United States Patent [19]

Madey

[11] **3,853,074**

[45] **Dec. 10, 1974**

[54] **STRUCTURE FOR SUPPORTING ARTICLES FOR DISPLAY PURPOSES**

[75] Inventor: **Marion J. Madey**, Park Ridge, Ill.

[73] Assignee: **Poster Products, Inc.**, Chicago, Ill.

[22] Filed: **Mar. 7, 1973**

[21] Appl. No.: **338,929**

Related U.S. Application Data

[63] Continuation of Ser. No. 127,613, March 24, 1971, abandoned.

[52] **U.S. Cl.** **108/101**, 108/106, 108/111, 211/182

[51] **Int. Cl.** **A47b 57/06**

[58] **Field of Search** ..... 108/101, 105, 95, 96, 141, 108/106; 248/405, 354 S; 211/166, 182, 175; 403/171, 176, 172, 173, 118

[56] **References Cited**

UNITED STATES PATENTS

275,027	4/1883	Drake	108/106
467,628	1/1892	Menefee	211/166
1,033,630	7/1912	Sowers	211/182
1,265,373	5/1918	Philip	211/182
2,546,979	4/1951	Cozzone	403/173
2,609,638	9/1952	Lindenmeyer	403/174
2,954,250	9/1960	Wing	211/182

FOREIGN PATENTS OR APPLICATIONS

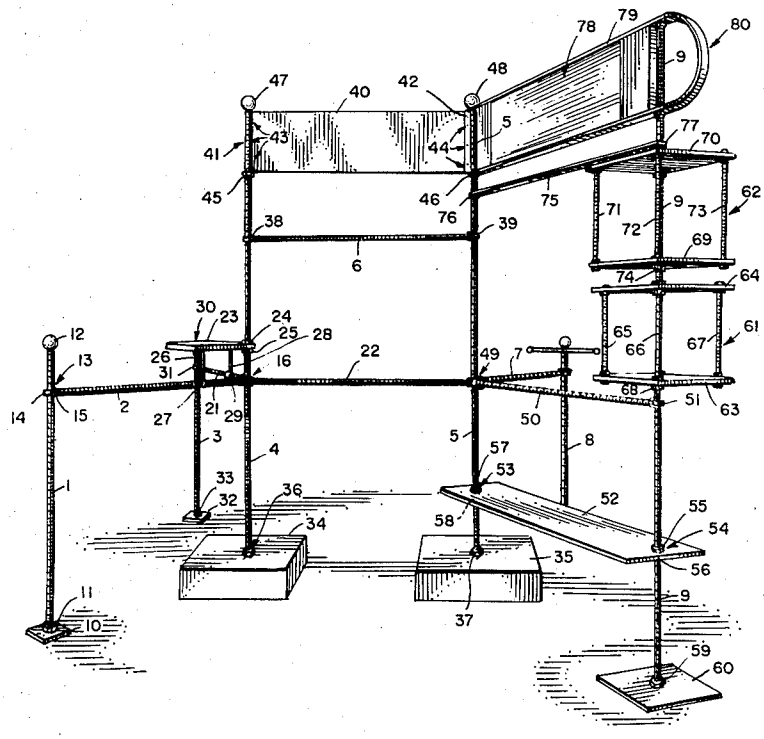
76,248	1/1933	Norway	211/182

Primary Examiner—Francis K. Zugel
Attorney, Agent, or Firm—Johnston, Keil, Thompson & Shurtleff

[57] **ABSTRACT**

A structure for supporting articles for display purposes is provided which consists of one or more externally threaded rods and one or more threaded fittings mounted on said rods with the internal threads of said fittings engaging the external threads of said rods and said fittings having outwardly extending supporting members attached thereto for supporting articles to be displayed.

