

(No Model.)

J. W. BOYLE.
CEILING BRUSH.

No. 375,919.

Patented Jan. 3, 1888.

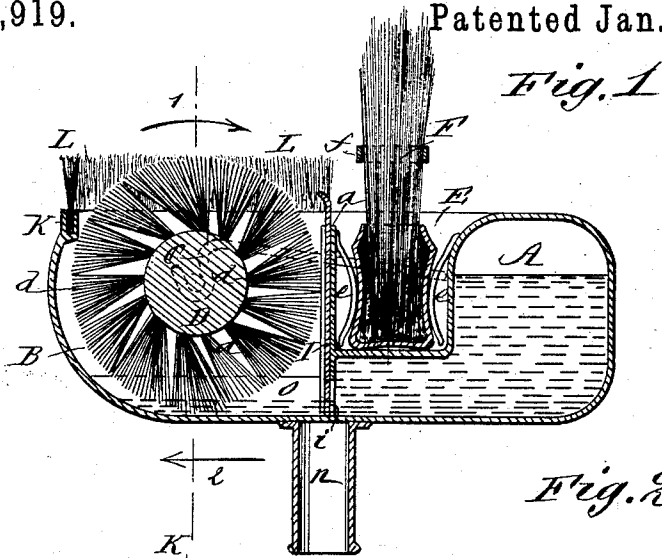


Fig. 1

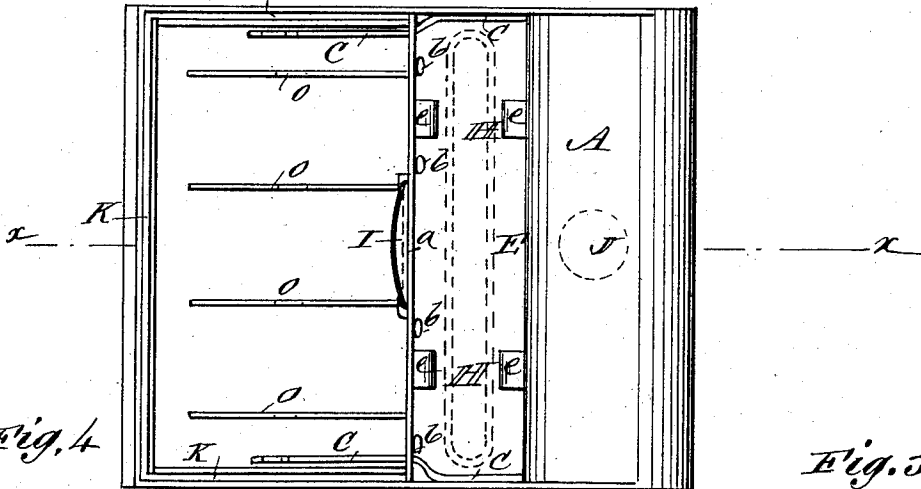


Fig. 2

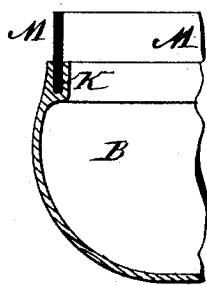


Fig. 3

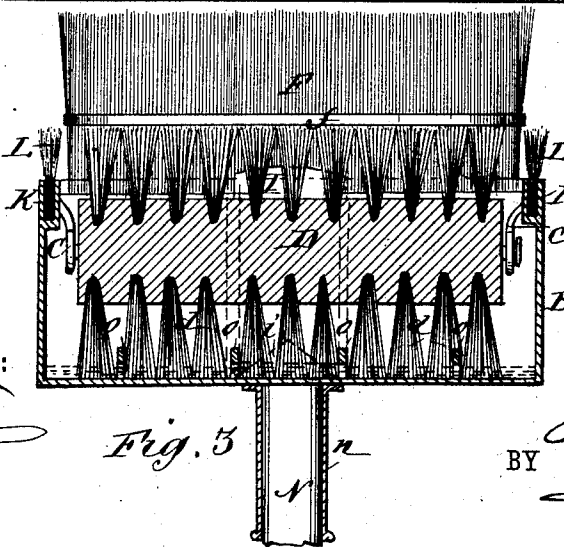


Fig. 4

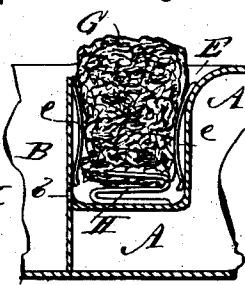


Fig. 5

WITNESSES:

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UNITED STATES PATENT OFFICE.

