

1,281,856.

Patented Oct. 15, 1918.

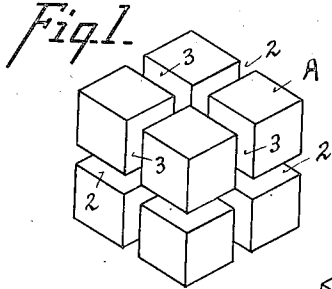


Fig. 3.

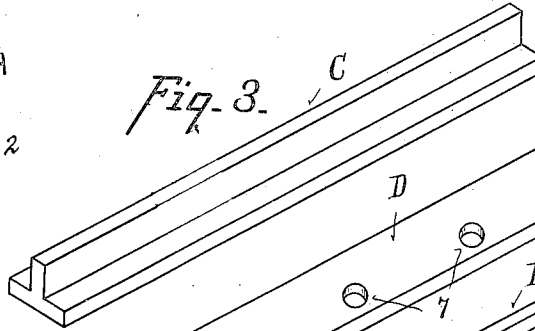


Fig. 4.

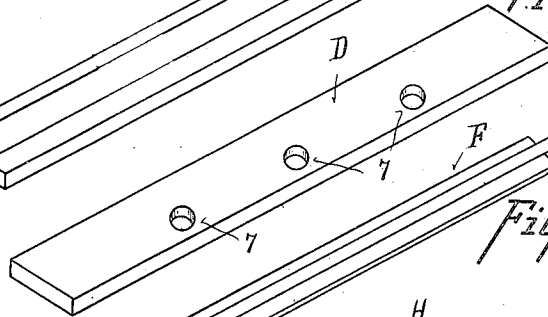


Fig. 5.

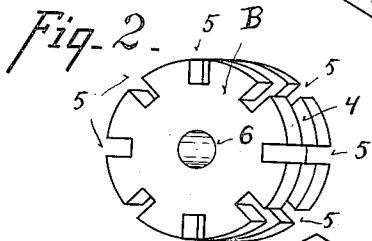
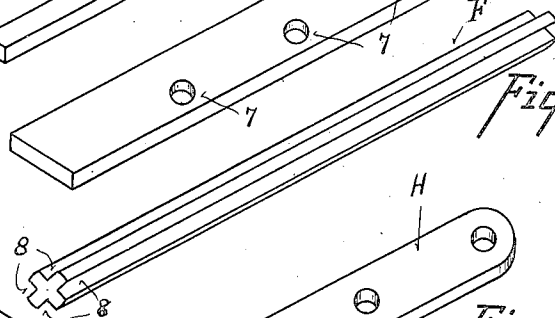


Fig. 7.

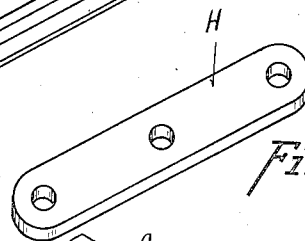


Fig. 6.

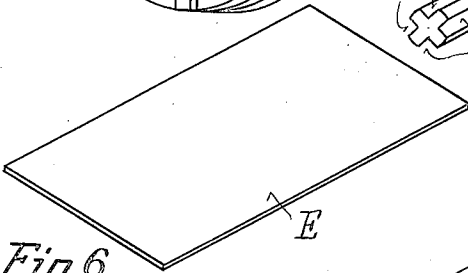
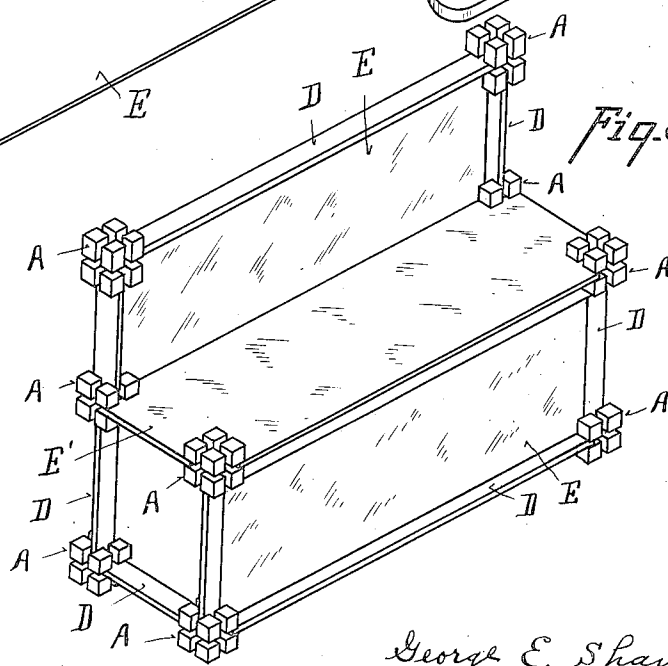


