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(54) METHOD AND MEANS FOR PACKAGING EDUCATIONAL KITS

(57) The invention relates to a method for packaging educational kits, in particular, for packaging construction sets, logic and board games, and teaching-aid kits. The intended technical result of using the invention is expansion of the functional possibilities of packaging for educational sets. A container, which is part of the packaging, is used simultaneously for storage, for assessing the completeness of a set, for sorting components into sections, for assembling complex models, and for exchange between individuals or groups. The technical result is achieved with the aid of a graphic identifier, which specifies the location of each component according to a particular shape and/or color. The graphic identifier is applied to the upper or lower surface of a container's lodgment plate or plates. A building element and its specific identifier are arranged alongside one another so as to be visible simultaneously, making a mismatch of the two items impossible to miss; the completeness of the entire kit is easily determined on the basis of all the components matching their specific identifiers.

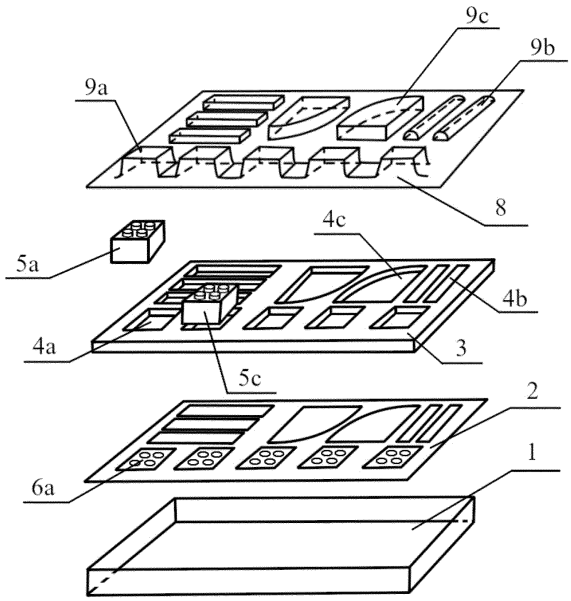

Figure 1

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Description

FIELD OF THE INVENTION

[0001] The present invention relates to a method and means of packaging educational sets, in particular, to the packaging for construction sets, puzzles, board games, and other learning kits.

[0002] Educational sets, including learning kits, board games, and children's construction sets branded as Lego, Megablocks, Fischertechnik, Playmobil, and so on, constitute one of the largest segments of the market for games and educational products. They are in constant demand among families and educational institutions.

[0003] A common feature of all kits and construction sets like the aforementioned is that individual models consist of a limited number of standardized elements and differ from one another only in that a model can have a specific number of pieces for the construction of more or less complex models of buildings, devices, characters, robots, and so on. Each construction set usually includes a printed manual, which illustrates the types of building elements, specifies their number and a guide describing how to build the model and indicating the elements required to assemble each model section.

[0004] Even a practiced user may find it very difficult to build a model that has the visual and technical characteristics of that illustrated in the assembly instructions. Lego-set themes are one example. They are created by professionals who are highly experienced in industrial design. Many models are comprised of special elements. It is likely that focus groups are used for some models. Title models fit into existing Lego product lines according to theme, such as Star Wars ships, and so on.

[0005] The high-level visual and technical characteristics of the models illustrated in the assembly manual are, however, achieved with the help of step-by-step instructions.

[0006] These assembly guides enable even an inexperienced user to build a sophisticated model. For this reason, together with the fact that the construction process is perhaps somewhat meditative, many children enjoy using step-by-step building instruction to assemble complex models.

[0007] However, building a model according to the assembly instructions amounts to more than blind repetition. In our observation, children who make wider use of step-by-step instructions are more successful in independent creative work than those who assemble models without using them. There is probably an analogy with other creative endeavors, namely painting and music. An essential element of art school curricula, for example, is copying paintings by great artists of the past. In doing so, children learn the visual and compositional approaches and techniques of the masters, which helps them to find their own style later on. Similarly, children who use manuals to assemble professionally created models are more likely to master the creator's techniques in graphics, design, and art, which subsequently helps them to create independently.

[0008] Therefore, using assembly manuals to build professionally created models is an excellent developmental technique and lesson.

[0009] Children strive to have more of this kind of developmental experience. They ask their parents to buy them more construction sets containing complex models for assembly with the help of instruction manuals. In addition, they can trade construction sets with other children. Moreover, children sometimes want to repeat the experience of assembling a model they have already built, perhaps to revive the joy of creating something interesting with their own hands or to repeat a previous learning experience.

[0010] However, in reality, one can encounter serious difficulties in each of these three circumstances.

[0011] Parents may find many models unaffordable. New construction sets can be so expensive that most families buy them only on special occasions such as birthdays or year-end celebrations.

[0012] When a model is completed in accordance with the manual, it is usually taken apart shortly afterward, and its elements are mixed together in a box for storage. After that, it is very difficult to exchange construction sets or build theme models again because it takes too much time and effort to sort out the necessary elements. Small children can find it too difficult, since it is still hard for them to focus their attention on a certain activity for a long time.

[0013] The purpose of the present invention is to realize a new method and means of packaging both new and existing mass-market construction toys and educational sets, which may enable the average user to:

- easily return any set to an organized state
- store any old set in an organized, space-saving manner and use it repeatedly, including in combination with any old or new set
- exchange sets with other users
- to return one's set in exchange for a new one for a fraction of the price
- efficiently replenish one's sets by replacing missing elements

[0014] The features of the proposed method and means of packaging in accordance with the present invention make it possible to verify quickly and easily, within seconds, the completeness of even the most complex sets.