JAMES W. BOYLE, OF NEGLEY, PENNSYLVANIA, ASSIGNOR TO HIMSELF
AND JAMES E. DAVISON, OF SAME PLACE.

CEILING-BRUSH.

SPECIFICATION forming part of Letters Patent No. 375,919, dated January 3, 1888

Application filed February 15, 1887. Serial No. 227,729. (No model.)

To all whom it may concern:

Be it known that I, JAMES W. BOYLE, of Negley, in the county of Allegheny and State of Pennsylvania, have invented a new and Improved Ceiling Brush, of which the following is a full, clear, and exact description.

My invention relates to a device or instrument adapted for whitewashing or calcimining and cleaning ceilings or other overhead work; and the invention has for its object to provide a simple, inexpensive, and effective device of this character allowing this work to be done by its use with economy of time and labor.

The invention consists in certain novel features of construction and combinations of parts of the ceiling-brush, all as hereinafter described and claimed.

Reference is to be had to the accompanying drawings, forming a part of this specification, in which similar letters of reference indicate corresponding parts in all the figures.

Figure 1 is a sectional elevation of my improved ceiling-brush with the handle removed. Fig. 2 is a plan view of the brush-head or case with the brushes and guard removed. Fig. 3 is a cross-section taken on the line *xx* of Fig. 1. Fig. 4 is a detail view of a modified form of guard and a part of the case to which it is fitted; and Fig. 5 is a detail view of a cloth or sponge as held in the finishing-brush pocket for use in cleaning or washing ceilings.

The sheet-metal head or case of the ceiling-brush has a rectangular general form, open for the most part at the top and divided by a fixed vertical partition, *a*, into two main compartments; a reservoir, *A*, and a box or receptacle, *B*, in which box is journaled, in the hooked ends of elastic rods *C C*, fixed at their other ends to the case *A*, the main or distributing brush *D* of the device, the elastic bearings allowing the brush to give or yield somewhat in use, but the brush may be journaled in bearings formed on or fixed to the case in any improved way.

Behind the partition *a* the upper wall of the case is sunken to provide a pocket or receptacle, *E*, for holding a finishing-brush, *F*, as shown in Figs. 1 and 3, or a cloth or sponge, *G*, as shown in Fig. 5. Springs *e*, fitted to op-

posite side walls of the pocket, hold either the brush *F* or the cloth or sponge *G* to place, and when the cloth or sponge is used a spring, *H*, (shown in full lines in Fig. 5 and indicated by dotted lines in Fig. 2,) will be placed in the pocket to force the cloth or sponge outward to its work for purposes presently explained.

An opening, *i*, made in the partition *a* at its center and next the bottom of the case, allows water, glue-size, calcimine, or other liquid to be used in cleaning or finishing a ceiling, and placed in the reservoir *A* to flow to the brush-box *B*, and the discharge of the fluid may be controlled by a valve or gate, *I*, fitted in suitable slideways on the partition. It is obvious that with this construction the reservoir *A* may be filled with liquid either by pouring the liquid through the opening *i* or through a valved opening in the top wall of the reservoir, and indicated by a dotted line, *J*, in Fig. 2 of the drawings; and when the instrument is held in position for use, or open side upward, as in Fig. 1, the fluid will be prevented from flowing too freely through the opening *i* by atmospheric pressure. Hence the flow of fluid to the brush-box *B* may be closely regulated by adjusting the valve *I* to maintain a uniform feed of the fluid to the brush *D* to assure its even distribution by the brush until the fluid is all used.

