Dec. 24, 1968 E. C. KIEKHAEFER 3,417,527

SKYLIGHT DOME

Filed Jan. 12, 1967

Fig. 1.

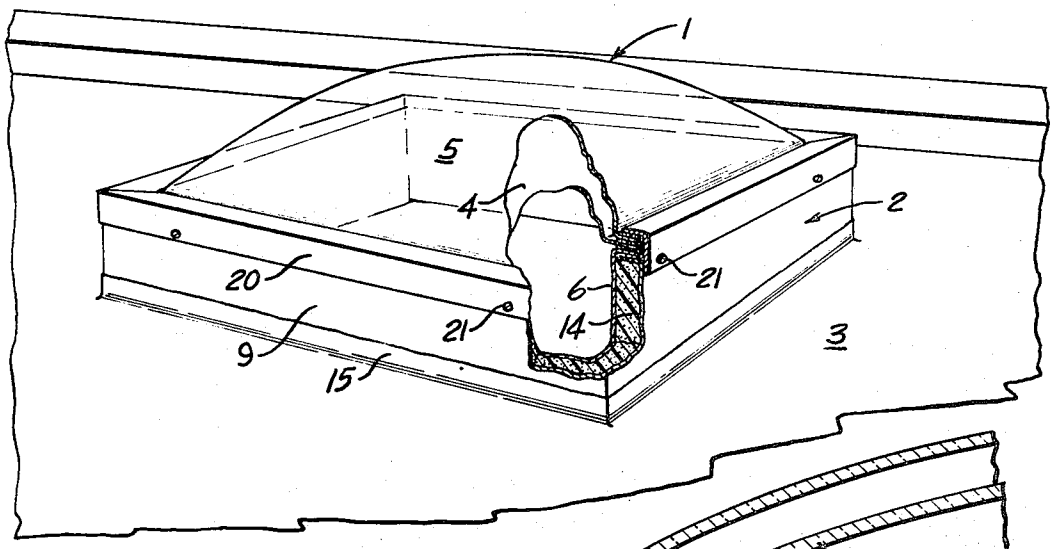
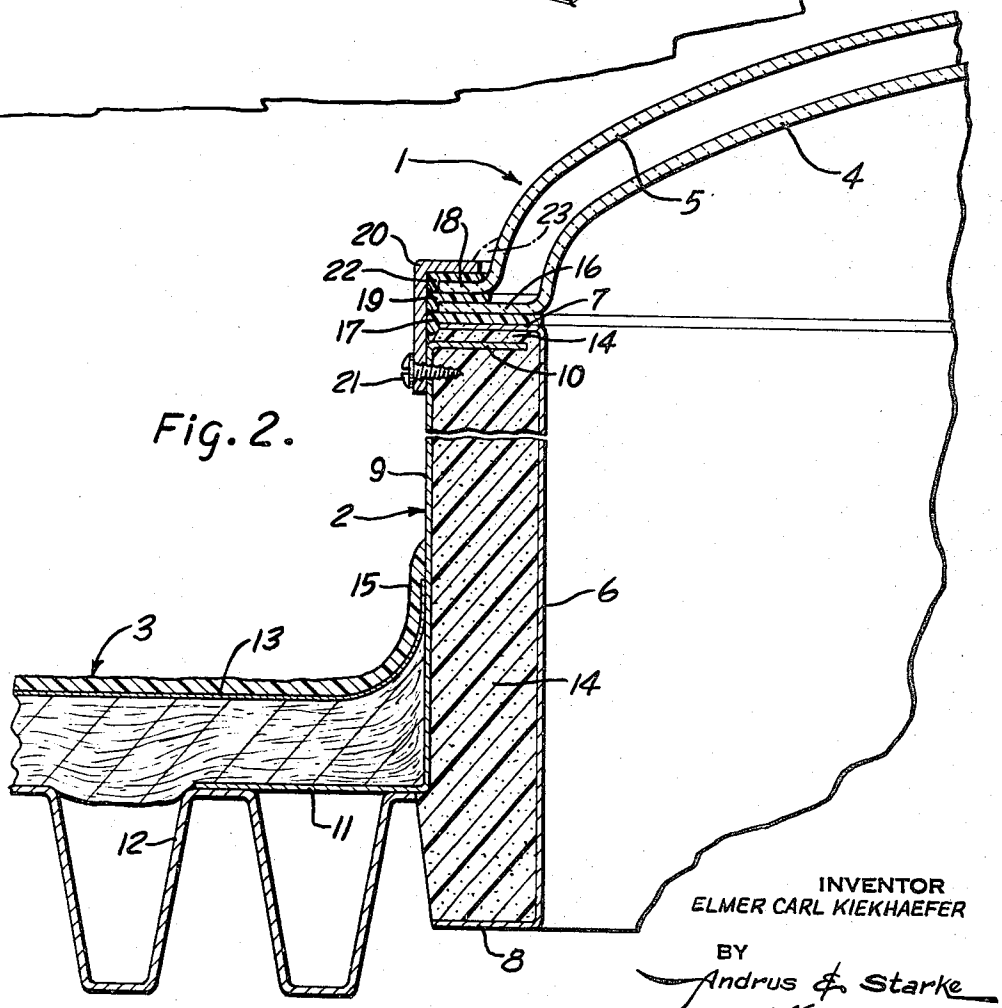


Fig. 2.



