March 15, 1938. H. C. HUEGLIN 2,111,244

FAN STAND

Filed April 22, 1935 3 Sheets-Sheet 1

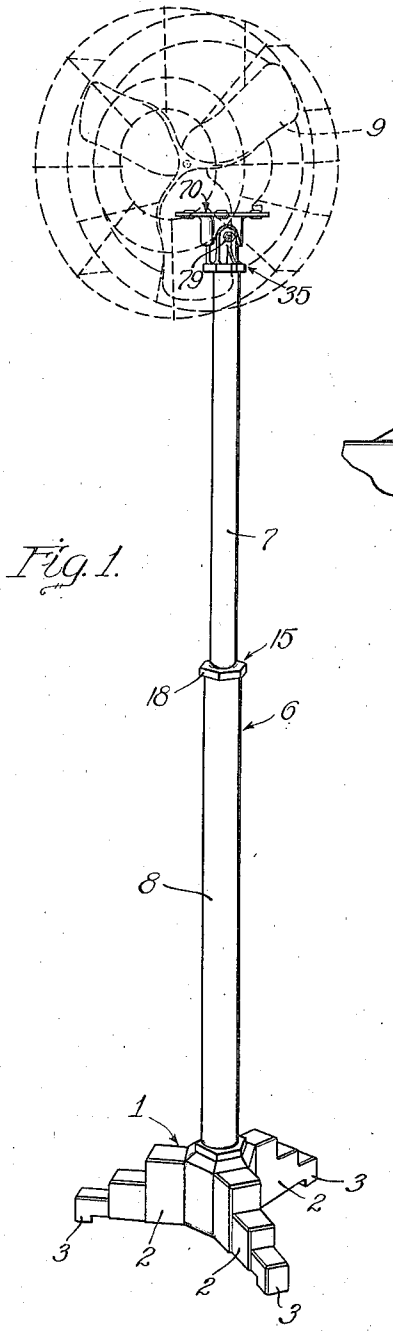



Fig. 1.

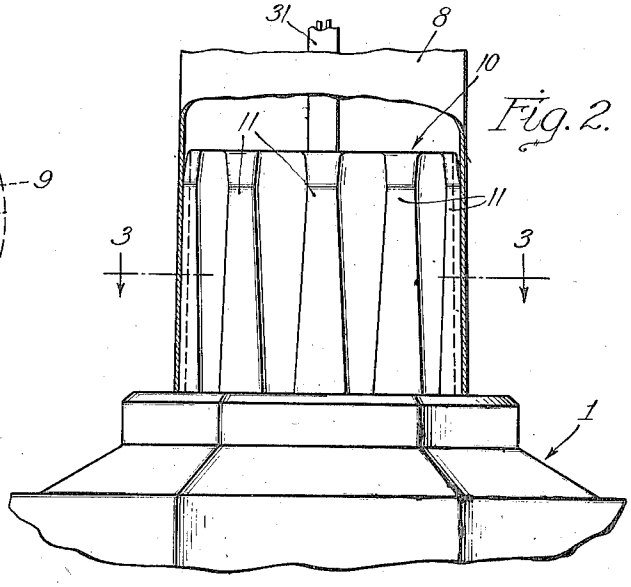
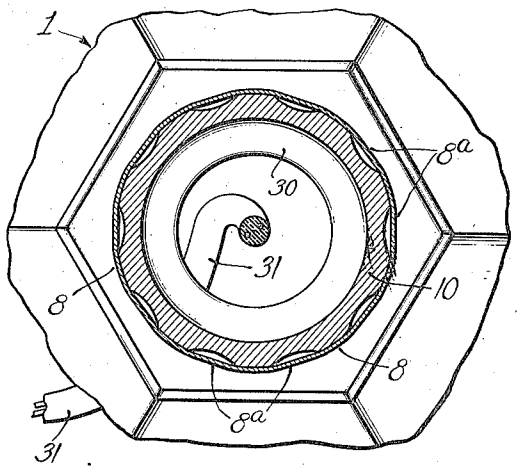



Fig. 2.

Fig. 3.




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Filed April 22, 1935 3 Sheets-Sheet 2

Fig. 4.

