Nov. 17, 1936. C. T. DRUMPELMANN 2,061,510

CONSTRUCTION TOY

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Fig. 1.

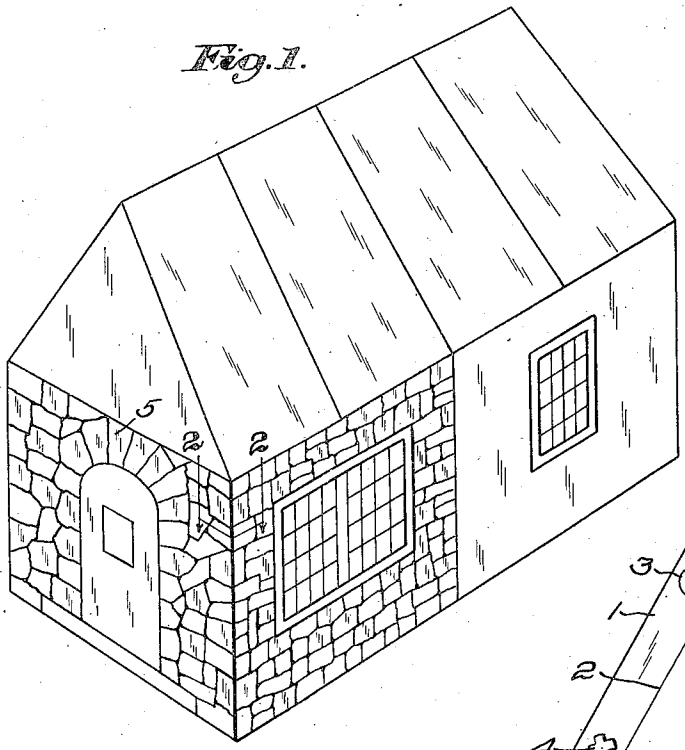


Fig. 2.

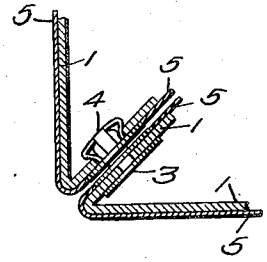


Fig. 4.

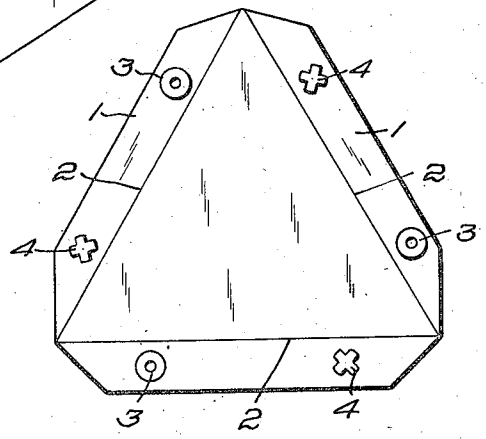


Fig. 3.

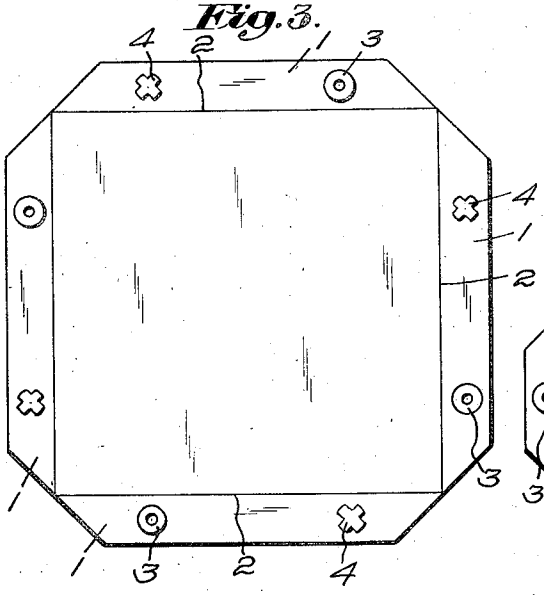
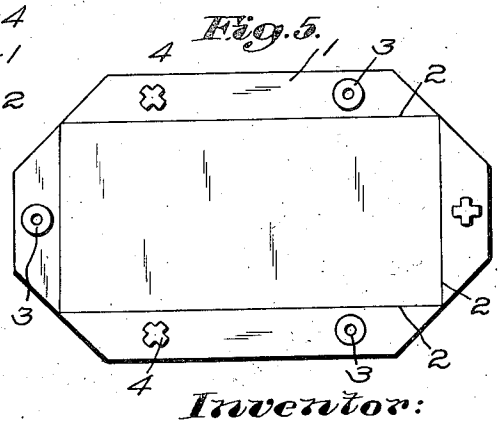


Fig. 5.



