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W. R. JAMES

BRUSH WITH DETACHABLE HANDLE

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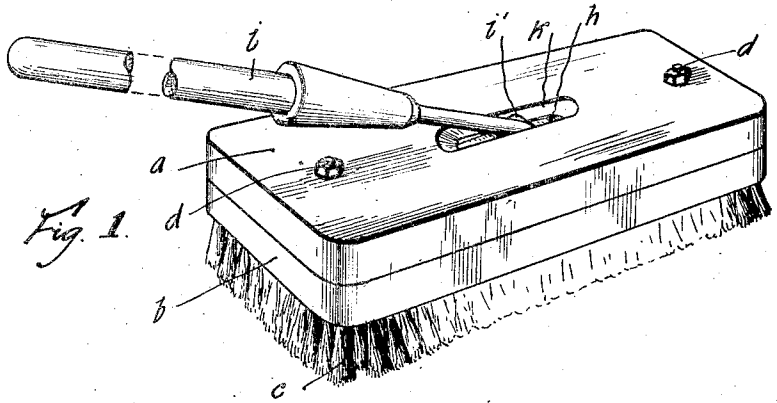


Fig. 1.

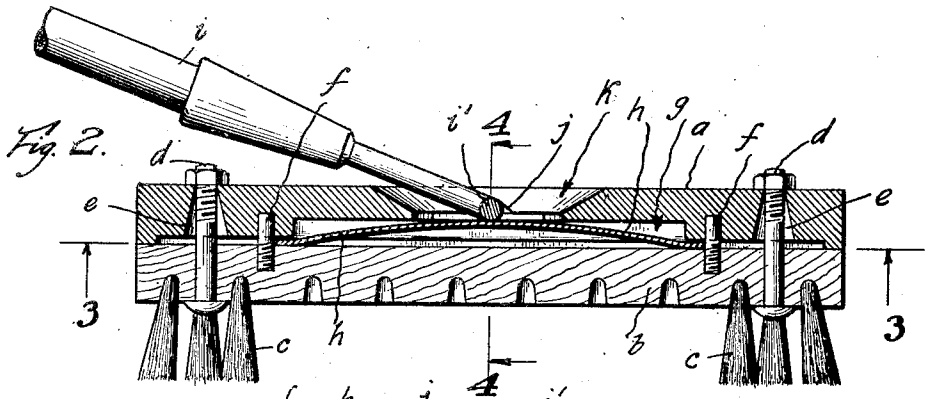


Fig. 2.

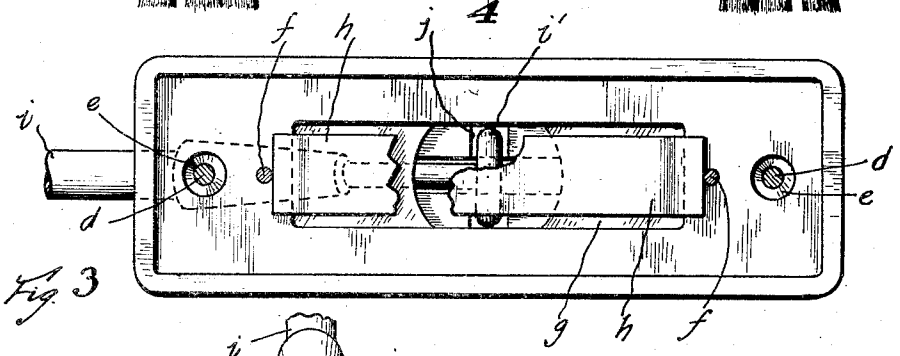


Fig. 3

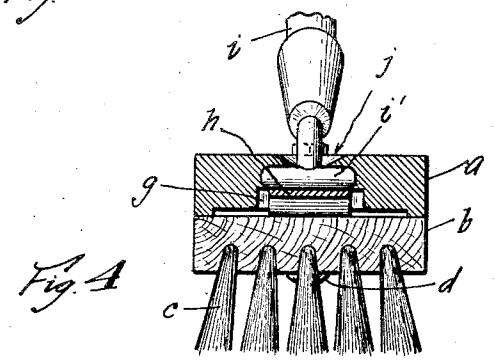


Fig. 4

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BRUSH WITH DETACHABLE HANDLE.

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My invention relates to floor waxing brushes and the like, which are extremely heavy and therefore difficult to handle and which often must be carried by workmen for a considerable distance. Said brushes usually weigh from twelve to twenty-five pounds and are provided with a relatively long handle which is necessarily pivotally connected to the brush body. It is impractical to house said brush and said handle in any reasonable sized container and thus the workman must carry said brush in his hand, or carry the same over his shoulder.

