Oct. 27, 1953 F. R. COMPOSTO 2,656,617

EDUCATIONAL TOY

Filed Dec. 15, 1950

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FIG. 5

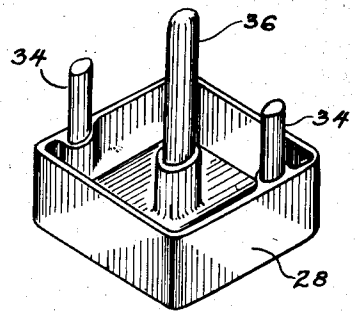


FIG. 6

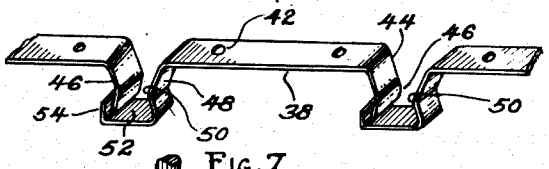


FIG. 7

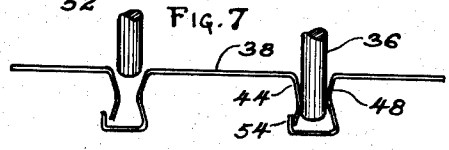


FIG. 4

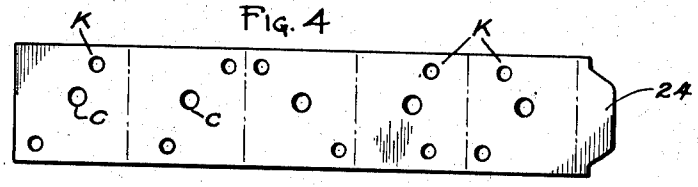


FIG. 3

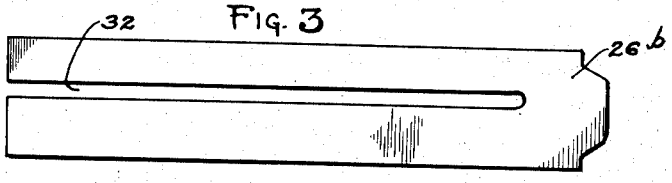


FIG. 2

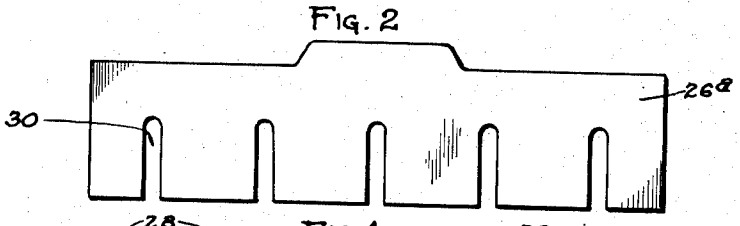


FIG. 1

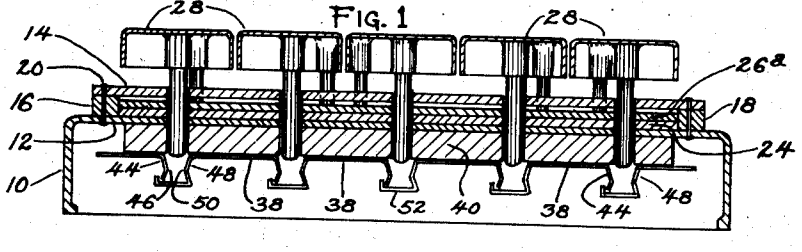


FIG. 1A

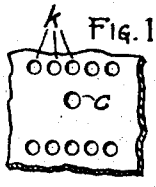
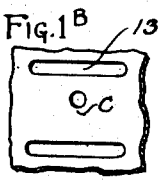


