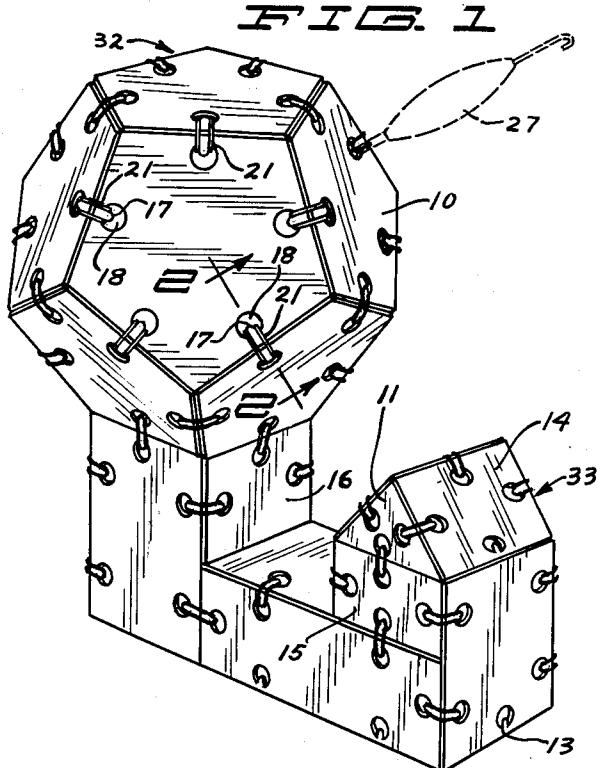


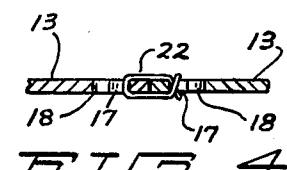
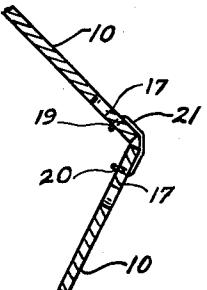
Feb. 4, 1964

N. E. BESSINGER  
CONSTRUCTION TOY COMPRISING PANELS OF SHEET  
FORM CONNECTIBLE BY ELASTIC BANDS  
Filed Sept. 19, 1961

3,120,078



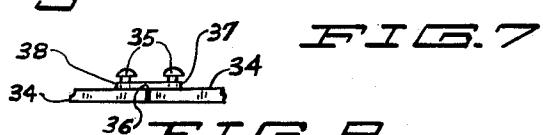
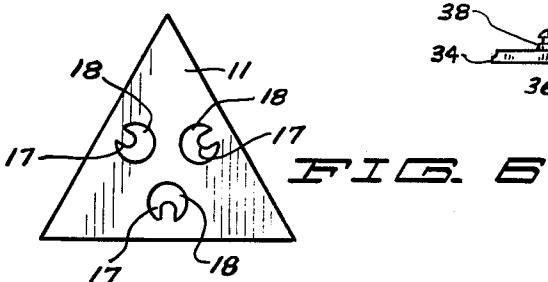
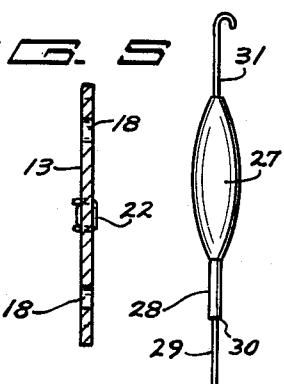
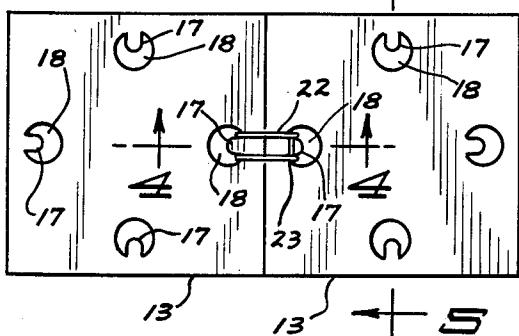
**FIG. 2**



**FIG. 3**

+ 5

**FIG. 5**



**FIG. 8**

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## 1

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### CONSTRUCTION TOY COMPRISING PANELS OF SHEET FORM CONNECTIBLE BY ELASTIC BANDS

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4 Claims. (Cl. 46—31)

The present invention has relation to a construction toy and more particularly to a toy which comprises a plurality of flat construction panels that are made in a variety of peripheral shapes and can be joined together with a unique fastening device to form three dimensional structural models.

