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2,754,590

CONTAINER FOR TOOTHACHE REMEDY

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Fig. 1.

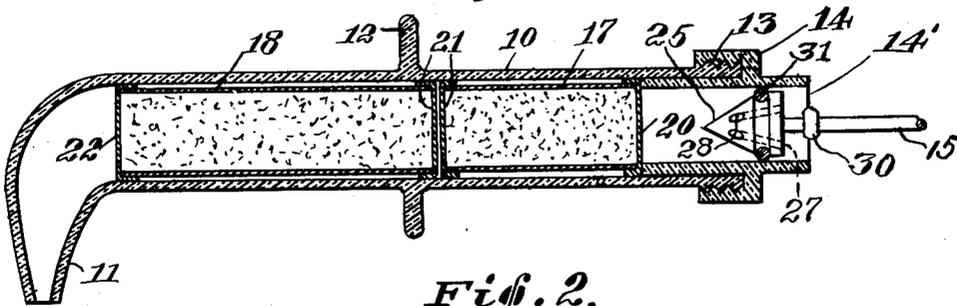


Fig. 2.

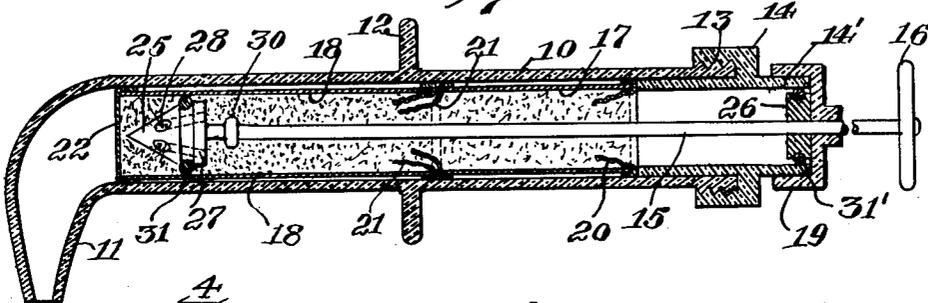


Fig. 3.

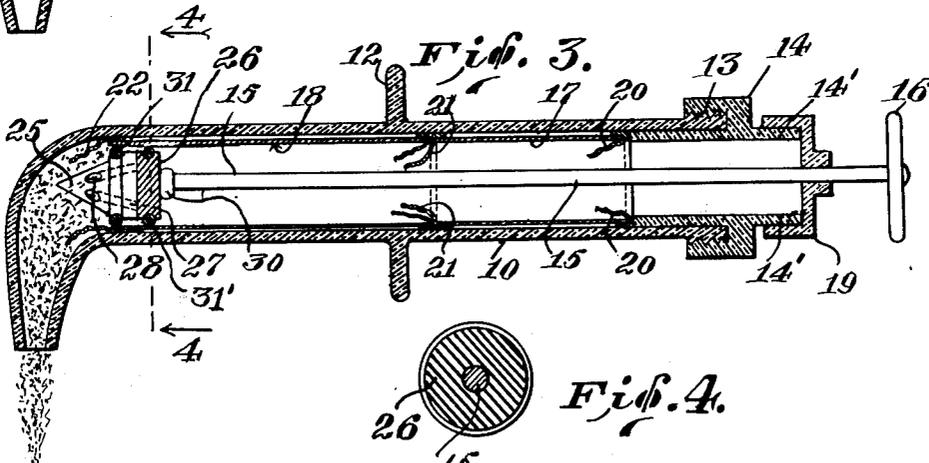
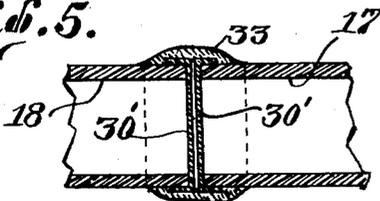


Fig. 5.



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1

2,754,590

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7 Claims. (Cl. 32-60)

My said invention is a first-aid device for treatment of toothache, and its principal object is the relief of toothache by simple means such as is easily applied, which may be stored for long periods without deterioration due to climatic conditions or to age, and which will serve to inhibit deterioration of the teeth and enable the patient to retain imperfect teeth for considerable periods without discomfort, or until the services of a dentist can be had.

It is an object of the invention to provide convenient means for applying a preservative pain-inhibiting composition that is simple and cheap and easily applied by unskilled persons, which hardens quickly and which will relieve pain and discomfort and can remain in place for an indefinite period in many cases. The composition can be applied by unskilled persons without difficulty and can be sold at a reasonable price. In effect, it is a portable professional means for relief of toothache and for postponement of the necessity for the drawing of teeth, while providing a means whereby temporary or diseased teeth can be kept in use safely and without pain until the proper time for drawing them, and for eliminating the use of remedies of doubtful value or undesirable characteristics, i. e., it is a true home remedy.

Referring now to the annexed drawings, which are made a part of this application, and in which similar reference characters indicate similar parts;

Fig. 1 is a longitudinal section of the device of my invention, in horizontal position.

Figs. 2 and 3, similar views but with parts in different positions such as are assumed thereby at different stages in the operation of treatment of a dental cavity.

Fig. 4, a section of a plunger forming part of my invention, and

Fig. 5, a detail section of a modified form of the invention.

