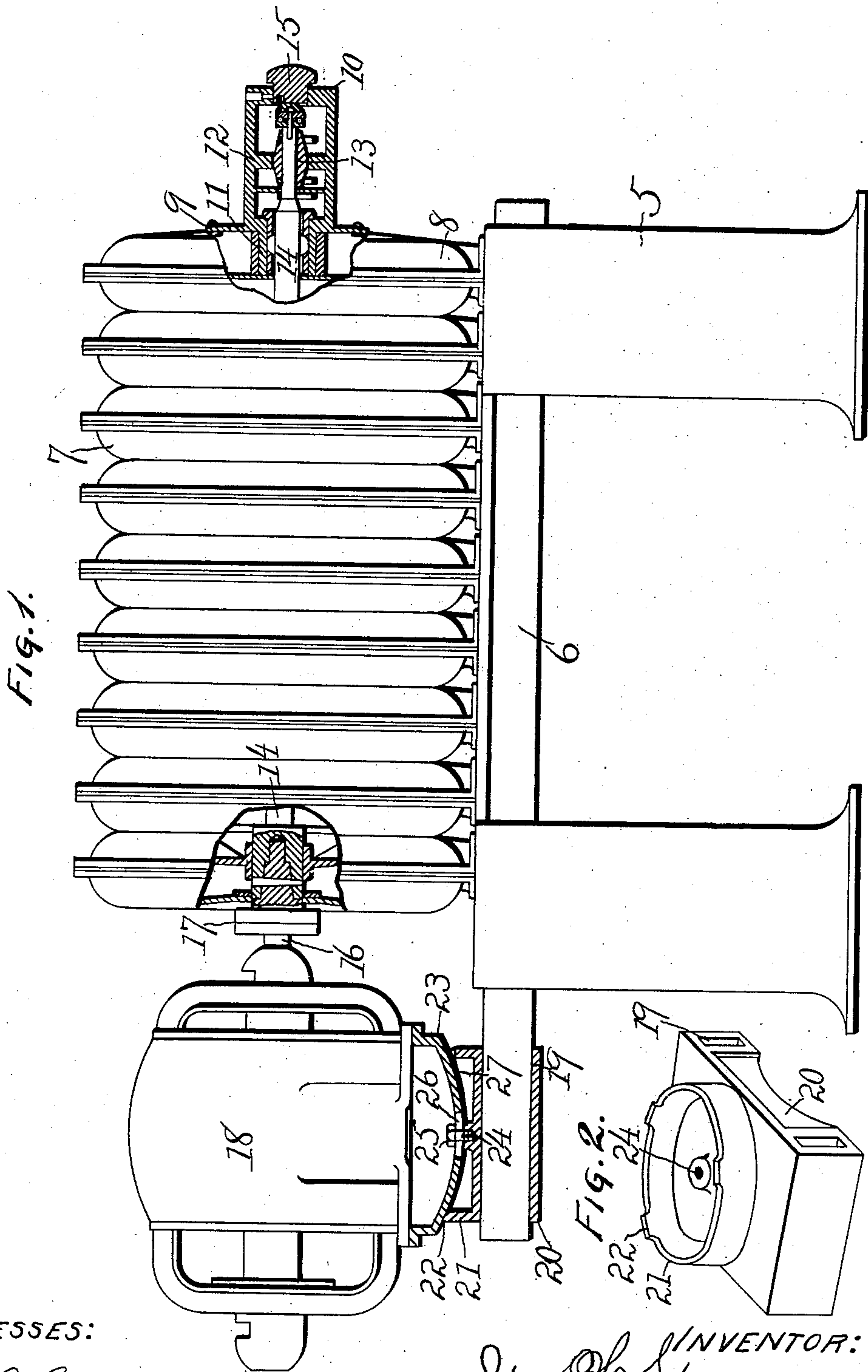


I. H. SPENCER.
MOTOR BASE.

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968,995.

