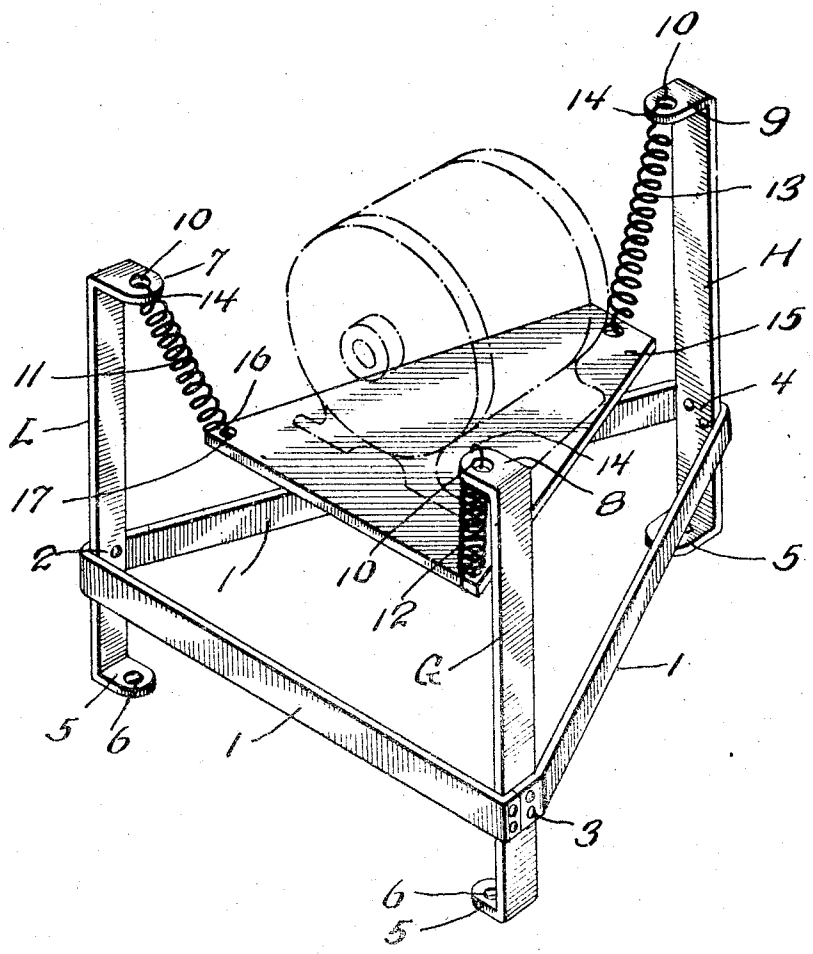
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MOTOR SUSPENSION

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MOTOR SUSPENSION

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This invention relates to a motor suspension, and particularly to a motor suspension of the type designed to absorb the vibratory motion and "hum" of an operating motor or the like.

A particular object of the present invention is to provide a device of this character which is of light construction, neat and attractive appearance, strong and substantial in use, one which may be manufactured at small cost, and which will possess a high degree of sound and vibration absorbing quality.

A more detailed object is to provide a motor suspension including a series of tension springs upon which the motor hangs, and to provide a simple and efficient form of resilient supporting means for said springs.

A further detailed object is to make up said supporting means as parts of a simple portable frame work whereby the whole may be readily moved from place to place.

A further detailed object is to make the frame work of such form that the parts thereof constituting the supporting means for the tension springs will be in the form of cantilever springs.

A further detailed object is to so construct the frame work that it will possess a desirable degree of resilience throughout for thereby lending to the resilient support of the tension springs.

Other objects and aims of the invention, more or less specific than those referred to above, will be in part obvious and in part pointed out in the course of the following description of the elements, combinations, arrangements of parts and applications of principles constituting the invention; and the scope of protection contemplated will be indicated in the appended claims.

In the accompanying drawing which is to be taken as a part of this specification, and in which I have shown merely a preferred form of embodiment of the invention, there is shown a perspective view of a motor support for the suspension device constructed in accordance with the provisions of this invention, the motor device being shown in dotted lines in operative position thereon.

Referring now to the exemplary structure illustrated in the drawing, the reference characters L, G and H indicate three standards spaced apart equi-distant or otherwise as may be required and connected together by a band or tie member 1 extending about them and being rigidly connected with them at their points of mutual contact as at 2, 3 and 4. This band serves both to hold the standards connected together and to hold them in a substantially vertical position as shown, and it is connected with the standards at a level intermediate the upper and lower ends of the standards, being preferably relatively nearer to the lower ends.

The lower ends of each of the standards are preferably turned to provide foot portions as 5—5, each foot portion having a hole as 6 therein for receiving a suitable screw or bolt by means of which the foot may be fastened down to a floor or other support whenever desired.

