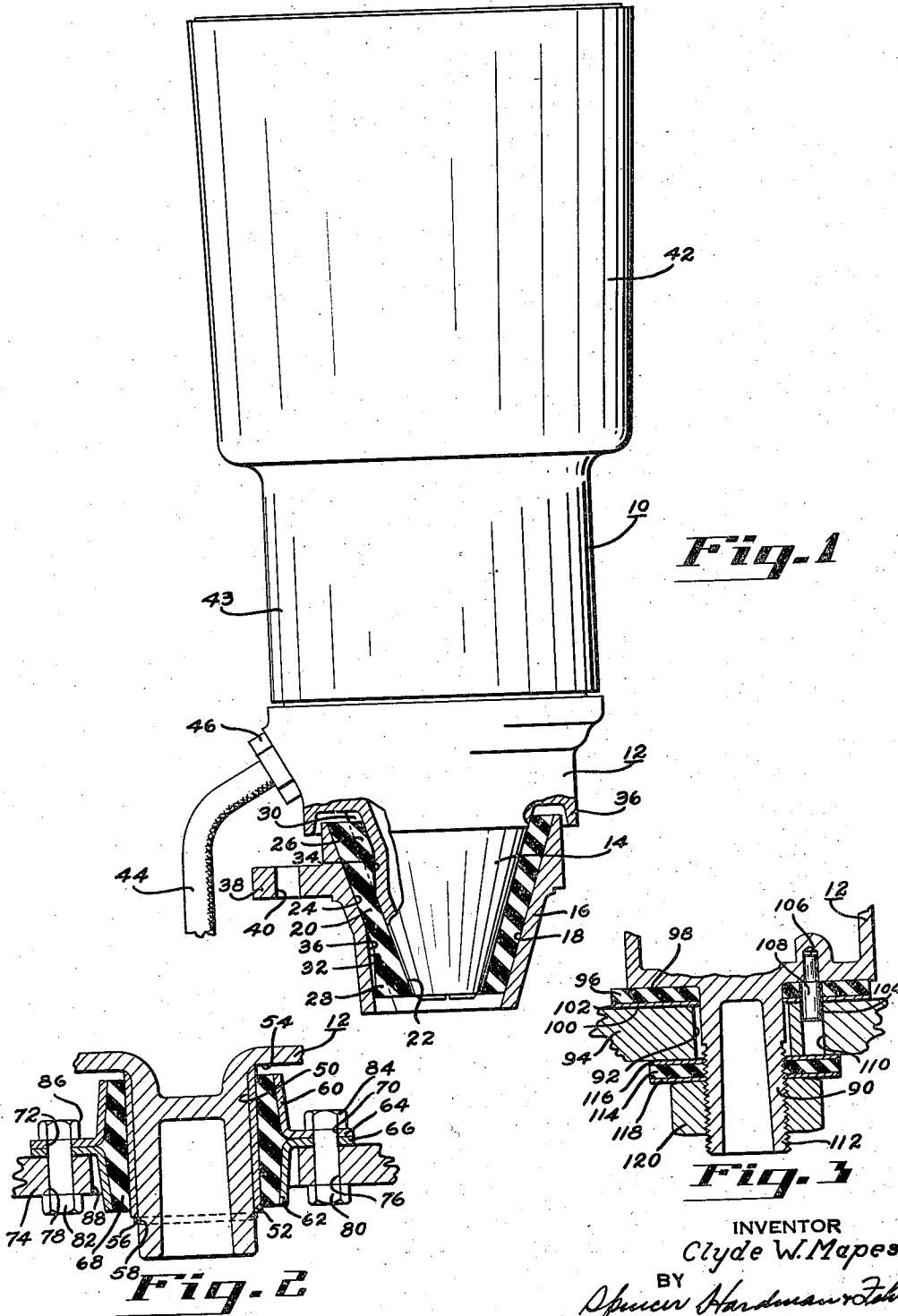


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RESILIENT MOUNTING
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RESILIENT MOUNTING

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2 Claims. (Cl. 248—26)

This invention relates to a resilient mounting, and more particularly to a resilient mounting for motors and the like.

It is an object of this invention to provide a resilient mounting for a motor which permits the motor to be easily removed from the support therefor.

Another object of this invention is to provide a resilient mounting for a motor that is particularly adapted to the mounting and support of a motor having a vertical axis of rotation.

Another object of this invention is to provide a resilient mounting for a motor, which mounting prevents rotation of the motor relative to the support therefor.

Further objects and advantages of the present invention will be apparent from the following description, reference being had to the accompanying drawing wherein a preferred embodiment of one form of the present invention is clearly shown.

In the drawing:

Fig. 1 is an elevation of a motor provided with a mounting embodying the present invention, with parts thereof shown in section.

Figs. 2 and 3 are fragmentary sectional views of resilient mountings embodying modified forms of the present invention.

With particular reference to Fig. 1, a motor 10, having a vertical axis of rotation, has a base member 12 that is provided with a base portion 14 that preferably has a substantially conical outer surface. The base portion 14 is preferably integrally formed with the base 12. A support member 16 preferably has a substantially conical surface 18, the axis of which surface preferably coincides with the axis of the conical surface of the base portion 14. A resilient member 20, preferably made of rubber, Duprene, or other suitable resilient material, has substantially conical inner and outer surfaces 22 and 24 respectively, which surfaces fit those of the base portion 14 and support 16.

