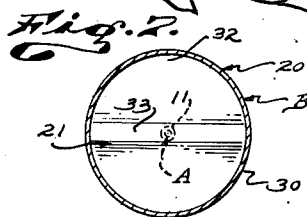
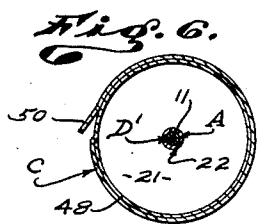
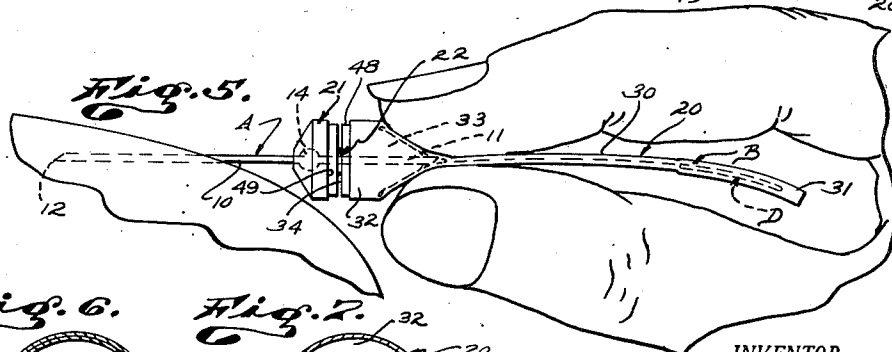
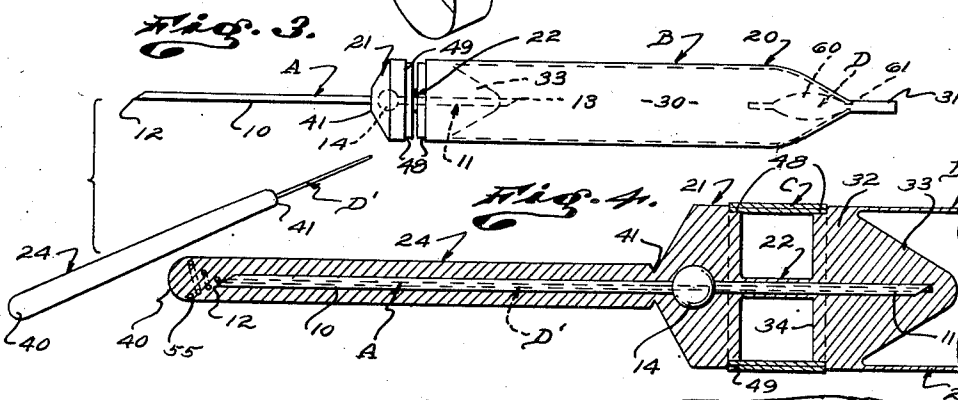
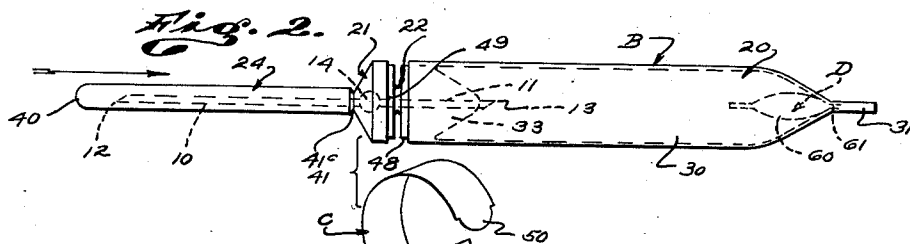
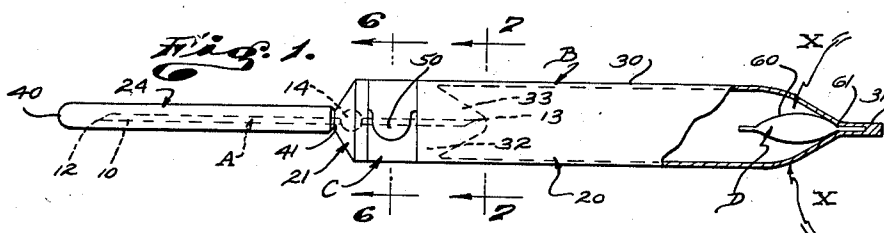


