J. B. JORDAN.

SALIVA EJECTOR.

APPLICATION FILED APR. 30, 1908. RENEWED JULY 16, 1909.

951,130. Patented Mar. 8, 1910.

Fig. 1.

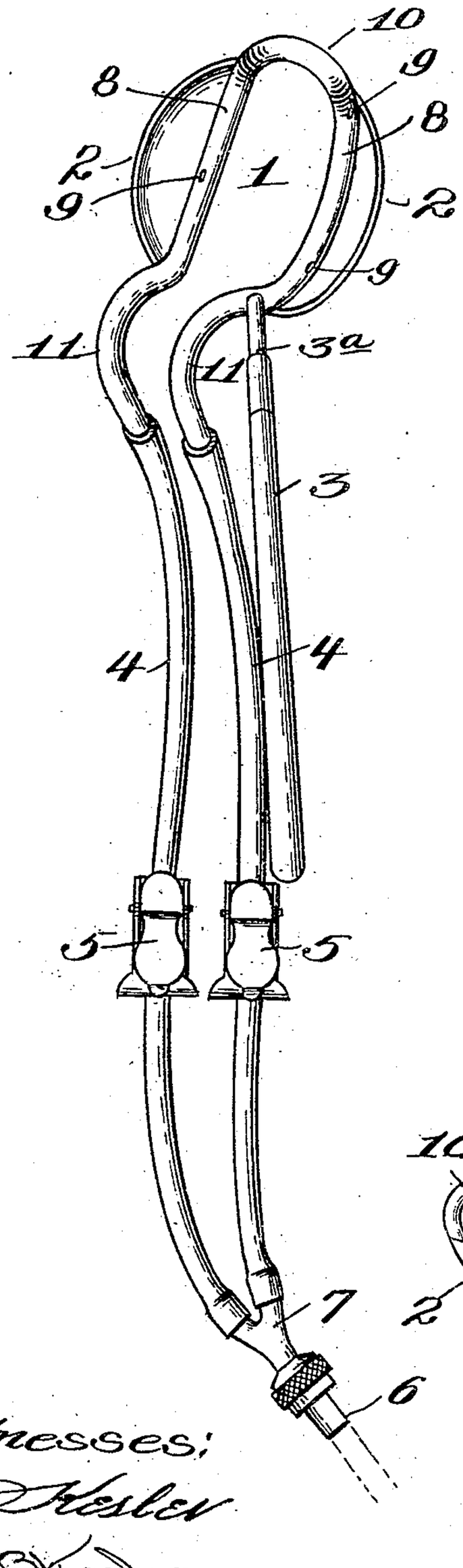


Fig. 2.

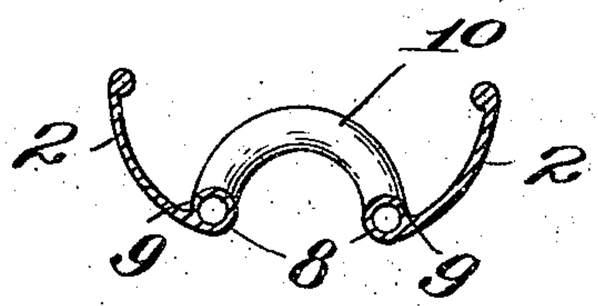
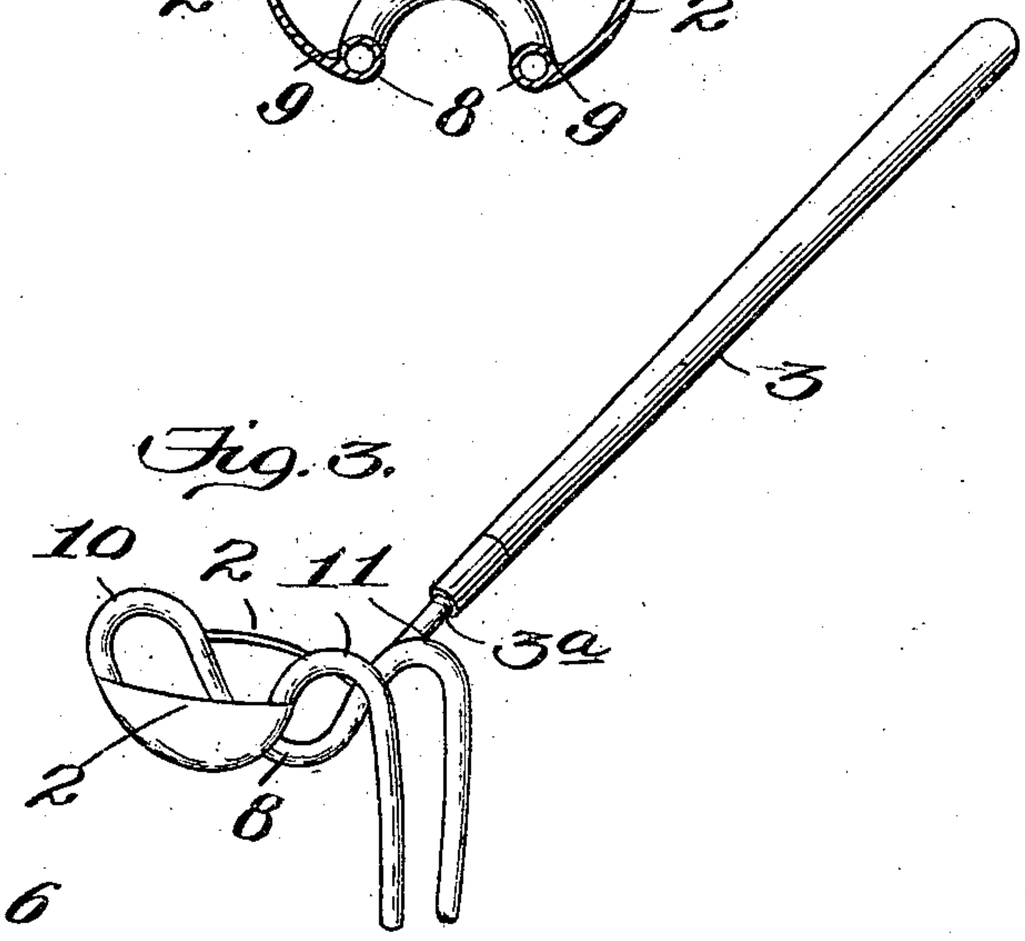


