

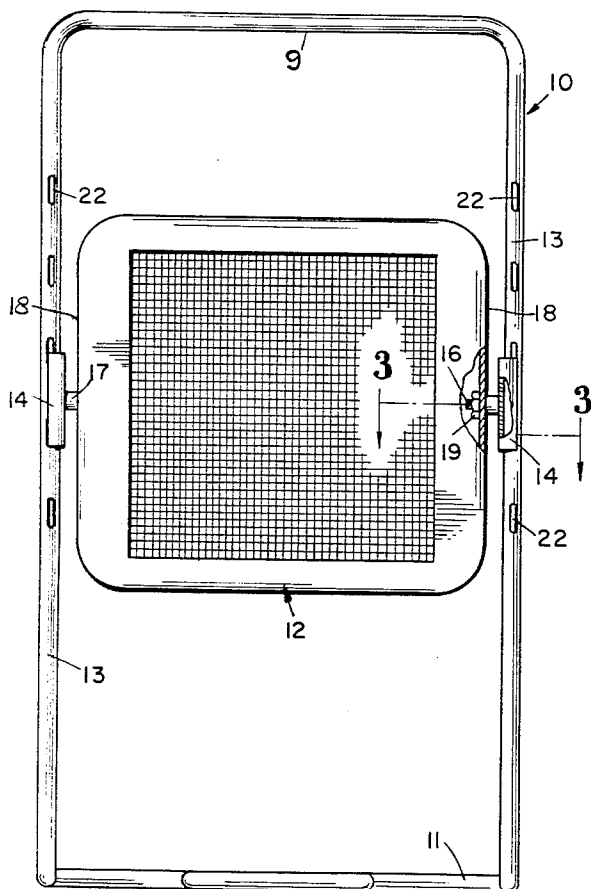
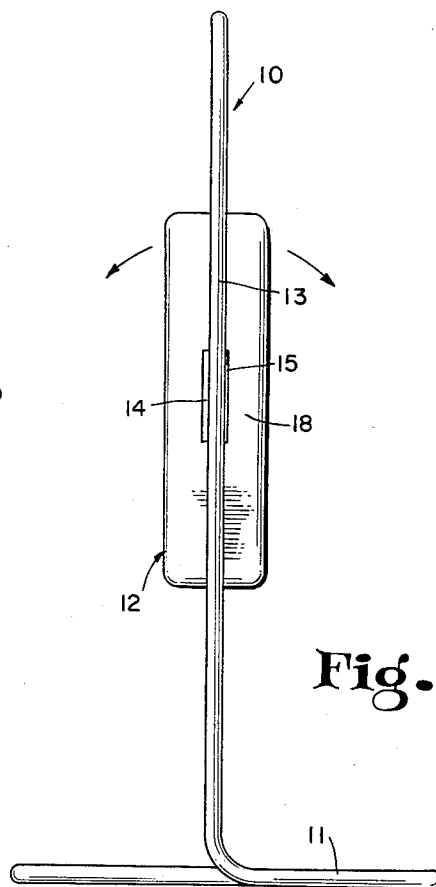
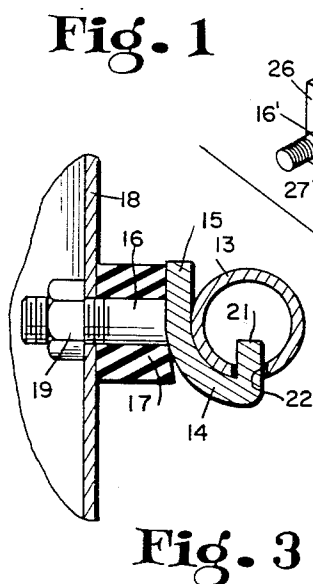
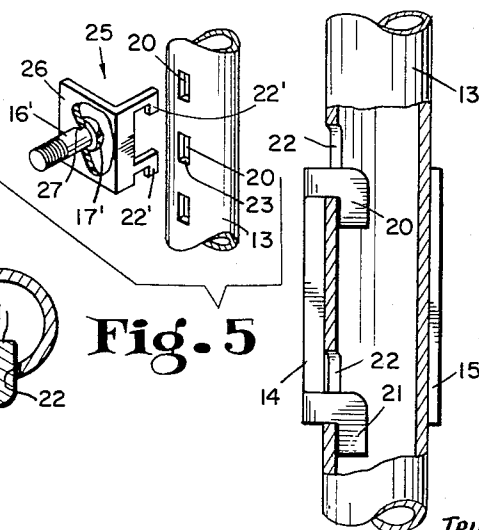
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FAN HOUSING LEVEL HOLDING STRUCTURE

