Jan. 8, 1929. 1,698,328

J. J. DUFFIE

ADJUSTABLE CLAMPING FRAME FOR VENTILATING FANS

Filed Aug. 29, 1927 2 Sheets-Sheet 1

Fig. 1.

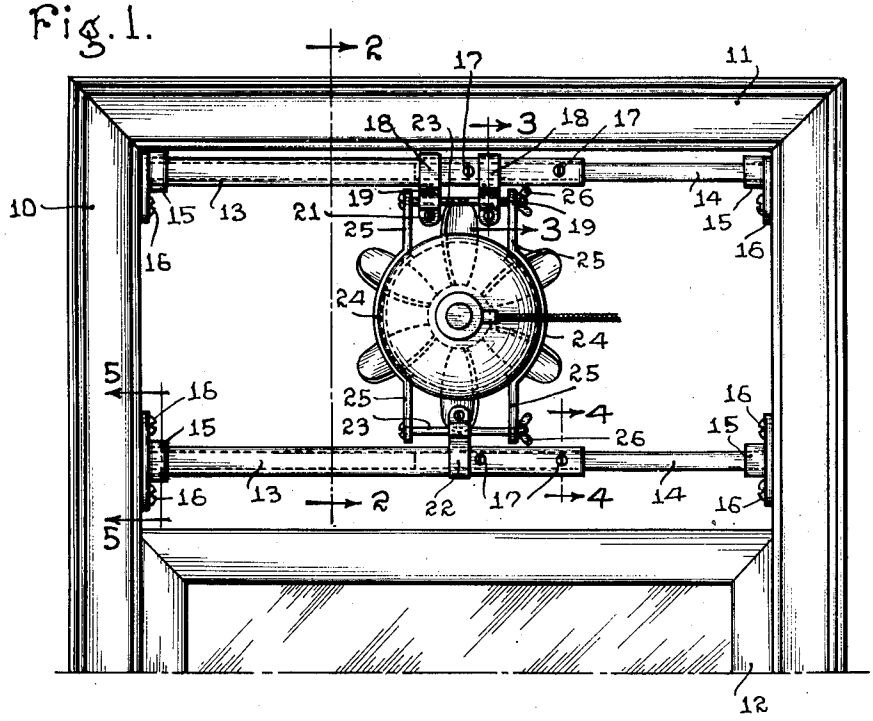


Fig. 2.

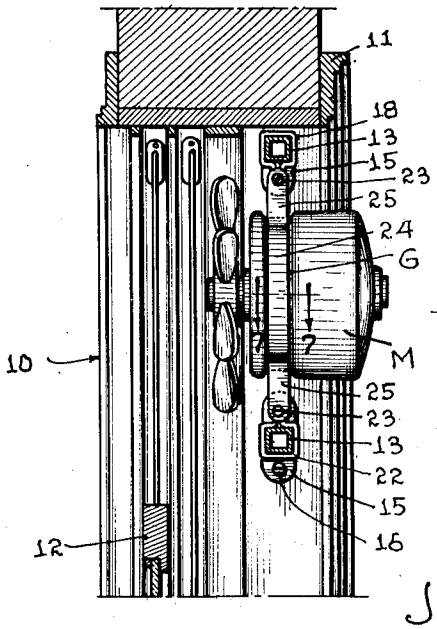
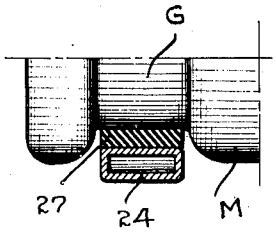


Fig. 7.



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Fig.3.

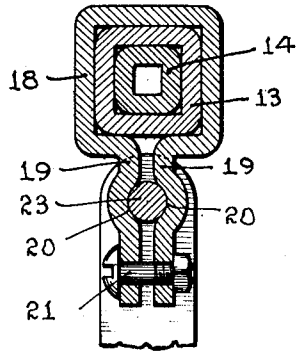


Fig.4.

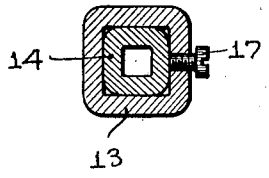


Fig.5.

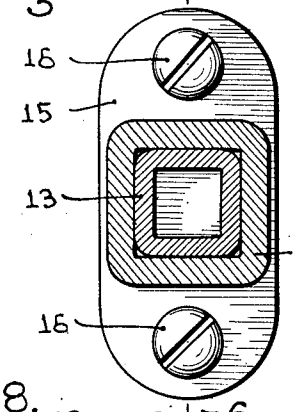


Fig.6.