Inventor:
Carlton T. Drumpelmann
by Walter S. Jones
Atty.

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Fig. 6.

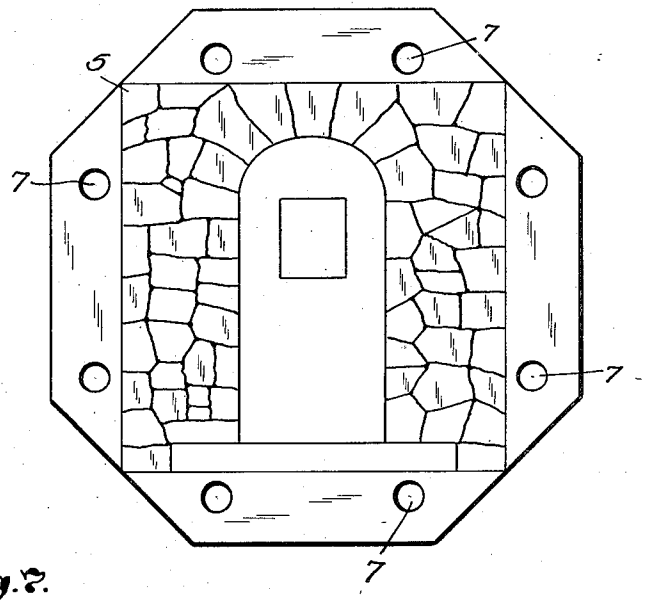


Fig. 7.

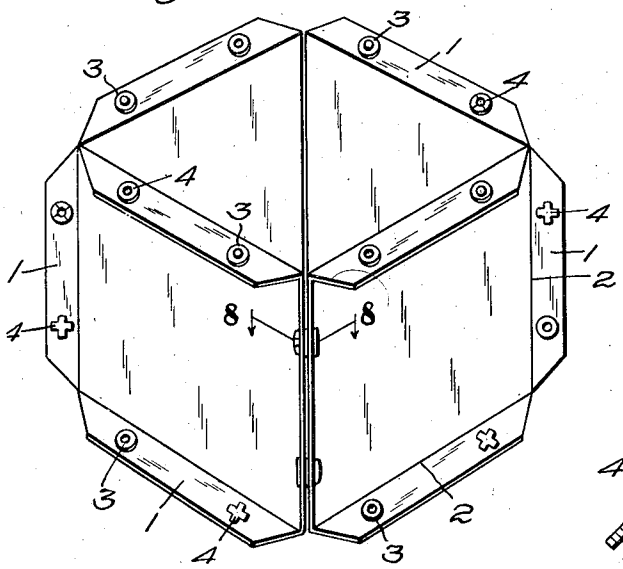
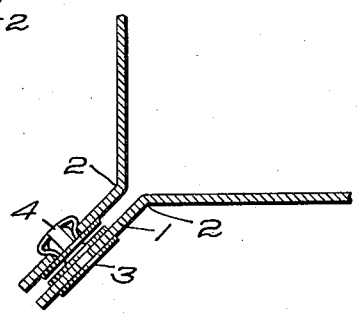


Fig. 8.



Inventor:
Carlton T. Drumpelmann
by Walter I. Jones
Atty.

Patented Nov. 17, 1936 2,061,510

UNITED STATES PATENT OFFICE

2,061,510

CONSTRUCTION TOY

Carlton T. Drumpelmann, Wellesley Hills, Mass., assignor to United-Carr Fastener Corporation, Cambridge, Mass., a corporation of Massachusetts

Application November 16, 1934, Serial No. 753,325

5 Claims. (Cl. 46—21)

My invention relates to a novel construction toy having a plurality of units with which various structures may be made.

In the drawings, which illustrate a preferred form of my invention:—

Figure 1 is a house constructed with a number of my novel units;

Fig. 2 is a section on the line 2—2 of Fig. 1, showing one way in which the units may be fastened together;

Fig. 3 is a plan view of one shape in which the panels may be made;

Fig. 4 is a plan view of a triangular panel;

Fig. 5 is a rectangular panel;

Fig. 6 is a plan view of an auxiliary panel or cover;

Fig. 7 is a perspective view of a structure formed from several panels; and

Fig. 8 is a section on the line 8—8 of Fig. 7, showing an alternative method of fastening the panels together.

One object of my invention is to provide a construction toy which may be used successfully by children too young to manage nuts and bolts, such as are commonly used in construction sets.

Another object of my invention is to provide a toy whose component parts are harmless in themselves, presenting no rough or sharp edges to cut fingers or to scratch furniture.

A still further object of my invention is to provide a toy which may be taken apart more easily than it is put together, since it has been my observation that interest in toys of this type generally wanes on completion of some building, it being very difficult and uninteresting to unfasten a number of nuts and bolts.

