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ADJUSTABLE ARCH STRUCTURES
Robert S. Medow, 2051 NE, 160th St.,
North Miami Beach, Fla. 33162
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5 Claims

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 consumed 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 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 wall shown 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 conjunction with the accompanying drawings forming a part of this specification, with the understanding, however, that the invention is not con-
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.

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 for 35 which encircles 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 thereafter 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 12, 13 and 14 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 thereafter. 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 hereinafter. 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 by 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 comprises an elongated body member engaging said rear portions of said column, base and frieze members, shoulder members 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 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 members 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.

References Cited

UNITED STATES PATENTS

Re. 21,001 2/1939 Bell et al. 52—311 X
769,719 9/1904 Smith 52—311
882,398 3/1908 Lupo 52—301 X
1,619,631 5/1927 Ptasinski 52—86 X
2,857,027 10/1958 Lindnepse 52—311 X
3,271,914 9/1966 Boyett 52—311 X
3,280,527 10/1966 Faust 52—301 X

ALFRED C. PELHAM, Primary Examiner.
PRICE C. FAW, Assistant Examiner.
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