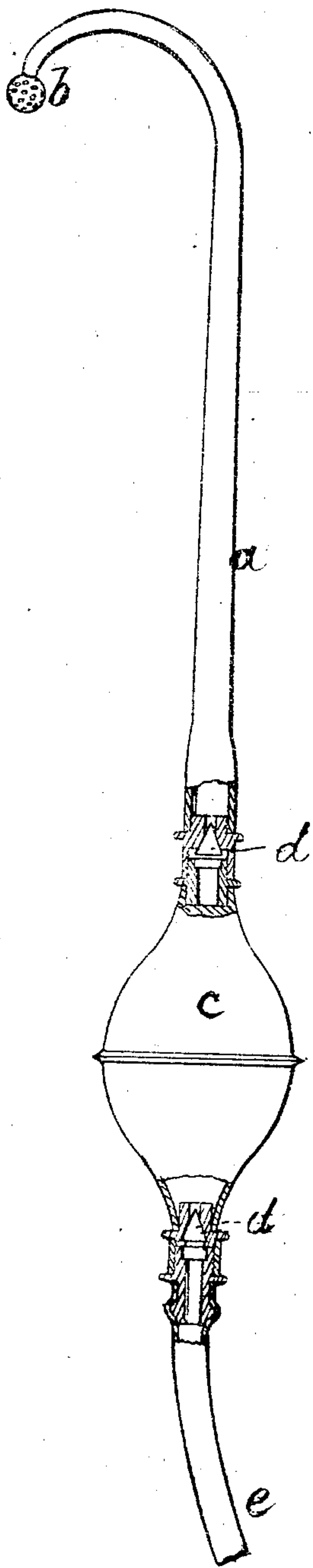


A.M. Shurtleff
Imp'd Saliva Pump.

