No. 629,046. Patented July 18, 1899.

J. O. OSMAN.

EDUCATIONAL APPLIANCE.

(Application filed Mar. 8, 1899.)

(No Model.) 2 Sheets—Sheet 1.

FIG. 1

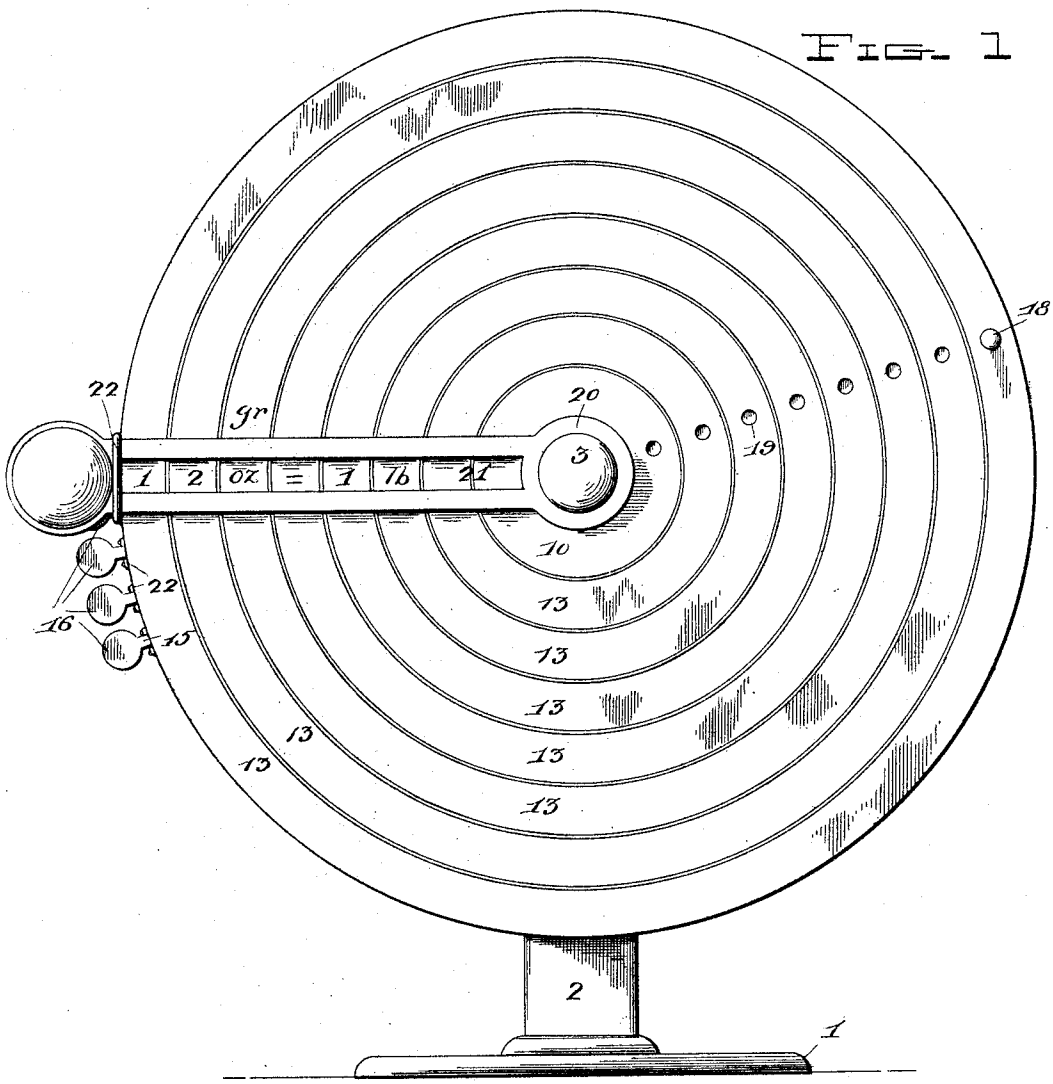
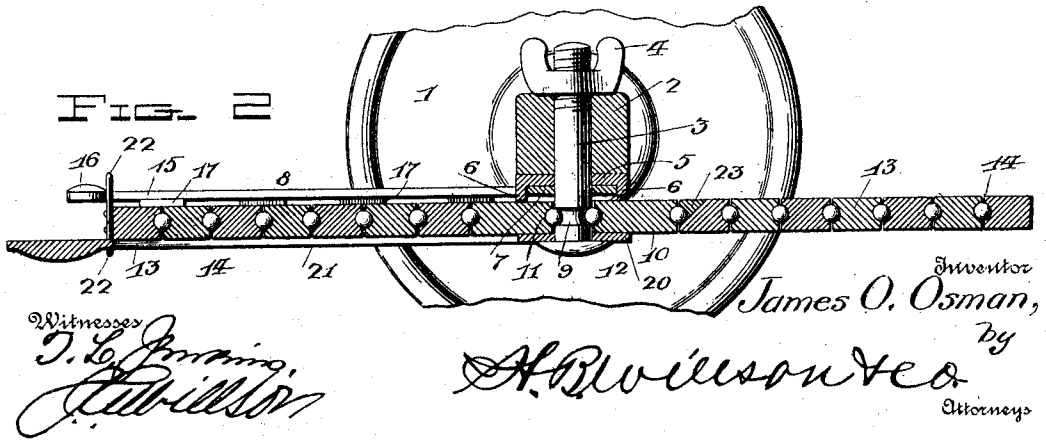


FIG. 2



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2 Sheets—Sheet 2.