[0015] The proposed method and means in accordance with the present invention also make it much easier to sanitize the building elements before reintroducing them into circulation for further use by other individuals.

PRIOR ART

[0016] Patent US1804927A: Container for construc-

tion toys and like sets (1928) describes a container for children's construction toys and like sets, which, more specifically, is a box with a sliding tray or trays of a certain thickness in which molded recesses are made to accommodate the exact dimensions of the corresponding elements contained in the construction set.

[0017] Patent US6554675: Method of packaging toy building elements and packaging for exercising the method, 1998, LEGO, describes a method for packaging elements of the popular Lego children's toys for building a comparatively complex toy model comprising a number of associated model sections, with each model section consisting of a number of Lego building elements. The preferred embodiment is that the basic elements for building each individual model section are packaged in a separate bag. The accompanying construction manual can be subdivided to show how to build each model section. Therefore, the relatively complex task of assembling the entire model is divided into several easier operations insofar as each individual model section consists of a relatively small number of elements, and it is considerably easier for the user to take the necessary elements from a limited number of elements rather than from all elements included in the construction set.

[0018] Patent US3777882A: Multi-tray instrument case (1971) describes a container for storing surgical instruments. The container is a box with flat panels, or trays, of a certain thickness, each of which consists of a layer of elastically deformable plastic foam with cutout areas matching the dimensions of each instrument that enable the instrument to be held tightly in place.

[0019] Patent US4711348A: Container for product samples (1986) describes packaging for small-sized consumer product samples used in direct mail advertising or in direct sampling of products, for which perfume or cosmetic samples are distributed to the consumer. The packaging is a type of ribbed envelope, or flat cardboard box, with overlapping lid panels. The container includes a porous foam material with selected portions removed to form product sample-receiving compartments. A distinctive feature of the packaging is that when it is open the decorative and informational graphics are applied in such a way that both the product samples and the accompanying graphics and text are simultaneously visible.

[0020] Patent US5320223A: Insert having part numbers or the like printed at the bottom of retaining recesses (1993) describes an insert for a tool box drawer. The upper layer of the insert is compressible material, such as foam, that has cut-out portions, with each cut-out portion being in the shape of the silhouette of the item or tool to be retained therein. The lower layer of the insert has information printed thereon and visible through the cut-out portions. The user sees the information contained in the insert for a tool box drawer and understands which cut-out portion corresponds to its tool.

[0021] Patent US7410053B2: Layered tool holder with visible identification (2004) describes a container, or tool holder, for storing a variety of tools and other devices, and the method of forming the tool. The container is formed from flat panels composed of at least two layers of material that have different thicknesses and cutout areas in the shape of the silhouette of each tool to be retained therein. In addition, a marker for tool identification is clearly visible next to each cutout. After use, the tools are returned to their designated cutout space in the container thereby enabling the user to determine easily whether all the tools are in place.

DISCOSURE OF THE INVENTION

[0022] The closest to the present invention prior art is patent US6554675: Method of packaging toy building elements and packaging for exercising the method, 1998, LEGO, describes a method for packaging elements of the popular Lego children's toys for building a comparatively complex toy model comprising a number of associated model sections, with each model section consisting of a number of Lego building elements. The preferred embodiment is that the basic elements for building each individual model section are packaged in a separate bag. The accompanying construction manual can be subdivided to show how to build each model section. Therefore, the relatively complex task of assembling the entire model is divided into several easier operations insofar as each individual model section consists of a relatively small number of elements, and it is considerably easier for the user to take the necessary elements from a limited number of elements rather than from all elements included in the construction set.

[0023] However, the packaging method described in Patent US6554675 has disadvantages that could limit the versatility of a construction set:

- the elements of each individual section are placed randomly into the appropriate packaging making it difficult to determine whether all of them are present; individual pieces may go missing; the ordering of parts for the convenience of assembling the section is not provided in advance;
- the building elements of each model section are packaged in bags implying that only one model can be built, since the elements for building any other model would be distributed differently;
- after the model has been assembled or even after the construction set has been fully unboxed, it is very difficult to return the set to its original state - with the parts sorted and separated into sections - thereby making the construction kit almost unsuitable for reassembly and rendering it practically a disposable product.

[0024] By contrast, the method and means disclosed in the present application for packaging such construction sets stipulates the rigidly ordered placing of parts in a container using the graphic identifier corresponding to each individual building element which can be found on

the surface of the container that holds the elements of the construction set.

[0025] The claimed method and means make it possible not only to find quickly any required part but also to assess instantly whether the set is complete, since each element and its identifier corresponding to it in shape and color are spatially aligned and simultaneously visible, and since the images used as graphic identifiers for individual parts together form the image of a set of parts.

[0026] Moreover, the proposed method and means make it possible to assemble sections of variable composition within a construction set. Thus, one set can be used to complete several models from sections that vary from model to model. The pieces from one section do not need to be placed in a separate bag or on a separate tray. Instead, the user can, for example, highlight sections of variable composition with contours of various colors or shapes on the surface of a common lodgment plate, or tray.

[0027] The technical result of the present invention is the expansion of the functional possibilities of packaging educational sets. The proposed method and means of the present invention provide at once the following features:

- a means and method to store an educational set
- a method to return an educational set to its original state, especially a set comprised of many parts
- a means and method to assess the completeness of an educational set
- a means to return to circulation a used set including without limitation the exchange of sets, preparation of sets for sanitization, and so on
- a means to subdivide a large set into sections of variable composition for ease of assembling various resulting models

[0028] The technical result of using the invention is that the functionality of the packaging for educational kits is expanded and the ergonomic design of the packaging is improved, which makes it possible to solve simultaneously all of the above issues.

