July 17, 1956 M. EMELOCK 2,754,822

INSTRUMENT FOR THE ADMINISTRATION OF SUPPOSITORIES

Filed Feb. 15, 1954

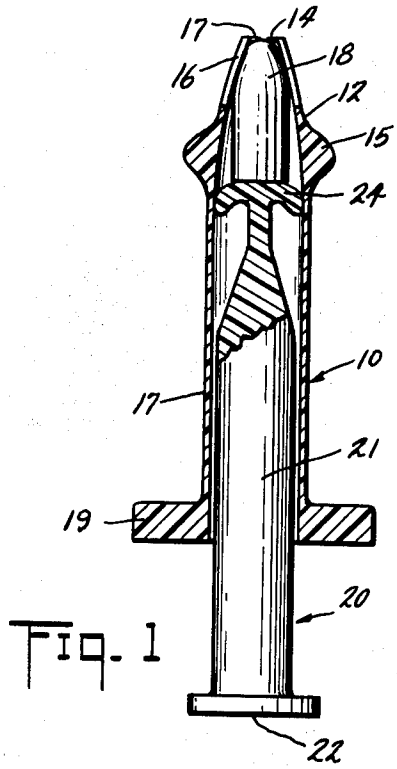


Fig. 1

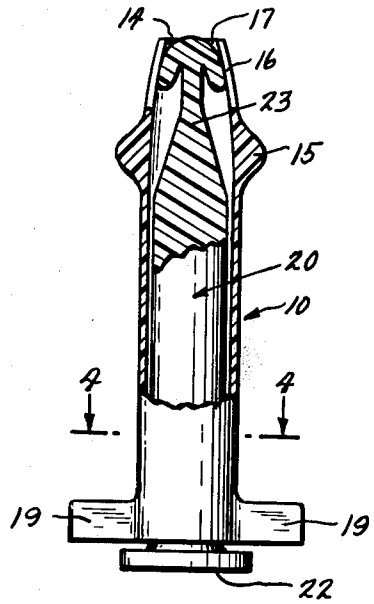


Fig. 2

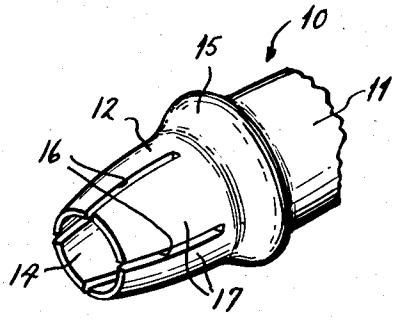


Fig. 3

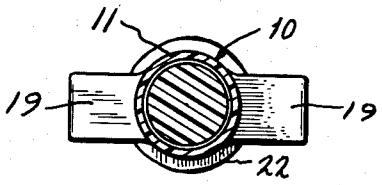


Fig 4

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INSTRUMENT FOR THE ADMINISTRATION OF SUPPOSITORIES

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4 Claims. (Cl. 128—264)

The present invention relates to a device or instrument for use in the insertion of suppositories into body openings, and especially for inserting rectal suppositories.

The administration of medication per rectum by means of suppositories is becoming increasingly prevalent, particularly for the convenience of persons who are not tolerant to the administration of certain types or forms of medication orally, and especially for children and animals, who gag on or cannot or refuse to accept most medications.

The administration of suppositories, and especially rectal suppositories by hand is a rather difficult operation, requiring care and delicacy of touch, because of the possibility of causing pain or injury to the patient. This is especially true of children whose anal opening is rather small and who require small suppositories, rather difficult to manipulate, and who are wont to fidget during the operation. In their case, pain is usual and even injury is not infrequent.

It is an object of the present invention to provide an instrument of the character described which will facilitate for the nurse or attendant the rapid and accurate insertion of a suppository, with a minimum of strain and effort.

It is another object of the present invention to provide an instrument for the insertion of suppositories, rapidly and accurately and with a minimum of pain and discomfort to the patient and which will eliminate any chance of injury to the patient.

It is a further object of the present invention to provide an instrument of the character described which is of simple construction, easy to manipulate and to keep clean, and which is economical to produce.

The foregoing and other desirable purposes and advantages of the suppository inserting instruments of the present invention will become more readily apparent to those skilled in the art from the embodiment thereof shown in the accompanying drawing and from the description following. It is to be understood, however, that such embodiment is shown by way of illustration only, to make the principles and practice of the invention more readily comprehensible, and without any intent of limiting the invention to the specific details therein shown.

In the drawing:

Fig. 1 is a longitudinal sectional view, partly in elevation, of one embodiment of a suppository inserting instrument of the present invention; shown with a suppository in place therein, ready for discharge;

Fig. 2 is an elevational and partly sectional view of the same showing its position after discharge of the suppository;

Fig. 3 is an enlarged, fragmentary, perspective view of the discharge end of the instrument; and

Fig. 4 is a section taken on line 4—4 of Fig. 2.

Referring now more specifically to the accompanying drawing, the suppository inserting instrument therein illustrated comprises a tubular, open ended barrel, generally designated as **10**, which is preferably formed of a material that is inherently stiff and resiliently flexible, and of a thickness that will retain it stiff enough to remain in tubular shape. A preferred material for the purpose is polyethylene. Another suitable material is vulcanized rubber, natural or synthetic. All of these materials may be readily and economically molded into the desired form or shape.

