F. D. WOLFGRAM & E. KLAUSMAN.

BRUSH.

APPLICATION FILED DEC. 30, 1908.

938,735. Patented Nov. 2, 1909.

FIG. 1.

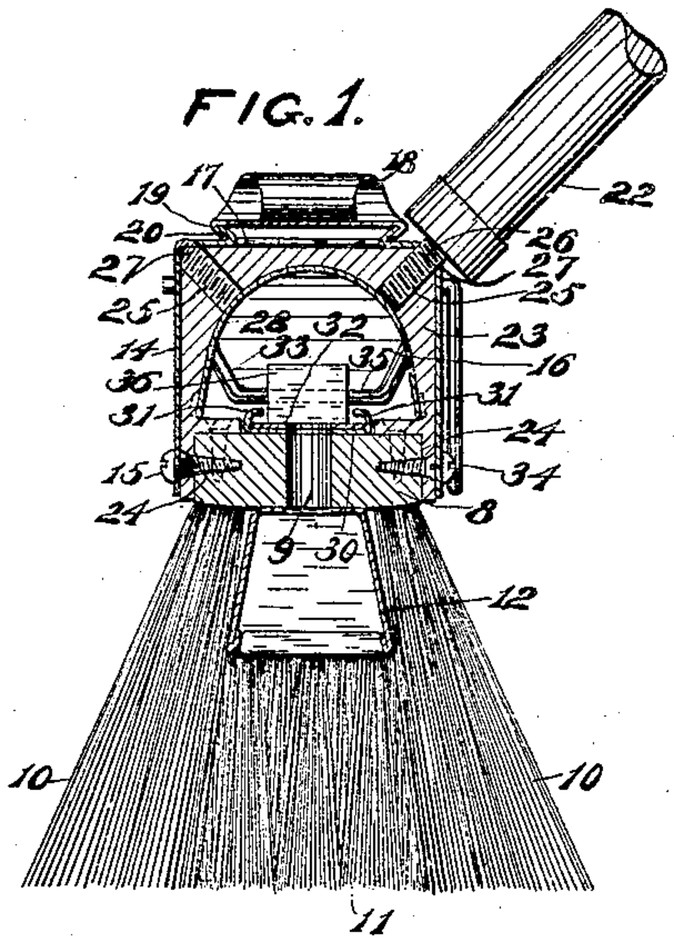


FIG. 2.

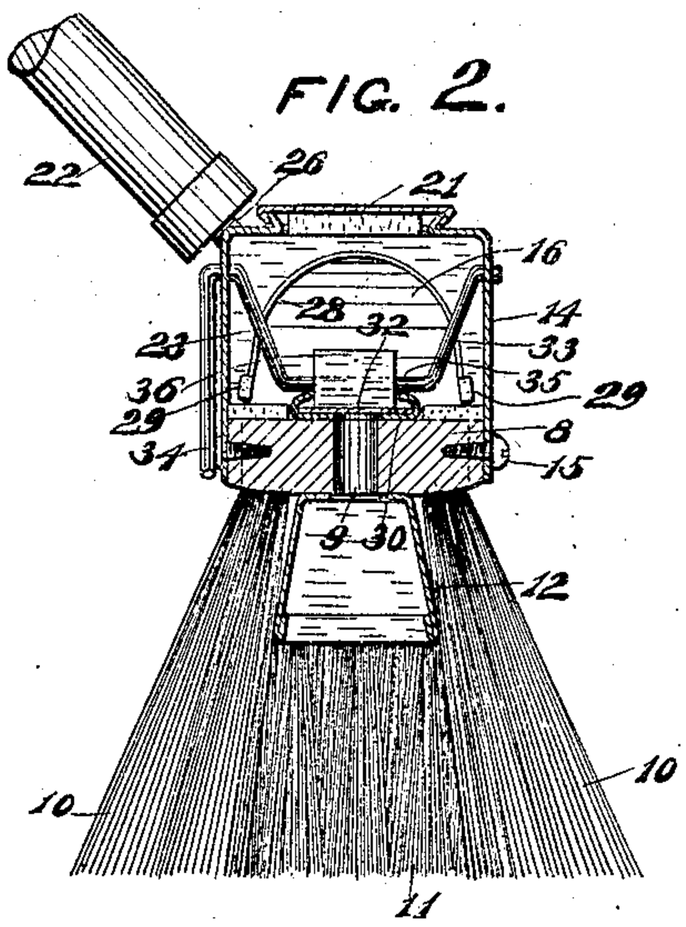


FIG. 3.

