No. 768,710. PATENTED AUG. 30, 1904.

W. VANDERMAN.

BRUSH.

APPLICATION FILED MAY 19, 1903.

NO MODEL.

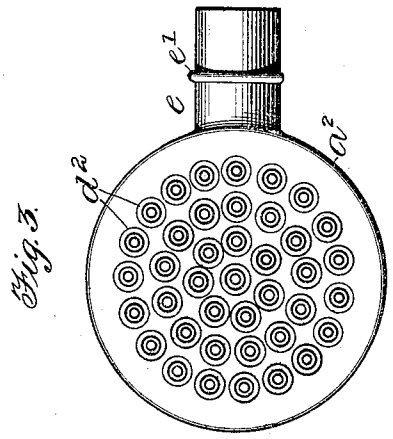


Fig. 3.

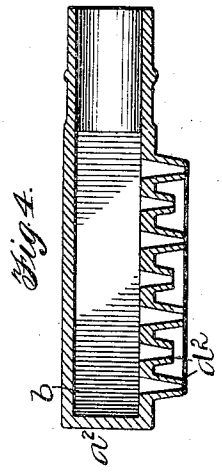


Fig. 4.

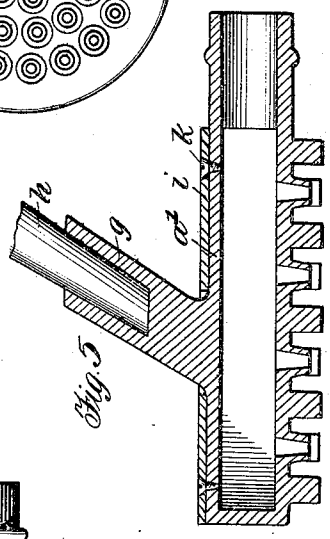


Fig. 5.

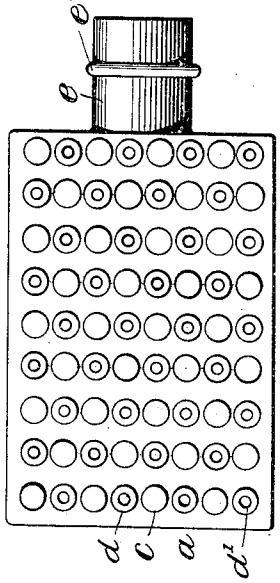


Fig. 1.

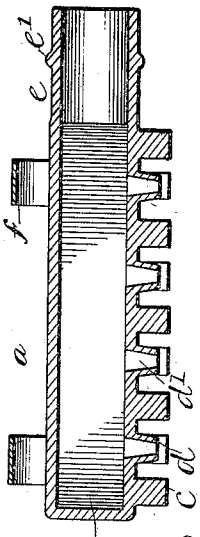


Fig. 2.

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No. 768,710. Patented August 30, 1904.

UNITED STATES PATENT OFFICE.

WILLIAM VANDERMAN, OF WILLIMANTIC, CONNECTICUT.

BRUSH.

SPECIFICATION forming part of Letters Patent No. 768,710, dated August 30, 1904.

Application filed May 19, 1903. Serial No. 157,786. (No model.)

To all whom it may concern:

Be it known that I, WILLIAM VANDERMAN, a citizen of the United States, and a resident of Willimantic, in the county of Windham and State of Connecticut, have invented certain new and useful Improvements in Brushes, of which the following is a specification.

My invention relates to the class of devices used more especially for cleansing purposes or cleaning and scrubbing; and the object of my invention is to provide a device of this class in which water may be applied freely to the surface to be cleansed and in which the greatest efficiency may be secured in the use of the device. A device by the means of which this object may be attained is illustrated in the accompanying drawings, in which—

Figure 1 is a face view of a brush embodying my invention. Fig. 2 is a view in central longitudinal section through the brush. Fig. 3 is a face view of a modified form of the improvement. Fig. 4 is a view in cross-section through the same. Fig. 5 is a view in cross-section through another form of brush embodying my invention.

