R. F. BEARDSLEY.

TOY OR THE LIKE.

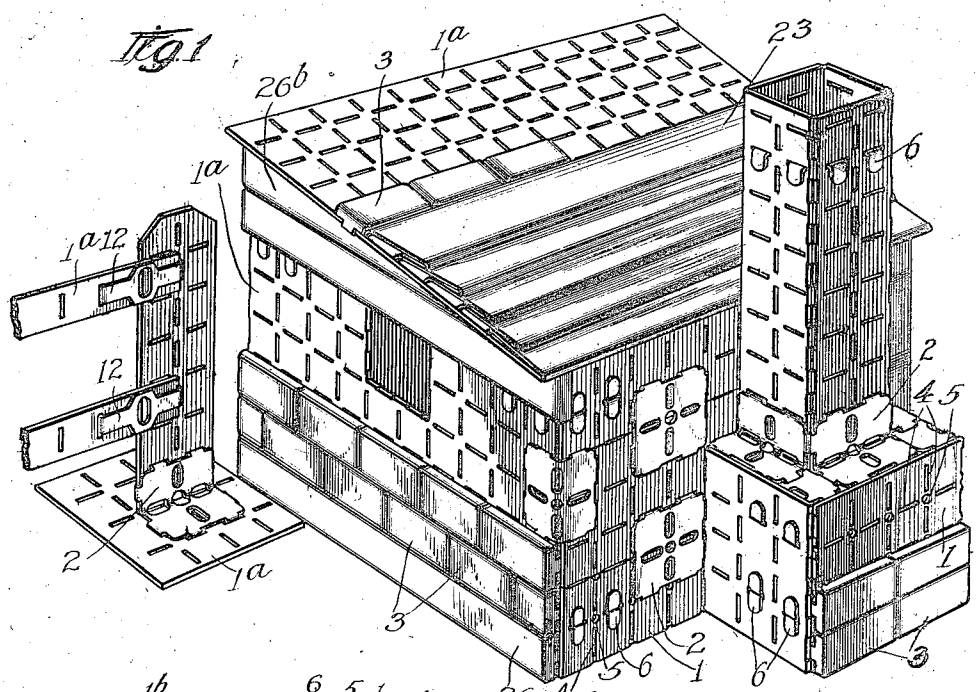
APPLICATION FILED NOV. 5, 1914.

1,193,975.

Patented Aug. 8, 1916.

4 SHEETS—SHEET 1.

Fig. 1



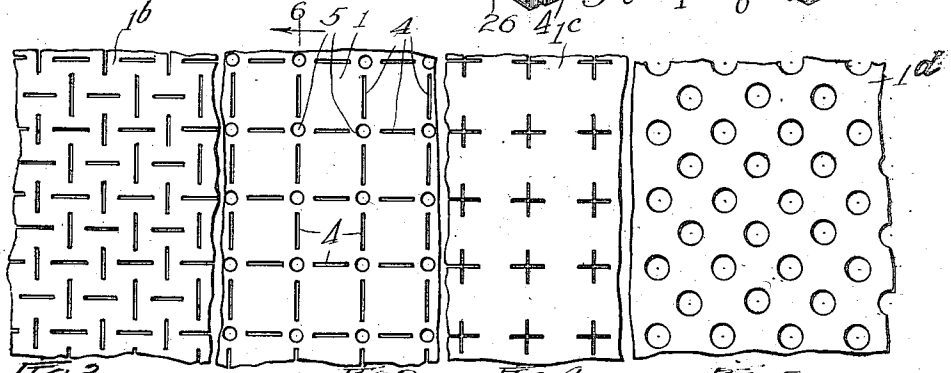


Fig. 3. Fig. 2. Fig. 4. Fig. 5.

Fig. 7.

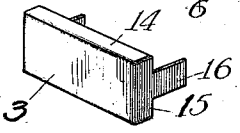


Fig. 8.

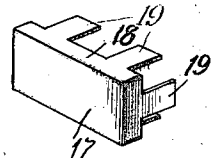
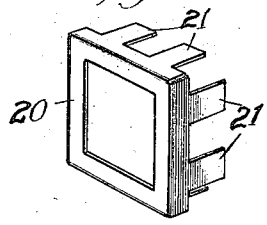




Fig. 6.

Fig. 9.



Witnesses:
Arthur W. Carlson
Robert F. Weir

Inventor:
Robert F. Beardsley
By Neil & Neil Attys.

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TOY OR THE LIKE.

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1,193,975.

Patented Aug. 8, 1916.

4 SHEETS—SHEET 2.

Fig. 10.

