

S. LIGHT & W. EICHELBERGER.
 SELF MOISTENING AND SELF SOAPING BRUSH.
 APPLICATION FILED SEPT. 16, 1916.

1,212,967.

Patented Jan. 16, 1917.

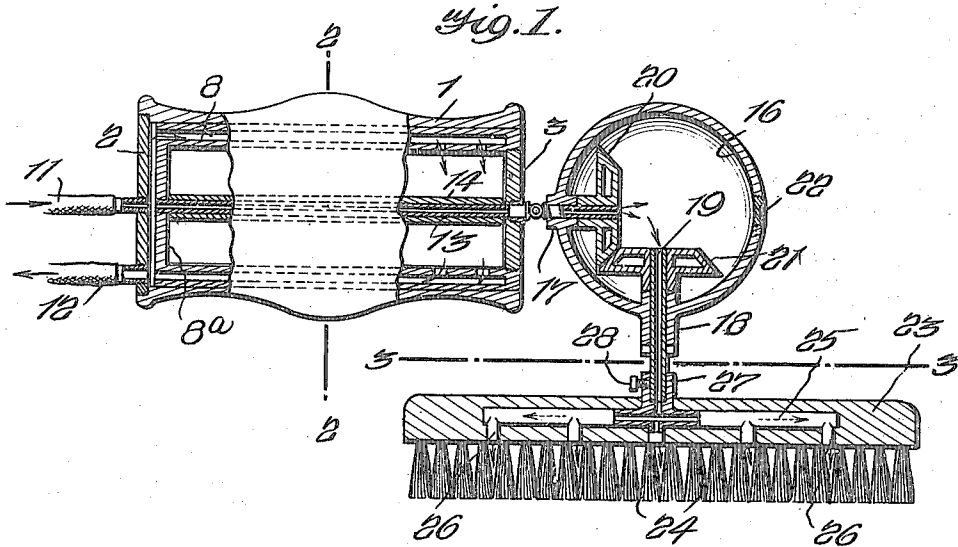


Fig. 2.

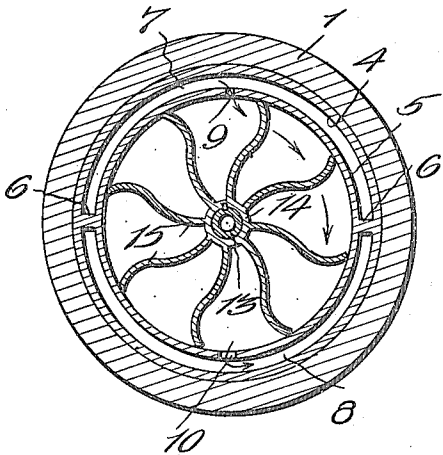
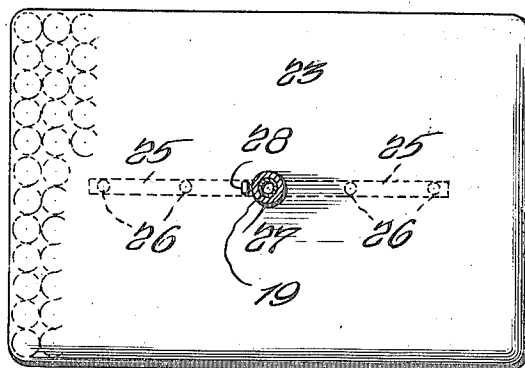


Fig. 3.



WITNESSES

E. M. Corrigan
H. E. Beck

INVENTORS

SAMUEL LIGHT,
 WILLIAM EICHELBERGER,

BY *Mum & Co.*

ATTORNEYS

UNITED STATES PATENT OFFICE.

SAMUEL LIGHT AND WILLIAM EICHELBERGER, OF PIERCE, WEST VIRGINIA.

SELF-MOISTENING AND SELF-SOAPING BRUSH.

1,212,967.

Specification of Letters Patent.

Patented Jan. 16, 1917.

Application filed September 16, 1916. Serial No. 120,485.

To all whom it may concern:

Be it known that we, SAMUEL LIGHT and WILLIAM EICHELBERGER, citizens of the United States, and residents of Pierce, in the county of Tucker and State of West Virginia, have invented certain new and useful Improvements in Self-Moistening and Self-Soaping Brushes, of which the following is a specification.

Our invention is an improvement in self-moistening and self-soaping brushes, and has for its object to provide a brush and a water motor so connected that the motor will rotate the brush on its central axis and wherein mechanism is provided in connection with the connection between the brush and the motor for grinding the soap, and wherein other mechanism connected with the motor is provided for moistening the soap and discharging the ground wet soap into the bristles of the brush.

In the drawings: Figure 1 is a vertical section through the improved brush, and Figs. 2 and 3 are sections on the lines 2—2 and 3—3 respectively of Fig. 1.

In the present embodiment of the invention, a motor support 1 is provided, of substantially cylindrical form shaped peripherally into a grip in order that it may be easily grasped by the hand, and a head 2 is threaded into one end of the support for closing the same.

