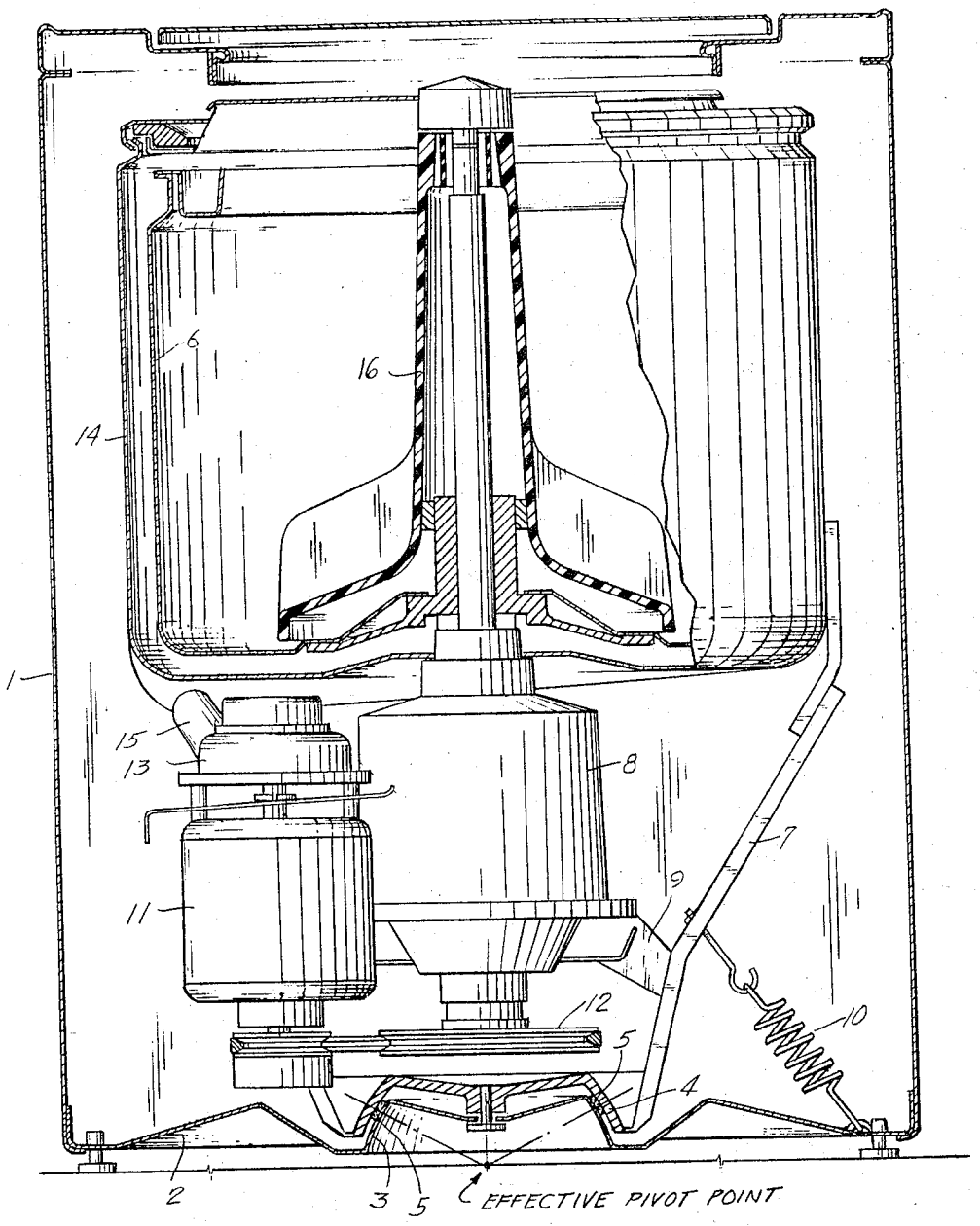
Oct. 11, 1966 J. G. JACOBSEN 3,277,742

CLOTHES WASHER

Filed Sept. 22, 1964



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United States Patent Office

3,277,742

Patented Oct. 11, 1966

3,277,742

CLOTHES WASHER

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Filed Sept. 22, 1964, Ser. No. 398,210
2 Claims. (Cl. 74—574)

This invention relates to washing machines of the type known as center post agitators whose operations center about an upright longitudinal axis and in each of which nutational movements and vibrations arising from imbalance in the load generally center in a pivot point lying somewhere along the longitudinal axis thereof.

It is conventional to construct such devices so that this virtual pivot point is at the geometrical center point of the drive pulley so that the nutational movements of the drive shaft are unrestrained but there are still unbalance forces exerted on the cabinet at the pivot point during spin.