Fig. 8.



Witnesses

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UNITED STATES PATENT OFFICE.

GEORGE E. SHAW, OF CINCINNATI, OHIO, ASSIGNOR TO THE SLADE & MILLER COMPANY,
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TOY BLOCKS.

1,281,856.

Specification of Letters Patent.

Patented Oct. 15, 1918.

Application filed January 24, 1916. Serial No. 73,883.

To all whom it may concern:

Be it known that I, GEORGE E. SHAW, a citizen of the United States, residing at Cincinnati, in the county of Hamilton and State of Ohio, have invented certain new and useful Improvements in Toy Blocks, of which the following is a specification.

My invention relates to improvements in toy blocks. One of its objects is to provide a set of toy blocks, with which various structures and mechanisms may be erected. Another object is to provide a set of toy blocks for the aforesaid purpose in which the forms are simple and readily produced and the number of forms required is few for a wide range of structures. Another object is to provide toy blocks, which when assembled provide grooves or recesses to receive rectangular sheets of cardboard or similar substance, thereby enabling the openings in the frame or skeleton of the structure to be closed. Another object is to provide for the construction of structures in which rotary shafts may be mounted close together and at right angles to each other. Another object is to provide a block to enter with the other blocks into frame structures and to enter with grooved shafts as either tight or loose pulleys into movable mechanical structures. My invention also comprises certain details of form, combination and arrangement, all of which will be fully set forth in the description of the accompanying drawings in which:

Figure 1 represents in perspective a block or element of cubical outline.

Fig. 2 represents in perspective a block or element of cylindrical outline.

Fig. 3 represents in perspective an element of T-beam outline.

Fig. 4 represents in perspective a block or element of elongated rectangular outline with a series of perforations.

Fig. 5 represents in perspective a block or element of grooved cylindrical outline.

Fig. 6 represents in perspective a thin block or element of rectangular outline.

Fig. 7 represents in perspective a block or element of elongated outline provided with perforations.

Fig. 8 represents in perspective one of a multiplicity of structures to be formed by the assembly of said elements.

The accompanying drawings represent the preferred embodiment of my invention, in

which Figs. 1 to 7 represent the blocks or elements there being several of each type provided to constitute a set of blocks. The greater the number of blocks of the respective types the larger and more complicated the structure capable of being erected therewith.

As illustrated in Fig. 1 the blocks A are of cubical outline and have cross grooves 2 and 3 of equal width in each face, the depth of the grooves being preferably slightly greater than their width. The blocks A serve as corners for stationary frame-works and for other purposes.

The blocks B are of cylindrical outline with a medial annular groove 4, a series of longitudinal grooves 5, and a central longitudinal perforation 6. The grooves 4 and 5 are of the same width as the grooves 2 and 3.

The elongated blocks C are T-shaped in cross section and their cross-section and thickness is such as to enable them to fit snugly endwise at each end into both grooves 2 and 3 of either face of blocks A or to fit endwise into the groove 4 and any one of grooves 5 of blocks B so as to produce a rigid stationary frame of practically any desired outline.

