

(No Model.)

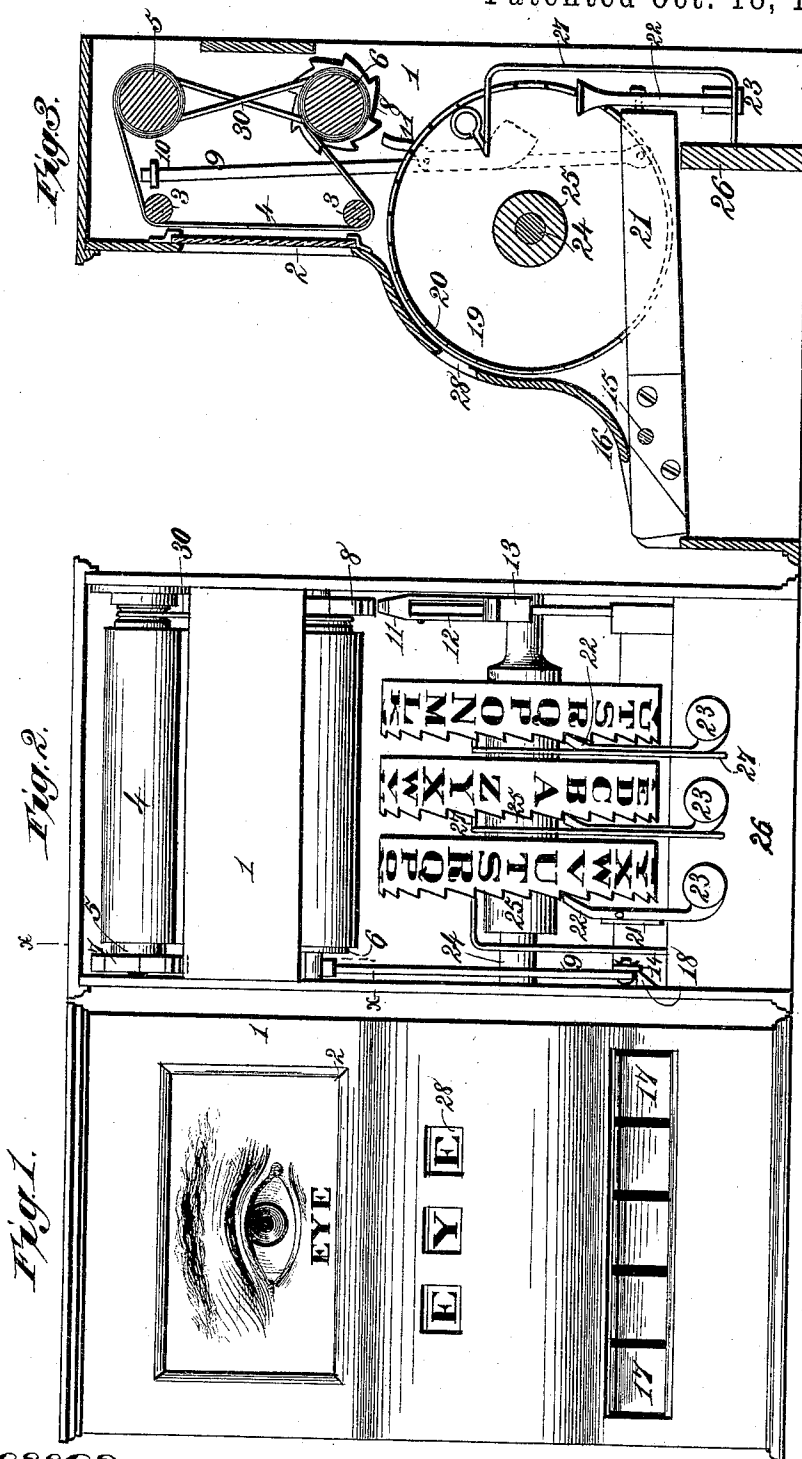
2 Sheets—Sheet 1.

H. BODEY.

KINDERGARTEN APPARATUS FOR TEACHING SPELLING.

No. 371,815.

Patented Oct. 18, 1887.



Witnesses,
Robert Everett,
J. A. Rutherford.

Inventor,
Howard Bodey,
By James L. Norris,
Atty.

(No Model.)

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2 Sheets—Sheet 2.

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Fig. 4.

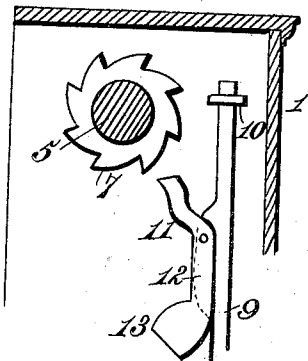


Fig. 5.

