

July 15, 1952

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2,602,971

ALUMINUM LOUVER SUNSHADE

Filed Jan. 30, 1950

Fig. 1.

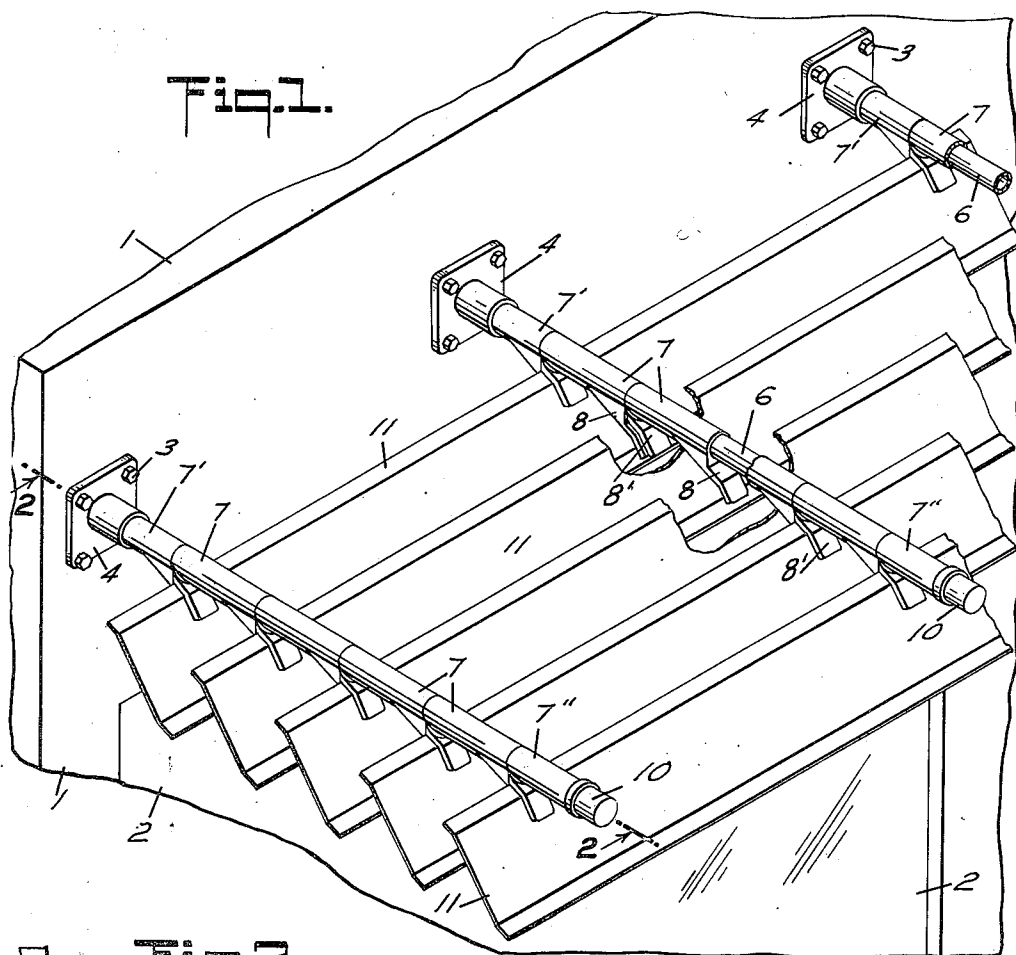


Fig. 2.

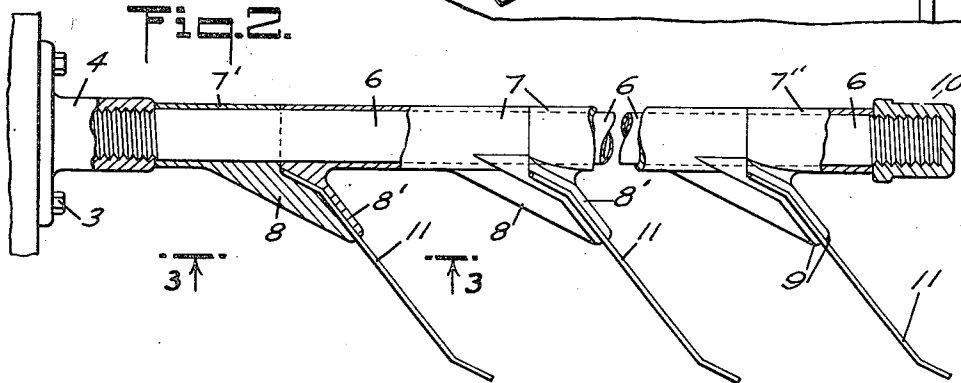
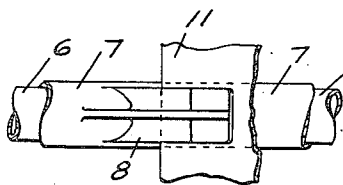


