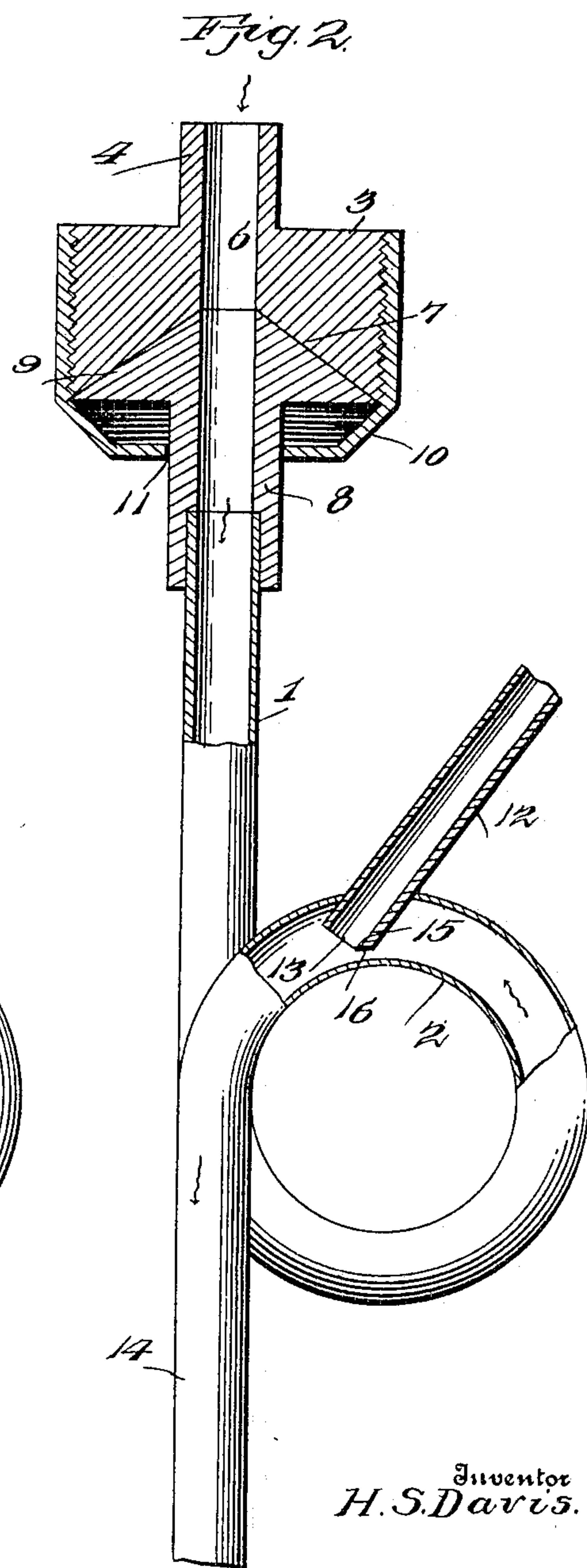
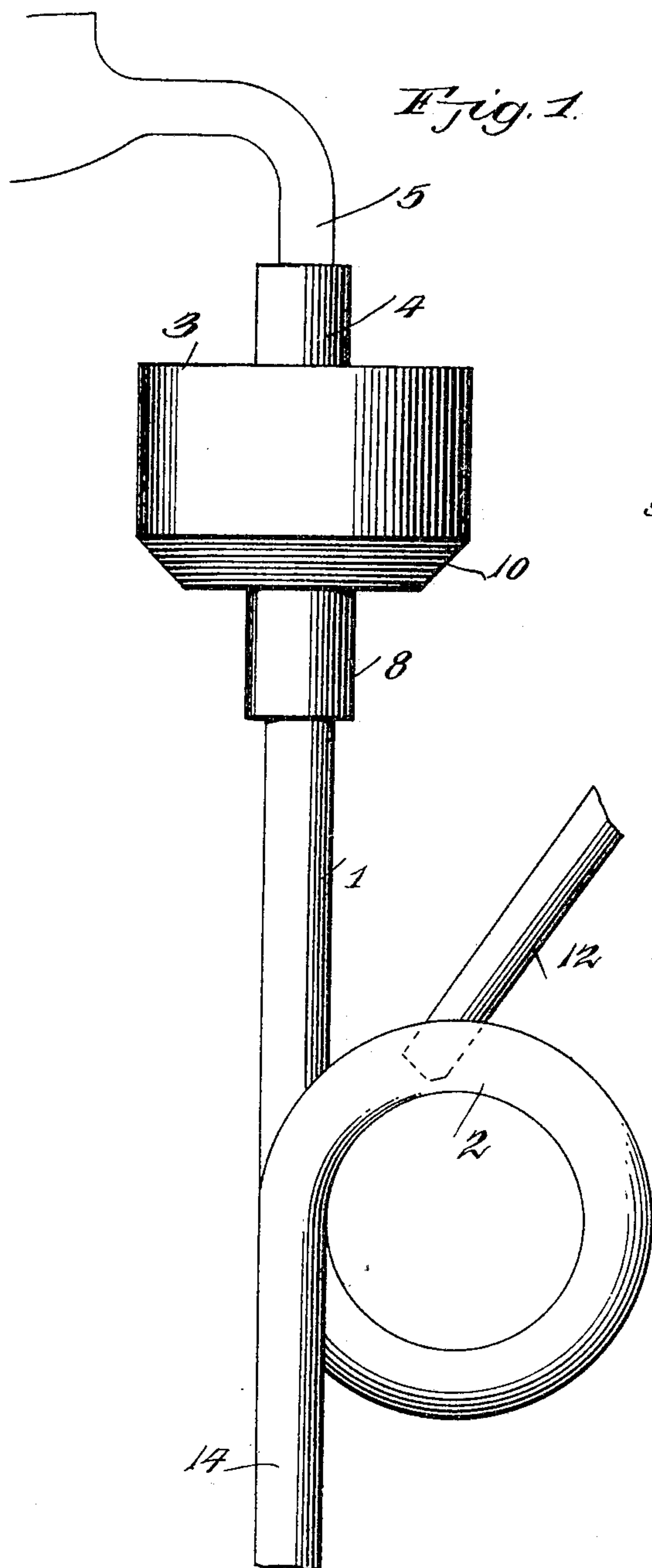