Patented Aug. 30, 1910.



WITNESSES:

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MOTOR-BASE.

968,995.

Specification of Letters Patent.

Patented Aug. 30, 1910.

Original application filed May 4, 1906, Serial No. 315,147. Divided and this application filed December 20, 1906. Serial No. 348,693.

To all whom it may concern:

Be it known that I, IRA H. SPENCER, a citizen of the United States, and a resident of Hartford, in the county of Hartford and State of Connecticut, have invented a new and Improved Motor-Base, of which the following is a specification.

My invention relates to the class of devices used for supporting a motor or the like, and the object of my invention is to provide a device of this class so constructed that the axis of the motor may be readily brought into line with the shafting to which it is to be connected; and a further object of the invention is to provide means to compensate slight irregularities in construction whereby the axis of the motor and the shaft to which it is to be connected may be readily brought into line; and a further object of the invention is to provide an efficient and cheap construction of base which shall enable the parts to be readily set up in alinement; and a further object of the invention is to provide such a structure which shall not require finishing of the casting forming the base.

A device in the use of which these objects may be obtained is illustrated in the accompanying drawings, in which—

Figure 1 is a view in side elevation of a cleaning apparatus showing the manner of use of my improved motor base. Fig. 2 is a perspective view of the base.

While my invention is applicable to the setting up of a motor in connection with any line of shafting which is to be driven thereby, I have shown and described its application herein in connection with a cleaning apparatus forming the subject matter of my application for Letters Patent of the United States on cleaning apparatus, filed May 4, 1906, of Serial Number 315,147, to which the device is especially applicable, the invention having originally formed a portion of the subject matter of said application and having been divided therefrom.

In the accompanying drawings the numeral 5 denote standards on which are supported bars 6, these standards and bars sup-

porting a shell 7. This shell is constructed in sections, as shown, but a detailed description of the construction of the standards and shell is deemed unnecessary herein. The end section 8 of this shell is closed by a cover 9 having an extension 10 outward therefrom and a neck 11 extending inward. A flange 12 from the inner wall of the extension 10 has a groove on its edge for the reception of a bearing 13. A shaft 14 extends through this bearing and is held against longitudinal movement as by means of a plug 15 secured in the extension 10.

The shaft 14 extends through the shell 7 and is secured to the motor shaft 16 in any suitable manner, flanges 17 secured together as by means of bolts, being shown herein as a means of connection.

The motor 18 may be mounted in any desired manner, in the form of mount shown herein the bars 6 projecting beyond one of the standards 5 and into openings 19 in a base 20. This base may be of any suitable form and material and is provided with a base ring 21, of circular form in general outline and having projections 22 from its edge forming bearings for a hollow movable support 23 for the motor. An opening 24 is formed within the base for the reception of a bolt 25 passing through a slot 26 in the movable support. The bearing surface 27 of the movable support 23 is of curved, preferably spherical, form and rests upon the projections 22. This provides an extremely cheap form of construction and an efficient means for supporting and setting up the motor, as it will be readily seen that the projections 22 constituting a three-point bearing for the movable support, which is firm and at the same time does not necessitate the finishing of the castings to provide a true bearing between the parts.

The adjustable support 23 is made hollow so that the bolt 25 may be inserted and manipulated from the inside to permit the adjustment of the support in horizontal planes, and the spherical bearing surface is slotted to permit the adjustment of the sup-

port in vertical planes. By this construction only one bolt or connecting device is necessary to allow for all of the desired adjustments.

5 It will be obvious that in thus employing rough castings the shaft of the motor will not always be located in direct alinement with the shaft to which it is to be connected, but should the motor shaft be slightly out
10 of alinement in a vertical direction the parts may be brought into line by sliding the movable support 23 on the base, this being permitted by the slot and bolt connection, as shown, and when the proper position has
15 been obtained in this direction the bolt 25 may be tightened to securely hold the parts. This end of the shaft 14 may be slightly raised or lowered to bring it into line with the motor bearing, the construction of the
20 bearing 13 and its support allowing the end of the shaft to be thus slightly raised or lowered. Should it be found that the motor bearings are slightly out of alinement in a horizontal direction the movable support
25 23 may be swung laterally on the bolt 25 as a pivot, and the end of the shaft 14 also swung in this direction to bring it into line with the motor bearings.

