

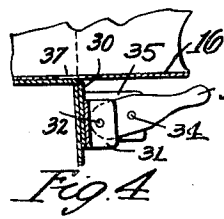
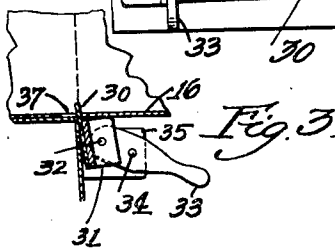
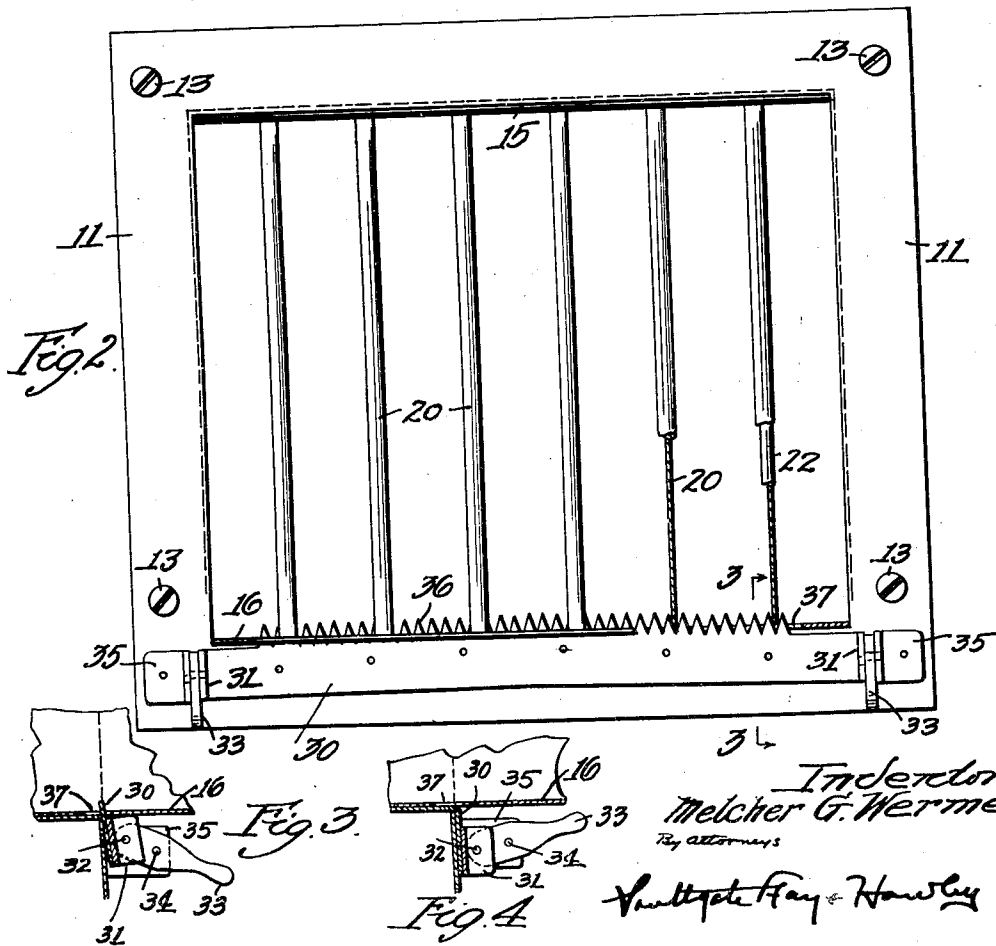
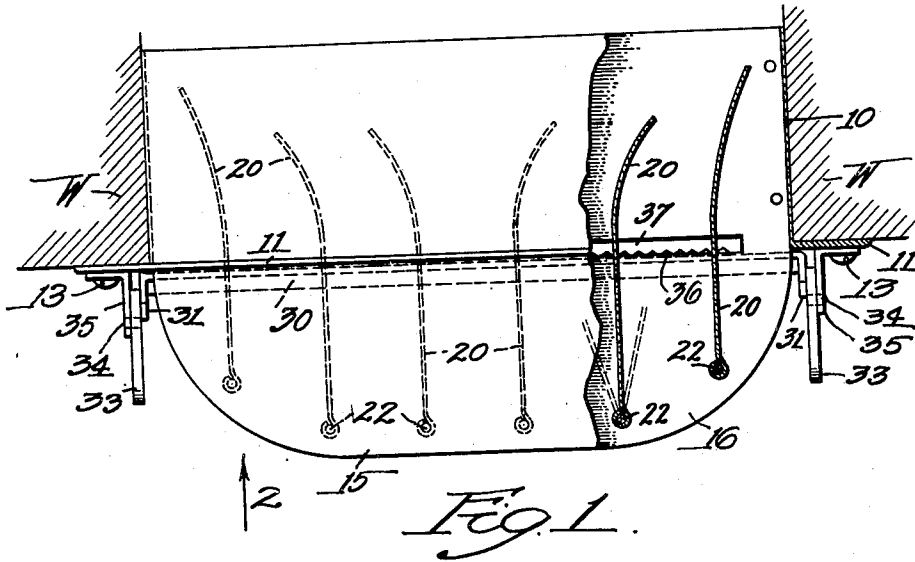
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M. G. WERME

