Aug. 18, 1959 P. SHAPIRO 2,899,719

CIRCULAR AWNING

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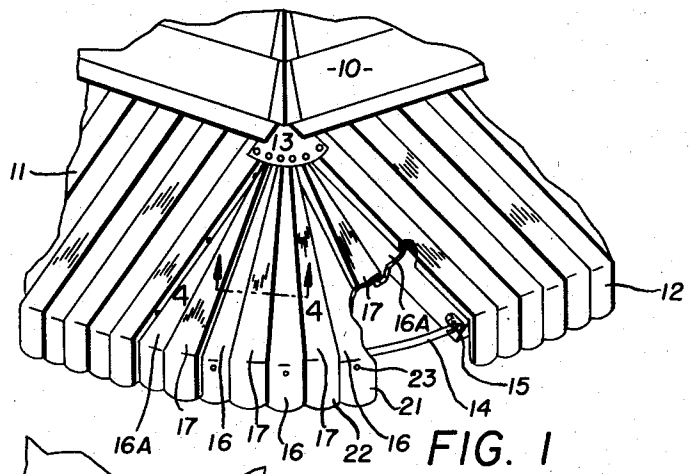


FIG. 1

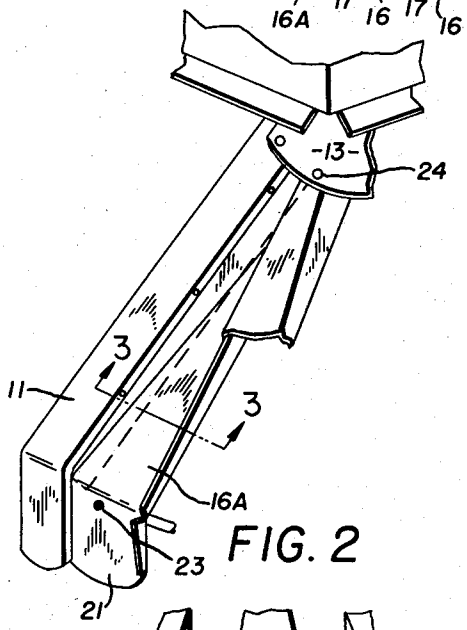


FIG. 2

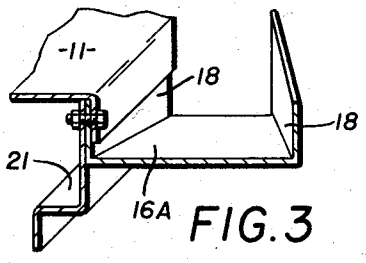


FIG. 3

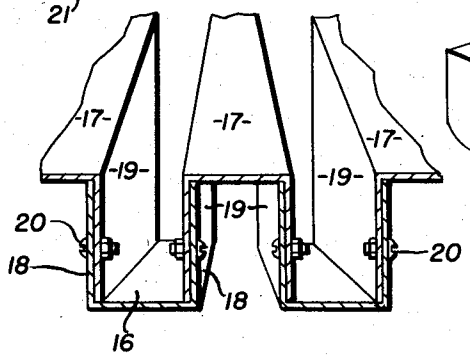


FIG. 4

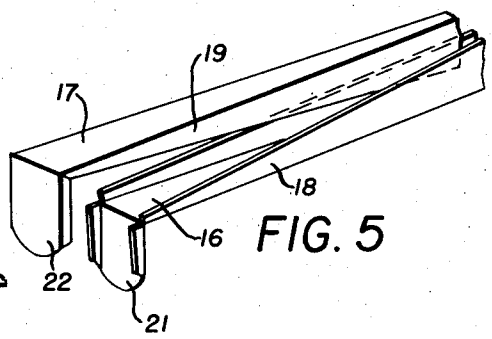


FIG. 5

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CIRCULAR AWNING

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This invention relates to a circular awning or a circular portion of an awning and more particularly to a structure of components forming said awning.

The principal object of the invention is the provision of a plurality of awning components formed of uniform width strip material which are tapered progressively from one end to the other by the formation of flanges on the longitudinal edges thereof, which flanges are formed on converging diagonal fold lines longitudinally of said components.