The construction toy, in a first form shown, discloses a series of substantially flat panels that are made in various peripheral shapes and sizes and that can be joined together to form actual or abstract three dimensional objects. To join the panels together, there are pegs provided adjacent the edges of each of the panels.

The pegs are co-planar with the panel and have an open area surrounding them. When two panels are to be joined together the panels are placed in adjacent relationship and an elastic band is looped over one of the pegs of one of the panels and is then looped over an aligning adjacent peg on the second panel. The elastic band is of dimension so that it is under tension when it is looped over the pegs of the second panel and thus will tend to hold the panels firmly together.

In alternate form, the panels have integral pegs extending at substantially right angles to the planes of the panels.

By utilizing a number of different panels in various shapes the construction of realistic structures as well as abstract and fanciful structures is possible. The utilization of the panels supplied in the construction toy kit is limited only by the imagination of the user.

To simplify hooking the elastic bands over their pegs, a special tool may be utilized. The tool has a hook at one end which can be used to pull the elastic bands through the openings for the pegs and the other end has a shank with a shoulder on it which can be used to push the band through the openings and over the pegs.

It is an object of the present invention to present a construction toy kit having a plurality of panels and utilizing a novel method of joining the panels together in order to permit construction of a wide variety of structural shapes.

In the drawings,

FIG. 1 is a perspective view of a model radar station which illustrates one object that can be made with the construction toy kit of the invention;

FIG. 2 is a fragmentary enlarged sectional view taken as on line 2—2 in FIG. 1;

FIG. 3 is a top plan view of a second form of the invention showing two panels of the construction toy joined together to form a flat surface;

FIG. 4 is a sectional view taken as on line 4—4 in FIG. 3;

FIG. 5 is a sectional view taken as on line 5—5 in FIG. 3;

FIG. 6 is a top plan view of a triangular shaped panel that can be employed in the construction toy of the invention;

FIG. 7 is a side elevational view of a tool used to aid in assembling structures from the construction panels; and

FIG. 8 is a fragmentary side elevational view of a third form of the invention.

Referring to a first form of the invention and the numerals of reference thereon, a construction toy kit includes a plurality of substantially flat panels of various peripheral shapes, for example a pentagon 10, a triangle

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11, a square 13, or various sizes of rectangles such as those illustrated by 14, 15 and 16.

Each of the panels is provided with a plurality of attachment pegs or tabs 17 that are integral with the block 5 with which they are associated and have a clearance hole or aperture 18 surrounding them. The pegs 17 are each co-planar with their associated panel. To join two panels together, an elastic band 21, which is formed in a continuous loop, is looped over one of the pegs 17 and extended across the edge portion of the panel and is then looped over a corresponding peg 17 on an adjacent panel. The distance between the pegs is such that the elastic band 21 must be stretched and under tension when it is looped over adjacent pegs. Thus the tension in the band 21 tends to draw the two panels together and hold them snugly and firmly. The elastic bands 21 stretch so that adjacent panels can be positioned at any desired angle. A variety of structural shapes may be made using the band 21 for joining the panels together.

20 The elastic bands can be fixedly attached to one of the pegs 17, as at 20, in FIG. 2 and stretched to be looped over a second peg as at 19. In this way the elastic bands will not become lost.

A second form of the invention is illustrated in FIGS. 25 3, 4 and 5. This joint may be used where two panels are to be joined together to form a single plane. A band 22, which is of elastic material and is longer than the elastic band 21 is used. This band is shown in FIG. 3 and is shown joining two square panels 13, 13 together. The band is looped over a peg 17 of a first panel, as at 23, and is passed over the edge portion of this panel and is slipped over a second peg 17 in a second of the panels 13. The band 22 is then extended on the opposite side of the panels back to the first of the pegs 17, and is fastened over the first peg 17. The band 22 is of dimension so that it must be stretched to reach around these two pegs and, as shown in FIGS. 3 and 4, the pull from the elastic band 22 will be substantially equal on both the top and bottom surfaces of the two panels and thus they will tend to remain in a single plane.

