June 11, 1957 C. F. MYERS 2,795,388

SUPPORTS

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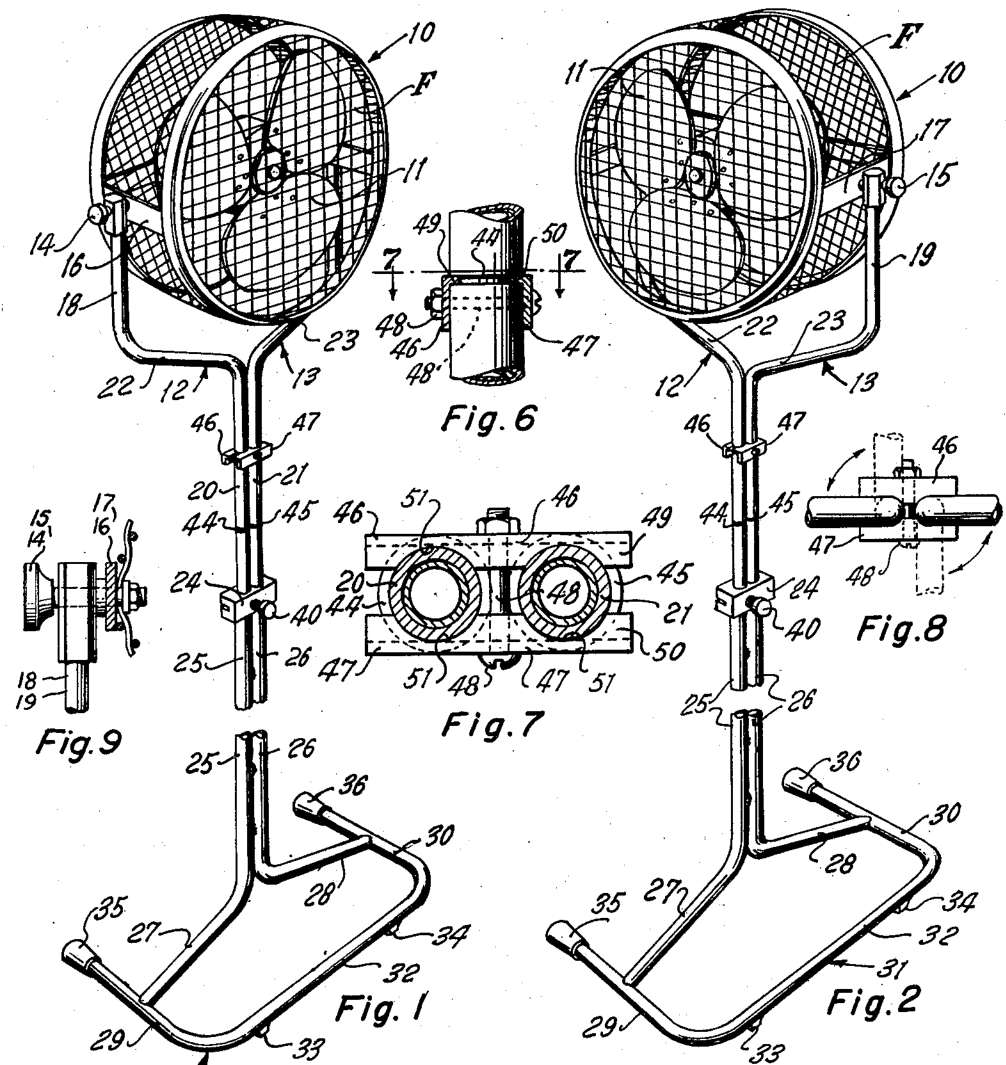