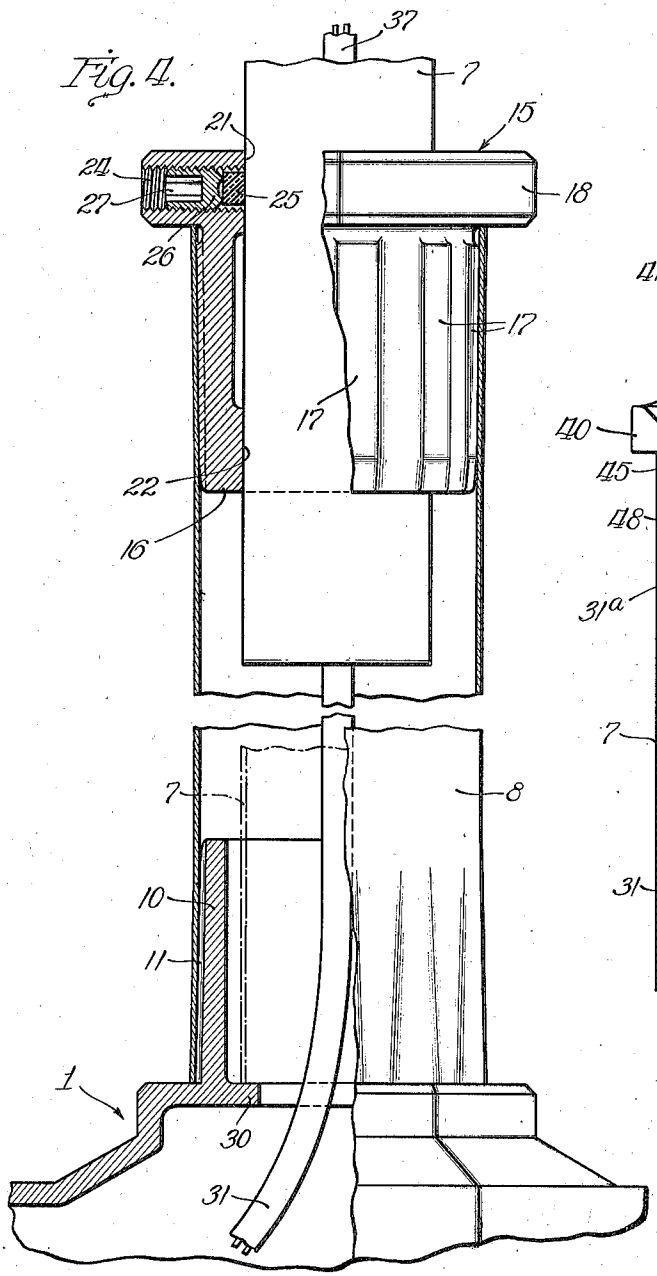
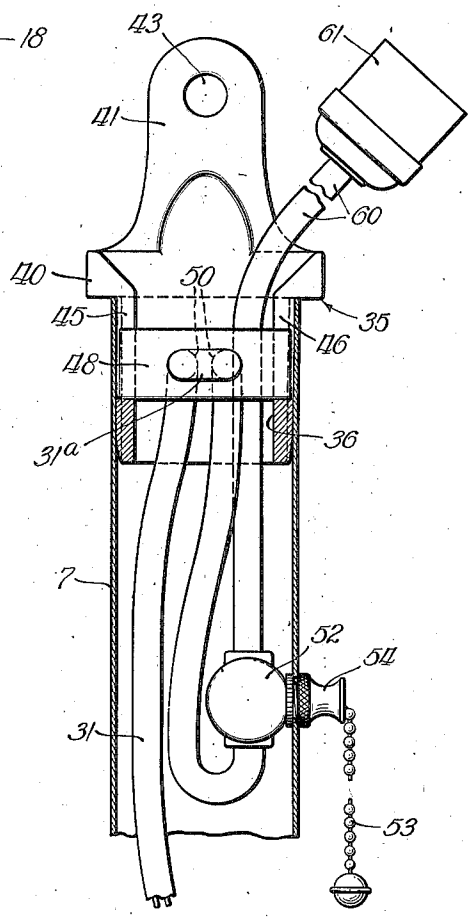



Fig. 5.




