United States Patent

[11] **3,577,673**

[72] Inventor **Ottorino Monestier**
Via Abbondio Sangiorgio 12, Induno Olona, Italy

[21] Appl. No. **793,787**
[22] Filed **Jan. 24, 1969**
[45] Patented **May 4, 1971**
[32] Priority **Jan. 31, 1968**
[33] **Italy**
[31] **12245/68**

[54] **BLOCK ELEMENTS OF VARIABLE ANGULAR FORM**
2 Claims, 4 Drawing Figs.

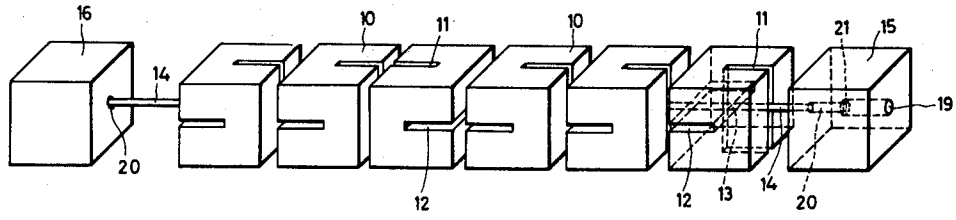
[52] **U.S. Cl.** **46/24,** 46/16
[51] **Int. Cl.** **A63h 33/06**
[50] **Field of Search** 46/24, 25, 26, 16, 17

[56] **References Cited**
UNITED STATES PATENTS

956,632	5/1910	Finch	46/26
2,825,178	3/1958	Hawkins	46/26
3,367,063	2/1968	Bondesen et al.	46/26

Primary Examiner—F. Barry Shay

ABSTRACT: A dismemberable toy is disclosed, which comprises geometric solid elements, preferably cubic elements, having slotted faces defining a through-hole and adapted to afford a passageway for a threadlike resilient connection element to be fastened to the solids which form the ends of the assembly.