Fig. 3.

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2,602,971

ALUMINUM LOUVER SUNSHADE

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Application January 30, 1950, Serial No. 141,255

4 Claims. (Cl. 20-57.5)

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This invention relates to an aluminum louver sunshade.

The word "aluminum" is used advisedly as indicating the best possible material, but is not intended to exclude other light reflecting materials if the maker is content with less effectiveness.

The object of this invention is the softening of sun-glare, especially with respect to store fronts, shop fronts and the like, where its effects are detrimental or uncomfortable.

A subsidiary object is to construct a sun glare softener that will not accumulate snow loads in winter or be susceptible to wind gusts and require a load bearing capacity of say 40 to 50 pounds per square foot, as building codes require of marquees.

A functional object is to soften glare to prevent bleaching of window displays, and to substantially lower the temperature on the sunny side of a building.

A further object is to eliminate the raw glare of a cement sidewalk that is directly hit by sunshine on hot days; and last, but by no means least, to furnish a glare shield that is capable of reducing inner room temperatures as much as ten degrees Fahrenheit, the room, such as a store, being fronted with glass display windows.

Other objects are hereinafter pointed out, particularly in the claims which conclude this disclosure.

A drawing accompanies and forms a part of the disclosure, showing a preferred form of construction, when erected over the outside of a show window.

In the drawing:

Fig. 1, in perspective, shows a fragment of a building wall, a portion of a window therein and a part of an aluminum louver sunshade over the window, supported by the wall. Parts are broken away and the structure is foreshortened as will be explained;

Fig. 2 is a section taken on the plane 2-2, Fig. 1; and

Fig. 3 is a section taken on the plane 3-3 of Fig. 2, the main structure upon which the section is taken having been foreshortened.

Describing the structures shown in the drawing and explaining them in greater detail.

Numeral 1 represents a fragment of a store front within which is mounted the customary plate glass window 2.

Suitably fastened, as by bolts 3, to the store front 1, are a plurality of suitable brackets 4, which in turn serve as mountings for the same number of generally horizontally extending sup-

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ports 6, here shown as pipes, over which matching sleeves 7, are slipped. Each of the sleeves 7 is formed with angularly extending jaw portions 8 and 8', as to those sleeves used in median position which have both the jaws 8 and 8', and the sleeves 7' and 7'' which have a single jaw, but at opposite ends of the sleeve.

The jaws of whatever designation are so formed that they match together and complete a louver blade clamp as indicated by the numeral 9 in Fig. 2. The screw pressure required is supplied by turning up the threaded cap 10 that screws onto the end of the pipe 6. Each clamp 9 grips a louver blade 11 and since, in the illustrated form, the edges of the blades 11 have been bent to a suitable angle, in this case about 22½ degrees, and the jaws in all cases made to conform, the louver blades 11, need no drilling of holes and the spacing of the brackets 4, need not be the same, as they are not spaced on the longitudinal line to match holes in the louver blades as would be needful with pre-drilled holes.

It is to be understood that this mounting is merely the best one I have been able, so far, to devise, but is not of the essence of the invention, considered alone.

Coming now to a description of the louver blades, which, as described, are bent at an angle along their upper edges for the purpose of constructing an excellent form for the clamping means shown and are also bent at the same angle along their bottom edges. This latter was done for appearance sake, as it was thought to promote a more pleasing appearance. Whether or not it has a measurably better effect in dispersing and softening sun glare is a difficult thing to determine. It is thought that it has but this is not certain. Also placing the blades 11, dependent from the pipes 6, is another thing that was done to promote pleasing appearance. The blades, apparently, do just as good work when laid above the pipes 6, which can be done at will with the same fittings as described.