Fig. 3.



Witnesses;

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UNITED STATES PATENT OFFICE.

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SALIVA-EJECTOR.

951,130. Specification of Letters Patent. **Patented Mar. 8, 1910.**

Application filed April 30, 1908, Serial No. 430,222. Renewed July 16, 1909. Serial No. 508,004.

To all whom it may concern:

Be it known that I, JAMES B. JORDAN, a citizen of the United States, residing at Nashville, in the county of Davidson and State of Tennessee, have invented new and useful Improvements in Saliva-Ejectors, of which the following is a specification.

This invention relates to a saliva ejector for use in dental work, and the primary object of the invention is to provide an efficient device of this class which is easily applicable and when in place is positively held in the mouth without the use of clamps and will not discomfort the patient or injure the tender tissues of the mouth or gum and by its use permitting an operator to freely work on the teeth with both hands in operative work.

The ejector when applied will efficiently operate to carry off all saliva and water used during certain kinds of dental operations.

The invention consists in the construction and arrangement of the several parts which will be more fully hereinafter specified in preferred form.

In the drawing: Figure 1 is a plan view of the complete ejector embodying the features of the invention. Fig. 2 is a transverse vertical section taken through the body of the ejector. Fig. 3 is a perspective view of the ejector shown in a different position.

Similar characters of reference are employed to indicate corresponding parts in the several views.

The improved instrument comprises essentially a tubular loop 1, wings 2 of highly polished plate material fixed to portions of the loop, a handle 3 also secured to the rear part of the loop, outlet tubes or relief pipes 4 each provided with a clamp 5 and a main tube 6 extending from a siphon of suitable construction and having a tubular fork 7 to which the tubes or pipes are connected.

The loop 1 is provided with side arms 8 having suitable apertures 9 therein at intervals and connected at the rear by an upstanding arch 10 and merging at the front into arched members 11 to which the front extremities of the tubes or pipes 4 are connected.

One extremity of the handle 3 is secured to one of the members 8 to assist in properly placing or disposing the ejector in the mouth of the patient. For the purpose of convenient manipulation this handle 3 is attached to one member 8 and is removable through a screw-threaded connection as at 3^a, so that after the ejector has been positioned in the mouth of the patient, the handle may be detached.

The tubes or pipes 4 serve as intakes or receptive means to relieve the portions of the loop to which they are attached of saliva or water and by this means a continual drainage is set up, the intake or receptive means being readily controllable as to their open and closed condition by the operation of the clamps 5 and either intake or receptive means may be opened independently of the other and either arm 8 relieved or drained of its accumulation of saliva or water, or the portion of the mouth adjacent to said arms may be cleared of such accumulations. The arms of the loop together with the intake or receptive means consisting of the tubes or pipes 4 may be so manipulated as to prevent the entrance of air that might have a tendency to interfere with the effective drainage of the mouth of the patient. It will be understood that the two arms 8 are so disposed as to respectively drain the lingual and buccal surfaces of the mouth, and as saliva collects more quickly on the lingual surface than on the buccal surface the arm 8 disposed to drain the lingual surface will have the intake or receptive means connected thereto more frequently operated, but this operation of the one intake or receptive means will not in the least interfere with the other similar means or the arm 8 coöperating with the buccal surface.