FIG. 1B



INVENTOR.
Frank R. Composto
BY
Hoag, Kilburn & Carlson
ATTORNEYS

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Fig. 8

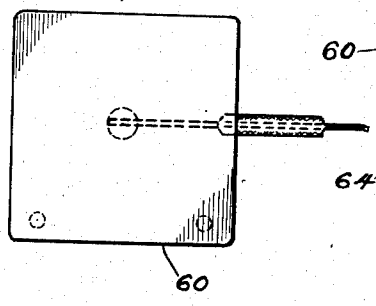


Fig. 9

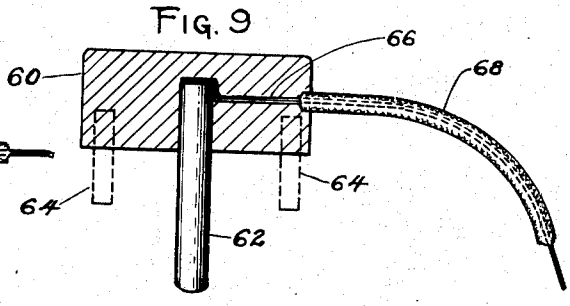


Fig. 10

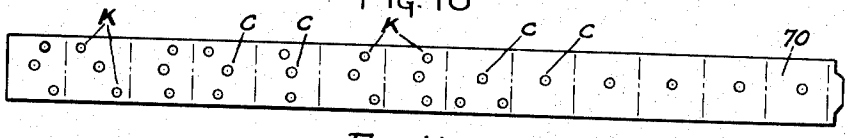


Fig. 11

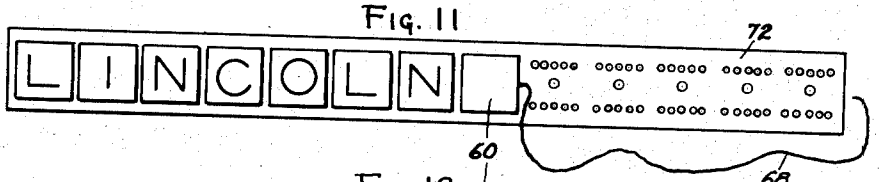


Fig. 12

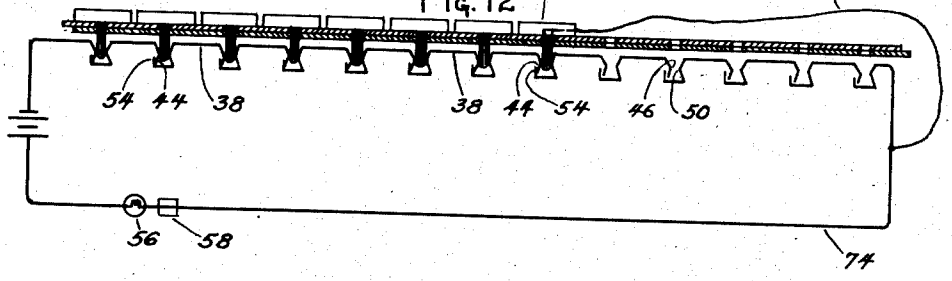


Fig. 19

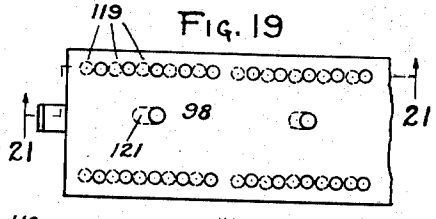


Fig. 20

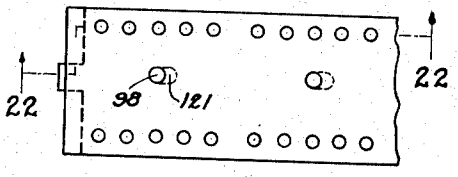


Fig. 21

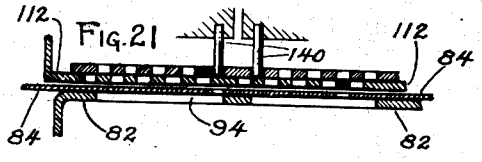
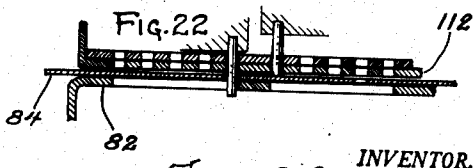


