

No. 660,677.

Patented Oct. 30, 1900.

D. J. ARCHER.  
TOOTH BRUSH.

(Application filed Dec. 9, 1899.)

(No Model.)

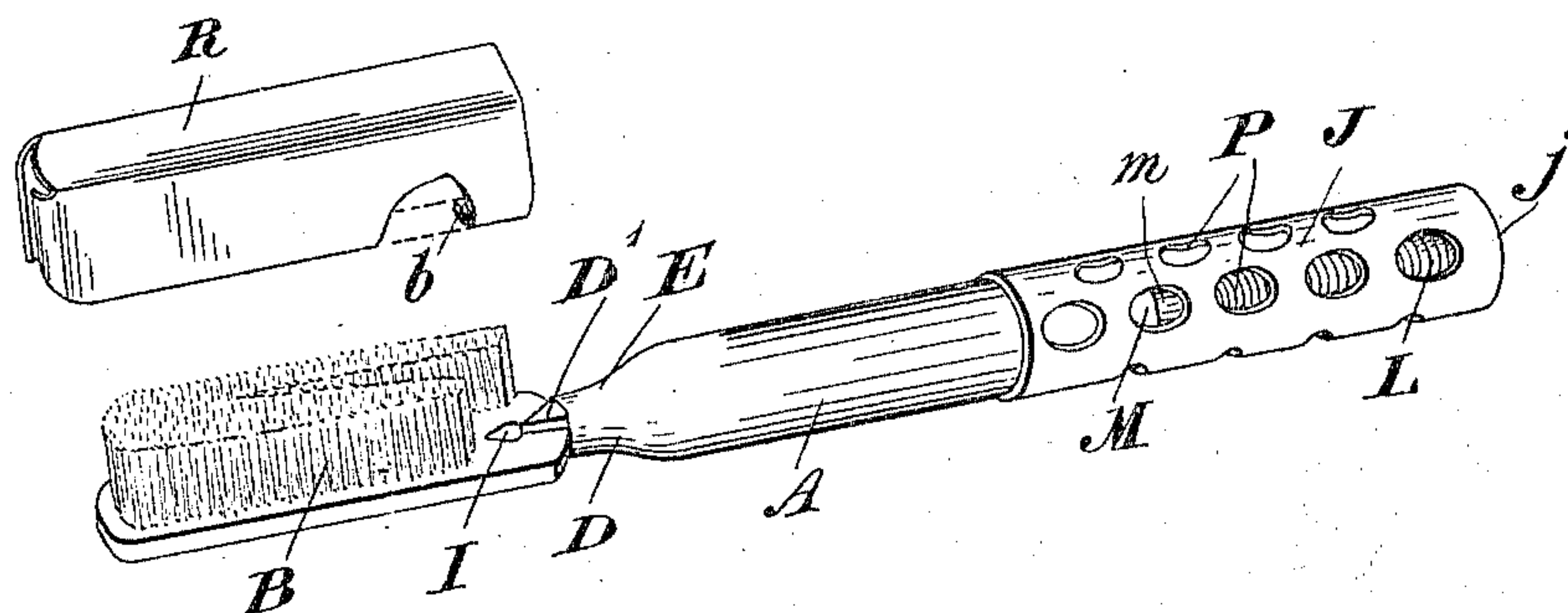


Fig. 1.

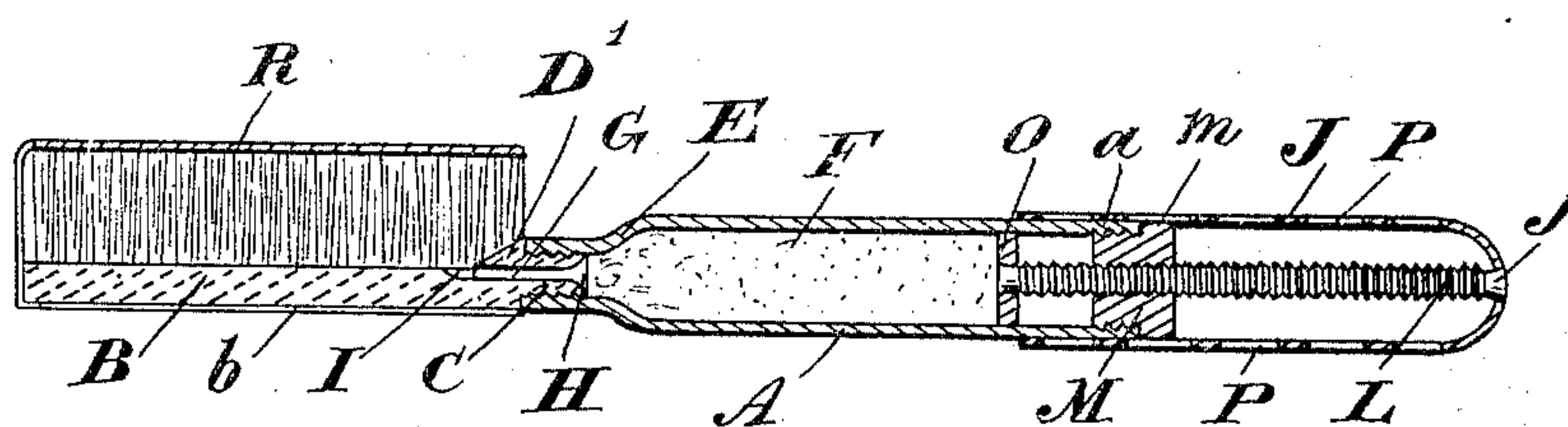


Fig. 2.

