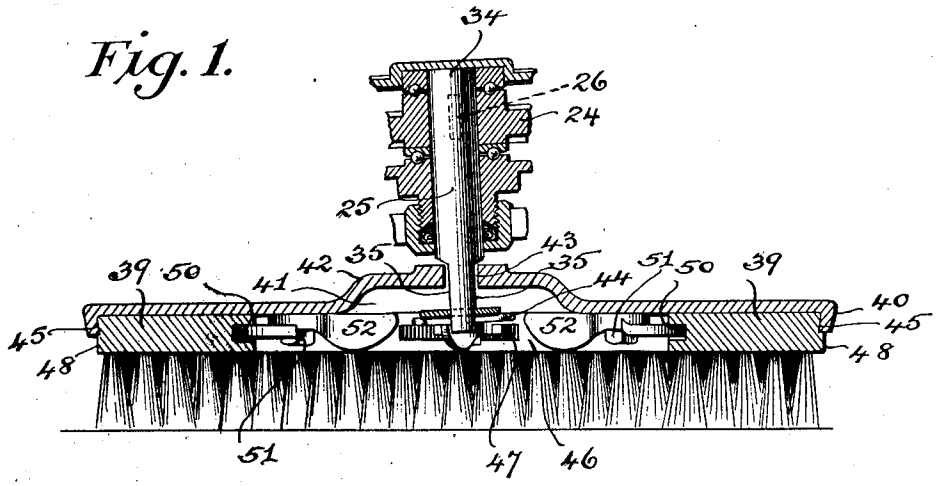
Dec. 8, 1925. 1,564,226

W. S. FINNELL

BRUSH HEAD FOR ROTARY SCRUBBING MACHINES

Original Filed Oct. 23, 1917

Fig. 1.



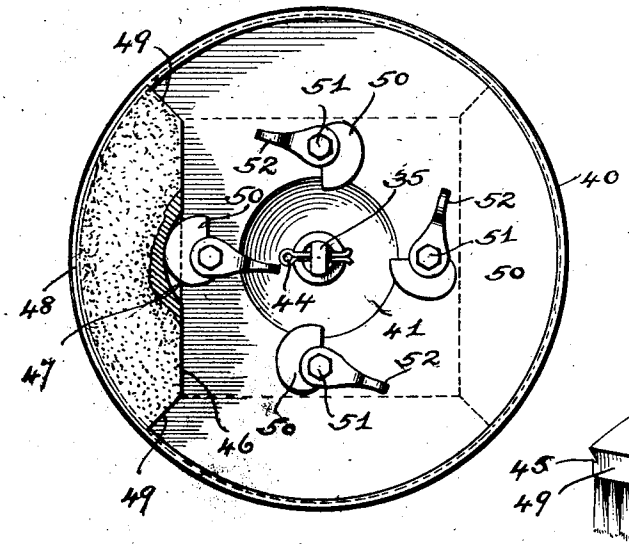
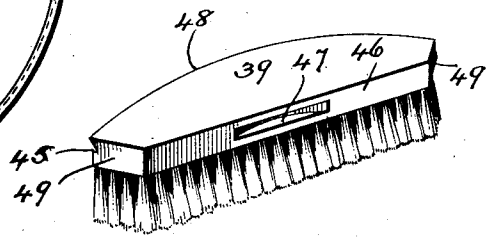


Fig. 2.

Fig. 3.



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UNITED STATES PATENT OFFICE.

WALTER SCOTT FINNELL, OF HANNIBAL, MISSOURI.

BRUSH HEAD FOR ROTARY SCRUBBING MACHINES.

Original application filed October 23, 1917, Serial No. 198,038. Divided and this application filed April 20, 1922. Serial No. 555,714.

To all whom it may concern:

Be it known that WALTER S. FINNELL, a citizen of the United States, residing at Hannibal, in the county of Marion and State of Missouri, has invented certain new and useful Improvements in Brush Heads for Rotary Scrubbing Machines, of which the following is a specification.

This invention relates to improvements in brush-heads for rotary scrubbing machines and is particularly directed to an improved means for attaching a series of brush-sections to a head that is to be revolved and carry the said brush-sections.

The subject-matter of the present application is divided from my application for patent, Serial Number 198,038, filed October 23rd, 1917, which has since resulted in Patent 1,434,109 granted October 31st, 1922.