3 Claims, 6 Drawing Figures



PATENTED DEC 10 1974

3,853,074

SHEET 1 OF 2

FIG. 1

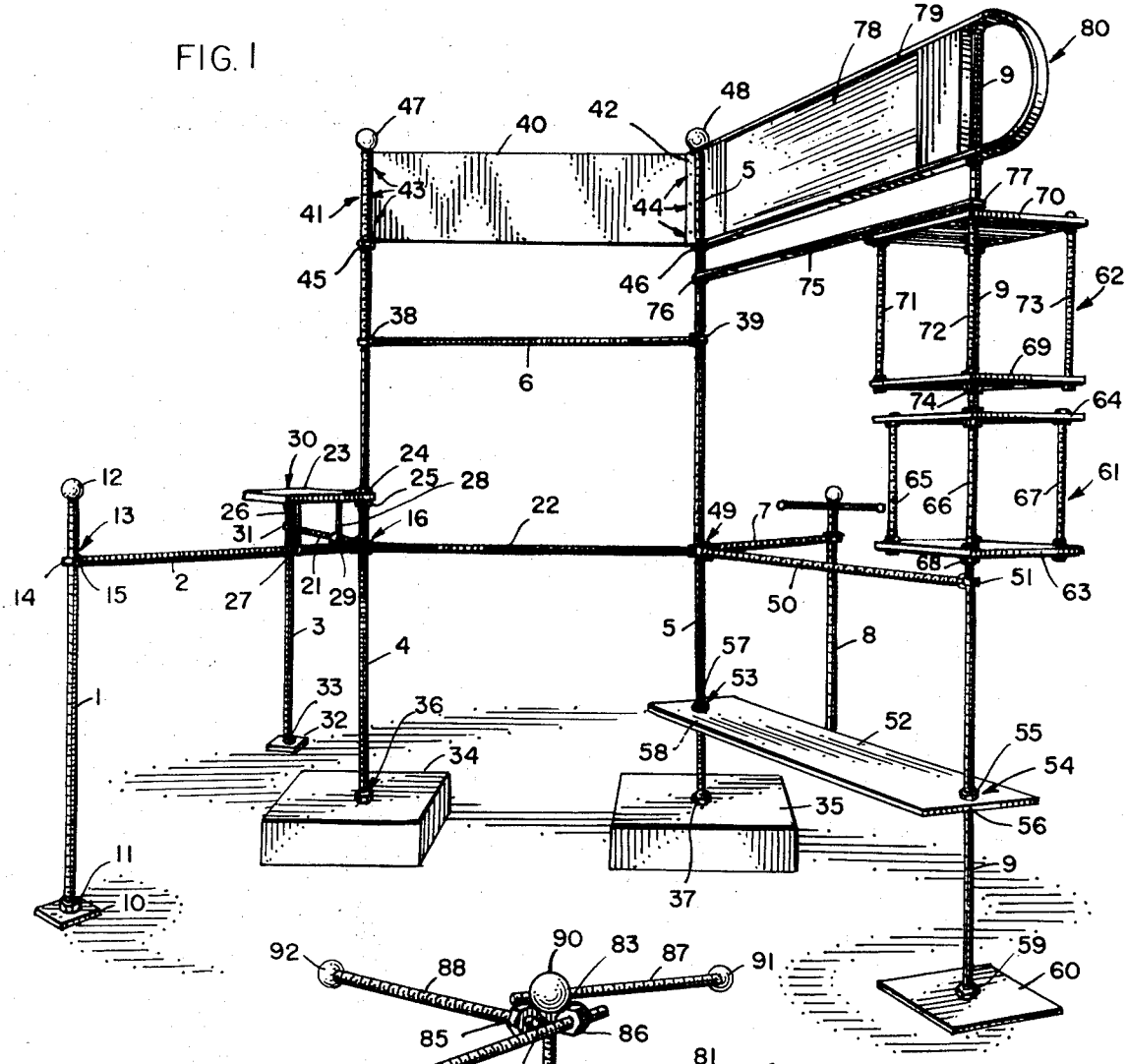
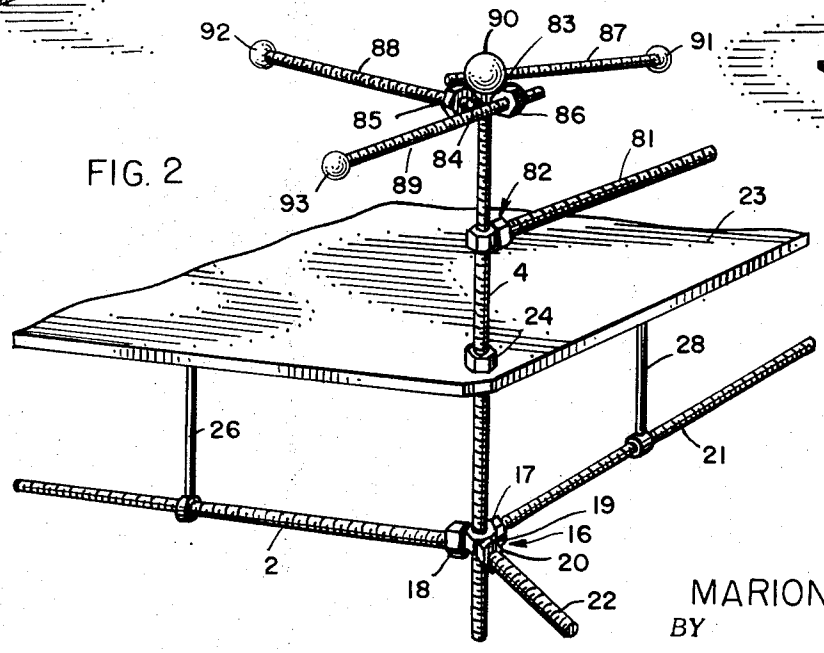


