Sept. 4, 1923. 1,466,989

H. R. CHICK ET AL

POLISHING MOP OR THE LIKE

Filed Jan. 31, 1921

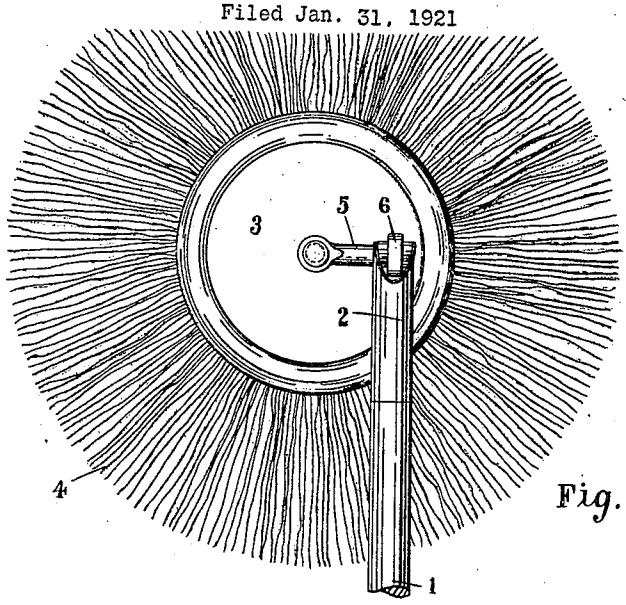


Fig. 1.

Fig. 2.

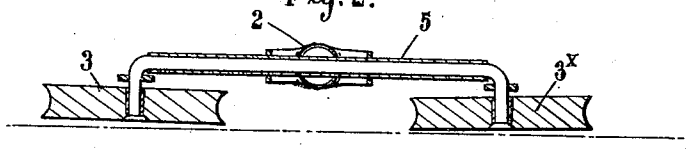


Fig. 3.

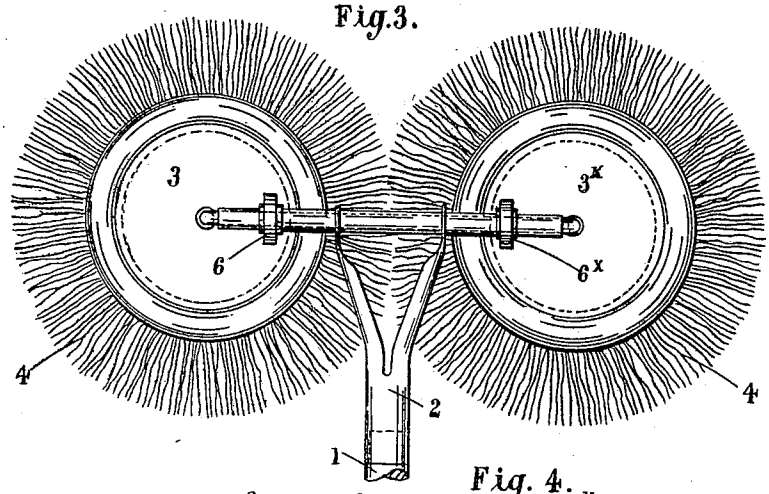
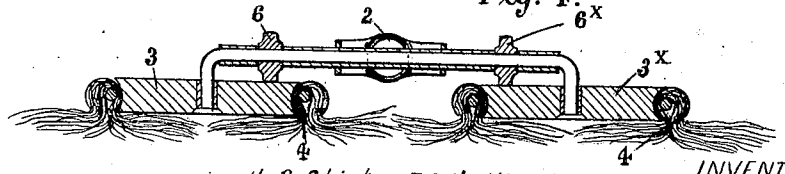


Fig. 4.



INVENTORS

H. R. Chick, F. O. Helliwell & W. Plumbridge

By Lawrence Langner Atty.

Patented Sept. 4, 1923. 1,466,989

UNITED STATES PATENT OFFICE.

HARRY ROBERT CHICK, OF HAMBLE, AND FRANK OXLEY HELLIWELL AND WILLIAM PLUMBRIDGE, OF FOLKSTONE, ENGLAND.

POLISHING MOP OR THE LIKE.

Application filed January 31, 1921. Serial No. 441,498.

To all whom it may concern:

Be it known that we, HARRY ROBERT CHICK, subject of the King of Great Britain, and resident of The Old House, Hamble, Hants, England, and FRANK OXLEY HELLIWELL and WILLIAM PLUMBRIDGE, both subjects of the King of Great Britain, and residents of 10 Shorncliffe Road, Folkstone, Kent, England, have invented certain new and useful Improvements Relating to Polishing Mops or the like, of which the following is a specification.

This invention relates to mops or the like of the manually operated kind in which a disc or equivalent element is applied with one face to the surface to be treated as distinct from cleaning or polishing devices of the rolling cylinder type. The invention relates particularly to mops of the kind used for polishing floors and consisting of a disc mounted on a handle and provided peripherally with lengths of coarse yarn, fibre, fabric, or similar material suitable for polishing. The usual method of using such a mop is to make the material and disc travel to and fro on the surface to be cleaned or polished by imparting a reciprocating motion to the handle. The chief object of the present invention is to increase the effectiveness of the reciprocating motion and incidentally reduce the amount of energy or pressure required to obtain the desired effect.

