Dec. 24, 1940. V. F. C. AUGUSTINE 2,225,963

WINDOW AIR COOLER

Filed July 18, 1939

Fig. 1

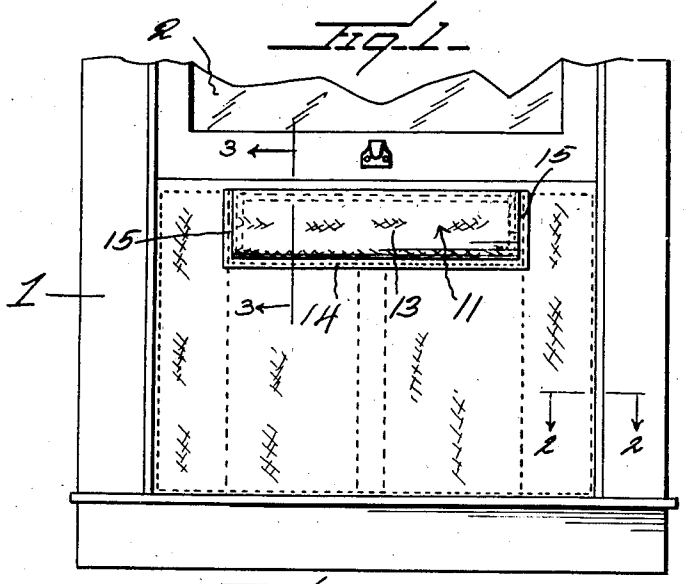


Fig. 2

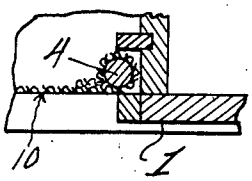


Fig. 5

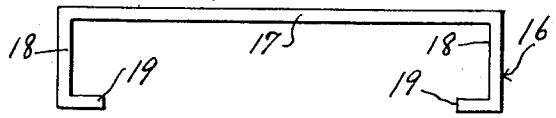


Fig. 3

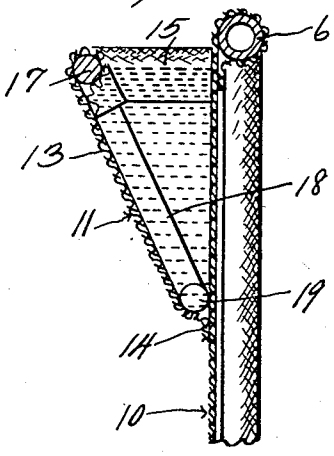
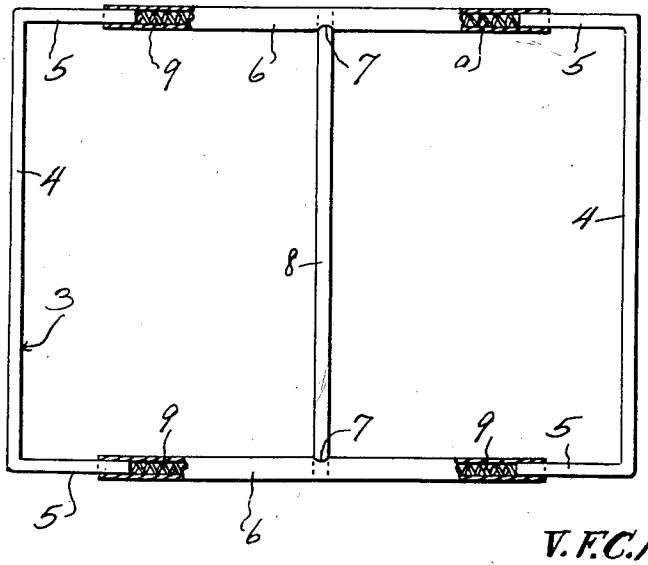


Fig. 4



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WINDOW AIR COOLER

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Application July 18, 1939, Serial No. 285,152

3 Claims. (Cl. 156—14)

This invention relates to air cooling devices and pertains particularly to improvements in devices designed for insertion into a window opening for the purpose of cooling the surrounding air.

The present invention has for its primary object to provide a window air cooler which is designed to be readily inserted into a window opening to be held in position therein by the window sash and which is made up of a woven fabric body which is supplied with water so that it will be kept moist and the air contacting therewith will be cooled by the evaporation of the water of the fabric.

Another object of the invention is to provide a device of the above described character which is designed so that it will adjust itself to the width of the window and to a certain extent automatically hold itself in position.

A still further object of the invention is to provide a window air cooler which is of simple construction and which may, therefore, be economically made and sold.

The invention will be best understood from a consideration of the following detailed description taken in connection with the accompanying drawing forming part of this specification, with the understanding, however, that the invention is not to be confined to any strict conformity with the showing of the drawing but may be changed or modified so long as such changes or modifications mark no material departure from the salient features of the invention as expressed in the appended claims.

In the drawing:

Fig. 1 is a view in front elevation of the device embodying the present invention showing the same installed in a window.

Fig. 2 is a sectional view on the line 2—2 of Fig. 1.

Fig. 3 is a sectional view on the line 3—3 of Fig. 1.

Fig. 4 is a view in elevation of the frame device per se.

Fig. 5 is a view in side elevation of the water receptacle supporting frame.

Referring now more particularly to the drawing, the numeral 1 generally designates the frame of a window in which the device embodying the present invention is shown mounted, this frame housing or enclosing the usual sash 2.

