

[54] **SYRINGE HAVING PIVOTABLE NOZZLE PORTION**

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[22] Filed: **Feb. 11, 1974**

[21] Appl. No.: **441,577**

[30] **Foreign Application Priority Data**

Feb. 22, 1973 Sweden..... 73024663

[52] **U.S. Cl.**..... **128/235; 128/239; 222/566**

[51] **Int. Cl.**..... **A61m 1/00**

[58] **Field of Search**..... 128/235, 261, 239, 218, 128/216, 224; 222/574, 572, 566, 386, 222/402.21, 402.24

[56] **References Cited**

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[57] **ABSTRACT**

An applicator syringe preferably made of a plastics material and intended for one time use only, said syringe comprising a plunger and a body member in which the piston is arranged for axial movement, and further comprising a pivotable nozzle which in its starting position extends concentrically with said body member and said plunger, wherein the body member and the nozzle are mutually joined together by means of a bellows-like conical junction member which is located concentrically with the body member and the nozzle and is arranged to enable said nozzle to be manually pivoted a repeated number of times between its starting positions and stable positions in all directions relative to said starting position.

1 Claim, 3 Drawing Figures

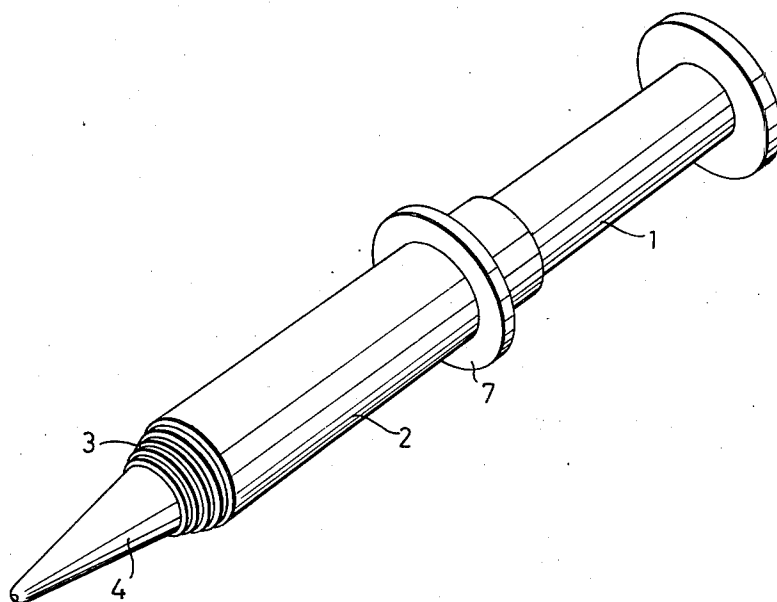


Fig. 1

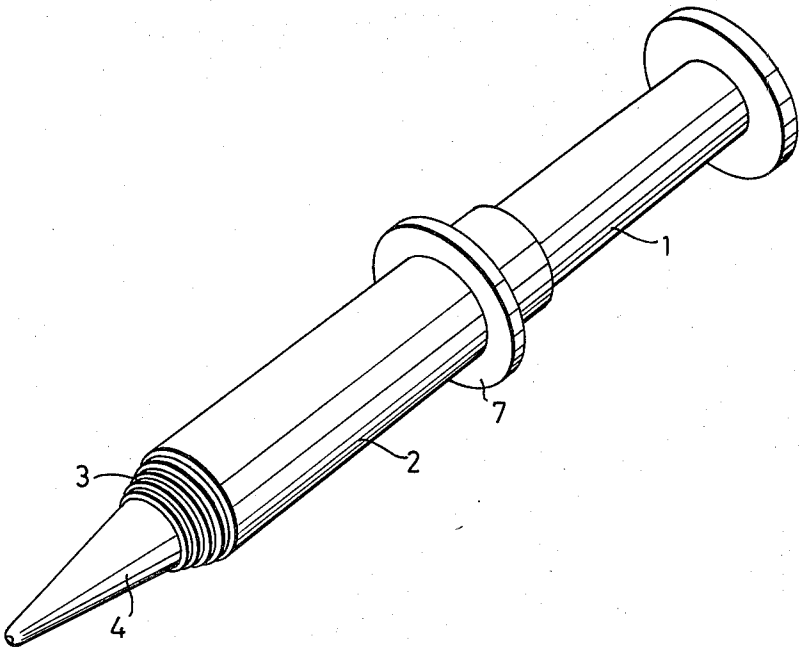


Fig. 2

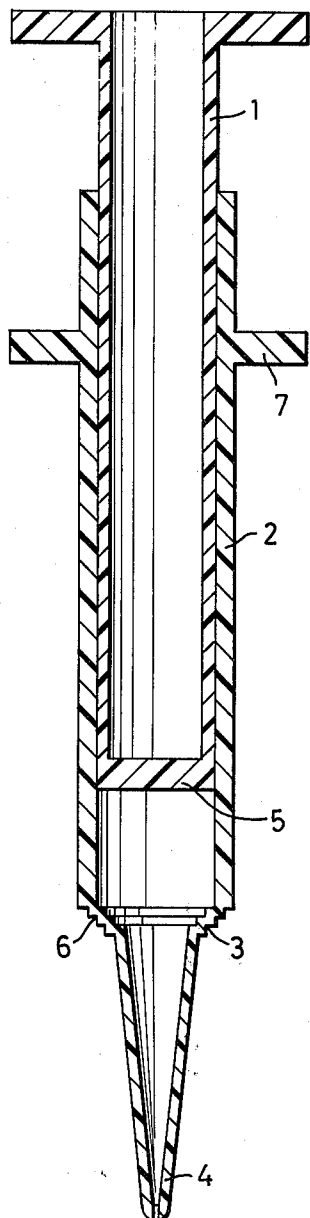
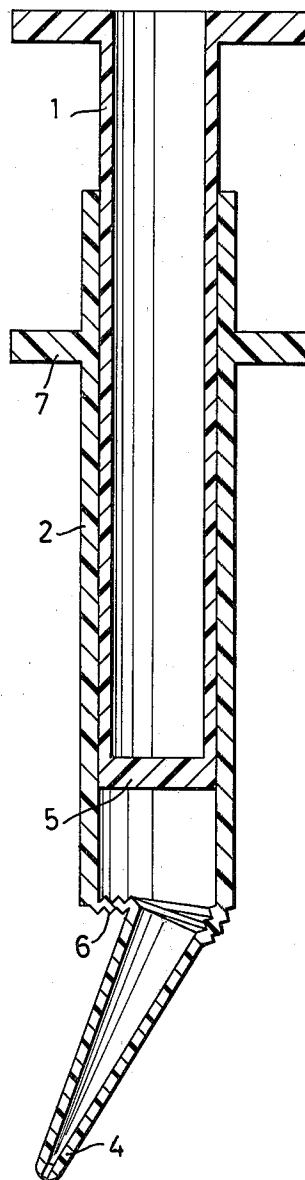


Fig. 3



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SYRINGE HAVING PIVOTABLE NOZZLE PORTION

The present invention relates to an applicator syringe and more specifically to a disposable applicator syringe made from a plastics material and comprising a plunger and a body portion in which the plunger is manually displaceable, and further comprising a pivotable nozzle portion which when occupying its starting position extends concentrically with the plunger and the body portion. Applicators of this type are often used within the field of odontology for applying a plastic casting material in the manufacture of different bridge constructions.

The object of the present invention is to provide an applicator syringe with which the portion joining the nozzle to the body portion of the syringe is so formed that the nozzle can be manually pivoted through a wide angle in all directions from said starting position, and with which said nozzle can be retained in said pivoted position and subsequently be returned manually to the starting position, from where it can be pivoted again to another outwardly pivoted position, and so on. With previously known applicator syringes of this type, it has only been possible to pivot the nozzle laterally to an extent determined by the design of the syringe.

The object of the invention is achieved by the fact that with an applicator syringe of the aforementioned type the body member and the nozzle are mutually joined together by means of a conical, bellows-like junction member which extends concentrically with the body member and the nozzle and which is arranged to enable the nozzle to be repeatedly pivoted manually between stable positions in all directions relative to its concentric position with the nozzle and the body member and its starting position.

Thus the applicator syringe of the present invention affords the advantage whereby the same syringe can be used to supply casting paste to different positions in the mouth of a patient.