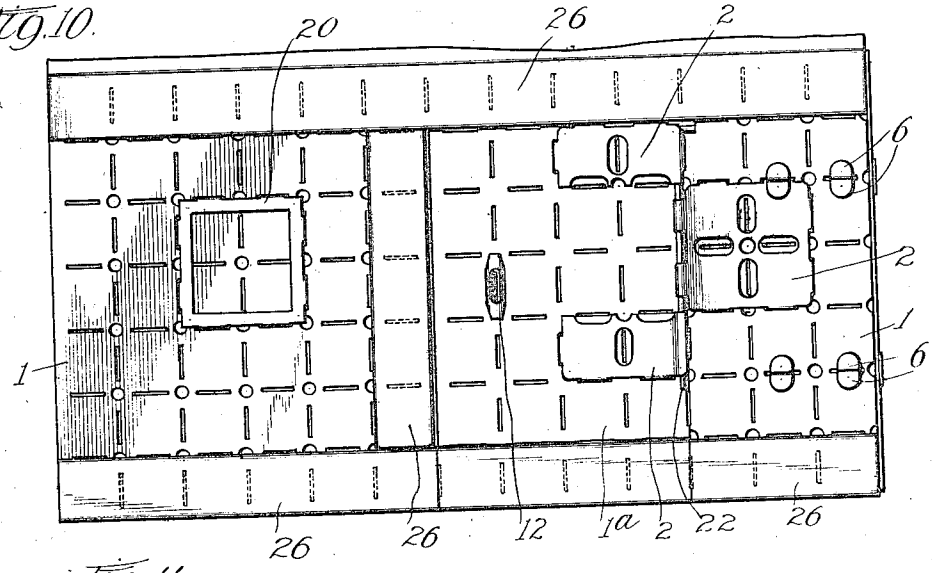


Fig. 11.

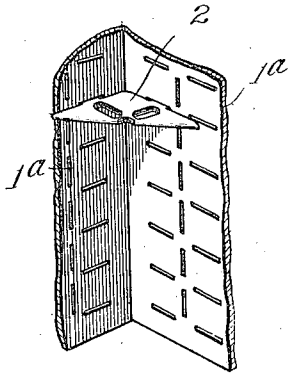


Fig. 12.

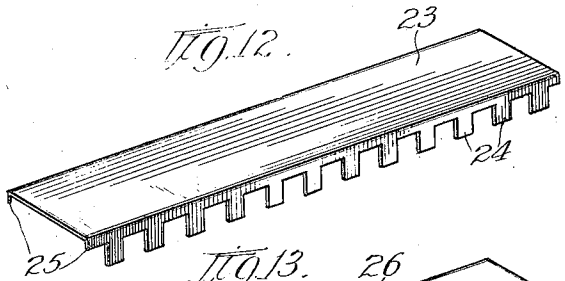


Fig. 13.

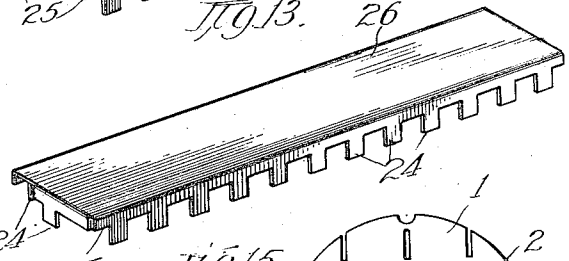


Fig. 14.

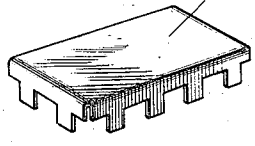
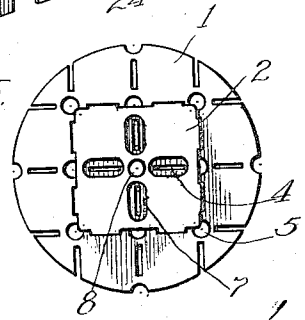


Fig. 15.



Witnesses

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TOY OR THE LIKE.

APPLICATION FILED NOV. 5, 1914.

1,193,975.

Patented Aug. 8, 1916.

4 SHEETS—SHEET 3.

Fig. 16.

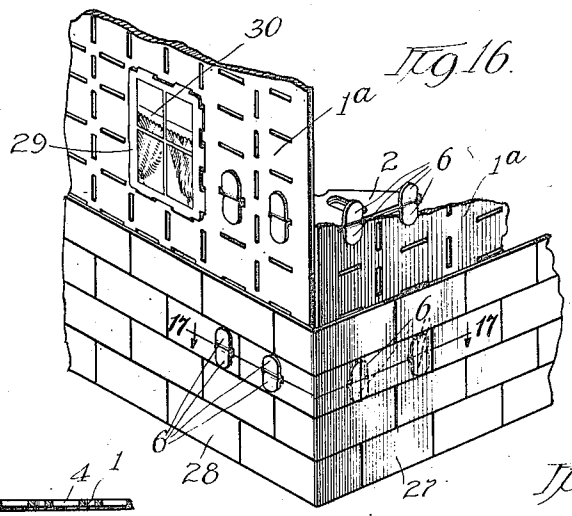


Fig. 17.