[0029] This technical result is achieved through a combination of features indicated in the patent claims. Specifically, the means of packaging is a container consisting of at least two parts.

[0030] The first part is intended to fix the location of individual parts on its surface and is made with the possibility to prevent displacement of any part along this surface. The first part can be made, for example, in the form of a lodgment plate with cutout portions in the shape of the parts into which said parts are inserted or be made to include small protrusions on a flat surface that prevent the displacement of the parts; or the first part can be made with an adhesive coating. The first part can have both a flat and curved surface of both constant and variable curvature. The first part may be made of cardboard, plastic, wood or any other suitable material, transparent or opaque.

[0031] The second part of the packaging means is designed to fix the position of the set of parts on the surface of the first part and is made with a possibility to prevent any and all of these parts from moving away from the fixing surface of the first part. The second part connects to the first part with a standard closure element or by another known method. The second part may be made of transparent plastic or a perforated material or any other material that provides visual identification for the elements placed on the surface of the first part. However, the second part may be completely opaque, in which case it should be fully opened to enable the user to assess whether the set of elements positioned on the surface of the first part is complete. The same layer of the packaging means can function as the second and first parts for the other layers that are placed below and above respectively, in which case the container would consist of more than two parts.

[0032] The surface of at least one of these parts contains graphic identifiers, or images, the shape and color of which correspond to the relevant building element. The location of the identifiers and the location of the parts in the packaging means are positioned in such a way that when visually reviewing the educational set, each of its parts is visible simultaneously with its identifier, and they are perceived together as a whole.

[0033] In the preferred embodiment, the packaging means is a container with at least one lodgment plate in the sockets of which, according to a given pattern, the parts of the set are located, each of which corresponds to a separate realistic image that is spatially aligned with the socket, which is made according to the shape of the relevant part. Together, all the images form a united image of a set of parts.

[0034] The packaging means for educational sets containing a large number of elements, such as a construction set for complex models, may contain several lodgment plates. In this case, the distribution of parts over the plates can be carried out in such a way as to ensure the convenience of sequential assembly of the corresponding sections of the model.

[0035] The benefits of the present invention are as follows:

- educational sets, including construction sets, are provided with improved readability and ease of use;
- a completed set can be constructed again, including by different users and in combination with similar sets;
- visual and simple automatic methods can be used to verify whether a set is complete;
- educational sets can be conveniently stored in a ready-to-use, well-organized state.

BRIEF DESCRIPTION OF DRAWINGS

[0036] A more complete understanding of the present

invention may be acquired by referring to the accompanying drawings which illustrate the substance and embodiments of the invention when considered in conjunction with the description.

Figure 1 shows a schematic representation of the packaging means using the example of a Lego construction set.

Figure 2 shows several options for the spatial alignment of the visual identifier of a part with the part itself, which is placed in the socket of the lodgment plate.

Figure 3 shows the visual identifier in the form of a semitransparent image located directly above the corresponding part or element.

Figure 4a and Figure 4b show a packaging means in the form of a strip of material

Figure 5 shows packaging means in the form of a book.

Figure 6 shows a way of using a tablet or smartphone to verify the completeness of an educational set.

IMPLEMENTATION OF THE INVENTION

[0037] One of the embodiments of the method and means of packaging a construction set is shown in Fig. 1. The present invention is illustrated in a schematic drawing showing a container designed especially for said embodiment and used for the organized positioning, storage, and transportation of a construction set. The building elements are arranged in the container in such a way as to make possible either a quick visual "at a glance" assessment of the completeness of a set or automatically, using an electronically aided image analysis system that employs video cameras.

[0038] The packaging means is a container 1 that includes a lodgment plate 3, which is preferably made of a transparent material, such as polycarbonate, methylmethacrylate, or transparent silicone with a thickness of 3-5 mm. The container 1 may have from one to several such plates 3.

[0039] In plate 3, the pockets 4a, 4b, and 4c are 2-4 mm deep and in the shape of parts 5a and 5c, and other elements of the same set not shown in Fig. 1. The horizontal dimensions of the recesses somewhat exceed those of their corresponding parts so that each element (i) can be freely inserted into and removed from its corresponding pocket, (ii) is retained in the pocket at a small inclination of up to 30 degrees, and (iii) freely falls out of the pocket when the plate is turned over.

[0040] Beneath the transparent lodgment 3, at the bottom of the container 1, is an identification layer 2, which is a sheet of paper or a thin sheet of plastic-like material with realistic images of the building elements printed or embossed on it. Each image on the identification layer 2 matches its corresponding building element in shape and color. The images of the elements on the identification layer 2 are arranged so that the outline of each image is matched perfectly with the outline of the pocket 4 designed to hold the corresponding element on the lodgment plate 3. The user inserts the building elements into the pockets 4 on the lodgment plate 3, ensuring that each element inserted into the corresponding pocket is identical with the image visible exactly under the pocket. As a result, the view of the complete set of elements placed on the lodgment plate 3 is identical with the image of the set of elements on the identification layer 2.

[0041] The lodgment plate 3 is covered from above with a relief cover or lid 8, made of a thin transparent material, such as polyethylene terephthalate, so that the protrusions in the lid correspond precisely in size and shape to the elements of the building set, which have been inserted into the pockets on the lodgment tray 3 corresponding to the image on the identifying layer 2. Thus, the raised portion 9a of the cover is positioned on the protruding larger portion of the element 5a inserted into the pocket 4a and placed above the image 6a of the element 5a. The raised portions 9b and 9c shown in Fig. 1 are in the shape of the elements that correspond to those inserted into the cutouts 4b and 4c respectively.