Fig. 22



INVENTOR.
Frank R. Composto
BY
Hoag, Kilburn & Carlson
ATTORNEYS

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Fig. 13

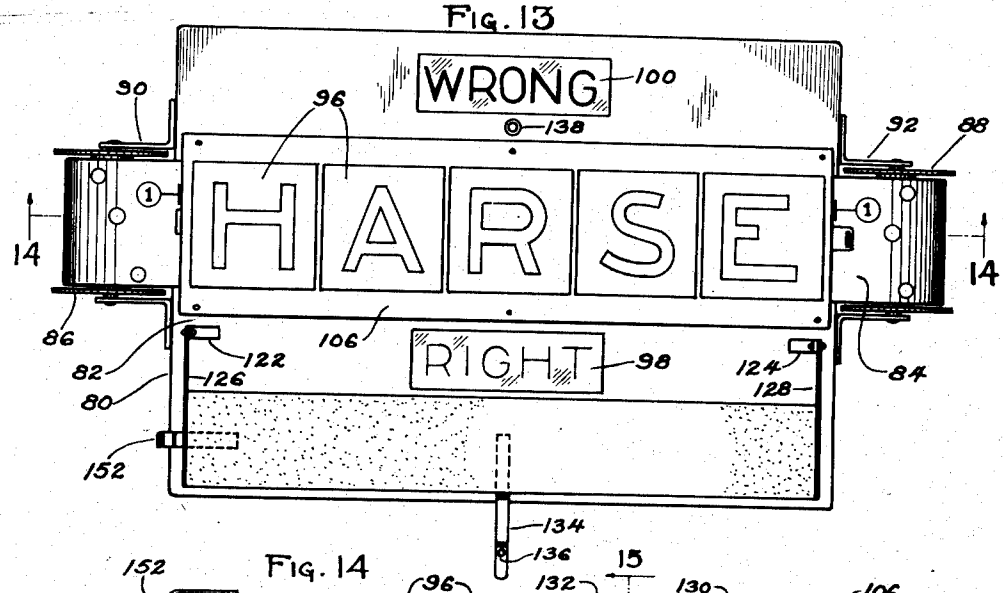


Fig. 14

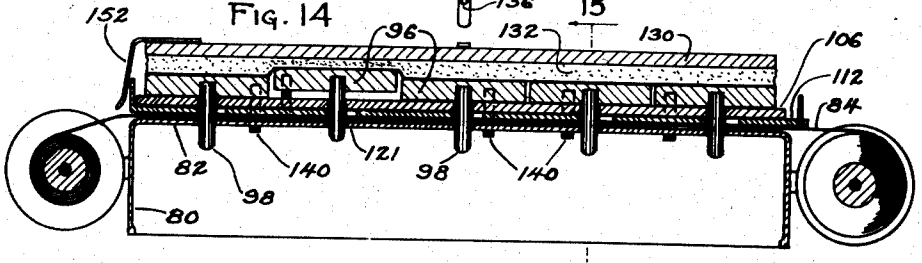


Fig. 17

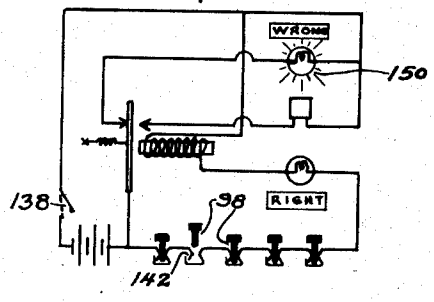


Fig. 15

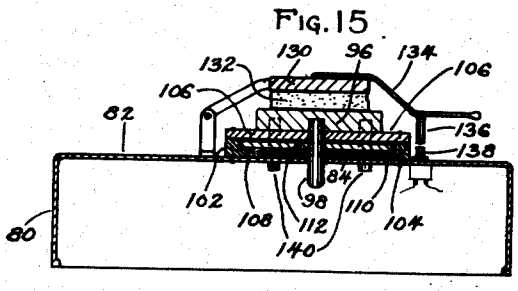


Fig. 18

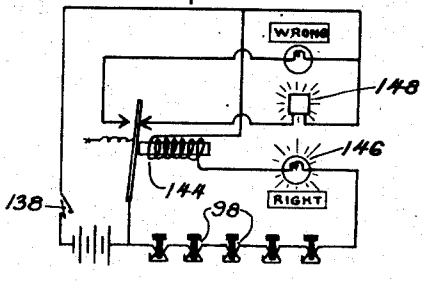
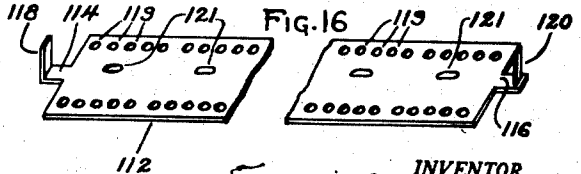


Fig. 16



INVENTOR.

Frank R. Composto

BY

Hoag, Kilburn & Carlson

ATTORNEYS

Patented Oct. 27, 1953

2,656,617

UNITED STATES PATENT OFFICE

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EDUCATIONAL TOY

Frank R. Composto, Brooklyn, N. Y.

Application December 15, 1950, Serial No. 200,907

9 Claims. (Cl. 35—9)

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This invention relates to a toy or game requiring the selection and arrangement of certain blocks or other indicia in answer to a question, which may be expressed orally, or in writing, pictorially, or graphically. It relates to an educational toy of the kind disclosed in my United States Patent No. 2,505,230, issued April 25, 1950, and comprises certain modifications and developments of the device disclosed in that patent.

The toy or game disclosed in that patent comprises a number of "cards" each having a series of groups of holes, each group comprising a combination representing a particular letter or numeral, and a number of indicia bearing blocks having projecting therefrom combinations of pins, disposed similarly to the respective combinations of holes in said cards. In operating the toy the user places a card on a support surface; selects blocks bearing indicia which he believes spells a word or answers a problem presented by said card and endeavors to insert the pins of said blocks in the appropriate holes in the card. When the wrong selection is made this is evident at once since only the pins of a correctly selected block will enter the holes comprising a particular combination of holes in the card, with the result that the block cannot be fully seated and will remain elevated above other blocks correctly selected for other combinations of holes in the card. The fact that a wrong selection may be thus indicated, even before the player has finished selecting the blocks bearing the letters, numerals, or other indicia he thinks are required to answer the question, allowing the player to correct mistakes as they occur and before he has finished spelling a word or giving an answer to a problem, dilutes the element of suspense which is brought to its climax by a signal, such as the lighting of a light or the sounding of a buzzer when all the blocks have been correctly chosen and their pins inserted in the corresponding groups or combinations of holes in the card. When a block has been correctly selected and positioned its lower surface will be in contact with the card or with a guide plate preferably provided above the support surface and having groups of holes at least equal in number to the groups of holes in the card placed between it and the support surface and each group comprising holes for all the different combinations of pins on said blocks.