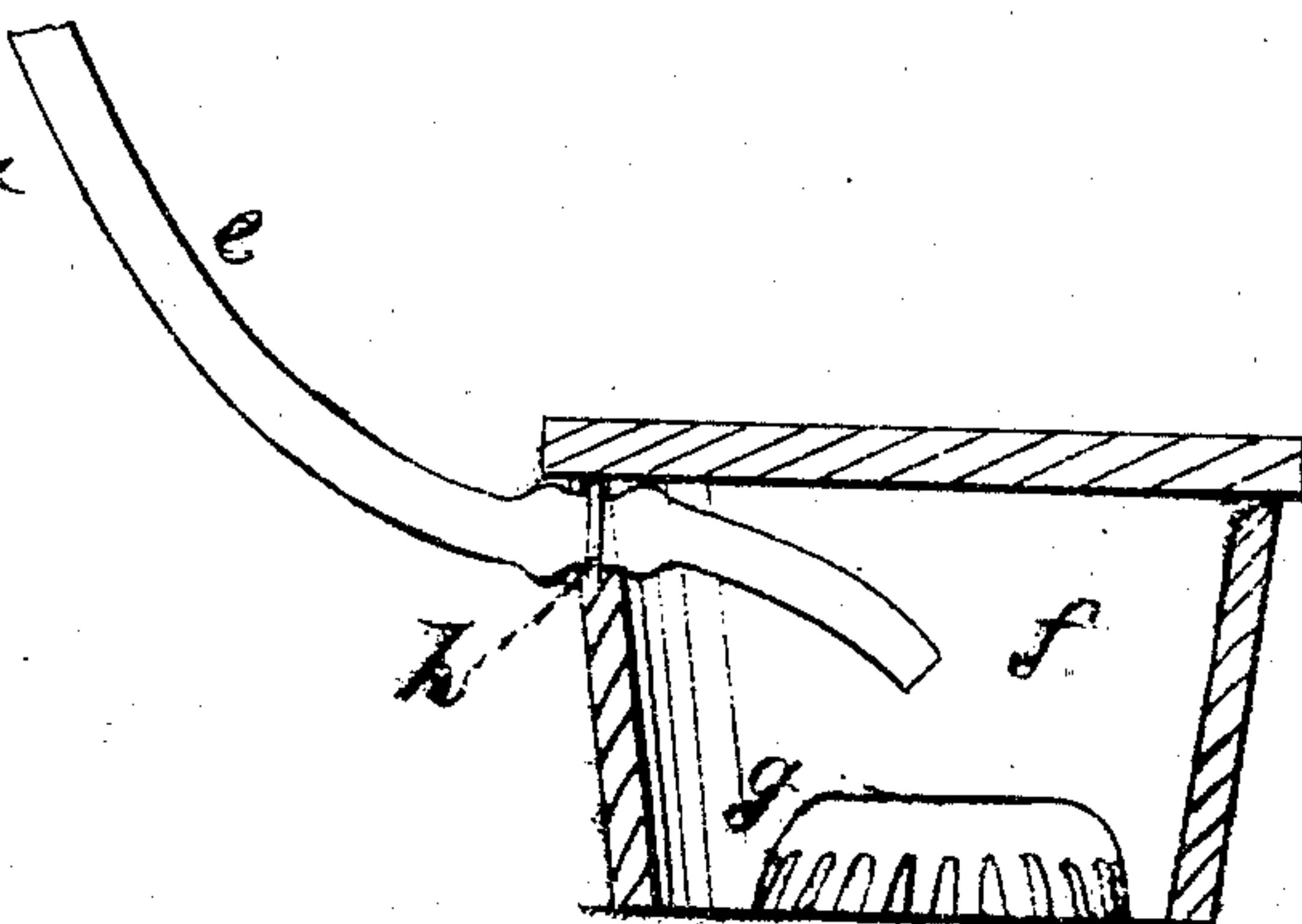
71799

PATENTED
DEC 3 1867



A.M. Shurtleff
by Crosby, Halsted & Gould
his Attys

Witnesses
P. B. Kidder
L. H. Brown



United States Patent Office.

A. M. SHURTLEFF, OF BOSTON, MASSACHUSETTS.

Letters Patent No. 71,799, dated December 3, 1867.

IMPROVEMENT IN SALIVA-PUMPS.

The Schedule referred to in these Letters Patent and making part of the same.

TO ALL WHOM IT MAY CONCERN:

Be it known that I, A. M. SHURTLEFF, of Boston, in the county of Suffolk, and State of Massachusetts, have invented an improved Saliva-Pump; and I do hereby declare that the following, taken in connection with the drawings which accompany and form part of this specification, is a description of my invention sufficient to enable those skilled in the art to practise it.

The invention relates to the construction of saliva-pumps, used in dental operations to keep the mouth of the patient free from fluid secretions, without necessity of placing absorbents therein.

These instruments, as heretofore made, have been either very expensive or inefficient, and my object has been to produce an instrument, which, while being cheap and simple in construction, should furnish a reliable means of discharging the saliva. For this purpose I use for the suction-pipe a long, rigid, hard-rubber tube, the upper end of which is bent over or reversed, and terminates in a perforated induction-bulb, while the opposite end of such tube is connected with an elastic bulb, having at each end a valve, one of which valves separates it from the induction-tube, and the other from a flexible pipe, which leads into a suitable saliva-receptacle.

It is in the employment of the reversed hard-rubber induction-tube, and in the combination with the rigid induction-tube of a valvular elastic bulb, and flexible eduction-pipe, that my invention consists, as also in a provision for attachment of the eduction-pipe to the vessel which receives the saliva.

The drawing represents a saliva-pump embodying my invention.

a denotes a hard-rubber tube, tapering towards its upper end, which end is bent over and projects downward, terminating in a suction or induction mouth-bulb, *b*. Attached to the large or lower end of this rigid rubber tube *a* is an elastic bulb or pump, *c*, provided at each end with a suitable valve, *d*, the upper one of which controls the opening of the bulb into the tube *a*, while the lower one controls the opening of a flexible discharge-pipe, *e*, into the bulb. The pipe *e* is a long, flexible pipe, the end of which is connected with or opens into a vessel or receptacle, *f*, which may be provided with a spittoon, *g*. To prevent the pipe *e* from being dislodged or accidentally disconnected from the vessel *f*, the pipe, near its end, is provided with a ring or flange, *h*, which sets into a groove made in the edge of the vessel *f*, the cover of the vessel shutting down over this flange, and preventing it from rising, the presence of the flange in the groove thus preventing any accidental withdrawal of the discharge-pipe from the discharge-vessel.

By connecting the elastic bulb *c* directly with the rigid mouth-tube at one end, and with the flexible discharge-pipe at its other end, with suitable valves to control the passages, the instrument is not only made very simple, both in its construction and operation, but it is easy to keep clean, is free from surfaces which can become clogged with solid matter, and is much more efficient in relieving the mouth of saliva than any pump now in use.

I claim combining with the suction or mouth-piece of the saliva-pump, an elastic valvular pump or bulb, connected at one end to the mouth-piece by a rigid tube, and having attached to its opposite end a flexible pipe leading to the saliva-vessel, substantially as shown and described.

I also claim making the induction or suction end of the pump of hard rubber, or equivalent material, substantially as described.

I also claim so connecting the discharge-pipe with the saliva-vessel, by means substantially such as described, that it cannot be withdrawn therefrom by the working or movements of the pump.

A. M. SHURTLEFF.

Witnesses:

FRANCIS GOULD,

L. H. LATIMER.