Witnesses.

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# UNITED STATES PATENT OFFICE.

DAVID JOHN ARCHER, OF TORONTO, CANADA.

## TOOTH-BRUSH.

SPECIFICATION forming part of Letters Patent No. 660,677, dated October 30, 1900.

Application filed December 9, 1899. Serial No. 739,858. (No model.)

*To all whom it may concern:*

Be it known that I, DAVID JOHN ARCHER, barber, of the city of Toronto, in the county of York, in the Province of Ontario, Canada, have invented certain new and useful Improvements in Tooth-Brushes, of which the following is a specification.

My invention relates to improvements in tooth-brushes; and the object of my invention is to design a tooth-brush so that the dentifrice used for cleaning the teeth can be fed into the head from the handle at will; and it consists, essentially, of a head provided with a hollow shank screwed into a hollow end-tapered reservoir and means secured to said reservoir for feeding the paste into the head, as hereinafter more particularly explained.

The construction of the parts for feeding the dentifrice into the tip of the brush are fully described in my application for shaving-brushes, Serial No. 737,235, filed November 16, 1899.

Figure 1 is a perspective view of my tooth-brush, showing the cap removed and hole for feeding the paste into the tip. Fig. 2 is a longitudinal section showing the construction of my tooth-brush.

In the drawings like letters of reference indicate corresponding parts in each figure.

A is a reservoir-tube in which the dentifrice is put, and B the head, which is screwed by its threaded shank C into the neck D of the reservoir. It will be noticed that one end of the reservoir A is tapered, as at E. The object of this tapered portion is to bring the paste F into a reduced passage-way before it is fed into the passage-way G into the head B, and thus concentrate the pressure of the paste as much as possible directly over the entrance of the passage-way G. The inner end H of the passage-way G is beveled, and thus reduces as much as possible any obstruction around the sides of the hole to the entrance of the paste. The shank D is reinforced on its upper side at D'. The inner end I of the passage-way G is enlarged, so as to facilitate the passage of the paste therefrom into the head B.

J is a sleeve fitting over the reservoir A. Rigidly secured in its upper end J is a threaded rod L, which has movement in the inter-

nally-threaded bearing-plug M, which is screwed into the end a of the reservoir. Rigidly secured to the inner end of the threaded rod L is a plunger-head O, which fits the inside of the reservoir A. The object of the plunger-head O is to feed the dentifrice into the head B when the sleeve J is turned, as will be understood.

P P are alternate rows of holes made in the sleeve J. The head of the bearing-plug M is milled, as at m. The object of the alternate rows of holes P P is to enable the tips of the fingers to be pressed into said holes and unscrew the bearing-plug M from the reservoir A, no matter how far in or how far out the sleeve J may happen at the moment to be, and thus obviate the necessity of having to move the said sleeve into any particular place before the bearing-plug M could be removed.

R is a metal cap for protecting the tip B. The cap R is provided with flanges b b, which fit on the inner side of the head B when the cap is in place, as shown.

From this specification it will be seen that my tooth-brush is of very positive action and simple in construction.

What I claim as my invention is—

In a tooth-brush, the combination of a head provided with an externally-threaded short shank formed integral with the solid flat back thereof, a longitudinal passage-way in said shank opening directly into the said head, the enlarged discharging end of said passage-way being in the same plane as the inner surface of the solid back, and the enlarged receiving end of said passage-way being in a plane at right angles to the plane of the said discharging end, a tubular taper-ended reservoir screwing over said shank, the longitudinal axis of the reservoir being in a direct line with the center of the major portion of the passage-way in said shank, the upper inner end of said shank being reinforced near the discharging end of said passage-way, an enveloping revoluble feeding-sleeve for said tubular reservoir, a milled bearing-plug held in the large end of said reservoir, a threaded rod secured to said feeding-sleeve and screwing through said bearing-plug, a revoluble solid plunger-head rigidly secured to the inner end of said threaded rod and operating



n the reservoir, the said plunger-head being  
actuated by the said revoluble feeding-sleeve  
to feed the dentifrice from the reservoir  
through the passage-way in the said shank  
5 into the head, substantially as set forth and  
for the purpose specified.

In testimony whereof I have signed my

name to this specification in the presence of  
two subscribing witnesses.

DAVID JOHN ARCHER.

Witnesses:

EGERTON R. CASE,  
L. C. REYNOLDS.