Sept. 23, 1958 W. J. HOMAN 2,852,863

ILLUMINATED PEG BOARD

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Fig. 1

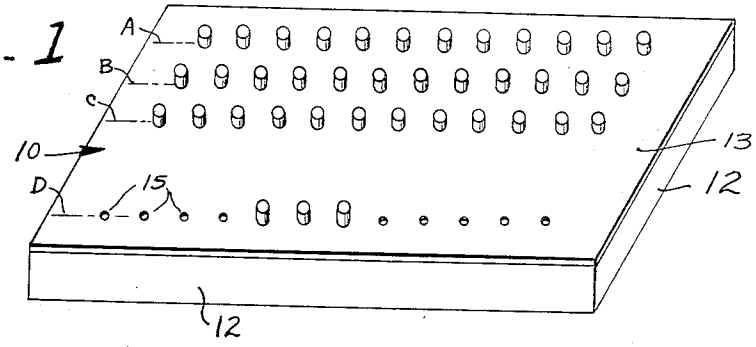
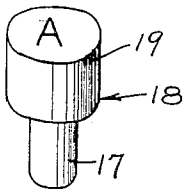


Fig. 2



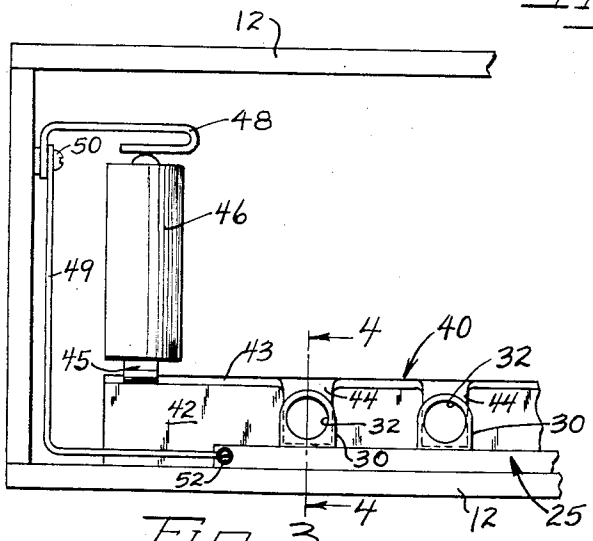


Fig. 3

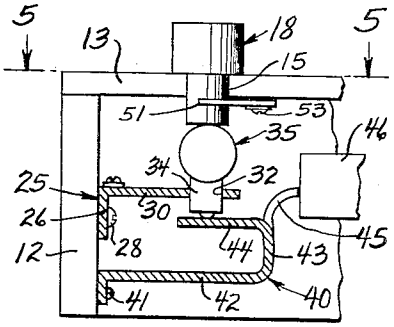


Fig. 4

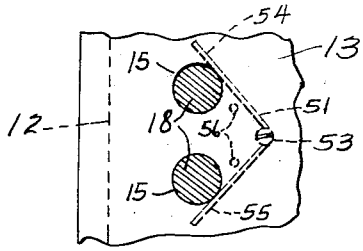


Fig. 5

INVENTOR.
WILLIAM J. HOMAN
BY
F. W. Anderson
Atty.

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ILLUMINATED PEG BOARD

William J. Homan, Mountain View, Calif.

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5 Claims. (Cl. 35—73)

This invention relates to a toy, and more particularly it has to do with a toy which may be used to instruct children in the proper use of letters, numerals, and the like.

It is an object of the present invention to provide an educational toy which, through the use of illuminated indicating means, is capable of attracting and holding a child's interest.

Another object of the present invention is to provide a toy having electrical circuit apparatus that is extremely simple in construction and economical to manufacture.

A further object is to provide an electrical toy that may be used with safety by small children.

Other and further features, objects and advantages of the present invention will be apparent to one skilled in the art from the following detailed description, taken in connection with the accompanying drawings, in which:

Figure 1 is a more or less schematic perspective of an educational toy constructed in accordance with the teaching of the present invention.

Figure 2 is a perspective of a translucent peg used with the toy of Fig. 1.