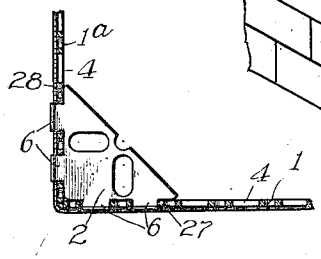


Fig. 18

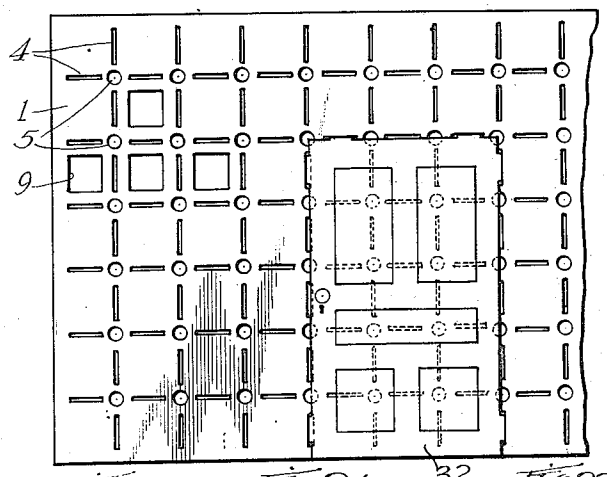


Fig. 19.

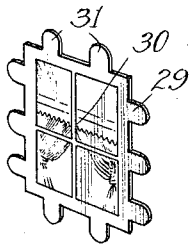


Fig. 20.

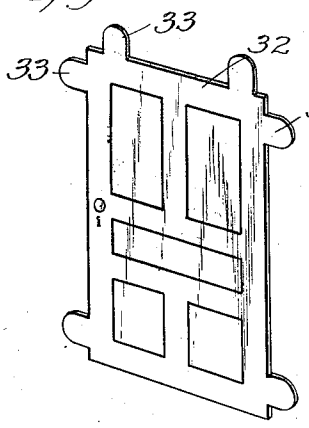


Fig. 23.

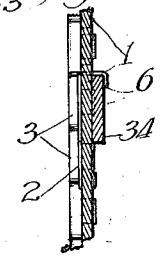


Fig. 21.

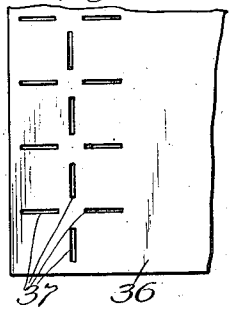
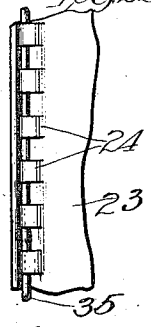


Fig. 22



Witnesses:

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TOY OR THE LIKE.

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1,193,975.

Patented Aug. 8, 1916.

4 SHEETS—SHEET 4.

Fig. 24.

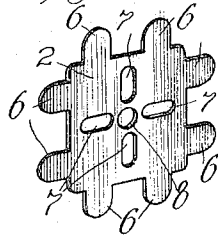


Fig. 25.

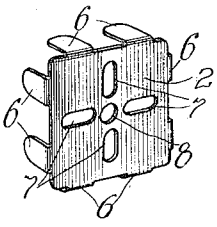


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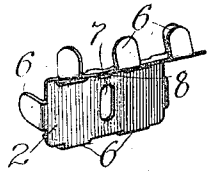


Fig. 27.

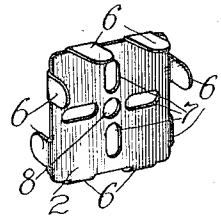


Fig. 28.

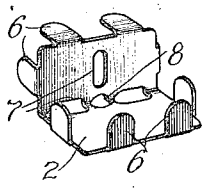


Fig. 29.

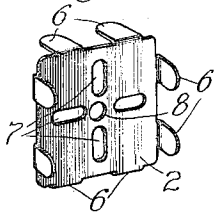


Fig. 30.

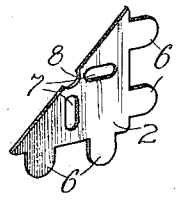


Fig. 31.

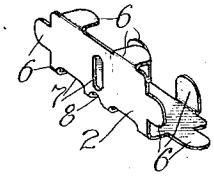


Fig. 32.