S. L. FOX
HYPODERMIC UNIT

2 Sheets-Sheet 1

Filed March 27, 1951



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S. L. FOX
HYPODERMIC UNIT

2,676,591

Filed March 27, 1951

2 Sheets-Sheet 2

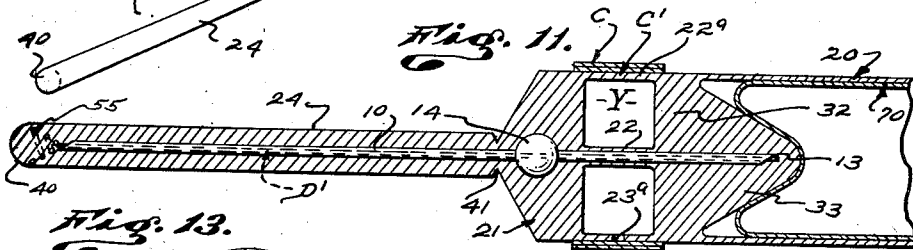
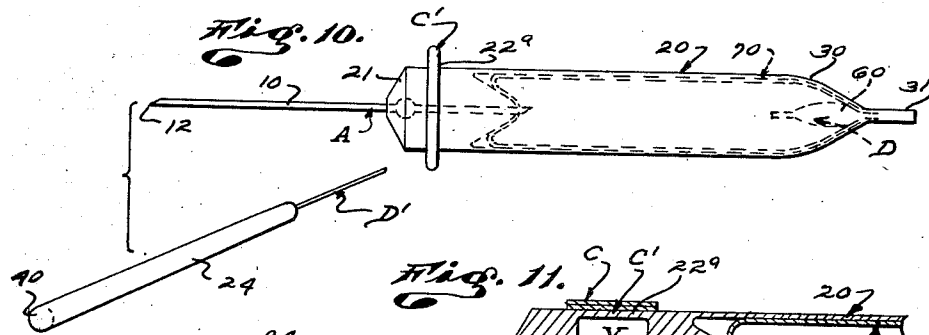
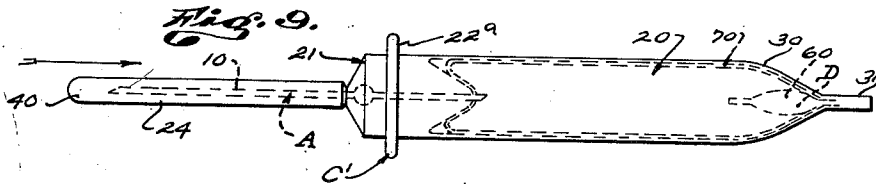
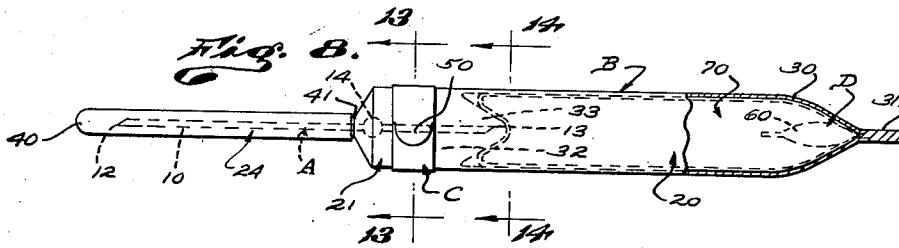


Fig. 13.

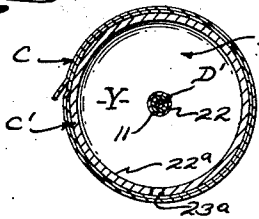


Fig. 12.

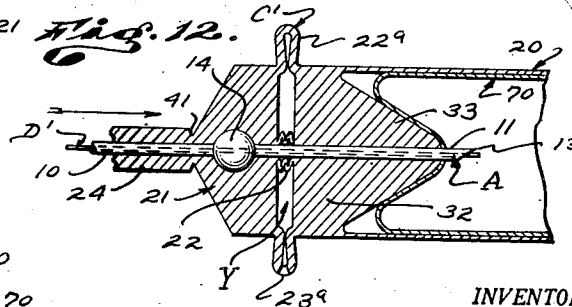
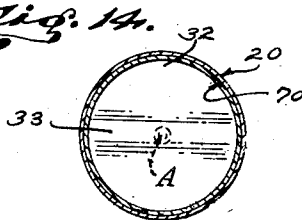


Fig. 14.