For the best structure that extensive try-outs have so far produced, the louver blades here shown are dependent from their mountings at something like 40 degrees and may, depending on latitudes, be dependent as much as 55 degrees or more. It is to be noted that when the sun rises to an apparent point where bright sunlight strikes the louver blades 11, at a downward angle, either directly or slantingly in any latitude excepting zero at meridian, the light will be reflected from the point where it strikes, on one blade, to the underside of the next blade spaced from the one

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where it strikes and be reflected again, to pass downwardly between the louvres towards the window or a sidewalk, which has been omitted for lack of space; and the plural reflections which the light must undergo disperses its energy and softens the glare to a point where it is effectually eliminated.

It is easily seen that the louver blades 11 may be made wider, in which case they can be spaced further apart than shown, relatively; the angles may be changed with different widths of louver blades, and many variations may be chosen, or they may be made adjustable; but the invention will nevertheless remain the same.

An unexpected function was discovered when these blades were first put into service during the immediately preceding summer. The bright aluminum blades almost immediately get so hot when the sun is bright that we find a thermal unit created. Air from below passes up through between the blades, and absorbs the heat, thus promoting a change of atmosphere in front of the window and above the sidewalk.

As indicated, the spacing apart of the louver blades will vary with their width, the main function being to intercept the direct rays of the sun and overcome their inherent glare by a plural reflection of the greater part of the rays intercepted.

As will be noted at a glance, snow will not accumulate on the louver blades in sufficient quantity to constitute a menacing overload, especially if the lower edge of the blades are planar; nor will gusts of wind find a gripping point to endanger them, if reasonably well mounted.

Having fully disclosed my invention so that its value can be seen and made useful by the building construction art, what I claim as new and desire to secure by Letters Patent is:

1. A light dispersing sunshade for mounting above a window, or the like, comprising a plurality of horizontal tubular louver supports, louver clamps comprising tubular sleeve members to slip over said first named tubular supports, dependent clamp jaws on adjacent louver holding ends of said sleeve members that are adapted to hold light dispersing louvres at a light intercepting angle of the order of forty to fifty-five degrees below horizontal, bright aluminum louvres clamped in dependent angular position between the sleeves, the said louvres being of a width that is at least as great as the spacing distance between the said louvres and screw clamping means for gripping the jaws to said louvres.

2. An aluminum louver light reflecting and glare dispersing sunshade, comprising a plurality of rigid horizontal tubular supports, clamping sleeves, as claimed in claim 1, in which the louver blades are bent at an angle, with the said clamp jaws formed to match the bent edge of said louver blades.

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3. A bright metal glare dispersing window shade comprising a plurality of horizontally projecting tubular shade supports in the form of an awning support above a window or the like, said supports in horizontal spaced position, a plurality of louver blade gripping jaw sleeve members having tubular portions that slidably fit over said shade supports, there being at least one-half part of a louver clamp on each sleeve, said clamps adapted to securely hold a louver blade when screw pressed endwise thereagainst, screw cap means on each of said supports that bear against the total assembly of blade gripping jaws, the said jaws formed to hold dependent louver blades therebetween at a light intercepting and reflecting angle of the order of forty to fifty-five degrees below horizontal, aluminum louver blades securely held between the parts of said clamps and being of such width and such horizontal spacing apart that sun rays will be reflected from the top surface of any given louver blade against the under side of another blade.

4. A glare dispersing awning like structure for protecting merchandise displays against direct sun glare, comprising a plurality of horizontal support members projecting outwardly above a display window or the like, slidable tubular clamp members mounted on said supports, louver clamp jaws made unitary with said slidable clamp members, there being a mating jaw part on each of two clamps forming a pair of jaws, aluminum sun reflecting louver blades securely held in dependent angular spaced position beneath each pair of clamp members, a dependent aluminum angularly supported louver blade held between each pair of jaws, each of said blades being of such width, held at such angle and being so spaced from its next nearest companion blade, that sun rays striking any blade directly on an upper surface will be reflected to be intercepted by the under side of the next adjacent blade, before passing through the said awning by a second reflection.

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