A double walled casing is provided within the support, the casing consisting of outer and inner sleeves 4 and 5 respectively, which are connected at diametrically opposite points by webs 6, the walls 4 and 5 being spaced apart from each other, and the webs 6 divide the annular space between the walls into compartments, namely an inlet compartment 7 and an outlet compartment 8. The said compartments open at the end of the casing adjacent to the head 2, and the head 2 of the casing 4—5—6 at this end is spaced apart from the head 2. The opposite end of the casing 4—5—6 is closed by a removable head 3, the said head being threaded into the casing. Inlet openings 9 are provided in the wall 5 at the inlet compartment 7, and outlet openings 10 are provided at the outlet compartment 8, the arrangement being such that water entering at the head 2 may pass into the compartments 7 and 8 and may flow through the ports 9 into the motor to be later described, eventu-

ally discharging through the ports 10 of the outlet compartment 8. The head 2 has a central opening which is engaged by a supply pipe 11, and a discharge pipe 12 is connected with said head at the compartment 8.

The motor comprises a hollow shaft 13 upon which is arranged a sleeve or hub 14 having radial blades 15, the said blades being curved as shown more particularly in Fig. 2. The hub 14 is keyed to the shaft 13, and the said shaft is hollow in order that the water may flow from the pipe 11 into the soap casing to be later described. The hollow shaft 13 extends through the head 3 of the casing 4—5—6, and into a substantially spherical casing 16, the shaft extending through a nipple 17 in the said casing. This casing is provided with another nipple 18 at right angles to the nipple 17, and a hollow shaft 19 is journaled in this nipple. The brush to be later described is connected with the hollow shaft 19 and the shafts 13 and 19 are provided with cooperating bevel gear wheels 20 and 21 within the casing 16. This casing 16 is also provided with an opening which is normally closed by a threaded plug 22, and the soap may be introduced into the casing through this opening. Preferably the gears 20 and 21 have cooperating knives for grinding the soap when the gears are rotated, and the water may flow from the pipe 11 to the pipe 13 into the soap casing 16, and by way of the hollow shaft 19 it may flow into the brush.

The brush consists of a body 23 and bristles 24 extending laterally therefrom, and a pipe 25 is arranged within the substance of the back, the said pipe extending longitudinally of the back at the center, and the said pipe is provided with discharge branches 26 delivering between the bristles. This pipe has a laterally extending nipple 27 at its center, and the end of the shaft 19 is received into the nipple and is connected thereto by a set screw 28.

In operation, the pipe 11 is connected with the faucet of a bath tub or wash stand, for instance, and the casing is provided with soap. When the water is turned on it will flow between the walls of the double casing through the motor wheel, turning the same and eventually discharging for the greater part to the pipe 12. A portion of the water will, however, pass through the pipe 13 into the soap casing and will mix with the

ground soap and will carry the soap in solution through the pipes 19, 25, and 26, delivering the soapy water where it is needed.

The device as a whole may be carried in the hand, the casing 1 forming the grip, and the brush may be used in the ordinary manner. By loosening the set screw the brush may be removed. When not in use with the motor, the brush may be detached and used as an ordinary brush, or may be provided with a handle connected to the nipple 27.

We claim:—

1. A device of the character specified comprising a brush having in the back thereof a pipe connected with branches discharging into the bristles, and having a nipple extending outwardly through the back of the brush, a water motor, a soap casing having a hollow shaft extending into the casing and a hollow shaft connected with the nipple of the brush and extending into the casing, bevel gears on the shaft and meshing together for constraining the brush to rotate when the water motor is rotated, the water flowing from the motor into the soap casing and into the brush, said bevel gears having means for cutting the soap as they rotate.

2. A device of the character specified comprising a brush having in the back thereof a pipe provided with branches discharging into the bristles and having a nipple extending outwardly through the back of the brush, a hollow shaft engaging the nipple and detachably connected therewith, a soap casing into which the hollow shaft extends, a motor having a connection with the hollow shaft in the casing for rotating the same, said casing being adapted to hold soap, and the hollow shaft and motor shaft having means for grinding the soap.

3. A device of the character specified comprising a brush having in the back thereof

a pipe provided with branches discharging into the bristles and having a nipple extending outwardly through the back of the brush, a soap casing, a hollow shaft engaging the nipple and extending into the casing, means for rotating the shaft, means for delivering water to the casing, and means in connection with the shaft for grinding the soap.

4. A device of the character specified comprising a motor, a brush, a driving connection between the motor and the brush for rotating the brush, a casing inclosing the driving connection and adapted to contain soap to be ground by the said connection, and means in connection with the motor and the brush for discharging water into the casing, and for discharging soap and water from the casing into the bristles of the brush.

5. A brush having means for discharging soap and water into the bristles thereof, and means in connection with the brush for rotating the brush, for grinding soap, and for delivering the ground soap and water into the discharging means of the brush, said means comprising a motor having a driving connection with the brush and serving as a handle for supporting the brush, and a casing inclosing the driving connection and adapted to contain soap to be ground by the said connection.

6. A brush having means for discharging soap and water into the bristles thereof, means in connection with the brush for grinding the soap and delivering the ground soap and water into the discharging means of the brush, and a motor for operating the said grinding means and brush and provided with a casing serving as a handle for supporting the brush.

SAMUEL LIGHT.

WILLIAM EICHELBERGER.