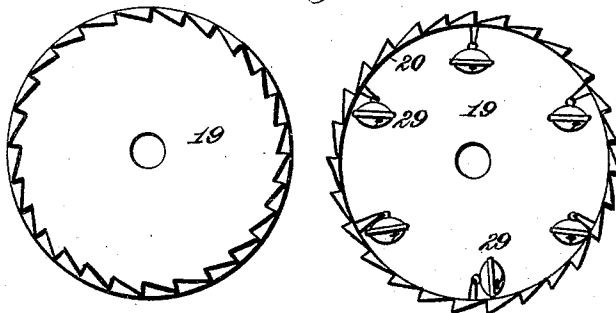
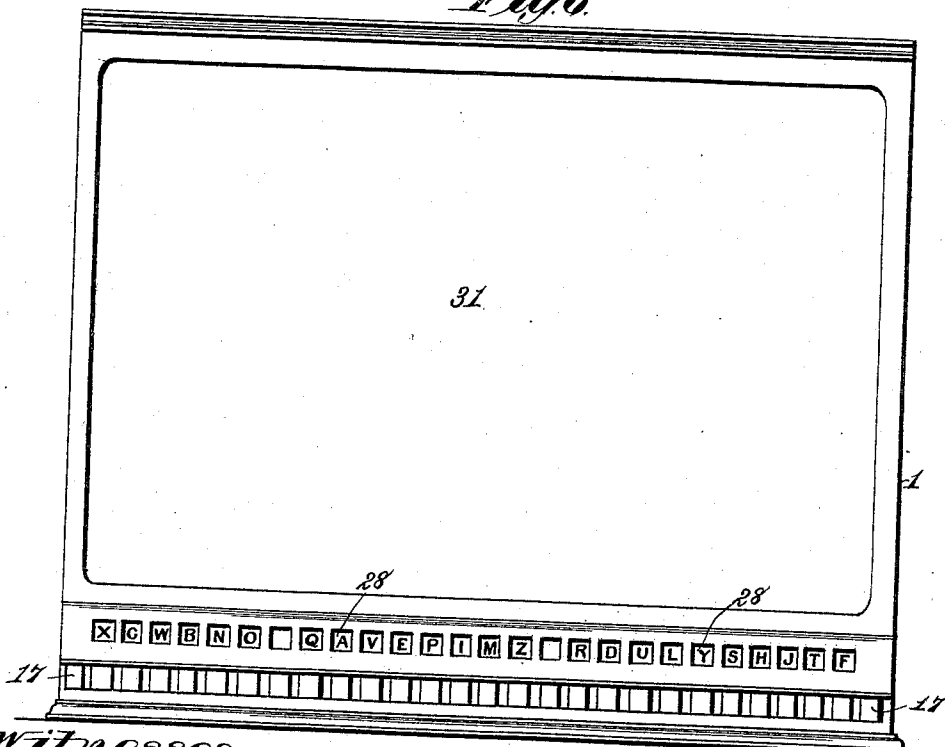


Fig. 6.



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UNITED STATES PATENT OFFICE.

HOWARD BODEY, OF PHILADELPHIA, PENNSYLVANIA.

KINDERGARTEN APPARATUS FOR TEACHING SPELLING.

SPECIFICATION forming part of Letters Patent No. 371,815, dated October 18, 1887.

Application filed January 18, 1887. Serial No. 224,713. (No model.)

To all whom it may concern:

Be it known that I, HOWARD BODEY, a citizen of the United States, residing at Philadelphia, in the county of Philadelphia and State of Pennsylvania, have invented new and useful Improvements in Kindergarten Apparatus for Teaching Spelling, of which the following is a specification.

This invention has for its object to provide a novel kindergarten apparatus for use in teaching spelling and similar purposes; and to such end the invention consists in the features of construction and combination of devices hereinafter described and claimed, reference being made to the accompanying drawings, in which—

Figure 1 is a front elevation of the apparatus. Fig. 2 is a rear elevation of the same. Fig. 3 is a vertical section in a plane at right angles with the shafts of the alphabet-disks. Fig. 4 is a detail section in the line *x x*, Fig. 2. Fig. 5 is a detail view showing modified constructions of the alphabetical disks. Fig. 6 is a view of a modification of the casing.

In the said drawings the reference-numeral 1 designates a casing of any suitable size and form, and constructed of wood, metal, or other material. In the front upper portion of the casing is formed an opening, 2, which may be covered by a glass pane, and above and below said opening are mounted small rolls 3, over which passes a panorama-strip, 4, having pictorial representations thereon of any suitable number of objects with the name of each attached. This panorama-strip is taken from a roll, 5, journaled in the casing, and is wound upon a similar roll, 6, these rolls being arranged behind the stretching-rollers 3. Upon the end of one roller, 5, is a ratchet, 7, and upon the opposite end of the other roller, 6, is a similar ratchet, 8, the purpose being to provide means for winding the panorama-strip in both directions, thereby avoiding the necessity of rewinding the whole strip on the upper roll, after it is exhausted therefrom, before it can be used again. As the winding devices of each roller are the same, a description of the construction and operation of one will be sufficient for both.

