April 29, 1952 E. SHAPIRO 2,594,688

HINGED DOOR AND MOTOR SUPPORT FOR WINDOW COOLERS

Filed Feb. 17, 1950

Fig. 1

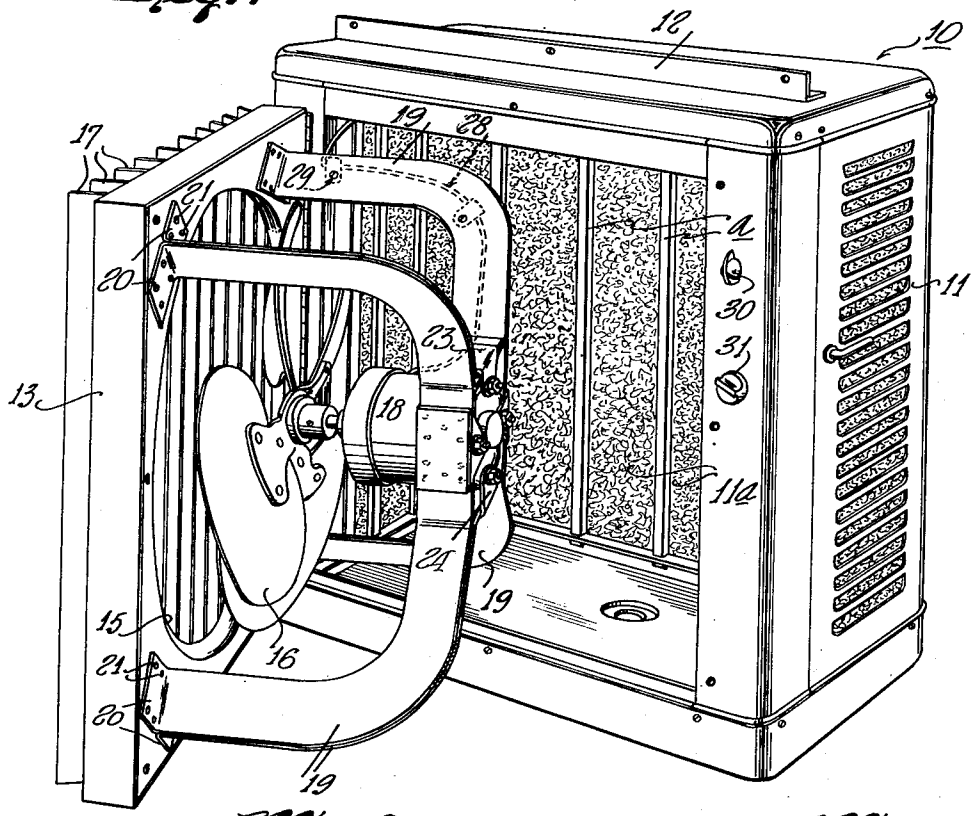


Fig. 2

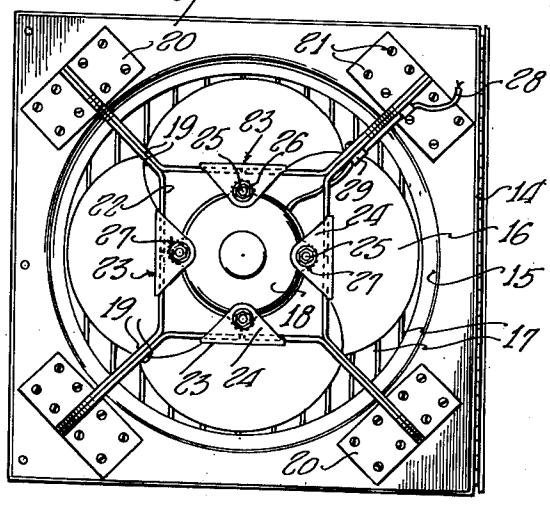
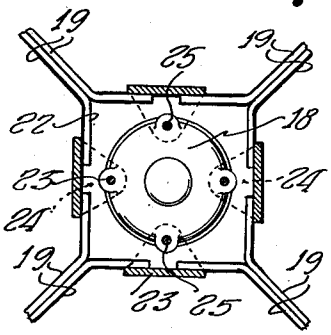


Fig. 3



ELI SHAPIRO
INVENTOR.

BY

ATTORNEY

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HINGED DOOR AND MOTOR SUPPORT FOR WINDOW COOLERS

Eli Shapiro, Dallas, Tex., assignor to Dearborn Stove Company, Dallas, Tex.

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1 Claim. (Cl. 183—37)

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This invention relates to evaporative coolers and more particularly to new and useful improvements in such coolers designed for installation in windows.

