

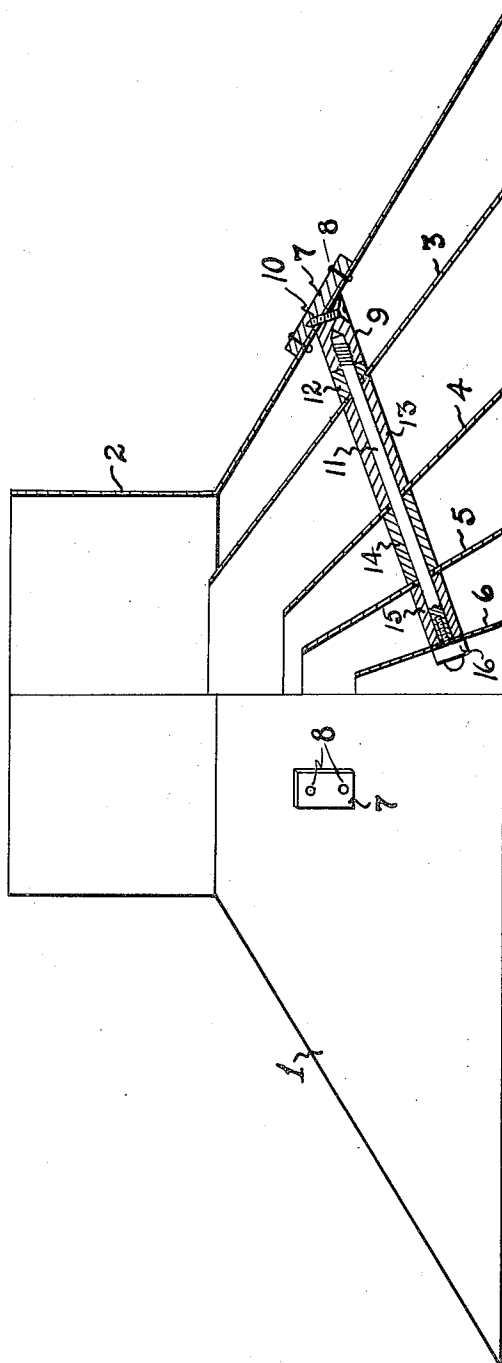
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LOUVER CONSTRUCTION

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LOUVER CONSTRUCTION

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1 Claim. (Cl. 98—40)

This invention relates to improvements in the construction of louvers or air diffusing devices adapted to be attached to the end of air discharge conduits for the purpose of diffusing the air as it is discharged from the conduit so as to reduce its velocity and at the same time to prevent the production of noise which would otherwise be caused by the outrushing air.

The general object of the invention is the provision of a novel form of spacing and securing means by which the elements of the diffuser are firmly connected together in the proper spaced relation.

Other and more detailed objects of the invention will be apparent from the details of the embodiment thereof illustrated in the attached drawing for the purpose of setting forth one example of the invention.

This invention resides substantially in the combination, construction, arrangement and relative location of parts, all in accordance with this disclosure.

In the accompanying drawing, the single view illustrates a device in accordance with this invention showing one portion thereof in elevation and one portion in vertical, central, cross-sectional form.

The device to which the improvements of this invention are applied is in commercial use under the trade name "Anemostat." Such a device is intended to be applied to the discharge outlet end of air-conditioning conduits which frequently, but not necessarily, discharge into the space to be air-conditioned from the ceiling. The quantity of air and the velocity with which it is moved through the conduits is such that should the air be allowed simply to issue from the unobstructed end of the conduit considerable noise would be generated and drafts created. In order to avoid these difficulties, the devices of this nature have been developed for application to the discharge end of the conduit for the purpose of reducing the velocity of the air to a point where noise and drafts are substantially eliminated and the air is diffused over a large area in relation to the area of the discharge conduit. In addition, such devices are desirably made in decorative form in order to blend in with the architectural characteristics of the space being air-conditioned.

The "Anemostat" is a form of such devices consisting of a plurality of nested concentric truncated cones connected together in spaced relation. In commercial practice the construction of such devices tends to be more expensive by reason of the constructions now employed for connect-

ing these cones together. In addition, the previously used methods do not form as strong and sturdy a structure as is desirable. If the cone members are not rigidly anchored the movement of air thereover tends to cause them to move and vibrate, which, of course, is not desirable. In accordance with this invention a simplified inexpensive construction is provided by means of which the conical members of such a device are firmly united together in the proper spaced relation.

As illustrated in the drawing, the device includes a plurality of truncated cones nested together, and of course, therefore, of decreasing diameter inwardly. The outermost truncated cone is illustrated at 1 and is provided at its smaller end with a cylindrical collar 2 by means of which it may be mounted in the conduit opening with which it is to be associated. The innermost cones 3, 4, 5 and 6 are of successively decreased diameters and preferably, as illustrated, flared outwardly from their smaller ends at various angles.

In accordance with this invention, these nested members are united together in spaced relation by three braces arranged 120° apart. Each of these braces consists of a plate 7 of suitable size and material riveted to the outer surface of the outermost member 1 as indicated at 8. An inwardly projecting boss or nut member 9 is secured to the plate by means of one or more machine screws 10, as clearly shown in the drawing. The member 9 is counterbored and threaded to receive the threaded end of a rod 11 which extends towards the center of the device through openings in the members 3, 4 and 5 and abuts against the outer face of the member 6. Surrounding the rod 11 and interposed between adjacent pairs of members are the collars or sleeves 12, 13, 14 and 15 which are of the proper length to hold the members in the desired spaced relation. Their ends are obliquely cut so as to lie flat against the faces of the adjacent members.

At 16 is a cap screw having its threaded end engaged in a threaded bore in the end of the rod 11 so that the parts are all firmly clamped together so that the conical members are gripped between the collars as shown. The provision of three of these braces disposed equidistantly in a circle ensures that the conical members all be firmly united together in proper alignment. These braces are of relatively small size so that they do not materially cut down the area of the air discharge passages between the conical members.

A practical feature of this invention is presented by the fact that the openings in the cones 3, 4 and 5, through which the tie rod 11 passes, are preferably elliptical in form, and in any event are larger than the diameter of the rod, so that the cones and rod may be relatively shifted so as to lie in the proper angular relation. It will be noted that one or both ends of the various sleeves 12, 13, 14 and 15 lie at angles to their longitudinal axes so that these parts must be turned and relatively shifted with respect to the conical members so that all the parts will lie in proper alignment. The construction herein disclosed facilitates the ready assembly of the parts in the proper angular relations. After the parts are assembled by loosening the cap nuts 16, all of the parts may be relatively shifted about until they are all in proper position, at which time the cap nuts are tightened to lock the parts in that position. The structural features of this invention facilitate these manipulations for these desired objects.

From the above description it will be apparent

to those skilled in the art that the novel features of this invention may be embodied in other physical forms, and I do not, therefore, desire to be strictly limited to the disclosure as given for purposes of illustration but rather to the scope of the appended claim:

What I claim is:

In a structure of the type described the combination including a plurality of nested, truncated, conical shields arranged concentrically in radially spaced relation, and means for firmly uniting said shields in such position comprising a rod passing through said shields at an acute angle to their adjacent surfaces, collars mounted on said rod and lying between adjacent pairs of shields, said collars having end faces at acute angles to their axis, and means for attaching said rod to the innermost and outermost shields, whereby said shields are firmly locked in place with respect to each other.

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