[0042] The cover, or lid, 8 can be attached to the lodgment plate 3 with any closure element (not shown in the drawing) that is widely used for plastic packaging for consumer goods, food containers, and stationery. The locked cover, or lid, 8 prevents the building elements from moving out of their cutouts regardless of the container's orientation.

[0043] In another embodiment of the invention, the identification layer 2 with the images of the construction set elements, may be on the bottom of the container. However, if the packaging is comprised of two or more stackable containers similar to those described above, each of the containers should have its own identification layer showing images similar to those described above identifier 2.

[0044] The user is provided with the packaging means which includes one or more containers with an assortment of building elements arranged on a lodgment plate and covered with a transparent cover that makes it possible to see all elements at once and each element individually. The cover is easily removed by unlocking the standard closure elements. The building elements, which are in their designated pockets are not mixed together but arranged in a manner that makes it easy to assess whether the set is complete and to assemble the model. Additionally, the elements are not firmly fixed in their pockets and may be removed effortlessly.

[0045] Any fully assembled model can be disassembled, and the user can return each element to its respective pocket on the identification plate 3, guided by the graphic identifier for each element in the set. If the iden-

tifiers depicting the image of the building elements are directly beneath the lodgment layer, then the image of each element is positioned precisely below its pocket and clearly visible, making it even easier to return the educational set to its original state.

[0046] When all elements are in place, the cover, or lid, is placed on top of the lodgment layer. The cover is then locked using the closure elements, which fixes the building elements in place so that they cannot move about. In this way, the construction set is prepared for storage, reuse, or sanitization. Moreover, the educational set is effectively ready for rapid at-a-glance verification as to whether the set is complete.

[0047] Fig. 2 shows a slightly different method of packaging a similar construction set. The method is also based on ensuring that the positions of the elements are precisely matched with their corresponding images. Images or any other graphic identification are shown in different variants.

[0048] The container 1, which is made of paperboard or another material suitable for use as packaging material, includes the lodgment tray 3 which has cutouts, each of which is in the shape of the corresponding building element. The lodgment plate can be made of a flexible material, such as polyethylene or polyurethane foam, or of a rigid material, such as wood and plywood.

[0049] The lodgment plate 3 is placed on top of the identification layer 2, which represents the surface for the elements arranged on the sheet, the relative position of which is fixed by the specified lodgment plate. In one of the embodiments, shown in Fig. 2, the images of the construction elements of the educational set are placed on the upper surface of the identification layer 2. When the lodgment plate 3 is placed on the identification layer 2, the images are visible through the cutouts mentioned above. Thus, the element 5a is inserted into the corresponding cutout in the lodgment plate 3 above the corresponding image 6a on the identification layer 2.

[0050] A different embodiment of the graphic identifier calls for the image of each element to be placed on the upper surface of the lodgment plate and adjacent to the cutout for each element. Figure 2 shows element 5c inserted into the cutout adjacent to its corresponding graphic identifier 6c.

[0051] As shown in Fig. 1 and Fig. 2, the shapes of the pockets and cutouts match the shapes of the elements to be placed in them. In principle, this makes it possible to gather a certain set of building elements according only to the shapes of the elements and their corresponding receptacles, as is done with children's toys of the "sorter" type. However, construction elements differ not only in shape but also in color. In order to organize the shapes according to color, graphic identifiers 6b, shown in Fig. 2 in the form of a colored outline, are drawn around the perimeter of each cutout.

[0052] Another method for achieving precise spatial alignment between any building element and its corresponding graphic identifier is shown in Fig. 3. A semi-transparent image of a building element 10 appears on the upper surface of the container's transparent cover 9 directly above its respective cutout 3a in the lodgment plate 3 into which is inserted the building element 5. In this case, the transparent cover provides the graphic identification. The shape and color of the graphic identifiers and the building elements correspond to each other; thus, they are perfectly matched. The user or person responsible for sanitization can view a packaged set of elements with a transparent cover, with graphic identifiers applied to it, and identify at a glance whether the graphic identifiers on the transparent cover correspond to the elements contained in the lodgment plate below. The same is true with regard to determining the presence or absence of any detail, the pocket or recess for which is on a lodgment plate positioned below its corresponding graphic identifier.

[0053] In respect of the embodiments of the invention described above, it is understood that that lodgment plates similar to those shown in Fig. 1, or any lodgment plates with graphic identifiers applied to their lower surface, similar to those shown in Fig. 2, are placed into a container. The plates 3 can be firmly attached to a graphic identification panel or sheet, or the two pieces can be separate. One container may hold several lodgment plates, each with graphic identifiers applied to its lower surface and each one stacked on top of the other.

[0054] Similarly, in the embodiment described in Fig. 3, the elements' graphic identifiers can appear on either the upper surface of the cover 9 or on a separate sheet positioned on the cover above the lodgment panel.

[0055] Fig. 4 and Fig. 5 show other embodiments of the packaging means for educational sets, or kits, that require more than one lodgment plate.

[0056] Fig. 4 shows three lodgment plates 20a, 20b and 20c attached to one another by a broad strip of flexible material made, for example, of fabric or other material with similar properties. The rectangular pieces of the strip, 21d, 21e, which are attached to the lodgment plates along one side, are the same width as that of the plates, while their length is slightly greater than the length of the plates.

[0057] As shown in Fig. 4a, the lodgment plates together with the pieces that connect them form a one-piece strip of flexible material. The lodgment plates can be attached to the entire flexible strip on the top. And at the same time fragments of the strip which are covered by plates 20a, 20b, 20c form corresponding underlying identifiers of these plates. The remaining free segments 21 d and 21e of the strip form a connecting bridge. Alternatively, the connecting bridges can be formed by separate pieces of the strip.