30 In making the adjustments just described in order to bring the motor shaft in line with the fan or other driven shaft, it becomes necessary that the motor shaft shall be movable in the general direction of its axis, in order that the flanges 17 at the
35 ends of the two shafts may come directly together, face to face. The permissive end play of the armature shaft of an electric motor would be sufficient to allow this bringing together of the shafts if they were but
40 slightly out of line; but to provide for more extensive adjustments the base 20 that carries the motor is adjustable in the direction of the motor axis—thus providing for the lengthwise or longitudinal movement of the
45 motor shaft—by being mounted upon the bars 6 as shown.

While I have shown and described herein the motor base as mounted on the bars 6, it will be obvious that any means of securing
50 this base may be employed, and that the base ring 21 may be secured to the base in any desired manner.

It should have been heretofore remarked that the axis of the horizontal swinging
55 movements of the motor, and the axis of its vertically swinging movements both intersect the axis of the motor shaft; and that a line connecting this point of intersection with the center of movement of the bearing
60 13 is coincident with the axis of the shafts 14 and 16 when in alinement. From this it follows that no matter in which direction the axis of the motor shaft may be out of line with the shaft 14, when the motor is

set upon the base 20, it may be brought into line therewith by the adjustments which
65 have already been described.

What I claim as my invention and desire to secure by Letters Patent is:—

1. The combination of a base ring provided with a three-point bearing extending
70 from its edge, a curved support resting on the said three-point bearing, and means for holding the support upon the bearing, substantially as set forth.

2. The combination with a motor adapted to have its shaft alined with and connected to a shaft to be driven thereby, of a support on which the motor is mounted having a curved bottom, and a base on which the said
80 support rests, the support and base being arranged to permit bodily adjustment of the motor to bring its shaft in alinement with the shaft to be driven, and means for securing the support rigidly to the base
85 after adjustment.

3. A motor mounting including a base having projections disposed at intervals thereabout and constituting a three-point bearing, a support having a curved bearing
90 surface to rest upon the said projections and formed with a slot, and fastening means projecting through the said slot and into the base.

4. The combination with a shaft to be
95 driven supported near one end in a bearing having universal adjustment and provided at its other end with means for connection with a motor, of a motor for driving the shaft, a base, a bearing on which the motor
100 rests supported by the base, the bearing surface of one of the said parts, base and bearing, being curved, the center of the said curved surface being in the line of the motor axis and in the line of the projected axis of
105 the driven shaft, and means for securely uniting the base and bearing after they have been adjusted substantially as set forth.

5. The combination with a driven shaft of a motor having a driving shaft adapted
110 to be alined and connected with said shaft which it drives, a support on which the motor rests having a curved bottom, a base having a supporting surface with which the said curved portion of the support engages,
115 this mounting of the motor permitting the motor shaft to be brought into alinement with the said driven shaft, and the motor shaft being movable in the general direction of its axis, and means for securing together
120 the support and base after adjustment, substantially as set forth.

6. The combination with a motor, of a support on which it is mounted having a curved bottom, a base on which the curved
125 portion of the said support rests, and means for securing the support and base together, the mounting for the motor being movable

in a direction substantially parallel with the motor shaft, substantially as set forth.

7. The combination with a motor, of a support on which it rests, having a curved
5 bottom, a base on which the said curved bottom of the support rests, means for securing the support and base together, and means for supporting the base so that it is

movable in a direction substantially parallel with the motor shaft when it is in working 10 position, substantially as set forth.

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Witnesses:

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