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Filed April 22, 1935 3 Sheets-Sheet 3

Fig. 6.

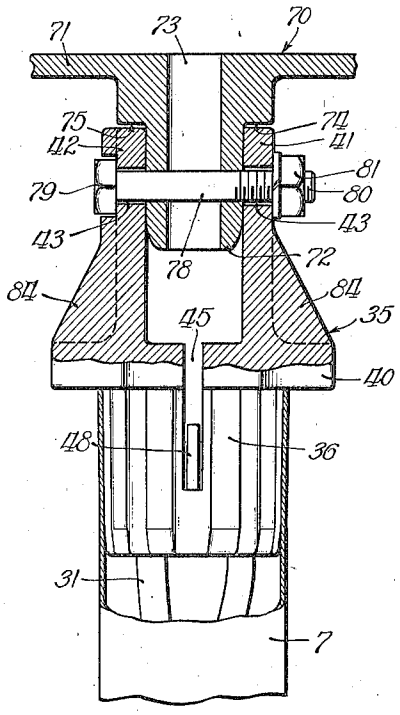



Fig. 7.

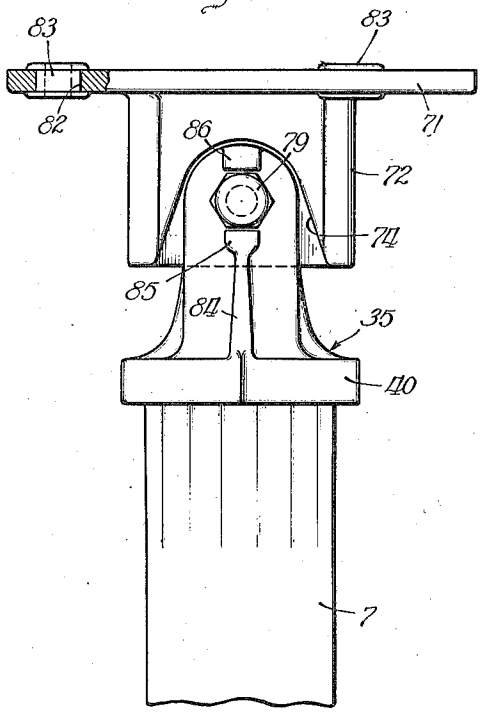



Fig. 8.

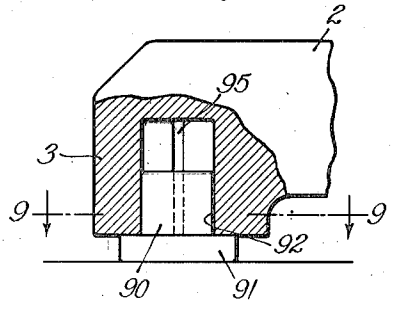
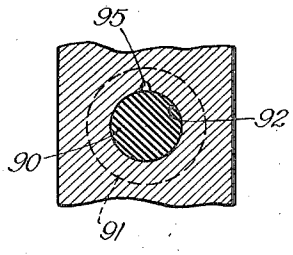



Fig. 9.




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Patented Mar. 15, 1938 2,111,244

# UNITED STATES PATENT OFFICE

2,111,244

## FAN STAND

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Application April 22, 1935, Serial No. 17,562

13 Claims. (Cl. 248—59)

The present invention relates generally to a fan stand or pedestal for supporting any desired or suitable unit, such as air circulating means, for example, the one illustrated in the drawings being especially useful where a relatively large volume of air circulation is required.

The principal object of the present invention is the provision of an adjustable pedestal including a relatively heavy base section and telescopically associated tubular standard sections, with a new and improved form of connection between the tubular standard sections and the parts associated therewith, such as the base and the bracket which supports a fan platform or the like.

