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TOY BUILDING BLOCK

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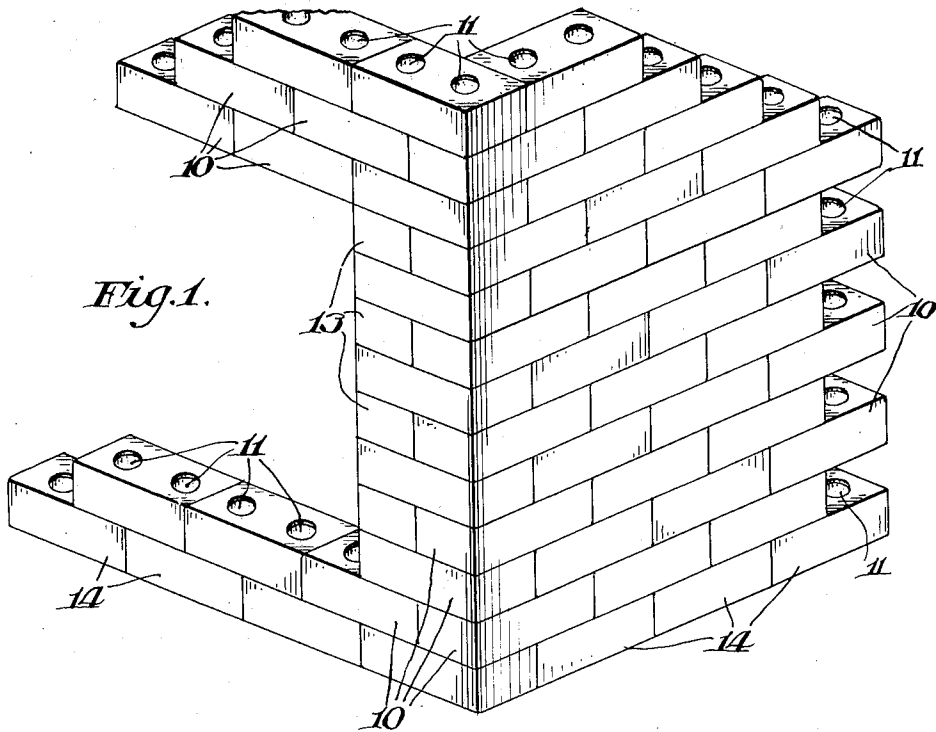


Fig. 1.

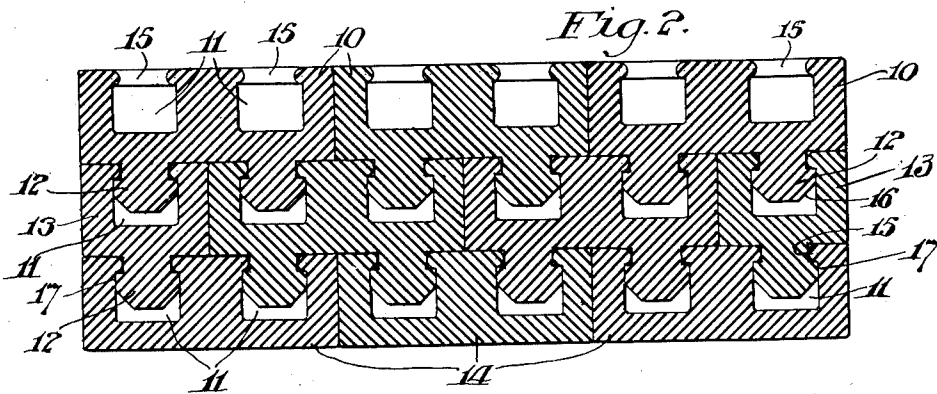


Fig. 2.

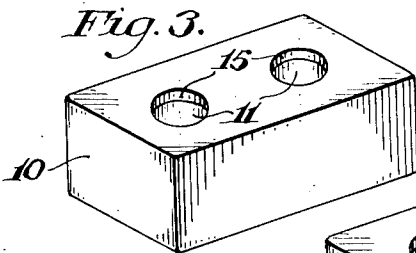


Fig. 3.