FIG. 3

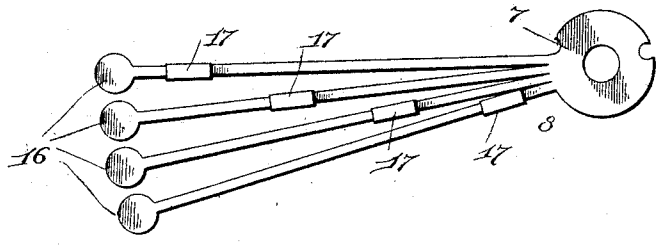
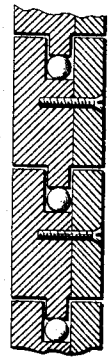


FIG. 4



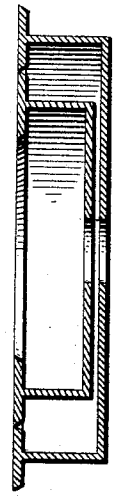


FIG. 5

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UNITED STATES PATENT OFFICE.

JAMES O. OSMAN, OF NORCATUR, KANSAS.

EDUCATIONAL APPLIANCE.

SPECIFICATION forming part of Letters Patent No. 629,046, dated July 18, 1899.

Application filed March 8, 1899. Serial No. 708,259. (No model.)

To all whom it may concern:

Be it known that I, JAMES O. OSMAN, a citizen of the United States, residing at Norcatur, in the county of Decatur and State of Kansas, have invented certain new and useful Improvements in Educational Appliances; and I do declare the following to be a full, clear, and exact description of the invention, such as will enable others skilled in the art to which it appertains to make and use the same.

My invention relates to improvements in the construction of synthetical educational appliances, and more particularly to that class of devices intended for kindergarten or primary teaching; and the object is to provide a simple, inexpensive, convenient, and effective device for this purpose.

To this end the invention consists in certain features of construction and combination of parts, which will be hereinafter fully described and claimed.

In the drawings, Figure 1 is a front elevation of my improved synthetical teacher. Fig. 2 is a horizontal transverse section of the same. Fig. 3 is a detail view of the spring brake-bars. Figs. 4 and 5 show different forms of mounting the annuli.

In the drawings, 1 denotes the base, and 2 the upright or standard, in the upper end of which is mounted a transverse bolt 3, removably secured in place by the thumb-nut 4.

5 denotes a washer fixed to the standard and provided with the projecting teats or lugs 6 6 to receive the collar 7 of the brake-bar plate 8.

9 denotes a circumferential groove in the bolt 3, and 10 denotes a disk mounted on the bolt and provided with a corresponding groove 11 to receive a series of bearing-balls 12, which also extend part way into the groove 9 and which form the bearing between the bolt and disk.

13 13 denote a series of independent concentric annuli, of which there may be an indefinite number, and each annulus, with the exception of the outer one, is formed with internal and external grooves to receive a series of bearing-balls 14, as shown in Fig. 2.

The brake-plate 8 consists of a series of brake-bars 15, each of which terminates in a thumb-button 16, and their inner faces are provided with a series of arbitrarily-arranged rubber brake-shoes 17 17, which bear against the contiguous faces of the annuli and retain them in their set position.

18 denotes a removable peg, which may be inserted in any one of the recesses 19, formed in the front faces of the annuli, to conveniently bring them to the desired position.

20 denotes a radial plate mounted on the bolt 3 and provided with a visual slot 21 for the purpose of reading the alined characters on the faces of the annuli.

Each of the brake-fingers 15 is provided with an L-shaped guard-hook 22, which laps over the outer edge of the outermost annulus 13 and which permits the brake-finger to be pushed backward a sufficient distance to release the brake-shoe from contact with the rear faces of the annuli, the guard-hook thereby limiting the rearward movement of the finger and preventing it from being pushed back far enough to lose its elasticity.

The outer faces of the annuli are provided with letters, characters, parts of words, or whole words after the usual manner of devices of this kind, a few of which are shown in Fig. 1; but of course the arrangement, as well as the characters themselves, is optional and may be varied to suit the particular class, grade, or use to which the device is applied.

As shown in Fig. 2, a pocket may be formed in the back of the annuli at any point to communicate with the grooves, and after the balls have been dropped in this pocket is closed by the plug 23, so that an unbroken path is formed for the bearing-balls.

In Fig. 4 I have shown each annulus formed in two parts and held together by a screw, and in Fig. 5 I have shown them stamped up of sheet metal, each being independently mounted on the common axis.

It will of course be understood that various changes in the form, proportion, and the minor details of construction may be resorted to without departing from the principle or sacrificing any of the advantages of this invention.

Having thus described the invention, what is claimed, and desired to be secured by Letters Patent, is—

1. In a device of the character indicated, a series of independent concentric annuli mounted in the same plane, means for independently moving each annulus, and a series

of spring-actuated brake-fingers engaging said annuli, substantially as and for the purpose set forth.

2. In a device of the character indicated, a series of independent concentric annuli mounted in the same plane, means for independently moving each annulus in either direction to bring the characters on one annulus into alinement with the corresponding characters on the other annuli, and a series of spring-actuated brake-fingers engaging said annuli, substantially as and for the purpose set forth.

3. In a device of the character indicated, a standard, a transverse bolt mounted therein, a series of independent concentric annuli mounted on said bolt, a visual indicator fixed to said bolt and extending across the alined faces of said annuli and a guard-hook fixed to the rear face of the indicator and extending inwardly across the rear face of the external annulus, substantially as and for the purpose set forth.

In testimony whereof I have hereunto set my hand in presence of two subscribing witnesses.

JAMES O. OSMAN.

Witnesses:
W. P. ANDERSON,
ISAIAH SHARP.