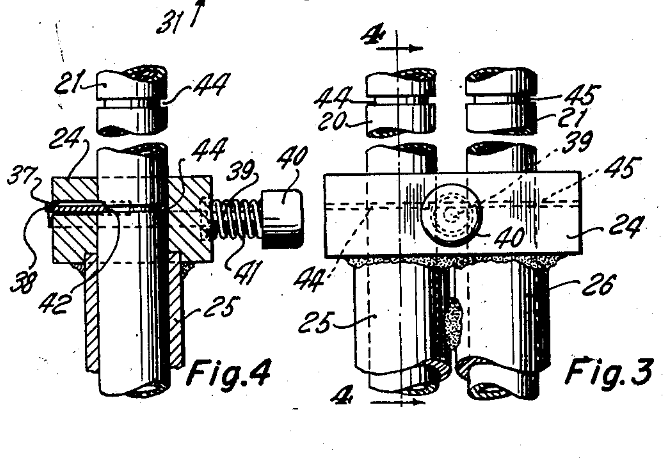

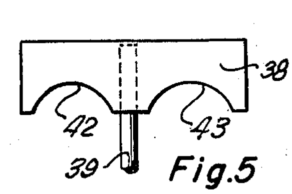

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2,795,388

SUPPORTS

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4 Claims. (Cl. 248—122)

This invention relates to new and useful improvements in supports, and more particularly to a support for adjustably supporting a fan or the like.

One object of the invention is to provide a new and improved support for fans or the like.

Another object of the invention is to provide a new and improved support for a fan or the like which permits rotation of the fan about an axis and also adjustment of the position of the fan along the axis.

A further object of the invention is to provide a new and improved support for a fan or the like of tubular construction which is easily manufactured and assembled.

Another object of the invention is to provide a support of the type described having a pair of tubular upright columns in which a pair of yoke members are telescoped, the yoke members being adapted to support a fan or the like.

Still another object of the invention is to provide a support of the type described in which the yoke members may be rotated in their respective columns to permit the fan to be turned to face in any desired direction.

A still further object of the invention is to provide a support of the type described in which the yoke members may be moved in and out of the columns to vary the vertical position of the fan.

Additional objects and advantages of the invention will readily be apparent from the reading of the following description of a device constructed in accordance with the invention, and reference to the accompanying drawings thereof, wherein:

Figure 1 is a perspective view of the support of the invention showing it supporting a fan mounted in a housing,

Figure 2 is a perspective view of the support illustrated in Figure 1, showing the yoke members rotated to face the fan in another direction from that it faces in Figure 1,

Figure 3 is an enlarged fragmentary elevation of the device for locking the yoke members in any one of several predetermined vertical positions,

Figure 4 is a vertical sectional view taken on the line 4—4 of Figure 3,

Figure 5 is a top plan view of the lock plate of the locking device shown in Figures 3 and 4,

Figure 6 is a fragmentary vertical sectional view of a device for holding the yoke members in a predetermined position relative to one another,

Figure 7 is a horizontal sectional view taken on line 7—7 of Figure 6,

Figure 8 is a fragmentary view showing the manner in which the yoke members may rotate relative to one another about a vertical axis, and

Figure 9 is a fragmentary view showing the connection between the upper ends of the yoke members with the side members of the fan housing.

In the drawings, the reference numeral 10 designates a fan housing in which is mounted a fan 11 in any suitable manner. The fan housing is mounted on and

between a pair of identically shaped yoke members 12 and 13 by means of bolt members 14 and 15 which extend through registering apertures in the upper ends of the yoke members and the side members 16 and 17 of the fan housing. The bolt members have a loose sliding fit on the bolt members 14 and 15 so that they may undergo movement longitudinally on said bolts with reference to the side members so that some movement may take place between the outer head of the bolt members and the fan housing as one yoke member is rotated relative to the other.

The yoke members 12 and 13 have upper substantially vertical end portions 18 and 19 which are connected to the lower vertical end portions 20 and 21 by downwardly and inwardly converging intermediate portions 22 and 23, respectively. It will be apparent that the two yoke members 12 and 13 together form a substantially Y-shaped supporting means.