Each block has one electrically conductive pin which, when the block is properly positioned closes a gap in an electric circuit for actuating the signalling means. The gaps in the circuit are

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equal to the number of groups of holes with which the cards are provided and when the blocks for each group of holes have been correctly selected and positioned all the gaps in the circuit will be completed by and through said conductive pins and the signalling means will be actuated.

An object of this invention is to prolong and increase the element of suspense by providing means whereby the player remains uninformed as to the correctness or incorrectness of his selections until he has selected and positioned all of the blocks he believes are required to answer the question.

Another object of the invention is to provide means for masking the combinations of holes in a card until a player has completed his selection and positioning of blocks, together with means for unmasking all of said combinations of holes simultaneously and urging said blocks to fully seat them.

Another object of the invention is to provide a toy of the kind described above comprising an electric signaling circuit in which the frame and blocks, including all of their pins may be made of electrically non-conductive material, such for example as plastic.

Another object of the invention is to provide means for completing the signalling circuit of the toy even though the question and answer require the selection and positioning of less blocks than the maximum number i. e. less than the number of gaps in the electric circuit.

Another object of the invention is to provide a device of the described kind adapted for use in connection with a question and answer contest conducted before an audience, as for example on a television program.

Other objects of the invention will be in part obvious or in part pointed out hereinafter.

The invention accordingly consists in the features of construction, combinations of elements, arrangements of parts, and in the several steps and relation and order of each of said steps to one or more of the others thereof, all as will be pointed out in the following description, and the scope of the application of which will be indicated in the following claims.

The invention will best be understood if the following description is read in connection with the drawings, in which,

Figure 1 is a side elevation, partly in cross section, of an embodiment of my invention;

Figure 1A is a fragmentary plan view of a portion of the support surface showing it perforated with a pattern of holes;

Figure 1^B is a view similar to Figure 1^A showing a pair of slots replacing all but the center hole of the pattern of holes shown in Figure 1^A;

Figure 2 is a top plan view of a first form of masking card;

Figure 3 shows another form of masking card;

Figure 4 is a plan view of a card with five block receiving spaces having therein respectively five different combinations of holes;

Figure 5 is a perspective view of a block bearing pins for insertion in one combination of holes in a card;

Figure 6 shows a number of contact strips comprising part of the electrical circuit of the device disclosed herein with their adjacent ends bent to form two normally open contactors;

Figure 7 is a side elevation illustrating one of said contactors closed by an electrically non-conductive pin;

Figure 8 is a top plan view of a block having a metal pin projecting therefrom and a conductor connected to said pin;

Figure 9 is a side elevation of the means shown in Figure 8, partly in cross section;

Figure 10 is a plan view of a card with thirteen block receiving spaces, only eight of which have combinations of holes therein, the other five each having a single hole similarly positioned;

Figure 11 shows a guide plate having thirteen block receiving groups of holes, seven of which are covered with indicia bearing blocks and an eighth covered with a block of the kind shown in Figures 8 and 9;

Figure 12 is a side elevational, partly schematic view, showing the electric circuit of my device, with blocks seated on a guide plate as indicated in Figure 11, and with the circuit completed through signalling means even though all of the block receiving spaces of the device are not filled;

Figure 13 is a plan view of an embodiment of the invention adapted for use in conducting a contest before an audience, as for example, in a television program;

Figure 14 is a cross section of the embodiment shown in Figure 13, taken on line 14—14 of Figure 13;

Figure 15 is a cross sectional view taken on the line 15—15 of Figure 14, and looking in the direction of the arrows;

Figure 16 is a perspective view of a masking plate forming part of the embodiment shown in Figures 13–22;

Figure 17 is a diagrammatic view of the circuit of the embodiment of Figures 13–22 closed to indicate an incorrect answer has been given;

Figure 18 is a diagrammatic view of the circuit of the embodiment of Figures 13–22 closed to indicate a correct answer has been given;

Figure 19 is a fragmentary plan view showing one position of the masking plate relative to the guide plate;

Figure 20 is a view similar to Figure 19 but showing another position of the masking plate relative to the guide plate;

Figure 21 is a cross section of Figure 19, taken on line 21—21; and

Figure 22 is a cross section of Figure 20, taken on line 22—22.

The words "card" and "block" are used broadly, to include respectively any member having therein combinations of holes, and any member bearing pins positioned for insertion through holes in the card. The numeral 10 indicates a box-like closure having a support surface 12, apertured or cut away for the pins of blocks to be described.