The units or panels of the set may take several forms, three of which I have shown in Figs. 3, 4 and 5. The particular panels shown are cut from relatively rigid cardboard or like material. Each panel has a main portion and a flange 1 along each side thereof. The flanges are made bendable by creasing the material at 2. If cardboard is used, this crease must be just deep enough to allow the flange to bend relative to the panel without cracking the material, since a certain amount of rigidity is necessary to hold the panels in correct relative position. The ends of the flanges 1 are cut at an angle (Figs. 3–5) so that all the flanges may bend freely in any direction without interfering with one another.

To illustrate one of several ways in which the panels may be fastened together by fasteners other than bolts, I have used stud members 3 and socket members 4, located at intervals on the flanges. Any stud will cooperate with any socket and the studs and sockets are preferably arranged in alternating series around any given panel, as shown in Figs. 3 through 5. The distance between the centers of the fastener members on any flange must obviously be equal to the interval between the fasteners on every other flange, otherwise universal cooperation would not be possible. By using the alternating arrangement, as shown, any panel may be attached to any other panel, regardless of shape, in any position.

In order to add a more realistic appearance to the finished structures, I have provided auxiliary panels or covers 5 adapted to fit over the main panels illustrated in Figs. 3 to 5. One of these auxiliary covers is shown in Fig. 6, adapted to be used in connection with the square panel shown in Fig. 3. These panels 5 are preferably made from flexible paper or like material and may be printed with any suitable design such for instance as representing the outside of a house or other building. It is at times desirable to use a heavier paper for these covers so that they may be printed with two different designs, one on each side. This materially increases the usefulness of each cover, inasmuch as the same cover can be used to represent two different kinds of building material, depending upon the choice of the user. The flanges of these auxiliary panels are provided with apertures 7 through which the fastener members 3 and 4 may be passed (Fig. 2). These extra panels add greatly to the versatility of any one set of main panels, inasmuch as they may be printed to represent shingles, bricks, clapboards, and all the various materials used in buildings, boats, bridges, towers and other structures.

The nature of the fasteners used is such that they may be separated very easily, which, as pointed out above, is a great advantage over nut and bolt assemblies. The materials from which the panels and auxiliary panels are made lend themselves readily to cutting and printing, and furthermore present no rough edges or sharp corners. With a very limited assortment of panels, it is possible to design and build a relatively large number of different structures, and with the use of variously designed auxiliary panels it is possible to vary the outward appearance of the same basic structure.

It should be understood that I claim protection on the novelty of the panels and/or covers ir-

respective of the type of fastening elements used to secure them and therefore, while I have illustrated and described a preferred form of my invention, I do not wish to be limited thereby, since the scope of my invention is best defined by the following claims.

I claim:—

1. A construction toy comprising a plurality of relatively rigid panels having straight sides, each panel having a bendable flange along each side thereof, each flange being provided with snap fastener members adapted to cooperate with like fastener members on another of said panels, a plurality of flexible covering members corresponding in shape and size to said panels and each of said covers being adapted to cover one face and the flanges of one panel, and each of said covers having means for the securing thereof to a panel while said panels are being used in a structure.

2. A construction toy comprising a plurality of relatively rigid panels, each panel having a bendable flange along each side thereof and a plurality of snap fastener members attached to each flange and adapted to cooperate with the snap fastener members on other flanges, a plurality of flexible covering members colored to represent building materials and the like, each of said covers being adapted to cover a face and the flanges of one of said panels, and each of said covers having apertures therethrough in alignment with the snap fastener members on the panel to which it is to be attached whereby, when several panels are connected to form a structure, said covers may be secured to said panels by passing the snap fastener members through said apertures.

3. A construction toy structure comprising a plurality of predetermined shaped panels of suitable material, bendable flanges at the edges of each panel for cooperative face-to-face arrangement and fastening members securing together the cooperating flanges of the panels, and covers attached to at least some of said panels only by the fastening members for the purposes illustrated and described.

4. A construction toy structure comprising a plurality of predetermined shaped panels for suitable material, bendable flanges at the edges of each panel for cooperative face-to-face arrangement, fastening members securing together the cooperating flanges of the panels, and covers for at least some of said panels for the purposes illustrated and described, said covers having bendable flanges cooperating with the flanges of the panels to hold the covers in place.

5. A construction toy structure comprising a plurality of predetermined shaped panels of suitable material, some of which are of different shape than others, bendable flanges at the edges of each panel for cooperative face-to-face arrangement and cooperating male and female fastening members on said flanges securing together the cooperating flanges of the panels, there being more than one fastener element on at least one bendable flange, said fastening members being arranged so that the male and female members alternate on a given panel for the purposes described.

CARLTON T. DRUMPELMANN.