

July 8, 1941.

R. W. DEVORE ET AL
STAND FOR ELECTRIC FANS

2,248,068

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3 Sheets-Sheet 1

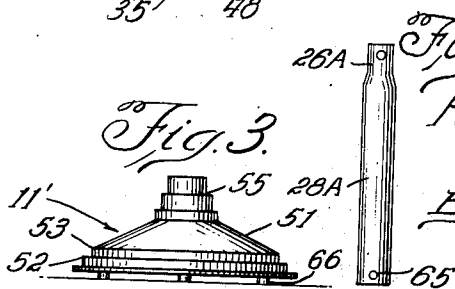
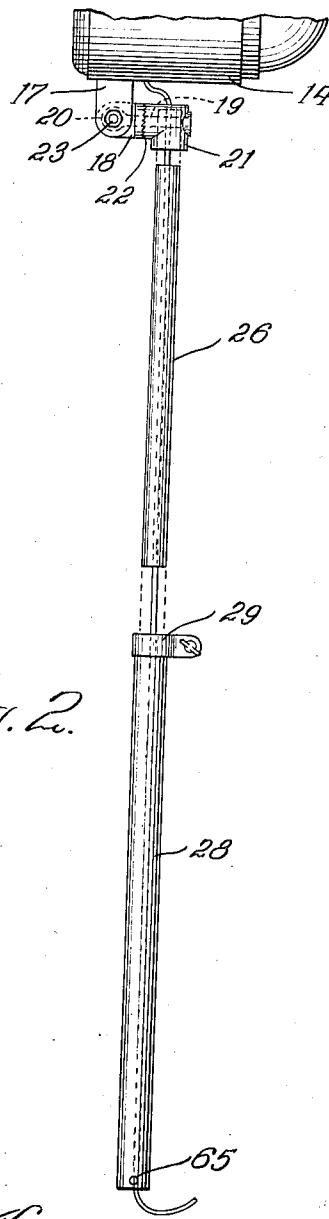
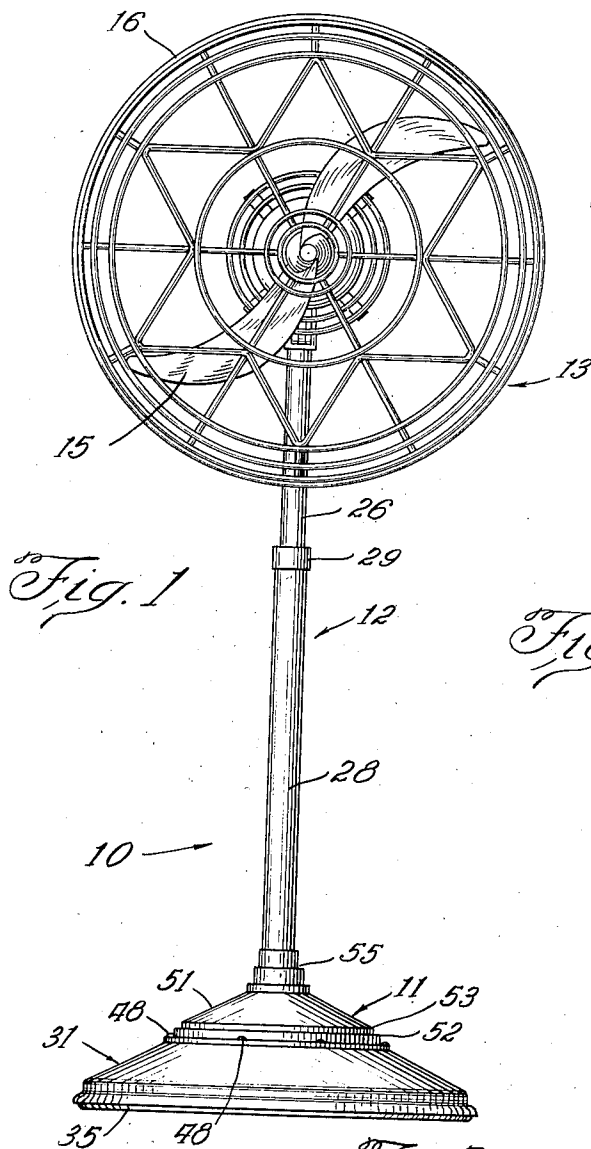


