Nov. 14, 1961 E. F. WIDIN 3,008,273

PRE-FORMED ARCH AND METHOD OF MAKING SAME

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Fig. 1

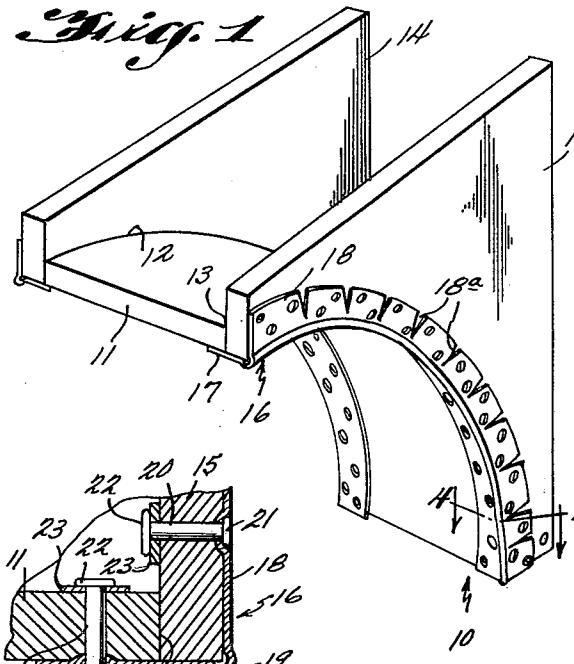


Fig. 4

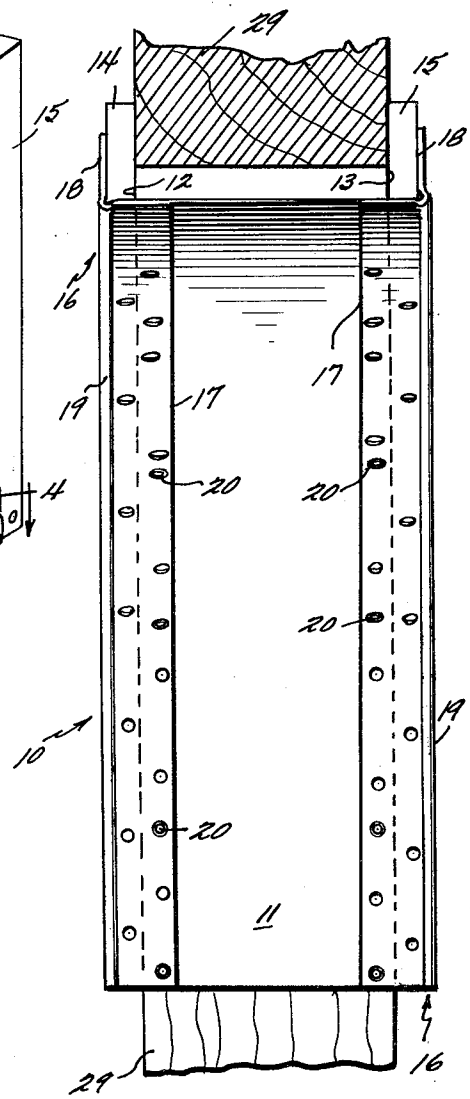


Fig. 2

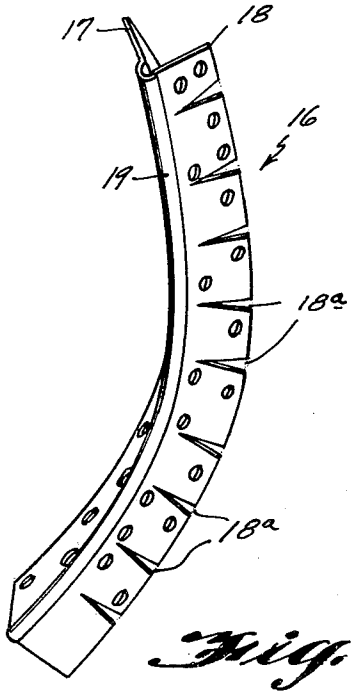


Fig. 3

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Fig. 5

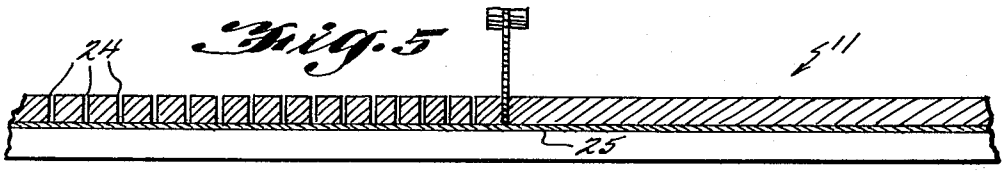


Fig. 6

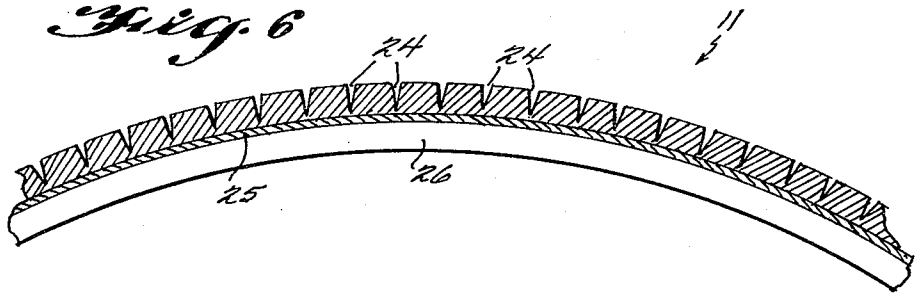


Fig. 7

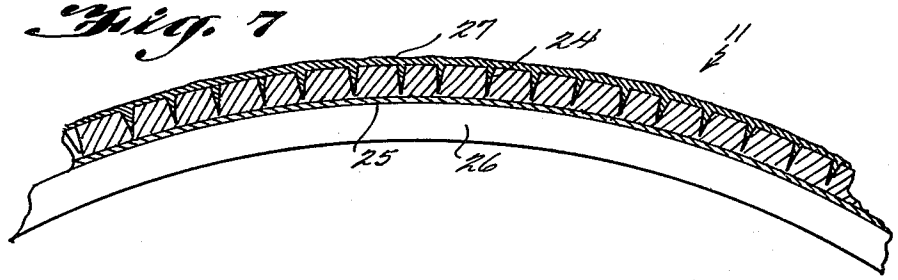
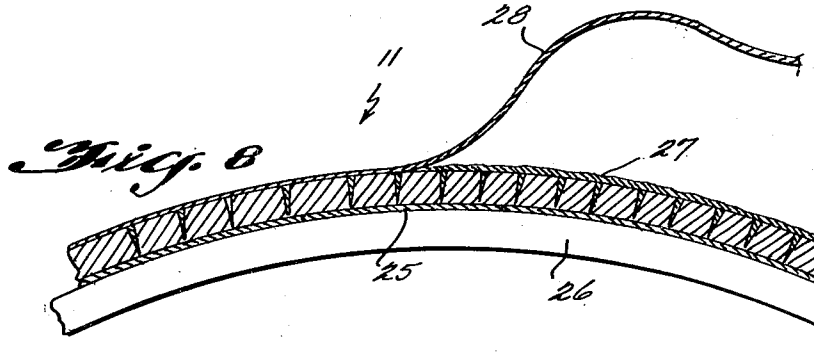


Fig. 8



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PRE-FORMED ARCH AND METHOD OF MAKING SAME

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Filed Apr. 7, 1959, Ser. No. 804,706
1 Claim. (Cl. 50—60)

The present invention relates to a pre-formed arch and the method of making same for installation as a unit.

The primary object of the invention is to provide a pre-formed arch structure which can be secured in the upper corner of a rectangular doorway as a unit in forming an arch in the doorway.

Another object of the invention is to provide a method of forming an arch in a section of plasterboard and for permanently and rigidly locking the plasterboard in the arched form.

A further object of the invention is to provide a pre-formed arch structure which can be secured in position in the corner of a rectangular doorway of a building to cooperate with conventional plasterboard dry wall panels forming the remainder of the wall surface.

Another object of the invention is to provide a pre-formed arch structure and method of forming same which is inexpensive in manufacture, easy to install and which materially reduces the labor cost in forming building arches.

