

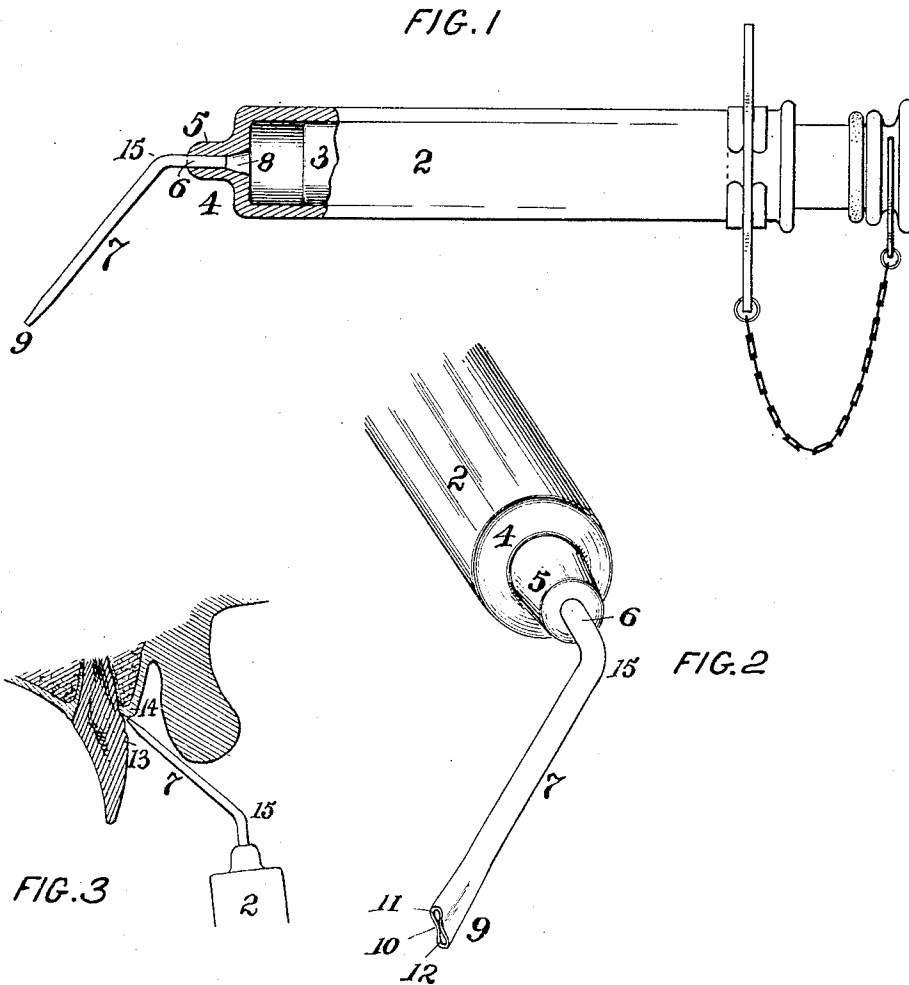
J. MacGREGOR.

SYRINGE.

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1,331,271.

Patented Feb. 17, 1920.



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SYRINGE.

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Specification of Letters Patent.

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To all whom it may concern:

Be it known that I, JOHN MACGREGOR, citizen of the United States, and resident of Roslindale, State of Massachusetts, have invented an Improvement in Syringes, of which the following is a specification.

The object of my invention is to provide a construction of syringe suitable for irrigating or flushing the gums of teeth, more especially where they are affected with pyorrhea or other diseases injurious to the health of the gums.

My invention is more particularly directed to the form or construction of the canula or nozzle for conveniently conveying and properly distributing the fluid to the gums under the action of the syringe plunger; and further comprehends a canula of uniform diameter extending at an angle from the axis of the cylinder of the syringe and terminating in a double aperture formed by flattening the end of the canula and bringing the diametrically opposite walls into contact at a medial point.

