Jan. 14, 1969 R. S. MEDOW 3,421,269

ADJUSTABLE ARCH STRUCTURES

Filed Aug. 23, 1967 Sheet 1 of 2

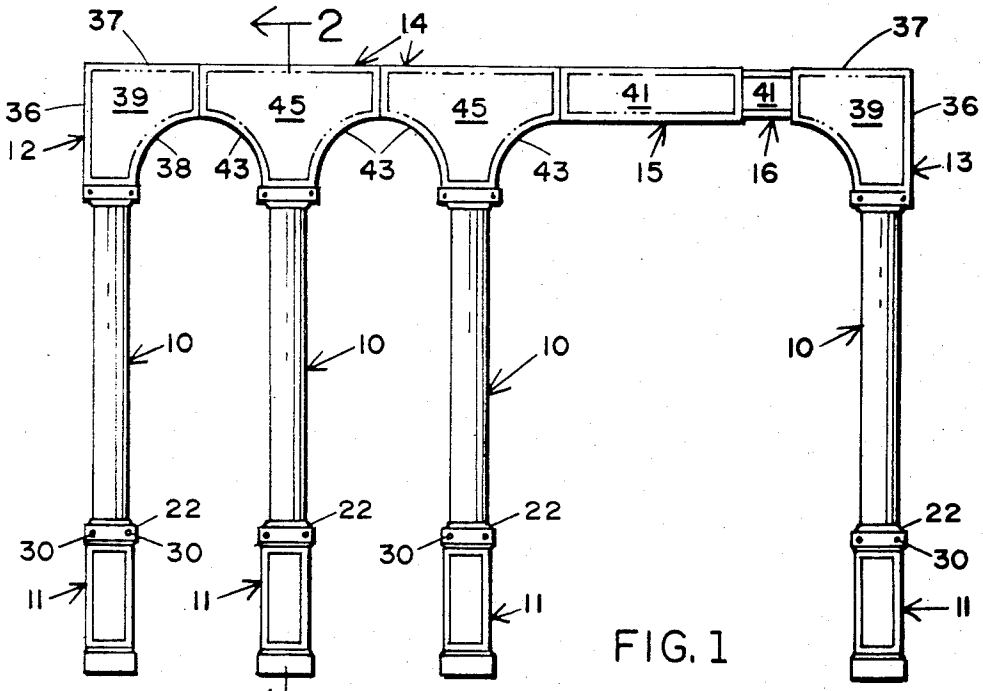


FIG. 1

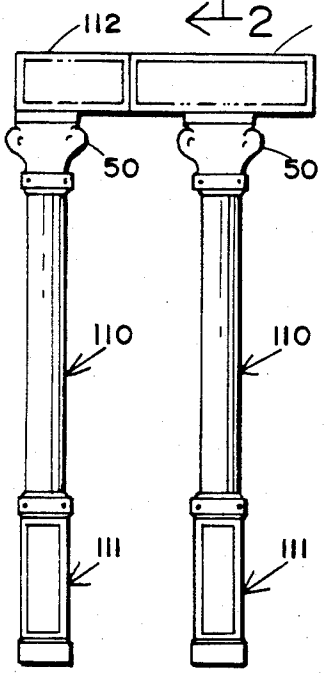


FIG. 6

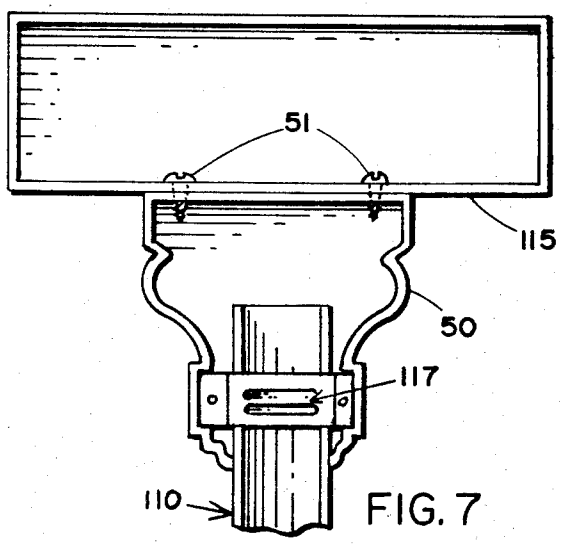


FIG. 7

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ADJUSTABLE ARCH STRUCTURES

Filed Aug. 28, 1967 Sheet 2 of 2

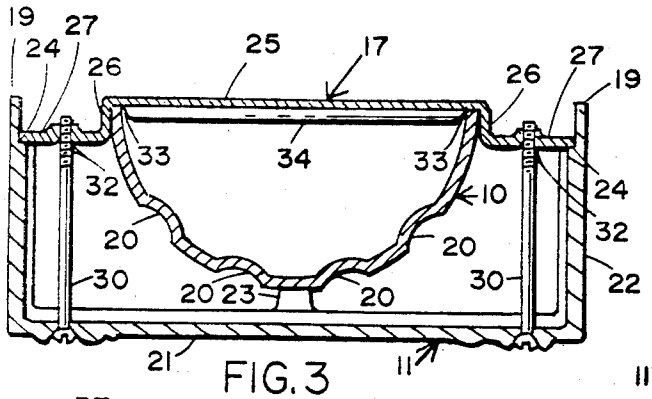


FIG. 3

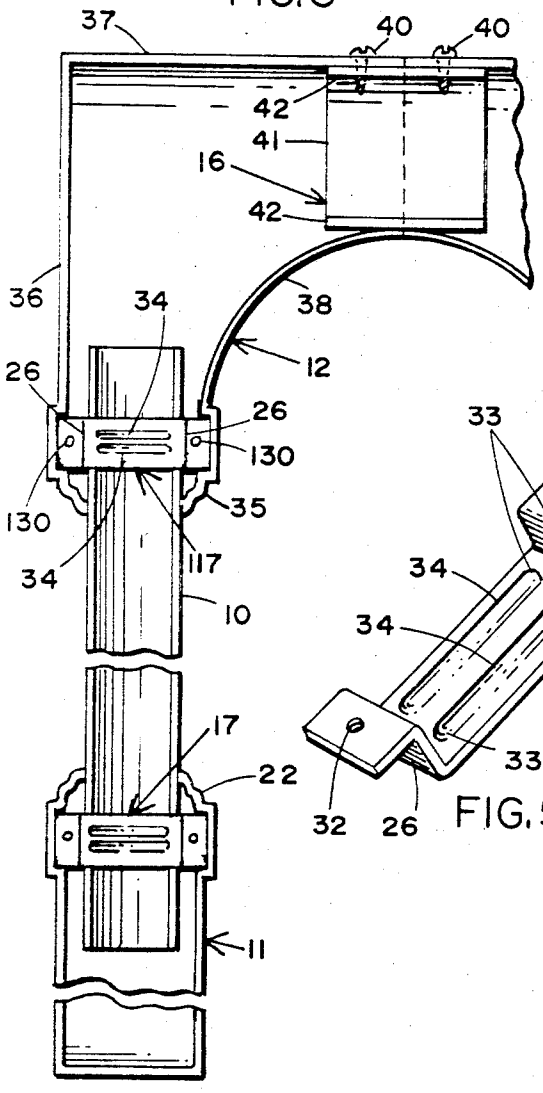


FIG. 4

FIG. 5

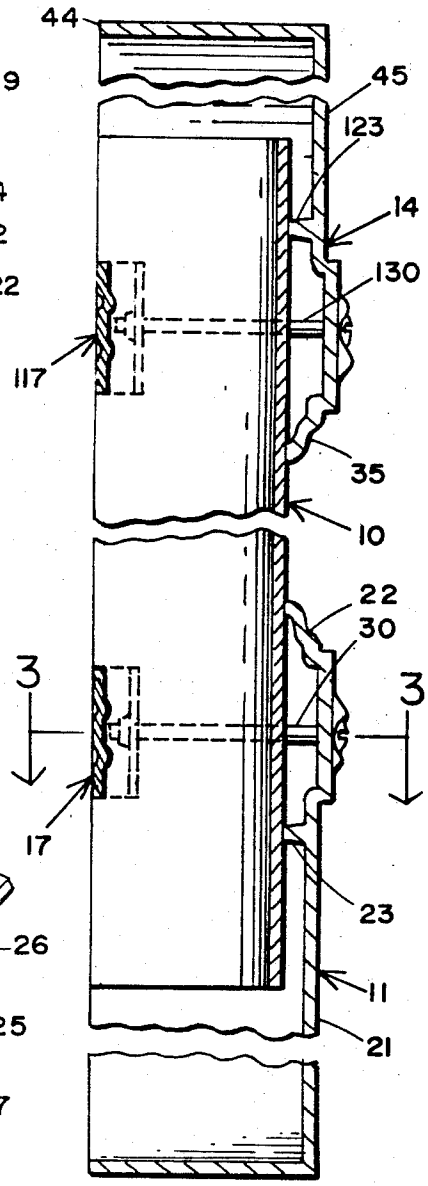


FIG. 2

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ADJUSTABLE ARCH STRUCTURES

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ABSTRACT OF THE DISCLOSURE

An adjustable arch structure consisting of a base member, a frieze member and a substantially semi-circular and hollow column each of which are prefabricated as separate parts capable of being erected in any sized wall or room by virtue of the column being telescopically mounted in the base and frieze member and secured thereto by a bracket which consists of an elongated body portion with offset portions and shoulders mounted thereon engaging the rear portion of the column at both the outside and inside surfaces and threaded bolts extending through openings in the front wall of the base and frieze members and received by threaded openings in said bracket.

This invention relates to ornamental building structures and is more particularly directed to adjustable arch structures.