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UNITED STATES PATENT OFFICE

2,676,591

HYPODERMIC UNIT

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Application March 27, 1951, Serial No. 217,751

17 Claims. (Cl. 128-216)

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This invention has to do with a fluid handling device or hypodermic unit and it is more specifically concerned with a device useful for receiving fluid or as a hypodermic syringe or fluid applicator. It is a general object of the present invention to provide a fluid handling device that can be readily and economically produced in a sterile condition and suitable for convenient handling and transportation, and which is such that it can be easily, quickly, and advantageously used when desired.

Hypodermic needles and fluid handling devices as ordinarily provided involve various joints and connections and present problems of sterilization, and the loading and handling of the fluids is generally somewhat difficult and in many instances hazardous.

It is a general object of this invention to provide a simple, practical, inexpensive device, in fact, a device that is such that it can be disposed of after a single use without appreciable loss, which device can be manufactured, loaded, and handled economically and is such that it is always immediately available for use and does not require the exercise of any unusual skill or care for its proper handling or use.

It is a further object of this invention to provide a device of the general character referred to which involves, essentially two major elements, namely, an applicator or fluid passing device that may be advantageously formed of metal and which is essentially a needle, and a liquid carrier which can be advantageously formed of so-called plastic materials such as polyethylenes, polyvinyl chlorides, or the like, which is soft or flexible and is such that it normally completely encases or encloses the applicator, maintaining it sealed and in a sterile condition while at the same time carrying a suitable charge or supply of fluid to be administered so that such charge is separate from or out of contact with the applicator and is only in contact therewith in the course of final application of the fluid.

It is another object of this invention to provide a structure or device of the general character referred to in which the liquid carrier can, in practice, be formed, for instance molded, directly onto or in connection with the applicator or needle, in the course of which molding operation temperatures are involved which effect sterilization.

It is another object of the invention to provide a device of the general character referred to in which the fluid to be handled or applied by the device can be charged directly into the molded

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or otherwise formed cell of the liquid carrier, and sealed therein, or if desired such fluid can be provided in a separate carrier or envelope applied to the cell of the liquid carrier as an insert.

The structure that I have provided, though useful both to receive and to apply fluid, will be described specifically as an applicator. However, I wish it understood that I contemplate using it also as a fluid or sample taking device.

The structure provided by the present invention is characterized by two units, one an applicator and the other a fluid carrier. The applicator is preferably formed of a simple, straight, elongate tubular part sharp at both ends and with an outer end portion in the form of a needle and a rear end portion in the form of a shank. An anchoring element or enlargement be provided on the elongate tubular element at about the point where the needle and shank portions come together. The fluid carrier involves a collapsible cell with an elongate tubular body closed at its outer end provided with an inner end wall that closes it at its inner end. The inner end wall receives the shank of the fluid applicator and a boss be provided at the inner side of the end wall to project a substantial distance into the cell. The shank extends a substantial distance into the boss but does not project completely through it. The unit forming the fluid carrier has a head spaced forward of the inner end of the cell and anchored on the applicator. A thin walled collapsible neck connects and is integral with the inner wall of the cell and the head, and a cap forms a part of the carrier unit and is engaged over the needle portion of the applicator, being integrally joined with the head by a coupling part that is thin and which forms a break joint. A core is carried by the cap and extends completely through the applicator from the pointed end of the needle portion to the pointed end of the shank portion. When the cap is removed the core is carried with it and is thus withdrawn from the opening of the applicator. The fluid charge is carried in the cell and may be completely sealed therein so that it is normally out of contact with the applicator and with any part or parts other than the cell of the structure. A spacer may be provided with the fluid carrier and may be a split ring arranged to extend between the head and the inner end of the cell where it normally holds these elements separated. If desired fluid can be sealed or encased in a thin-walled envelope designed to fit into and substantially fill the cell. A second or any number of additional mate-

rials or fluids may be carried in fracturable containers within the cell, or within the envelope provided in the cell.

The various objects and features of my invention will be fully understood from the following detailed description of typical preferred forms and applications of my invention, throughout which description reference is made to the accompanying drawings, in which:

Fig. 1 is a side elevation of a typical form of the invention with a portion thereof broken away to appear in section, the device being shown in loaded condition and in a form suitable for storage and transportation. Fig. 2 is a view similar to Fig. 1 with the spacer shown in Fig. 1 removed and the device operated to establish the applicator in communication with the fluid supply. Fig. 3 is a view similar to Fig. 2 showing the cap removed and leaving the device ready for operation. Fig. 4 is an enlarged longitudinal detailed sectional view of a portion of the structure as it is shown in Fig. 1 of the drawings. Fig. 5 is a view showing the device in the course of being used. Fig. 6 is an enlarged detailed transverse sectional view taken as indicated by line 6—6 on Fig. 1. Fig. 7 is an enlarged detailed transverse sectional view taken as indicated by line 7—7 on Fig. 1. Fig. 8 is a view similar to Fig. 1 illustrating another embodiment of the invention. Fig. 9 is a view similar to Fig. 2 showing the structure illustrated in Fig. 8. Fig. 10 is a view similar to Fig. 3, showing the structure illustrated in Figs. 8 and 9. Fig. 11 is an enlarged longitudinal detailed sectional view of a portion of the structure shown in Fig. 8. Fig. 12 is a view of a portion of the structure shown in Fig. 11 in a position such as is illustrated in Fig. 9. Fig. 13 is an enlarged detailed transverse sectional view taken as indicated by line 13—13 on Fig. 8, and Fig. 14 is an enlarged detailed transverse sectional view taken as indicated by line 14—14 on Fig. 8.

Referring first to the form of the invention shown on sheet 1 of the drawings, the structure involves, generally, two principal elements, namely, an applicator A and a fluid carrier B. In addition to these principal elements the structure may include a spacer C and one or more secondary or supplemental fluid or material carriers D.

The applicator in its preferred form is a rigid or substantially rigid unit, and it is illustrated as being in a form that can be advantageously formed of a suitable metal, or alloy of metals. The particular applicator shown in the drawings involves, essentially, a straight, elongate, tubular part, uniform in size throughout its length and having a forward portion in the form of a needle 10 and a rear portion in the form of a shank 11. The forward terminal end of the needle 10 is beveled or cut at an angle to provide the needle with a sharp point 12, and in like manner the rear or terminal end of the shank 11 is fashioned or formed so that it has a sharp point 13. In the preferred form of the invention an anchoring device 14 in the form of an enlargement or projection on the tubular part above described is provided to occur where the needle and shank portions join.

The fluid carrier B involves, essentially, a collapsible cell 20, and in its preferred form it further involves a head 21 spaced forward of the cell, a collapsible neck 22 connecting the cell and head, and a cap 24 covering the needle 10 and joined to the head by a break joint.

The cell 20 in the form illustrated on sheet 1 of the drawings involves an elongate tubular body 30 having opposite wall portions pinched together at the rear end of the cell to be sealed or joined together at 31, and thereby close or seal the rear end of the cell. In practice the rear end of the cell can be closed or sealed in any suitable manner, for instance, if a thermoplastic is employed in the formation of the cell it can be permanently and tightly sealed by the application of heat, or by the application of heat and pressure. If other materials are employed it may be desirable to employ other types of joints or seals to gain the desired closure at the rear end of the cell.

The cell includes a front end wall 32 which is preferably a disc-shaped part of substantial thickness so that it has some body or rigidity, and in the preferred form of the invention a boss 33 is formed centrally of the end 32 and projects inwardly therefrom to extend somewhat into the body 30 of the cell. The shank 11 of the applicator enters the end wall 32 from its outer side 34 and extends a substantial distance into or through the wall 32 and the boss 33 so that its pointed end 13 normally terminates within the wall or the boss thereof just short of the inner side or face of the boss. Through this relationship of parts the pointed end of the shank is normally completely embedded in or encased by the inner wall of the cell, or the boss which is a part thereof, as will be seen in Fig. 4 of the drawings.

The head 21 is preferably in the nature of an enlargement on the applicator A at about the point where the needle and shank come together, and it is preferably a body of material such as is employed in the formation of the cell 20 of sufficient size and thickness so that it has substantial body or rigidity. In the case illustrated it is a disc-like part formed on or around the applicator A where the anchoring element or projection 14 occurs. The head is spaced a substantial distance forward of the end wall 32 of the cell.

The collapsible neck 22 joins the cell and the head, for instance, it extends between the end wall 32 of the cell and the side of the head that faces the cell, and it is preferably a thin-walled tubular part surrounding the shank as the shank extends from the head to the cell so that it is collapsible or easily deformed. In the particular case under consideration the neck is small or of limited diameter and is such as to fit closely around the shank as it extends from the head to the cell.

The cap 24 forms a case or closure for the needle 10 and has a closed outer or forward end 40 while its inner end is joined to the head 21 by a thin or weak coupling part 41 that forms a break joint between the cap and the head. The cap 24 is such that it fits snugly and completely around the needle 10 and when it is removed as by breaking the coupling 41 it leaves the needle completely exposed and ready for use.