The lower end portions 20 and 21 of the yoke members extend slidably through a block 24 to telescope in the upright tubular columns 25 and 26, respectively. The columns 25 and 26 have lower end portions 27 and 28, respectively, extending downwardly and outwardly to the side members 29 and 30 of a U-shaped base 31. The lower end portions 27 and 28 may be rigidly secured to the base 31 by welding or in any other suitable manner.

The base 31 has an intermediate connecting portion 32 to which are secured, in any suitable manner, a pair of resilient rubber or the like, supports or bumpers 33 and 34. The ends of the side members 29 and 30 are provided with resilient guard cups 35 and 36, respectively, so that the base 31 rests on the bumpers and on the guard cups, thereby preventing any scratching or wearing of the surface on which the base is supported.

The block 24 is rigidly secured to the upper ends of the upright columns by welding, and is provided with a longitudinal horizontal slot 37 in which is adapted to slide a lock plate 38. The lock plate is rigidly mounted on the rear end of a push rod 39 which extends slidably through a transverse aperture in the block 24. A cap 40 may be threaded on the opposite front end of the push rod and a spring 41 disposed about the push rod so that its opposite ends bear against the front side of the block and the web side of the cap and bias the push rod forwardly and outwardly to draw the lock plate into the slot 37.

The front edge of the lock plate 38 is provided with a pair of spaced arcuate indentations, as at 42 and 43, so that the front edge of the lock plate may enter into any one of the vertically spaced pairs of annular grooves 44 and 45 of the lower portions 20 and 21 of the yoke members.

It will be apparent that to adjust the vertical position of the fan, the push rod is moved inwardly against the resistance of the spring 41 to move the front edge of the lock plate out of the one pair of annular grooves 44 and 45. The yoke members 12 and 13 may then be moved either upwardly or downwardly in the upright columns until another pair of grooves 44 and 45 is aligned with the longitudinal groove 37 and the lock plate 38. The front edge of the lock plate then enters into the grooves, since it is biased forwardly by the spring, to lock the yoke members in this new vertical position.

The lower vertical portions 20 and 21 of the yoke members 12 and 13 are held in closely adjacent parallel position relative to one another by a pair of angle shaped retaining members 46 and 47 disposed on opposite sides of said lower vertical portions 20 and 21 of the yoke members and connected together by a bolt 48 which

extends between the vertical portions **20** and **21**. The horizontal flanges **49** and **50** of the retaining members **46** and **47**, respectively, have their inwardly facing edges cut away arcuately, as at **51**, so that the horizontal flanges may enter into a pair of aligned annular grooves **44** and **45** of the yoke members and closely engage them. The retaining members prevent the yoke members from moving apart laterally as well as restrain them from rotating freely about their vertical axes relative to one another.

It will be evident that the yoke members **12** and **13** may be rotated about a vertical axis, say from the solid line positions to the broken line positions of Fig. 8, and that the yoke members will be restrained in any rotated position by tightening the bolt **48**. The fan, of course, will be moved to face a new direction whenever the yoke members are rotated relative to one another, the loose fit between the bolts **14** and **15** and the fan housing permitting the necessary movement between the bolts and the fan housing.

It will be seen now that a support for fans or the like has been illustrated and described which includes a pair of vertical tubular columns **25** and **26** mounted on a base **31** and a pair of yoke members **12** and **13** slidably telescoped in the tubular members for vertical and rotatable movement therein. Moreover, it will be seen that a locking device has been provided to hold the yoke members in any selected vertical position which includes a lock plate **38** which engages in any one of several pairs of vertically spaced aligned annular grooves **44** and **45** of the yoke members. It will also be seen that a pair of retaining members **46** and **47** have been provided which engage in any of the pairs of aligned annular grooves to restrain the yoke members in any positions to which they have been rotated.