At the present time ornamental arch structures for indoor and outdoor installation are not available as a prefabricated over the counter purchase. In order that a person may satisfy his desire for such a structure, he must first obtain the services of an architect to design the particular ornamental arch structure, that will fit in that part of a room or outside wall where he wishes to have it installed. Then he obtains the services of one who is capable of fabricating custom made arches whether of wood, cement or plastic material. Lastly, he hires workmen who are skilled in the erection of the ornamental arch structure so that finally the ornamental arch structure is erected as desired. However, it is obvious that not only is the cost of such an article of structure exceedingly high, since highly skilled labor is used throughout the project, but also the time consummed from start to completion is great.

The present invention contemplates avoiding the high cost of custom made arch structures and the need for skilled help to make and install the arches by prefabricating the arch structures which are flexible in their arrangement, adjustable to fit different sizes of rooms and walls, and which can be erected by unskilled help with nothing more than a simple tool.

Therefore, a principal object of the present invention is to provide adjustable arch structures made of parts which are prefabricated of fiberglass in mass production quantities whereby the cost of manufacture is low and the installation thereof so simple that it can be accomplished by an unskilled person with use of a screwdriver alone.

Another important object of the present invention is to provide prefabricated arch structures that can be purchased over the counter and which are sufficiently flexible in sizes so that one need not cut or alter the various parts in order to be installed properly.

A still further object of the present invention is to provide prefabricated arch structures constructed of parts of the well known types of arch structures and which may have any desired designs thereon as well as the parts being interchangeable so that a person may select any of the designs or combination thereof.

With these and other objects in view, the invention will be best understood from a consideration of the following detailed description taken in connection with the accompanying drawings forming a part of this specification, with the understanding, however, that the invention is not confined to any strict conformity with the showing of the drawings but may be changed or modified so long as such changes or modifications mark no material departure from the salient features of the invention as expressed in the appended claims.

In the drawings:

FIGURE 1 is a front elevational view of a Romanesque arch structure constructed in accordance with my invention.

FIGURE 2 is a cross sectional view taken along the line 2—2 of FIGURE 1.

FIGURE 3 is a cross sectional view taken along either of the lines 3—3 of FIGURE 2.

FIGURE 4 is a rear elevational view of a portion of my arch shown in FIGURE 1.

FIGURE 5 is a perspective view of the column retaining bracket.

FIGURE 6 is a front elevational view of a Corinthian arch structure embodying my invention.