More specifically, one object of the present invention is the provision of flutes or similar means limiting the area of contact on the part or parts adapted to be rigidly and permanently connected with the tubular standard sections, the diameter of the fluted portions preferably being slightly in excess of the interior diameter of the associated tubular standard so that when the parts are forced together into a pressed fit, the standard sections securely grip and are rigidly and permanently attached to the associated parts without danger of ever becoming detached. In forcing the parts into the tubular standards in this manner, the ends of the standards are expanded and the portions thereof between the flutes are chorded, whereby the firm and permanent attachment between the standard sections and the associated parts is maintained throughout the entire life of the pedestal. Also, by this means, expensive machining, threading, or other operations are eliminated.

An additional object of the present invention, having particularly to do with the formation of the base section, is the provision of an apertured shoulder or flanged portion disposed adjacent the fluted section of the base and cooperating therewith for limiting the downward movement of the smaller of the telescopically associated tubular standards, and when the pedestal is utilized in supporting electrical apparatus, it is a further object of the present invention to dispose the extension cord or cable means therefor up through the shouldered base portion and into the interior of the telescopically associated tubular standard sections.

Still further, another object of the present invention in this connection is the provision of a bar or similar member carried at the upper end of the standard so as to relieve the switch mechanism, also carried by the standard, of all stresses to which the extension cord or cable may be subjected. Preferably, according to a specific object of the present invention, the upper bracket is slotted to provide a clamping section and the cord supporting bar is arranged to be disposed in the slotted section within the interior of the upper end of the smaller standard section. Not only does this afford a neat appearance but there is no danger of disarranging the switch mechanism when the pedestal is moved about or when the upper section thereof is raised and lowered.

An additional object of the present invention is the provision of a new and improved sleeve member, which may be rigidly and permanently secured to the upper end of the larger standard section by a pressed fit, as described above, and which is so constructed and arranged as to serve as a guide for the upper or smaller of the telescopically associated standards. Since by the above method of fastening the base and sleeve or bracket parts to the tubular standards does not require that the parts be machined, these parts may be formed as castings, and where the sleeve member is in the form of a casting, it is preferably provided with upper and lower portions which are machined and which constitute relatively closely fitting guides for the upper or adjustable tubular standard. It is also an object of the present invention to provide the sleeve member with means which may be tightened for holding the adjustable standard section in position, this means including a non-metallic part which engages the upper standard but which does not tend to mar the surface thereof.

A further object of the present invention is the provision of an improved base construction in which novel means is provided for receiving the cushioning feet for the base.

These and other objects of the present invention will be apparent to those skilled in the art after a consideration of the following detailed description of the preferred construction, taken in conjunction with the accompanying drawings illustrating such construction.

In the drawings:

Figure 1 is a view of a completed pedestal showing in dotted lines a motor driven fan supported thereon;

Figure 2 is an enlarged fragmentary view, with parts broken away in order to illustrate the fluted construction of the upstanding boss or flange portion of the base over which the lower tubular standard section is forced into a pressed fit;

Figure 3 is a section taken along the line 3—3 of Figure 2;

Figure 4 is a fragmentary view with certain parts being broken away in order to show the telescoping association of the upper and lower tubular standard sections and the means for guiding and limiting the movement of the upper or smaller section;

Figure 5 is a vertical section taken substantially midway through the upper end of the upper telescopic standard section and illustrating the manner of supporting the electric cord in order to relieve the switch mechanism of stresses to which the cord is subjected;

Figure 6 is a view, partly in section, taken generally at right angles to the view shown in Figure 5, and illustrating the fluted construction of the upper bracket member and the pivotal connection between the bracket and the fan or motor platform;

Figure 7 is an elevation of the upper end of the upper standard section, illustrating the means provided for limiting the pivotal movement of the fan or motor platform and the bracket which supports it;

Figure 8 is a vertical section taken through one of the leg portions of the supporting base, illustrating the provision made for receiving a cushioning floor engaging foot member; and

Figure 9 is a section taken along the line 9—9 of Figure 8.

Referring now to the drawings, and more particularly to Figure 1 which illustrates the complete pedestal, the reference numeral 1 indicates the base which is preferably formed as cast metal having considerable weight and is provided with a plurality of outwardly extending legs 2 terminating in supporting feet 3. These latter sections of the base member are preferably provided with floor engaging cushioning members which will be referred to later.

