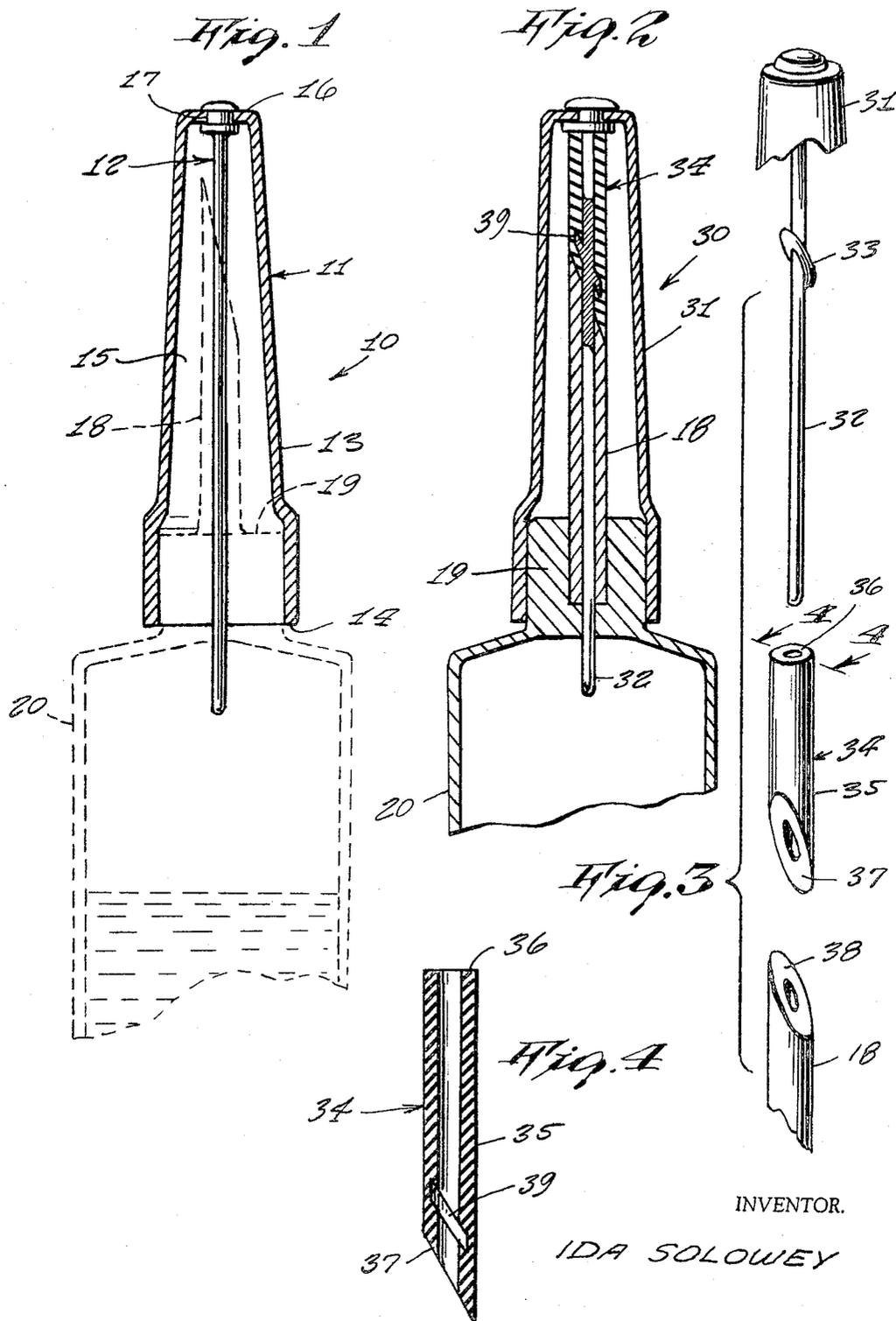


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COMBINATION HYPODERMIC NEEDLE BLOCKER
AND NEEDLE SHEATH
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**COMBINATION HYPODERMIC NEEDLE BLOCKER
AND NEEDLE SHEATH**

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ABSTRACT OF THE DISCLOSURE

A blocking device and sheath for a hypodermic needle which is inserted into the needle opening, sealing the opening from leaking and enclosing the needle from contact with the external environment to maintain the needle in a sterile condition.

This invention relates generally to hypodermic needles. More specifically it relates to means for blocking and sheathing hypodermic needles.

A principal object of the present invention is to provide a combination hypodermic needle blocker and needle sheath for sealing the opening within a hypodermic needle against leaking and at the same time enclosing the needle from outside contact with foreign objects thereby rendering it sterile.