In accordance with the present invention the several parts of the element B that I have termed a fluid carrier are integrally joined, that is, the body and wall 32 of the cell 20 are integral, the neck 22 integrally joins or connects the cell and the head, and the coupling 41 integrally connects the head and the cap. It will be apparent from the drawings that the several parts of element B, formed and related as I have provided, are such that they can be easily and practically

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molded or otherwise suitably formed from a suitable so-called plastic such as polyethylene or modifications thereof such as fluorinated polyethylene or chlorinated polyethylene, or I may use various polyvinyl compounds, either acetates, alcohols or chlorides, etc. The particular material or composition used in any particular case may be selected in accordance with the conditions to be met. The materials mentioned are thermoplastics and are essentially inert at the temperatures required for the class of use I have indicated. Further, they are capable of being worked or formed by extrusion, injection or compression molding or by deposition on forms from dispersions known as "plasticols" or from solutions in some instances. Furthermore, it is practical to employ a material which can be molded hot so that the formation of the element B on or in connection with the applicator A serves to sterilize the element A and may, in practice, supplement initial sterilization of element A which may be resorted to as circumstances require.

It is to be understood, of course, that although I refer to a material such as polyethylene or polyvinyl as the material out of which to form element B I do not wish to imply thereby in any way that the invention is limited to the use of this or any other particular material, and when I use the term "plastic" I mean to include within such term any and all other materials or combinations of materials that may serve to carry out the inventive concept herein set forth.

The spacer C employed in the form of the invention being described is a simple split ring or band of any suitable material having reasonable strength and rigidity, for instance, it may be a light metal band or a heavy fiber or paper band. The spacer is engaged around the element B to engage and extend between the cell 20 and the head 21. In the case illustrated the spacer is engaged or wrapped around the element B and has its end portions seated in recesses 46 provided in the head and end 32 so that the spacer abuts opposing shoulders 49.

In the particular case illustrated the spacer is provided with a handle or tab 50 where it is split, the tab serving as a means to facilitate ready removal of the spacer from the element B when it is desired to prepare the device for use. When the spacer is in place, as shown in Figs. 1 and 4 of the drawings, it holds the head 21 spaced from the end 32 of the cell where the pointed end of the needle is embedded in the boss 33 of the end 32.

When the spacer has been removed the head 21 and the cell 20 can be moved relative to each other so that the head approaches the end 32 causing the pointed end of the shank 11 to advance through the end 32 or boss 33 and finally enter and project into the interior of the cell, as shown in Figs. 2 and 3 of the drawings. In the course of such movement of the head relative to the cell the neck 22 is deformed or collapsed and being of light, thin-walled construction it does not interfere with such relative movement between the parts.

It is preferred, in practice, that the construction be provided with a core D' that occupies the opening provided in the applicator A until such time as the device is ready for use. In the form of the invention illustrated the core D' is a simple rod or wire slidably engaged in the tubular element forming the needle and shank, and it preferably extends completely through such ele-

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ment, that is, from the pointed end of the needle 10 to the pointed end of the shank 11.

In accordance with the invention the core D' is fixed or anchored to the closed end 40 of the cap 24 as at 55, so that when the cap is removed by fracturing the break coupling 41 the core is removed from the interior of the applicator at the same time that the cap is removed from the exterior thereof. By providing the core within the applicator and by placing it therein prior to the element B being molded or formed on or in connection with the applicator, all danger of material entering the applicator is eliminated and when the core is finally removed from the applicator the passage through the applicator is clean and wholly free to handle the material from the cell 20.

If desired, a supplemental fluid supply D, for instance, a secondary fluid supply, may be provided, as where it is preferred that two materials or fluids be provided in the device ready to be mixed either immediately before, during, or after use of the device. In the case illustrated I have shown a secondary or supplemental fluid container 60 carried by the cell 20, and the container 60 is in the form of a thin-walled or fracturable element filled with suitable material and located within the cell 20. In the case illustrated the fracturable container 60 is anchored in the cell 20 at the rear end thereof where a portion 61 of the container 60 is held between the sealed or joined rear end of the cell body 30. With such an arrangement and relationship, initial application of pressure to the cell at the rear end thereof, as indicated by the arrows X, will break the container 60 and liberate the contents thereof so that they mix or come into the contents of the cell body 30. It will be apparent, however, that by suitable handling of the device the secondary container 60, when employed, can be fractured at any desired time, as circumstances require.