Fig. 3A. Inventors:
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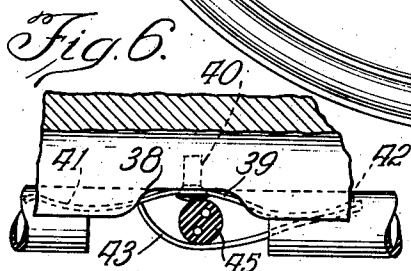
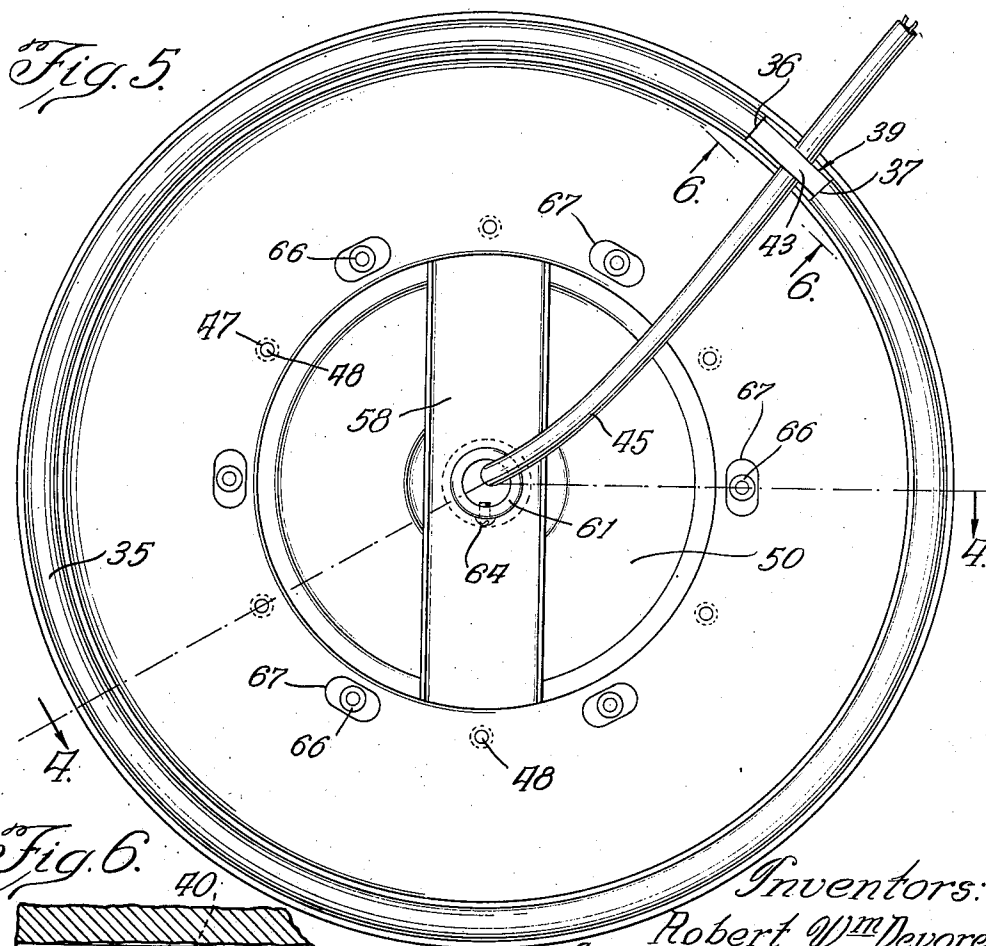
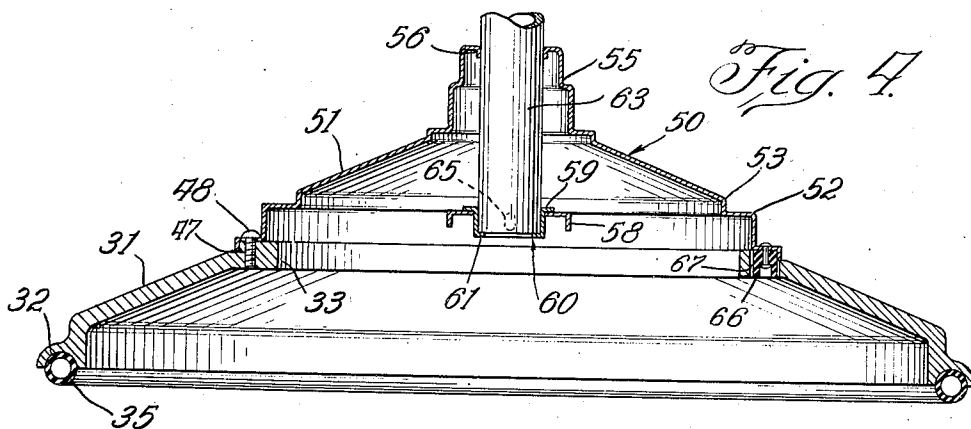