The blocks D are adapted to fit snugly at either or both ends into any of the grooves 2 and 3 of blocks A and into any portion of groove 4 or any of the grooves 5 of blocks B. Blocks D are also provided with a series of perforations 7 which are adapted to receive and form journal boxes for any desired number of rotatable shafts. Perforations 7 are preferably at one side of the medial line of blocks D so that by reversing the positions of the blocks D at the ends and sides of a frame-work shafts may cross each other close together without contact or interference.

Blocks E may be provided with the other blocks, and are preferably of cardboard. They may also be cut from time to time as desired from sheets of cardboard or similar substance. Those portions of the grooves in blocks A and B not occupied by the ends of the blocks C and D in forming the frame-work provide recesses to retain the panel blocks E in place, and into which such blocks E may readily spring to form the tops and panels and plane faces of furniture, houses, and machines.

The blocks F are of elongated cylindrical

outline with longitudinal grooves 8, and may be of different lengths. Blocks F fit loosely, or rotatably in the bores 6 of blocks B, and in the perforations of blocks D and H. Blocks B and H may be rigidly attached at any point along the blocks F by inserting a wooden key or wedge in one of its grooves 8.

Blocks of the type H are adapted to be employed as either short or long crank arms or walking beams by inserting a shaft through one or more of its perforations 9 and allowing the shaft to rotate therein, or keying the two together as may be required.

A series of blocks B and C may be united to form a drum of which two blocks B are the heads, and a series of blocks B and D may be united to form a drum or paddle wheel. Also a block E may be bent to encircle two or more blocks B to form a smooth faced cylinder or drum. The annular-groove in the blocks B when mounted upon shafts as tight or loose pulleys, serve as recesses to retain the driving belts in place thereon. The number of stationary and movable objects capable of being produced by uniting and assembling said blocks is almost limitless, and the assembled structures have great strength and rigidity, and the appearance of permanent structures. The blocks except E are preferably constructed of wood, being thus readily constructed at low cost, and serving to unite so as to retain their assembled positions.

In a portion of the blocks D the perforations may be omitted, if desired as indicated in Fig. 8. In Fig. 8 the block E' forming the seat has its corners clipped away so that its ends and front edge may come flush with the outer face of blocks A.

The blocks C, D, E and F are preferably provided in series of different lengths, say in lengths of one, three, six and twelve inches.

The blocks herein illustrated and described are capable of considerable modification without departing from the principle of my invention.

Having described my invention, what I claim is:

1. In combination a plurality of toy blocks of cubical outline with recesses crossing each other on each face thereof, and

elongated blocks to engage endwise in said recesses.

2. In combination a plurality of toy blocks each having six faces at right angles to each other with recesses crossing each other in each face thereof, and elongated blocks to engage endwise in said recesses.

3. In toy building blocks, the combination with elongated rectangular sticks of connecting means therefor comprising a rectangular block having a plurality of intersecting grooves in each face thereof adapted to grip the edges of the sticks.

4. In toy building blocks, the combination with elongated rectangular sticks of connecting means therefor comprising a rectangular block having a plurality of grooves extending entirely around the block and intersecting on each face thereof, and adapted to grip the edges of the sticks.

5. In toy building blocks, the combination with elongated rectangular sticks of a connecting block therefor having a pair of plain faces on opposite sides thereof, a circular groove encircling the block intermediate of the plain faces and adapted to grip the edges of the sticks, a plurality of grooves extending from plain face to plain face and intersecting the encircling groove, and adapted to grip the edges of the sticks, and a central orifice for an axle member extending between the plain faces of the block.

6. In toy building blocks the combination of elongated block members having a plurality of longitudinal angularly related flanges and a connecting block therefor having a plurality of intersecting grooves adapted to grip the edges of the flanges.

7. In toy building blocks the combination with a connecting member having a plurality of intersecting grooves, and a central orifice for an axle member of an elongated axle member therefor having a plurality of longitudinal angularly related flanges adapted to engage in the grooves of the connecting member.

In testimony whereof I have affixed my signature in the presence of two witnesses.
GEORGE E. SHAW.

Witnesses:

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