Other objects and advantages will become apparent in the following specification when considered in light of the attached drawings, in which:

FIGURE 1 is a perspective view of the invention;

FIGURE 2 is a side elevation of the invention attached to a rectangular doorway;

FIGURE 3 is a perspective view of one of the corner forming members of the invention;

FIGURE 4 is an enlarged fragmentary horizontal section taken along the line 4—4 of FIGURE 1, looking in the direction of the arrows; and

FIGURES 5 through 7 are a plurality of longitudinal cross-sections illustrating the steps of the method of forming the rigid fixed arch panel.

Referring now to the drawings in detail wherein like reference characters indicate like parts throughout the several figures, the reference numeral **10** indicates generally an arch unit constructed in accordance with the invention.

The arch unit **10** comprises an arcuate plasterboard panel **11** having the side edges **12, 13** thereof engaging a pair of spaced parallel generally flat plasterboard panels **14, 15.**

The panels **14, 15** have the edges thereof in contact with the panel **11** formed concavely arcuate to conform to the shape of the panel **11.** A corner bead, generally indicated at **16,** has a pair of legs **17, 18** extending generally perpendicularly to each other and connected by an arcuate portion **19** at their intersection. The corner beads **16** are curved to conform to the shape of the panel **11** and also to the flat surface of the panels **14, 15,** as illustrated in FIGURES 1 and 4. The leg **18** has a plurality of slits **18***a* cut therein in spaced parallel relation to permit the leg **18** to be curved as shown. A plurality of tubular rivets **20** extend through the legs **17, 18** and through the panels **11, 14, 15** to secure the panels **14, 15** to the opposite side edges of the panel **11.** The tubular rivets **20** are rolled outwardly to form heads **21, 22** on the opposite ends thereof with the head **21** being pressed into the metal of the legs

17, 18 and the head **22** engaging against a washer **23,** as is clearly shown in FIGURE 4. In addition to the openings through which the rivets **20** extend, the legs **17, 18** are perforated to form a grip for the taping cement which is conventionally applied to finish the dry wall surface.

The curved panel **11** is formed by making a plurality of spaced parallel transversely extending kerf cuts **24** completely through one side thereof and the plaster with the finish paper **25** being left intact on the opposite side. The panel **11** is then placed over an arcuate form **26** with the kerf cuts **24** extending upwardly, as is shown in FIGURE 6. The paper cover **25** curves to the shape of the form **26** in a smooth curvature. With the panel **11** in the position illustrated in FIGURE 6, wet plaster **27** is pressed into the kerf cuts **24,** completely filling the kerf cuts **24** and providing a plaster surface over the rear face of the panel **11.**

A paper tape **28** is then adhered to the plaster **27** to form a smooth finished surface to the panel **11.** The panel **11** is then allowed to remain on the form **26** until the plaster **27** has hardened so that the panel **11** is provided with a permanent rigid curvature.

With the rigid panel **11** pre-formed into a rigid curvature, the side panels **14, 15** are attached to the opposite side edges thereof, as described above, to complete the arch structure.

After the arch unit **10** has been completely pre-formed, it is taken to the job site and there secured to the 2x4 partition members **29** which form a rectangular doorway of a home. After securing the arch unit **10** in the corner of a doorway, conventional plasterboard installing methods are followed to complete the dry wall construction.

Having thus described the preferred embodiment of the invention, it should be understood that numerous structural modifications and adaptations may be resorted to without departing from the scope of the appended claim.

What is claimed is:

A pre-formed plaster arch comprising a rigid arcuate panel comprised of a first paper tape, a plaster board panel having a plurality of kerf cuts therein and curved to expand the outer edges of said kerf cuts on said paper tape, plaster filling said expanded kerf cuts, and a second paper tape overlying said plaster, said arcuate panel having horizontally spaced parallel arcuate side edges, a pair of generally flat panels engaging the opposite side edges of said arcuate panel, an arcuate bead strip engaging over the corners at the intersection of said flat panels with said arcuate panel, and a plurality of tubular rivets extending through said panels and said bead strips rigidly securing said panels and said strips together to form a rigid pre-formed arch unit, said generally flat panels having concave arcuate edges engaging the opposite side edges of said arcuate panel.

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