[0058] Fig. 4b shows that when the plates 21a, 21b, and 21c are stacked one on top of the other the strip of flexible material attached to them is folded in such a way as to form linings 21d and 21e between the plates.

[0059] In Fig. 5, the lodgment plates 25a, 25b, 25c, and 25d are attached to one another using a method

similar to that used to bind together the pages of a book. When open, the container resembles an open book, for example, with the right-hand side containing building elements inserted into the lodgment plate and the left-hand side containing the relevant page or pages 26 of the assembly instructions. When folded, the container resembles a closed book, which can be stored conveniently on a shelf 28, with its spine 27a and 27b facing outward and information about the models clearly visible on the spine.

[0060] Figure 6 shows how augmented reality may be used to verify whether all elements of a construction set are in place. A mobile device, such as a tablet, laptop, smartphone, or other similar device, equipped with a camera and validation and inventory app that determines the article number of the set. An on-screen image from a computer camera showing the building elements can be supplemented by images of virtual parts arranged in the same order. By combining both images - real and virtual - the completeness of the set can easily be checked. A special app can perform inventory.

[0061] The embodiments for the means used for packaging of educational sets described above should not be construed as limiting any patent claims of the invention. Various changes and additions which are obvious to specialists in the art can be introduced without exceeding the scope of the invention.

Claims

1. A means for packaging educational sets, which is a container with a cover, or lid. Said container is made in such a way as to prevent the displacement of each and any of the building elements placed on said container's retaining surface away from or along said surface. Said container is distinguished from other similar containers in that:

    - all elements are positioned separately on one surface so that said elements do not touch or overlap each other,
    - each element has a graphic identifier in the form of a realistic image or any other symbol identical in form and size to said element and spatially matched with said element,
    - the means of fixing said elements to said retaining surface ensures that each element is at least partially visible so that it can be simultaneously recognized together with its corresponding graphic identifier,
    - the relative position of each graphic identifier corresponds unequivocally to its corresponding element positioned on the retaining surface so that when the two are viewed simultaneously the graphic identifiers provide a full view of the toy construction set or educational set.

2. A method of packaging the elements of a toy or educational set comprises the following steps:

    - a schematic diagram is made indicating the fixed positions of the elements of a construction set relative to one another on the surface of a packaging container's lodgment plate, or retaining surface, the function of which is to hold in a fixed position said elements of said toy or educational set; said elements are placed on the surface of the packaging container's lodgment plate, or retaining surface, in accordance with their respective positions as indicated in said schematic diagram,
    - said retaining surface is joined to other parts of said packaging container in such a way as to prevent said elements from shifting away from or along said retaining surface,
    - each of said elements, positioned as described above, has a corresponding graphic identifier in the form of a realistic image or other symbol identical to its corresponding said element,
    - said graphic identifier is fixed on at least one surface of said packaging container in such a way as to ensure that said element and its said graphic identifier are adjacent to each other and can be viewed simultaneously,
    - all said graphic identifiers together form a complete image of said set of said elements, and said image unambiguously corresponds to said arrangement or positioning of said elements relative to one another on said retaining surface.

3. A method of storing the elements of toy construction or educational sets comprising the following steps:

    - said elements of said toy or educational sets are stored in a container made especially for a specific said set of elements,
    - said elements are placed on said container's retaining surface or lodgment plate, which is designed with a fixed location for each specific element relative to one another in accordance with a provided schematic diagram,
    - said container's individual sections are joined to one another to prevent individual elements from shifting along the surface of the lodgment plate,
    - each construction element has a specific shape and color and is placed in a socket on said surface of said lodgment plate corresponding only to the size, shape and color of that specific element,
    - a realistic graphic image for each element, or other graphic identifier corresponding in size, shape and/or color to each said element, is fixed on said retaining surface above, below, beside or underneath each said socket, which has the same dimensions and shape as the element it

is intended to hold in place on said retaining surface,

- when any of said elements is placed in its socket on said lodgment plate, said element and its said graphic identifier can be viewed simultaneously, ensuring that it will be immediately obvious if said element and its said graphic identifier do not match
- the size and shape of said retaining surface which contains said elements make it possible to see all elements at once in order to assess whether the set is complete.

