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2,672,144

POWDER DISPENSER

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Fig. 1

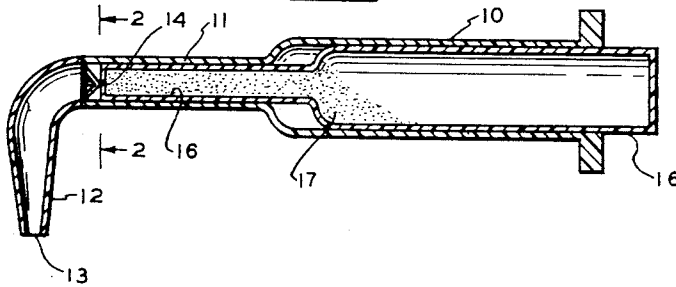


Fig. 2

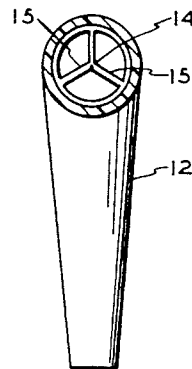
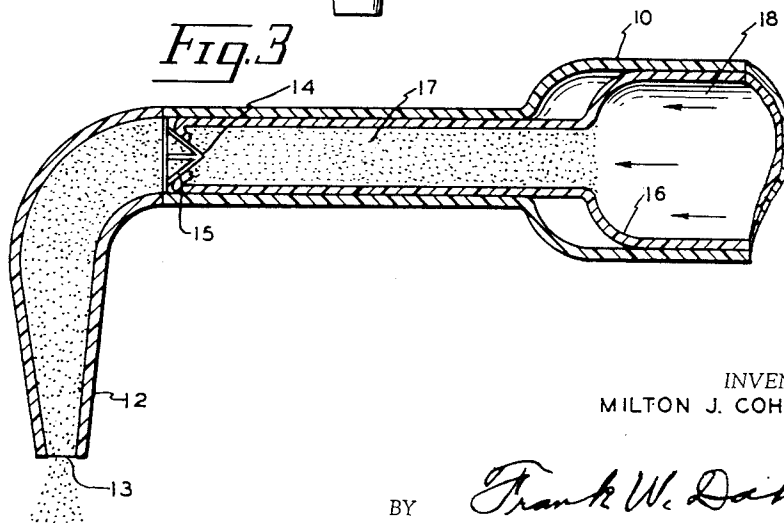


Fig.3



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POWDER DISPENSER

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2 Claims. (Cl. 128—265)

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My invention relates to means and a method for introduction of antibiotic powder into wounds such as the sockets from which teeth have been extracted by a dentist, and also into wounds in various other parts of the body which may be traumatic or surgical in origin, and it is an object to provide means for effective introduction of such powder into the innermost areas of these wounds, so as to fill the same and stop post-operative pain, as well as to prevent infection. Various medicaments have been proposed and various methods have been used for these purposes, but they are unsatisfactory for several reasons, as by reason of the presence of saliva and blood, inaccessibility of the wound to be treated, and the like.

Another object is to provide a simple, cheap and effective device of the character described, of such character that it may be discarded after a single use.

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

Fig. 1 is a longitudinal central section of the device of my invention,

Fig. 2, a section on line 2—2 of Fig. 1, and

Fig. 3, a section on a larger scale than Fig. 1 and showing the parts in a different position.

In the drawings, reference character 10 indicates a hollow shell or body member, which is preferably cylindrical and which may advantageously be made of relatively cheap plastic material, such as styrene, which is transparent and resistant to chemical action, it being contemplated that the entire appliance shall be discarded after a single use, i. e., shall be a so-called "throw away" or "disposable" device. The shell is preferably made with a neck portion 11 of reduced diameter, the forward part of the neck portion being laterally bent at 12 so as to be insertible into the socket from which a tooth has been removed and being tapered toward its outlet at 13. This construction also facilitates application of medicament to a cavity in a tooth.

Near the front end of the body there is located a puncturing point 14 that is directed rearwardly or away from the outlet of the device and is formed by three vanes 15 that extend radially inward from the inner wall of the body in the throat of the same, said vanes merging at their inner edges and being preferably so molded or stamped as to be integrated with the body 10 and with each other.

A container 16 for antibiotic or styptic powder, or a mixture of the two, indicated at 17 is also preferably made of cheap plastic material of such character that it will be sufficiently rigid that it may be pushed through the body without losing its shape. This container will preferably fit closely in the shell at its larger part, and may be so formed that its movement through the shell will be arrested shortly after its closed end has encountered the point 14 and been ruptured thereby.

The container is to be filled with compressed air or other gas at 18, and a predetermined

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amount of powder 16 of any kind suitable for the purpose in mind is also placed in the container, as gas and the powder being, of course, necessarily compatible. The amount of powder and the pressure of the gas should be so related that the powder will be blown out of the appliance with sufficient force to reach the bottom of the tooth socket or wound and so build up a filling or lining from the bottom upward and outward for the best results.

It is intended that the tube shall be reduced toward the outlet end, and in use the device will be held with the outlet, or puncturable end, downward, so that the powder will run toward the outlet end of the container, the container being tapped or shaken to expedite that movement of the powder into the nozzle portion. Then the container may be moved toward a position such as that shown in Fig. 3. As it approaches such position, the container may be pushed toward the nozzle. Its end will be ruptured as shown in said figure and the powder is forced out and into the cavity to be filled or treated, due to the pressure of the gas at 18, the motion of the powder being increased as it passes through said nozzle, due to the tapering of the nozzle 12.

It will be evident that my invention is not limited to the use of a dry powder, since any pulverulent or fluent material may be dispensed in like manner, it being only important that the material to be dispensed shall be accumulated adjacent the outlet where it will be blown out by the expanding gas behind it, and into contact with surfaces to be treated.

It will be obvious to those skilled in the art that many changes may be made in the device herein disclosed, 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, but only as indicated in the appended claims.

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

1. A disposable therapeutic instrument comprising a cylindrical shell that is open at both ends, a closed cylindrical container fitting slidably in said shell, a charge of compressed gas and fluent powder in the container, one end of the container normally projecting from the shell and piercing means positioned in the shell so as to rupture the other end of the container and release its contents when the container is moved endwise of the shell, and a reduced nozzle for directing the contents out of the shell.

2. A device as in claim 1, said shell and container having coaxial shoulders positioned to arrest the container when its end has been ruptured by said piercing means.

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