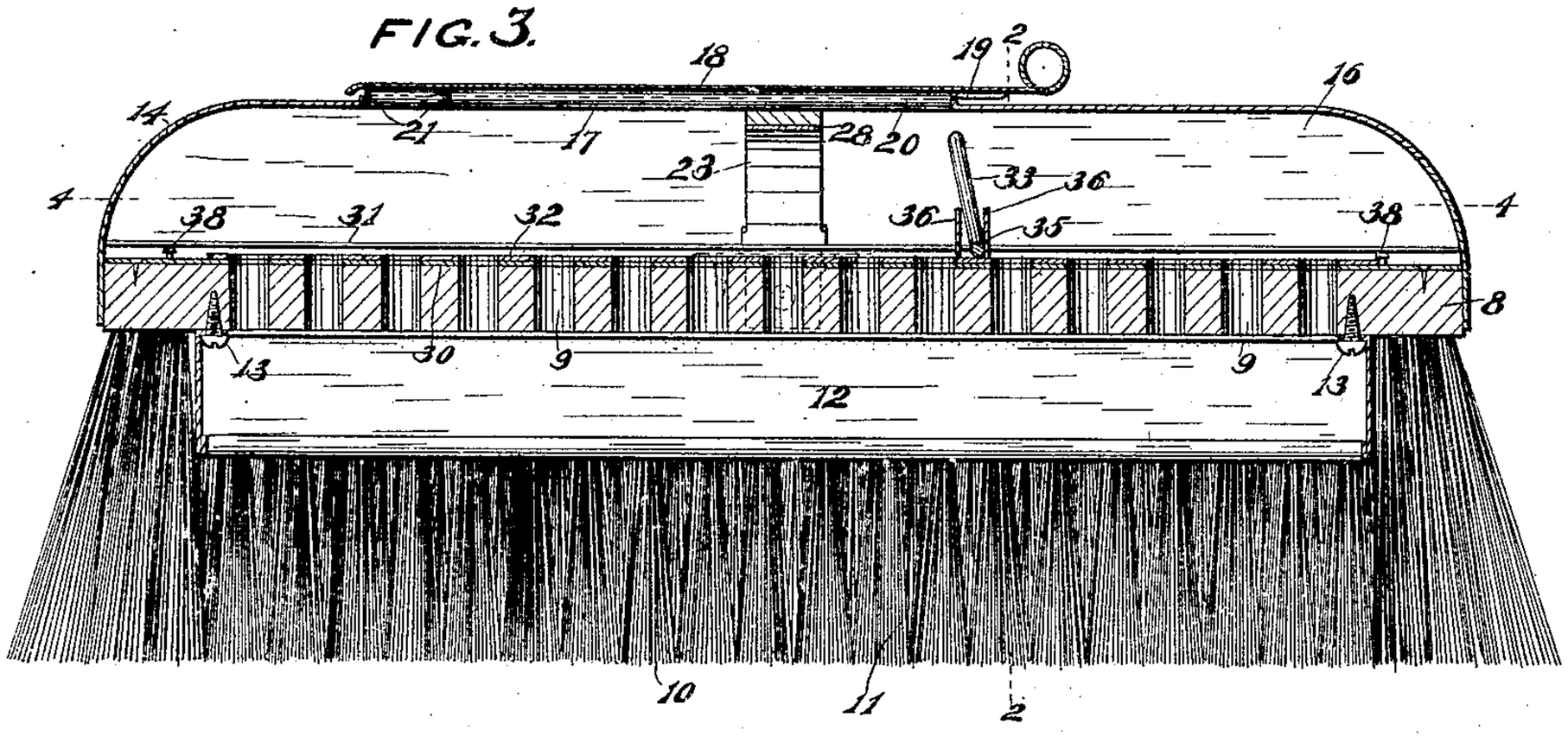


FIG. 4.