Figure 3 is a plan view of the left end of the toy of Fig. 1, with the cover of the housing of the toy removed from the sidewalls.

Figure 4 is a fragmentary vertical sectional view taken on line 4—4 of Fig. 3.

Figure 5 is a fragmentary horizontal sectional view taken on line 5—5 of Fig. 4.

In Figure 1 the reference numeral **10** indicates a box-like housing having four side walls **12** and a cover **13** all suitably secured together to form a rigid wooden structure. The cover **13** has a plurality of rows, A, B, C, and D, of cylindrical apertures **15** which extend entirely through the cover. Each aperture is arranged to snugly receive the cylindrical shank **17** (Fig. 2) of a peg **18** that has an enlarged, generally cylindrical head **19**. The pegs **18** are made of translucent plastic material for a purpose which will be explained hereinafter. Each peg **18** has a letter or a number on its upper surface. The rows A, B, and C are storage rows where pegs that are not being used are kept, while the row D is an active row in which certain pegs are arranged to form a desired word or number. In using this educational toy, the child chooses letters or numerals from rows A, B, or C and forms words or numbers in row D, thus familiarizing himself with the alphabet, the spelling of words, and the formation of numbers.

It is a feature of the present invention that, when each peg is inserted in an aperture in row D, it will be illuminated whereby the child's attention is arrested and focused on the word being formed. Each peg is illuminated by means of an electric circuit arrangement mounted inside the housing immediately below row D. This circuit arrangement comprises a support strip **25** (Figs. 3 and 4) that is made of conducting material, such as copper, and has a flange **26** secured at several points to

the inner surface of the front wall **12** of the housing by screws **28** (one screw only being shown). The strip **25** has a plurality of spaced, inwardly projecting tabs **30** (Fig. 3), each of which has an opening **32** adapted to snugly receive the cylindrical base **34** of a small electric light bulb **35** (Fig. 4). If desired the wall of the opening **32** may have one or more threads formed thereon to receive and hold the usual threaded base of the bulb. A second strip **40**, of conducting material, is secured by screws **41** (one only being shown) to the inner surface of the front wall of the housing. The strip **40** has a flat, inwardly extending body portion **42** and an upturned inner flange **43**. A plurality of spaced tabs **44** project from the top edge of the flange **43** in a reverse direction back toward the front wall **12**, each tab being positioned to underlie one of the apertured tabs **30** of the support strip **25**. At one end of the second conductor strip **40**, and arm **45** projects upwardly and inwardly into contact with the end surface of a typical small dry cell **46**. The cell **46** is supported by the arm **45** and by a spring mounting member **48** (Fig. 3) which is also made of conducting material. The member **48** is electrically connected to the support strip **25** by a conductor **49** that is held in contact at one end with the member **48** by a capscrew **50**, and is held in contact with the support strip **25** by a screw **52**.

It will be noted in Fig. 4 that there is a bulb **35** disposed immediately below each aperture **15** in row D of the cover **13**. Thus, when a peg is inserted in an aperture **15**, the lower end of the peg will contact the top of the bulb and, since the tab **30** is flexible, the peg will move the entire bulb downwardly to bring the lower end of the bulb into contact with the tab **44** of the conductor strip **40**. A circuit is then closed from the bulb **35** through the strip **40**, the arm **45**, the dry cell **46**, the mounting member **48**, the conductor **49** and the conductor strip **25** back to the bulb **35**. As a result the bulb will be lit and it, in turn, will illuminate the translucent peg with which it is in contact.

Each illuminated peg **18** is held in position, in circuit-making contact with the associated bulb, by means of a spring retainer member **51** (Figs. 4 and 5) which is secured to the underside of the cover **13** by a screw **53** and has arms **54** and **55** disposed at substantially 90 degrees to each other. When there are no pegs in the apertures **15**, the arms **54** and **55** swing inwardly to a position against stop pins **56** to underlie the side edges of a pair of adjacent apertures. When a peg is inserted in one of the apertures, one of the spring arms is flexed outwardly, tensioning the arm and locking the peg in place. If desired, indentations may be provided in the shank portion **17** of each peg to receive the associated spring arm to aid the arm in holding the peg in place.