FIG. 2



INVENTOR:
MARION J. MADEY
BY

Johnston, Root, O'Keeffe, Keil, Thompson & Shurtleff
ATT'YS

FIG. 3

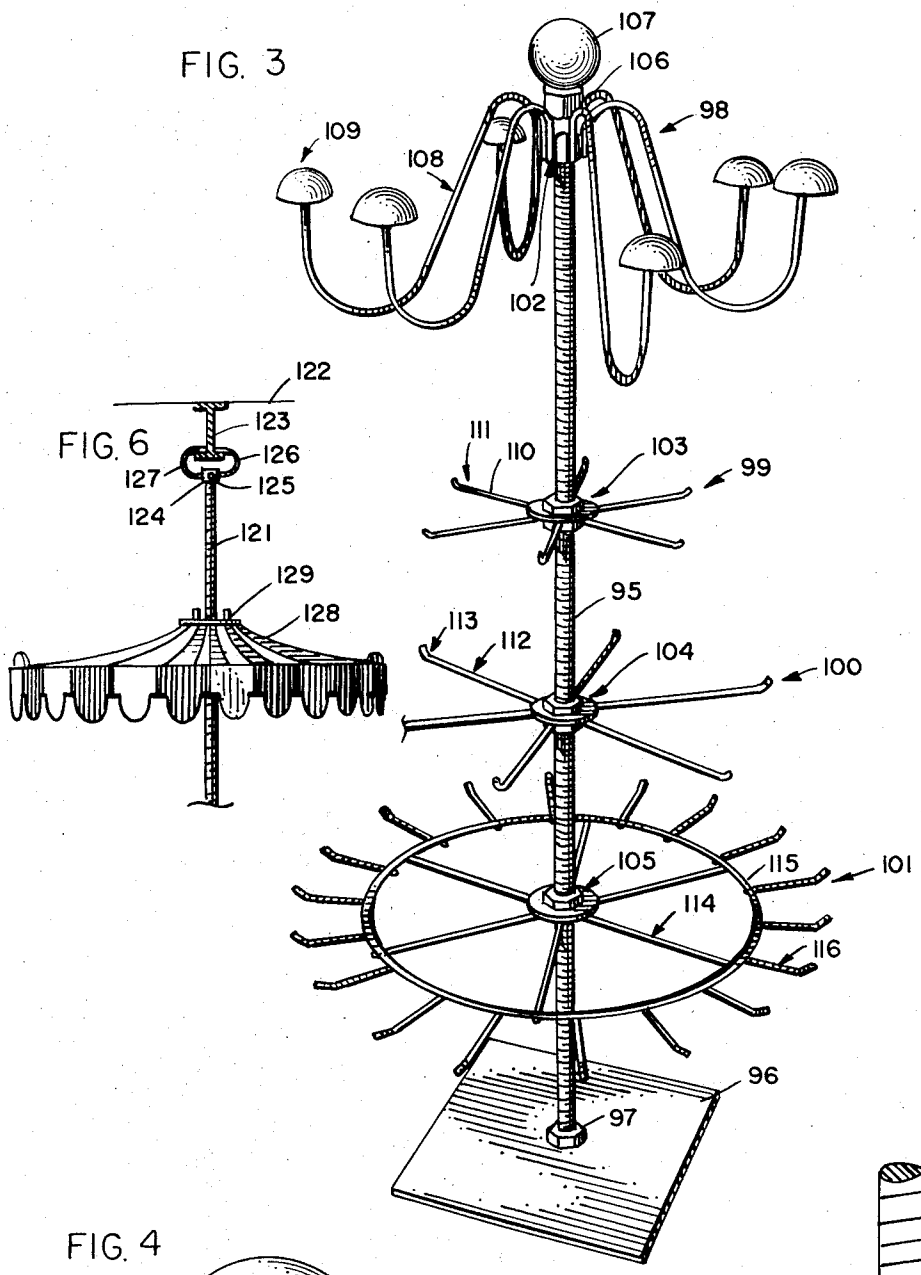


FIG. 6

FIG. 4

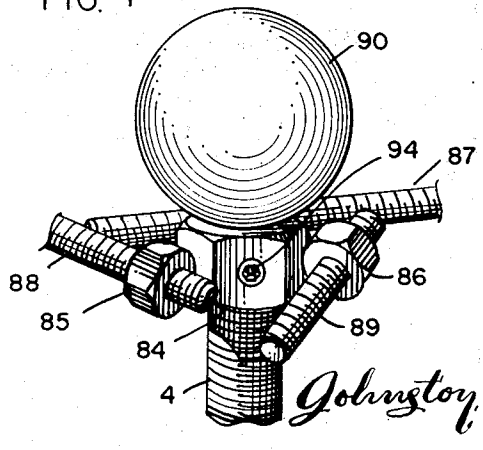
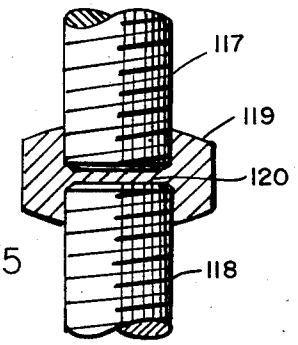


FIG. 5



INVENTOR:
MARION J. MADEY
BY
Johnston, Root, O'Keeffe, Keil, Thompson & Shurtleff
ATT'YS

STRUCTURE FOR SUPPORTING ARTICLES FOR DISPLAY PURPOSES

This is a continuation, of application Ser. No. 127613, filed Mar. 24, 1971, now abandoned.

BACKGROUND

In recent years it has become increasingly important to display articles of merchandise in an unusual manner so that they attract the eye of the public. Most equipment which is used for display purposes is more or less conventional in structure and consists of tables and chests with and without superstructures. This type of equipment is relatively expensive to manufacture and quite cumbersome to move around to various locations. Furthermore, when articles of merchandise are displayed upon such equipment they are not apt to be attractive to the eye of the consumer.

OBJECTS

One of the objects of the present invention is to provide new and improved structures for supporting articles for display purposes which are quite simple and inexpensive to manufacture, and have a wide range of versatility limited only by the imagination of the party using such structures for display purposes.

Another object of the invention is to provide structures of the type described which can be readily assembled and disassembled and moved from place to place.