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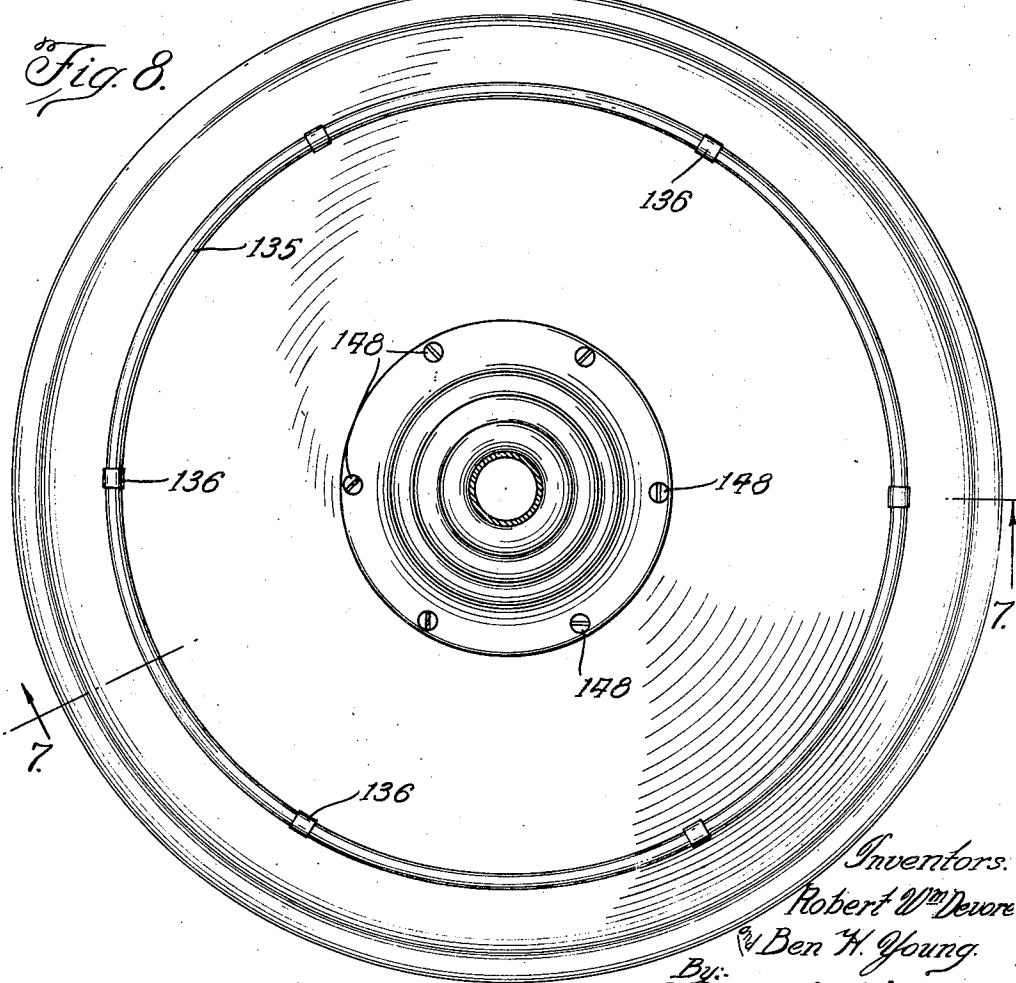
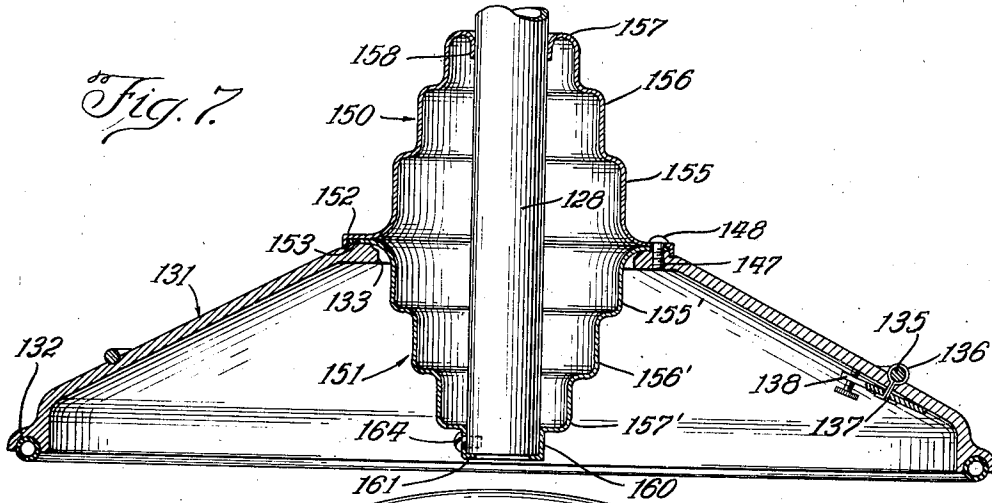
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3 Sheets-Sheet 3