Thus for example surface 12 may comprise five similar groups of holes, one of which is shown in Figure 1^A, each group including holes positioned similarly to all combinations of holes in card 24; or it may comprise the slots 13, see Figure 1^B, which are long enough to include all of the holes *k* of Figure 1^A. Desirably a guide plate 14 is provided, positioned above said support surface 12, as for example by means of the spacing members 16 and 18 and pins 20 and 22. Supported on surface 12 is a card 24 which coacts with indicia and pin bearing blocks to answer a question. The question may for example, be written on the reverse side of the card. As shown in Figure 4, card 24 may comprise a card punched with five groups of holes, the holes shown being disposed similarly to the pins of blocks bearing letters to spell the word "think" i. e. to answer the question how to spell the word "think." As shown each combination of holes comprises a large hole C centrally and similarly disposed for each group of holes and two smaller holes K the position of one or both of which varies in each of the said five groups of holes.

Interposed between question card 24 and the guide plate 14 is a masking card which may take the form 26^a shown in Figure 2 in which slots 30 are provided extending inwardly from, and at right angles to, one lateral margin of the card. Or the masking card may take the form 26^b, shown in Figure 3, wherein a long slot 32 is provided extending from one end nearly the full length of the card along its longitudinal mid-line. When placed above the card 24 either masking card 26^a or masking card 26^b covers the holes K in card 24 leaving exposed only the large central holes C which are aligned vertically with the slots 30 respectively of 26^a, or the slot 32 of 26^b.

In Figure 5 one of the indicia bearing blocks 28 is shown in inverted position. Projecting from it are the smaller pins 34 adapted to fit into holes K of card 24, and the larger, centrally disposed pin 36 adapted to fit in the holes C. This block, including its larger central pin 36 as well as its key positioning pins 34 may be formed of non-conductive material, such for example as any of a wide variety of plastic materials and nevertheless employed to close a gap in an electric circuit for signalling whether or not a question has been correctly answered by the indicia of the selected blocks.

As shown in Figure 1 electrically conductive strips 38, comprising part of the electric circuit shown fully in Figure 12, are mounted within the box-like member 10 in abutting relation, as for example on the under surface of the support member 40 depending from the under side of the upper or support surface 12 of member 10. Strips 38 are shown on an enlarged scale in Figure 6 and are there illustrated provided with the screw holes 42 to facilitate their being mounted on said support member 40. One end, 44, of each strip is bent down substantially at right angles while the other end is substantially hook shape whereby the adjacent ends of members 38 although normally spaced apart providing gaps in the electric circuit constitute contactor members adapted to be closed when a pin 36 is inserted between them. Said other end comprises a portion 48 bent similarly to the end portion 44; a portion 52 extending substantially at right angles to portion 48 and substantially parallel to the body portion 38, and portion 52 having at its outer end an upturned portion 54 extending substantially at right angles to portion 52 and overlapping, although

normally spaced from, the end 44 of the adjoining strip 38. The end 44 of one strip 38 and the portion 48 of the opposed end of the adjoining strip thus extend in opposed, substantially parallel relation forming spaces or channels aligned with the holes C of a card properly positioned on surface 12 of said box-like member 10. End 44 and end portion 48 is each bent intermediate the ends so that they have the high points 46 and 50 respectively narrowing the space between them. When a pin 36 is inserted into this space it contacts said high points and spreads the opposed strip ends apart thus forcing end 44 into contact with the end portion 54 of the opposed contactor thereby closing the circuit between the adjoining members 38. Thus when a card 24 has been positioned on surface 12 of member 10 and blocks bearing the proper indicia have been positioned over each of the groups of holes in card 24, all of the pins of the blocks will be aligned with holes in the card and the blocks can be fully seated. When fully seated the pins 36 of the blocks will project into said spaces or channels thus completing said electric circuit by closing all the gaps in it thereby actuating lamp 56 or a bell or buzzer 58 to signal the correct selection and insertion, in each of the groups of holes provided in card 24, of blocks bearing indicia answering the posed question.

In practice, in order to prevent the user from seeing the pattern of the holes of each group in the card, and thus be able to select a block on the basis of the disposition of its pins rather than for the indicia borne by the block, I prefer to insert one of the masking cards 26^a or 26^b over the question card 24, and the blocks which the player believes bear the indicia for answering the question are selected and placed in position with the long center pins 36 extending through the slots 30 or the slot 32 of the cards 26^a or 26^b as the case may be, part way into holes C in the card 24. No indication is given as to whether each selection is correctly made, and the player does not know whether his selections are correct until he has selected all of the letters or numerals or other indicia which he believes are necessary for answering the question i. e. spelling the word or answering the problem asked. He then pulls out the masking card 26^a or 26^b, in the direction made possible by its slots 30 or 32 respectively, and if the blocks have been correctly selected they may then be fully seated themselves and the key positioning pins 34 will enter the smaller holes K of card 24 and the large pins 36 of the blocks will enter the larger holes C and extend into the said spaces or channels thereby closing all the gaps in the circuit and causing the actuation of the signal.