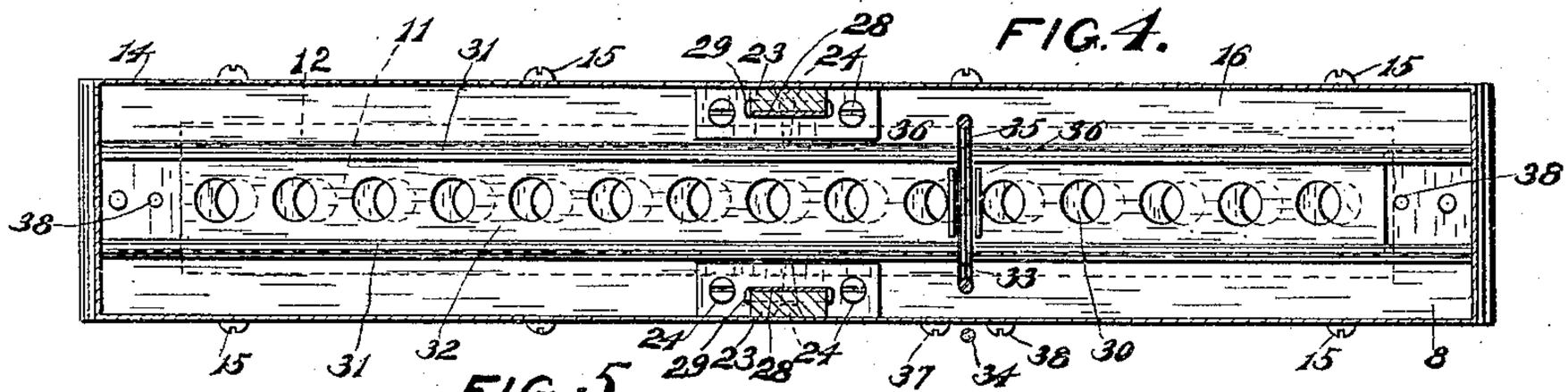
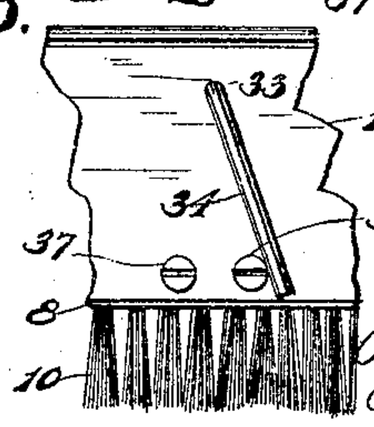


FIG. 5.



WITNESSES.

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UNITED STATES PATENT OFFICE.

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BRUSH.

938,735. Specification of Letters Patent. Patented Nov. 2, 1909.

Application filed December 30, 1908. Serial No. 470,069.

To all whom it may concern:

Be it known that we, FRANK D. WOLFGRAM and EDWARD KLAUSMAN, residing in Milwaukee, in the county of Milwaukee and State of Wisconsin, have invented new and useful Improvements in Brushes, of which the following is a description, reference being had to the accompanying drawings, which are a part of this specification.

This invention relates to improvements in brushes and particularly to that type known as dustless brushes.

The principal object of the invention is to provide a brush in which the back of the brush is provided with a receptacle adapted to deliver a dust absorbing medium on the floor or other surface being cleaned so that in sweeping the compound back and forth it will absorb the dust.

A further object of the invention is to regulate from the outside of the brush the quantity of the dust absorbing medium delivered from the receptacle.

A still further object of the invention is to provide simple means, within the receptacle, for attaching a handle to either side of the brush in order that both sides of the brush may be worn evenly.

A still further object of the invention is to provide an improved form of slide which is adapted to prevent the clogging of said slide in its guide.

A still further object of the invention is to provide means whereby the elongated space between the bristles is prevented from being closed or reduced in size by the bristles.

With the above, and other objects, in view, the invention consists of the devices and parts, or their equivalents, as hereinafter set forth.

In the accompanying drawing, in which the same reference characters refer to the same parts in all of the views; Figure 1 is a central transverse sectional view of the improved brush; Fig. 2 is a transverse sectional view taken on line 2—2 of Fig. 3; Fig. 3 is a central longitudinal sectional view of the brush; Fig. 4 is a sectional view taken on line 4—4 of Fig. 3, the bristles being omitted; and Fig. 5 is a view of a fragment of the brush showing means of holding the slide in adjusted position.

In the drawing, the numeral 8 indicates the brush back which is formed of a block of wood provided with a central longitudinal line of apertures or discharge openings 9 and with rows of bristles or tufts 10 extending downwardly from the block and positioned to form an elongated recess 11 beneath the block and coincident with the line of apertures. An elongated rectangular shaped guard 12 is fastened to the underside of the back in the elongated recess formed by the bristles. The upper portion of the guard is flanged for strength and to provide convenient means for the accommodation of fastening screws 13 which pass through holes in the flange and are threaded into the block. The depending sides of the guard are diverged outwardly in order to incline the bristles of the brush in the same direction and enlarge the size of recess at the bottom and also to prevent the bristles from bending inwardly and closing up the recess. The lower edge of the guard is bent over upon itself inwardly for strength and to form a rounded edge to prevent injury to the bristles. A cover or casing 14 extends over the top of the brush back and is fastened to sides thereof by means of screws 15. The cover or casing is formed of sheet metal and is spaced above the brush back to form a chamber or receptacle 16 for holding the dust absorbing medium. A charging opening 17 is provided in the top of the casing and a slide 18 provided with downwardly and inwardly bent side edges serves as a door for the opening. The bent side edges are adapted to engage upwardly and outwardly bent edges 20 of the casing forming guides therefor. Stops 21, 21 connected to the under side of the slide, are positioned to limit the travel of the slide on its guides and act as stops to prevent the removal of the slide from the casing and to properly position the slide in closing the charging opening. The end of the slide is bent upwardly in a curve to form a handle for convenience in operating the same.

