

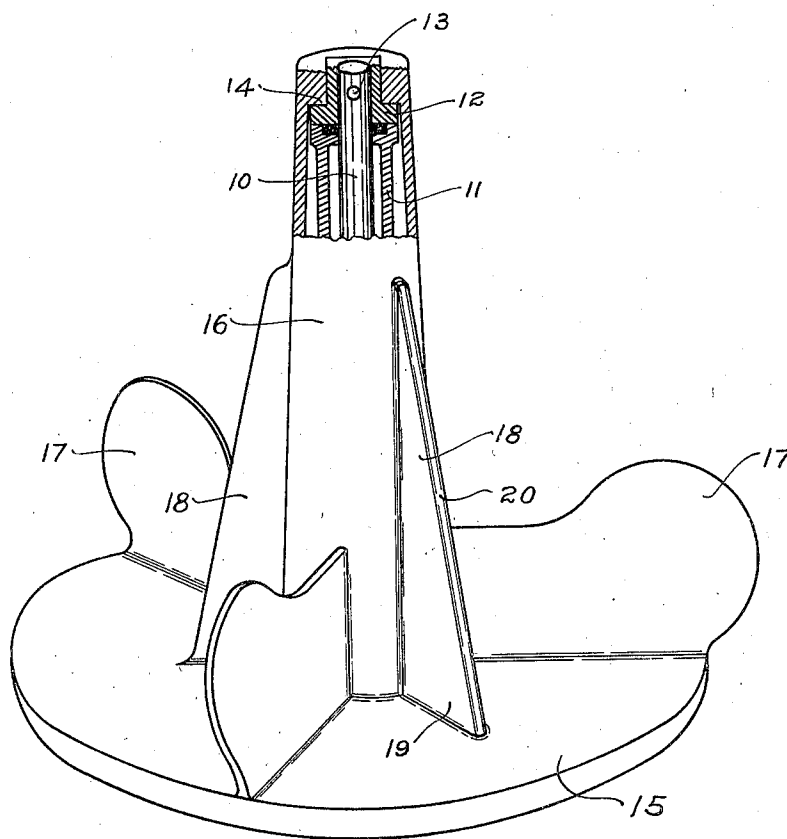
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AGITATOR FOR WASHING MACHINES

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UNITED STATES PATENT OFFICE.

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AGITATOR FOR WASHING MACHINES.

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This invention relates to agitators for washing machines.

One of the objects of the invention is in the provision of an agitating disk for washing machines fashioned with a plurality of comparatively widely spaced blade members that merge with a centrally disposed post rising from the disk, there being also provided smaller ribs disposed intermediate the water agitating blades, said ribs operating to intercept the returning water currents initially set up by the blade members, and also acting as an additional clothes agitating element.

Another object is in the provision of a specially formed agitator member for washing machines, wherein a disk member having a centrally disposed post member or driving connection has radially extending therefrom a plurality of unusually widely separated water agitating blades, as well as smaller ribs, of smaller radius, disposed intermediate the water agitating blades, said ribs being fashioned in a manner to intercept the returning water current set up by the agitating blades and to agitate the clothes portions carried by said currents, with a resultant increasing efficiency of the washing operation.

A further object lies in the provision of a specially formed agitating disk for washing machines comprising a centrally disposed post having a plurality of comparatively widely spaced water agitating blades radially extending therefrom, and intermediate web portions disposed intermediate the agitator blades, said web portions being angularly shaped to provide a substantial agitating surface between the blade members, the upper edges of said web portions diminishing towards their upper ends until they finally merge with the post member.

Other objects will appear in the following specification, taken in connection with the annexed drawings, in which—

Fig. 1 is a perspective view of the specially formed agitator member, the upper portion of which is cut away for a more detailed view of the driving connection therefor.