In the accompanying drawings, the letter *a* denotes the body of the brush. This body may be made of any desired material and is provided with a chamber *b*. This chamber is of substantially the same dimensions as the body of the brush, provision simply being made for the walls of the chamber, which are comparatively thin. This body part of the brush may be of any desired form, several of which are shown in the drawings, and, as before stated, may be of any desired material. Rubber, however, is the material of which the devices shown in the drawings are constructed, this being the preferred material, as it is flexible to afford the desired requisites necessary to a brush, especially when used for toilet purposes. It will be understood, however, that a more rigid material may be employed, if desired, where the device is used for scrubbing floors or the like, in which instance the face of the brush may be composed of any material suitable to the purpose in hand.

The face of the brush is provided with projections *c d*. The projections *c* are preferably formed solid, as clearly shown in Fig. 2 of the drawings, and the projections *d* are tubular, providing an opening *d'*, leading into the chamber *b*. These openings preferably taper from the chamber outward, being smaller in diameter at the outer end than at the portion leading from the chamber. In the form of construction with a tapered opening should the pressure within the structure for any reason become excessive instead of distorting or swelling the body part the openings will expand and allow the water to flow more freely and the pressure be thus relieved. In the preferred form of the device the solid and tubular projections alternate in the rows along the brush.

A nipple *e* is located preferably at one edge of the brush, to which a hose may be connected, which said hose may lead from a faucet or like means for supplying water to a bath-tub or the like. This nipple is provided with a rib *e'* as a means of securing the hose against removal.

The back of the brush may be supplied with straps *f*, through which the hand may be inserted for the purpose of operating the brush.

In the device shown in Figs. 3 and 4 all of the projections d^2 are tubular in form.

In Fig. 5 there is shown a form of the device applicable more especially for scrubbing woodwork, as floors and the like. In this form of the device the body portion *a'* may be formed of rubber, as in the other instance, the back of the body portion having an extension *g*, to which a handle *h* may be secured. A backing *i*, of hard rubber, metal, or other material of greater density than the rubber, but having some flexibility, is provided for the purpose of stiffening the body portion, as will be desirable in a brush used for such purposes. The extension *g* is flexible to a greater or less extent, and the handle *h* may be of any desired length, thus allowing the brush to be used for walls or ceilings, the flexibility of the extension allowing the brush to conform to all positions which may be required in such use. The backing may be secured to the brush in any desired manner in the form herein, screws *k* projecting through the backing into the body portion.

It is obvious that the constructions herein

shown may be departed from to a considerable extent without the aid of anything more than mere mechanical skill.

A brush of this class affords an extremely effective device for removing impurities and is extremely handy, as the water may be freely applied directly to the surface operated upon and the amount of water may be graduated to any extent by regulating the pressure of the brush upon said surface. The device will also find ready application in connection with washing windows, polished floors, and the like, as being composed of rubber there is no danger of scratching polished surfaces or breaking windows and the like.

It is obvious that the arrangement of the projections on the face of the brush as to the solid and tubular portions may be arranged in any desired manner with reference to each other, and the form herein shown is preferred, in which a portion at least of the projections for delivering water are shorter than the other projections.

What I claim as my invention, and desire to secure by Letters Patent, is—

1. A brush including a body portion having a chamber with an inlet thereto, a face having a series of solid projections and a series of tubular projections less in height than the solid projections said tubes leading to the chamber within the brush.

2. A brush including a body portion having a chamber, a nipple having an inlet-opening to said chamber, a face for one wall of the chamber and composed of flexible material having a series of solid projections and a series of tubular projections less in length than the solid projections, said tubes leading into the chamber within the body portion.

3. A brush including a body portion having a chamber with an inlet-opening thereto, and a face composed of elastic material having projections, a portion of which are tubular in form and shorter than the remaining projections.

4. A brush including a body portion having a chamber with an inlet-opening, an extension flexibly united to the back of the brush and provided for the reception of a handle, and a face having a series of solid projections and a series of tubular projections with openings from the chamber through the latter to the face of the brush.

5. A brush including a body portion having a chamber with an inlet thereto, and a face provided with projections with openings therethrough from the chamber, said openings being of larger diameter at the entrance to the chamber than at the outer end.

6. A brush including a body portion having a chamber with an inlet thereto, a face having a series of solid projections and a series of tubular projections less in height than the solid projections and with openings from the chamber through the latter and of a diameter greater at the opening from the chamber than at the outer end.

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