In the form of the invention shown on sheet 2 of the drawings, the various essential parts of the structure hereinabove described may be the same as I have described, except that in this form of the invention the material handled by the cell 20, instead of being filled or carried directly in the cell, is carried in a container or envelope 70 which fits into or is contained within the cell, and, furthermore, the spacer C' in this form of the invention is somewhat different than that above described and the element B has a second neck portion 22^a which is of substantial diameter and which occurs immediately within the spacer.

The envelope 70 provided within the cell 20 may be considered, broadly, a part of or a lining within the cell, although it is preferred that it be initially formed entirely separate and independent of the cell 20. In practice the envelope 70 may be loaded or filled with any suitable material and after it is inserted or filled into the body of the cell 20 the cell can be closed by sealing it at 31, thus confining the envelope 70 within the cell, as shown in the drawings. In this case if a secondary supply or secondary container 60 is required it can be applied to or incorporated in the envelope 70, as clearly shown in Fig. 8 of the drawings where it is shown anchored in the cell 20 at the end of the cell that occurs in the rear end of the cell body 30. In this case the structure operates substantially the same as that first described, except that as the shank of the applicator enters the cell it does not open into the interior of the cell directly, but opens into

the interior of the envelope 70 which is located in the cell.

The large neck portion 22^a, shown best in Fig. 11 of the drawings, may be employed in place of or in addition to the neck 22. In practice the neck portion 22^a may be of such wall thickness and size as to normally serve as an effective spacer between the head 21 and the cell 20, making it unnecessary to employ a separate or independent element in the form of a spacer to normally keep these parts separated. In the drawings, however, I have illustrated a spacer C similar to the spacer hereinabove described, being in the form of a split ring or band wrapped around the element B to occur between the head and the cell and thus reinforce or stiffen the structure where the neck 22^a occurs. A vent opening 23^a is applied in the neck 22^a so that the air confined in the chamber Y, defined by the neck 22^a, end wall 32 and head 21, may be bled out when the structure is actuated. It is to be observed that in practice the spacers employed in the construction can be used to bear markings or identifications so that they are, in effect, labels, and also seal the vent opening 23^a.

From the foregoing description it will be apparent that I have provided a construction which lends itself to simple, inexpensive manufacture which can be carried out so that the resulting device is sterile and loaded with a suitable material so that there is a suitable quantity of such material, and so that such material is completely sealed and contained within the device against all danger of contamination. Ordinarily in the course of manufacture the applicator A will be initially sterilized with the core D inserted therein, and then the element B will be cast or formed around the applicator, the initial formation of element B being such as to leave the rear end portion thereof open.

When the desired charge of material or materials has been applied, as by filling into the body 30 or by insertion of an envelope 70 into the body 30, the body is sealed or closed as at 31, and at any suitable point in the operation the spacer is applied so that the shank of the applicator is maintained in a position where it does not enter the interior of the cell or the envelope within the cell.

When it is desired to use the device the spacer, if employed, is removed, tension is applied to the cap 24 sufficient to break the coupling 41 thus separating the cap and head, freeing the cap so that it can be withdrawn from the needle, which operation withdraws the core from the applicator. The device is now ready for use and by mere pressure or collapsing of the cell 20 the materials in or carried thereby can be effectively discharged through or by means of the applicator, or so as to be delivered by the needle. It is to be understood that the needle can be applied or manipulated in any suitable manner and in accordance with established practice, or to apply or administer the contents of the device in the desired manner. The structure that I have provided is of such simple, inexpensive construction that once emptied, by operation as above described, it can be disposed of without appreciable loss.

When either of the devices is to be used to receive or take samples or bodies of fluid, the cell is collapsed and the needle applied following which the fluid will fill into the cell to be thereafter handled as desired.

Having described only typical preferred forms and applications of my invention, I do not wish

to be limited or restricted to the specific details herein set forth, but wish to reserve to myself any variations or modifications that may appear to those skilled in the art and fall within the scope of the following claims:

Having described my invention, I claim:

1. In a device of the character described, two units, one an applicator having an elongate tubular part with a forwardly projecting needle portion and a rearwardly projecting shank portion each with a pointed terminal end, and the other a fluid carrier with a closed collapsible fluid carrying cell with the shank partially entered through a wall thereof, the applicator being shiftable relative to the carrier to enter the shank into the cell, the carrier having a head shiftable relative to the cell and engaged with said part to facilitate shifting of the shank to enter the cell.

