Oct. 18, 1955 A. J. TOTI 2,720,684

SLAT AWNING

Filed Jan. 16, 1951

Fig. 3.

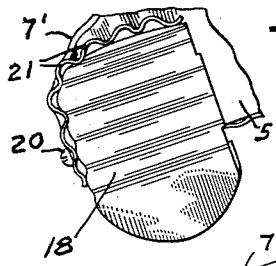


Fig. 1.

Fig. 2.

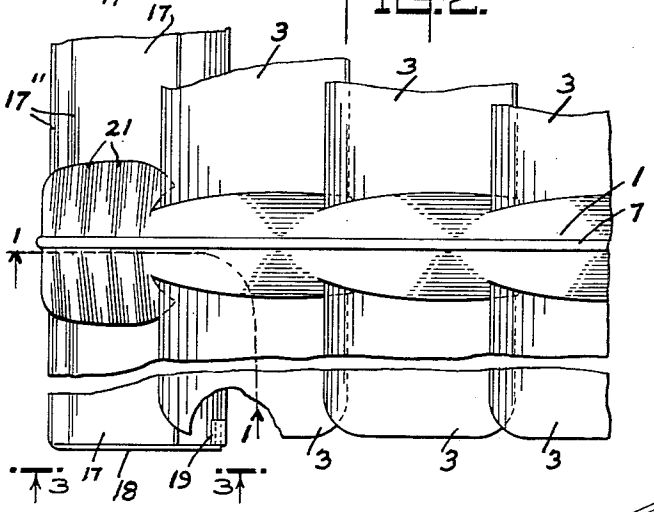
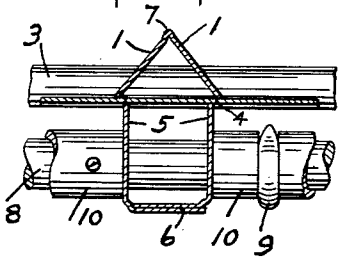


Fig. 4.



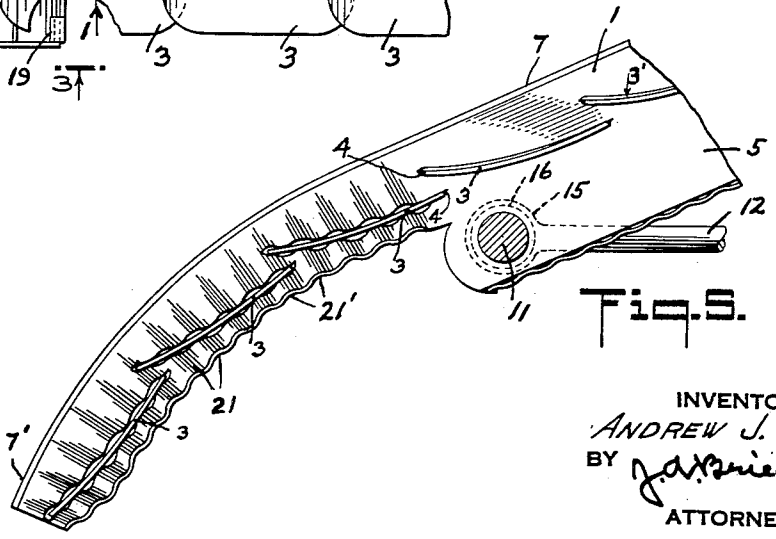


Fig. 5.

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SLAT AWNING

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6 Claims. (Cl. 20—57.5)

This invention relates to improvements in awnings of the type formed of strips or slats of sun shielding material, and particularly to such awnings supported rigidly over side walks in front of stores, tho they may be otherwise used and supported.

The principal object of the improvements is to provide an attractive, light, preferably all metal, simple and durable construction.

A particular feature of the invention is that the construction worked out permits shipping the frame members and slats in knocked-down condition and easy quick assemblage on the job.

Other features and advantages of the improved awning construction will appear in the following description and accompany drawings—

In the drawings, Fig. 1 is an end elevation of my improved slat awning shown with portions broken away (as along the dotted line 1—1 of Fig. 2) to reveal the inner construction of a rafter, and the lower edge beam.