In order to provide a convenient and strong connecting means for attaching a

handle 22 to the brush and also to reinforce the casing forming the receptacle, a casting 23 is connected to the brush back inside of the casing by screws 24, 24 passing through holes provided therefor in lugs projecting downwardly and also at right angles to the casting and into the block so that the casting is fastened to the top and both side edges of the block. The outer surface of the casting is shaped to conform to the inner surface of the casing to serve as a brace or reinforcement for said casing. Screw threaded openings 25, 25 positioned at an angle in said casting are adapted to accommodate the threaded bolt 26 fastened in the end of the handle 22. The casing 14 is provided with openings 27, 27 in register with the threaded openings of the casting thus providing means for attaching the handle to either side of the brush. A bent plate 28 provided with bent over ears 29, 29 is positioned against the inner edge of the casting and is adapted to cover the screw threaded openings of the casting and prevent loss of the compound therethrough. The ears of the plate are bent on both sides of the casting and securely hold the plate in position.

A perforated guide plate 30 with its perforations in register with the apertures 9, 9 of the block 8 is connected to said block by tacks or other convenient attaching means. The side edges 31, 31 of this plate are bent upwardly and over toward each other to form a grooved guide way for a perforated slide 32, the perforations of which are positioned to be brought into register with the perforations of the guide plate 30 and the apertures 9 coincident therewith when the slide is moved to the full open position. The position of the perforated slide is controlled to regulate the discharge of the dust-absorbing medium by means of a cranked wire 33 pivotally connected to the casing 14 and having one of its outwardly extending ends bent downwardly to form an operating handle 34. The medial bent portion 35 of this wire is positioned between two plates 36, 36 extending upwardly from the perforated slide. In order to hold the cranked wire and the perforated slide in positions of adjustment, knobs or screw heads 37 are connected to the casing, or the casing may be embossed to form projections thereon (not shown). The screw heads are so positioned with relation to the handle of the cranked wire that in swinging the handle to adjust the slide to the full open or to the full closed position, the handle will have to spring over one or the other of the screw heads which are in the path of movement of the wire handle thus holding the handle locked in either position. If it is desired to partly open the discharge openings the wire handle is moved to a position between the two screw heads as clearly shown in Fig. 4 of the drawing. Stop pins 38, 38 are positioned near both ends of the perforated guide to limit the movement of the slide to its full open or its full closed position. The slide 32 does not extend the full length of the casing so as to provide sufficient space between the ends of the slide and casing as to prevent the packing of the dust absorbing medium in the guide which would stop the adjustment of the slide.

In operation, the receptacle is filled with a dust-absorbing medium through the charging opening and the slide door is closed. The perforated slide is adjusted as desired and the brush is moved over the surface to be cleaned. This movement will cause the medium to be discharged continuously from the apertures in the bottom of the brush to the surface inclosed by the bristles forming the elongated space beneath the brush. As the medium is moved over the surface by the brush it will gather or absorb the dust and dirt without dust arising therefrom, and when the surface is cleaned the medium is brushed into a pile and removed. By the use of the guard the bristles or tufts are prevented from closing up the elongated recess and the medium is free to drop on the surface being cleaned. The cranked wire provides a convenient means of adjusting the discharge of the medium and the screw heads or projections hold the slide in adjusted position.

From the foregoing it will be seen that a brush is provided which is simple in construction and adjustments and is well adapted to accomplish the desired results.

What we claim as our invention is:

1. A brush, comprising a brush back provided with lines of bristles or tufts positioned apart to form an elongated recess, a guard attached to said back and located within said recess, a receptacle adjacent to said brush and constructed to discharge a dust-absorbing medium within and through said recess, and a slide for controlling the discharge of said medium.

