Aug. 12, 1930. J. HEUSSER 1,772,749

DISK WASHING MACHINE

Filed May 10, 1929 2 Sheets-Sheet 1

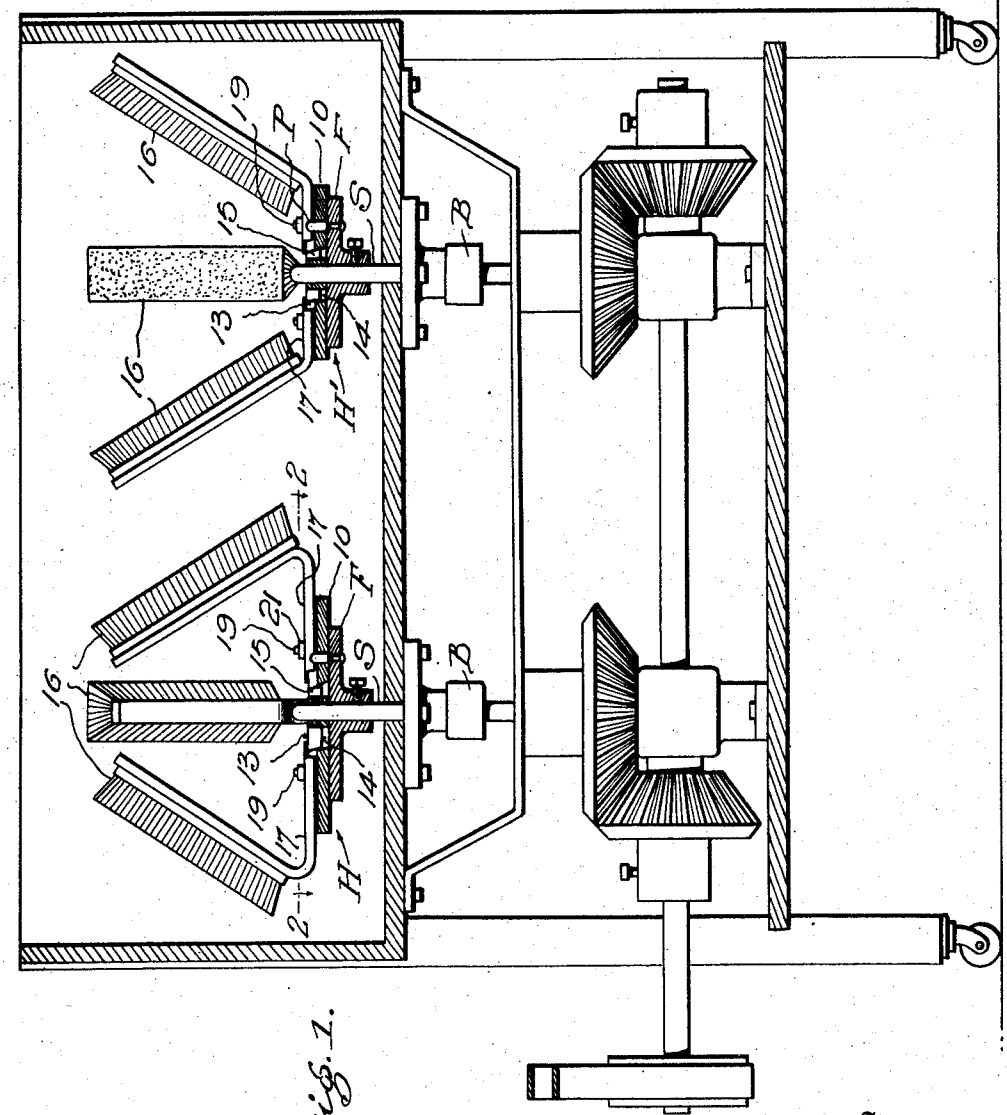


Fig. 1.

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Fig. 2.