According to the present invention the disc portion of the mop is mounted rotatably upon the handle in such a way that the pressure directed upon the rear face of the disc portion while manipulating the mop causes said disc portion to rotate as it travels. For the sake of mechanical balance and symmetry of design, two discs are conveniently mounted upon the two limbs of the branched or forked end of the handle. In order to obtain the desired rotation of the discs all that is necessary is to cause the pressure on the handle to be applied eccentrically to them. This eccentric application of the pressure may take place upon the upper or rear face of the disc by means of a roller bearing eccentrically on said face and mounted on the lower end of the handle or handle socket or it may take place by reaction from the surface being cleaned by slightly inclining the pivotal mounting so that the disc does not press upon the surface equally at all points on its periphery.

The invention will now be described more fully with reference to the accompanying drawings which represent by way of example three simple embodiments.

Figure 1 is a plan view of a polishing mop with a single disc.

Figure 2 is a sectional elevation of a mop with a pair of symmetrically placed discs.

Figure 3 is a plan view and Figure 4 is a sectional elevation of the preferred form of our invention.

Referring first to Figure 1, it will be seen that the mop comprises the handle 1, the handle socket 2, the peripherally dished disc 3, and the fabric, fibres or yarn 4 peripherally attached to the disc by an elastic band or in any other convenient manner. The disc 4 is rotatably mounted upon one end of an arm 5 to the other end of which the socket 2 is attached. The socket is forked to embrace a roller 6 which is rotatably mounted on the arm 5. It will be understood that as the handle is moved to and fro and pressed towards the floor or other surface to cause the disc and cleaning material to travel over it the pressure will cause the roller 6 to press eccentrically upon the disc and thereby cause the latter to rotate as it travels thus easing the to and fro movement and producing a far more effective cleaning and polishing effect than would result from a plain reciprocating motion.

It will be apparent that the construction shown in Figure 1 presents the disadvantage of lack of mechanical balance tending to set up undesirable strain and a certain awkwardness in manipulation. These defects are readily overcome by mounting a disc on each end of the arm and attaching the socket to the arm symmetrically between the discs as shown in Figure 2. This figure shews discs 3 and 3^x mounted with their planes slightly tilted towards each other, whereby the reaction from the floor being greatest at the points of nearest approach to the surface being cleaned causes an excess of pressure to be applied eccentrically and a consequent rotative motion to accompany the reciprocating or travelling motion of the discs.

Figures 3 and 4 illustrate a twin-disc mop wherein the eccentrically applied pressure is

derived from rollers 6 and 6× on the cross arm 5 instead of by inclining the planes of the discs. It will be obvious from this figure that as the handle is reciprocated the discs will not only travel to and fro on the surface being cleaned or polished but will also rotate. It may be noted that the connection of the handle socket with the cross piece is such that the handle can be rocked about the axis of the cross-piece.

We believe that the principle of utilizing the manually applied pressure on the handle of a mop of the kind described to cause a rotation of the cleaning or polishing disc-like members as they travel to and fro is broadly new, and we wish it to be understood than any analogous application of this principle is within the scope of our invention. For example instead of fabric rags, yarn or the like polishing material we might employ bristles in which case the device would be more in the nature of a brush though operating on precisely the same principle.

What we claim is:—

1. A polishing mop or the like comprising a handle, an angularly extending arm thereon, a disc rotatably mounted on said arm and adapted to be reciprocated on one face thereof mopping material on said disc, and means for applying the pressure exerted in reciprocating said disc eccentrically to said disc to rotate the same as it travels.

2. A polishing mop or the like comprising a handle, an angularly extending arm thereon, a disc rotatably mounted on said arm and adapted to be reciprocated on one face thereof, mopping material on said disc and a roller for applying the pressure exerted in reciprocating said disc eccentrically to said disc to rotate the same as it travels.

3. A polishing mop or the like comprising a handle, a cross piece thereon, a disc rotatably mounted on said cross piece, a roller on said cross piece bearing eccentrically on one face of said disc, and cleaning or polishing material interposed between the other face of said disc and the surface to be cleaned or polished.

4. A polishing mop or the like comprising a handle, a cross piece thereon, a disc rotatably mounted on each end of said cross piece, mopping material on said discs, and means for applying the pressure exerted in reciprocating said discs eccentrically to said discs to rotate the same as they travel.

5. A polishing mop or the like comprising a handle, a cross piece thereon, a disc rotatably mounted on each end of said cross piece mopping material on said discs, and rollers on said cross piece bearing eccentrically on the rear faces of said discs to cause them to rotate as they travel with their front faces on the surface to be cleaned.

6. A polishing mop or the like comprising a handle, a cross piece thereon, a peripherally grooved disc rotatably mounted on said cross-piece, a roller on said cross piece bearing eccentrically upon the rear face of said disc, polishing material for interposition between the front face of said disc and the surface to be polished, and means detachably securing said material to the periphery of said disc.

7. A polishing mop or the like comprising a handle, a cross piece thereon, a peripherally grooved disc rotatably mounted on each end of said cross piece, rollers on said cross-piece bearing eccentrically on the rear faces of said discs, cleaning material on said discs for interposition between the front faces of said discs and the surface to be cleaned, and means detachably securing the cleaning material to the peripheries of said discs.

HARRY ROBERT CHICK.
FRANK OXLEY HELLIWELL.
WILLIAM PLUMBRIDGE.