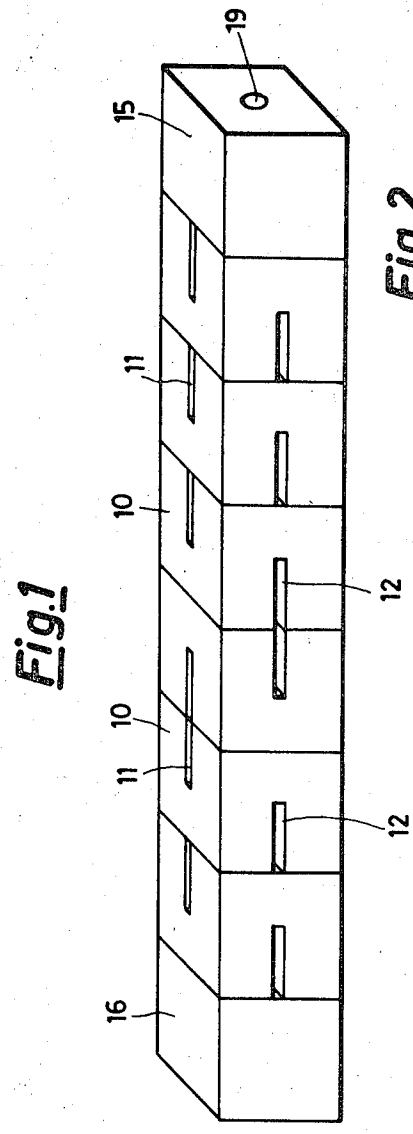


Fig.1

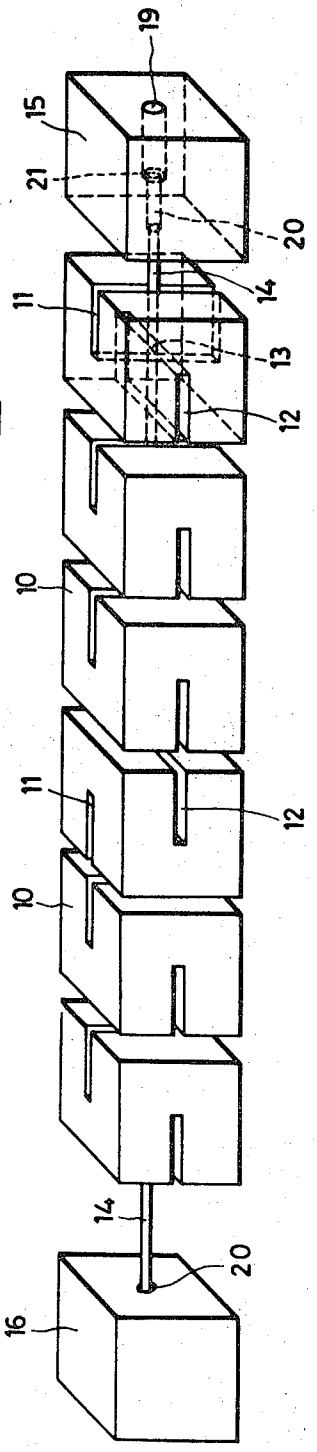


Fig.2

INVENTOR
OTTORINO MONESTIER

BY Stevens, Davis, Miller & Mosher

ATTORNEYS

Fig.3

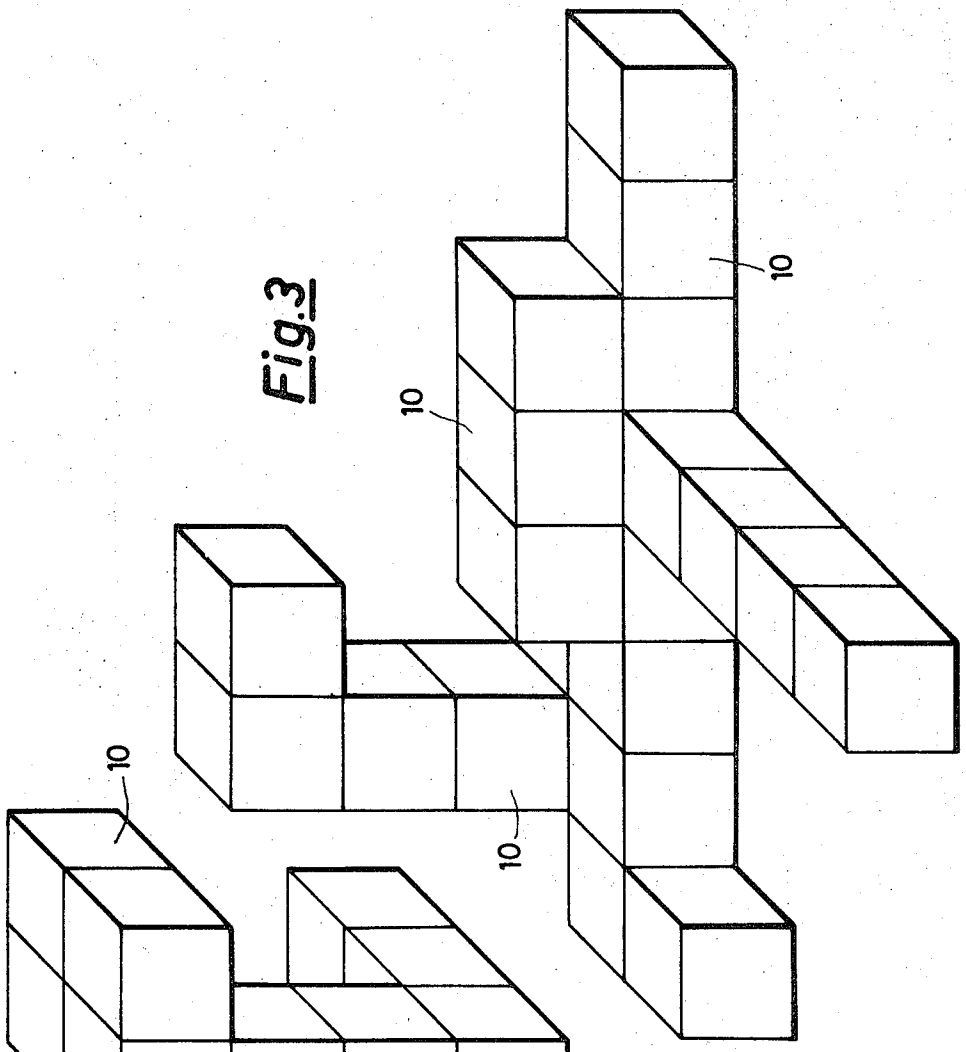


Fig.4

INVENTOR
OTTORINO MONESTIER

BY Stevens, Davis, Miller & Mosher

ATTORNEYS

BLOCK ELEMENTS OF VARIABLE ANGULAR FORM

This invention relates to an assembly of geometric solids, for example, cubes, resiliently connected to one another so as to be oriented mutually in such a way as to form constructional compositions of various shape to be used as toys.

The assembly according to the present invention is characterized in that it comprises at least two geometric solids connected to one another in a mutually orientable manner, each of these solids having at least two slots along planes which are substantially perpendicular to one another, said slots being extended towards the interior of each solid so as to define a through-hole, and a longitudinally deformable member passed through said hole of each of said solids and anchored under tension to the end solids so as to keep the whole assembly resiliently connected.

More exactly, the present invention is characterized in that said geometric solids are substantially cubic, said resilient member is an elastic string affixed under a tension to the end solids, and said slots are formed along two planes perpendicular to one another and to two opposite side faces of said cubes.

The description will now be given, by way of example and without limitation, of a preferred embodiment of the subject invention, reference being had to the accompanying drawings, wherein:

FIG. **1** is a perspective view of an assembly of cubic geometric solids united by an elastic string under tension.

FIG. **2** is a view similar to FIG. **1**, but with the string slackened.

FIGS. **3** and **4** are perspective views of two possible constructional combinations which can be obtained with a single assembly, or by the union of two or more such assemblies.

The assembly according to the present invention consists of a plurality of geometric solids **10**, for example cubic, made of wood or a plastic material.

On two of the opposite side faces of the cubes **10** are formed two slots **11—12**, along two planes which are substantially perpendicular to one another and also to two opposite lateral surfaces of the solid; the slots are formed towards the interior of the solid down to such a depth that, by intersecting one another, they define a hole **13**. As clearly illustrated in FIGS. **1** and **2**, a plurality of cubes structurally so formed is assembled by means of an elastic string **14** passed through each hole **13**, and the tensioned string is affixed to the two end cubes which