The housing **10** may be made of plastic and the various mounting strips and brackets may be molded in the housing so that no screw connections will be necessary.

From the foregoing description it will be evident that the present invention provides a novel toy that is particularly adapted for teaching a child the use of letters and numerals. It is, of course, within the scope of the present invention to provide as many rows of storage apertures as is desired, and it will be evident that other markings may be placed on the top surfaces of the pegs, as for example, pictures of animals or the like. With such an arrangement, the instructor could set up the problem by choosing an appropriate picture and the child would attempt to spell the name of the animal. The use of illuminated pegs provides an effective means of arresting and holding the child's attention and the simple unique electrical circuit makes possible an inexpensive unit.

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

1. A toy comprising a housing having a plurality of apertures therethrough, electric circuit means mounted in said housing and including a pair of spaced conducting members, an electric bulb having a shank of conducting material mounted in one of said members and arranged to be moved into contact with the other member to close an electric circuit through said bulb and light said bulb, a translucent peg adapted to be selectively inserted in one of said apertures to engage said bulb and move the shank portion of the bulb into contact with said other conducting member to close said circuit, sad peg having educational indicia thereon which is clearly visible when said translucent peg is illuminated by said bulb.

2. An educational toy comprising a housing having a plurality of positioning holes therethrough, electric circuit means disposed in said housing adjacent said holes and including two electrically connected conductor plates, a bulb disposed in one plate and arranged to contact the other plate upon being moved a predetermined distance whereby to close the circuit and light said bulb, and a translucent indicator member adapted to be disposed in one of said holes and in contact with said bulb to move said bulb said predetermined distance to close the circuit, said indicator member having educational indicia thereon which is clearly visible when said member is illuminated by said bulb.

3. An educational toy comprising a housing having a plurality of apertures therethrough, electric circuit means disposed in said housing adjacent said apertures and including a source of electrical energy, a first conducting member mounted on said housing and having an apertured flexible portion underlying one of said positioning holes, an electric bulb mounted in the aperture of said flexible portion with the glass portion of the bulb adjacent said one hole, a second conducting member electrically connected to said energy source and to said first conducting member and having a portion disposed in spaced relation below the end of said bulb, and a translucent peg arranged to be inserted in said one positioning hole to contact the bulb therebelow and move it downwardly on said flexible portion to contact said second conducting member whereby to close said circuit and light said bulb, said translucent peg having educational indicia thereon which is visible when said peg is illuminated by said bulb.

4. An educational toy comprising a housing having a plurality of positioning holes therethrough, electric circuit means disposed in said housing adjacent said holes and including a flexible conducting strip mounted on one wall of said housing and having an apertured flexible portion underlying one of said positioning holes, an electric bulb mounted in the aperture of said flexible conducting strip, a second conducting strip mounted in said housing having a body portion, a tab disposed in spaced relation below the lower end of said bulb and a support arm extending outwardly from said body portion, a mounting member of conducting material supported on said housing, means for electrically connecting said mounting member to said flexible conducting strip, a source of electrical energy supported between said mounting member and the support arm of said second conducting strip, and a translucent peg arranged to be inserted in said one positioning hole to contact said bulb and move it downwardly into contact with the tab of said second conducting strip to close a circuit through and light said bulb, said translucent peg having educational indicia thereon which is clearly visible when said peg is illuminated by said bulb.

5. A toy comprising a support member having a plurality of apertures therethrough, translucent pegs having educational indicia thereon and adapted to be selectively positioned in said apertures, electric circuit means mounted below said support member and arranged to be contacted and closed by a peg inserted in any one of said apertures, a spring retainer member mounted on the underside of said support member and having two arms disposed at substantially 90 degrees to each other, each arm being normally disposed under an edge portion of one of said apertures in position to be contacted by a peg inserted in the aperture and moved to a stressed position retainingly engaging the pin in the aperture, and a plurality of bulbs connected in said circuit means and arranged to be illuminated upon closing of said circuit means, one of said bulbs being positioned close to each peg to illuminate the peg.

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