A still further object of the invention is the provision of a circular awning formed of a plurality of components each of which comprises a strip of material of uniform width having flanges on its longitudinally extending edges, the area of said components between said flanges being progressively tapered from one end to the other and each of the flanges being progressively tapered from one end to the other, and the plurality of components being secured to one another with the narrower ends thereof in close proximity to one another.

A still further object of the invention is the provision of forming a circular awning wherein a plurality of upper and lower longitudinally flanged pans are employed and wherein the flanges of the pans are of progressively greater height from one end to the other and the area of the pans between the flanges is of progressively narrower width from one end to the other and wherein the channels defined by the pans in the circular awning are progressively tapered from one end to the other with the deepest ends lying adjacent the center area of the awning.

The circular awning disclosed herein comprises an improvement in the art relating to circular sections of awnings such as, for example, those which are used to go around a corner to provide a continuous awning between two right angularly disposed awnings.

In the past such circular awnings and circular awning sections have been formed of strip material which has been cut to the predetermined length desired and the edges thereof trimmed off progressively from one end to the other so that a progressively narrower or tapered strip results which is then flanged along its opposite longitudinal edges with flanges of even height. The formation of a circular awning or circular section of an awning from such tapered sections or components is expensive and time consuming and is wasteful of the material of the awning as a considerable portion of it is cutaway and discarded.

The resulting structure is weak due to the cutting away of a considerable portion of the material. These several disadvantages are completely eliminated and overcome by the construction disclosed herein wherein pans of uniform width are formed with flanges of tapering height thereby forming the areas between the flanges of each of the pans as a longitudinally tapering shape which, when assembled in the circular awning, has an improved appearance due to the progressively deeper channels

formed between the pans and has increased structural strength and rigidity due to the presence of all of the material of the pans.

With the foregoing and other objects in view which will appear as the description proceeds, the invention resides in the combination and arrangement of parts and in the details of construction hereinafter described and claimed, it being the intention to cover all changes and modifications of the example of the invention herein chosen for purposes of the disclosure, which do not constitute departures from the spirit and scope of the invention.

The invention is illustrated in the accompanying drawing, wherein:

Figure 1 is a perspective view of a portion of a building structure showing portions of awnings positioned thereon at right angles thereto and a portion of a circular awning section positioned therebetween.

Figure 2 is an enlarged detail of portions of the circular awning section shown in Figure 1.

Figure 3 is a cross section taken on line 3—3 of Figure 2 in enlarged scale.

Figure 4 is a cross section taken on line 4—4 of Figure 1 on an enlarged scale.

Figure 5 is a perspective view of two of the components of the circular awning section shown in separated relation.

By referring to the drawing and Figure 1 in particular it will be seen that a corner of a structure such as a dwelling house is illustrated and generally indicated by the numeral **10** and that a pair of metal awnings have been positioned on the two sides of the structure **10**, one of the awnings being indicated by the numeral **11** and the other by the numeral **12**. Each of the awnings **11** and **12** runs parallel with the side of the structure, as is customary.

The angularly shaped corner left between the ends of the awnings **11** and **12** is illustrated as being filled by a section of a circular awning. The upper ends of the section of circular awning are secured to an arcuate flange **13** and the lowermost ends are secured to an arcuate tubular support **14**, the ends of which are in turn secured to brackets **15—15** on the ends of the awnings **11** and **12**, respectively.

The circular awning section is formed of a plurality of bottom pans **16—16** which are inter-spaced between top pans **17—17**. Flanges **18—18** in the longitudinal edges of the bottom pans **16—16** are engaged in interlocking relation with downwardly extending flanges **19—19** on the longitudinal edges of the top pans **17—17**.

The flanges **18—18** and **19—19** are also secured to one another by a plurality of fasteners **20—20** and the outermost end sections or starter pans illustrated at **16A—16A** in Figures 1, 2 and 3 of the drawing are secured to the ends of the awnings **11** and **12**, respectively, and to rafters **21** which form the ends of the awnings **11** and **12**, respectively. The rafters **21** are best shown in the cross section of Figure 3 of the drawing which is taken across the junction of the circular section of the awning and the adjacent straight section, as shown in Figure 2 of the drawing.