THE DRAWINGS

Other objects and advantages of the invention will be apparent from the following description in conjunction with the accompanying drawings in which

FIG. 1 is a perspective view of one type of multidimensional structure provided in accordance with the invention;

FIG. 2 is a perspective view of a portion of another type of multidimensional structure showing the manner in which the various components are assembled;

FIG. 3 is a perspective view of another type of structure provided in accordance with the invention for supporting articles for display purposes;

FIG. 4 is an enlarged detailed view with parts broken away of a portion of the structure shown in FIG. 2 illustrating particularly the manner in which the connecting members function;

FIG. 5 is a sectional view showing another type of connecting member suitable for use in the practice of the invention; and

FIG. 6 is a side elevational view illustrating one way of suspending a structure of the type described from a ceiling supporting member.

BRIEF SUMMARY OF THE INVENTION

In accordance with the invention a structure for supporting articles for display purposes is provided comprising one or more externally threaded rods and one or more internally threaded fittings mounted on said rods with the internal threads of said fittings engaging the external threads of said rods, said fittings having outwardly extending supporting members attached thereto for supporting articles to be displayed.

In some cases said supporting members are in the form of rods and in other cases they are in the form of shelves.

The invention contemplates structures in which a single rod threaded from end to end is disposed vertically with outwardly extending supporting members attached thereto for supporting articles to be displayed. It also contemplates multidimensional structures comprising means connecting two or more externally threaded rods disposed vertically with one or more externally threaded rods disposed horizontally.

As one of the component parts of structures of the type described connecting members are provided for connecting one threaded rod to another threaded rod, said connecting members being internally threaded with the internal bores running in different directions. The connecting members usually comprise a first nut having one or more additional nuts secured to the outside of the first nut with the internally threaded portion facing in a different direction from the internally threaded portion of the first nut. The connecting members can also be in the form of a block having several internally threaded bores extending in different directions from one another so that multidimensional structures can be formed by inserting externally threaded rods into said bores.

DETAILED DESCRIPTION OF THE INVENTION

Referring to FIG. 1 the embodiment of the invention illustrated therein comprises a number of threaded rods **1, 2, 3, 4, 5, 6, 7, 8** and **9** which are threaded from end to end. Rod **1** is mounted on a base **10** having an internally threaded collar **11** secured thereto. An internally threaded round knob **12** is mounted on the top of rod **1.** Rod **1** is connected to rod **2** by a fitting **13** which consists of two nuts **14** and **15** welded together so that the internal bore of nut **15** faces outwardly and engages the external threads of rod **2.** The internal threads of nut **14** engage the external threads of rod **1.**

Externally threaded rod **2** is connected to rod **4** through fitting **16,** an enlarged form of which is illustrated in FIG. **2.** Fitting **16** consists of a central nut **17** and three nuts **18, 19** and **20** welded to the outside of central nut **17** with their internally threaded bores facing outwardly. In FIG. **1** the internally threaded bores of nuts **18, 19** and **20** are connected, respectively, to rods **2, 21** and **22.** The internal threads of nut **17** engage the external threads of rod **4.** As shown, a shelf **23** is mounted above rods **2** and **21.** One corner of the shelf **23** contains an aperture adapted to receive rod **4** and is held in place on rod **4** by means of nuts **24** and **25.** One side of shelf **23** is supported by a vertical supporting member which is secured to an internally threaded member **27** mounted on rod **2.** Another side of shelf **23** is supported by supporting member **28** secured to an internally threaded member **29** mounted on rod **21.** The far side of shelf **23** at **30** is supported by rod **3** which is connected by means of fitting **31** to rod **21.** Fitting **31** is similar to fitting **13.** Rod **3** is supported on a base **32** secured to an internally threaded collar **33** which receives the external threads at one end of rod **3.**

In the structure shown in FIG. **1** the vertical rods **4** and **5** are connected to base members **34** and **35** which are internally threaded at **36** and **37.** In the upper part of the structure shown in FIG. **1** the horizontal threaded rod **6** is connected by fitting **38** to rod **4** and by fitting **39** to rod **5.** The fittings **38** and **39** are similar to fitting **13.**

A panel 4 which can also be in the form of a sign is secured between the upper ends of rods 4 and 5 in any suitable manner, for example, by providing flexible end portions 41 and 42 which are wrapped around the threaded rods 4 and 5, respectively, and secured by brads or rivets 43 and 44. The end portions 41 and 42 are supported by nuts 45 and 46 and internally threaded knobs 47 and 48 which are mounted on rods 4 and 5, respectively.

