B. G. RICHARDS.

TOY.

APPLICATION FILED NOV. 22, 1916.

1,350,338. Patented Aug. 24, 1920.

Fig. 1.

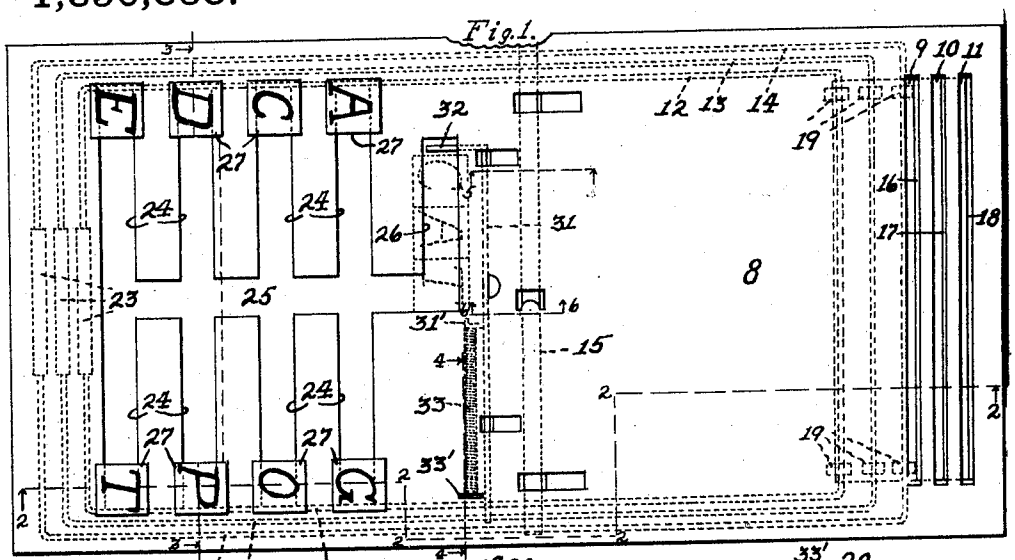


Fig. 3.

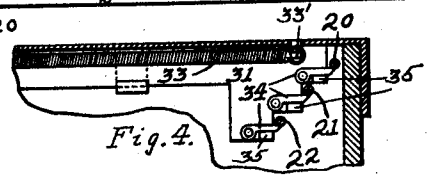


Fig. 4.

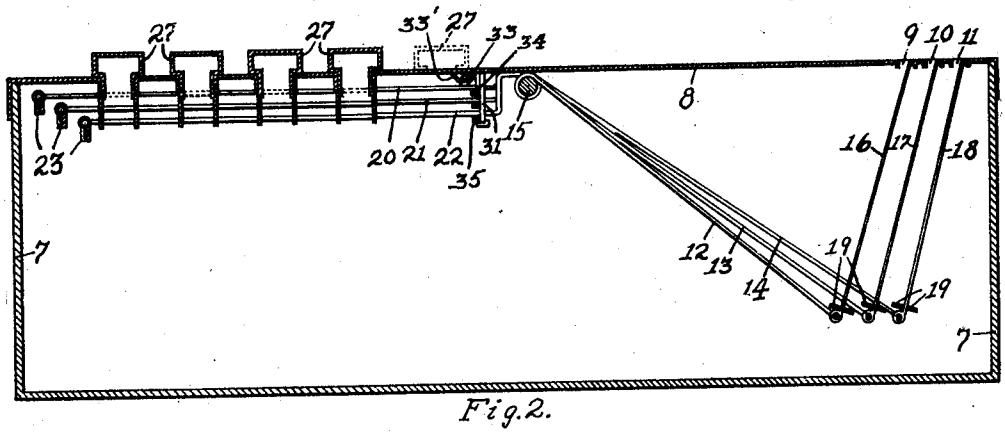


Fig. 2.