1,793,295

AIR DIFFUSER

Filed Dec. 24, 1928



Indecor
Melcher G. Werme
By attorneys
Vulliamy Hay & Hawley

UNITED STATES PATENT OFFICE

MELCHER G. WERME, OF WORCESTER, MASSACHUSETTS, ASSIGNOR TO WICKWIRE
SPENCER STEEL COMPANY, OF NEW YORK, N. Y., A CORPORATION OF DELAWARE

AIR DIFFUSER

Application filed December 24, 1928. Serial No. 328,219.

This invention relates to a device for controlling the distribution or diffusion of air in rooms or buildings.

It is the general object of my invention to improve the construction of such air diffusers, to the end that they may be more conveniently adjusted to meet operating conditions, and that the parts may be quickly and easily secured in any selected position of adjustment.

In the preferred form, the air is directed by a plurality of vanes, and provision is made for separate and independent adjustment of each vane, while a common locking device is provided for the entire set of vanes.

My invention further relates to arrangements and combinations of parts which will be hereinafter described and more particularly pointed out in the appended claims.

A preferred form of the invention is shown in the drawings in which

Fig. 1 is a plan view, partly in section, of my improved air diffuser;

Fig. 2 is a front elevation thereof, looking in the direction of the arrow 2 in Fig. 1;

Fig. 3 is a sectional end elevation, taken along the line 3—3 in Fig. 2; and

Fig. 4 is a view similar to Fig. 3 but showing the parts in a different position.

Referring to the drawings, my improved air diffuser comprises a rectangular casing 10 provided with a front face or flange 11. The casing 10 is commonly inserted in an opening through a wall or partition W, with the flange or facing 11 secured against the surface of the wall in any convenient manner, as by screws 13.

The top and bottom members of the casing project outward into the room or building to be ventilated, as clearly indicated at 15 and 16 in Fig. 1.

A plurality of vanes 20 are provided for the casing 10, and each of these vanes is preferably pivoted at its front or inner end on a vertical rod 22 (Fig. 2) riveted or otherwise secured in the casing extensions 15 and 16. The vanes are preferably formed of sheet metal and the inner or forward edges thereof are conveniently bent to provide bearing portions, as indicated in Fig. 1.

The rear ends of the vanes 20 are prefer-

ably curved to varying radii, as indicated in Fig. 1, and the vanes at the opposite side of the diffuser are preferably mounted in reversed relation, so that the rear portions of all of the vanes curve outward away from the central vertical plane. The vanes 20 are freely movable angularly on their pivot rods 22 and may be set manually in any desired position.

For locking the vanes in adjusted position, I provide a serrated bar 30 having flanges 31 at its ends, pivoted at 32 to locking levers 33, which in turn are pivoted at 34 to brackets 35 secured to the flange or facing 11 of the casing 10. Teeth or serrations 36 on the upper edge of the bar 30 project through a slot or opening 37 (Figs. 1 and 3) in the bottom of the casing 10 and directly engage the vanes 20 when the bar is raised.

When it is desired to change the adjustment of the vanes, the hand levers 33 are moved from the position shown in Fig. 3 to the position shown in Fig. 4, thus depressing the serrated bar 30, so that the teeth 36 will then clear the lower edges of the vanes 20. Each vane 20 may then be adjusted manually to any desired angular position, as indicated in dotted lines in Fig. 1.

After the vanes have been thus separately and selectively adjusted, the levers 33 are returned to the position shown in Fig. 3, thus raising the serrated bar 30 and locking each vane in its separately adjusted position. The joints of the locking device are somewhat snugly fitted, so that the bar will remain in either raised or lowered position, as desired.

I have thus provided a very simple device for quickly locking a plurality of vanes, and for releasing the vanes to permit separate and independent adjustment thereof. The entire diffuser may be easily and economically manufactured and is found extremely satisfactory in use.

Having thus described my invention and the advantages thereof, I do not wish to be limited to the details herein disclosed, otherwise than as set forth in the claims, but what I claim is:—

1. An air diffuser comprising a casing, a plurality of air directing vanes pivotally

mounted therein, and a single locking bar effective to hold each of a plurality of vanes in a separately selected angular position, said locking bar having a serrated vane-engaging edge.

5 2. An air diffuser comprising a casing, a plurality of air directing vanes pivotally mounted therein, a single locking bar effective to hold each of a plurality of vanes in
10 a separately selected angular position, and manual means to move said bar to and from engagement with said vanes, said vanes being independently adjustable manually when
15 unlocked and said manual means comprising spaced hand levers by which said single bar may be quickly moved to locking and unlocked positions.

In testimony whereof I have hereunto affixed my signature.

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MELCHER G. WERME.

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