Another object is to provide a hypodermic needle sheath that is sealed to the needle stem and which, when once it is torn off, cannot be replaced thereupon, thereby rendering it tamperproof.

Yet another object is to provide a hypodermic needle blocker and sheath which will make a hypodermic needle unit to be disposable after a one time use.

Yet another object is to provide a hypodermic needle blocker which presents a diagonal faced wall into abutment with the diagonal faced end of the needle so to block leakage through the needle.

Yet another object is to provide a hypodermic needle blocker wherein the diagonal faced wall is resilient material which is backed by a correspondingly diagonal stiff disc to urge hard pressure of the relatively soft resilient soft resilient material against the diagonal faced end of the needle.

Yet another object is to provide a hypodermic needle blocker which extends through the needle opening and wherein the blocker is of equal or oversized cross section to seal the opening.

Other objects are to provide a hypodermic needle blocker and sheath which is simple in design, inexpensive to manufacture, rugged in construction, easy to use and efficient in operation.

These and other objects will be readily evident upon a study of the following specification and the accompanying drawing wherein:

FIGURE 1 is a side cross sectional view of the invention shown mounted on a hypodermic needle stem,

FIGURE 2 is a similar view of a modified form of the invention,

FIGURE 3 is an exploded perspective view of parts employed in the structure shown in FIGURE 2, and

FIGURE 4 is a cross sectional view taken on line 4—4 of FIGURE 3.

Referring now to the drawing in detail, the reference numeral 10 represents a combination hypodermic needle blocker and needle sheath according to the present invention wherein there is a sheath member 11 and a blocker member 12.

The sheath member 11 comprises a hollow part made preferably from rigid plastic material or the equivalent,

and includes a generally tapered cylindrical side wall 13 bounded at one end by a circular edge 14 that forms a mouth to a central cavity 15, and which is bounded at its opposite end by a generally flat circular wall 16 having a central opening 17 therethrough, within which the blocker member is supported.

The blocker member 12 comprises an elongated part made of any rigid material that is secured at its one end within the opening 17, and the opposite end is inserted within a tubular opening in a hypodermic needle 18 at one end of a needle stem 19 formed on needle cylinder 20.

The sheath member 11 is frictionally or otherwise secured upon the stem 19 in a manner so that once it is pulled off therefrom it cannot be again replaced, thereby making the assembled unit disposable after single use.

In operative use, the sheath is pulled off the stem 19 and at same time the blocker is pulled out of the needle 18 to clear the opening. It will thus be evident that the sheath protected the needle against contact with foreign objects prior to use and the blocker maintained the hypodermic needle opening sealed, due to the blocker having a same cross sectional diameter or the needle opening.

In the modified construction 30 shown in FIGURES 2 to 4, the sheath member 31 is of like construction as sheath member 11 and supports a blocker member 32 of like construction as blocker member 12 but wherein the blocker member 32 includes an integral disc 33 which is on an axis diagonal to the axis of the blocker member.

The construction 30 further includes a sleeve 34 of flexible rubber or plastic and which is mounted upon the blocker 32, as shown in FIGURE 2. The sleeve 34 is of cylindrical configuration having a cylindrical side wall 35 bounded at one end by a transverse wall 36, and at its opposite end by a diagonally inclined flat wall 37 that abuts with the correspondingly inclined end wall 38 of the hypodermic needle 18. The sleeve 34 further includes an internal recess 39 that is diagonally disposed so to accommodate the disc 33 therein.

In operative use, the sleeve wall 36 is in abutment with the upper end of the blocker or the sheath wall 16 while the diagonal end is in abutment with the needle end wall 38, thus securely sealing the end of the needle opening. The disc provides hard pressure to the relatively resilient sleeve.

While various changes may be made in the detail construction it is understood that such changes will be within the spirit and scope of the present invention as is defined by the appended claim.

Having thus set forth and disclosed the nature of this invention, what is claimed is:

1. In a combination hypodermic needle blocker and needle sheath, the combination of a needle blocker and a needle sheath, supporting said blocker, said sheath being secured to a stem on a hypodermic needle cylinder to enclose the needle, and said blocker being receivable within an opening in the needle to seal said opening, wherein said sheath comprises a tapered cylindrical side wall bounded by a circular edge at one end and an end wall at the other end, said end wall having an opening, said blocker being secured in said opening in the end wall, wherein the blocker comprises an elongated cylindrical shaft with a cross-sectional diameter equal to the needle opening diameter, including a flexible sleeve mounted on said blocker, said sleeve having a diagonally inclined one end for sealing abutment with the inclined end wall of the needle, said blocker having an integral diagonally disposed disc thereon and said sleeve having a diagonally disposed disc thereon and said sleeve having a diagonally disposed recess therein for receiving said disc.

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