It will be apparent that the lock plate **38** also tends to hold the yoke members in any positions to which they have been rotated, and if the spring **41** exerts sufficient force, the retaining members may be dispensed with.

The foregoing description of the invention is explanatory only, and changes in the details of the constructions illustrated may be made by those skilled in the art, within the scope of the appended claims, without departing from the spirit of the invention.

What I claim and desire to secure by Letters Patent is:

1. A support for fans or the like including: a base; a pair of vertical tubular columns mounted on said base and extending substantially side by side thereabove; a pair of yoke members each having a vertical cylindrical lower portion slidably telescoped in the upper end of one of the columns, an intermediate portion extending outwardly from said lower portion, and an upper substantially vertical end portion spaced outwardly from said vertical lower portion and extending upwardly from the outer end of said intermediate portion; said lower portions of said yoke members being provided with vertically spaced pairs of annular grooves in their periphery; a lock plate slidably mounted on said upright columns for horizontal movement into and out of said aligned grooves whereby said yoke members may be locked in any one of several predetermined vertical positions relative to said upright columns; a housing for fans or the like connecting the upper ends of the upper vertical end portions of the yoke members and holding said yoke members substantially in a vertical plane; said yoke members each being swingable about the vertical axis of its vertical lower cylindrical portion while so connected at their upper ends.

2. A support for fans or the like including: a base; a pair of vertical tubular columns mounted on said base; a pair of yoke members; each of said yoke members having a vertical lower portion cylindrical in form and each separately slidably telescoped in the upper end of one of the columns; an intermediate portion extending outwardly from said lower portion; an upper substantially vertical end portion spaced laterally outwardly from said upright columns extending upwardly from the outer end of said intermediate portion; a fan housing; means connecting the upper end of the upper vertical end portion of each yoke member to said fan housing, said means providing for lateral movement of said upper end of each yoke member with respect to said fan housing; said lower portions of said yoke members being provided with horizontally aligned vertically spaced pairs of annular grooves; a lock plate slidably mounted on said upright columns for horizontal movement into and out of said aligned grooves whereby said yoke members may be locked in any one of several predetermined vertical positions relative to said upright columns by engagement of said lock plate in a selected pair of grooves; and a pair of restraining members disposed on opposite sides of said vertical lower portions of said yoke members and adapted to extend into the uppermost pair of said aligned pairs of grooves for restraining the vertical lower portions of said yoke members against lateral movement away from one another and against rotative movement about their vertical axes, said restraining means permitting restrained rotative movement of said yoke members about the vertical axes of such lower vertical portions.

3. A support of the character set forth in claim 2 including: a block mounted on the upper ends of said vertical tubular columns and carrying said lock plate; and means carried by said block and connected with said lock plate yieldably biasing said lock plate to position engaging said grooves.

4. A support for fans or the like including: a base; a pair of vertical tubular columns mounted on said base; a pair of yoke members each having substantially vertical laterally spaced upper and lower end portions connected by an intermediate portion; said lower end portions being each cylindrical and each separately slidably and rotatably telescoped in one of said upright columns; said lower end portions of said yokes having vertically spaced aligned pairs of horizontal annular grooves; a block mounted on said upright columns and having a longitudinal horizontal slot therein; a lock plate slidably mounted in said slot for movement into and out of said grooves for locking said yoke members against vertical movement relative to said upright columns; said yoke members being each rotatable about the longitudinal axis of its lower portion in said upright columns while held against vertical movement by the engagement of said lock plate in said annular grooves; means comprising a push rod carried by said block and connected at one end with said lock plate and a spring connected with said push rod and said block for yieldingly biasing said lock plate into said grooves; and a pair of restraining members disposed on opposite sides of said vertical lower portions of said yoke members and adapted to extend into the uppermost pair of said aligned pairs of grooves for restraining the lower vertical end portions of said yoke members against lateral separating movement and permitting restrained rotative movement of such lower end portions about their longitudinal axes to adjusted positions.

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