In Figure 8 a block 60 is shown which differs from the block 28 in that its longest pin, 62, is electrically conductive. The body of block 60 and its key positioning pins 64 may be made of non-conducting material, such for example as plastic. Pin 62, as shown in Figure 9, is embedded in the body of block 60 and also embedded in the body of the block in contact with pin 62 is the uncovered end portion of the core 66 of a shunting lead 68. Block 60 and its shunting lead 68 are used to complete the circuit shown in Figure 12 even though all of the contactors comprised by the overlapping ends of strips 38 have not been closed.

Thus for example in Figure 10 a punched card 70 is shown comprising thirteen sections with one or more holes therein. The first seven sections reading from the left are punctured for blocks bearing the letters L, I, N, C, O, L, N, and thus when the proper blocks have been selected and their pins inserted through card 70 they will spell the word "Lincoln." If this is the correct answer to a question which has been asked, it would be necessary, using blocks with the long non-conductive pins such as pin 36 of block 28, to insert blank blocks in each of the six sections of card 70 beyond the section covered by the block with the letter N, in order to complete the electrical circuit shown in Figure 12 and actuate the lamp 56 or the buzzer 58. However, using block 60 it is only necessary, as shown in Figure 11, to position it over the eighth group of holes in the guide plate 72, with its electrically conductive center pin 62 extending through the card 70 and closing the aligned, overlapping adjacent ends of contactor strips 38 and to connect the free end of lead 68 to the lead 74. The five contactors which are under the five spaces of cards 70 at its extreme right as viewed by the reader, and aligned with the holes C in said spaces respectively, are thus shunted out and the circuit completed without them.

By means of the block 60 and shunting lead 68 cards having different numbers of groups of holes can be used in the same device. Thus a card having from one to thirteen groups of holes may be used with a support surface and guide plate able to take a card with thirteen groups of holes, and without having to insert a pin 36 through the holes C of all of the unused groups of holes, although "blank" blocks without a shunting lead with a central pin, 62, and key positioning pins 64 may be provided for this purpose.

In Figures 13–22 an embodiment of the invention is shown which is particularly adapted for conducting a spelling or other question contest before an audience, as for example in a television show. According to this embodiment a frame 80 is provided comprising the support surface 82 across which may be fed a strip 84 having therein a series of groups of combinations of holes and therefore constituting a plurality of cards such as 24, or 70, joined end to end. As shown rolls 86 and 88 are shown supported from opposite lateral margins of frame 80 by brackets 90 and 92, and strip 84 may be fed from one roll to the other to present a series of groups of hole combinations on said surface 82. Said surface is cut away or slotted with slots 94 as shown in Figures 21 and 22 to permit the pins of blocks 96, which may be similar to blocks 28 and 60, to be inserted through holes in the cards comprising strip 84.

In frame 80, in front of, and beyond strip 84, windows 98 and 100 are provided labelled Right and Wrong and means are provided for illuminating one or the other of said windows, as will be explained.

Positioned over the surface 82, as for example on spacing members 102 and 104 is the guide plate 106 which may be similar to guide plate 72 shown in Figure 11. Interposed between surface 82 and said guide plate 106, as for example on a slideway provided by the angle members 108 and 110, is the masking member or plate 112 having the projections 114 and 116 extending from its ends respectively and comprising the upturned ends 118 and 120 respectively. The masking member has a series of patterns of holes 119 therein which may be similar to the patterns of holes shown in guide plate 72 (Figure 11) except that the central hole in each pattern is

elongated forming a slot 121 at least as long as twice the diameter of the holes 119.

Projecting up from frame 80, in the near side of surface 82, are the brackets 122 and 124 and pivoted to said brackets are the arms 126 and 128 supporting between them the cross piece 130 having on its surface, which is its inner surface when closed, the facing strip of resilient material 132, which desirably may be foam rubber or the like. Cross piece 130 and facing strip 132 may be swung through approximately 180° from the open position shown in Figure 13 to the closed position shown in Figures 14 and 15. A handle 134 is provided by which cross piece 130 and facing strip 132 may be swung to closed position on top of blocks 96 positioned on guide plate 106, or swung to open position. Said handle is more or less Z-shaped and has a finger 136 which projects downwardly from handle 134 when the assembly of which it is a part is in closed position. In this position finger 136 contacts and closes a push button switch 138 of an electric circuit shown in Figures 17 and 18. The arms 126 and 128 are angled so that facing strip 132 will be brought into contact substantially simultaneously with the tops of all the blocks 96, selected and positioned on guide plate 106.

Blocks 96 each comprise the key positioning pins 140 similar to pins 34 of block 28 (Figure 5) and a longer pin 98 similar to pin 36 of block 28. When properly selected, according to their indicia, and positioned on the guide plate 106 these pins are aligned with holes in the card on the support surface 92. However, with masking member 112 in the position indicated in Figures 19 and 21 the key positioning pin 140 will strike the surface of said member between holes 119 therein and the large pins 98 will extend only part way through slots 121 and be located at the right end of said slots as viewed by the reader in Figure 19. When the masking member is moved from its position in Figure 19 to its position in Figure 20 its holes 119 will become aligned with the key positioning holes in the card and the pin 140 will enter said holes, particularly since pressed down by strip 132, allowing the longer pins 98 to close all the circuit gaps 142, as shown in Figure 18, thus causing finger 136 to close push button switch 138 and actuating relay 144 and closing the circuit through lamp 146 behind the window labelled "Right," and through the buzzer 148.