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**FAN HOUSING LEVEL HOLDING STRUCTURE**  
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## ABSTRACT OF THE DISCLOSURE

A fan housing supporting stand comprising a pair of upstanding, parallel standards having a plurality of pairs of slots therein along common sides of the standards; each pair comprising two slots in one standard and two like slots in the other standard at common respective elevations; a pair of bolts, one each engaging opposite sides of the housing; a plate carried by each bolt conforming to the circumferential shape of the standards, abutting opposing sides of the standards, and extending therearound a distance to receive upper and lower hooks engaging over bottom margins of two slots in each pair of each standard.

This invention relates to a structure for carrying a fan housing at variably selected elevations. A primary object of the invention is to provide means for not only supporting the housing but to insure the positioning and the retaining of the housing in level positions at each of selected elevations.

A further primary object of the invention is to permit the housing to be readily attached to a stand and to be shifted readily from elevation to elevation in the absence of having to remove and return supporting bolts and yet permit rocking of the housing on a mounting axis whereby the flow of air from a fan in the housing can be variably angularly directed upwardly and downwardly.

A further primary object is to provide a fan housing support which will be snug fitting in its several parts to prevent vibration and rattle.

Primarily, the invention involves the combination of a pair of upwardly extending standards between which the fan housing is carried by a bracket resiliently attached to each of opposite sides of the housing and directed toward opposing sides of the standards, and there are a pair of spaced apart hooks extending from each bracket to enter detachably slots up and down the standards in common elevation zones.

The invention is embodied in the structure illustrated in the accompanying drawing, in which

FIG. 1 is a front elevational view in partial section;

FIG. 2 is a side elevational view;

FIG. 3 is a view in horizontal section on the line 3—3 in FIG. 4 on an enlarged scale;

FIG. 4 is a detail in partial section in vertical elevation of a plate engagement with a standard; and

FIG. 5 is a view in top perspective and partial section of a modified form of bracket adjacent a post and on a reduced scale.

A frame 10, generally inverted U-shaped, comprises a pair of upwardly extending tubular standards 13 integrally interconnected at the upper ends by a transverse bar. The lower ends of the standards 13 merge into a base 11 which may be of any suitable construction not per se entering into the invention other than being designed to support and resist tendency of the standards 13 against rocking over. The standards 13 may extend upwardly at any desired angle but are herein shown as being vertically positioned.

A conventional fan housing 12 of any shape having opposite sides is herein shown as being rectangular with sides 18. A bolt 16 enters by a threaded end through each

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of these sides at positions equidistant from the housing top or bottom. A nut 19 screw-threadedly engages the bolt from within the housing 12, FIGS. 1 and 3. A resilient washer 17 surrounds the bolt 16 between the housing side 18 and a bracket 14 carried by the bolt 16 having in the present construction an arm 15 constituting a bolt head.

The bracket 14 has a form which fits substantially ninety degrees around a standard 13, from the plate 15 and terminates in spaced apart upper and lower hoods 20 and 21, FIGS. 3 and 4, both being directed downwardly in substantial parallelism with the arm 15. These plates will be made in right and left forms in respect to the hooks 20 and 21.