Threaded rod 5 is connected by fitting 49 to rods 22, 7 and 50. Fitting 49 is similar to fitting 16 (see FIG. 2). Rod 50 is connected to rod 9 by fitting 51 which is similar to fitting 13. A shelf 52 is mounted between rods 5 and 9 by providing apertures in opposite ends of the shelf at 53 and 54 and mounting the apertures over rods 9 and 5 between nuts 55 and 56 on rod 9 and nuts 57 and 58 and rod 5. The internal threads of nuts 55 and 56 engage the external threads of rod 9 and the internal threads of nuts 57 and 58 engage the external threads of rod 5. The bottom end of rod 9 is threaded into the internally threaded collar 59 of base 60.

Two display units 61 and 62 in generally cubic form are mounted on threaded rod 9. As shown, unit 61 consists of a bottom 63 and a top 64 held together at three corners by threaded rods 65, 66 and 67 and at the fourth corner by rod 9. The bottom 63 has an aperture in each corner to receive said rods and nuts threaded on the rods above and below the aperture. In addition, a nut 68 is threaded on rod 9 to support the entire unit. Similarly, the top 64 has apertures at each corner to receive the threaded rods and nuts above and below the apertures to secure the top in place.

In a like manner unit 62 has a bottom 69 and a top 70 each having apertures at the four corners adapted to receive threaded rods 71, 72, 73 and threaded rod 9 with nuts on said rods above and below said apertures to hold the bottom 69 and top 70 in place. A nut 74 on rod 9 beneath bottom 69 holds the entire unit 62 in position. It will be recognized that the cubic units 61 and 62 can be rotated around rod 9 by loosening the supporting nuts on rod 9.

A threaded rod 75 is mounted between the rods 5 and 9 by fittings 76 and 77 which are similar to fitting 13.

A panel generally indicated at 78 is mounted at one end on rod 9 and at the other end on rod 5, and is held in place by a member 79 which is in the form of a metal strip that is flexible enough to be bent at 80 so that it can enclose the upper and lower edges of panel 78. Any suitable means can be provided to fasten the panel 78 to strip 79.

In FIG. 2 the embodiment shown is an enlarged variation of a portion of the structure shown in FIG. 1 including the connecting member 16, the threaded rods, 2, 21 and 22, shelf 23, and supporting members 26 and 28. Above shelf 23, however, the arrangement is somewhat different in that there is an additional threaded rod 81 connected to rod 4 through connecting member 82 which is similar to connecting member 13. A further variation is shown at the top of threaded rod 4 where a different type of connecting member 83 is employed. Connecting member 83 comprises a nut 84 which is threaded on rod 4 and two nuts 85 and 86 which are welded to nut 84 and have internal bores which are essentially tangential to the internal bore of nut 84. A third nut is also welded to the opposite side of nut 84 to receive rod 87. The internal threads on nuts 85 and 86 engage the external threads of threaded rods 88 and 89. Internally threaded knobs 90, 91, 92 and 93 are mounted on the ends of threaded rods 4, 87, 88 and 89. The rods 87, 88 and 89 can be used to support hangers for various types of articles.

As shown in FIG. 4 nut 84 can be fixed to rod 4 by a set screw 94.

Another modification of the invention is illustrated in FIG. 3 from which the threaded rod 95 is supported by a base plate 96 and secured to said base plate by a nut 97 which is welded to the base plate. The outwardly extending supporting members 98, 99, 100 and 101 have centrally disposed members 102, 103, 104 and 105, each of which has an internally threaded bore so that all of said members 98, 99, 100 and 101 can be mounted on the rod 95 and can be rotated on said rod to a predetermined position. A nut 106 and an internally threaded knob 107 are locked together at the top to form a stop or limit for the upward movement of member 98.