I perceived that if the brush is made with a detachable handle, said brush can be easily carried together, with the wax and other supplies within a small sized suitcase, while the relatively light handle can be easily and conveniently carried in the other hand. This is especially true if the detachable securing means on said body for said handle is arranged interiorly of said body so as not to affect the otherwise rectangularly formed body.

I have also discovered that the brush portions or polishing surfaces of said brushes quickly wear out, while the relatively expensive weighted heads are not proportionately worn and thus the unworn weighted portions must be discarded when the brush portion or polishing surface is worn out.

The object of my invention therefore is to provide a brush, such for example, as a floor waxing brush, with co-operating detachable means on the removable handle and on the body, respectively, which means serve to permit said handle to be easily and quickly detached from the body, but which serve to permit the handle to have pivotal movement relatively to the body, but no relative reciprocal movement therewith.

A further object of my invention is to provide a floor waxing brush of this character with detachable handle securing means, said means being entirely housed within the body thus serving to maintain the rectangular form of the brush which makes said brush compact and easily carried.

A further object of my invention is to provide a brush of this character with a body portion made in two separable halves, one of which may constitute a weight, said halves being relatively formed so that their opposed faces will constitute a chamber for enclosing said handle securing devices. Said handle securing devices comprise a resilient element which normally tends to hold the handle in engagement with the body, but which may be depressed to permit the relative disengaging thereof.

The details of my invention are further described with reference to the accompanying drawings, in which:

Fig. 1 is a perspective view of my improved brush with the handle shown as secured thereto, the handle being foreshortened;

Fig. 2 is a longitudinal section through the body of said brush, showing a handle seated in its recess and held in place by resilient means;

Fig. 3 is a horizontal section taken on the line 3—3 of Figs. 2, looking in the direction of the arrows, of the upper or weighted half of the brush body; and

Fig. 4 is a transverse section taken on the line 4—4 of Fig. 2.

My improved brush comprises a body made in halves *a* and *b*, *a* being made of metal, preferably lead and constituting the necessary weight for polishing. The half *b* is a wooden filler preferably carrying tufts of hair or fiber *c*. If the body is to be used as a polisher, said tufts may be omitted and a fabric surface substituted therefor.

Said halves are held together by bolts *d*. The holes *e* in the weighted half *a* are preferably tapered inwardly relatively to the inner face of said half so as to permit the bolt to be quickly inserted through said weighted half. Supplemental pins *f* are provided which are preferably threaded or otherwise secured in the half *b*, as shown in Fig. 2, and are arranged to be seated in pockets in said weighted half *a*.

Said weighted half *a* is provided with a recess *g* which is adapted to house the leaf spring *h* which constitutes the resilient means for holding the T-shaped end *i'* of the handle *i* in position. Said leaf spring *h* bears against the pins *f* at each end which pins *f* thus tend to limit the movement of said spring element *h* and said spring tends to hold the T-shaped end *i'* in the transverse groove *j* arranged in said upper half *a* of the body of the brush. Said handle *i* extends through the longitudinally arranged slot *k* in said weighted half of the brush, said slot having inclined ends which permits the angle which said handle makes with the body of said brush to be varied to a relatively large degree.

Said handle is inserted into said body by arranging the T-shaped end *i'* flatwise with the slot *k*, said slot being only slightly wider than the width of said head when arranged flatwise therewith. Forcing said handle downwardly into the chamber *g* causes said spring element *h* to be flexed. The handle can then be given a quarter turn so that said T-shaped end *i'* of said handle is arranged transversely of said slot *k* and, so as to be seated in said groove *j*. Said groove *j* is arranged transversely to said slot *k* and substantially centrally thereof so as to permit the handle to extend in either direction with equal facility.

The spring element *h* is of such tension that it is not flexed by the ordinary use of said brush and thus said handle is held firmly in said recess *j*, but is permitted pivotal movement therein. The relatively stiff spring element *h* thus tends to prevent any play between said handle and said brush.

I claim:

In a brush of the character described, a body part provided with an elongated interior recess communicating with an elongated narrow slot in the top of said body part, the roof of said recess being provided with a transverse central groove, and a flat spring bearing against the edges of said groove, in combination with a handle, provided with a T-end adapted to be inserted through said elongated slot into said recess, and thence turned at right angles therewith, thereby to seat the lateral portions of said T-end in said transverse groove, the said lateral portions being held in place by said spring.

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