The housing 12 will be entered between the two standards 13 by bringing the plate 15 therebetween and then to engage around the standards 13 and present the hooks 20 and 21 in slots 22 on the standards located approximately ninety degrees therearound from the initial contact of the arms 15. These slots 20 are of sufficient height to permit the hooks 20 and 21 to pass simultaneously therethrough and drop downwardly to engage over the bottom margins of the two slots, FIG. 4. The hooks 20 and 21 are made to engage over those margins and the inside faces of the tubular standards 13 to hold the brackets 14 snugly against the outer sides of the standards 13 without vibration under fan operation and thus avoid rattling or the like.

The slots 22 are spaced to have one slot in one standard 13 at the same elevation as a slot on the other standard 13, thereby forming pairs of slots, and the hooks 20 and 21 are spaced apart on each bracket 14 the distances of adjacent slots, a pair of slots being required for each bracket pairs of hooks 20 and 21. The distance of the spacing apart of slots and hooks insures that the fan housing is always supported in a level position regardless of how low or high the engagement of the brackets are with the standards since the brackets 14 cannot be "cocked" in standard engagement.

The housing 12 can be rotatably adjusted about the common axes of the two bolts 16 and be frictionally retained in the desired rotated position by tightening the nuts 19 on the bolts which tends to compress the resilient washer 17, the standards 13 being sufficiently resilient to follow the pull thereon laterally by the hooks 20 and 21, thereby compressively holding the standards 13 against the brackets 14.

The nuts 19 require normally no further adjusting upon changing the elevation of the housing in respect to the standards. The arms 15 serve as guides in reentering the housing 12 and brackets between the standards.

The brackets 14 may take another form as is illustrated in FIG. 5. This modified form is generally designated by the numeral 25. A flange 26 has a hole 27 through which a bolt 16' will extend with a head 17 limiting passage therethrough. This bolt 16' extends through the resilient washer 17 and the fan housing side 18 to receive the nut 19 as in FIG. 3. The bracket 25 will have a pair of vertically spaced apart hooks 21' extending from the flange 26 and are turned downwardly.

The standards 13 will have the same vertically spaced slots 22, but these slots will be rotated ninety degrees, FIG. 5, to have the slots in one standard directly opposite the slots in the other standard in order that the hooks 21' may be entered into the slots 22 and allowed to drop downwardly and engage over the lips 23 at the bottoms of the slots. The hooks 21' may be urged laterally against the sides of the slots 22 adjacent the fan housing sides by tightening the nuts 19.

While we have herein shown and described our invention in the forms illustrated, it is obvious that structural modifications may be made without departing from the

spirit of the invention and we therefore do not desire to be limited thereto beyond limitations which may be required by the following claims.

We claim:

1. For a fan housing support, the combination with a housing; of
  - a pair of approximately parallel standards, one on each of two opposite sides of said housing;
  - a bolt extending from each of said two housing sides toward said standards;
  - a member carried on the end of each of said bolts adjacent said standards;
  - a pair of spaced apart, downturned hooks extending from each of said members toward said standards;
  - a plurality of hook engaging elements carried by and longitudinally spaced along each standard and over a pair of which elements said hooks engage; and
  - means carried by each of said bolts resiliently selectively spacing said members from said housing sides.
2. The structure of claim 1, in which said standards are tubular; and said hook engaging element is the lower edge of a slot in each instance through the wall of the standard.
3. The structure of claim 2, in which there is means holding said standards against radial rotation.
4. The structure of claim 1, in which there is a portion

of each of said members extending between opposing sides of said standards.

5. The structure of claim 3, in which said holding means comprises a bar also maintaining a fixed spacing between ends of the standards.

6. The structure of claim 2, in which said spacing means comprises a resilient tubular member and said housing side; said bolt passes through said housing side to the interior of the housing; and a nut screw-threadedly engages the end of the bolt within the housing to bear against the housing and squeezes said tubular member and to draw said hooks against sides of said slots.

7. The structure of claim 1, in which said members extend circumferentially around portions of said standards.

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