

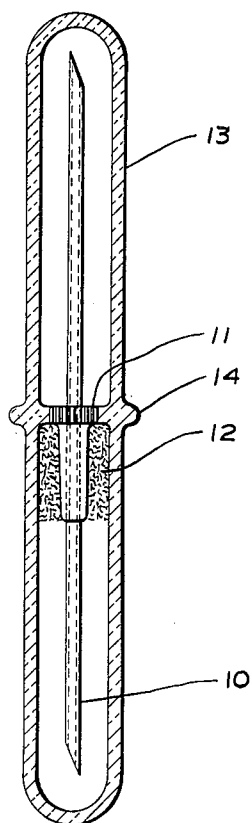
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J. W. LONG

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HYPODERMIC NEEDLE PACKAGE

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Inventor

JAMES W. LONG

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John P. Wetherill, III
Agent

UNITED STATES PATENT OFFICE

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HYPODERMIC NEEDLE PACKAGE

James W. Long, Chevy Chase, Md.

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3 Claims. (Cl. 206—63.2)

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This invention relates to a hypodermic needle container and more particularly to a needle container for conveniently sealing a hypodermic needle and maintaining the same in a sterile condition after sterilization thereof.

An object of the invention is the preparation of a needle container completely sealed in such a manner that it is impossible to contaminate the same after sterilization without breaking the container.

A further object of the invention is the preparation of a needle container such that the needle may be removed from the package without contacting any part thereof.

A still further object of the invention is to provide a device containing a needle which may be used in blood sampling work.

Still another object is providing a needle that may be used in the taking of blood directly from the vein without the usual two-step syringe method.

It is also an object of the invention to provide a needle container that may be conveniently carried and that will give absolute assurance of being maintained in a sterile condition.

These objects and other advantages are contained as hereinafter set forth, reference being had to the accompanying drawing in which:

The figure is an elevation of a needle container taken in section.

In the above drawing 10 is a double ended steel, chromium plated, stainless steel, or platinum needle. 11 is a plastic, glass or metal thickened portion. 12 is a fibre plug. 13 is a glass tube, 14 is a thickened portion of this tube firmly holding part 11 of the needle 10.

The completed assembly as shown in the drawing is sterilized at a temperature of 165° C. for a period of two hours or longer. It is then ready for use as follows:

For the withdrawing of blood in blood transfusion work the needle package is held firmly in both hands, the upper half is held by the fingers of the left hand, the fingers of the right hand grasping the lower half. Gentle pressure is made at right angles at the point of seal. The tube breaks in a clean fracture through the thickened joint. The upper portion of the tube is removed and discarded, care being taken not to touch the needle. The needle is retained in the lower half of the glass tube. Fibre plug 12 being of cotton or other fibrous material which will stand the sterilization temperature and serves the double purpose of acting as a cushion causing a snug, stationary fit and a mechanical barrier to contaminating air and dirt. The vein in the

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patient's arm is appropriately prepared for vein puncture. The lower half of the glass tube held in the right hand and the needle inserted into the vein. Thus, it is not necessary to touch the needle and this source of contamination is eliminated. When the needle has been appropriately inserted the operator has visual indication that the vein has been entered by the appearance of a drop of blood emerging from the lower end of the needle, into the bottom of the glass tube. When this occurs the operator grasps the center knurled portion 11 of the needle 10 and the cotton plug between the thumb and the forefinger of the right hand. With the left hand he removes the bottom half of the glass tube, discards it and immediately shoves a rubber cap vacuum tube or bottle over the lower end of the needle. The vacuum within the tube or bottle sucks the blood from the vein through the needle. When the desired amount of blood is withdrawn the tube or bottle is removed from the needle, the needle is then withdrawn and the vein appropriately treated. This needle may also be used for hypodermic work when employed with an appropriate syringe utilizing a capsule containing a medication and sealed with a rubber diaphragm. This ampule is the usual type supplied for use with penicillin or other materials where it is not desirable to have the dose or drug exposed to the air prior to injection.

In the above description a needle of stainless steel is described but it may be made of any appropriate material such as platinum, normal steel chrome plated etc. This needle may be of the conventional type with the opening at the end of the needle and at an acute angle to the axis thereof, or it may be of a newer type with the end sharpened and sealed with the opening in the side of the barrel above the end. The tube 13 is described as consisting of glass but any substance, such as thin plastic, which will fracture when bent to expose the appropriate parts comes within the scope of this invention. The fibrous substance 12 may be cotton, ramie fiber, glass wool or other fibrous material which would stand sterilization at the temperature given.

The advantages of this type of package for a hypodermic needle are positive assurance that the unbroken tube contains a sterile needle; and that this needle may be removed from the container without being contacted with any contaminating parts thereof. A glass seal gives positive assurance of sterilization and the maintenance of this sterilization while corks or stoppers may become hardened due to temperature of

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sterilization or ageing due to standing. This will allow contamination to leak by these stoppers and one is never sure whether the needle has become contaminated or not. The present device cannot become disassembled when being carried in a physician's bag or pocket as can devices secured by rubber stoppers.

A further advantage of this type of container for blood sampling work as described above is that the operator has a positive visual indication that the vein has been entered and the time is correct for the application of the vacuum.

This arrangement is especially designed to furnish the practicing physician with a simple, practical, and readily available tool for taking bacteriological blood samples in the home or office and will find wide application in hospital use for this purpose.

What is claimed is:

1. The combination of a double-ended needle having a collar thereon intermediate its ends and a glass tube sealed at both ends and enclosing said needle, said tube having an inwardly thickened portion frictionally engaging said collar to maintain said needle in spaced relation with the walls of said tube.

2. The combination of a double-ended needle

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having a collar thereon intermediate its ends and a tube sealed at both ends and enclosing said needle, said tube having an inwardly thickened portion frictionally engaging said collar to maintain said needle in spaced relation with the walls of said tube.

3. The combination of a double-ended needle having a collar thereon intermediate its ends and a friable tube sealed at both ends and enclosing said needle, said tube having an inwardly thickened portion frictionally engaging said collar to maintain said needle in spaced relation with the walls of said tube.

JAMES W. LONG.

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