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SKYLIGHT DOME

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ABSTRACT OF THE DISCLOSURE

A skylight structure having a curb of spaced vertical walls with foamed plastic insulation therebetween and a lower outward flange sealed to the roof, and an outer frame secured to the outer wall and extending over the edge of the skylight to retain the latter in place.

This invention relates to a skylight dome.

The invention has been employed in the construction of curb supports for double acrylic domes, but may provide curb support for glass and various other types of skylights.

The invention utilizes foamed-in-place plastic filling the upright wall space between inner and outer metal walls or shells which provide a rigid strong and lightweight curb for supporting the skylight.

The accompanying drawing illustrates one embodiment presently contemplated as the best mode of carrying out the invention.

In the drawing:

FIGURE 1 is a perspective view of a skylight dome on a flat roof and with parts broken away and sectioned; and

FIG. 2 is a vertical section of the curb and of adjacent parts of the skylight and roof.

The dome illustrated is shown as generally rectangular and comprises a dual transparent or translucent dome **1** supported by a curb **2** upon the flat roof **3**.

The dome **1** may comprise spaced inner and outer domes **4** and **5**, respectively, which may be formed from acrylic to the dimensions and shape desired. The peripheral edge of each dome **4** and **5** is preferably flanged outwardly in a corresponding horizontal plane to constitute the vertical support for the dome upon the curb **2**.

The curb **2** comprises an inner vertical metal shell **6** having an outward flange **7** at its upper edge for supporting the flanges of the domes **4** and **5** and an outward flange **8** at its lower edge, an outer vertical shell **9** spaced from shell **6** approximately the width of the flange **7** and having an upper flange **10** extending inwardly beneath flange **7** and toward shell **6** and a lower flange **11** extending outwardly upon the steel deck **12** of roof **3** and beneath the roofing **13**, and a suitable foam plastic **14** filling the spaces between the shells **6** and **9**.

The flange **7** overlaps and is spaced above flange **10** with a portion of plastic **14** disposed therebetween to support the shell **6**.

By employing an acrylic type foamed plastic in curb **2** the structure obtained is rigid, heat insulating and free from vermin and rot problems over a long life period.

Heat insulation is inhanced by avoiding metal to metal contact between the inner shell **6** and outer shell **9**.

The curb **2** may be supported upon the roof **3** in any suitable manner. In the construction illustrated the lower flange **11** of outer shell **9** is supported upon the metal roof deck **12** and the roofing **13** is applied thereover and sealed against the outer shell **9** by any suitable sealing compound **15**.

The dome **1** is supported upon the curb **2** and secured thereto. In the construction illustrated the flange **16** of inner dome **4** is supported on flange **7** with a layer **17** of foamed plastic or other suitable sealing and heat insulating material therebetween, and flange **18** of outer dome **5** is supported on flange **16** with a layer **19** of foamed plastic or other suitable sealing and heat insulating material therebetween.

An angular retainer member **20** is secured to outer shell **9** as by screws **21** and extends upwardly of the edges of flanges **16** and **18** and inwardly over the top of flange **18** with a layer **22** of foamed plastic therebetween. This construction provides a heat insulation seal between all members comprising the dome **1** and its securement.

If desired, an additional seal **23** of suitable caulking material may be applied along the inner edge of layer **22** and between upper dome **5** and the inner edge of retainer member **20**.

The invention provides a fully heat insulated skylight construction and one that is rigid and permanent as against vermin and rot.

Various modes of carrying out the invention are contemplated as being within the scope of the following claims particularly pointing out and distinctly claiming the subject matter which is regarded as the invention.

I claim:

1. In a skylight construction, an upstanding curb supported by a roof deck and defining an opening therethrough and supporting a skylight dome, comprising inner and outer spaced metal walls, and a rigid foamed plastic material filling the space therebetween, said outer wall having an inwardly extending flange at its upper edge embedded in said foamed material, said inner wall having a flange at its upper edge extending outwardly over the top of the curb and spaced upwardly from said outer wall flange, and said curb having an outwardly extending flange on one of said walls disposed to interengage and seal with the roof deck, and retainer means for the dome secured to said outer wall and extending upwardly and inwardly over the outer edges of the dome and sealed therewith.

2. The construction of claim **1** in which the inwardly extending flange extends beneath said outwardly extending flange and foamed plastic material is disposed between said overlapping flanges and prevents metal to metal contact thereof, said dome being supported upon the upper outwardly extending flange of said inner wall.

3. The construction of claim **1** in which said deck supported outwardly extending flange is on said outer wall and underlies a portion of the roof sealed to the curb.

4. The construction of claim **1** in which said retainer means comprises an angular member with a vertical wall portion and an inward horizontal flange portion, and removable means securing said vertical wall portion of the retainer to the outer wall of the curb.

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