2. In a device of the character described, two units, one an applicator having an elongate tubular part with a forwardly projecting needle portion and a rearwardly projecting shank portion each with a pointed terminal end, and the other a fluid carrier with a closed collapsible fluid carrying cell with the shank partially entered through a wall thereof, the applicator being shiftable relative to the carrier to enter the shank into the cell, the carrier having a head shiftable relative to the cell and engaged with said part to facilitate shifting of the shank to enter the cell, and a collapsible neck connecting the cell and said head.

3. In a device of the character described, two units, one an applicator having an elongate tubular part with a forwardly projecting needle portion and a rearwardly projecting shank portion each with a pointed terminal end, and the other a fluid carrier with a closed collapsible fluid carrying cell with the shank partially entered through a wall thereof, the applicator being shiftable relative to the carrier to enter the shank into the cell, and a core engaged in said part and removable therefrom to free said part for passage of fluid from the cell, the carrier having a head shiftable relative to the cell and engaged with said part to facilitate shifting of the shank to enter the cell.

4. In a device of the character described, two units, one an applicator having an elongate tubular part with a forwardly projecting needle portion and a rearwardly projecting shank portion each with a pointed terminal end, and the other a fluid carrier with a closed collapsible fluid carrying cell with the shank partially entered through a wall thereof, the applicator being shiftable relative to the carrier to enter the shank into the cell, and a core engaged in said part and removable therefrom to free said part for passage of fluid from the cell, the carrier having a head shiftable relative to the cell and engaged with said part to facilitate shifting of the shank to enter the cell, and a collapsible neck connecting the cell and said head.

5. In a device of the character described, a core, and two units, one unit being a substantially rigid applicator having an elongate tubular part with a forwardly projecting needle portion and a rearwardly projecting shank portion each with a pointed terminal end, and the other unit being a single continuous body of material with a portion defining a fluid carrier with a closed collapsible fluid carrying cell with the shank partially entered through a wall thereof, the applicator being shiftable relative to the carrier to enter the shank into the cell, another portion of

the body of material a cap engaged over the needle portion and removable therefrom, upon being separated from the first mentioned portion of said body of material, the core being slidably engaged in said part and connected with the cap for removal from said part when the cap is removed from the needle portion.

6. In a device of the character described, a core, and two units, one of the units being an applicator having an elongate rigid tubular part with a forwardly projecting needle portion and a rearwardly projecting shank portion each with a pointed terminal end, and the other of said units being a single continuous body of flexible material establishing a plurality of integrally joined portions one defining a fluid carrier with a closed collapsible fluid carrying cell with the shank partially entered through a wall thereof, the applicator being shiftable relative to the carrier to enter the shank into the cell, another portion of said other unit being a cap projecting from the fluid carrier and engaged over the needle portion, the core being carried by and projecting from the cap and occupying and slidable in the opening in said part, the said body of material having a part forming a break joint joining the cap and fluid carrier.

7. In a device of the character described, two units, one an applicator having an elongate tubular part with a forwardly projecting needle portion and a rearwardly projecting shank portion each with a pointed terminal end, and the other a fluid carrier with a closed collapsible fluid carrying cell with the shank partially entered through a wall thereof, the applicator being shiftable relative to the carrier to enter the shank into the cell, the carrier having a head shiftable relative to the cell and engaged with said part to facilitate shifting of the shank to enter the cell, and a spacer detachable from the carrier and normally holding the head against movement toward the cell.

8. In a device of the character described, two units, one an applicator having an elongate tubular part with a forwardly projecting needle portion and a rearwardly projecting shank portion each with a pointed terminal end, and the other a fluid carrier with a closed collapsible fluid carrying cell with the shank partially entered through a wall thereof, the applicator being shiftable relative to the carrier to enter the shank into the cell, the carrier having a head shiftable relative to the cell and engaged with said part to facilitate shifting of the shank to enter the cell, and a detachable sleeve engaged around the carrier and with the cell and head to hold the head away from the cell.

9. In a device of the character described, two units, one an applicator having an elongate tubular part with a forwardly projecting needle portion and a rearwardly projecting shank portion each with a pointed terminal end, and the other a fluid carrier with a closed collapsible fluid carrying cell with the shank partially entered through a wall thereof, the applicator being shiftable relative to the carrier to enter the shank into the cell, the carrier having a head shiftable relative to the cell and engaged with said part to facilitate shifting of the shank to enter the cell, and a collapsible neck engaged with said part and connecting the cell and head.