A series of apertures, *b*, made in the partition *a*, at the base of the pocket *E*, allows liquid dripping either from the finishing-brush *F* or the cloth or sponge *G* to flow from the pocket into the brush-box *B*, to be taken up by the brush and applied to the ceiling.

Around the front and opposite ends of the brush-box *B*, at its upper edge, there is provided a slot or recess, *K*, in which a narrow bristle brush *L* may be fitted, as shown in Figs. 1 and 3 of the drawings, or a strip or band, *M*, of elastic substance, preferably india-rubber, and as will be understood from Fig. 4 of the drawings. Both the brush *L* or the rubber band *M* will project about to a plane level with the ends or periphery of the brush *D*, and will prevent a spattering of the fluid by the brush beyond the space bounded by the box *B*; but the brush-guard *L* will be used only when a size or finishing liquid is to be

applied to the ceiling, as the soft hairs of the guard will not mar or scratch the ceiling at the laps of the successive strokes of the brush, and the rubber band M will be used when cleaning the ceiling by using the cloth or sponge G, as the band will, by its friction, facilitate the loosening and removal of the dirt.

The finishing or laying brush E may have any suitable stock or head in which its bristles will be held, and will be suitably formed to be clamped firmly by the springs *e*, and an elastic band, *f*, will preferably be placed around the bristles to hold them in compact form for the best effect. A socket, *n*, fixed to the head or case of the device, provides for attaching the head to a handle, N, of any desired length for reaching ceilings of different heights. The box B is shown provided on its bottom with a series of ribs, O, which act as cleaners or clearers to the spiral rows of brush material of the brush D as it revolves in the box.

It will be noticed that the bristles *d* of the brush D project tangentially away from the direction of motion of the brush, thereby causing the brush to turn positively in direction of the arrow 1 in Fig. 1, while the instrument is moved along the ceiling in direction of the arrow 2.

The operation, briefly stated, is as follows: When sizing or calcimining a ceiling the brush-guard L and the brush F will be adjusted to the pockets K E, respectively, and when the reservoir A is charged with the size or white-wash and the valve I is adjusted the instrument will be passed over the ceiling in direction of the arrow 2, and as the brush D distributes the fluid on the ceiling the brush F, following it, will lay the fluid evenly to give a smooth and perfect coating at one traverse of the machine. To wash a ceiling prior to calcimining or painting it the rubber band M will be fitted into the pocket K, and the springs H and cloth or sponge G will be placed in the pocket E, and

the reservoir will be filled with water and when the valve I is adjusted the device will be passed over the ceiling, the brush D distributing the water thereon, while the band M aids the loosening of the dirt and the cloth or sponge wipes the ceiling; and in this way smoky or sooty ceilings may be very quickly and thoroughly cleaned, and whether cleaning or sizing or whitewashing is being done, the work may be performed with economy of time and labor.

Having thus fully described my invention, I claim as new and desire to secure by Letters Patent—

1. In a ceiling-brush, the combination, with a case provided with a reservoir, A, and an open-topped box, B, separated by a partition having an opening in its lower part, of the brush D, journaled in the said box, and the reservoir and box, substantially as herein shown and described.

2. The combination, in a ceiling-brush, of a head or case provided with a reservoir, A, an open-topped box, B, a brush, D, journaled in box B, an opening, as *i*, connecting the parts A B, a pocket, as E, formed behind the box B, and provided with springs *e*, and a finishing-brush or wiper held in the pocket by said springs, substantially as shown and described.

3. The combination, in a ceiling-brush, of a head or case provided with a reservoir, A, an open-topped box, B, adapted to receive a rotary distributing brush, and a pocket, E, formed behind the box B, and adapted to receive a finishing-brush or wiper, and the front wall of said pocket E provided with openings, as *b*, for passage of drip from the pocket to the brush-box, substantially as shown and described.

JAMES W. BOYLE.

Witnesses:

ANDREW JACK,
G. W. POOL.