No. 818,940.

PATENTED APR. 24, 1906.

H. S. DAVIS.  
SALIVA EJECTOR.  
APPLICATION FILED JUNE 13, 1905.



Witnesses  
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# UNITED STATES PATENT OFFICE.

HENRY S. DAVIS, OF SAN FRANCISCO, CALIFORNIA.

## SALIVA-EJECTOR.

No. 818,940.

Specification of Letters Patent.

Patented April 24, 1906.

Application filed June 13, 1905. Serial No. 265,029.

*To all whom it may concern:*

Be it known that I, HENRY S. DAVIS, a citizen of the United States, residing at San Francisco, in the county of San Francisco and State of California, have invented new and useful Improvements in Saliva-Ejectors, of which the following is a specification.

The invention relates to an improvement in saliva-ejectors designed particularly for use in connection with dental operations or the like and serving to remove the saliva from the mouth of the patient.

The main object of the present invention is the provision of an ejector of the class described wherein the action is automatic and may be regulated as desired.

With this object in view the invention consists of certain details of construction and combinations of parts which will be described in the following specification, reference being had particularly to the accompanying drawings, wherein—

Figure 1 is a view in elevation of my improved saliva-ejector, the same being shown connected to a source of power; and Fig. 2 is a similar view partially sectioned to show the interior arrangement.