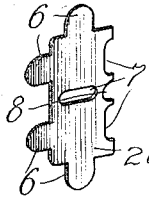


Fig. 33.

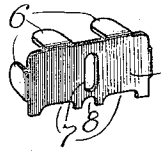


Fig. 34.

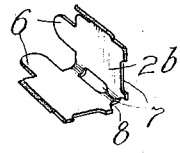


Fig. 35.

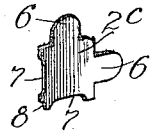


Fig. 43.

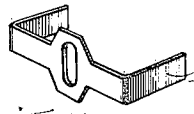


Fig. 36.

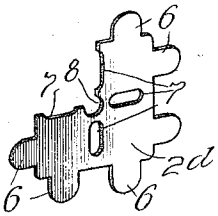


Fig. 37.

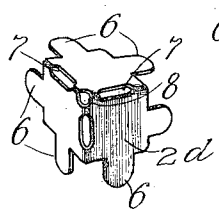


Fig. 38.

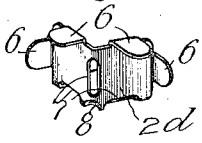


Fig. 39.

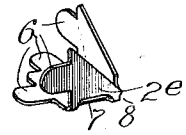


Fig. 40.

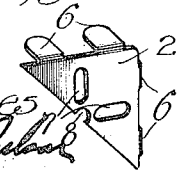


Fig. 41.

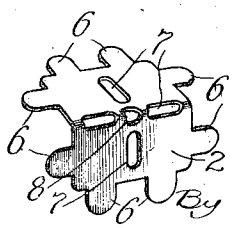
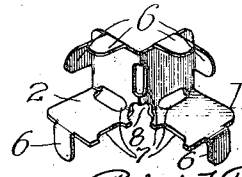


Fig. 42.



Witnesses

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Inventor:

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By Thos. Weir & Thos. Weir Attys.

UNITED STATES PATENT OFFICE.

ROBERT F. BEARDSLEY, OF CHICAGO, ILLINOIS, ASSIGNOR TO HENRY W. ANGSTEN, OF CHICAGO, ILLINOIS.

TOY OR THE LIKE.

1,193,975. Specification of Letters Patent. Patented Aug. 8, 1916.

Application filed November 5, 1914. Serial No. 870,338.

To all whom it may concern:

Be it known that I, ROBERT F. BEARDSLEY, a citizen of the United States, residing at Chicago, in the county of Cook and State of Illinois, have invented certain new and useful Improvements in Toys or the like, of which the following is a description.

My invention belongs to that general class of inventions known as toys or amusement devices, and relates particularly to building or constructing toys, or more specifically, a combination of new and novel parts of various kinds by means of which children and adults may construct toys, or ornamental or useful articles and the like to meet the individual desires of the builder. It is impossible to enumerate the many different articles that may be constructed, as the number is without limit, depending entirely upon each individual person.

The invention has among its objects the production of a toy, game device or the like, consisting of new and novel articles, by means of which simple, complex, ornamental, amusing, instructive, useful, and pleasing articles may be constructed. The same is entertaining for children, and even persons of older years, and desirable for training the mind and sharpening the inventive faculties of the user.

It has among its further objects the production of the new and novel parts herein set forth, arranged or adapted to be used in combination or singly, with other toys or for other uses.

Other objects and advantages will appear from the disclosure herein given.

To this end my invention consists in the novel construction, arrangement and combination of parts herein shown and described, and more particularly pointed out in the claims.

In the drawings, wherein like reference characters indicate like or corresponding parts, Figure 1 is a perspective view of an illustrative structure constructed with a number of the different parts illustrated in detail in the other figures; Fig. 2 is a plan view of the preferred form of structure board; Figs. 3, 4 and 5 are similar views of a slightly different or modified form of the same; Fig. 6 is a sectional view taken substantially on line 6, 6 of Fig. 2; Fig. 7 is a perspective view of one form of covering member; Fig. 8 is a similar view of a slightly different form; Fig. 9 is a perspective view of a framing member which may be employed; Fig. 10 is a front elevation of the illustrative structure shown in Fig. 1; Fig. 11 is a perspective view of a portion of the same, illustrating a portion of the construction; Figs. 12, 13 and 14 are perspective views illustrative of other forms of covering members; Fig. 15 is a view in elevation illustrative of a wheel constructed with parts illustrated in some of the other figures; Fig. 16 is a perspective view of a portion of a structure, illustrating a modified construction; Fig. 17 is substantially a sectional view on line 17, 17 of Fig. 16; Fig. 18 is a view in elevation of a portion of a structure, and is illustrative of modified arrangements; Fig. 19 is a perspective view illustrative of an ornamental fastening or cover for use in building structures; Fig. 20 is a similar view of another form; Fig. 21 is a plan view of a piece of structure board, illustrating a modified punching; Fig. 22 is a view in elevation illustrative of a detail in construction; Fig. 23 is a sectional view illustrative of the application of the invention herein described to other building toys; Fig. 24 is a perspective view of my preferred form of fastening member; Figs. 25 to 42 inclusive are perspective views of the same member, or portions thereof, bent or cut, or both, illustrating several of the innumerable ways in which the fastening member may be employed, and Fig. 43 is a perspective view of another form of fastening.