The generally vertically disposed standard of the pedestal is indicated by the reference numeral 6 and comprises an upper section 7 and a lower section 8 telescopically associated to provide for adjusting the vertical position of the fan 9 or other unit supported by the pedestal. Each of the telescoping sections 7 and 8 is formed of relatively light gauge tube stock. The lower standard section 8 is secured to the base section without the use of threaded connections, welded joints and the like by providing an upstanding generally cylindrical fluted portion indicated in Figures 2, 3 and 4 by the reference numeral 10. The flutes on the section 10 are indicated at 11, and as best shown in Figure 2 these flutes taper slightly outwardly toward the bottom of the section 10, and similarly, the diameter of the section 10 adjacent the base 2 is slightly greater than the diameter at the upper end thereof. According to the principles of the present invention, when the standard 8 is assembled onto the base 2, it is forced over the fluted section with considerable pressure, and in doing so the lower end of the standard is expanded or stretched a certain amount by the flutes, the portions of the tubular standard 8 between the flutes being chorded, as best shown in Figure 3 at 8a. By virtue of this construction, once the standard has been forced into position, it becomes a permanent and rigid part of the base. The resiliency of the tubular standard 8 causes it to firmly grip the base section 10, and the flutes 11, providing a limited area of contact between the section 10 and the standard 8, make it unnecessary to exert excessive pressure in forcing the standard onto the base, but once the standard is in position it is rigidly and permanently fastened to the base. The resiliency of the standard and the stretched or chorded condition of the lower end thereof, by virtue of the fluted construction, eliminates any danger of splitting the standard 8 and also serves to accommodate slight variations in the diameter of the base section 10. This makes it possible to use a base in the form of a casting without requiring that any part thereof be machined or necessitating any other relatively expensive operation.

The lower tubular standard section 8 extends upwardly from the base 1 and at its upper end carries a sleeve member 15 which, like the base 1, is provided with a generally cylindrical fluted section 16 having flutes 17 and a laterally directed flange 18. The sleeve member 15 is secured to the standard 8 in the same manner that the standard is secured to the base, namely, by forcing the fluted section into the tube, slightly expanding the same, whereby the parts are rigidly and permanently fastened together by the frictional and resilient grip which the upper end of the standard 8 exerts against the flutes 17.

The upper standard section 7 is adjustable vertically relative to the lower standard section 8, and the sleeve member 15 is provided with vertically spaced portions 21 and 22 which closely fit against the upper standard section 7 and serve as guides in preventing any lateral displacement of the upper section with respect to the lower. In order that a close fit at these points may be obtained, the portions 21 and 22 are preferably machined to bring them to the exact diameter required. The sleeve member 15 also carries suitable clamping means for securing the adjustable standard section 7 in position, and to this end the flange portion 18 of the sleeve member 15 is provided with a threaded bore 24 in which is disposed a fiber plug 25 or the like and an adjusting set screw 26 which does not extend outwardly of the sleeve member 18 but, instead, is provided with a wrench receiving socket 27. By inserting a suitable tool in the socket 27 the set screw 26 may be threaded inwardly to force the fiber plug 25 against the upper standard 7, thereby frictionally securing the latter in any adjusted position. The purpose of the fiber plug 25 is, in the first place, to provide for sufficient frictional engagement for the purpose of effectively holding the upper section 7 in its adjusted position and, in the second place, to prevent any scratching or marring of the exterior surface of the member 7, as might occur if a metallic set screw or the like were arranged to be screwed into direct contact therewith. The set screw 26 provides for convenient adjustment of the section 7 but it does not extend outwardly from the sleeve member 15 and thus is not easily tampered by unauthorized persons. Similarly, there are no projecting parts to catch the clothing of persons passing by the stand.

The downward movement of the upper standard section 7 is limited by the engagement of the lower end thereof with a radially inwardly extending flange or collar section 30 carried by the base 2 a distance sufficiently inwardly of the upstanding section 10 to be engaged by the section 7. Figure 4 illustrates the lowermost position of the latter in dotted lines, and from this figure it will be noted that the boring or interior of the upstanding fluted section 10 is large enough to receive the lower end of the standard section 7. The illustrated construction is preferred, but if desired the flange stop 30 may be disposed in-

side or at the upper part of the fluted section 10 proper, or it may be disposed in the base proper in a somewhat lower position than that indicated in Figure 1. The fluted section 10 may be solid or closed at its top in which the lower section 8 would be limited in its lowermost position in substantially the same manner. Whatever the construction, however, it is desirable to provide an opening therethrough to receive an electric cord 31 which is preferably arranged within the standard sections 7 and 8 and which is disposed within the base 2, as indicated. The cord 31, which conducts current to the fan motor 9 or other unit carried by the stand, is thus disposed out of the way.