The upper ends of each of the standards are likewise turned or bent to provide lateral extensions as 7, 8 and 9 projecting in the general direction of a common centre between the several standards. These extensions are formed with holes 10, or other appropriate means by which the upper ends of a series of coil springs 11, 12 and 13 may be universally pivotally connected therewith, a convenient method of attachment consisting of having hooked shaped terminals 14 of said springs engaged through the holes 10 as indicated.

The lower ends of these springs 11, 12 and 13 are connected with the motor platform 15 so as to support said platform suspended thereon, the connection between the springs and the platform being of a universally pivotal type, for instance of the same general character as the connection between the

springs and the extensions 7, 8 and 9. Hooked ends as 16 of the springs may extend through openings as 17 of the platform for this purpose.

It is here mentioned that the motor platform may be of any desired construction, either as a part of the motor itself or otherwise according to preference or convenience in specific cases.

The points of attachment of the springs 11, 12 and 13 with the extensions 7, 8 and 9 respectively are at or near the inner ends of said extensions and are hence spaced at one side of the vertical plane of the standards so that any applied weight will tend to bow or bend the standards inwardly of the frame, thus placing said standards always under strain.

The openings 17 in the motor platform for receiving the spring ends 16 are preferably arranged in such relation to the standards that the springs extend from said openings in an inclined direction upwardly into connection with the standards, the inclination of the several springs being such that they converge downwardly from the standards to the platform and thus exert a centering tendency upon the platform suitable to hold the platform normally in a properly centered relationship between the standards while at the same time leaving the platform in a floating condition freely movable laterally in all directions.

The standards L, G and H are each formed of resilient material, such as spring steel or the like, so that they are capable of resilient flexing under the tension of springs 11, 12 and 13. Their lower end portions are firmly held by the band 1, as also, if desired, by fastening means through the openings 6 of the foot portions 5, so that they constitute cantilever or leaf springs. Furthermore the band 1 is preferably formed of a resilient springy material, such as spring steel, strap iron, or the like which although amply stiff to hold the standards against any permanent distortion relative to each other is yet capable of a certain, almost imperceptible flexing or vibrating movement suitable to assist in absorbing the vibratory movements and "hum" of the motor.

Vibratory movement of the motor platform is impressed first upon the tension springs 11, 12 and 13, from these to the cantilever springs, and finally to the main frame element or band 1. The tension springs are relatively highly resilient. The cantilever springs are relatively less resilient, and the main frame element 1 is still less resilient. Vibratory movement of the motor platform is largely absorbed by the tension springs. In greatly reduced strength it is transmitted to the upper ends of the cantilever springs where it is practically entirely absorbed, very slight movements of the lower portions of these canti-lever springs being permitted by the resilient quality of the main frame band 1 which thus constitutes a means of absorbing such infinitesimal vibratory movements as reach it.

It will be understood that while the drawing herewith shows the device to include only three standards L, G and H, obviously any number of such standards may be employed grouped about a common centre with the motor platform suspended between them collectively, and said standards being connected by the main frame band 1 and functioning in the same manner as above described.

As many changes could be made in this construction without departing from the scope of the invention as defined in the following claims, it is intended that all matter contained in the above description, or shown in the accompanying drawings, shall be interpreted as illustrative only and not in a limiting sense.

Having thus described my invention, what I claim as new and desire to secure by Letters Patent is:—

1. A motor suspension comprising a motor platform, a plurality of tension springs by which said motor platform is suspended so as to be freely movable in all lateral directions, and a plurality of substantially vertically disposed leaf springs having upper ends from which the upper ends of said tension springs are suspended, together with supporting means for said leaf springs engaging the lower end portions thereof.

2. A motor suspension comprising a motor platform, a plurality of tension springs by which said motor platform is suspended so as to be freely movable in all lateral directions, and a plurality of substantially vertically disposed leaf springs having laterally turned upper ends from which the upper ends of said tension springs are suspended, together with supporting means for said leaf springs comprising a resilient member by which all of said leaf springs are connected together.

3. A motor suspension comprising a plurality of resilient standards spaced apart about a common centre, a frame member extending about said standards being connected thereto at points spaced from the upper ends of said standards serving to hold them spaced in a substantially upright position with the upper ends of said standards left freely flexible, a plurality of tension springs suspended by their upper ends from the upper end portions of said standards respectively, and a motor platform arranged between said standards and connected with the lower ends of said tension springs collectively.

4. A motor suspension comprising a motor platform, a plurality of tension springs by which said motor platform is suspended so as

to be freely movable in all lateral directions, and a plurality of substantially vertically disposed leaf springs arranged about a common center and having their upper end portions turned inwardly, said tension springs being suspended by their upper ends from the inner ends of said inwardly turned portions, together with supporting means for said leaf springs engaging the lower ends thereof.

In testimony whereof I affix my signature.

THORNTON W. PRICE.