The resilient member 20 has portions 26 and 28 projecting inwardly and outwardly respectively, from the inner and outer surfaces 22 and 24 thereof. The projecting portion 26 projects into a recess 30 in the base portion 14, and preferably conforms to the surfaces or walls of the recess 30. A projecting portion 28 projects into a recess 32 in the support 16, and preferably conforms to the walls of the recess. The recesses 30 and 32 preferably have walls 34 and 36 respectively, that are substantially parallel to the axes of the conical surfaces to facilitate removal

of the resilient member 20 therefrom. A portion 36 of the base member 12, preferably integrally formed therewith, overhangs the insulating member 20 and support 16, and thereby tends to prevent lubricant and foreign substance from reaching the surfaces of the resilient member 20. The flange member 38 on the support member 16 has an aperture 40 therein, and is adapted to be secured to a suitable mounting support to mount the motor.

The particular motor shown in Fig. 1, is of a type utilized in the processing of textile material, and has a bucket portion 42 at the top thereof, and a skirt portion 43 that forms a part of the motor housing; however, it is understood that the present invention is not limited to that particular type of motor. The operating current for the motor is provided through a suitable cable 44 that extends into the base of the motor and is anchored to that base by clamping means including an external nut 46 that is preferably made of insulating material.

With particular reference to Fig. 2, the base 12 has a substantially cylindrical base portion 50 preferably integrally formed therewith. A sleeve member 52 fits over the base portion 50 and is held in place thereon between the flared portion 54 of the base and a locking ring 56 that fits into a groove 58 in the base portion 50. Flanged annular members 60 and 62 having their flanged portions 64 and 66 respectively, adjacent, surround the sleeve 52 and are preferably coaxial therewith and spaced therefrom. A layer of resilient material 68 that forms a resilient member fills the space intermediate the members 60 and 62 and a sleeve 50, and is preferably vulcanized thereto. This resilient layer or member may be made of rubber, Duprene, or other suitable resilient material. The flange portions 64 and 66 have apertures 70 and 72 therein and rest against a support member 74 having corresponding and aligning apertures 76 and 78 respectively therein, which apertures accommodate mounting bolts 80 and 82 respectively. The bolts 80 and 82 have cooperating nuts 84 and 86 respectively, and serve to secure the motor to the support 74. The support 74 is provided with an opening 88 through which the base portion 50 and resilient mounting project. The annular member 62 is spaced somewhat from the wall of the aperture 88. The motor is thus supported through the resilient member 68.

With particular reference to Fig. 3, the base 12 has a substantially cylindrical portion 90 integrally formed thereon and extending through

an opening 92 in a support member 94. A layer of resilient material or resilient member 96 is interposed between a plane surface 98 on the base 12 and a plane surface 100 on the support 5 94, and surrounds the cylindrical portion 90 so that the motor is supported therethrough. A metallic disc member 102 is preferably interposed between the resilient member 96 and the support 94. The base portion 90 is preferably spaced 10 from the wall of the opening 92 so that the support is obtained entirely through the resilient material. A pin 104 is preferably driven into an aperture 106 in the base 12, and extends through an aperture 108 in the resilient member 96 and 15 disc 102, and into an opening 110 in the support 94 to locate the motor circumferentially, and prevents circumferential movement of the motor relative to the support 94. The motor is resiliently secured to the support 94 through a layer 20 of resilient material or resilient member 114 having cooperating metallic disc members 116 and 118, all of which surround a portion of the base portion 90, and are disposed intermediate a nut 120 that is threaded onto a threaded surface 112 25 of the cylindrical portion 90, and the support member 94.

In the operation of the device shown in Fig. 1, the resilient member 20 fits into the conical surface 18 of the support 16 and is located therein 30 by the projecting portion 28 that fits into the recess 32. The conical surface of the base portion 14 then fits into the inner surface of the resilient member 20 and is located therein by the projecting portion 26 that fits into the recess 30. The cooperating projecting portions and recesses thus serve to locate the motor circumferentially, as well as to prevent circumferential movement of the motor relative to the support 16. By making the walls 34 and 36 of the recesses 30 and 32 respectively, substantially parallel to the axes of the conical surfaces, the motor may be easily axially removed from the support. Since rubber and similar resilient materials are deteriorated by oil and other foreign 45 substances, the overhanging portion 36 on the base 12 is provided to prevent such substances, as well as dirt and grit from easily reaching the surfaces of the resilient material.

In the device shown in Fig. 2, the weight of 50 the motor, which is supported through the re-

silient member 68 establishes a shearing stress in the resilient material between the surfaces adjoining that material. Hence, the resilient material is preferably vulcanized to the sleeve 52 and flanged annular members 60 and 62. In this form, the sleeve 52 preferably fits snugly upon the cylindrical portion 50 so as to provide a firm support for the motor and to prevent circumferential movement of the motor therein. The motor is then located and held against circumferential movement relative to the support 74 by the bolts 76 and 78, and the cooperating apertures in the projecting flanges.

In the device shown in Fig. 3, the motor is supported through direct compression of the resilient material. In this form, the motor is circumferentially located and prevented from circumferential movement relative to the support by the pin 104. 15

While the form of embodiment of the present 20 invention as herein disclosed, constitutes a preferred form, it is to be understood that other forms might be adopted, all coming within the scope of the claims which follow.

What is claimed is as follows: 25

1. A resilient mounting for a motor, comprising, in combination, a support member having a substantially conical inner surface, said support member having a recess therein through the substantially conical inner surface thereof; a 30 base portion on the motor having a substantially conical outer surface, said base portion having a recess therein through the substantially conical outer surface thereof, said recesses having wall portions substantially parallel to the axes of the conical surfaces; and a resilient member intermediate the surfaces through which the motor is supported, said resilient member having projecting portions thereon that fit into said recesses and substantially conform to the walls 40 thereof.

2. In a resilient mounting for a motor, the combination comprising, a resilient member having substantially coaxial conical inner and outer surfaces, and integrally formed portions projecting from each of said surfaces, said integrally 45 formed projecting portions each having three faces defining planes that are substantially parallel to the axis of said conical surfaces.

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