My improvements also provide the union between the metal canula and glass nipple of the syringe body, by having the glass fused about the inserted end of the canula and pressed into intimate contact and thereby shrunk thereon to provide a liquid tight connection of a permanent character.

My invention also consists of improvements hereinafter described whereby the above objects and results are attained, said improvements comprising certain organization and combination of parts which are fully described hereinafter and more particularly defined in the claims.

Referring to the drawings: Figure 1 is an elevation of a syringe embodying my invention, with part in section; Fig. 2 is a perspective view of the canula and end of the syringe body; and Fig. 3 is a sectional view of the upper jaw showing the application of my improved syringe to the gums.

2 is the syringe body and is formed of glass with the bore ground to accurate diameter. 3 is the plunger for the syringe body and is ground to make a fluid tight though movable sliding joint. The general construction of the body and plunger shown is that which is in general use and will need no further description. 7 is the canula of metal, the orifice through it being of uniform size and through which the fluid from

the syringe body may freely flow. This canula 7 is bent at 15 to provide a short length 6 which extends into and is held by the nipple 5 of glass formed as an extension of the body 2 at its discharge end 4. On the inside of the nipple there is a conical aperture 8 for directing the fluid content of the body into the receiving end 6 of the canula. This end of the canula is held in place in the glass nipple 5 by the latter being fused and molded under pressure to fit tightly about the canula as will be understood by reference to Fig. 1. The long extended portion 7 of the canula is bent at an angle to the axis of the syringe body 2 so as to extend to one side of the body 2 and be adapted for easy and satisfactory application to the gums, a capacity which could not be secured with a short straight canula.

By reference to Fig. 2 it will be seen that the discharge end 9 of the canula 7 is flattened and the opposite middle portions of the flattened sides are pressed together at 10 to provide the two ducts or discharge apertures 11 and 12 which divide the fluid passing through the canula into two parts for the purpose of spreading the discharge and at the same time restricting the escape to an extent sufficient to retard the discharge. Moreover, the discharge from the two orifices 11 and 12 is slightly divergent and hence will more fully flush the gums. The shape of the nozzle end 9 is such that its greatest width may be pressed against the gums transversely to the length of the teeth, or be held with the two apertures 11 and 12 in a vertical line and between the teeth, to suit the conditions of the gums.

In hypodermic syringes as commonly made, the needles are detachably clamped upon the nozzle end of the syringe so that the needles may be removed and replaced, but the constructions thus in common use are costly and wholly unnecessary for the purposes of my invention. By my construction the canula is cheaply made, effective in fluid distribution, and secured to the glass nipple of the syringe body in a permanent manner, and by a joint which is both strong and liquid tight.

It will now be apparent that I have devised a novel and useful construction which embodies the features of advantage enumerated as desirable, and while I have in the present instance shown and described the

preferred embodiment thereof which has been found in practice to give satisfactory and reliable results, it is to be understood that I do not restrict myself to the details, 5 as the same are susceptible of modification in various particulars without departing from the spirit or scope of the invention.

Having now described my invention what I claim as new and desire to secure by Letters Patent, is:

10 1. A syringe for treating the gums, comprising a syringe body provided with a canula having its discharge end flattened and the side walls thereof pressed into contact at an intermediate point to provide two 15 clearly defined discharge apertures to produce two diverging streams.

20 2. A syringe for treating the gums, comprising a syringe body of glass provided with a metal canula opening through the end of the body and secured in place by hav-

ing the glass thereof shrunk upon the inclosed end of the canula and the free end of the canula bent in an oblique direction to the syringe body and terminating in a plurality of nozzle apertures. 25

3. A syringe for treating the gums, comprising a syringe body having a glass nipple arranged at the discharge end and an angularly shaped canula of metal having 30 one end extending through the glass nipple and held in place by the glass being shrunk thereon and said canula and its extended end projecting to one side of the body and having its end flattened to form a nozzle 35 portion.

In testimony of which invention, I hereunto set my hand.

JOHN MacGREGOR.

Witness:

ANNA J. HANLEY.