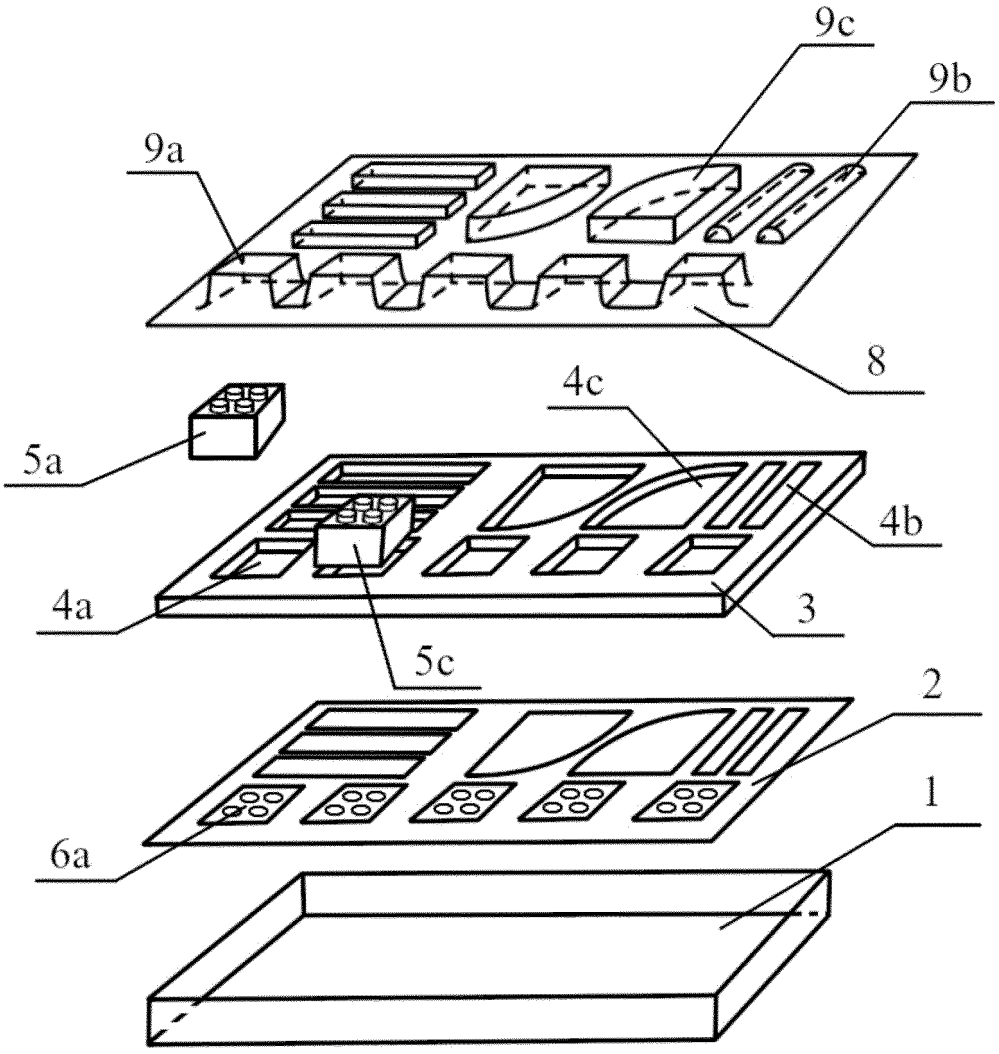

Figure 1

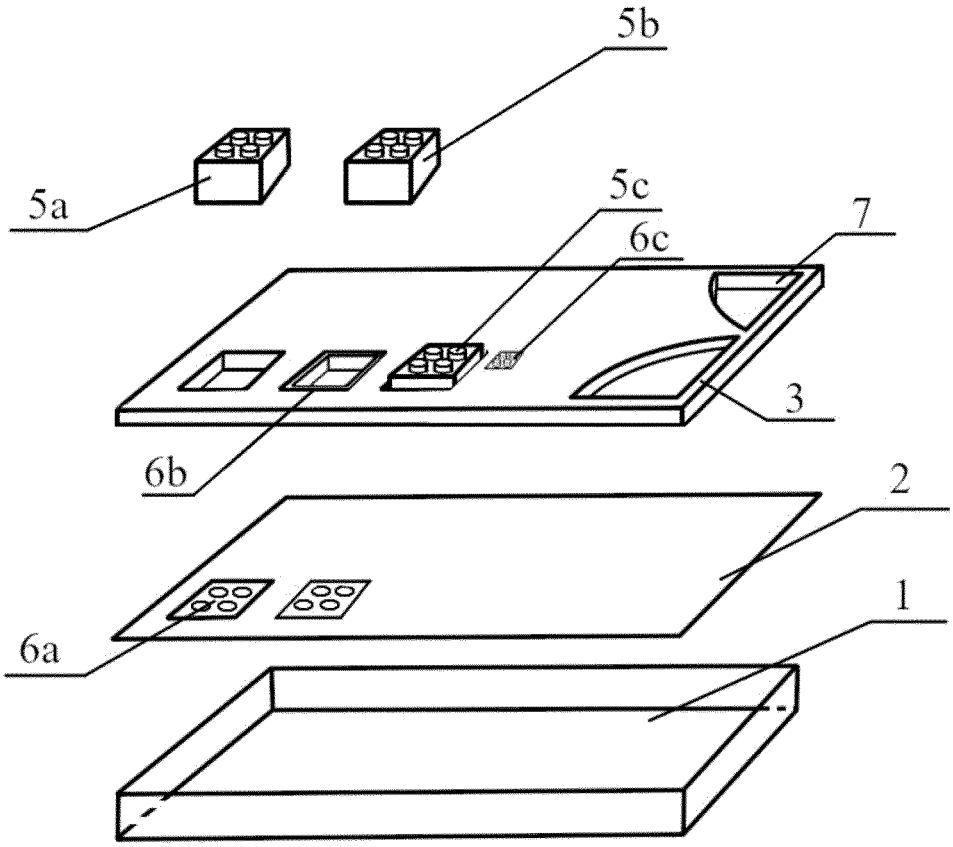

Figure 2

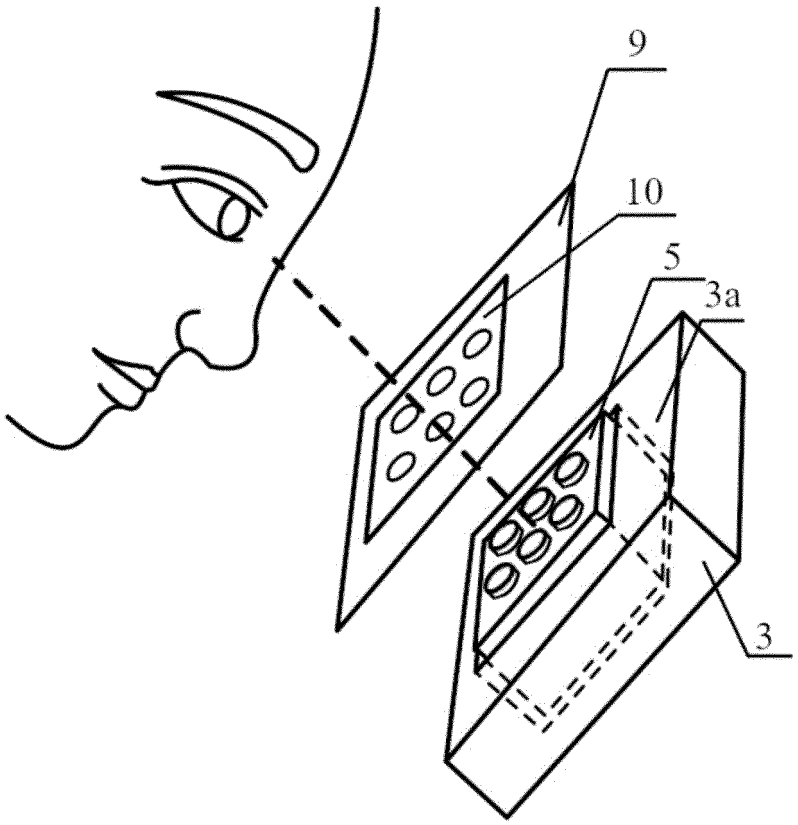

Figure 3

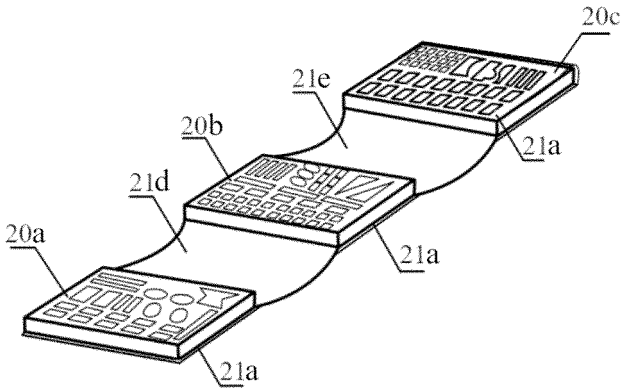