Referring to the drawings, my improved ejector comprises a pipe or tube 1, which may be of any length desired and which is formed intermediate its ends with a complete circular bend or coil 2. To the upper end of the pipe is attached a coupling, preferably comprising an inlet-section 3, centrally formed with a projection and sleeve 4, designed to be fixedly or removably secured to a source of water-supply, as a faucet 5. The aperture 6 within the section 3 in communication with the sleeve 4 is of inverted-cone shape, communicating with a reversely-shaped seat 7, projected from the lower edge of the section. A pipe-section 8 is secured to the upper end of the pipe 1 and is formed at its upper ends with a cone-shaped extension 9, designed to fit within the seat 7 in the section 3. A sleeve 10, formed with an opening 11 in its bottom to snugly and slidably engage the pipe-section 8, is open at its upper end and interiorly threaded to engage the exteriorly-threaded surface of the section 3. In this construction the section 3 and pipe-section 8 are drawn together through operation of the sleeve 10, thereby alining the pipe-bore with the bore in the section 3.

12 represents the mouth-tube, one end being designed to be held in the mouth of the

patient, as is usual in structures of this kind. The opposite open end 13 of the mouth-tube projects within the pipe of the coil 2, being preferably located immediately adjacent that portion of the coil adjoining the outlet end 14 of the pipe 1. The external diameter of the mouth-tube is practically the same as the internal diameter of the tube 1, whereby said mouth-tube will completely fill the interior of the tube 1 at the point of juncture. To provide a passage for the water, however, beneath the open end of the mouth-tube, the edge of the mouth-tube wall nearest the lower wall of the coil is cut away or beveled at 15 to provide a narrow passage 16 between said mouth-tube and the wall of the coil.

In connection with the above description it will be particularly noted that I provide a mouth-tube arranged at an inclination to the tube of the coil, locate the open end of said tube approximately at the point where said coil straightens into the outlet-pipe, and arrange said mouth-tube to fill the internal bore of the coil except a narrow passage at the lower side thereof.

In use the passage of water through the tube 1 and coil 2 will tend to create a partial vacuum within the mouth-tube and draw in saliva or other liquids from the mouth of the patient. The operation is rendered particularly efficient in the use of a coil 2, as the speed of the water is materially increased just at the point where said coil straightens into the outlet-pipe owing to the sudden break in the regularity of the curve at this point and, furthermore, from the increased pressure and speed resulting from the passage of the water to the restricted port or channel 16.

While I prefer to use the coupling described, it is obvious that the device will be equally serviceable with any form of coupling. It is also to be understood that the effective operation of the device is in no way dependent upon the length of the pipe 1 or mouth-tube 12, and these parts may be of such length as required under the particular circumstances.

Having thus described the invention, what is claimed as new is—

1. A saliva-ejector comprising a pipe connected with a source of water-supply, means for restricting the flow of water through said pipe at a predetermined point therein, and a mouth-tube in communication with the pipe at the point of restriction.



2. A saliva-ejector comprising a pipe formed with a coil, the bore of said pipe being equal throughout its length, and a mouth-tube in open communication with the pipe, 5 said tube projecting within the pipe and forming a means for restricting the passage of the water through the pipe at the juncture of the tube and pipe.

3. A saliva-ejector comprising a pipe and a 10 mouth-tube in open communication with the pipe, the wall of said tube serving to restrict the passage of water through the pipe.

4. A saliva-ejector comprising a pipe 15 formed with a coil, and a mouth-tube in open communication with the pipe, the wall of said tube serving to restrict the passage of water through the pipe, the lower end of the

tube being cut away to provide a port for the passage of water through the pipe.

5. A saliva-ejector including a pipe formed 20 with a coil and having a straight outlet portion projecting from the coil, and a mouth-tube projecting from the bore within the pipe at the juncture of the coil and straight outlet portion, said tube providing a means for re- 25 stricting the water-passage at the point of its juncture with the pipe.

In testimony whereof I affix my signature in presence of two witnesses.

HENRY S. DAVIS.

Witnesses:

CHAS. H. WHITLEY,  
A. J. HENRY.