It may be mentioned that the complete toy or device consists of suitable sheet body material, which may be termed a structure board or base of suitable material, a plurality of fastening members of suitable shape and material, and covering members also of suitable material, shape, size, etc., by means of which a complete structure may be built, that is attractive and ornamental. With a toy of this kind, or the articles herein described, a structure may be built that is complete and has the appearance of the actual structure after which it is modeled, as distinguished from a mere bare skeleton or framework, which when built does not in any way, with but few exceptions, resemble the article patterned after.

The body material, which, as stated, may

be termed the structure board or base, is preferably of cardboard, fiber board, or the like, of the desired size and thickness. The preferred form of board is punched or otherwise suitably formed at the factory, so that suitable fastening means may be employed for attachably or detachably securing the parts together. In the drawings I have shown several forms of punching, that shown in Fig. 2 being preferred. Referring to this figure, 1 represents the structure board, which is punched or cut with slotted apertures 4 therein, and with holes 5, as shown, at the ends of the adjacent slots. The holes 5 may be round, square, or as desired. The preferred form of structure board shown in Fig. 2 may be said to be provided with a plurality of series of disconnected slotted apertures, arranged in parallel lines lengthwise and across the sheet, the same being so disposed that a plurality of squares are formed, and having apertures at the corners of the squares or adjacent the ends of the adjacent slots. The punching of the board 1^b shown in Fig. 3 is arranged in a slightly different manner, and additional holes similar to 5 may be arranged in the board, if desired (not shown). Another arrangement is shown in board 1^c, shown in Fig. 4, and still another form in the board 1^d, shown in Fig. 5. These several forms are merely for illustration, and other forms, as for example, shown in Figs. 18 and 21, are illustrated in the drawings. The various slots or perforations in the board permit the boards to be assembled and secured together by suitable fastening parts, in a simple, easy manner without requiring a knife, punch or other tools.

My preferred form of fastener for securing or locking the structure board parts together to form any desired structure or article is illustrated in Fig. 24, in which 2 is a plate or sheet of suitable material, preferably metal of light weight that is easily bendable without the use of tools, and yet when bent will retain its shape, and which may be cut as desired. As shown, the plate 2 is preferably cut square and provided with a plurality of tongues or prongs 6, and with openings or perforations 7, as well as a central aperture 8. The fasteners when constructed for my particular structure board, as for example the form of board shown in Fig. 2, are so proportioned that the prongs 6 may be bent, for illustration as shown in Fig. 25, so that they may aline with the openings 4 in the board. At the same time the perforations or openings 7 and 8 register with the slotted openings 4 and hole 5 in the board, back of the plate, as will be clear by reference to Figs. 1 or 10. The slots 4 in the preferred construction of board are of sufficient width, so that more than one tongue may be pushed through and bent over or engaged on the opposite side, *i. e.*, clenched (see Figs. 1 and 16). At the same time the plate 2 permits the tongues or other parts to engage through holes 7 or 8 with the slots or apertures in the board, that is the fastener and board slots and holes register, and every aperture in the board is displayed even when the fasteners are in place. The plates 2 may be bent, cut and formed to provide practically an unlimited variety of fasteners, the same depending upon the particular structure in which they are to be employed and the ingenuity of the builder. In Figs. 25 to 42 inclusive, I have shown plates bent, cut and formed for different uses not necessary to set forth herein. The builder, however, is not confined to these few forms shown, but can readily construct or design his own. As shown in Fig. 30, a portion of the plate may either be bent back or cut off to form the corner brace, as shown in Figs. 11 or 16. In Fig. 32 the plate is shown partially cut away to form a plate 2^b, which may be bent or formed, as for example as shown in Figs. 33 and 34. A portion of the plate 2^c, which may be used where it is desired, is shown in Fig. 35, while in Figs. 36, 37 and 38 the remaining portion of the plate indicated by the character 2^d is shown in different forms for application in other ways. In Fig. 39 the same is formed into the shape of a member 2^e. In Fig. 42 the plate 2 is shown cut and bent to form a base for a column or pillar, that is, for securing the column to a base or top, etc. Another style of fastener 12 is shown in Fig. 43, this being illustrated in use in Fig. 1. While the fastener 2 shown, is the preferred form, it is, of course, obvious that any other forms may be employed, or the builder might take light tin or the like and make his own special fasteners of any size, shape, form, or the like, to complete a structure. However, any material may be used and formed up, preferably that which is of such weight that it will bend easily and yet retain its shape. The same may be colored, painted, or the like, as I further refer to. There will be some cases perhaps where rods, bolts, or the like, may be preferred to connect the parts, and when such is the case they may be readily employed with my improved structure board as required.