30 In FIG. 8 of the drawings a third form of the invention is shown. A pair of panels 34, 34, which are of substantially the same outer configuration as the panels in the first and second forms of the invention, are in contiguous relationship and each is provided with a plurality of integral upright pegs 35. An elastic band 36 is fixedly attached as at 37 to a peg 35 on a first of the panels and is looped over a corresponding peg 35 of a second of the panels, as at 38. The elastic band has to be stretched 45 to be looped over the second peg and thus is under tension and draws the panels together. In this form of the invention the elastic bands could also be loose and looped over both of the pegs if desired. The pegs 35 extend at substantially right angles to the plane of the panels. A plurality of pegs are provided adjacent the peripheral edges of the panels as in the other forms of the invention. Panels using upright pegs can be used to construct a variety of shapes also.

40 In FIG. 7 a tool 27 for aiding in positioning the elastic bands is shown. The tool consists of a handle portion with a shank 28 integral therewith. The shank 28 has an end portion 29 that is of smaller diameter than the shank 28 and a shoulder 30 is formed at their junction point. A hook 31 is integral at a second end of the handle portion of tool 27 and is constructed so it may be hooked onto one of the elastic bands and pull it through its associated opening 18 so that it can be looped over the peg.

50 The end portion 29 of the shank 28 may be used also for inserting the elastic bands through the clearance holes 18 over the pegs 17. The elastic band will ride over the end portion 29 and strike the shoulder 30. Thus the

shoulder may be used to push the band through the clearance hole and over the peg to assemble the panels.

One of the types of structures that can be constructed with the panels is shown in FIG. 1. A simulated radar station has a dome 32 that is constructed of a plurality of five-sided or pentagon panels 10 all joined together with elastic bands 21. A base portion may consist of rectangular or square panels joined onto the dome portion and a block house 33 can be made of rectangular panels with a triangular panel 11 forming the gable for the roof. The elastic bands 21 will stretch so that the included angle between the adjoining pieces can be any desired magnitude. In addition to structures such as these, abstract items can be constructed; balls, space vehicles, or practically any other type of structure can be made. The elastic bands looped over the pegs permit easy rapid assembly and securely hold the pieces together so that they do not fall apart.

What is claimed is:

1. A toy construction kit comprising a plurality of substantially flat panel members having various peripheral shapes, each panel being provided with a plurality of apertures therethrough adjacent the peripheral edges thereof, a separate peg extending into each of said apertures, said pegs being co-planar and integral with their respective associated panel members, and a plurality of continuous elastic bands each adapted to be removably attached to one of said pegs on one of said panel members and extended to be removably attached to a corresponding peg on an adjacent panel member to hold adjacent panels contiguous to each other to form a three dimensional structure in their assembled state.

2. A construction toy of the assembly type comprising at least two independent substantially flat construction panels, at least a first of said independent construction panels having at least one aperture therethrough, a peg co-planar with said first panel extending into said aperture and being integral with said first panel, and a continuous elastic band operably associated with a second of said construction panels and adapted to be passed through said aperture and looped over said peg, said elastic band being of dimension to be under tension when in place over said peg and said panels are contiguous.

3. A toy of the assembly type comprising a plurality of substantially flat panels of predetermined peripheral shapes, said panels each being provided with a plurality of apertures therethrough adjacent the edges thereof, a separate peg extending into each of said apertures and being substantially co-planar and integral with the panel with which it is associated, and connecting means adapted to be connected between adjacent construction panels comprising a continuous elastic band adapted to be removably attached to a peg of a first of said adjacent panels and extended to be removably attached to a corresponding peg of a second of said adjacent panels whereby said elastic band is under tension when in place on said pegs and said adjacent panels are contiguous.

4. A toy construction kit comprising a plurality of substantially flat panel members having triangular, rectangular, and pentagonal peripheral shapes, each of said flat panel members being provided with a separate aperture adjacent each edge of the respective members, a separate peg extending into each of said apertures, said pegs being co-planar and integral with their respective associated panel members, and a plurality of elastic bands adapted to be removably attached to one of said pegs on one of said panel members and extended to be removably attached to the corresponding peg on an adjacent panel member whereby said elastic band is under tension to hold the edges of adjacent panel members contiguous to each other.

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