The upper end of the upper standard section 7 carries a platform-receiving bracket 35, and like the base 2 and the sleeve member 15, the bracket 35 carries a fluted section 36 which is arranged to be forced into the upper end of the standard section 7, making a pressed fit, whereby the bracket 35 is firmly and rigidly connected with the tubular standard section 7. If desired, the flutes may be tapered slightly, as is the case with the other fluted sections 10 and 16, and the generally cylindrical portion in which the flutes are formed may have a diameter at one end slightly greater than the diameter at the opposite end thereof. In this case, the interior diameter of the associated tubular standard section will preferably lie somewhere between the two diameters of the fluted section. The bracket 35 includes a flanged exterior section 40 which when in position is disposed against the upper end of the standard section 7, and a pair of clamping ears 41 and 42 provided with apertures 43 extend upwardly from the flange 40. The bracket 35 is slotted at 45 and 46, as best shown in Figures 5 and 6, and both slots extend downwardly toward the lower end of the fluted section 36 an appreciable extent.

Since the upper standard section 7 is adjustable vertically and since the cord 31 is disposed within these sections, the present invention contemplates supporting the upper end of the cord at the upper end of the adjustable standard section 7 so as to relieve the associated switch mechanism of stresses to which the cord 31 may be subjected in use. To this end, a cross bar 48 is provided and which is adapted to be seated in the bottom of the recesses 45 and 46 and well within the upper end of the tubular standard section 7, as best shown in Figure 5, the ends of the supporting bar member 48 lying adjacent the interior walls of the tubular section 7, whereby the bar 48 is held in position in the slots 45 and 46 of the platform supporting bracket 35. The supporting bar 48 is provided with a pair of openings 50 (Figure 5), and the upper end of the cord 31 is brought through one opening and then inserted back through the other opening, forming a supporting loop 31*a*. The cord 31 is preferably in the form of a rubber covered electric cable which fits tightly in the holes 50 and, by disposing the upper end thereof in the bar 48 in the manner just stated, the cord is supported on the bracket 35 so that all strain comes on the latter. The cord 31 leads to switch mechanism 52 and, as best indicated in Figure 5, the principal part of this mechanism is disposed within the tubular standard section 7, the pull chain 53 and the attaching nut and guide 54 thereof being disposed exteriorly of the standard 7. The cord 31 continues past the switch mechanism 52 and has an end 60 which terminates in a socket 61 of more or less conventional construction. Preferably, the end 60 is brought out of the bracket 35 in between the clamping ears 41 and 42 thereof and underneath the fan or motor supporting platform.

The fan or motor platform is indicated in Figure 6 by the reference numeral 70 and, like the base 2, the sleeve member 15 and the bracket 35, the platform 70 is preferably in the form of a casting. The platform comprises a shelf section 71 and an apertured lug 72 which is hollow, as indicated at 73, and which includes recessed portions 74 and 75 which receive, respectively, the clamping ears 41 and 42 of the bracket 35 when the platform 70 is mounted in position thereon. The apertures in the lug 72 and the opening 43 in the clamping ears 41 and 42 are arranged to receive a pivot bolt 78 which has a head 79 at one end and a threaded section 80 at the other, the latter receiving a clamping nut 81 which, when tightened, serves to force the clamping ears 41 and 42 against the lug section 72, thereby securely holding the fan or motor platform 70 in any tilted position. The platform shelf 71 is apertured, as at 82, to receive cushioning bushings 83 of rubber or the like to receive the securing means for the motor or other unit carried by the pedestal.