The perforations or slotted apertures or openings 4 and 5 in the structure not only afford a quick and convenient method of detachably securing the parts together by means of the fasteners described, but also have the additional functions of serving as an aid to fastening the covering material in place when that is constructed as illustrated in the drawings, or in an equivalent manner. In Fig. 7 I have shown the covering member 3 flanged at the sides and ends as at 14, 15, and provided with a tongue or prong 16 at each end, the tongues being separated

a distance corresponding to the distance between alternate slots 4. However, the size of the parts 3 may be as desired, and they may engage with alternate, adjacent, or any slot or slots which will register. In Fig. 8 a member 17 is shown with the flange 18 thereabout, and with a plurality of tongues 19 on the sides and ends. This particular member will engage or lock in adjacent holes or slots 4. These particular members shown in Figs. 7 and 8, may be constructed of a size and suitably colored to represent one or more bricks, stones, blocks, or the like.

In Fig. 9 a frame part 20 is shown, provided with tongues 21, this forming a very convenient covering or frame for a window opening. (See Fig. 10). Of course the size may be as desired, and if sufficiently large, may serve as a door opening frame.

In Figs. 12, 13 and 14, other forms of covering are shown, in which 23 represents a board or siding preferably flanged as at 25 on each side or edge, and on the ends (not shown) if so desired. This particular part is shown with tongues or prongs 24 on one side only. The board or member 26 shown in Fig. 13 is flanged entirely about the edges and provided with tongues 24 at the sides and ends. Member 26^a is similar except of smaller size. The sizes and shapes of the various parts may be varied, of course, as preferred. The purpose of flanging the members about the edges and ends will be further referred to, this giving a neater and more finished appearance when embodied in a structure.

The parts may be combined in various ways (not fully shown) to make wheels, pulleys, levers, etc., Fig. 15 showing a wheel made up of the structure board 1 and provided with a bearing or axle member consisting of the plate 2. The wheel may be cut round, and may, of course, be made up of any desired thickness or size of structure, and may be covered or otherwise made ornamental. While metal wheels, pulleys, and the like, can be furnished with the set, or sold separately, they may be readily constructed by the builder along the lines indicated in Fig. 15.

In completing a structure with the structure board fasteners and covering mentioned, the structure board or the framework of the building, or other article to be constructed, is cut as desired, and the parts firmly secured together by means of the fasteners 2. In this connection it may be mentioned that the slots being regularly spaced, distances or lengths may be readily measured off by counting the lines of slots, etc. This saves time and gives accurate cutting, as rules and squares, and even compasses are not needed to lay out the work.

In Fig. 1, I have illustrated a small house made up of the structure board 1, the same being secured together by the fasteners 2, arranged in various ways. I have also shown in this figure a structure board 1^a, similar to the board 1, except that the perforations 5 are omitted. This board is shown covered with bricks 3, boards similar to 26, as well as boards similar to 23. It will be noted that the boards 23 form a very neat roof and may be applied to form siding, or a tile roof effect may be obtained by using bricks on the roof similar to parts 3. I have illustrated at the under side of the edge of the roof how a board 26 may be cut down, as at 26^b, so as to fit the other parts and form a neat, attractive structure. In this connection it may be mentioned that any of the parts for covering the device may be constructed of such a material and of such weight that it may easily be cut by shears or the like, a light weight tin being found very satisfactory. I have shown in this figure a part of a fence, in which are embodied the fasteners 12, shown in Fig. 43, it being understood, however, that any other style of fasteners may be employed for the same purpose. An illustrative front of the structure shown in Fig. 1, is shown in Fig. 10. It will be noted by referring to this figure that boards similar to 23 or 26 are employed in making a door frame, a window frame 20 similar to that shown in Fig. 9 being also employed. This figure also illustrates how the fasteners 2 may be formed and employed in connection with a wire, or equivalent member 22, to form hinges for supporting the door. The bracing of the structure, as well as the securing of the parts together, is very clearly illustrated in Fig. 11 (also 17), in which members 2 may be bent or cut to form what might be termed a brace. the same securely locking the parts together at the desired angle, and bracing them. As was previously mentioned, this part may be cut in two to form two braces, or folded over so as to be clenched both ways, as indicated at the right hand side in Fig. 10.