The device embodying the present invention consists of an adjustable or expansible frame designated generally by the numeral 3 and comprising two side portions each having a central vertical part 4 and right angularly turned or directed terminal portions 5, the terminal portions being connected together by tubular connectors 6. As shown, each of the tubular connectors receives in its end an end of a terminal portion 5 of a side member of the frame and each tubular connector intermediate its ends has an opening 7 in which is received an end of a center vertical brace or stay bar 8.

Within each tubular connector 6 are two expansion springs 9, these springs being disposed upon opposite sides of the inserted end of the stay 8 and bearing at their outer ends against the inserted end portions 5 of the side members of the frame. It will thus be seen that the frame structure 3 has, through the medium of each connector 6 and the two portions 5 joined therewith, a longitudinally extensible horizontal side. One of these longitudinally extensible sides rests upon the window sill in the plane of the sash 2 while the other extensible side is engaged by the bottom rail of the sash, the bars 4 of the side portions bearing against the vertical sides of the window frame.

The extensible frame 3 is covered by a canvas covering which is indicated by the numeral 10. This canvas is preferably of about 10-ounce weight although it may be heavier or lighter as found desirable.

At one side of the canvas body 10 and adjacent the top of the frame 3, there is secured to the canvas body, an upwardly opening canvas tank 11 which is made of canvas of slightly heavier weight than the frame filling body 10. Where the canvas 10 is of 10-ounce weight, the tank canvas 11 may be of 12-ounce weight and this tank is made up of an outer wall panel 13 which is secured along its lower edge, as at 14, to the canvas body 10, and the triangular end panels 15 which are integral with or sewed to the side panel 13 and have their inner vertical edges sewed to the frame canvas 10 as shown.

In order to maintain the tank 11 against collapse there is provided a spreader frame which positions upon the inner side of the tank wall 13 and which is indicated generally by the numeral 16. This tank frame consists of a top bar 17, the right angularly extending side bars 18 which are integral with the top bar, and the inturned terminal portions or feet 19 which are integral with the side bars 18. The bar 17 extends along the top edge of the panel 13 of the tank while the end bars or side bars 18 extend along or across the ends of the side wall panel and the terminal or foot portions 19 are directed inwardly in opposed relation at the bottom edge

of the panel 13 where it is stitched to the canvas body 10. The tank frame 16 may be secured to the canvas of the tank in any suitable manner as by stitching or the like. It will thus be seen that this frame will maintain the tank open at all times so that water may be poured into the top thereof.

In the use of the present device, the frame 3 may be inserted into the window opening or frame, the frame 3 being decreased slightly in width by forcing the side members 4 together against the springs 9 so as to facilitate the insertion of the device in the window frame. The tank 11 will be upon the inner side of the window and the sash 2 will be lowered against the top horizontal bar or side of the collapsible frame. Water is then poured into the tank 11 and this will slowly seep through the canvas material and be absorbed by the canvas wall 10 so that the latter will be maintained constantly in a moist condition. Thus as the air moves in contact with the canvas 10, it will be cooled by the evaporation of the moisture.

It will be understood from the foregoing that the device embodying the present invention may be made in a number of sizes to fit windows of different size and that by reason of the construction which permits the side members 4 to be forced together to a certain extent, it will be readily apparent that a device of one size might be adjusted to fit windows of several different sizes where the differences between the window sizes are not great.

What is claimed is:

1. A window air cooler, comprising a rectangular frame adapted to be inserted within a window frame beneath the sash and having top and bottom longitudinally extensible bars whereby the frame may be adjusted for width, a canvas body covering said frame, a canvas water receptacle secured to a side of said canvas body adjacent the top of the frame, said receptacle consisting of an outer wall portion stitched along its lower edge to the canvas body and end wall portions each stitched along a vertical edge to the canvas body, the said canvas body forming the inner side of the receptacle, and a frame for the receptacle which is formed to outline the outer wall thereof and which is secured thereto to maintain the receptacle in open condition.

2. A window air cooler, comprising a rectangular frame adapted to be inserted within a window opening beneath the sash and having top and bottom longitudinally extensible bars facilitating the adjustment of the frame for width, said extensible bars being connected by vertical end bars, a canvas body covering said frame, a canvas water receptacle secured to one side of the canvas body and consisting of an outer wall portion secured along its lower edge to the canvas body and end wall portions of triangular form stitched to the outer wall portion at the ends thereof and to the canvas body whereby to dispose said outer wall portion at an upwardly and outwardly extending angle to the body, and a frame outlining said outer wall portion of the receptacle and comprising a top bar extending along the top edge of the said portion, end bars extending downwardly along the ends of said portion, and short inturned terminal fingers at the ends of said end bars which are stitched between the canvas body and the said outer wall portion whereby oscillation of the frame together with the said outer wall portion of the receptacle is permitted relative to the canvas body.

3. A window air cooler, comprising a frame formed for insertion in a window opening beneath the sash therein, an absorbent fabric covering the frame, means forming a water receptacle upon the side of the covering comprising a panel of fabric secured along one edge to the covering and having each of two opposite edges connected to said covering, the panel extending upwardly and outwardly from the covering to form with the covering the said receptacle, and a stiffening frame secured to the panel and maintaining the receptacle in opened condition.

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