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UNITED STATES PATENT OFFICE

2,248,068

STAND FOR ELECTRIC FANS

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Application October 6, 1939, Serial No. 298,174

2 Claims. (Cl. 248—158)

This invention relates to a stand and particularly to a stand for electric fans or the like. It is customary to mount an electric fan or similar device on a comparatively small stand to be supported on a desk or other elevated place or to be supported on the floor and extend but a short distance up therefrom. It is also customary to support fans on high stands which may be disposed on a floor and the fan proper be as high as six or eight feet or even higher in the air. In most instances the fan proper, that is the fan motor, propeller and remaining apparatus is the same or may be the same irrespective of the type of stand upon which the device is supported. On the other hand it is highly desirable to supply a complete fan outfit including the stand with either a short or long stand.

In the case of dealers and service men having a stock of parts on hand, it is highly desirable to be able to supply all parts and models without having large inventories. Thus, it is desirable for a dealer to have a set of different size stands and a set of different size fans each of which may be interchangeable with the other so that any desired model may be assembled from the various parts.

In the case of fans supported on a stand at a substantial distance from the floor such as six or eight feet, it is desirable that the entire apparatus be easily dismantled so that it may be shipped with a minimum of expense and difficulties. It is also desirable that the entire apparatus be assembled in a simple and easy manner so that in the event of a purchaser receiving the disassembled apparatus, such purchaser, even though unskilled, may be able to assemble the entire device with a minimum of trouble.

While interchangeable parts or stands are well known, it is necessary that the parts in a stand for an electric fan fit together snugly and maintain the entire assembly firmly in position. The reaction of the air stream on the propeller and motor of a large fan results in a substantial force which must be taken up by the stand and base. This force is not always constant and may vary due to blasts of air from windows or other fans. The result is that the base must be able to support a substantially heavy fan without objectionable sway and vibration. In order to accomplish this in a manner which will permit ready assembly by an unskilled person as well as convenient dismantling, it is essential that the stand be simple and effective.

In order to support a fan or similar device at a substantial distance above the floor, it is

necessary to provide a base having a substantial area to prevent dangerous swaying and possible overturning of the stand. It is important that the base maintain a firm foothold on the floor or supporting structure and, in those instances where the floor is uneven, this becomes rather difficult. In addition, the base should be insulated from the floor as regards vibration and noise. The floor upon which the base stands may act as a sounding board otherwise and amplify vibration and noise. This is particularly objectionable to anyone in the floor below. By the invention described herein, substantial unevenness of the floor is compensated for by suitable means disposed in the base, while at the same time the transmission of vibration and noise from the stand to the floor is effectively eliminated.

