(No Model.)

A. R. LAWSHE.

SALIVA PUMP.

No. 522,842. Patented July 10, 1894.

Fig 1.

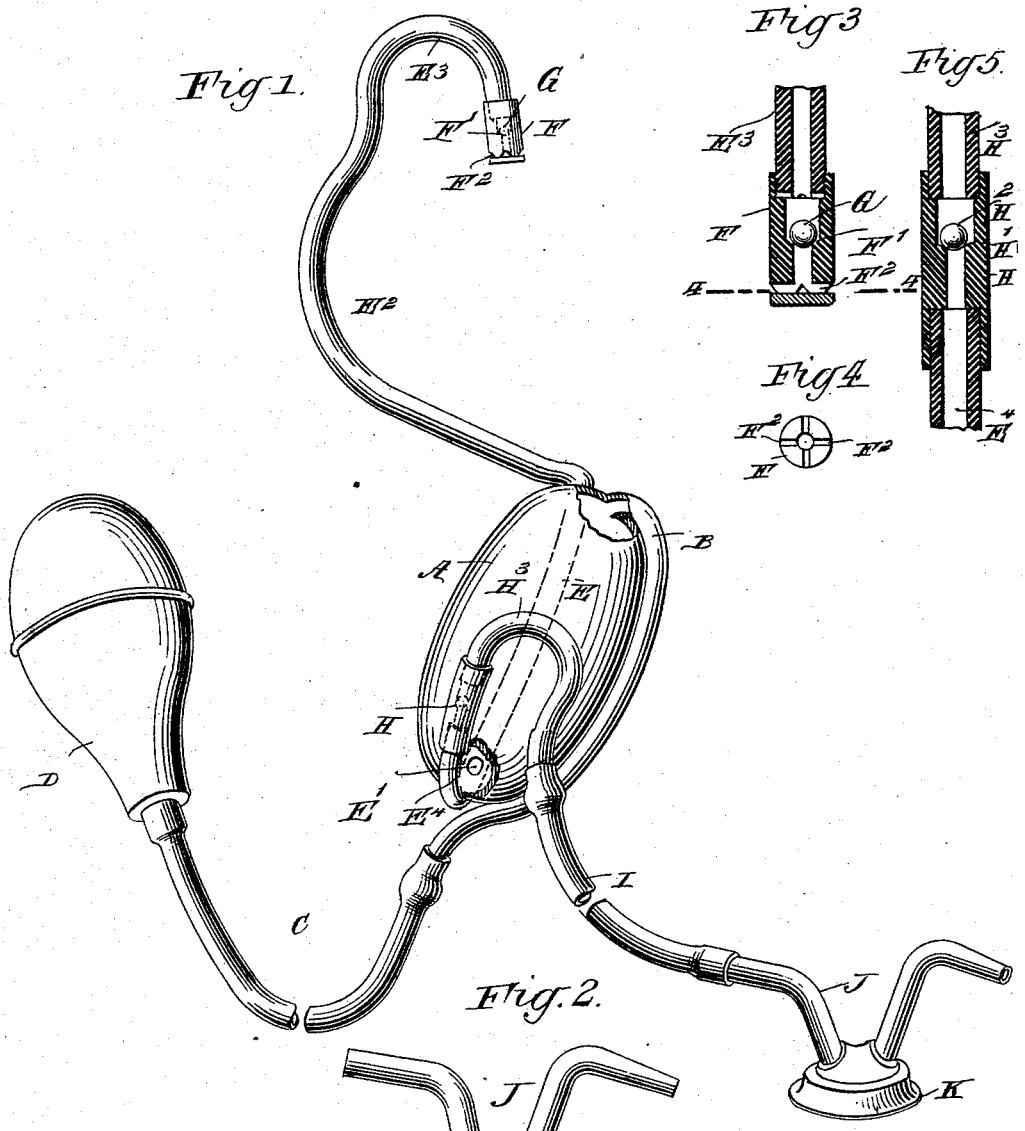
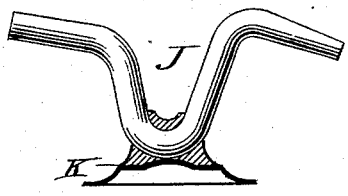


Fig 3

Fig 5.

Fig 4

Fig. 2.



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ALLISON R. LAWSHE, OF TRENTON, NEW JERSEY.

SALIVA-PUMP.

SPECIFICATION forming part of Letters Patent No. 522,842, dated July 10, 1894.

Application filed May 8, 1894. Serial No. 510,519. (No model.)

To all whom it may concern:

Be it known that I, ALLISON RITTENHOUSE LAWSHE, of Trenton, in the county of Mercer and State of New Jersey, have invented a new and Improved Saliva-Pump, of which the following is a full, clear, and exact description.