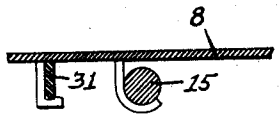


Fig. 5.

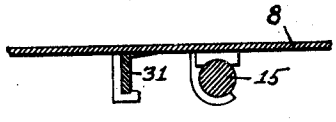


Fig. 6.

Witnesses

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UNITED STATES PATENT OFFICE.

BRAYTON G. RICHARDS, OF CHICAGO, ILLINOIS.

TOY.

1,350,338. Specification of Letters Patent. Patented Aug. 24, 1920.

Application filed November 22, 1916. Serial No. 132,834.

To all whom it may concern:

Be it known that I, BRAYTON G. RICHARDS, a citizen of the United States, and a resident of the city of Chicago, county of Cook, and State of Illinois, have invented certain new and useful Improvements in Toys, of which the following is a specification.

My invention relates to improvements in toys, and has for its object the provision of a toy having educational advantages, and primarily designed to assist in the teaching of spelling to children.

The invention consists in the combinations and arrangements of parts hereinafter described and claimed.

The invention will be best understood by reference to the accompanying drawings forming a part of this specification, and in which,

Figure 1 is a top plan view of a construction embodying my invention,

Fig. 2, a section taken substantially on line 2—2 of Fig. 1,

Fig. 3, a section taken on line 3—3 of Fig. 1.

Fig. 4, an enlarged section taken on line 4—4 of Fig. 1,

Fig. 5, an enlarged section taken on line 5—5 of Fig. 1, and

Fig. 6, an enlarged section taken on line 6—6 of Fig. 1.

The preferred form of construction, as illustrated in the drawings, comprises a light box 7 provided with a sheet metal cover 8, as indicated. The cover 8 is provided, adjacent one end, with three transverse slots 9, 10 and 11, the edges of said slots being turned downwardly, as indicated, for stiffening and strengthening purposes. Arranged on the under side of the cover 8 are three substantially rectangular wire frames 12, 13 and 14, all hinged centrally upon a transverse rod 15 mounted in suitable hangers struck from the body of cover 8, as indicated. The frames 12, 13 and 14 are successively larger in size so that each is free to swing or oscillate on rod 15 independently of the others, and said frames carry respectively, plates 16, 17 and 18 pivotally mounted thereon and arranged to operate upwardly through slots 9, 10 and 11. The plates 16, 17 and 18 are provided with pictorial representations, and if desired may be shaped to correspond. Thus, the plate 16 is provided on its inner face with the picture of a dog, the plate 17 is provided on its inner face with the picture of a cat, and the plate 18 is provided on its inner face with the picture of an ape or monkey. Each of the plates 16, 17 and 18 is provided, at each side adjacent its bottom, with laterally extending positioning stops or fingers 19 adapted to engage with the lower edges of the flanges about slots 9, 10 and 11 to maintain the plates 16, 17 and 18 in upright positions, when projected through said slots. The portions of the frames 12, 13 and 14 lying under the portion of the cover 8, provided with the slots 9, 10 and 11, are arranged at an angle to the opposite portions of said frames, said opposite portions of said frames being positioned in different planes, as shown. Thus the portions 20 of the frame 14 are arranged in the highest level or plane, the portions 21 of the frame 13 are arranged below the portions 20, and the portions 22 of the frame 12 are arranged below the portions 21, as best shown in Figs. 2, 3 and 4. Each of the frames 12, 13 and 14 is provided with a weight 23 sufficient to overbalance the corresponding plate on the other end of the frame, so that when said frames are released, the plates 16, 17 and 18 will automatically rise through the slots 9, 10 and 11, as will be readily understood.