The barrel **10** comprises a main body portion **11**, of substantially uniform, preferably cylindrical shape and bore, and a tapering, approximately bullet shaped discharge end, **12**, with a correspondingly tapered bore, terminating in a reduced outlet opening, **14**. The barrel **10** may be provided at its upper end with laterally extending finger pieces **19** to facilitate handling and use.

The wall of the barrel **10**, immediately adjacent the tapered end portion **12** thereof, is provided with an annular thickening or rib, **15**, and the tapered end portion **12** thereof is provided with longitudinally extending slits, **16**, opening into the outlet edge, which may be two or more, as four, in number, to provide the resiliently flexible wall flaps, **17**, that normally remain in tapering or convergent position, as shown in Figs. 2 and 3, to constrict or reduce the outlet end to fit readily into small anal openings, but may be separated and spread sufficiently to enlarge the outlet opening **14**, to permit the discharge therethrough of a suppository, **18**, having a diameter greater than the normal diameter of the discharge opening **14**.

The instrument comprises, additionally, a plunger, generally designated as **20**, which may, preferably, be molded of a material that has inherent resilient flexibility, as rubber or polyethylene, or the like. The plunger **20** may be formed to have a main body portion, **21**, of a thickness or cross-section to make it fit within the main barrel portion **11** and to move freely therewithin. The plunger **20** is formed with an enlarged head, **22**, at one end, for ease of operation, and is tapered at the other end, as at **23**, terminating in a resiliently flexible, transversely extending, preferably elongated flap, **24**, the longer dimension of which is preferably greater than the diameter of the barrel portion **11**, and the shorter dimension less than said diameter.

In operation, the suppository **18** is inserted, tapered end first, into the barrel **10**, until the tapered end rests on the flaps **17**, which retain it within the barrel. The plunger may then be inserted, flap **24**, first, into the barrel **10**. The tapered discharge end of the barrel, **12**, is then inserted by the operator into the body opening, as the anus, until the bead or rib **15**, rests on and is supported by the body portion surrounding such opening, such as the anal sphincter. The plunger **20** is then pressed inwardly into the barrel, pushing the tapered end of the suppository against the flaps **17**, gradually spreading them apart to enlarge the opening **14**, to permit the discharge of the suppository therethrough directly into body.

It will be readily apparent that the presence of the rib **15** permits the pressing of the instrument against the body, to steady it against displacement during the administration operation, without causing any appreciable pair or discomfort to the patient and without forcing the end of the barrel deeper into the body opening.

It will also be apparent that by the tapered and split construction of the discharge end of the barrel, the instrument may be inserted even into small, tight body openings and may discharge into such body openings relatively larger suppositories without undue discomfort; the spreading of the body opening for receiving such suppository being slow and gradual, so as not to make it painful, the suppository being also guided accurately into the opening to prevent its painful impinging against the tender tissues within it.

It will additionally be apparent that the administration of a suppository by the instrument of the invention is a neat, quick and clean operation in which the operator's hands touch neither the suppository nor any portion of the opening receiving it, to the advantage of both, patient and nurse or attendant.

It will likewise be apparent that the instrument of the present invention may be easily and quickly disassembled for cleaning and for sterilizing and as easily and quickly reassembled for use.

It will be further apparent that numerous variations and modifications in the suppository inserting instrument of the present invention may be made by any one skilled in the art, in accordance with the principles hereinabove set forth, and without the use of any inventive ingenuity. I desire, therefore, to be protected for any and all such variations and modifications that may be made within the spirit of the present invention and the scope of the claims hereto appended.

What I claim is:

1. An instrument for the administration of a suppository, comprising an open-ended, tubular barrel formed of a stiff, resiliently flexible material, said barrel having one end portion tapered to provide a restricted barrel opening at said end, said barrel having an external annular rib formed thereon at approximately the base of said tapered end portion and having slits formed in said tapered end portion extending from the edge of said restricted opening in the direction of said rib to provide resiliently flexible flaps adapted to be distended under pressure to enlarge said restricted opening, and a plunger reciprocably arranged within said barrel for discharging a suppository adapted to be disposed within said tapered end portion through said restricted opening of said barrel.

2. An instrument for the administration of a suppository, comprising an open-ended, tubular barrel formed of a stiff, resiliently flexible material, said barrel having a main portion of substantially uniform diameter and one end portion tapered to provide a restricted opening at said tapered end portion and having slits formed in said tapered end extending longitudinally thereof from the edge of said restricted opening to provide resiliently flexible flaps at said end portion adapted to be distended under pressure to enlarge said restricted opening, and a plunger reciprocably arranged within said barrel for discharging a suppository adapted to be disposed within said tapered end portion through said restricted barrel opening, said plunger comprising a main portion adapted to fit relatively closely within the main portion of said barrel and having an extension of reduced thickness at one end and a transversely disposed laterally extending flexibly resilient flap at the end of said portion of reduced thickness, said last named flap being of a length greater than the diameter of said barrel bore and of a width lesser than the diameter of said bore.

3. The instrument of claim 2, wherein said plunger is formed of a stiff, flexibly resilient material.

4. The instrument of claim 2, wherein said barrel is provided with an external annular rib at approximately the base of said tapered end thereof.

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