Member 98 has arms generally indicated at 108 which extend outwardly, then downwardly and then upwardly again and terminate in rounded supporting members generally indicated at 109 which are useful in displaying hats and similar types of merchandise.

Supporting member 99 has arms generally indicated at 110 with turned up ends 111 which can be used to support bags or packages containing components adapted to fit over these arms, or other types of merchandise which can be hung from the arms. Similarly member 100 has somewhat longer arms as indicated at 112 with turned up ends 113. Supporting member 101 illustrates another variation in which spokes generally indicated at 114 are secured at one end to a ring 115 and at the other end to member 105. Supporting arms generally indicated at 116 extend outwardly from said ring 115 and can be used to display various types of merchandise.

FIG. 5 illustrates a modification of the invention wherein two externally threaded rods 117 and 118 are connected by an internally threaded nut 119 provided with a partition 120. This type of connector can be used in structures of the type previously described where it might be undesirable to use an extremely long rod. For example, in the structure illustrated in FIG. 3 instead of having a single long rod 95, two or more separate rods could be used with connecting members of the type shown in FIG. 5.

FIG. 6 illustrates another variation of the invention in which an externally threaded rod 121 is supported from a ceiling. In the modification shown, the ceiling 122 has an I-beam 123 and the threaded rod 121 is connected to a fixture 124 which is internally threaded at one end to receive rod 121 and is pivotally mounted by means of a bolt 125 at the juncture of a pair of clamps or tongs 126 and 127 which clamp the upper surface of the lower part of the I-beam 123 and thereby support rod 121. A canopy 128 provided with an internally threaded member 129 can be mounted on rod 121 by engaging the threads of internally threaded member 129 with the external threads of rod 121. Beneath the canopy 128 other outwardly extending supporting members similar to supporting members 99, 100 and 101 of FIG. 3 can be mounted on rod 121.

From the foregoing description it will be seen that the invention is susceptible to a number of variations and modifications in the manner of its practical application.

The invention provides multidimensional structures for display purposes which are quite simple and inexpensive to manufacture, can be readily assembled and disassembled and moved from place to place, and have a wide range of versatility as compared with conventional structures commonly used for display purposes.

The invention is hereby claimed as follows:

1. A structure for supporting articles for display purposes comprising a plurality of vertically disposed continuously externally threaded rods, means at one end of each of said rods for holding said rods in a vertical position, means comprising one or more horizontally disposed continuously externally threaded rods spaced from said ends of said vertical rods, fittings connecting two or more said vertical rods and one or more said last mentioned horizontal rods together intermediate the ends of said vertical rods, said fittings being internally threaded to receive said external threads of said vertical and horizontal rods, additional internally threaded fittings on one or more of said vertical rods, and one or more article supporting members extending outwardly laterally with respect to said vertically disposed rods, said article supporting members being supported by one or more said additional fittings, and at least one of said article supporting members having a cubical configuration with a top member, a bottom member to receive an article to be displayed, open sides, and vertical rods adjacent the corners connecting said top and bottom members, one of said vertical rods being one of said vertically disposed continuously threaded rods, and the latter containing an internally threaded fitting mounted thereon with the internal threads of said fitting engaging the external threads of said rods, said article supporting member being mounted on said fitting and being rotatable about said vertically disposed continuously threaded rod.

2. A structure as claimed in claim **1** in which there are at least three of said vertically disposed rods connected together successively by said horizontally disposed rods to form a multidimensional structure in which at least two said successive vertical rods in one vertical plane are arranged obliquely to two said successive vertical rods in another vertical plane, one of said vertical rods being common to both planes.

3. A structure as claimed in claim **1** in which at least one said article supporting member comprises a shelf which extends longitudinally between two said vertical threaded rods and has openings adjacent opposite ends thereof to receive said rods, said shelf being supported on each vertical rod by an internally threaded rotatable fitting the threads of which engage the external threads of said rod.

* * * * *