Upon a rod, 9, moving vertically in guide-lugs 10, is pivoted a pawl, 11, having a slotted shank, 12, which straddles the rod 9. The

nose of the pawl is curved forward from the upper end of this shank and lies under the ratchet, while a weight, 13, is attached to the lower end and projects in front of the rod 9. This weight normally lies in front of and against the rod, thereby holding the pawl in proper position to engage the ratchet, and also allowing it to turn on its pivot to pass over the tooth behind it, as the pawl is retracted, and then restoring it to operative position again. The rod 9 is operated by a lever, 14, to the end of which it is pivoted, and this lever is fulcrumed upon a shaft, 15, under the front extension, 16, of the casing. Upon the end of the lever is mounted a key plate or block, 17, projecting into an opening in the casing after the manner of a piano-key. The roll is operated by depressing this key by the finger, the key being lifted after each operation by the weight of the rod 9 and its attachments, the level of the key-plate being preserved by a rest, 18, on which the end of the rod 9 rests.

The roller 6 is operated in a similar manner, the keys of these rollers being arranged at opposite extremities of the key board or manual.

The alphabetical disks consist of metallic plates 19, having a flange, 20, on which the alphabet is displayed in any suitable manner—as, for example, by a paper strip cemented upon said flange 20, which may be formed by striking the metal up in a die. The edge of the flange may be serrated, as shown in Fig. 2, or the teeth may be turned inward or outward, as shown in Fig. 5.

Upon the shaft 15 are fulcrumed levers 21, each composed of a flat bar or plate, to the end of which is pivotally connected a pawl, 22, having its nose engaging with the serrated edge of the flange 20 of one of the disks, each pawl being provided with a weight, 23, by which the engagement is maintained.

The alphabet-disks are mounted on a shaft, 24, and are separated by washers or disks 25, bearing against their adjacent faces. The levers 21 have play between these washers and a rest-bar, 26, the edges of the plates or bars 21, of which the levers are composed, striking said washers and rest-bar alternately. By these simple means the throw of each pawl 22 is equalized.

Upon any suitable support—as, for exam-

ple, the rest-bar 26—I mount friction-brakes 27, composed of wire, which is bent to enter the open side of the alphabet-disk and bear against its inner face or the inner face of the flange 20. The elasticity of the wire gives frictional contact sufficient to put a brake upon each disk and prevent its accidental displacement, and thereby the letters on its periphery are brought to register with the opening 28.

Within the disks may be mounted or attached small bells 29, or any other small musical device which will sound as the disk turns.

The panorama-rolls 5 and 6 are connected by a cross-belt, 30, by which equal surface motion is given each roller. In this manner a proper tension is preserved in the panorama-strip as it passes the opening in the casing between the rolls 3.

The shaft 24 may be loose or rigid, as desired, and the brakes 27 may be mounted on the said shaft, or on the washers 25. The front of the casing 1 may be provided with a black-board, 31, instead of the opening 2, and the letter-openings 28 may be extended across the whole front, so that a series of words may be formed by the alphabet-wheels; or facilities may be provided for placing such a black-board on the front for use in connection with such a board.

The brakes 27 may be of wire or any other suitable material, and may bear against the inner or outer face of the flange on the disk or wheel. The washers 25, also, may be loose or rigid on the shaft.

What I claim is—

1. The combination, in a kindergarten teaching apparatus, of a casing having a displaying-opening, a pair of rollers therein, a pictorial strip passing from one roller to the other, two ratchet-wheels at the opposite ends, respectively, of the rollers, vertically-movable rods, a weighted pawl pivoted to each of said rods, one pawl being above the other, and swinging key-levers pivoted in the case intermediate their ends and at their inner ends pivoted to the vertical pawl-carrying rods, substantially as described.

2. The combination, in a kindergarten teach-

ing apparatus, of a casing having a displaying-opening, a pair of rollers therein, a pictorial strip passing from one roller to the other, two ratchet-wheels at the opposite ends, respectively, of the rollers, a crossing belt connecting said rollers to rotate them in unison, vertically-movable rods, a weighted pawl pivoted to each of said rods, one pawl being above the other, and swinging key-levers pivoted intermediate their ends and at their inner ends pivoted to the vertical pawl-carrying rods, substantially as described.

3. A kindergarten teaching apparatus, consisting of the following elements, to wit: a casing having upper and lower displaying-openings, a pair of rollers in the upper part of the case, a pictorial strip passing from one roller to the other, a ratchet-wheel on each roll, vertically-movable rods, a pawl pivoted on each rod, pivoted swinging key-levers located, respectively, at the opposite sides of the casing and pivoted to the pawl-carrying rods, a series of alphabet-wheels in the lower part of the casing, washers separating the wheels, and a series of pawl-carrying levers pivoted in the casing between the aforesaid key-levers and swinging between the alphabet-wheels, substantially as shown and described.

4. The combination, with the panorama-roll having a ratchet on one end, of a pawl-carrying rod moving in bearings on the casing, a pawl having a slotted shank which straddles the rod, said pawl being pivotally mounted on the rod, and having a weight at its lower end which lies in front of and against said rod, and means for actuating the latter, substantially as described.

5. The combination, with the alphabet-wheels having flanges 20, of the wire brakes bent to enter the open faces of said wheels and bearing against the inner face of said flange, substantially as described.

In testimony whereof I affix my signature in presence of two witnesses.

HOWARD BODEY.

Witnesses:

WM. MCINTYRE,
JAMES S. PHILLIPS.