10. In a device of the character described, two units, one an applicator having an elongate tubular part with a forwardly projecting needle portion and a rearwardly projecting shank portion

each with a pointed terminal end, and the other a fluid carrier with a closed collapsible fluid carrying cell with the shank partially entered through a wall thereof, the applicator being shiftable relative to the carrier to enter the shank into the cell, the carrier having a head shiftable relative to the cell and engaged with said part to facilitate shifting of the shank to enter the cell, and a deformable neck extending between the head and cell and normally holding the head away from the cell.

11. In a device of the character described, two units, one an applicator having an elongate tubular part with a forwardly projecting needle portion and a rearwardly projecting shank portion each with a pointed terminal end, and the other a fluid carrier with a closed collapsible fluid carrying cell with the shank partially entered through a wall thereof, the applicator being shiftable relative to the carrier to enter the shank into the cell, the carrier having a head shiftable relative to the cell and engaged with said part to facilitate shifting of the shank to enter the cell, and a removable spacer engaged around the carrier holding the head against movement toward the cell.

12. In a device of the character described, two units, one an applicator having an elongate tubular part with a forwardly projecting needle portion and a rearwardly projecting shank portion each with a pointed terminal end, and the other a fluid carrier with a closed collapsible fluid carrying cell with the shank partially entered through a wall thereof, the applicator being shiftable relative to the carrier to enter the shank into the cell, a head on said part and spaced from the cell, a collapsible neck connecting the head and cell and a cap releasably connected to the head and engaged over the needle portion, the cell, head, neck and cap being an integral body of material.

13. In a device of the character described, two units, one unit being an applicator having an elongate rigid tubular part with a forwardly projecting needle portion and a rearwardly projecting shank portion each with a pointed terminal end, and the other unit being a fluid carrier with a closed collapsible fluid carrying cell with the shank partially entered through a wall thereof, the applicator being shiftable bodily relative to the carrier to enter the shank into the cell to be in direct communication therewith, a head rigid on said tubular part and spaced from the said wall of the cell, a collapsible neck connecting the head and cell and a cap releasably connected to the head and engaged over the needle portion, the cell, head, neck and cap being a continuous integral body of material, and a core occupying the opening in said tubular part and connected to the cap for withdrawal from said tubular part when the cap is removed from the needle portion.

14. In a device of the character described, two units, one an applicator having an elongate tubular part with a forwardly projecting needle portion and a rearwardly projecting shank portion each with a pointed terminal end, and the other a fluid carrier with a closed collapsible fluid carrying cell with the shank partially entered through a wall thereof, the applicator being shiftable relative to the carrier to enter the shank into the cell, a head on said part and spaced from the cell, a collapsible neck connecting the head and cell and a cap releasably connected to the head and engaged over the needle portion, the cell,

head, neck and cap being an integral body of material, and a releasable spacer engaged with the carrier holding the head away from the cell.

15. In a device of the character described, two units, one an applicator having an elongate rigid tubular part with a forwardly projecting needle portion and a rearwardly projecting shank portion each with a pointed terminal end, and the other a fluid carrier with a closed collapsible fluid carrying cell having the shank partially entered through a wall thereof, the applicator being shiftable bodily relative to said wall to enter the shank into the cell, a head in fixed position on said tubular part and spaced from said wall of the cell, a collapsible neck connecting the head and cell and a cap releasably connected to the head and engaged over the needle portion, the cell, head, neck and cap being an integral body of material, a substantially rigid spacer releasably engaged around the carrier holding the head away from the cell, and a core occupying the opening in said part and fixed to the cap for withdrawal from said part when the cap is removed from the needle portion.

16. In a device of the character described, two units, one an applicator having an elongate tubular part with a forwardly projecting needle portion and a rearwardly projecting shank portion each with a pointed terminal end, and the other a fluid carrier with a closed collapsible fluid carrying cell with the shank partially entered through a wall thereof, the applicator being shiftable relative to the carrier to enter the shank into the cell, the carrier having a head shiftable relative to the cell and engaged with said part to facilitate shifting of the shank to enter the

cell, and a plurality of concentric collapsible necks connecting the cell and said head.

17. In a device of the character described, two units, one an applicator having an elongate rigid tubular part with a forwardly projecting needle portion and a rearwardly projecting shank portion each with a pointed terminal end, and the other a body of flexible material defining a fluid carrier with a closed collapsible fluid carrying cell with the shank partially entered through a wall thereof, the applicator being shiftable bodily relative to said wall to enter the shank into the cell, the cell having a material carrying container therein, the container being formed of friable material and being adapted to be fractured for discharge of the material in the container upon a user flexing the cell and thereby applying pressure to the container.

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