Where it is not desired to employ the covering members previously described to cover over the structure board to improve the appearance, the structure board itself may be suitably lithographed, or otherwise printed, painted, or the like, to give an attractive appearance, or the same may be covered by lithographed paper or sheet metal, which is lithographed or painted in the form of brick, or other material, or ornamental design, each piece representing a great number of bricks, boards, or the like, etc. In Fig. 16 I have illustrated two methods of covering the structure board. Referring to this figure, the structure board 1^a is secured together by the fasteners 2, or the equivalents. On the right hand side I show the

tongues 6 covered by paper, metal, or the like 27, suitably painted or illustrated, and put on after the structure board is assembled. In this case the tongues 6 are entirely covered. On the left hand side I have shown the paper or covering 26 attached to the structure board covering holes or openings 4, except where the tongues 6 are pushed through to clench. In this case the fasteners may be painted or colored. The advantage of using a cover is that the slots or perforations in the board are completely covered, the same as if the covering members previously described were employed. These constructions are illustrated in the sectional view shown in Fig. 17. In Fig. 18 a slightly modified board is shown, in which, in addition to the slots 4 and holes or apertures 5, excess material may be removed, leaving openings or holes 9. This is, of course, true with any of the forms of structure board shown, or their equivalents. In this figure I have also illustrated a door 32. This door may be constructed by lithographing the door directly on the board, or by making a paper cover or a covering 32, similar to that shown in Fig. 20, having tongues 33 thereon, which lithographed or painted door may be secured on suitable structure board. The same may be hinged as previously described, or the tongues 33 bent to form hinges. This type of hinge is illustrated in Fig. 22, in which the board 23, for example, has the tongues 24 bent over rod or bolt 35. This is a convenient construction for window blinds or the like. If desired, a sliding door may be constructed, as for example, suitable for a barn door, by arranging a wire slide and bending the tongues over the same in a substantially similar manner. It may be mentioned that where wire is employed, or equivalent means, the same may be so bent or twisted as to reinforce and perhaps secure the parts of the structure board together. In Fig. 19 is illustrated a frame 29, lithographed as at 30 and provided with tongues 31, the same being suitable for a window. This is merely a suggestion.

The structure board herein previously described is particularly intended to be punched or cut at the factory. If desired, however, a punching tool may be included with the outfit, by means of which cardboard or the like may be employed where additional structure board is required. In Fig. 21 I have illustrated a plain board 36, which may be perforated about the edge, or as desired, as for example, as at 37, by any suitable tool. Any form of punching may, of course, be employed.

Fig. 23 is inserted to illustrate how the structure board 1, and any suitable covering 3 may be employed in connection with some of the well known building toys now on the market. I particularly refer to those toys in which towers, bridges, buildings, cars, and the like, may be constructed of bars or rods, and which when made are merely the bare skeleton or framework. My set may be used very handily with any of these for completing the structure and giving a really finished article, correctly representing the model followed. In this case 34 may represent a metal bar or the like, typical of most of those other sets. My structure board may be secured thereto by bending the tongue 6 of the fastener over or about the bars 34, or by otherwise securing the structure board shown in place.

It will be readily seen from the preceding that with my improved set, structures of various kinds and of a nature with which the child is thoroughly familiar, or which he may observe in his home vicinity, may be finished complete, and when so finished will actually resemble the subject, and not require a most vivid stretch of the imagination to guess what it represents. By means of this set he may build houses, fences or skyscrapers, railroad stations, bridges, tunnels, tanks, derricks, wind mills, etc., and can also build wagons, carts, automobiles, sleighs, merry-go-rounds, locomotives, railroad and street cars, steamboats, battleships, or other vehicles and the like. These, when completed, will each be a true likeness of the real article, and not a bare framework or skeleton. In this connection it might be mentioned that the various toys constructed may be covered with prints or pictures from advertisements, newspaper and magazine cuts and illustrations, or plain paper or other material used and painted as desired. For instance, a battleship might be constructed in every detail with the materials herein set forth, the outside covered or waterproofed by painting or placing oil cloth, canvas, tin, or the like, over the outside, making a serviceable, staunch and rigid construction, entirely and accurately modeled after an actual vessel. It is not necessary to use the particular tin covering illustrated in the drawings, as ordinary sheet tin might be employed, the fasteners 2, or the prongs thereof affording convenient places for soldering tin plates in place. While the structure board is ordinarily stiff enough for construction purposes, it may be secured to a wood or metal framework by the fasteners or by wire or the like, the apertures in the structure board being particularly convenient for the use of wire, which may be easily bent and twisted. Or a child may make a doll house complete, both exterior and interior, with partitions, furniture, dolls, etc. On the other hand a child or adult may construct waste paper baskets, boxes, picture frames, lamp shades, and many other articles that

are attractive and ornamental, useful or desirable about the home, play room, office, store, shop, or the like. Likewise the outfit may be used for commercial purposes by architects, engineers, designers, and the like, for setting up or constructing a model building, machine, article of furniture, or the like. Many other things not referred to may be constructed, it being impossible to anticipate and mention them all, as the results depend entirely upon the age and ability of the builder, his skill and inventive faculty. As before mentioned, it may be used with any of the building toys now on the market wherein skeleton frameworks may be constructed, thereby completing and making true to life and accurate, devices that may be made with those sets.