Window coolers, especially of low C. F. M. capacity are conventionally serviced from the outside, that is to say, access to the motor, fan and other internal elements is gained by removing one or more of the filter mats and, as a matter of fact, the mats themselves are required to be removed and replaced from the exterior. Such installations are inconvenient and difficult to service, especially in cases where the cooler is installed in windows above the ground floor.

The principal object of the present invention is to provide a window cooler having the usual filter mat assembly, water reservoir and pump but which is equipped with a louvered door or front panel hinged along one vertical edge to the cooler cabinet. The door offers a support for the fan or blower and its motor, these elements being sustained in proper relationship with the inner surface of the door by a novel form of mounting. Thus, the interior of the unit is made accessible from the inside of the room for convenient servicing.

Another object of the invention is to provide a fan and motor mounting in the form of a spider made up of four pairs of metal straps, each pair of straps being secured together in flush relationship to define a leg which is affixed to the rear surface of the cooler door to extend inwardly of the cabinet. The inner ends of the legs are curved into confronting relationship and the straps of each pair are separated in such manner that the pairs of straps collectively form a frame supporting the motor. This arrangement makes for convenience and economy since the size of the motor supporting frame can be varied to accommodate motors of different sizes through the simple expedient of changing the location of the bend in the straps of the legs at their confronting ends.

Other objects will appear as the description proceeds, taken in connection with the accompanying drawings, wherein:

Figure 1 is a front perspective view of a window cooler embodying the invention, showing the door open to reveal the fan motor mounting.

Figure 2 is a rear elevational view of the door and motor mounting, and

Figure 3 is a fragmentary rear elevational view of the motor mounting per se, partly in section.

Continuing with a more detailed description

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of the drawing, reference numeral 10 denotes generally the shell or cabinet of the cooler, which has a louvered and removable panel 11, constituting both the rear and sides of the cabinet against which is disposed a group of air filter mats 11*a*, supported by removable bars *a*. A cleat 12 is affixed to the top of the cabinet and is adapted to bear against and be secured to the lower portion of the lower window sash frame when the latter is moved against the top of the cabinet in operative position in a window, thus to hold the cabinet in place.

Important in the construction of the cabinet however is the door 13 which is connected to the cabinet by means of a hinge 14, coextensive with one vertical edge of the door. The door has a central opening 15 through which air is discharged by a fan 16, the direction of the air being controlled by adjustable louver blades 17.

In order to facilitate repairs and replacements within the cabinet 10, the motor 18 operating the fan 16 is mounted on the inner face of the door 13. The motor mounting is comprised of four pairs of metal straps 19, the straps of each pair being of identical width and length and secured in flush relationship as by riveting or spot welding. The straps are each turned at right angles at one end to form flanges 20 which are apertured to receive screws 21, affixing the same to the inner surface of the door 13, as shown. Each pair of straps forms a leg of the spider produced by the strap assembly and each of said legs is curved towards a common central point where the individual straps of each leg are spread apart at different angles, the straps collectively defining a substantially square frame 22. When their juxtapositioned ends are joined together by gusset plates 23 welded to and bridging the ends. The plates 23 are each bent at right angles to define motor supporting lugs 24 apertured to receive bolts 25 which carry nuts 26 bearing against rubber grommets 27, the latter being effective to prohibit transmission of vibration from the motor and fan to the cabinet through the mounting.

Current is supplied to the motor 18 through wires 28 which are secured alongside one of the mounting legs by clips 29 and which extend to the upper corner of the hinged edge of the door 13, thus to be out of the way while servicing the machine. Suitable controls for the pump and motor circuits are designated at 30 and 31 respectively (Fig. 1).

Manifestly, the construction as shown and described is capable of some modification and

such modification as may be construed to fall within the scope and meaning of the appended claim is also considered to be within the spirit and intent of the invention.

What is claimed is:

In a window cooler cabinet, the combination comprising louvered ends and rear walls, a top and bottom defining said cabinet, a group of filter mats in said cabinet, a louvered door hinged along one vertical edge to cover the front of said cabinet, a fan motor and fan for influencing air through said cabinet for discharge into a room, means supporting said motor and fan comprising a group of four metal straps, each having a curved end portion outwardly divergent from its midsection, the curved portions of the straps of said group being joined one to another in flush parallelism to define reinforced legs and a substantially square frame spaced inwardly of said door for supporting said motor, one of legs being affixed to the inner face

of said door at each corner thereof, a plate affixed to the midsection of each side of said frame having a perforated ear formed thereon, means for securing said fan motor to said ears, a rubber grommet interposed between said motor and said ears and means for holding said door in closed position.

ELI SHAPIRO.

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