The side of the cover 8 corresponding with the frame portions 20, 21 and 22 is provided with a plurality of transverse guide slots 24 connected centrally by a longitudinal guide slot 25 leading to a lateral slot 26, as shown. Letter blocks 27 are slidably arranged in the slots 24, said letter blocks being preferably formed of sheet metal stampings and the edges of the slots being turned downwardly for stiffening and guiding purposes, as indicated. The letter blocks are marked on their tops with the letters A, C, D, E, G, O, P, and T as indicated, and the blocks marked A, P and E are provided with laterally extending supporting fingers 28 on a level and of sufficient length to rest under the corresponding frame portions 20 when said letter blocks are in the outer portions of their corresponding guide slots. Thus, it will be seen, that the three letters A, P, and E serve as a means for temporarily retaining the outermost or larger frame 14 in the position shown in Fig. 2, in which position the pictorial representation of the ape or monkey is depressed and concealed within the box, but that upon removal of the letter blocks A, P

and E from the positions indicated, said frame will be released from the control of said letter blocks to permit of the elevation or projection of the plate 18 through the slot 11 to exhibit the pictorial illustration of the ape which the three letters A P E spell. Likewise, the three letter blocks marked C A T carry supporting fingers 29, somewhat shorter than the fingers 28 and arranged in a lower plane so as to engage under the corresponding frame portions 21 when the letter blocks are at the outer ends of their guide slots, by which arrangement the removal of the three letters spelling cat will release the plate 17 bearing the pictorial illustration of the cat. Likewise, the three letter blocks marked D O G are provided with supporting fingers 30, somewhat shorter than the fingers 21 and lying in a lower plane so as to engage under the corresponding portions of the frame 22 so that removal of these letter blocks will free the frame 12 carrying the plate 16 bearing the pictorial representation of the dog.

A locking bar 31 is slidably arranged centrally on the under side of the cover 8 in suitable brackets or guides stamped from the body of said cover, as indicated, said slide being provided with a laterally turned end 32 underlying the outer end of the slot 26. A tension spring 33 is connected at one end with a bracket 31′ formed on the slide 31 and a strap 33′ stamped from the cover 8, so as to hold said slide yieldingly in position with the end 32 resting against the corresponding bracket. The outer end of the slide 31 is notched to accommodate the three frame portions 20, 21 and 22, as shown in Fig. 4, and gravity-held locking dogs 34 are pivoted to said slide and rest upon stop lugs 35 formed thereon, said dogs being arranged to automatically engage the different frame portions 20, 21 and 22 when the same are elevated, but to simultaneously release all of said frames when said slide is retracted. The arrangement is such that upon the assembling of a set of letter blocks corresponding to one of the pictorial plates in the slot 26 and upon pressing said letter blocks outwardly in said slot, the slide 31 will be withdrawn to release all of the frames 12, 13 and 14. However, the removal of the three letter blocks corresponding to one of the pictorial plates, releases only the corresponding frame, so that the release of all of the frames by the movement of the slide 31 will only release the frame corresponding to the assembled letter blocks for actual operation and projection of the corresponding pictorial representation. Thus, it will be observed, that upon assembling the proper letters to spell either of the words "ape," "cat" or "dog," the corresponding plate bearing a pictorial representation of the corresponding word, will be automatically projected upwardly through the corresponding slot in the cover 8, thus serving to teach the operator the spelling of these simple words, in addition to furnishing the amusement of manipulating the toy. Obviously the plates 16, 17 and 18 may be provided with different pictorial representations or be made in different form, the controlling blocks modified to correspond, as desired. Also, the controlling blocks could be provided with numerals or other representations and the plates 16 and 17 marked to correspond, thus aiding in the teaching of rudimentary problems in arithmetic. Various other modifications will readily occur to anyone devoting a little thought to the matter, and may be readily applied to the construction by changing the markings thereon.

While I have illustrated and described the preferred form of construction for carrying my invention into effect, this is capable of variation and modification without departing from the spirit of the invention. I, therefore, do not wish to be limited to the precise details of construction set forth, but desire to avail myself of such variations and modifications as come within the scope of the appended claims.