It will be observed that each of the bottom pans **16** or **16A** has the longitudinally extending flanges **18—18** on its opposite edges formed by the same having been folded from the uniform width material of the bottom pans **16** or **16A** on diagonal lines extending from end to end of said bottom pans, the diagonal lines being spaced relatively closer at the upper or innermost ends of the pans **16** and **16A** than they are spaced at the outer or lower ends.

Thus, as best shown in Figures 2, 3 and 5 of the drawing, the bottom pans **16** and **16A** have longitudinally ex-

tending flanges along the progressively narrowing width thereof so that the flanges **18—18** which are upstanding are progressively higher from one end to the other.

It will be observed that the effective width of the bottom pans **16** and **16A** are thus widest at their lowermost ends where they rest on the arcuate tubular support member **14** and narrowest at their upper innermost ends where they are secured to the arcuate flange **13**.

It will also be observed that each of the top pans **17** is formed in a similar manner to the bottom pans **16** with the exception that the flanges **19** thereof are downturned, as clearly illustrated in Figures 4 and 5 of the drawing.

By referring to Figure 5 of the drawing in particular it will be seen that both the top and bottom pans **16** and **17** are notched in the area of their flanges **18** and **19**, respectively, inwardly from their foremost or lowermost ends and bent transversely across to form depending valance portions **21** and **22**, respectively, the vertical sides of which are flanged as a continuation of the flanges formed on the top and bottom pans **17** and **16**, respectively.

It will be observed that in the finished circular section of awning the downturned or inwardly turned flanges of the top pan **17** overlie the upturned or outturned flanges **18** of the bottom pan **16**. The notching of the flanges on the pan **17** to form the valance portion **22** forms an attractive corner as the edges of the notch meet and present an unbroken appearance to the eye.

The bottom pans **16** directly engage the arcuate tubular support member **14** and are secured thereto by fasteners such as metal screws **23**. The opposite upper ends of the pans **16** and **17** are secured to the arcuate flange **13** by fasteners such as metal screws **24**.

It will thus be seen that the circular awning section forms a unitary structure partially carried on the arcuate flange **13** partially on the straight awnings **11** and **12**.

The novel structure resulting from the formation of the longitudinally extending flanges on diagonal fold lines longitudinally of the pans will be recognized as forming very sturdy and rigid components which, when overlapped and secured to one another by the fasteners **20—20**, as illustrated in Figure 4 of the drawing, form a very substantial and practical circular awning section.

Those skilled in the art will recognize that by continuing the construction herein disclosed in a full 360°, a completely circular awning will be formed possessed of the desirable structural qualities heretofore lacking in such circular awnings as have been formed.

It will thus be seen that the several objects of the invention have been met by the circular awning disclosed herein.

Having thus described my invention, what I claim is:

1. A circular awning component comprising an elongated pan including a substantially flat central portion having opposite longitudinally extending side edges, a substantially planar flange formed along each of said edges and extending substantially normally to said central portion, said flanges being formed substantially throughout the entire length of said pan, the flanges converging inwardly toward one another from the outer end portion of said pan to the inner end portion of said pan, each of said flanges sloping upwardly from said outer end portion to said inner end portion such that each flange has a height adjacent said inner end portion greater than the height adjacent said outer end portion, said central portion and said flanges being of substantially constant thickness and said pan having a substantially constant cross sectional area at spaced points along the longitudinal axis thereof.

2. A circular awning comprising a plurality of elongated pans, each of said pans including a substantially flat central portion having opposite longitudinally extending side edges, a substantially planar flange formed along each of said edges and extending substantially normally from the central portion of the associated pan, the flanges being formed substantially throughout the entire length of the associated pan, the flanges of each pan converging inwardly toward one another from the outer end portion of the pan to the inner end portion of the pan, each of the flanges on the pans sloping upwardly from the outer end portions of the pans to the inner end portions of the pans such that each flange has a height adjacent the inner portion of the associated pan greater than the height adjacent the outer end portion of the associated pan, the central portion and the flanges of each of said pans being of substantially constant thickness and each of said pans having a substantially constant cross sectional area at spaced points along the longitudinal axis thereof, said pans being arranged in alternately oppositely disposed overlapping relationship to one another with the flanges of the uppermost pans extending downwardly and the flanges of the lowermost pans extending upwardly, and a support structure for said pans including a member joined to the innermost end portions of said pans and another member disposed beneath and supporting the outermost end portions of the pans.

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