can be the same as the ones which form the assembly, or can be also formed in the following manner.

The end cubes **15—16** shown in FIG. **2** have a hole **19** which coincides with the central axis of said cubes. The hole **19** has an adjacent hole **20** communicating therewith and coaxially arranged but having a lesser diameter so as to form a ledge **21** for engaging the end of the knot of the resilient string **14** when the latter is tensioned. It can be clearly seen in FIGS. **1** and **2** that each solid can be arranged at leisure on three different side faces of the adjacent solid to which it is connected, inasmuch as there is the possibility of making a 180° shift. As a matter of fact, the resiliency of the string **14** and its possibility of movement through the slots formed in each solid permit these mutual displacements.

Such an embodiment is an attractive toy which permits a number of constructional combinations with a single assembly and by pairing two or more of such assemblies.

Of course, and merely by way of example, a cube has been suggested as the geometric solid, without, however, implying any limitation to the scope of the invention, the latter being susceptible of being applied to a wide range of geometric solid forms.

I claim:

1. A toy formed by an assembly of geometric solids comprising a series of at least two substantially cubic elements, said series including opposed end elements, a slot formed at least two opposite faces of each of said cubic elements perpendicular to an edge thereof, said slots lying in planes which are substantially perpendicular to one another and having a depth not less than half the length of a side of said cubic element to intersect and together define a through-hole, and a resiliently deformably member passing longitudinally through the hole of each cubic element and secured under tension to the end elements thereby keeping the whole assembly resiliently united, said slots being of a size to furnish a passage for said deformable member whereby said elements can be positioned in a plurality of stable arrangements.

2. A toy according to claim **1**, said end elements being of substantially cubic shape and having an axial hole passing therethrough, said hole having a portion of reduced diameter forming a step, said resiliently deformable member being an elastic string with an enlarged portion resting against said step under tension.