While the parts herein enumerated comprise my preferred set, or combinations of parts, additional elements, such as ornamental features or coverings, gear wheels, shafts, bolts nuts, fasteners, and the like, may be used therewith, or on the other hand only portions of my outfit may be used with equivalents for other parts of the outfit with the same or similar results.

Having thus described my invention, it is obvious that various immaterial modifications may be made in the same without departing from the spirit of my invention; hence I do not wish to be understood as limiting myself to the exact form, construction, arrangements, or combination of parts herein shown and described, or uses mentioned.

What I claim as new and desire to secure by Letters Patent is:—

1. In a toy of the kind described and in combination, a plurality of sheets of suitable material, provided with suitably disposed apertures therein, means for detachably securing said parts together, as desired, comprising a plurality of fastening members, each constructed of bendable material and having parts arranged to engage the structure board in the apertures formed therein, and covering means for said structure provided with fasteners arranged to engage in said structure board slots, and clench on the opposite side thereof.

2. A structure board of the kind described, consisting of a sheet of suitable material provided with a series of regularly disposed disconnected slots therein.

3. A structure board consisting of a sheet of suitable material of the desired thickness and size, and provided with a series of slotted apertures therethrough, extending lengthwise and transversely across the sheet.

4. A structure board consisting of a sheet of suitable material provided with a plurality of disconnected slotted apertures arranged in a series of spaced parallel lines lengthwise the sheet, with spaces between the slots in each line and a plurality of disconnected slots also arranged in series in parallel lines, and at right angles to the first mentioned slots, and in lines extending between the ends of the first mentioned slots.

5. A structure board consisting of a sheet of suitable material, said sheet substantially divided into a plurality of regular sections by a plurality of disconnected slotted apertures disposed in regular lines lengthwise and across the sheet.

6. A structure board consisting of a sheet of suitable material, said sheet substantially divided into a plurality of rectangular sections, a plurality of series of disconnected slotted apertures disposed in regular lines lengthwise and across the sheet, said sheet also provided with apertures disposed intermediate the ends of adjacent slots.

7. A fastener of the kind described, consisting of a plate of suitable size and shape, formed with a tongue at the edges thereof, and provided with suitably disposed slots therethrough.

8. A fastener of the kind described, consisting of a plate of suitable size and shape, formed with a pair of tongues at each edge thereof, and provided with suitably disposed slots therethrough, with a central aperture proximate the adjacent ends of said slots.

9. A fastener of the kind described, consisting of a rectangular shaped piece of sheet metal having a projecting tongue at each edge near each corner, and provided with a centrally disposed aperture and disconnected slots extending radially from the central aperture at substantially right angles to the sides of the plate.

10. In a toy of the kind described and in combination, a sheet metal plate provided with a central aperture, and with radially extended slotted apertures therethrough, and with tongues at the edges of the plate.

11. A cover member of the kind described, consisting of a sheet of suitable material, flanged about the edges thereof and provided with suitably disposed tongues extending from the free edges of said flanges.

12. In a toy of the kind described and in combination, a plurality of pieces of structure board, each consisting of a sheet of suitable material provided with a plurality of disconnected apertures disposed on the sheet in regular order, means for securing said sheets together, as desired, comprising a plurality of fasteners, each consisting of a sheet metal plate having extending tongues at the edges thereof, so disposed as to fit and extend through desired apertures in said structure board, and of a length to project beyond the opposite face of the board and be clenched thereat, and means for covering said structure board and fasteners, comprising a plurality of covering members, each consisting of a sheet of suitable material

formed as desired and provided with suitably disposed tongues arranged to extend through the apertures in said structure board and be clenched thereat.

13. The combination of a structure board of bendable fracturable material having a plurality of suitably disposed apertures therein, and a plurality of bendable fastening members, each provided with tongues about the edges thereof, and with apertures corresponding in arrangement with the apertures in the structure board.

In testimony whereof, I have hereunto signed my name in the presence of two subscribing witnesses.

ROBERT F. BEARDSLEY.

Witnesses:
ROY W. HILL,
CHARLES I. COBB.