April 8, 1930. H. S. LABISKY 1,753,521

WASHING MACHINE AGITATOR

Filed Aug. 6, 1929

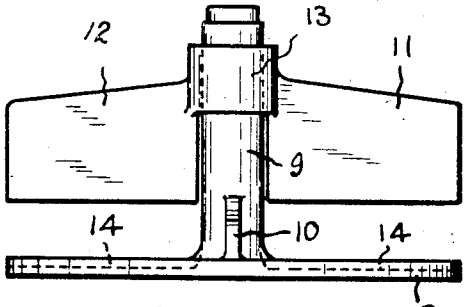


Fig. 3

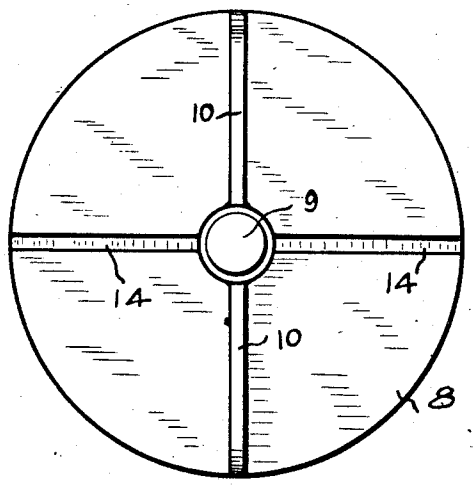


Fig. 1

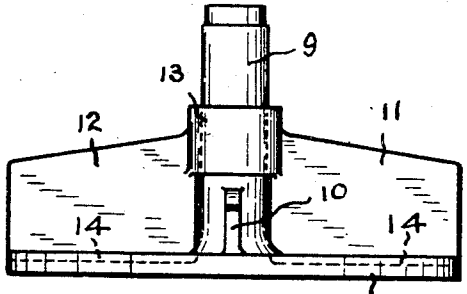


Fig. 4

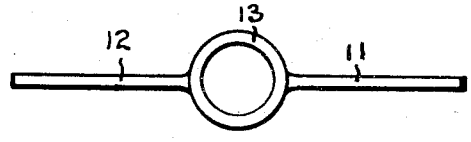


Fig. 2

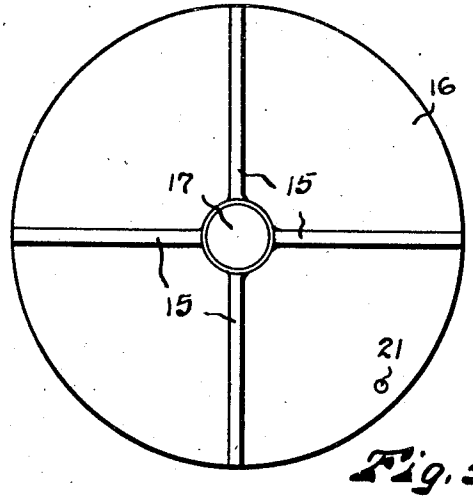


Fig. 5

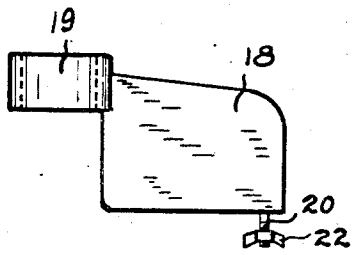


Fig. 6

INVENTOR
Henry S. Labisky
BY
Fred C. Matheny
ATTORNEY

Patented Apr. 8, 1930 1,753,521

UNITED STATES PATENT OFFICE

HENRY S. LABISKY, OF SEATTLE, WASHINGTON

WASHING-MACHINE AGITATOR

Application filed August 6, 1929. Serial No. 383,860.

My invention relates to improvements in washing machine agitators and is in the nature of an improvement on my prior Patent No. 1,661,763, issued Mar. 6, 1928. The object of my invention is to provide means for increasing the efficiency of an agitator to thereby cause it to impart a more violent agitation to the water in a washing machine tub without varying the speed of the agitator.

A more specific object is to provide a washing machine agitator having auxiliary vane sections that may be readily attached to, and detached from, the agitator between the usual vanes to increase the effective total area of said vanes and cause them to agitate the water more violently.

In my prior patent hereinbefore referred to I provide auxiliary vanes which are adapted to be attached to the usual vanes to increase the effective heights of said usual vanes. In this application I provide auxiliary vanes readily attachable to the agitator between the usual vanes.

Other and more specific objects will be apparent from the following description taken in connection with the accompanying drawings.