In the drawings, reference character 10 indicates the main body member of an instrument constructed according to my invention and which is used in the manner hereinafter described. Member 10 is cylindrical in cross section, with a nozzle portion 11 bent downward substantially at right angles to the body 10, said body having an annular flange 12 approximately midway of its length for convenience in holding the device by gripping it between two fingers that bear against the front face of said flange while the thumb bears against the handle 16 on piston rod 15. At its rear end the body portion 10 has threads 13 encircling it, on which a locking cap 14 with an extension 14' may be fixed by threads engaging with those on the sleeve in which is located the piston rod 15 of a piston 25 to which the operating head or handle 16 is affixed at a distance rearwardly from the flange 12. The locking cap 14 may fit loosely on the outer end of the extension 14' so as to be readily removable, or it may be threaded thereon, as will be obvious. The extension 14' projects rearwardly of the body of the instrument and serves as a guide for the elongated piston rod 15.

Within the cylindrical cavity of the body 10 there are two cylinders 17 and 18 for containing suitable medica-

2

ments that are to be preserved out of contact with each other until the time comes for mixing them and applying the mixture to a cavity. Such medicaments are zinc oxide and eugenol that may be preserved indefinitely in the separate containers, but which quickly harden when mingled and exposed to atmosphere. The cylinders are preferably made of thin glass that can be broken readily, and they have frangible seals at their ends as at 20, 21 and 22. The seals may be made of metal foil, rubber, plastic or other frangible material that is not affected materially by climatic conditions, and are affixed to the ends of the cylinders, or other arrangements are made to keep the contents of the cylinders sealed until needed, thus preventing contamination, deterioration and waste by leakage, etc.

The preparation of the remedy includes assembly of the unitary body 10 and nozzle 11, insertion of the closed cartridges 17 and 18 containing respectively zinc oxide and eugenol, and application of the locking cap 14, the cylinders having been previously loaded and sealed. Now the cap 14 is applied. The device is now ready for use when needed, and it may be put into use with a minimum of delay when needed.

At such time of need a plunger is inserted into the device, said plunger consisting of a piston rod 15 with a handle 16, and having a head portion comprising a piston 25 with a pointed end. Passages 27 and 28 of suitable size and number extend lengthwise of the piston head and a head 30 normally holds in place a rubber collar or the like at 31 that serves to seal the space between the piston head and the cylinder, so as to prevent leakage during mixing and application of the medicament.

An extension 14' affords means for supporting a cap as 19, which also insures that the piston rod 15 and parts carried thereby shall operate accurately.

A ring 31 of soft rubber or the like seals the space between piston 25 and tube 10.

The piston rod 15 carries a piston 25 with longitudinal passages 27 and 28 and a groove to receive a ring 31 of soft rubber. On the stem back of the head and spaced therefrom is an integral enlargement 30 serving as a retaining means for a washer 26 of soft rubber capable of stretching to pass over the enlargement 30. Said washer 26 is slidable along the stem 15 and has a circumferential groove in which the ring 31' is seated. It will be understood that sealing rings 31, 31' may be omitted, they serving merely to reduce waste of the fluent contents of the syringe.

In Fig. 5 I have shown how the two cylindrical containers may be connected for convenience, and thus both can be punctured by a single movement of the piston rod to cause its point to pierce the ends of both containers at a single stroke. The two cylinders have their ends juxtaposed, with caps 30' mounted on them and an annular closure 33 is placed on them which closes both the contiguous ends and seals them and holds the containers aligned and in position for insertion in the syringe.

In the use of the device of my invention, a package is made up such as shown in Fig. 1, the plunger being placed in a package alongside the body 10, or otherwise associated with the syringe, and being ordinarily separate from the syringe. When the medicaments are to be applied the plunger is inserted into the extension opening 14' of the casing as in Fig. 1 and is pushed toward the nozzle end and is then reciprocated to commingle the contents of the instrument, as indicated in Fig. 2. The mixture can flow through passages 27 and 28 and the piston may be reciprocated to commingle the contents of the syringe thoroughly, after which the soft rubber piston or head is moved rearwardly to cause the enlargement 30 to pass through the central aperture in the washer 26 and to the rear end of the syringe. The washer now backs up or

3

occludes the passages 27 and 28 thus forming a solid head or piston, which allows that piston to eject the contents of the syringe into a cavity in a tooth.

It will be obvious to those skilled in the art that many changes can be made in the device of my invention, all without departing from the spirit of the invention; and therefore I do not limit myself to what is shown in the drawings and described in the specification, except as indicated in the appended claims.

Having thus fully described my invention, what I claim is:

1. The combination of a tubular container, a plurality of closed packages aligned therein, said packages having frangible ends and being mounted end to end in the container, a closure for one end of the container, a piston slidable in the tubular container, said piston having a tapered forward end shaped to pierce the ends of said packages, and a nozzle at the exit end of the container.

2. A device as in claim 1, said piston having passages extending endwise of the container for mixing the contents of the container by reciprocation of the piston.

3. A device as in claim 1, said piston having a rearwardly extending supporting shaft, and a flexible washer

4

on said shaft said washer being positioned to act as a plunger to force material out of said container.

4. A device for treatment of dental cavities comprising a shell providing a cylindrical chamber holding a plurality of frangible-ended cylindrical sealed containers in aligned position, said shell having a reduced passage for ejection of the commingled contents of the sealed containers, means for holding the containers in place in the shell, and a piston having a plunger with a pointed end adapted to rupture the ends of the sealed containers.

5. A device as in claim 4, said plunger having longitudinal passages for mixing the contents of the shell.

6. A device as in claim 5, having a washer loosely mounted on the stem of the piston.

7. A device as in claim 6, and an enlargement on the stem of the piston and tending to move therewith.

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