The walls of the recessed portions 74 and 75 are formed with a downward flare, as indicated in Figure 7, and cooperate with the clamping ears 41 and 42 in limiting the tilting movement of the platform 70 with respect to the bracket 35. Each of the clamping ears 41 and 42 is provided with a reinforcing rib 84, the rib on the clamping ear 42 terminating in a boss 85 which cooperates with a similar boss 86 in receiving the head 79 of the bolt 78, whereby the latter is prevented from turning when the nut 81 is tightened. In forcing the clamping ears 41 and 42 against the platform lug 72, the slotted construction 45, 46 provides some resiliency for the bracket 35, but the firm attachment of the bracket 35 with the upper end of the tubular standard section 7 is not affected, partly because the expansion of the upper end of the tubular member 7 by the fluted section 36 and the consequent chording of the member 7 permits of some yielding at this point without disturbing the firm attachment of the bracket 36 with the standard 7.

As mentioned above, the leg sections 2 of the supporting base 1 are provided with cushioning floor contacting members, and these members are preferably in the form of rubber plugs or inserts 90 having flanged portions 91. To receive the cushioning members 90, each of the foot portions 3 is provided with a downwardly facing opening 92 in which the associated cushioning member 91 is adapted to be fitted sufficiently tight to prevent the member from dropping out when the stand is moved about. The cushioning members 90 are adapted to be pushed into the openings 92, and to provide for the escape of air and to facilitate the insertion of the cushioning members, each of the downwardly facing recesses 92 is provided with a small slot or groove 95. By the provision of this slot or groove, there is no danger of air becoming entrapped behind the rubber cushioning member 90 when it is being inserted in the base. As best shown in Figure 9, the flange 91 is made sufficiently large enough to cover the lower end of the slot or groove 95.

By virtue of this construction, there is no necessity for providing a hole in each of the cushioning members 90 to allow the air to escape when

they are being inserted, nor is there any necessity for forming a hole leading upwardly from the recess **92** to the upper surface of the base. This surface may therefore be continuous and uninterrupted, and the slot **95** may be conveniently and inexpensively formed when the base **1** is cast, there being no machining or other operation required in forming the grooves **95**.

While I have shown and described above the preferred construction in which the principles of the present invention have been embodied, it is to be understood that my invention is not to be limited to the specific details shown and described above, but that, in fact, widely different means may be employed in the practice of the broader aspects of my invention.

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

1. A supporting pedestal comprising a base having an upstanding portion, and a tubular standard comprising a pair of telescopic sections, the lower end of the larger tubular section secured to said upstanding section, said base carrying a shouldered section extending radially inwardly with respect to said upstanding portion for limiting the telescoping movement of the smaller of said tubular standard sections inwardly of the larger tubular section.

2. A supporting pedestal comprising a hollow base having an upstanding portion, a tubular standard comprising at least two telescopically associated sections, the larger section embracing and secured to said upstanding portion and the latter receiving the lower end of the smaller section in its lowermost position, and a flange carried by said base adjacent the lower part of said upstanding portion extending radially inwardly thereof sufficiently to engage and serve as a stop for said lower end of the smaller of the telescopically associated sections.

3. A supporting pedestal comprising a hollow base having a tubular upstanding portion, a tubular standard comprising at least two telescopically associated sections, the larger section resiliently engaging and fixed to said upstanding portion, the lower end of the smaller section being disposed in its lowermost position within said tubular portion, a sleeve disposed within and resiliently engaged by and fixed to the upper end of the larger section, said sleeve receiving and serving as a guide for the smaller of said telescopically associated sections, and a flange carried by said base adjacent the lower part of said upstanding portion extending radially inwardly thereof sufficiently to engage and serve as a stop for said lower end of said smaller section.

4. In a supporting pedestal having a base and a pair of telescopically associated tubular standards, the larger being rigidly supported on said base, a cast metal sleeve member connected with the upper end of said larger standard, said sleeve member carrying a pair of vertically spaced interior machined sections closely embracing and serving as a guide for the telescopic movement of the smaller of said tubular standards.