FIGURE 7 is a rear elevational view of the Corinthian frieze assembly.

Referring to the drawings wherein like numerals are used to designate similar parts throughout the several views there is shown in FIGURE 1 a Romanesque arch system in which all of the different parts are included to make any arrangement desired and to fit any sized wall. In general, these different parts which constitute the Romanesque arch consist of a base **11**, column **10**, the following friezes namely, a left and right single arch friezes **12** and **13**, a double arch frieze **14** and a straight frieze **15**, a frieze connector **16** and a column retaining bracket **17**. Except for the column retaining bracket **17** which is made of sheet metal, the remaining parts of my Romanesque arch is made preferably of fiberglass by the usual cavity mold process utilizing high pressures and temperatures.

The columns **10** which extend between bases **11** and the various friezes **12**, **13** and **14** are held in position by brackets **17** as is explained in detail hereinafter. The cross sectional shape of the columns **10** is approximately equal to or slightly less than semi-circular in configuration and may be fluted on the outer surface as shown by FIGURE 3 by the grooves or depressions **20** extending therealong.

The base **11** consists of a channel shaped member having a rectangular front wall **21** slightly depressed to form a border thereabout, and side walls **22** with necking portion **22** extending upwardly of the front and side walls **21** and **22** to engage the semicircular outer surface of the column **10**. On the inner surface of the front wall **21** is a landing or projection **23** which engages the lower end portion of the column **10** which projection **23** in combination with the bracket **17** retains the columns **10** securely in position. The outer edge **19** of the sidewalls **22** is thinner than that of the remainder of the walls **22** thereby forming a shoulder **24** upon which the ends of bracket **17** impinges.

The bracket **17** consists of an elongated flat body member **25** which is precisely equal in length to the width of the columns **10** and at whose ends extend off-set portions **26** set at right angles thereto. At the ends of the off-set portions **26** extend arm portions **27** which lie in a plane parallel to that of the main body portion **25** of the bracket. Each off-set portion **26** is equal in length to the distance the shoulder **24** is from the outer edges **19** of the side walls **22**. This compels the outer surface of the main body portion **25** of the bracket **17** to lie in coplanar relation with the outer edges **19** of the side walls **22**. With this construction, when the bracket **17** is placed in position against the rear edges of the column **10**, the off-set portions **26** will engage the outer surface of the column **10** and the arm portions **27** will rest on the shoulders **24** as the arms **27** fit snugly between the side walls **22** of the base **11**. The bracket **17** is then locked in position by bolts **30** that

extend through openings **31** in the front wall **21** of the base **11** and are threaded into threaded bores **32** formed in the arms **27**. The landing **23** and off-set portions **26** prevent any movement or spreading of the column **10**. To prevent the rear portions of the column **10** from collapsing or moving in the direction toward each other shoulders **33** engage the inner surfaces of the column **10** at the rear edges. The shoulders **33** are formed by a stamping process which forms a groove **34** whose raised portion extends along the inner surface of the bracket **17** along the length of the main portion **25** terminating in shoulders **33** a distance equal to the thickness of the material forming the column **10** from the off-set portions **26**.

In the mounting of the bracket **17** on the column **10**, recesses are formed in the outer edges of the column **10** for receiving the main body portion **25** so that the latter will lie in the same plane as the outer edges of the column **10** and the edges **19** of the side walls **22** and the column **10** and base **11** will lie evenly against the wall upon which they are being erected. At the upper ends of the columns **10** are the friezes **12, 13** and **14**. The friezes **12** and **13** are left and right single arch friezes while frieze **14** is a double arch frieze. All of the friezes **12, 13** and **14** are identical in construction except for their outer configurations having an identically shaped necking **35** which encircle the upper ends of the columns **10** in the same manner as the necking **22** of the bases **11**. The column **10** is secured at its upper end to the frieze by the bracket **117** which is identical in structure and function as the bracket **17**. The friezes **12, 13** and **14** are provided with a projection or landing **123** which in combination with bolts **130** secure the column **10** to the friezes. Just as with the bracket **17** the column **10** is locked into position by the bolts **130** which draw the column **10** firmly against the landing or projection **123** while the outer edges of the column are wedged between the off-set portions **26** and shoulders **33** of the bracket **117**.