Figure 4a

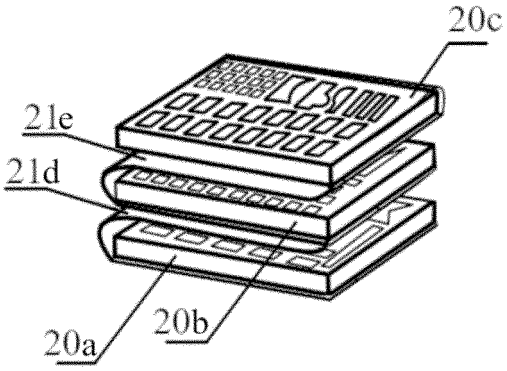

Figure 4b

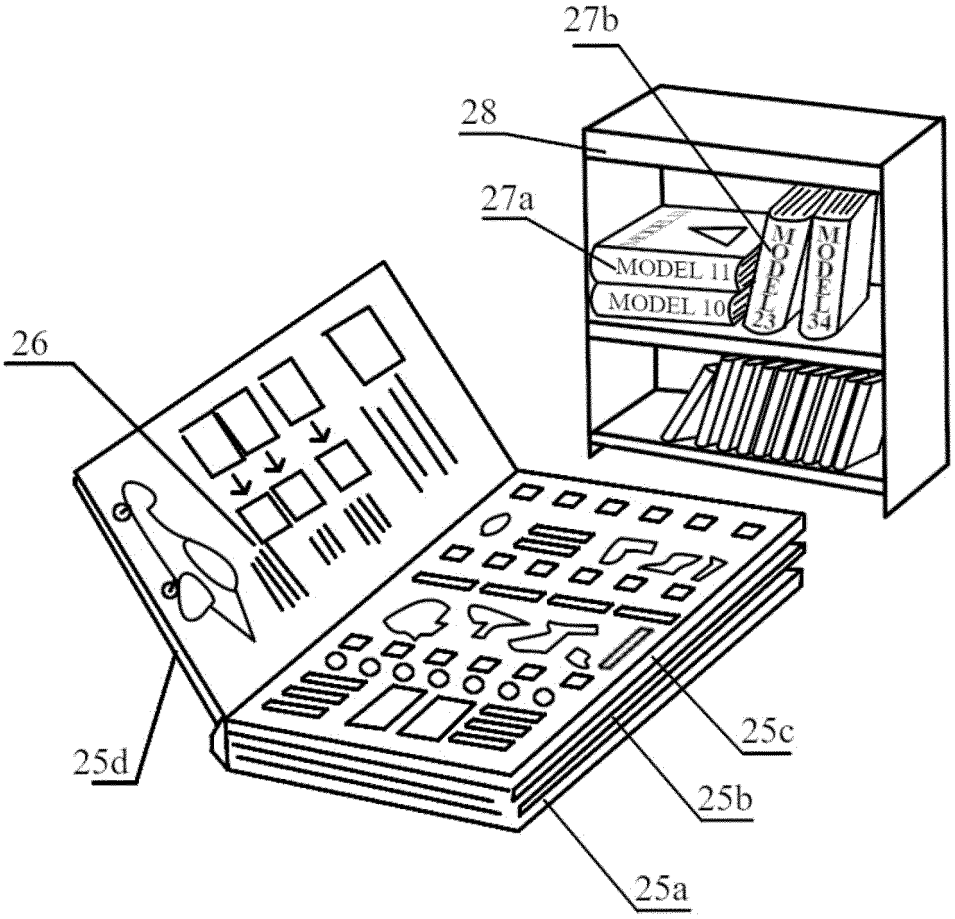
27b
28
27a
MODEL 11
MODEL 10
MODEL 23
MODEL 34
26
25d
25c
25b
25a