One well known type of washing machine agitator which is ordinarily mounted for oscillation in the bottom of a washing machine tub has upright radial vanes that impart the agitation to the water. The efficiency of this type of agitator in imparting agitation to the water in the tub depends, within certain limits, on the height and area of the vanes, the higher vanes tending to impart a greater agitation. More violent water agitation removes the dirt from the clothes more quickly and more efficiently but too violent agitation is objectionable because it is hard on the clothes and subjects them to more wear than a lesser degree of agitation. The average family washing is liable to include a wide range of articles varying from the lightest of delicate fabrics to heavy coarse dirty working and children's clothes. For this reason the usual washing machine agitator must be designed so that it will not seriously injure the lighter clothes and yet, will afford sufficient agitation to wash the heavier ones. This necessitates the provision of agitator vanes that are so deep as to be needlessly rough on the lighter clothes and yet are too shallow for the most efficient washing of the heavier clothes. In accordance with my present invention I make the usual agitator vanes of the correct depth and number for the lighter clothes and provide auxiliary vanes for quick and easy attachment to the agitator between the usual vanes to produce a more violent agitation of the water for heavier work, the auxiliary vanes preferably extending above the level of the tops of the usual vanes.

In the drawings Figure 1, is a top plan view of a washing machine agitator constructed so as to receive my auxiliary vanes, the said auxiliary vanes being removed.

Fig. 2 is a top plan view of the auxiliary vane.

Fig. 3 is an elevation of the agitator with the auxiliary vane shown on the agitator post but raised above its operative position.

Fig. 4 is a similar elevation showing the auxiliary vane lowered into the operative position.

Fig. 5 is a plan view of a slightly modified form of agitator.

Fig. 6, is a side elevation of an auxiliary vane adapted to be placed on the agitator shown in Fig. 5.

Like reference numerals designate like parts throughout the several views.

Referring to Figs. 1 to 4 inclusive, I show a washing machine agitator of well known form comprising a disc like base 8 having a centrally arranged upright post 9 and provided with a plurality of radial vanes 10. I show two vanes 10 but it will be understood that any desired number of vanes, one or more, may be used.

The parts 8, 9 and 10 are preferably of integral construction. The post 9 is usually unobstructed at the top, the agitator being driven from below.

In accordance with my invention as exemplified in Figs. 1 to 4, inclusive, I provide a readily detachable and attachable auxiliary vane member embodying two vanes 11

and 12 connected with each other by an integral ring 13 which is of the proper size to fit snugly over the post 9. The base portion 8 of the agitator is provided with two diametrically opposite grooves 14 for the reception of the bottom edges of the vanes 11 and 12. In applying the vane member to the agitator the ring 13 is slipped over the post as shown in Fig. 3, and the vanes 11 and 12 are allowed to drop into the grooves 14. The grooves 14 prevent the auxiliary vane member from turning and said vane member provides additional area for imparting a more violent agitation to the water. I find that the violence of the agitation is governed to a very great extent by the depth of the vane and for this reason I prefer to construct the auxiliary vanes so that they will extend above the level of the tops of the regular vanes.

In Figs. 5 and 6 I show an agitator having four integral vanes 15 provided on a base 16 and equally spaced around a central post 17. An auxiliary vane 18 is provided with a ring 19 adapted to fit over the agitator post and is further provided with a stud bolt 20 arranged to extend through a hole 21 in the agitator base 16 and to have a nut 22 placed thereon to secure said vane to the agitator. The stud bolt 20 forms a rigid connection and the only alteration required on the usual standard agitator is the provision of the hole 21. The usual washing machine affords sufficient clearance below the agitator for the nut 22. The vane 18 is preferably higher than the standard agitator vanes 15 so that it will extend above the level of the tops of said standard vanes.

In the course of a washing the operator of the washing machine may employ the usual agitator for the washing of the more delicate clothes and may quickly and easily apply the auxiliary vanes when dirtier and coarser clothes are to be washed and more violent agitation of the wash water is desired.

The use of the auxiliary vanes makes it possible to design the agitator with low vanes so that delicate clothes will be subjected to the least possible wear but if no auxiliary vanes are provided the agitator will necessarily be designed with vanes of medium height which will agitate more violently than is necessary for delicate clothes and less violently than is desirable for heavy rough clothes.

The foregoing description and accompanying drawings clearly disclose certain perferred embodiments of my invention but it will be understood that these disclosures are merely illustrative and that changes of construction may be made within the scope and spirit of the following claims.

I claim:

1. The combination with a washing machine agitator having vertical vanes, of auxiliary vanes of greater depth than the first named vanes readily detached and attachable relative to said agitator at points removed from the first named vanes.

2. The combination with a washing machine agitator embodying a disc shaped base provided with an upright post and having radially extending vanes, of an auxiliary vane member arranged to be supported on the base and to project above the level of said radial vanes, said base having means cooperating with said auxiliary vane for securing the same against angular displacement on said base.

3. The combination with a washing machine agitator embodying a disc like base provided with a center post and having upright vanes thereon, said base being recessed between said vanes, of an auxiliary vane member arranged to be removably supported on said base between the first named vanes, and means on the bottom edge of said auxiliary vane for engaging within said recess in said base to prevent angular displacement of the auxiliary vane.

4. The combination with a washing machine agitator embodying a disc like base having a radial groove in its top side of a center post on said base, upright radial vanes on said base, and a readily attachable and detachable auxiliary vane having a ring arranged to fit over said center post, the bottom edge of said auxiliary vane being adapted to rest within said radial groove in said base.

The foregoing specification signed at Seattle, Wash., this 19th day of July, 1929.

HENRY S. LABISKY.