The object of the invention is to provide a new and improved pump, more especially designed for use by doctors and dentists, to conveniently remove the saliva from a patient's mouth while undergoing treatment.

The invention consists of a receiver connected at its bottom with a pipe carrying on one end a valved mouthpiece, and at its other end a discharge valve leading to an outlet pipe, and an air bulb connected by a pipe with the top of the receiver.

The invention also consists in certain parts and details, and combinations of the same, as will be hereinafter fully described and then pointed out in the claims.

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 views.

Figure 1 is a perspective view of the improvement, with parts in section. Fig. 2 is a sectional side elevation of the discharge nozzle and support. Fig. 3 is an enlarged sectional side elevation of the mouthpiece with its inlet valve. Fig. 4 is a sectional end view of the same, on the line 4—4 of Fig. 3; and Fig. 5 is an enlarged sectional side elevation of the discharge valve.

The improved saliva pump is provided with a suitably constructed receiver A, preferably made of hard rubber or other similar material, and into the top of which discharges an air pipe B, held on the receiver A, and connected at its lower end by a flexible hose C with an air bulb D, to pump air into the receiver A and to withdraw air therefrom, on pressing and releasing the bulb, as hereinafter more fully described.

On the receiver A is held a second pipe E, connected at its lower end with the bottom of the receiver A, the said pipe E being provided with a bent portion E^2 leading to the curved lip part E^3, carrying at its lower end a mouthpiece F formed with a valve seat F′ for an inlet valve G, controlling the inlet of the saliva and preventing the escape of air through the mouthpiece.

The mouthpiece F is provided with transversely extending radial grooves F^2, to permit the saliva to pass to the interior of the mouthpiece instead of from an open end, so that the patient does not obstruct the inlet to the mouthpiece F at a time when the latter comes in contact with the tongue or other parts of the mouth. The other pipe end E^4 extends upward a short distance on the receiver A from the opening E′, and then supports a discharge valve H, containing a valve seat H′ and a ball valve H^2, as plainly illustrated in Fig. 5.

The valve H connects with the rigid bent pipe portion H^3, held on the receiver A and connected at its lower end by a flexible pipe or hose I, with a discharge nozzle J supported on an adhesion disk K, made of soft rubber or similar material and adapted to be attached to a spittoon or other receptacle, to cause the saliva passing through the outlet nozzle J to pass into the interior of the spittoon or other vessel. The said nozzle is essentially V-shaped, and the disk, K, is attached to it, at its bend or angle, by passing the pipe, J, through a curved passage formed in the upper side of said disk, as shown.

The operation is as follows: The rigid pipe E^2 is hung with the lip portion E^3 in the patient's mouth, so that the mouthpiece F is within the patient's mouth to readily take up the saliva gathering in the lower jaw. The receiver A is supported outside by the said pipe E, and the bulb D extends to the patient's lap, to be actuated by the patient by pressing and releasing the bulb, so that on pressing the bulb, air is forced through the tube C and pipe B into the receiver A, to pass from the latter through the opening E′ into the pipe end E^4, and past the ball valve H^2 to the pipe H^3, tube I and nozzle J to the outside. As soon as the pressure is released on the bulb D, the latter expands and draws in air from the receiver A and through the opening E′, also from the pipe E, so that a suction is created in the mouthpiece F, and the valve G opens to permit the saliva surrounding the mouthpiece to be drawn in through the openings F^2 and past the valve G, down the pipe E, to finally pass through the opening E′ into

the receiver A. Now, when the operator again presses the bulb D, then the air discharging into the receiver A, forces the saliva through the opening E′ into the pipe end E^4, and past the ball valve H^2 into the pipe H^3 and tube I, to finally be discharged through the nozzle J into the spittoon or other vessel. On the next releasing of the bulb D, a new charge of saliva is drawn in through the mouthpiece F to the receiver A as before described. This operation is repeated from time to time, to remove all the saliva as it gathers in the mouth.

The receiver A is preferably made somewhat larger than the bulb D, to prevent overflowing of the saliva in the receiver A into the pipe B or bulb D.

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

1. A pump, comprising a receiver having a suitable discharge, a pipe rigidly connected with the said receiver and opening into the bottom thereof, a mouthpiece held on the upper end of the said pipe and containing an inlet valve, a discharge valve in the other end of the pipe, and an air bulb connected by a pipe with the top of the said receiver, substantially as shown and described.

2. A pump comprising a receiver, a pipe rigidly connected with the said receiver and opening into the bottom thereof, a mouthpiece held on the upper end of the said pipe and containing an inlet valve, a discharge valve in the other end of the pipe, an air bulb connected by a pipe with the top of the said receiver, a discharge pipe leading from the said discharge valve, a V-shaped discharge nozzle held on the said discharge pipe, and an adhesion disk having a curved passage to receive said nozzle and adapted for attachment to a suitable receptacle, substantially as shown and described.

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Witnesses:
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