

UNITED STATES PATENT OFFICE.

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EDUCATIONAL TOP.

SPECIFICATION forming part of Letters Patent No. 658,358, dated September 25, 1900.

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To all whom it may concern:

Be it known that I, WILSON R. ELLIS, a citizen of the United States, residing at Livermore, in the county of Alameda and State of California, have invented certain new and useful Improvements in Educational Tops, of which the following is a specification.

My invention relates to an improved top or similar spinning device exhibiting words or other symbols which are rearranged in fresh combinations by the successive operation of the top, and thereby afford instruction or amusement. By using suitably-selected words the device is adapted to present a new sentence at each operation of spinning, and thus will be found useful in teaching children to read. Moreover, the top is preferably arranged so that two such sentences are so presented simultaneously and the words forming such sentences are so selected, both as to rhythm and as to rhyme, that the two sentences form a rhyming couplet.

In the accompanying drawings, Figure 1 is a top plan view of my improved top. Fig. 2 is a vertical section. Fig. 3 is a plan of a portion of the disks, the upper part of the top being removed; and Fig. 4 is a perspective of the top-bolt.

1 represents the top, which has a hollow body mounted on a spindle 2. In said body is secured a horizontal partition 3, and on said partition are laid disks 4 one above the other, each centrally apertured to permit the spindle 2 to pass loosely therethrough, and the disks 4 and partition 3 have each a circular series of equidistant holes 5, all the series being precisely alike. Upon the margin of each disk are symbols 6, corresponding in number to the holes 5, and each disk projects a sufficient distance beyond the one above it to permit the symbols on its margin to be visible from above, and for this purpose the upper side of the top has a series of slots 7 over the margin of the respective disks, each slot disclosing only one of the symbols on the disk, so that the complete series of slots discloses a combination of said symbols.

8 is a bolt which is supported by an arm 9 on a sleeve 10, loosely surrounding the spindle 2, and said bolt normally passes through one of the holes 5 in each of the disks 4 and the partition 3 and locks the disks and partition

in the proper position, so that the symbols thereon show through said slots. The sleeve 10 has above the top-body a vane 11, which also serves as a finger-piece, and when the operator takes hold of said vane to lift the top he thereby raises the bolt 8 out of engagement with all of the holes 5, so that the disks can then revolve loosely around the spindle 3. The operator will retain his hold of the finger-piece while spinning the top; but upon placing the spindle-point of the rotating top upon a table or similar support and releasing the finger-piece the bolt 8 will drop upon the uppermost disk of the series. The disk will now be in rapid rotation, while the bolt will be at first stationary. It will of course gradually assume the velocity of the top; but its acceleration will be opposed by the resistance to the air offered by the vane 11. The bolt 8 will enter a hole 5 of each disk in succession and finally of the partition 2, but in doing so will by reason of its motion relative to the top rotate all the disks more or less around the top, and so present through the slots 7 a new combination of symbols. If suitable words are placed on the margin of the disks, the combination of words will form sentences. Thus on the uppermost disk will be placed a list of adjectival words, as "the jumping," "the silly;" on the next disk a series of nouns, as "soldier," "gander;" on the next a series of verbs, as "scares," "hugs;" and on the next a series of nouns, as "dog," "frog." By providing two series of four slots 7 diametrically opposed to each other two sentences appear at the same time. Moreover, by making all the words on the same disk to have the same metrical rhythm and diametrically-opposite words on the lowest disk to rhyme, as "dog," "frog," "moon," "spoon," "cat," "rat," the two sentences form a rhyming couplet.

I claim—

1. In a device of the character described, the combination of a series of superposed coaxial disks having a series of symbols arranged in progressively-increasing circles, a cover for all the disks having a series of apertures lying respectively over the series of symbols on each disk and each disclosing one symbol therethrough, means for rotating the disks relatively to each other and to the cover, and means for arresting the disks in such a

position that one symbol in each disk appears through an aperture in the cover, substantially as described.

2. In a device of the character described, 5
the combination of a series of superposed coaxial disks, having registering circular series of apertures, and having series of symbols arranged in progressively-increasing circles, a cover for all the disks having a series of apertures, lying respectively over the series of symbols on each disk and each disclosing one symbol therethrough, means for rotating the disks relatively to each other, and a bolt arranged to be released from said apertures before rotating the disks, and successively entering apertures in the respective disks as the latter rotate to lock the same, substantially as described. 15
3. In a device of the character described, 20
the combination of superposed coaxial disks, having registering circular series of apertures and having series of symbols arranged in progressively-increasing circles, a cover for all the disks having a series of apertures lying respectively over the series of symbols on each disk and each disclosing one symbol therethrough, means for rotating the disks relatively to each other, and a gravity-bolt moving at right angle to the disks and successively entering the apertures therein to lock the same, substantially as described. 30
4. In a device of the character described,

the combination of the top-body having a partition therein and having a series of slots in its upper side, a series of progressively-increasing disks on said partition loosely surrounding the spindle of the top, and having each a series of symbols on their margins and a circular series of apertures, a sleeve sliding on said spindle and a bolt carried by said sleeve and adapted to enter said apertures, substantially as described. 35 40

5. In a device of the character described, the combination of superposed coaxial disks, having series of symbols arranged in progressively-increasing circles, a cover for all the disks having a plurality of series of apertures, the apertures of each series lying respectively over the series of symbols on each disk and each disclosing one symbol there- 45 50
through, means for rotating the disks respectively to each other and to the cover, and means for arresting the disks in such a position that one symbol on each disk appears through each aperture in the cover, substantially as described. 55

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

WILSON R. ELLIS.

Witnesses:

FRANCIS M. WRIGHT,
M. R. DANIELS.