May 10, 1932. A. W. ALTORFER 1,857,930

SUPPORT FOR WASHING MACHINES

Filed Jan. 25, 1928

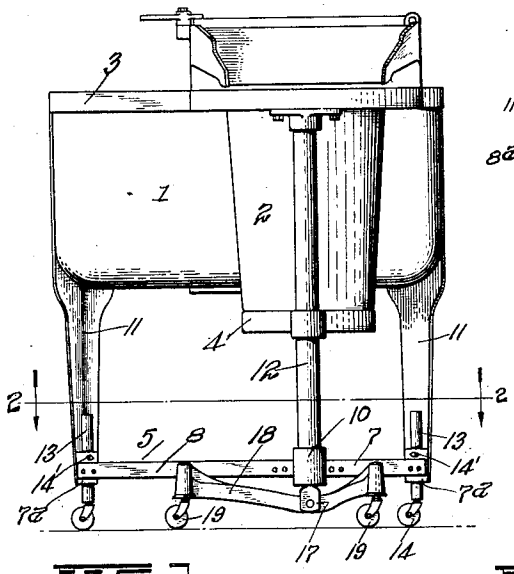

FIG. 1.

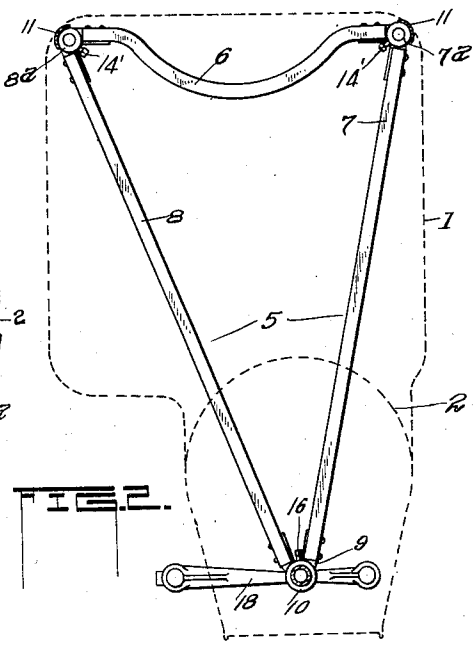

FIG. 2.

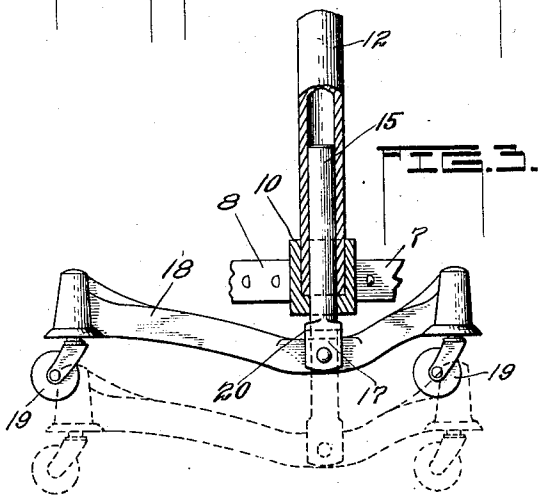

FIG. 3.

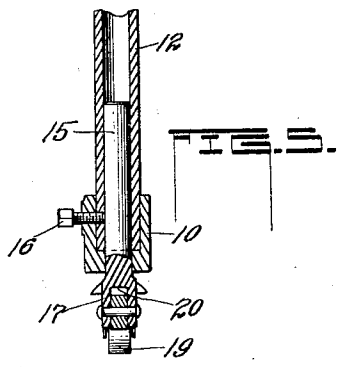

FIG. 5.

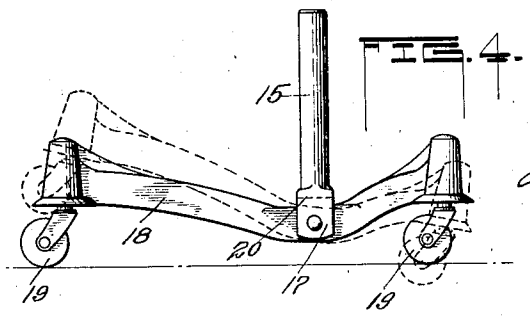

FIG. 4.

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UNITED STATES PATENT OFFICE

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SUPPORT FOR WASHING MACHINES

Application filed January 25, 1928. Serial No. 249,382.

This invention has reference to supports, and it has for its principal object to provide a new and improved supporting frame for washing machines, preferably of the type including a centrifugal extractor or drier.

A further object of the invention is to provide a three point suspension support for washing machines and the like, each of the supporting elements being vertically adjustable independently of the others for the purpose of leveling the machine.

The invention has for a further object to provide a supporting member which is vertically adjustable, and to provide said member with an equalizing lever or arm swiveled thereto and with caster wheels at its opposite ends.

A still further object is to provide a frame or chassis for a washing machine which is preferably substantially triangular in form and with one of the reaches of the frame shorter than the remaining two and at the intersections of the reaches of said frame to provide vertically adjustable supports; one of said supports having pivotally connected therewith an equalizing arm and the said supports and arm provided with caster wheels. The said equalizing arm adapting the machine to automatically level itself on uneven floors and further, prevent the tipping over of the machine as a result of any unequal weight being applied to one side of the said machine.

Other and further objects will more fully appear from the following description.