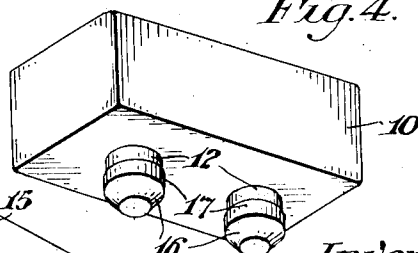


Fig. 4.

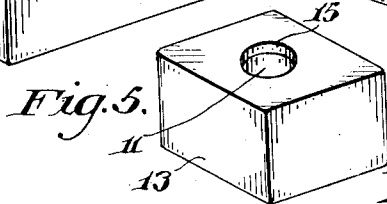


Fig. 5.

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# UNITED STATES PATENT OFFICE

1,971,545

## TOY BUILDING BLOCK

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16 Claims. (Cl. 46—35)

My invention relates to toy building blocks, that is to say, to blocks intended to be supplied in suitable numbers for the construction of miniature buildings in a variety of shapes, according to the fancy of the user.

The principal object of my invention is to provide toy building blocks which may be inexpensively made, and which, when joined to each other, will simulate walls and buildings made of brick or stone masonry.

A further object of my invention is to provide toy building blocks which are substantially indestructible, and which may be used for the construction of miniature buildings which will be quite stable, as well as pleasing in appearance.

A further object of my invention is to provide toy building blocks which are provided with means for the proper registering of the blocks in a wall or walls of a miniature building, whereby the structure may be quickly and easily made.

A further object of my invention is to provide toy building blocks which may be used in constructing miniature buildings having door and window openings of a width greater than the length of the individual blocks, the construction and arrangement being such that the blocks may be carried across the tops of said openings without requiring supporting members.

With the foregoing objects in view, my invention contemplates the provision of toy building blocks made of suitable resilient material, such as rubber, having means for separably uniting the same to each other in desired relationships, to the end that various structures of a non-collapsible character may be readily made by the users. The blocks are particularly adaptable for use by children, who are not possessed of a high degree of skill.

The nature and characteristic features of my invention will be more readily understood from the following description taken in connection with the accompanying drawing forming part hereof, in which:

Figure 1 is a perspective view of a portion of a miniature building, illustrating in operative relationship a number of blocks embodying the main features of my invention;

Fig. 2 is a longitudinal, sectional view, illustrating a number of the blocks united to each other to form a portion of a wall;

Fig. 3 is a perspective view illustrating more particularly the top of one of the main blocks;

Fig. 4 is a similar perspective view, illustrating more particularly the bottom of one of the main blocks; and

Fig. 5 is a perspective view illustrating a "half" block, used for finishing a marginal portion of the wall when the main blocks are arranged in overlapping relationship, similar to the common manner of laying ordinary bricks.

It will, of course, be understood that the description and drawing herein contained are illustrative merely, and that various changes and modifications may be made in the structure disclosed without departing from the spirit of the invention.

As shown in the drawing, each of the main blocks comprises a rectangular prism 10, made of rubber or other suitable material having similar characteristics of resiliency. The main blocks are preferably made of a length twice their width, and of a thickness somewhat more than half their width.

Each of the main blocks has circular sockets 11 in the top face thereof, and teats 12 protruding from the bottom face thereof. Each of the sockets 11 in the top face is positioned in the center of each end half of the block, and each of the teats 12 extending from the bottom face is likewise positioned in the center of each end half of the block. By this arrangement, the blocks may be positioned in overlapping relationship as shown in Figs. 1 and 2 of the drawing, and corners may be turned in the same manner as is done with ordinary bricks in building walls at right angles to each other.

Half blocks 13 are provided, so that a wall may be terminated with a straight vertical edge wherever desired.

There may also be provided a series of blocks 14, in which the teats 12 are omitted from the under faces, which may provide a base layer for starting a structure. These are illustrated in Fig. 2 of the drawing.