Fig. 2 is a top plan view of one end of the awning of Fig. 1.

Fig. 3 is an elevation of the outer end of the lower edge beam as seen from the line 3—3 of Fig. 2.

Fig. 4 is a cross section of one of the rafters showing the hollow sheet metal construction and the manner in which the slats are held in place.

Fig. 5 is a side elevation of a modified form of the lower end of the rafter and arrangement of slots carried by it.

Briefly described the improved awning comprises a frame supported by a building structure such as a store front or window frame and projecting outward therefrom like the frame of a conventional awning, but in the present case the frame includes a series of preferably hollow tubular sheet metal rafters, 1 slanting downwardly from the store front 2 or other support and supporting a relatively large number of "Venetian blind slats" 3 preferably in slightly overlapping edge arrangement. The slats are passed through slots 4 in the sides of the sheet metal rafters and locked in place by slightly crimping the edges of the slats or compressing the sides of the rafters adjacent the slats. The slats are of very thin metal (tho they could be of a durable weather resisting plastic) and are "crowned" or channeled to a slight arc as shown and preferably arranged with concave side up.

In the drawings—the rafters, designated 1 may be spaced along the building, generally about two or three feet. They are preferably of sheet metal and of tubular cross section (see Fig. 4) with spaced side walls 5, lapped over at the bottom and suitably secured to form a double bottom wall 6 crimped together, and folded in gable roof formation on top with a central ridge 7 joining the adjacent slanting or gabled "roof" walls 1.

The rafters are suitably secured at their upper ends to the building by any desired means, but here indicated as being first supported on a horizontally disposed rod 8 which passes through their side walls, and which rod is shown supported in open hooks 9 screwed or otherwise

secured to the building, tho the hooks 9 may be eyebolts if desired or any other form of supporting fixture. Suitable spacing pipe sections or collars 10 may also be provided on the rods to hold the rafters spaced if desired, tho ordinarily when once installed the friction against the slats will prevent them from shifting.

At their lower ends, the rafters may also be supported on a pipe or rod 11 as described for the upper ends, which pass through openings in the side walls 5, and strut rods 12 either solid or hollow pipes are spaced at required intervals to support the outer and lower end of the awning. These struts 12 may be level or somewhat inclined and at their inner ends they are suitably secured to the building by any desired means, one such means being lag screws or bolts 13 passing through the turned down and enlarged ends 14 of the struts which may be formed with an eye to receive the bolt.

The outer ends of the strut rods may be secured in any desired manner to the longitudinal rod 11, a simple way being to provide the outer ends of each rod with an opening or eyebolt end 15 through which the rod 11 passes, and which strut rods are laterally spaced along the rod as by pipe spacers or collars 16 as described for the upper rod 8 under numeral 10.

Preferably the outer ends of the strut rods are covered by a hollow sheet metal beam 17 extending the length of the awning. This beam may be of any size or cross sectional form, but is here shown of somewhat oblong cross section with rounded bottom wall 17' and with front wall corrugated as at 17'' for stiffening it as well as for improving its appearance. The extreme ends of the hollow sheet metal beam are preferably closed by sheet metal caps preferably formed by bending an extension of the front wall 18 back to cover the end of the beam and securing the free edge in place as by engaging clips 19 formed of the adjacent parts, or otherwise.

The inner side of the beam 17 is left open to receive the lower ends of the rafters which are suitably notched to enter it, and an extension 7' of the gabled roof 7 of each rafter is preferably extended over the top of the beam and downward over its forward edge and secured in place as by rivets or screws 20. This extension 7' is preferably crimped as at 21 to facilitate bending it over the beam as shown. The hollow beam is preferably provided with drainage holes 22.