5. In a supporting pedestal having a base and a pair of telescopically associated tubular standards, the larger being rigidly supported on said base, a sleeve member fixed to the upper end of said larger standard and having an exterior flange extending therefrom, said sleeve member carrying a pair of vertically spaced interiorly facing machined sections closely embracing and serving as a guide for the smaller of said telescopically associated tubular standards, one of said machined sections being opposite said exterior flange, there being a boring extending through said exterior flange to the upper of said machined sections, and adjustable clamping means carried by said sleeve and including a non-metallic member within said boring engageable with said smaller tubular standard for holding it in adjusted position and a threaded adjusting screw disposed wholly within said boring so as to be inaccessible to unauthorized adjustment.

6. In a supporting pedestal having a base and a pair of telescopically associated tubular standards, the larger being rigidly supported on said base and the smaller being adjustable vertically of the larger, a supporting bracket fixed to the upper end of said smaller standard and provided with a pair of generally diametrically opposed slots and apertured clamping ears on opposite sides of said slots, switch mechanism carried by said smaller standard, extension cord means connected with said switch mechanism and disposed inside said standards, and a bar carried by said bracket in said slots for supporting the extension cord means and relieving said switch mechanism of stresses imposed on said extension cord means.

7. A supporting pedestal comprising a base having an upstanding portion, a tubular standard comprising a pair of telescopic sections, the lower end of the larger tubular section being fixed to said upstanding section, an apertured shouldered section extending radially inwardly with respect to said upstanding portion for limiting the telescoping movement of the smaller of said tubular standard sections, a supporting bracket having a generally cylindrical portion fixed to the upper end of said smaller standard section, switch mechanism carried by said smaller standard section, and a conducting cable extending upwardly through the apertured shouldered section of said base into said tubular standard sections and connected at its upper end with said bracket and said switch mechanism whereby the support of said cable on said bracket relieves the switch mechanism of stresses imposed on the cable.

8. In a fan stand, a tubular standard, a slotted bracket mounted on the upper end of said standard, the slotted portion extending into the interior of said standard, and a conductor supporting bar carried in the slotted portion of said bracket within the upper end of said tubular standard, said bar being held in position in said slots by the interior walls of the latter.

9. In a fan stand, a tubular standard, a slotted bracket mounted on the upper end of said standard, the slotted portion extending into the interior of said standard, a pair of clamping ears carried by said bracket, the latter having some resiliency by virtue of the slotted construction thereof, fan controlling switch means carried by said standard, a conductor supporting bar carried in the slotted portion of said bracket within the upper end of said tubular standard, a conductor supported by said bar within the standard and connected with said switch, and a fan platform supported on said bracket and clamped in position by said clamping ears.

10. In a fan stand including a tubular standard, a pivot bracket carried by the upper end of the tubular standard, said bracket having a pair of upstanding apertured ears, a platform including an apertured lug section with recessed portions to receive said clamping ears, and a clamping bolt disposed in the apertures of said lug and clamping ears, the walls of said recessed portions

cooperating with said ears for limiting the pivotal movement of the platform on said bracket.

11. In a fan stand, a base section provided with generally outwardly directed legs each having a continuous outer surface and a relatively short downwardly opening recess therein, there being a slot along one side of each recess, and a cushioning foot member disposed and fitting within each of said recesses sufficiently close so as to be retained therein by virtue of such close fit, each slot providing for the escape of air when the foot member is inserted.

12. In a fan stand, a base section provided with generally outwardly directed legs each having a continuous outer surface and a relatively short downwardly opening recess therein, there being a slot along one side of each recess, and a flanged cushioning foot member disposed and fitting within each of said recesses sufficiently close so as to be retained therein by virtue of such close fit, each slot providing for the escape of air when the foot member is inserted and the flange serving to close the open end of the slot when the cushioning member is in place in the recess.

13. In a fan stand including a tubular standard, a pivot bracket having a generally fluted cylindrical section secured in the upper end of the tubular standard, the inside diameter of the upper end of said standard being such that the fluted section is resiliently gripped by the standard with portions of the latter chorded between the flutes of said section, said bracket having a slotted section with a pair of upstanding apertured ears, the slots thereof extending into said fluted section, a platform including an apertured lug section with recessed portions to receive said clamping ears, and a clamping bolt disposed in the apertures of said lug and clamping ears.

HERMAN C. HUEGLIN.