In applying the instrument or ejector the body thereof is disposed in the mouth of the patient and so positioned that the arch 10 of the loop will be back of the last molar and the arms 8 will bear on the lingual and buccal surfaces. The arched portions or members 11 pass upwardly and outwardly over the front lower teeth and lip and the intakes or receptive means 4 will depend over the adjacent portion of the body of the patient. Instead of applying the arch 10 back of the last molar as just explained, said arch is high enough to be moved in advance or forwardly toward the mouth of the patient and clear the teeth over which it extends as may be required in carrying on dental operations with the different teeth. In other words, the position of the ejector is not limited, as it

may be moved forwardly and backwardly within the mouth as may be found necessary. As before explained the entrance of air into one inlet and the corresponding tubular arm 8 to which said inlet is connected, prevents the entrance of saliva or water into the other inlet or intake. It is therefore necessary if saliva is accumulating faster upon one arm 8 than the other, that the arm free from accumulating saliva should be kept closed until sufficient saliva has accumulated to fill said arm, and the latter then opened through the clearance of the intake or receptive means connected thereto until the accumulated saliva is drawn off or taken up and said arm is then again closed.

The handle 3 is shown as being attached to the forward portion of one arm 8. While this is a preferred association of the handle with the ejector, it will be understood that the said handle may be applied to any portion of the ejector and furthermore in some applications and uses of the ejector the handle may be detached and the ejector successfully operated without the assistance of the handle.

The wings 2 not only serve as reflectors and by means of the handle 3 readily movable to take the place of mirrors, but also act as guards to prevent the tongue and cheek from coming in contact with the teeth to be operated on and thus avoid interference with the work of the operator and the use of instruments or grinding devices. The wings 2 are firmly soldered or otherwise fastened to the arms 8 so that they will always be in proper position and cannot possibly slip out of place. It will also be observed that the handle may be employed as a holding means for the body of the ejector without requiring the use of a retaining clamp, and, furthermore, troublesome and expensive valves are entirely eliminated from the arms 8 and their connections and each arm may be independently drained.

From the foregoing description it will be evident that the improved ejector comprises broadly, lingual and buccal tubular drainage elements which have intake or receptive means preferably in the form of flexible tubes which are independently operative as to open and closed position, and further that the lingual and buccal drainage elements may be independently controlled to relieve the accumulations of saliva or water from the surfaces with which they coöperate without the one affecting the operation of the other.

Changes in the proportions, dimensions and minor details of the ejector may also be made within the scope of the invention.

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

1. A saliva ejector having buccal and lingual tubular drainage elements, each having inlet means, and flexible intake or receptive tubular devices connected to the elements and each provided with exteriorly operative means for opening and closing the same.

2. A saliva ejector having buccal and lingual tubular drainage elements provided with openings for the inlet of saliva thereto, said elements being also provided with front individually arched terminals, highly polished wings secured to the elements, and separate means attached to the front arched terminals for relieving the drainage elements of accumulations of saliva.

3. A saliva ejector having drainage elements provided with arched members, and intake devices independently coöperating with the drainage elements for individually relieving the latter of accumulations of saliva.

4. A saliva ejector having drainage elements connected by a rear arch and provided with arched extremities adapted to project exteriorly of the mouth of the patient, intake or receptive devices individually connected to the arched extremities, and means to which the intake or receptive devices are unitedly attached for relieving one or both of said devices of saliva.

5. A saliva ejector consisting of a rigid tubular loop with inlet openings therein and arched to fit over the teeth, and exterior flexible intake or receptive means connected to extremities of the loop for draining the same.

6. A saliva ejector, consisting of a tubular loop having a rear arch to fit over the teeth and to receive saliva on opposite sides of the teeth, and exterior flexible drainage devices connected to the outer terminals of the loop.

7. A saliva ejector consisting of a tubular loop having a rear arch and outer arched members, drainage devices connected to the arched members and means removably attached to a part of the loop for placing and holding the ejector in applied position.

8. A saliva ejector consisting of drainage devices, and a handle removably attached thereto.

9. A saliva ejector involving drainage devices having reflecting means forming a part thereof and a handle removably attached to said devices whereby the latter may be placed in operative position or withdrawn from the mouth of the patient, and reflecting means positioned to inspect the teeth.

In testimony whereof I have hereunto set my hand in presence of two subscribing witnesses.

JAS. BLOUNT JORDAN.

Witnesses:
WM. H. LINDSEY,
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