That the invention may be more fully understood, reference is had to the accompanying drawings forming part of this description, illustrating a preferred embodiment of the invention, in which:—

Fig. 1 is a side elevation, on a greatly reduced scale, showing a washing machine embodying my improved frame support;

Fig. 2 is a plan view of the frame or chassis, as the same would appear on the line 2—2 Fig. 1;

Fig. 3 is a detail in elevation, partly in section, showing the support having the equalizing arm and illustrating in dotted lines the adjustability of the support;

Fig. 4 is an elevation of the support and equalizing arm shown in Fig. 3 and illustrating in dotted lines how the equalizing arm operates on uneven floors, and

Fig. 5 is a vertical sectional view transverse to the position these parts are shown in Fig. 3.

Like characters of reference denote corresponding parts throughout the figures.

In the development of that type of washing machine, including a washing tub and an associated centrifugal extractor or drier, it has been discovered, that the extractor has lengthened the frame somewhat and necessitated, not only a close assembly of the washing tub and extractor, but it has also been found desirable and practical to place the extractor closer to one side of the washing tub than the opposite side, whereby washing and drying of clothing and other materials may be conveniently handled by an attendant without any unnecessary movement about the machine. As a result, leveling of the machine, due to frame length, has become an important feature in such machines and therefore an automatic equalizing means made essential and of such character as will stabilize the frame and prevent tipping of the machine in the event of undue weight being applied to one side thereof. In the present frame, supporting means and equalizer I have overcome these difficulties, and in addition, have provided a means which will relieve the frame of the torsional strains set up by the operation of the operating means carried by said frame.

To illustrate the practical carrying out of the invention I have shown a washing machine including the usual tub 1 and a centrifugal extractor or drier 2 associated therewith, the two said elements having a common head frame 3 and connecting lower frame 4.

The supporting frame 5 is preferably triangular in form and comprises the reach bars 6, 7 and 8 which are connected at their meeting corners in brackets 7*a*, 8*a* and 9, respectively. Each of said brackets is formed or provided with tubular portions or sleeves 10, as shown in Figs. 3 and 5. The two said

brackets 7*a* and 8*a*, respectively, are preferably connected to legs or standards 11 connected to and depending from the tub 1, and the bracket 9 is preferably connected to a tubular sleeve or standard 12 which is connected to and depends from the head and lower frame members 3 and 4, respectively, as shown in Fig. 1.

Slidably and vertically adjustable in the tubular or sleeve portion 10 of the bracket 7*a* and 8*a* are short legs or standards 13, each provided at its lower end with a swiveled caster wheel 14. These said legs or standards may be secured in different adjusted positions by means of the set screws 14′. Slidably and vertically adjustable in the sleeve or standard 12 and the sleeve portion 10, is a leg 15, which takes the form of a bar telescopically carried in said sleeve or standard 12 and adapted to be secured in different adjusted positions, by means of the set screw 16, as shown Fig. 5. The lower end of the bar 15 is preferably formed or provided with a bifurcated portion 17, in which is swiveled or has a pivotal connection the equalizing lever or arm 18, which at its opposite ends is provided to receive the shanks of the caster wheels 19, whereby to swivel the caster wheels thereto. The lever or arm 18 is adapted to have a limited oscillatory movement in the portion 17 of the bar 15, the said portion having the stop 20 with which the said lever or arm comes into contact and presents the extent to which the said lever or arm may oscillate.

In the arrangement of frame and supports shown, it is seen that I have provided a practical three point suspension for machines of the character referred to. It will further appear, looking at Fig. 2, that by reason of off-setting the extractor for the purposes explained that the point of location of the support 15 is off-set closer to one side of the machine, determined by a line passing transversely through the tub 1 and crossing the medial part of the reach 6. This makes the reaches 7 and 8 slightly different in length and the reach 6 considerably shorter than the remaining two. The lever or arm 18, I, therefore, construct having one end longer than the other, the purpose of which is clearly apparent from an examination of Fig. 2, placing the caster wheels in more balanced relation to those at the other side of the machine so as to provide a more evenly balanced support. However, it is to be understood that said lever may have equal end portions, if desired. The several supports, as shown and explained are capable of independent adjustment for leveling purposes and the lever or arm 18 will permit of automatic leveling or adaptation to uneven floors and will also prevent tipping of the machine due to any uneven weight on one side. The stop 20 limits the extent of oscillation of the lever or arm 18, as explained. The whole arrangement makes easy and convenient the moving of the machine from one point to another with little or no effort.

The reach bars 6, 7 and 8 are employed to support the operating mechanism for the several elements of the machine, but as such means or mechanisms form no part of the present invention it is not thought necessary or desirable to show or describe the same.

What I claim is:—

1. In a three point frame suspension, caster wheels vertically adjustable at two of the points of suspension, an equalizing member pivotally connected at the other point of suspension, means to vertically adjust said member, and caster wheels at the opposite ends of said member.

2. In a support of the character described, a frame including a plurality of reach bars, tubular bracket members connecting the meeting ends of said bars, a support vertically adjustably connected with each of said members, and an equalizing arm having a pivotal connection with the lower end of one of said supports.

3. In a support of the character described, a frame including a plurality of reach bars, tubular bracket members connecting the meeting ends of said bars, a support vertically adjustably connected with each of said members, caster wheels connected direct with certain of said supports, an equalizing lever pivotally connected with the lower end of one of said supports, a stop to limit the movement of said lever, and caster wheels at the opposite ends of said lever.

4. In a support of the character described, a frame comprising reach bars in triangular arrangement, means to connect the meeting ends of said bars, a support vertically adjustable with each connecting means, and an equalizing lever pivotally connected with the lower end of one of said supports.

5. In a support of the character described, a frame comprising reach bars in triangular arrangement, means to connect the meeting ends of said bars, a support vertically adjustable with each connecting means, caster wheels associated with each support, and an equalizing means interposed between one of said supports and its caster wheels.

In witness whereof, I have hereunto affixed my hand this 12 day of January, 1928.

ALPHEUS W. ALTORFER.