2. A brush, comprising a brush back provided with lines of bristles or tufts positioned apart to form an elongated recess, a guard attached to said back and located within said recess, a receptacle adjacent to said brush and constructed to discharge a dust-absorbing medium within and through said recess, a slide for controlling the discharge of said medium, and means for locking the slide in adjusted positions.

3. A brush, comprising a brush back provided with lines of bristles or tufts positioned apart to form an elongated recess, a guard attached to said back and located

within said recess, a receptacle adjacent to said brush and constructed to discharge a dust-absorbing medium within and through said recess, a slide for controlling the discharge of said medium, and a cranked member for locking the slide in adjusted positions.

4. A brush, comprising a brush back provided with lines of bristles or tufts positioned apart to form an elongated recess, a guard attached to said back and located within said recess, a receptacle adjacent to said brush and constructed to discharge a dust-absorbing medium within and through said recess, a slide for controlling the discharge of said medium, a cranked member for adjusting the position of the slide, and means projecting in the path of movement of the cranked member for locking said member in adjusted positions.

5. A brush, comprising a brush back provided with lines of bristles or tufts positioned apart to form an elongated recess, a guard attached to said back and located within said recess, a receptacle adjacent to said brush and constructed to discharge a dust-absorbing medium within and through said recess, a slide for controlling the discharge of said medium, a cranked member provided with a handle for adjusting the position of the slide, and projections extending in the path of movement of the handle of the cranked member for locking said member in adjusted positions.

6. A brush, comprising a brush back provided with lines of bristles or tufts positioned apart to form an elongated recess, a guard attached to said back and located within said recess, a receptacle adjacent to said brush and constructed to discharge a dust-absorbing medium within and through said recess, a slide for controlling the discharge of the medium, a guide for said slide, plates extending upwardly from said slide, a cranked member provided with a handle positioned so that the cranked portion of the member will extend between the upwardly extending plates, and projections extending in the path of movement of the handle of the cranked member for locking said member in adjusted positions.

7. A brush, comprising a brush back provided with lines of bristles or tufts positioned apart to form an elongated recess, a guard attached to said back and located within said recess, a receptacle adjacent to said brush and constructed to discharge a dust-absorbing medium within and through said recess, a slide for controlling the discharge of the medium, a guide for said slide, stops positioned at a distance from the end walls of the receptacle for limiting the movement of the slide, plates extending upwardly from said slide, a cranked member provided with a handle positioned so that the cranked portion of the member will extend between the upwardly extending plates, and projections extending in the path of movement of the handle of the cranked member for locking said member in adjusted positions.

8. A brush, comprising a brush back provided with lines of bristles or tufts positioned apart to form an elongated recess, a rectangular guard attached to said back and located within said recess and constructed to hold the bristles or tufts spaced apart, a sheet metal casing connected to the sides of said brush back and spaced above said back to form a receptacle for containing a dust-absorbing medium, a cover for closing a charging opening in said casing, a handle attaching means connected to said brush back and located within the casing and constructed to reinforce the same, and means for discharging the dust-absorbing medium into and through the elongated recess.

9. A brush, comprising a brush back provided with lines of bristles or tufts positioned apart to form an elongated recess, a rectangular guard attached to said back and located within said recess and constructed to hold the bristles or tufts spaced apart, a sheet metal casing connected to the sides of said brush back and spaced above said back to form a receptacle for containing a dust-absorbing medium, a cover for closing a charging opening in said casing, a casting provided with threaded openings connected to said brush back and located within the casing and constructed to reinforce the same, said casing provided with openings in register with the threaded openings, a handle provided with a threaded portion constructed to pass through an opening of the casing and to engage a threaded opening of the casting, and means for discharging the dust-absorbing medium into and through the elongated recess.

10. A brush, comprising a brush back provided with lines of bristles or tufts positioned apart to form an elongated recess, a rectangular guard attached to said back and located within said recess and constructed to hold the bristles or tufts spaced apart, a sheet metal casing connected to the sides of said brush back and spaced above said back to form a receptacle for containing a dust-absorbing medium, a cover for closing a charging opening in said casing, a casting provided with threaded openings and with lugs extending downwardly and also at right angles thereto and constructed to be connected to the top and side edges of said brush back and located within the casing and constructed to reinforce the same, said casing

provided with openings in register with the threaded openings, a handle provided with a threaded portion constructed to pass through an opening of the casing and to engage a threaded opening of the casting, and means for discharging the dust-absorbing medium into and through the elongated recess.

In testimony whereof, we affix our signatures, in presence of two witnesses.

FRANK D. WOLFGRAM.
EDWARD KLAUSMAN.

Witnesses:
R. S. C. CALDWELL,
ALMA A. KLUG.