An object of the present invention is to minimize the unbalance forces exerted on the cabinet at the pivot point during spin. It has been found that this may be done by constructing the device so that the pivot point is located as nearly as possible in an immovable position from which vibrational effects cannot be communicated to the frame or the cabinet. If the forces set up during the operation of the machine are exerted at any significant distance from a firmly anchored part of the cabinet, then flexure of the structure will take place so it becomes desirable to construct the machine in such manner that the point of application of these forces will be located at a point from which they cannot be communicated to the other parts thereof.

The point of application of the forces developed in the machine may be shifted and localized by building into the device a virtual joint so that the portion in which the forces are developed may give slightly and, by providing friction material at this point, the resulting movements may be damped. Damping joints may be made by providing a globular portion as part of the frame, covering this with a layer of friction material and providing a cup like flange at the base of the center post apparatus having a mating contour. Then the vibrations developed will be translated to slight movements about the geometrical center of this spherical device and the forces tending to be communicated to the globular base will be centered thereat. If this pivot point is immovable then none of the vibrations developed in the working parts will be communicated to the frame. Hence the object of the invention is to construct the damping joint in such manner that the virtual center point thereof lies on the surface of the floor on which the cabinet rests. This means that the said virtual center point of the joint shall be below the bottom surface of the cabinet.

In accordance with the present invention a cabinet for the machine is provided having a frame on which all the working parts of the machine are supported. The said frame is provided with a globular surface on which the center post of the machine rests, the assembly of working parts supported on the center post being tied down to the frame by a number of tension springs. Friction material is interposed between the top globular surface of the frame and the mating bottom globular flange of the center post. The contour of these globular parts is devised to be such that the geometrical center point thereof is beneath the bottom of the cabinet substantially at floor level.

A feature of the invention is the use of a latitudinal strip of friction material interposed between a globular bearing integral with the frame at the base of the cabinet and a mating globular flange at the base of the center post, the geometrical center point of said globular surfaces and said latitudinal strip constituting a pivot point about which the assembly of working parts supported by said center post may move, said pivot point being located at substantially floor level.

The drawings consist of a single sheet having a single figure in the form of a schematic vertical section of a washer.

The machine embodying the present invention is housed in a cabinet **1** whose bottom surface **2** constitutes a frame having fashioned integrally therewith a globular surface **3** which may be termed a dome having a spherical contour whose effective geometrical center will be substantially at floor level as indicated by the dot and dash lines meeting at the floor and along the longitudinal axis of the device.

A frame rigidly attached to the center post apparatus consists of a similarly contoured flange **4** separated from the globular dome **3** by a latitudinal strip **5** of friction material allows this frame and all the apparatus thus carried by the center post construction to move in response to vibrations of the agitator **16** and the spinner basket **6** due to imbalance in the load about this effective pivot point.

The globular dome **4** is rigidly secured to frame members, such as **7**, and since these rigidly support the agitator transmission means **8** by elements, such as **9**, may be considered a flange at the lower end of the center post apparatus. The frame members **7** are held to the frame **2** by tension springs **10**. A motor **11** is mounted conventionally to the center post frame and this operates a pulley **12** at the lower end of the transmission **8** which will conventionally operate the agitator **16** or spin the basket **6**. The motor **11** also operates a pump **13** to fill the shell **14** during the washing operation and a drain **15** is provided to clear the shell **14** when the basket **6** is spun.

The latitudinal strip **5** of friction material acts to damp vibrational movements of the dome **4**, but since the effective pivot point of these matching domes **3** and **4** and the strip of friction material **5** is substantially at floor level as indicated, such vibrational movements will not be communicated to the cabinet **1**.

What is claimed is:

1. In a center post agitator washing machine, a cabinet for housing said machine having a supporting frame and, movably supported thereby, an assembly of working parts grouped about an upright center post housing an axially rotatable drive shaft for operating said machine, a plurality of tension springs each attached at one end to the said frame at substantially floor level and at the other end to said assembly of working parts and a bearing for supporting said assembly of working parts and for maintaining said springs under tension, said bearing including means for damping any relative movements of said center post and said bearing being further constructed and arranged to center said relative movements of said center post about a point along the longitudinal axis of said drive shaft and depressed to substantially floor level.

2. In a center post agitator washing machine, a cabinet for housing said machine having a supporting frame securely attached thereto, a center post for supporting an assembly of working parts, a globular bearing integral with the base portion of said supporting frame, a mating globular flange integral with the lower termination of said center post and a latitudinal strip of friction material be-

tween said globular bearing and said globular flange for damping relative movements of said flange about said bearing, a pivot point defined by said globular surfaces being located at substantially floor level beneath said cabinet.

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