If, however, a wrong block has been selected, as for example one bearing the letter A in place of the correct letter O to spell "horse," as illustrated in Figures 13 and 14, the block bearing the wrong indicia cannot be properly seated even after the masking plate has been moved to ineffective position. When the facing strip 132 and its assembly is swung to press all the blocks to fully seated position, and the masking plate has been moved to ineffective position as shown in Figure 22, finger 136 will depress and close push button switch 138 but since the circuit gap 142 will not be closed by the long pin on the wrong block, which as illustrated is the one bearing the indicium A, relay 144 will not be actuated. Accordingly a circuit will be closed through lamp 150 behind the window labelled "Wrong," and the circuit through lamp 146 and buzzer 148 will remain open.

Secured on one end of cross member 130 is an angled contact member 152 positioned so that as the assembly of which cross member 130 is a part is swung to closed position it will strike the end portion 118 of the projection 114 on the masking member and move it from masking to ineffective position, thus making this clearing movement accomplished automatically with the closing of the assembly of which the facing strip 132 is a part.

By the means disclosed herein the element of suspense is sustained until a contestant has completed his selection of indicia bearing blocks and the facing strip assembly has been closed, moving to inoperative position the masking member 112 and fully seating the blocks which have been correctly selected, and indicating by one or more signals, and so that an audience can clearly see or be otherwise informed by a signal, whether or not the sum of the contestant's selections gives the right answer.

The device described herein has the advantage of flexibility in that cards with different numbers of combinations of holes may be employed and a signalling circuit nevertheless actuated. And the device has the further advantage that substantially all parts of it may be manufactured of plastic thus facilitating large scale production.

It will thus be seen that there has been provided by this invention a method and apparatus in which the various objects hereinabove set forth together with many thoroughly practical advantages are successfully achieved. As various possible embodiments might be made of the mechanical features of the above invention and as the art herein described might be varied in various parts, all without departing from the scope of the invention, it is to be understood that all matter hereinbefore set forth or shown in the accompanying drawings is to be interpreted as illustrative and not in a limiting sense.

What I claim is:

1. In an educational toy, a card supporting surface, a plurality of cards each provided with a plurality of groups of punched holes comprising each a plurality of holes disposed in a distinctive space pattern representative of a particular indicium and a single aperture uniformly positioned in all the groups, said groups of holes on each card being arranged in a predetermined order to represent a sequence of indicia forming the answer to the problem posed by the particular card and each card being separately positionable on said supporting surface, signalling means including an electric circuit having an electrical conductor provided with a plurality of normally open electrical contact elements in series, each of said contact elements being supported by said surface in registry with the said apertures on said cards, indicia bearing blocks having each projecting therefrom a contact engaging pin receivable in a said aperture and a plurality of code pins disposed in a space pattern corresponding to the group of holes representative of like indicium on said cards and receivable therein, said contact pin being operable to engage and connect said contact elements when said code pins project into said holes, and a withdrawable card-like shield member superimposable over a said card to cover all the holes therein except said apertures whereby said shield may be withdrawn after all the selected blocks have been assembled with their contact pins engaged in said apertures to allow all properly selected blocks to be concurrently seated by their code pins with their contact pins in engagement with and connecting their respective contact elements.

2. In an educational toy, a card supporting surface, a plurality of cards each provided with a plurality of groups of punched holes each group comprising a plurality of holes disposed in a distinctive space pattern representative of a particular indicium, and a hole to receive a contact engaging pin, said groups of holes on each card being arranged in a predetermined order to represent a sequence of indicia forming the answer to the problem posed by the particular card and each card being separately positionable on said supporting surface, indicia bearing blocks each having pins projecting therefrom including a plurality of code pins disposed in a space pattern corresponding to the group of holes representative of like indicium on said cards and receivable therein, and a contact engaging pin, a withdrawable card-like shield member superimposable over a said card to cover the indicium representing holes therein leaving uncovered said holes for said contact engaging pins respectively, whereby said shield may be withdrawn after all the selected blocks have been assembled above said member with their contact engaging pins extending into the said holes provided for them in the card seated on said supporting surface, and signalling means rendered operative by said contact pins actuable when said member is withdrawn permitting the code pins of the blocks forming the answer to the problem posed by said card to enter the holes of the card comprising corresponding space patterns.

3. The device claimed in claim 2 in which said member is slotted in alignment with the contact engaging pin hole of each group of holes in said card, and said contact engaging pin in each block is longer than its other pins to extend through said slot in said member and into the said contact engaging pin hole in the card while said member is positioned to cover the indicium representing holes in the said card.