Having described my invention what I claim as new and desire to secure by Letters Patent is:

1. A construction of the class described comprising a body; a movable object on said body; a plurality of controlling members movably mounted on said body and associated with said object; means for assembling and dispersing said members on said body; and means operable through an assembled set of said members for moving said object, substantially as described.

2. A construction of the class described comprising a body; an object on said body; a plurality of controlling members movable on said body; means for assembling and dispersing said members on said body; and means controlled by an assembled set of said members for rendering said object conspicuous, substantially as described.

3. A construction of the class described comprising a body; an object on said body; a plurality of controlling members slidable on said body and arranged to be assembled and dispersed thereon; and means operable by said members for rendering said object conspicuous or inconspicuous, substantially as described.

4. A construction of the class described comprising a body; an object on said body; a plurality of controlling members slidable on said body and arranged to be assembled and dispersed thereon; and means operable by said members for rendering said object visible or invisible, substantially as described.

5. A construction of the class described

comprising a body; a plurality of movable objects on said body; a plurality of controlling members slidable on said body and arranged to be assembled into sets and dispersed thereon; and means operable through movement of said assembled sets for moving said objects, substantially as described.

6. A construction of the class described comprising a body having guide slots and an assembling slot; controlling members slidable in said slots; movable objects on said body; and means operable by members in said assembling slot for moving said objects, substantially as described.

7. A construction of the class described comprising a body having guide slots and an assembling slot; a plurality of movable objects on said body; a plurality of controlling members slidable on said body and arranged to be assembled into sets and dispersed thereon; and means operable by sets of said members in said assembling slot for moving said objects, substantially as described.

8. A construction of the class described comprising a plurality of movable objects; a plurality of movable letters arranged to be assembled and dispersed; and means operable by an assembled set of letters for moving said objects, substantially as described.

9. A construction of the class described comprising a plurality of movable objects; a plurality of sets of controlling members associated therewith; means for assembling each set of controlling members; and means for effecting movement of the corresponding movable object through manipulation of the assembled sets of controlling members, substantially as described.

10. A construction of the class described comprising a plurality of movable objects; a plurality of sets of controlling members associated therewith; means for assembling each set of controlling members; and means for utilizing an assembled set of controlling members for moving the corresponding object, substantially as described.

11. A construction of the class described comprising a plurality of inconspicuous objects; a plurality of sets of controlling members associated therewith; means for assembling each set of controlling members; and means for utilizing an assembled set of controlling members for rendering the corresponding object conspicuous, substantially as described.

12. A construction of the class described comprising a plurality of invisible objects; a plurality of sets of controlling members associated therewith; means for assembling each set of controlling members; and means for utilizing an assembled set of controlling members for rendering the corresponding object visible, substantially as described.

13. A construction of the class described comprising a plurality of inconspicuous objects; a plurality of sets of letters associated therewith; means for assembling each set of letters; and means for utilizing an assembled set of letters for rendering said objects conspicuous, substantially as described.

14. A construction of the class described comprising a plurality of invisible objects; a plurality of sets of letters associated therewith; means for assembling each set of letters; and means for utilizing an assembled set of letters for rendering the corresponding object visible, substantially as described.

15. A construction of the class described comprising a box; a cover for said box, there being a plurality of transverse slots in said cover adjacent one end thereof; a plurality of guide slots in the opposite end of said cover; a plurality of oscillatory frames in said box in operative relation with said slots; pictorial objects on said frames and operating through said transverse slots; a plurality of blocks marked with letters of the alphabet slidable in said guide slots; supporting members carried by said letter blocks and arranged in sets to support different frames; and means associated with one of said guide slots for releasing a corresponding frame when the corresponding letters are assembled therein, substantially as described.

In testimony whereof I have signed my name to this specification in the presence of two subscribing witnesses.

BRAYTON G. RICHARDS.

Witnesses:

CHRISTIE E. WESSELS,

ARTHUR A. OLSON.