The entire structure is simple, fool-proof, cheap to manufacture and is susceptible to ready replacement to interchangeability as desired.

Referring to the drawings:

Figure 1 is an elevation view of a telescopic type stand supporting a fan;

Fig. 2 is a detail of the telescopic supporting pipe and bracket upon which the fan motor is supported;

Fig. 3 is a detail of a base together with a simple pipe forming a short stand base;

Fig. 3A shows a pipe adapted to cooperate with the base of Fig. 3 for forming a stand;

Fig. 4 is a section through the center of a base taken on line 4—4 of Fig. 5;

Fig. 5 is a bottom view of the base;

Fig. 6 is a sectional detail on 6—6 of Fig. 5;

Fig. 7 is a sectional elevation of a modified form of base taken on line 7—7 of Fig. 8; and

Fig. 8 is a bottom view of the base shown in Fig. 7.

Referring to the drawings and particularly to Fig. 1, there is shown a telescopic stand 10 consisting of a base 11 and a column 12 upon which is mounted a fan assembly 13. This assembly comprises a motor 14 carrying a propeller 15 enclosed by a suitable fan-guard 16.

Motor 14 has supporting arm 17 suitably apertured adapted to be disposed against a cooperating arm 18. This arm 18 is formed of a bolt 19 having a flat apertured part 20 around which is cast additional metal forming arm 18. This additional metal may be conveniently die cast to provide a bright ornamental finish.

Bolt 19 passes through an L bracket 21 having serrated face 22 cooperating with a similarly serrated face on arm 18. A nut 23 on bolt 19

rigidly clamps the entire bracket assembly in position.

The telescopic stand shown in Figures 1 and 2 includes a pipe section 26 of uniform diameter adapted to slide in a large pipe 28 and be retained in predetermined adjusted position by a clamp 29.

Referring to Figures 3 and 3A, a base 11' is shown. This base is adapted to have a large diameter pipe such as 28 inserted therein. On the other hand, this base is smaller than base 11 and is not desirable for use with large telescoping stands. To eliminate the necessity for changing bracket 21, a pipe 28A having a reduced end section 26A is provided. End 26A is the same size as pipe 26 while 28A is the same as 28. In this way, interchange of pipes and bases is promoted.

Referring to Figs. 4 and 5, one form of base is shown consisting of a heavy casting 31 of a general annular shape. Casting 31 may be of any suitable shape and as shown here is provided with a semicircular recessed bottom 32 and an inner edge 33. Disposed in semicircular recess 32 as by cementing or the like is a length of stiff rubber hose 35 whose ends 36 and 37 are separated by a gap. The material of the base is cut-away at 38 at the gap between the ends 36 and 37 of the rubber hose. In cut-away portion 38 is a retaining clamp 39 maintained in position by a screw 40. This clamp 39 has end portions 41 and 42 threaded into the open ends of 36 and 37 of rubber hose 35 and also has a strip 43 which may be bent into position as shown in Fig. 6 to retain wire cord 45 in position.

Inwardly from inner edge 33, casting 31 is provided with a plurality of tapped holes 47. Tapped holes 47 are adapted to have bolts 48 engage the same and retain an assembly 50 in position on base casting 31. Assembly 50 comprises a dished pressed steel member 51 having suitable decorative steps 52 and 53 formed therein extending upwardly from base 31 until a stepped bearing member 55 is formed. This bearing member 55 has an inwardly turned lip 56 formed therein.

Diametrically disposed across the bottom of pressed member 50 is a supporting plate 58 spot welded or suitably fastened to opposite portions of pressed member 50. Plate 58 supports at the center a cup-shaped member 59 whose bottom 60 is open except for a peripheral flange 61. In practice plate member 58 is positioned so that cup-member 59 is substantially concentric with the lip portion 56 prior to the welding or bolting of the plate 58 to the pressed member 50. Preferably the dimensions of lip 56 and cup 59 are such that bottom 63 of pipe 28 may fit snugly therein. Due to the distance between the lip and cup, considerable support is given to the pipe without requiring extremely accurate fit or heavy material. The bottom 63 of the pipe may be retained in position by a screw 64 passing through a suitable aperture in cap 59 and engaging a tapped hole 55 in the pipe.