Figure 5

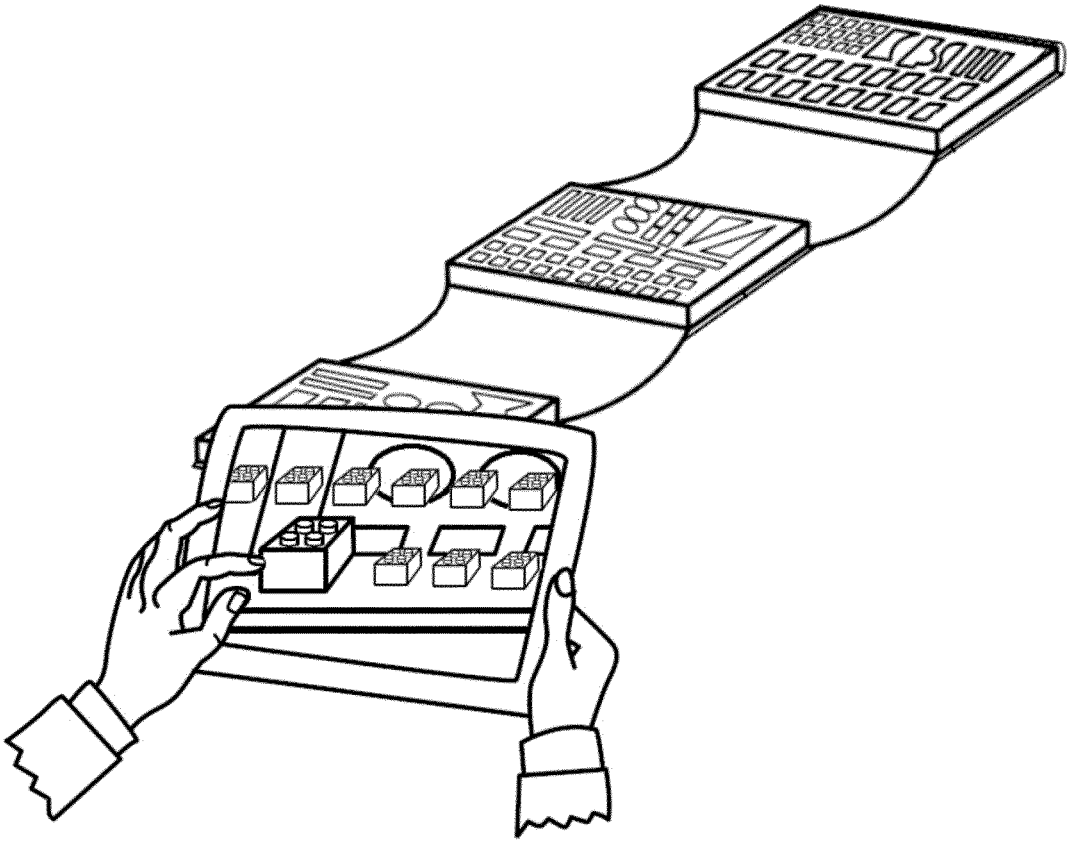

Figure 6

INTERNATIONAL SEARCH REPORT

International application No.
PCT/RU 2020/000577

A. CLASSIFICATION OF SUBJECT MATTER
B65D 85/00 *(2006.01)*
B65D 25/10 *(2006.01)*

According to International Patent Classification (IPC) or to both national classification and IPC

B. FIELDS SEARCHED

Minimum documentation searched (classification system followed by classification symbols)

B65D 85/00-85/90, 25/00-25/36

Documentation searched other than minimum documentation to the extent that such documents are included in the fields searched

Electronic data base consulted during the international search (name of data base and, where practicable, search terms used)

PatSearch (RUPTO Internal), USPTO, PAJ, Espacenet, Information Retrieval System of FIPS

C. DOCUMENTS CONSIDERED TO BE RELEVANT

Category*	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
D, Y	US 6554675 B1 (INTERLEGO AG) 29.04.2003, col. 4, lines 35-43, figure 17	1-3
Y	US 5944532 A (MARIE T LIENHOP) 31.08.1999, figures 4, 5	1-3
A	US 3473257 A (LAWRENCE A. GAMBINO) 21.10.1969	1-3
A	US 3355837 A (N.N. PEDERSEN) 05.12.1967	1-3

☐ Further documents are listed in the continuation of Box C. ☐ See patent family annex.

* Special categories of cited documents:
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"Y" document of particular relevance; the claimed invention cannot be considered to involve an inventive step when the document is combined with one or more other such documents, such combination being obvious to a person skilled in the art
"&" document member of the same patent family

Date of the actual completion of the international search	Date of mailing of the international search report
10 March 2021 (10.03.2021)	25 March 2021 (25.03.2021)
Name and mailing address of the ISA/ RU Facsimile No.	Authorized officer Telephone No.

Form PCT/ISA/210 (second sheet) (January 2015)

REFERENCES CITED IN THE DESCRIPTION

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Patent documents cited in the description

- US 1804927 A **[0016]**
- US 6554675 B **[0017] [0022] [0023]**
- US 3777882 A **[0018]**
- US 4711348 A **[0019]**
- US 5320223 A **[0020]**
- US 7410053 B2 **[0021]**