Referring to the drawings, there is shown merely a single figure illustrating the present special agitator member for washing machines. In view of the fact that this agitator is adapted for use in a type of

washing machine which is well known, no disclosure has been made of the washing machine and driving means therefor. It is thought sufficient to say that this agitator is adapted to be placed in the bottom of a tub member of any desired shape, there being a driving connection through the bottom center of the tub, said driving connection being elevated to a point above the normal water level in the tub, and the special disk member shown herein attached thereto in a manner now to be described.

The vertically disposed drive shaft, before mentioned, is shown at 10, and has a surrounding supporting column 11, securely attached in a manner not shown, to the bottom of the tub and supporting brackets therefor. A lug 12 is securely fastened as at 13 to the upper end of the drive shaft 10, and the special agitator member has the interior portion of the upper end 14 fashioned in a manner to conform to the shape of the lug 12, whereby said agitator may be lifted therefrom by simple vertical lift, said connection, however, being of a fixed nature and providing the driving connection between the drive shaft and the agitator. Oscillation of the drive shaft 10 and consequently the agitator member, is effected through any type of gear mechanism, not shown. The agitator itself comprises an oscillating disk 15, there being centrally disposed thereon and rising therefrom, a center post 16, the same providing the connecting means before described, with the drive shaft. Three water agitating blade members 17 extend radially from the center post 16. These agitator blades extend to a point substantially adjacent the periphery of the disk 15, and provide the main water agitating elements, the movement of said blades against the water in the tub acting to throw the water, due to centrifugal force, against the sides of the tub. By utilizing only three water agitating blades, it has been found that a greater degree of water agitation results than by utilizing a larger number, and hence in using only three blades, they may be disposed at comparatively widely spaced points.

Disposed intermediate the water agitating blades 17 are radially extending ribs or web portions 18, projecting, at their lower ends, as at 19 a substantial distance radially upon the disk 15. The outer edges 20, however,

incline upwardly towards the axis of post 16, with the result that substantially all of the agitating surface of said ribs lies intermediate the widely spaced agitator blades 17.

5 Applicant is aware that various water agitating disks have been heretofore used, of many sizes, shapes and arrangement of blade members. It has been found, however, that the use of merely a plurality of water
10 agitating blades as 17, without the intermediate rib or web portions, results in such violent action upon the clothes washed, as in some instances to damage same. After exhaustive tests and experiment, applicant has
15 found that by disposing the specially formed rib members 18 between the comparatively widely spaced agitator blades, the returning water currents initially set up by the agitator blades 17, were intercepted by said ribs
20 18, to further increase said water agitation by giving same a sort of rolling effect, which had a tendency to turn the clothes over and hence increase the efficiency of the washing operation.

25 Due to the comparatively widely spaced blade members, and the nature of the water currents set up thereby, the displaced water has a tendency at all times to return directly to the spaces intermediate the blade
30 members and to carry clothes portions therewith. Due to the disposal of these rib members intermediate the blades, as stated before, the returning water currents are intercepted, with an increased clothes agitating

effect that aids, to a surprising degree, in 35 the washing operation.

It will be noted that the ribs 18 have substantially all their agitating surface located at a point below and between the widely spaced blade members, at which points the 40 returning water currents initially set up by the agitator blades are intercepted.

What I claim is:

1. An agitator for washing machines, comprising a plane, a horizontally disposed disk, 45 a vertical post rising from the center of said disk, a plurality of radial blades extending from the lower portion of said post and terminating adjacent the circumference of said disk, radial agitating ribs merging with said 50 post and terminating a substantial distance beyond the circumference of the post, the outer edges of said ribs inclining upwardly toward the axis of said post.

2. An agitator for washing machines, 55 comprising an oscillating disk having a central post rising therefrom, comparatively widely spaced blade members extending radially from said post to a point substantially adjacent the periphery of said disk, 60 and smaller rib members merging with the central post and extending radially a short distance on the disk, said rib members being disposed intermediate the blade members.

In testimony whereof I have hereunto af- 65 fixed my signature.

JOSEPH H. FEDLER.