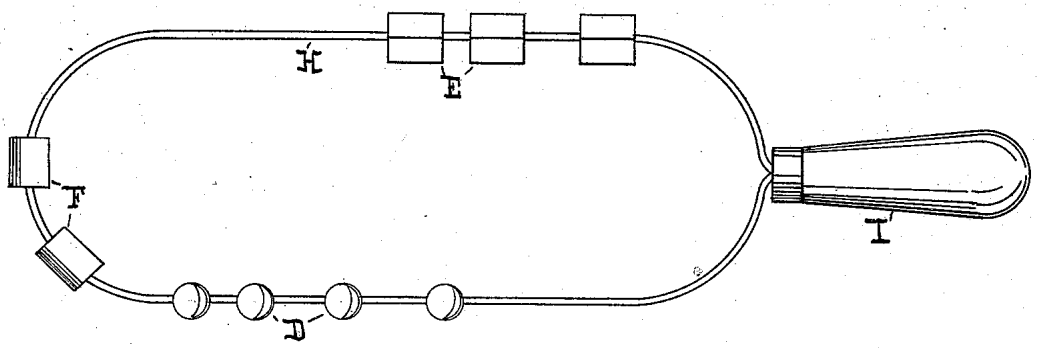

FIG. 3.

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UNITED STATES PATENT OFFICE.

EMBURY P. CLARK AND DAVID L. WREN, OF HOLYOKE, MASSACHUSETTS.

ABACUS.

SPECIFICATION forming part of Letters Patent No. 378,866, dated March 6, 1888.

Application filed July 14, 1887. Serial No. 244,255. (No model.)

To all whom it may concern:

Be it known that we, EMBURY P. CLARK and DAVID L. WREN, of Holyoke, in the county of Hampden and Commonwealth of Massachusetts, have invented a new and useful Improvement in Educational Appliances, of which the following is a specification, reference being had to the accompanying drawings, forming part thereof.

Our invention relates to apparatus for the instruction as well as the amusement of children, and is designed especially for the use of pupils during their first and second years in school. Its object is to combine in a single device means for teaching children the names and distinguishing characteristics of the elementary forms of bodies, the names and appearance of primary and secondary colors, and the simpler operations in arithmetic.

To this end our invention consists in the device hereinafter fully described, and particularly pointed out in the claims.

Referring to the drawings, in which like letters designate like parts in the several figures, Figure 1 is a side view of one form of device embodying our invention. Fig. 2 is a perspective view thereof with a portion of the central rod broken away. Fig. 3 is a side view of another form of the device.

In Figs. 1 and 2, the letters A A designate two end pieces united by a rod, B, seated at each end in one of said end pieces at or near the center of the latter. Said end pieces and rod are preferably made of wood, and the former are preferably made triangular in shape, for a purpose presently to be described. Wires C C C are secured at each end to the end pieces, near each of the three corners of the latter, as shown, and upon one of said wires are strung a series of spheres, D, upon another a series of cubes, E, and upon the third a series of cylinders, F, in such manner as to have free movement upon said wires. The said spheres, cubes, and cylinders will preferably be made of wood, and will be painted or otherwise colored to represent the primary and secondary colors as generally taught during the first and second years of school. For example, the spheres, cubes, and cylinders designated by the numeral 1 will be red, those marked 2 will be yellow, those marked 3 will be blue, those marked 4 will be orange, those marked 5 will be green, and those marked 6 will be purple, the first three being the primary and the last three the secondary colors.

It will be observed that as thus constructed a simple and attractive device is afforded, whereby distinctive forms and colors can be readily impressed upon the mind of a child, and, moreover, that the device can be used like the ordinary abacus for teaching the simpler operations of the science of arithmetic.

We prefer to make the end pieces, A A, triangular in shape, for the reason that an example of an elementary form, in addition to the sphere, cube, and cylinder, is thereby afforded, and for the further reason that the device is thereby adapted to rest securely upon a desk or table, with either of the wires C uppermost, as shown in Fig. 2, so that when attention is being directed to one of the distinctive forms of blocks the others are in a less prominent position and do not distract attention.

We do not wish to limit ourselves to the form of device shown in Figs. 1 and 2, however, as it is obvious that the main feature of our invention is wholly independent of the construction or shape of the frame upon which the blocks D E F are mounted. We have shown in Fig. 3, for instance, a frame composed of a single bent wire, H, having its ends inserted in a handle, I, all of the blocks being mounted upon said wire so as to move freely thereon. Neither do we wish to limit ourselves to the particular examples of distinctive forms or colors herein described, it being obvious that others could be combined therewith or substituted therefor without departing from the spirit of our invention.

We are aware that devices have heretofore been devised in which blocks of different colors have been employed to assist the mind in making correct combinations of numbers; but we believe ourselves to be the first to devise means whereby color, form, and combinations of numbers can be taught with a single device.

Having thus fully described our invention, what we claim, and desire to secure by Letters Patent, is—

1. An educational device comprising within a single device means for teaching form, color, and combinations of numbers, said means consisting of a frame having movably mounted

thereon two or more series of blocks, the blocks of each series having a uniform shape which is distinctive from the shape of the blocks composing either of the other series, and the individual blocks of each series being of different colors, substantially as and for the purpose set forth.

2. An educational appliance comprising a frame supporting one or more wires, and blocks having the form of spheres, cubes, and cylinders, respectively, mounted so as to move freely upon said wire or wires, said blocks being colored to represent the three primary and also the three secondary colors, substantially as and for the purpose described.

3. An educational appliance composed of the frame consisting of end pieces, A A, and rod B, wires C C C, extending between said end pieces, and spheres D, cubes E, and cylinders F, mounted upon said wires, respectively, each of said spheres, cubes, and cylinders being colored substantially as described, arranged and operating substantially in the manner set forth.

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