Each of the sockets 11 provided in the blocks is preferably shaped so as to provide an annular ridge 15 therein, adjacent the surface of the block. Each of the teats 12 is preferably formed with its end portion tapered or frusto-conical in shape, as at 16, so that a teat of one block may be guided into a socket of another block. Each of the teats 12 is also provided with an enlarged head portion 17.

In the use of the blocks, the same are arranged in any desired manner to form building structures of a wide variety of forms. When the blocks are brought together, a teat of one block is pushed into the socket of an adjoining block, and snapped into position, the resiliency of the material permitting the enlarged head of the

teat to pass beyond the ridge in the socket of another block, and thus be retained to hold the blocks together until a sufficient degree of force is exerted to separate them. When the blocks are thus united, they will be properly registered with respect to each other, and the structure formed will be quite stable, and will not readily fall apart when accidentally struck or pushed.

By the foregoing arrangement, it will be noted that the blocks are so formed that the same may be readily molded of soft rubber, or other suitable material having similar qualities of elasticity. It will be seen that after the blocks are brought together they will be maintained in their proper relationship by means of the interlocking annular ridges provided in the recesses and on the teats of the blocks. One of these annular ridges, for example the ridge 15 provided in the recess 11 adjacent the surface of the block, is preferably of a rounded contour in cross section, while the other of said ridges, which is provided by the enlargement of the head portion 17 of the teat, is preferably made with a square shoulder (see Fig. 2).

By thus making one of the ridges rounded in cross section, and the other with a square shoulder, the snapping of the teat of one block into the recess of another will be greatly facilitated. It will be observed that after the square edge of one ridge passes the center of the rounded portion of the other ridge, the square shoulder will snap past the ridge and resume its normal shape behind the same.

By locating the ridge 15, provided in the recess 11, adjacent the surface of the block, the neck portion of the teat may be made correspondingly short. Hence when the deformation takes place during the interlocking action, the neck portion of the teat will not be shortened to such an extent as to prevent the snapping of the head of the teat past the ridge of the recess, as would be the case if said neck portion were relatively long. This arrangement insures the proper engagement of the teats in the recesses, notwithstanding that the blocks are made of soft rubber or the like.

It will also be noted that the manner of securing the blocks to each other permits the carrying of the same across relatively wide openings, without additional supporting members as the blocks along the top edge of the opening will be held by means of the teat and socket engagement.

It will, of course, be understood that, if desired, various accessories may be used in connection with the blocks, such as window and door frames, roof members, and the like (not shown), it being obvious that the sockets and teats in the blocks may be used for the connection and positioning of such auxiliary devices.

It will be seen that there is thus provided a simple, durable, and inexpensive form of toy building block, which may be readily made of rubber or other suitable material having similar qualities of elasticity, which is adaptable for making structures which it would not be possible to construct with the toy building blocks heretofore available.

I claim:

1. Toy building blocks made of material having the elastic qualities of soft rubber, each of said blocks having a socket in one face thereof, and a teat extending from the opposite face thereof, the teat on one block being adapted to be positioned in and to mate snugly with the socket of

another block, said socket having a relatively thin flange substantially flush with the face of the block, and the teat having an enlarged head adapted to be readily snapped past the flange of the socket in which it is positioned whereby the blocks may be easily secured to and detached from each other.

2. Toy building blocks made of material having the elastic qualities of soft rubber, each of said blocks comprising a rectangular prism having a socket in one face thereof, and a teat extending from the opposite face thereof, the teat on one block being adapted to be positioned in and mate snugly with the socket of another block, said socket having a relatively thin flange substantially flush with the face of the block, and the teat having an enlarged head adapted to be readily snapped past the flange of the socket in which it is positioned whereby the blocks may be easily secured to and detached from each other; and the end of the teat being tapered to guide the same into the socket.

3. Toy building blocks made of material having the elastic qualities of soft rubber, each of said blocks comprising a rectangular prism having a plurality of sockets in one face thereof, and having a plurality of teats extending from the opposite face thereof, a teat on one block being adapted to be positioned in and mate snugly with a socket of another block, each of said sockets having a relatively thin flange substantially flush with the face of the block, and each of the teats having an enlarged head adapted to be readily snapped past the flange of the socket in which it is positioned whereby the blocks may be easily secured to and detached from each other.