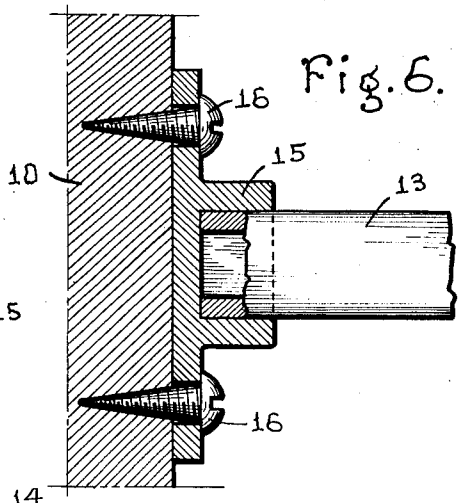


Fig.8.

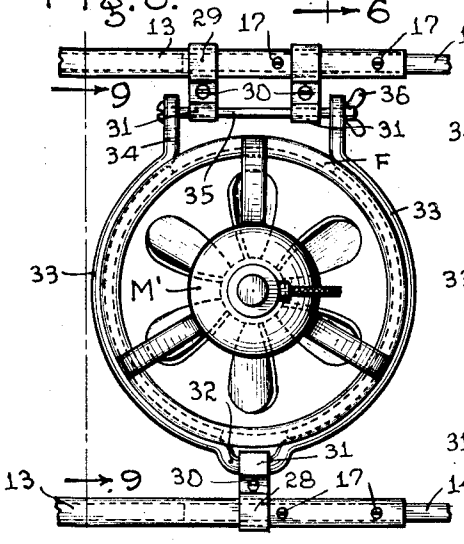
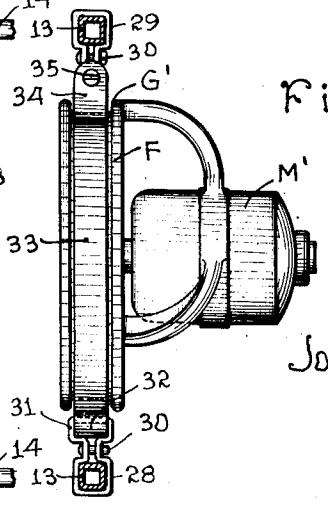


Fig.9.



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UNITED STATES PATENT OFFICE.

JOHN J. DUFFIE, OF NEW YORK, N. Y.

ADJUSTABLE CLAMPING FRAME FOR VENTILATING FANS.

Application filed August 29, 1927. Serial No. 216,232.

This invention relates to motor driven fans of the type used generally as exhaust fans for driving hot or foul air from a room or other structure provided with window openings.

More particularly the invention relates to a bracket for motor driven fans, the bracket being used to support the fans in the window frame.

Among the objects of the present invention is to provide a support for motor driven fans which may be fitted within any size window frame within the limits of its capacity, which is adapted for ready removal and replacement, will not interfere with the light entering through the window, can be adjusted to have the fan positioned any desired place in the width of the window, will not interfere with the opening and closing of the window by the movement of the sash and which permits the motor driven fan to be quickly removed for repair or other causes without in any way disturbing the fit of the support in the window frame.

With the above and other objects in view as will be presently apparent the invention consists of certain novel details of construction which will now be described and specifically claimed, reference being had to the accompanying drawings, wherein:

Figure 1 is a view of the upper part of a window and its frame looking from the inside and showing the device in position supporting a fan and motor.

Figure 2 is a detail section on the line 2—2 of Figure 1.

Figure 3 is an enlarged detail section on the line 3—3 of Figure 1.

Figure 4 is an enlarged section on the line 4—4 of Figure 1.

Figure 5 is an enlarged detail section on the line 5—5 of Figure 1.

Figure 6 is a section on the line 6—6 of Figure 5.

Figure 7 is an enlarged detail section on the line 7—7 of Figure 2.

Figure 8 is a detail view showing a modified form of support for the motor driven fan unit.

Figure 9 is a side elevation of the modified form taken on the line 9—9 of Figure 8.

In the present embodiment of the invention there has been disclosed a window frame having the usual side members 10 and top member 11 and in this frame are provided the ordinary run ways for a sash 12 which move up and down in the frame.

The invention itself consists of a pair of telescopic struts each composed of an outer tubular member 13 and an inner member 14 which is also preferably of tubular construction. Sockets 15 are provided and are preferably secured to the side members 10 of the frame by screws 16. These sockets are of such size as to fit the ends of the telescopic members 13 and 14 respectively and the telescopic members are held in expanded position by suitable set screws 17 screwed through the members 13 and bearing against the members 14. By this means the struts are held firmly in the window frame in vertically spaced parallel position and obviously can be made of such length as to fit any width of window frame within proper limits.