The base described in connection with Figs. 4 and 5 of the drawings is principally for use with comparatively short lengths of pipe. For very short pipes, such as in Fig. 3A, the assembly 50 may be used as a base by itself, as shown in Figure 3. In order to provide for this possibility a series of rubber feet 66 are riveted to the pressed member 50. Slots 67 are provided in casting 31 to accommodate rubber feet 66 when pressed member 50 is used with casting 31. Hence even after assembly, as shown in Fig. 4,

member 50 and casting 31 may be disassembled to form base 11' as shown in Fig. 3.

Referring to Figs. 7 and 8, there is shown a casting 131 of suitable size having a semicircular bottom recess 132 similar to 32 in Fig. 4. The inner edge 133 of casting 131 extends further from the edge of the casting than is true of the structure shown in Fig. 4 for example. The comparatively large expanse of metal of casting 131 may be relieved by a trim 135 maintained in position by rings 136 whose ends 137 extend through suitable apertures in casting 131 and are pulled inwardly on the inside of the metal wall by means of a block 138 and screw 139 bearing against the inside surface of the casting.

Adjacent inner edge 133 of base 131, is a series of apertures 147 suitably tapped to accommodate bolts 148. Rigidly bolted to casting 131 by means of these bolts 148 are a pair of pressed steel bearing members or supporting members 150 and 151. These are disposed in opposed relation with their wide bottoms 152 and 153 adjacent each other. Member 150 has a series of steps 155, 156 and a top step 157 whose edge 158 is inturned. Bottom member 151 also has a series of steps 155', 156' and 157' which are identical to steps 155, 156 and 157. Bottom member 151 has its step 157' with edge 160 formed as a cup having an inturned flange 161 at the bottom with the center thereof cut out.

By thus making the various steps equal, it is possible to press members 150 and 151 out of the same set of dies except for the last operation of producing the inturned edge 158 on one hand and cup 160 on the other. Inasmuch as the dimensions of members 150 and 151 are such that in practice several draws must be made, it is evident that use of the same dies for the drawing of most of the steps effects a substantial saving in tooling.

Bottom 128 of the pipe may then be inserted as shown and retained in place by means of a bolt 164 in a manner similar to the corresponding bolt 64 in Fig. 5. In all instances, the line cord extends up through the pipe to the motor.

It is obvious that because of the mechanical simplicity of the two types of bases, that assembly and dismantling of the base may be accomplished with a minimum of labor. Furthermore, because of the distance between the points of support at the bottom of the pipe, the entire stand is endowed with considerable stability. In addition, each pipe is supported at a comparatively short zone at spaced intervals thus eliminating accurate and expensive machine work. Preferably the various elements for the supporting pipe in both types of bases are so proportioned so that parts may be used interchangeably.

It is obvious therefore that a dealer need only have one of each base and one set of pipes for each base to make up all sizes desired.

What is claimed is:

1. A stand comprising an annular casting adapted to rest on a substantially flat surface and having a broad base tapering to a small top, a pressed sheet metal assembly carried by said casting at the center thereof, said assembly consisting of two dished members disposed in opposed relation to each other, said members tapering from a wide base to a narrow end with the wide bases together at the casting top and extending above and into said casting, said dished members being identical except for the ends, the end outside of the casting having its edge curled in to define a circular pipe receiving portion.

the end within the casting having a pipe receiving portion of equal diameter but having a pipe stop at the bottom thereof, and a pipe section disposed in said receiving portions and carried in a vertical position thereby, said receiving portions being separated by a distance great in comparison to the pipe diameter.

2. The structure of claim 1 wherein said casting has an annular groove at the bottom thereof

in which a rubber hose is disposed and the ends of said hose are spaced to define a gap and an electric cord is disposed in said gap and wherein means engaging the ends of said hose retain said cord in position, said means being adapted to retain said hose end in position.

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