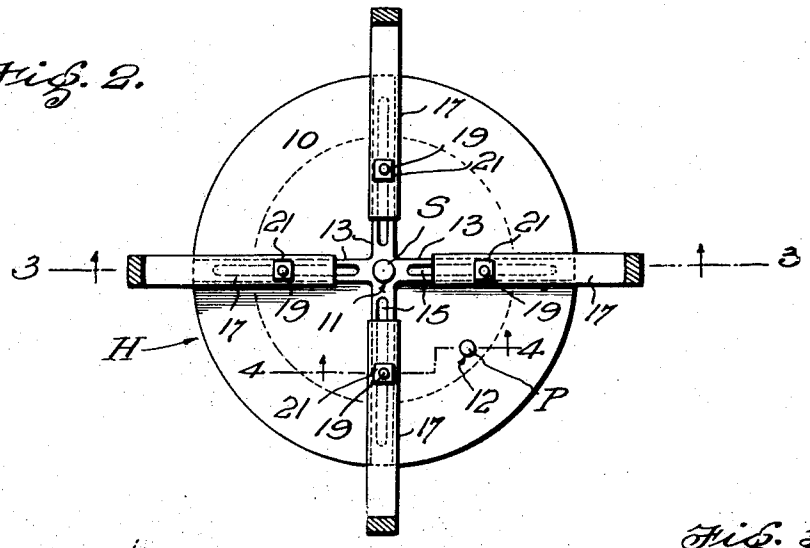
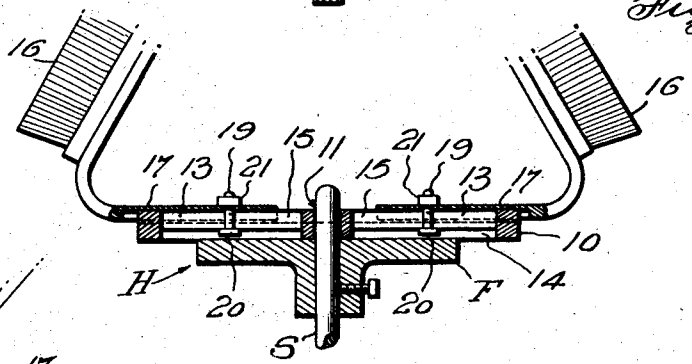


Fig. 3.



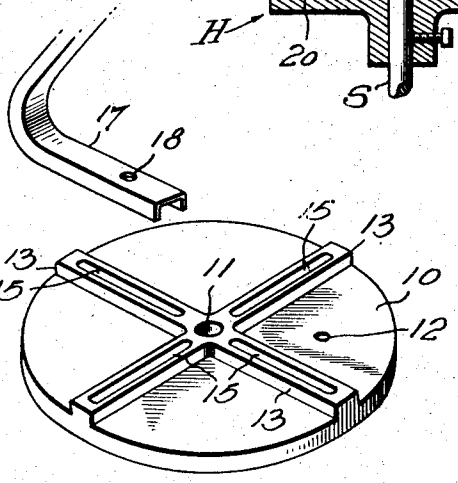
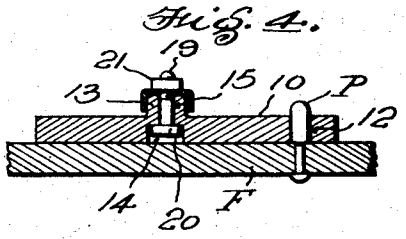


Fig. 5.

Fig. 4.



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UNITED STATES PATENT OFFICE

JULIUS HEUSSER, OF CLEAR LAKE, WISCONSIN

DISK-WASHING MACHINE

Application filed May 10, 1929. Serial No. 361,986.

The invention relates primarily to washing machines for the conical disks of cream separators and has reference more particularly to a brush head whose brushes are positioned to engage either the outer or the inner side of the disks to be washed.