The left and right single friezes **12** are provided with a straight side wall **36** on the left and right sides respectively, a flat top wall **37** and an arcuate wall **38** on the right and left respectively. With a flat front wall **39** depressed slightly to form a border thereabout and joining the aforementioned walls, a channel member is formed to receive a connector **16** as shown by FIGURE 4. Connector **16** which is channel shaped likewise consisting of a body or face portion **41** with flanges **42** extending at right angle thereto is telescopically received by two adjacent friezes. If the friezes **15, 13** are spaced from each other the connector **16** becomes a spacer connector as shown at the right as viewed in FIGURE 1. The straight frieze **15** is identical in construction as the connector **16** except that it is wider than the latter by a distance equal to the thickness of the walls of the friezes.

The double arch frieze **14** which is channel shaped likewise consists of arcuate side walls **43** extending upwardly of the necking **35** and a top wall **44** joined by a front wall **45** also slightly depressed to form a border thereabout. On all of the depressed front walls such as the walls **21** of the base **11**, walls **39, 41** and **48** of the various friezes may be provided with any suitable ornamental design as desired.

It is readily noted from the above description taken in connection with FIGURES 1–5 inclusive, my Romanesque arch structure may be prefabricated to fit any height of room or wall by virtue of the columns **10** that are telescopically adjustable within the bases **11** and friezes **12, 13** and **14**. Likewise, my Romanesque arch structure will fit in any length of wall or any desired combination of friezes may be effected.

Also, other types of arch structures may be adapted for prefabrication and installation in the manner described hereinabove. As an example, FIGURE 6 shows a part of a Corinthian arch structure consisting of structure which is identical to that described above except for the structure of the frieze. The Corinthian arch structure

consists of the base **111** in which the column **110** is telescopically secured by the bracket **117** in the same manner as explained in connection with the Romanesque arch structure hereinabove. The frieze of the Corinthian arch system consists of a straight frieze **115** which is identical in construction with the straight frieze **15** described hereinabove to which a frieze base **50** is attached. The frieze base **50** that has the configuration that is distinctive of the Corinthian arch is fastened by screws **51** which extend between the walls of the straight frieze **115** and the column head **50** as shown by FIGURE 7. End straight friezes **112** are of identical construction as the straight frieze **115** except that they are proportionally shorter in length.

Having disclosed my invention, what I claim as new and desire to secure by Letters Patent of the United States is:

1. In an adjustable arch structure having a base member, a frieze member and a column, said column extending between said base member and said frieze member, and having end portions telescopically received by said base member and said frieze, bracket means engaging rear portions of said column and said frieze and base members and fastening means securing said bracket means to each of said base member and said frieze member for securing said column to each of said base member and said frieze member.

2. The structure as recited by claim **1** wherein said bracket means comprising an elongated body member engaging said rear portions of said column, base and frieze members, shoulder means mounted on said body member abutting against the outer and inner surfaces of said rear portions of said column preventing the longitudinal spreading or collapsing of said column.

3. The structure as recited by claim **2** wherein said base member and said frieze member comprise a front wall and side walls, said front walls having a projection on the inner surface engaging said column and said fastening means extending through said front walls and received by said bracket means.

4. The structure as recited by claim **1** wherein said bracket means comprises an elongated body portion, a flange portion extending at right angle at each end of said bracket means, an arm portion extending in opposite directions from each of said flange portions, said arm portions lying in a plane substantially parallel to that of said body portion, said flange portions forming shoulders abutting against the outside surfaces of said column and a plurality of raised surfaces formed on said body portion in spaced proximity to said flange portions, said raised surfaces forming shoulders abutting against the inside surfaces of said column.

5. The structure as recited by claim **4** wherein said base member and said frieze member comprise a front wall and side walls, said front walls having a projection on the inner surface engaging said column, threaded bores formed on said arm portions, and bolt means extending through openings in said front walls and received by said threaded bores for securing said column to each of said base member and said frieze member.

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U.S. Cl. X.R.

52—211, 301, 311, 632