4. In an educational toy, a card supporting surface, a plurality of cards each provided with a plurality of groups of punched holes comprising each a plurality of holes disposed in a distinctive space pattern representative of a particular indicium and a single aperture uniformly positioned in all the groups, said groups of holes on each card being arranged in a predetermined order to represent a sequence of indicia forming the answer to the problem posed by the particular card and each card being separately positionable on said supporting surface, signalling means including an electric circuit having an electrical conductor provided with a plurality of normally open electrical contact elements in series, each of said contact elements being supported by said surface in registry with the said apertures on said cards, indicia bearing blocks having each projecting therefrom a contact engaging pin receivable in a said aperture and a plurality of code pins disposed in a space pattern corresponding to the group of holes representative of like indicium on said cards and receivable therein, said contact pin being operable to engage and connect said contact elements when said code pins project into said holes, a withdrawable card-like shield member superimposable over a said card to cover all the holes therein except said apertures whereby said shield may be withdrawn after all the selected blocks have been assembled with their contact pins engaged in said apertures to allow all properly selected blocks to be concurrently seated by their code pins with their contact pins in engagement with and connecting their respective contact elements, and means to press down simultaneously on all blocks positioned above said card after the holes therein are uncovered by said shield member.

5. The device claimed in claim 4 including means carried by said block pressing means to actuate said shield member to move and uncover said holes in said card.

6. In an educational toy, a card supporting surface, a plurality of cards each provided with a plurality of groups of punched holes comprising each a plurality of holes disposed in a distinctive space pattern representative of a particular indicium and a single aperture uniformly positioned in all the groups, said groups of holes on each card being arranged in a predetermined order to represent a sequence of indicia forming the answer to the problem posed by the particular card and each card being separately positionable on said supporting surface, signalling means including an electric circuit having an electrical conductor provided with a plurality of normally open electrical contact elements in series, each of said contact elements being supported by said surface in registry with the said apertures on said cards, indicia bearing blocks having each projecting therefrom a contact engaging pin receivable in a said aperture and a plurality of code pins disposed in a space pattern corresponding to the group of holes representative of like indicium on said cards and receivable therein, said contact pin being operable to engage and connect said contact elements when said code pins project into said holes, and a member positionable over said card to cover said code pin holes, said member being movable to uncover said code pin holes in the card after blocks have been positioned above said card and member, allowing said code pins of properly positioned blocks to enter said holes in the card, said member being perforate and movable from a position in which its perforations are not aligned with holes in the card to a position in which its perforations are aligned with holes in the card.

7. In an educational toy, a card supporting surface, a plurality of cards each provided with a plurality of groups of punched holes comprising each a plurality of holes disposed in a distinctive space pattern representative of a particular indicium and a single aperture uniformly positioned in all the groups, said groups of holes on each card being arranged in a predetermined order to represent a sequence of indicia forming the answer to the problem posed by the particular card and each card being separately positionable on said supporting surface, signalling means including an electric circuit having an electrical conductor provided with a plurality of normally open electrical contact elements in series, each of said contact elements being supported by said surface in registry with the said apertures on said cards, indicia bearing blocks having each projecting therefrom a contact engaging pin receivable in a said aperture and a plurality of code pins disposed in a space pattern corresponding to the group of holes representative of like indicium on said cards and receivable therein, said contact pin being operable to engage and connect said contact elements when said code pins project into said holes, and a member positionable over said card to cover said code pin holes, said member being movable to

uncover said code pin holes in the card after blocks have been positioned above said card and member, allowing said code pins of properly positioned blocks to enter said holes in the card, and a member hinged to said means for supporting a card and movable into position to simultaneously urge toward the card all the blocks positioned above said card after movement of said member to uncover holes in the card.

8. The device claimed in claim 7 including means carried by said hinged member coactive with said member to move it from hole covering to hole uncovering position.

9. In an educational toy, a card supporting surface, a plurality of cards each provided with a plurality of groups of punched holes comprising each a plurality of holes disposed in a distinctive space pattern representative of a particular indicium and a single aperture uniformly positioned in all the groups, said groups of holes on each card being arranged in a predetermined order to represent a sequence of indicia forming the answer to the problem posed by the particular card and each card being separately positionable on said supporting surface, signalling means including an electric circuit having an electrical conductor provided with a plurality of normally open electrical contact elements in series, each of said contact elements being supported by said surface in registry with the said apertures on said cards, indicia bearing blocks having each projecting therefrom a contact engaging pin receivable in a said aperture and a plurality of code pins disposed in a space pattern corresponding to the group of holes representative of like indicium on said cards and receivable therein, said contact pin being operable to engage and connect said contact elements when said code pins project into said holes, and a member positionable over said card to cover said code pin holes, said member being movable to uncover said code pin holes in the card after blocks have been positioned above said card and member, allowing said code pins of properly positioned blocks to enter said holes in the card, and means for moving said card step by step across said means for supporting the card.

FRANK R. COMPOSTO.

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