It is the principal object of the invention to provide a unique adjustable mounting for connecting the bases of the brushes with a shaft-carried disk in such manner that said brushes may be quickly and easily set at any desired distance from the center of the shaft, thereby adapting them for washing disks of different sizes.

With the foregoing in view, the invention resides in the novel subject matter hereinafter described and claimed, description being accomplished by reference to the accompanying drawings.

Fig. 1 is a vertical sectional view of a disk washer embodying my improvements.

Fig. 2 is a horizontal sectional view on line 2—2 of Fig. 1.

Figs. 3 and 4 are detail vertical sectional views on lines 3—3 and 4—4 of Fig. 2.

Fig. 5 is a perspective view of one of the brush-carrying disks and one of the brush bases in juxtaposition.

Two of the improved brush heads H and H′ are shown in a water tank T, said heads being driven by vertical shafts S which pass through stuffing boxes B, said shafts being in turn driven by gearing G on a drive shaft D.

Each head H—H′ embodies a disk 10 which in the present showing rests on a flange F secured to the shaft S, said flange being provided with an upstanding pin P. The disk 10 is provided with a central opening 11 receiving the upper end of shaft S and with an off-center opening 12 receiving the pin P, a driving connection being thus established between the brush head and the shaft S, of such nature as to permit quick and easy detachment of said brush head simply by lifting it.

The upper side of the disk 10 is provided with a plurality of integral radial ribs 13 and the lower side of said disk is formed with an equal plurality of radial grooves 14, said grooves being in the portions of the disk which are thickened by the ribs 13. Disk 10 is also provided with a plurality of radial slots 15 which open into the grooves 14 and through the upper sides of the ribs 13. The brushes 16 of the head H converge upwardly and those of the head H′ diverge upwardly for washing the interior and exterior respectively of the separator disks. The lower ends of these brushes are provided with longitudinally channeled bases 17 whose channels slidably receive the ribs 13, said bases being provided with bolt-holes 18 registering with the slots 15. Bolts 19 pass through the holes 18 and the slots 15 and are provided with flat-sided heads 20 which are slidably but non-rotatably received in the grooves 14. Clamping nuts 21 are threaded upon the upper ends of the bolts 19 and abut the upper sides of the bases 17.

By loosening the nuts 21, the bases 17 may be adjusted inwardly or outwardly with respect to the shaft S to set the brushes 16 for washing disks of various sizes. Tightening of these nuts tightly clamps the brushes in adjusted position and due to the arrangement of coacting ribs and channels, only one bolt is necessary for each brush base 17. It is thus an easy matter to adjust the brushes as may be desired and moreover the adjustment may be rapidly effected. Then too, whenever it is advisable to entirely remove the brushes from the disks, for instance to permit thorough cleaning and sterilizing of the parts, this may be quickly and easily accomplished. This is seldom necessary however, as each brush head H—H′ may be bodily removed from the driving shaft S, thoroughly washed and placed either in the sterilizer or in the open air or sunlight.

On account of the existing advantages for the details disclosed, these details are preferably followed. However, within the scope of the invention as claimed, minor variations may be made.

I claim:

1. A brush head comprising a shaft-carried disk having a plurality of radial ribs on one side, a plurality of brushes having channeled bases whose channels slidably receive said ribs, and bolt and slot connections be-

tween said bases and ribs allowing setting of the brushes any desired distance from the disk axis.

2. A brush head comprising a shaft-carried disk having a plurality of radial ribs on one side and an equal plurality of radial grooves in its other side, the grooves being formed in the disk portions thickened by the ribs, said disk having also a plurality of radial slots which open into said grooves and through the outer sides of said ribs, a plurality of brushes having channeled bases whose channels slidably receive said ribs, said bases being provided with bolt holes registering with said slots, bolts having heads slidably but non-rotatably received in said grooves, said bolts passing through said slots and said bolt holes, and clamping nuts threaded on said bolts and abutting said bases.

In testimony whereof I have hereunto affixed my signature.

JULIUS HEUSSER.