4. Toy building blocks made of material having the elastic qualities of soft rubber, each of said blocks comprising a rectangular prism having a plurality of sockets in one face thereof, and having a plurality of teats extending from the opposite face thereof, a teat on one block being adapted to be positioned in and mate snugly with a socket of another block, each of said sockets having a relatively thin annular flange substantially flush with the face of the block, and each of the teats having an enlarged head adapted to be readily snapped past the flange of the socket in which it is positioned whereby the blocks may be easily secured to and detached from each other; and the ends of the teats being tapered to guide the same into the sockets.

5. Toy building blocks made of resilient material having the elastic qualities of soft rubber, each of said blocks having a socket in one face thereof and a teat extending from the opposite face thereof, the teat of one block being adapted to be positioned in the socket of another block, said socket having a relatively thin annular flange and the teat having a head portion provided with a flange adapted to be readily snapped past the flange of the socket in which it is positioned, one of said flanges having a rounded cross sectional contour and the other having a square edge coacting therewith.

6. Toy building blocks made of material having the elastic qualities of soft rubber, each of said blocks comprising a rectangular prism having at least one socket in one face thereof, and at least one teat extending from the opposite face thereof, said socket having a relatively thin annular flange at the face of the block, and said teat having a cylindrical neck portion, a flange forming an enlarged head, and a tapered end for guiding the teat into said socket, one of said flanges having a

- rounded cross-sectional contour and the other having a square edge coacting therewith.
7. A model and toy construction member comprising a body portion, and securing means associated with the body portion, the said securing means comprising at least one integral resilient flanged snap-locking member. 80
8. A model and toy construction member comprising a body portion, and securing means associated with the body portion, said securing means comprising flanged snap-locking members adapted to snugly mate with and engage like locking members on other units. 85
9. A model and toy construction member comprising a body portion, and securing means associated with the body portion, the said securing means comprising a flanged female die member and a flanged male die member adapted to coact therewith. 90
10. In model and toy building construction elements the improvements comprising detachable locking means having mutual snap engagement, the said locking means comprising snugly mating portions having interengaging shoulders. 95
11. In model and toy building construction elements the improvements comprising detachable locking means having mutual snap engagement, the said locking means comprising mating portions having interengaging shoulders, and at least one of the said shoulders being formed of elastic material. 100
12. In model and toy building construction elements the improvements comprising detachable locking means having mutual snap engagement, the said locking means comprising mating portions having interengaging shoulders, both of the said shoulders being formed of elastic material. 105
13. In model and toy building construction elements the improvements comprising detachable locking means having mutual snap engagement, the said locking means comprising mating portions having interengaging shoulders, both of the said shoulders being formed of elastic material such as rubber. 110
14. An improved building member for model, structural, instructional and toy-building purposes, comprising a body portion, aligned circular sockets and circular pin members disposed on opposite sides of the body, the sockets being provided with inwardly extending flanges at the surface of the body and the pins being provided with tapered collared portions, the said pins being adapted to yieldingly engage socket portions in other like members. 90
15. An improved model and toy-building element comprising a cubical member approximating a brick in general configuration, a pair of sockets formed on one face of said member and spaced equi-distant from the ends thereof, a pair of collared pin members formed opposite the said sockets on another face of the member, the said sockets and pins being respectively adapted to yieldably engage pins and sockets in other like building elements. 100
16. A novel constructional element for model, toy and instructional building purposes comprising, in combination, a body portion, locking means formed on the body portion, said locking means including a plurality of flanged sockets and a plurality of conical tapered and collared pin members, the flanges of the sockets forming yieldable shoulders adapted to provide a gripping engagement with and retain tapered and collared pin members of similar constructional elements, the said pin members having conical ends, and shoulders inwardly from the said ends and formed on circular shank members. 110
- ERNEST E. TOMPKINS. 115
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