The invention is illustrated in the accompanying drawing, wherein,—

Fig. 1 shows a vertical cross-sectional view through a rotatable plate on the lower end of a shaft with my improved means on the under side thereof for attaching a series of brush-sections thereto.

Fig. 2 illustrates an inverted or bottom view of the plate and one of the brush-sections attached thereto by my improved means, and

Fig. 3 shows one of the brush-sections in perspective.

Referring to the drawing the numeral 24 designates a gear which revolves in substantially a horizontal plane and is made fast to an upright shaft 25, by means of a key 26. The gear and shaft, as I have used them in practice, are parts of a rotary scrubbing machine, shown in my said application for patent, and are so mounted as to be moved over a floor or other surface on which the rotary brush is to operate.

The upright shaft 25 has its upper portion cylindrical as at 34 while its lower portion is flattened on two sides as at 35.

The brush structure is designed to be carried at the lower end of the shaft 25 where the opposite flattened faces are located.

This brush structure comprises a circular metal plate having a raised central portion 42 and a downwardly and slightly inwardly-extending annular rim-flange 40. On the under side of the plate the raised central portion produces a central cavity 41 and a slot 43 is provided through the plate which is shaped to loosely receive the flattened end of the shaft. This construction permits the shaft and plate to have independent vertical movement but requires the plate to revolve with the shaft.

A cotter pin 44, passes through the shaft and prevents the latter from being withdrawn from the plate.

On the under side of the circular metal plate there are provided a plurality of brush-section engaging devices which have the form of cams 50. Each cam is pivotally mounted on a pivot bolt 51 so it may be swung in a direction substantially parallel with the under surface of the plate. Each cam also has a thumb-piece 52, so it may readily be operated by hand.

The scrub brush is preferably circular in shape and consists of a plurality of sections 39, say three or four, but in the present instance four are intended to be used.

One of the detached brush-sections is shown in Fig. 3 and by reference thereto it will be seen to consist of a wood block with one long straight edge 46 which has a slot or groove 47 therein. The opposite side 48 of the block is curved from end to end and this curved edge has a groove 45 in its vertical face. The two ends 49 of the block are cut at an angle corresponding with radial lines of a circle, of which the curved edge 48 is an arc,—these angle-ends are clearly shown in Fig. 2 of the drawing.

The several brush-sections are assembled against the under side of the circular plate with the curved edges 48 of the sections confronting the inclined flange 40 and with the slots or grooves 47 in the edge 46 of the brush registering with the cams 50,—the cams at this moment being in the withdrawn position as shown at the top, bottom and right hand side of Fig. 2.

After a section is in place the cam 50 will be swung about and entered in the groove 47, which entrance forces the brush block outwardly and seats the groove 45 at the rounded edge against the inclined flange 40 which rigidly holds the section in place.

The other sections will be attached to the under side of the circular place in the same manner until all the sections are in place.

Having described my invention, I claim,—

1. In a brush-head for rotary scrubbing machines the combination with a driving mechanism including a depending shaft, of

a circular plate loosely attached to the shaft to permit the latter to have an up and down motion independently of the circular plate but to revolve the latter,—said circular plate having a circumferential down-turned annular flange, a brush having a back to seat against the under side of the circular plate and one side of the brush-back being curved to fit the annular flange and means on the under side of the circular plate and at the inner side of the brush back for locking the back against the down-turned annular flange.

2. In a brush-head for rotary scrubbing machines the combination with a plate having an inwardly inclined depending flange at its outer edge, of a brush having a back with an inclined groove at one edge to receive the inclined flange of the plate and a cam pivotally carried at the under side of the plate for engaging the brush-back and pressing the grooved edge thereof against the inclined flange of the plate.

3. The combination with a circular plate having a downwardly and inwardly-inclined flange at its outer edge, a plurality of cams pivotally carried at the under side of the plate, a plural number of brush-sections each having a brush-back with its outer face curved to correspond to the curvature of the flange on the plate said curved back-edge having a groove therein to receive said inclined flange and the backs being located between the flange and the cams whereby the latter may press the backs into locking engagement with the flange.

4. The combination with a plate having a downwardly and inwardly inclined flange at its outer edge, of a brush having a back with an inclined groove at one side to engage the said flange and at the opposite side said back being provided with a longitudinal groove, and cam-means on the plate to enter the said longitudinal groove, of the back and press the latter outwardly to engage its inclined groove with the inclined flange.

In testimony whereof I affix my signature.

WALTER SCOTT FINNELL.