The awning slats 3 are of very thin metal or suitable hard plastic on the order of regular metal Venetian blind slats and are also "crowned" or arched transversely and are of spring metal to make them stiff and prevent sagging. They are preferably used with concave sides 3' uppermost and with slightly overlapping but vertically spaced margins as indicated at 23 in Fig. 1 so as to permit some light to pass through the awning yet shed the rain which runs over the lowermost edge of each slat to the slat below. The concave sides of the slats being uppermost aid in preventing the water backing up over the upper edges of the slats.

The slats are passed endwise through curved slots 4 formed through the walls of the rafters with the upper ends of the slots being about on a line with the lower part of the "gable-roof-like" top of the rafters and extend downward (with respect to a level line) about half way into the gable-roof-like sides 1 of the rafter. The slots 4 are made by cutting and pushing the metal of the gabled walls outwardly and after the slats are inserted endwise through the slots the outwardly bent walls just above each slat may be pinched or squeezed toward each other to thereby lock the slats in place. It will be sufficient to pinch the walls above each slat just at the end nearest the ridge 7 of the rafter with a small pair of pliers to effectively lock the slats in place. The lowermost slat

preferably extends over the upper wall **17** of the lower edge beam as shown in Fig. 1.

In the modification shown in Fig. 5 the beam at the lower edge of the awning is dispensed with and the lower ends of the rafters are simply extended somewhat beyond the rod **11** in a downward curve as shown at **7'**, the side walls of the rafter being preferably crimped or fluted as at **21'** to facilitate bending the rafter, similarly to the crimping of the lower ends of the rafters of Fig. 1 shown at **21**, except that in Fig. 5 the downwardly curved ends of the rafters are fitted with several slats **3** as shown.

The entire awning structure may be assembled at the shop and transported and erected as a unit or it may be easily assembled on the job by first erecting the rafters with their rods **8** and **11** and spacers **10** and **16**, then passing the slats through the slots one at a time. If desired the slats may be in shorter sections than the full length of the awning and their ends overlapped preferably at points embraced by a rafter.

If an awning as described above is made of a bright non-rusting metal it makes a handsome awning structure which will never need painting and will endure for many years against the normal ravages of time.

From the nature of the structure above described it will be evident that minor changes in details may be made without departing from the spirit of the invention and coverage of my appended claims.

I therefore claim:

1. In a slat awning comprising rafters supporting a series of spaced thin flexible slats passing through slots in the rafters said rafters being of hollow sheet metal construction having substantially spaced side walls and with the slots for said slats extending through said spaced side walls of the rafters, and whereby the slats are each engaged and supported at two substantially spaced points along the slat by each rafter.

2. In a slat awning as set out in claim 1, the rafters being straight from upper ends down to adjacent the lower ends and the extreme lower outer ends of the rafters provided with downwardly curved extensions and the series of slats also curved downwardly with and across said curved extensions.

3. In a slat awning comprising rafters supporting a series of spaced thin flexible slats passing through slots

in the rafters said rafters being of hollow sheet metal construction having substantially spaced side walls and a gable-roof-like top wall and with the slots for said slats extending through the spaced side walls of the rafters and extending into the said gable-roof-like top wall.

4. In a slat awning comprising rafters supporting a series of spaced thin flexible slats passing through slots in the rafters means adapted to support one end of the rafters to a building, a bar extending transversely of and supporting the outer ends of the rafters, and a sheet metal hollow beam extending along the outer ends of said rafters and embracing said bar, and means securing said beam to said rafters.

5. In a slat awning comprising rafters supporting a series of spaced slats passing through slots in the rafters means adapted to support one end of the rafters to a building, a bar extending transversely of and supporting the outer ends of the rafters, and a sheet metal hollow beam extending along the outer ends of said rafters and embracing said bar, and means securing said beam to said rafters, said rafters extending partially about said beam, and being secured thereto.

6. In a slat awning comprising rafters supporting a series of spaced slats passing through slots in the rafters mean adapted to support one end of the rafters to a building, a bar extending transverely of and upporting the outer ends of the rafters, the rafters being extended beyond said bar and having their outer ends curved downwardly over said bar, said outer ends having aligned slots therein and some of said slats being supported in the slots in said outer ends.

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