Moreover, it is obvious that the struts at any time may be collapsed for removal by simply removing the set screws 17. On the upper member 13 is arranged a pair of clamp brackets each having a body 18 fitting closely around the member 13 and provided with depending legs 19 having opposed concave portions 20 intermediate the length. Through the lower end of these legs extends a clamp bolt 21. A similar clamp 22 is provided on the lower member 13. The concave portions 20 of these legs embrace and grip the clamping bolts 23. It will now be noted that in the form shown in Figures 1 and 2 these bolts extend parallel to the respective struts. In order to clamp the motor driven fan unit there is shown in these figures a pair of clamps having confronting arcuate central portions 24 and ends 25 which fit on the bolts 23, these bolts being provided with wing nuts 26 so that the arcuate clamps may be drawn together and fit in the groove G of a motor M, a rubber backing 27 being preferably used to give a better grip and to absorb the vibrations of the motor and prevent their transmission to the frame.

In the form shown in Figures 8 and 9 there is provided a bottom clamp 28 and a pair of top clamps 29, the clamping screws 30 in these being intermediate the length of the legs and the jaws 31 being at the ends of the legs. The jaws of the lower clamps grip an off set portion 32 in a C-shaped clamping band 33 fitting in the groove G′ of a fan frame F, this frame also supporting the motor M′. The C-shaped clamp 33 has at its ends the legs 34 which fit on the ends of the bolt 35 and may be drawn together by a butterfly nut 36. In each of these constructions it will be seen that

the clamps on the struts may slide thereon and be held in adjusted position by screwing up on the clamping screws so that the support for the fan and motor unit may be positioned anywhere desired in the width of the window. It will also be seen that by merely loosening the butterfly nuts the fan and motor unit may be removed for repairs, cleaning, oiling or the like without in any way disturbing the remainder of the support. With a support of this character the entire structure may be quickly removed for storage or for transfer to another window, the sockets being, if desired, left in position and each window to which it is desirable to fit the fan being provided with appropriate sockets.

Having thus described the invention, what is claimed as new, is:

1. A bracket for motor driven fans including a pair of telescopic struts adapted to extend from side to side of a window frame, means to secure said struts in expanded position, and a motor and fan clamp secured to and extending between said struts.

2. A bracket for motor driven fans including a pair of telescopic struts adapted to extend from side to side of a window frame, sockets adapted to be secured to the sides of said frame and receive the ends of said struts, means to secure said struts in expanded position, and a motor and fan clamp secured to and extending between said struts.

3. A bracket for motor driven fans including a pair of telescopic struts adapted to extend from side to side of a window frame, means to secure said struts in expanded positions, clamp members slidable along said struts and adapted to be clamped in adjusted position thereon, and arcuate clamp members adapted to embrace a motor driven fan structure and having their ends secured to the first clamp member.

4. A bracket for motor driven fans including a pair of telescopic struts adapted to extend from side to side of a window frame, sockets adapted to be secured to the sides of said frame and receive the ends of said struts, means to secure said struts in expanded positions, clamp members slidable along said struts and adapted to be clamped in adjusted position thereon, and arcuate clamp members adapted to embrace a motor driven fan structure and having their ends secured to the first clamp member.

5. A bracket for motor driven fans including a pair of telescopic struts adapted to extend from side to side of a window frame, means to secure said struts in expanded positions, clamp members slidable along said struts and adapted to be clamped in adjusted position thereon, bolts mounted in and secured by said clamp members in parallel relation to said struts, and opposed arcuate clamp members adapted to embrace a motor driven fan structure on opposite sides and provided with ends engaged by said bolts, said bolts being provided with nuts to draw the last mentioned clamp members toward each other.

6. A bracket for motor driven fans including a pair of telescopic struts adapted to extend from side to side of a window frame, sockets adapted to be secured to the sides of said frame and receive the ends of said struts, means to secure said struts in expanded positions, clamp members slidable along said struts and adapted to be clamped in adjusted position thereon, bolts mounted in and secured by said clamp members in parallel relation to said struts, and opposed arcuate clamp members adapted to embrace a motor driven fan structure on opposite sides and provided with ends engaged by said bolts, said bolts being provided with nuts to draw the last mentioned clamp members toward each other.

7. A support for a motor driven fan comprising a pair of struts adapted to extend from side to side of a window frame, means to secure the ends of said struts, an arcuate clamp member adapted to embrace a motor driven fan structure and clamp members slidable along said struts and securing said arcuate clamp to said struts.

8. A support as set forth in claim 7, and vibration absorbing means interposed between said arcuate clamp and the fan structure.

9. A support for a motor driven fan comprising a pair of struts adapted to extend from side to side of a window frame, means to secure the ends of said struts, an arcuate clamp member adapted to embrace a motor driven fan structure, a bolt operating to tighten said arcuate clamp, and clamp members slidable along said struts and securing said arcuate clamp to said struts.

In testimony whereof I affix my signature.

JOHN J. DUFFIE.