The invention will now be described in more detail with reference to the accompanying drawings, on which

FIG. 1 shows the applicator syringe of the invention in perspective,

FIG. 2 is a cross-sectional view of the syringe in FIG. 1 with the nozzle located in its starting position concentric with the syringe body, and

FIG. 3 shows the syringe with the nozzle in an outwardly pivoted position.

The applicator syringe comprises a plunger 1 which is arranged for axial movement in a body member 2. The inner end of the plunger is identified by the refer-

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ence numeral 5. A nozzle 4 is arranged concentrically with the plunger 1 and the body member 2, as shown in FIG. 2. Arranged around the outer periphery of the body member 2 is a flange 7 against which the first and second fingers of the user's hand are intended to rest while the plunger 1 is being moved by means of the thumb, when the syringe is in use. The body member 2 and the nozzle 4 are interconnected by means of a conical junction member 3 arranged concentrically with said body member and said nozzle. The junction member 3 has a bellows-like construction and is provided with three folds 6, said folds being concentric with the nozzle 4 and the body member 2, as shown in FIG. 2. FIG. 3 shows the syringe with the nozzle 4 moved to the left in a stable position. The nozzle 4 can be manually moved from this position back to the starting position of FIG. 2 and from there to another outwardly pivoted position different to that shown in FIG. 3. Although for hygienic reasons the disposable applicator syringe of the present invention should not be used to treat more than one patient, it can of course be used several times for several treatments and that the nozzle can be moved a repeated number of times to apply the casting paste to the desired, different positions in the mouth of the patient.

I claim:

1. A disposable applicator syringe of plastics for dispensing pastes, comprising a tubular body member, a plunger fitted in said body member and axially slidable therein, a pivotable tubular nozzle of a smaller cross sectional area than the body member and having a neutral position with its axis substantially in axial alignment with the common axis of the plunger and the body member, a frustoconical junction member connecting the inner end of the nozzle with the body member, said junction member having a number of folds of progressively reduced diameter from the body member to said inner end and mutually concentric and concentric with the plunger, with the body member and with the nozzle in the neutral position thereof, the mutual spacing and the dimensions of said folds being chosen to enable the manual tilting of the nozzle to any stable inclined position relative to the body member, and said nozzle remaining in any selected inclined position without any manual force acting thereupon, and said junction member permitting the repeated manual transfer of said nozzle from any inclined position to another inclined position and to its neutral position, thus enabling the use of the syringe for dispensing paste with its nozzle located in any number of selected angular positions relative to the body member.

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