

May 8, 1951

E. R. CARLSON
INSEMINATION TUBE SYRINGE

2,552,403

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Fig. 1.

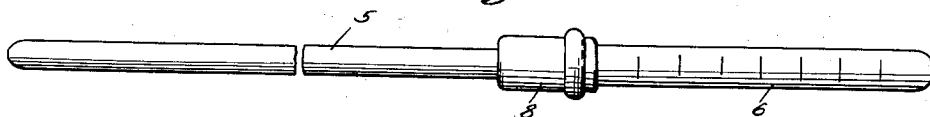


Fig. 2.

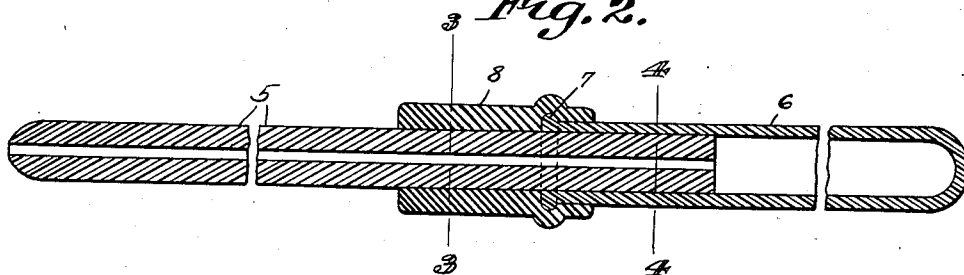


Fig. 3.

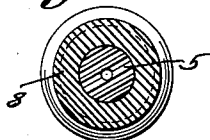


Fig. 4.

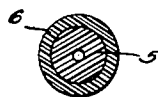
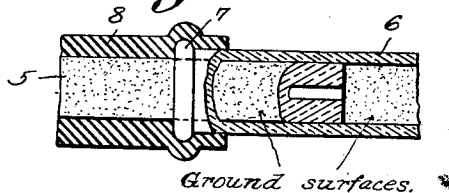


Fig. 5.



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INSEMINATION TUBE SYRINGE

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1 Claim. (Cl. 128—234)

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This invention relates to a combined insemination tube and syringe, the primary object of the invention being to provide a device of this character including a two-piece construction, eliminating the several parts used at present in insemination devices, thereby eliminating the hazards of contamination and at the same time providing a structure simplifying sterilization.

Another object of the invention is to provide an inexpensive syringe for each insemination tube, thereby speeding up the insemination procedure.

Still another object of the invention is to provide means for use in connection with the usual insemination tube, for converting the tube into a syringe whereby the fluids may be drawn into the tube, and by a reverse movement of the attachment, the fluids may be expelled from the tube.

With the foregoing and other objects in view which will appear as the description proceeds, the invention consists of certain novel details of construction and combinations of parts, hereinafter more fully described and pointed out in the claim, it being understood that changes may be made in the construction and arrangement of parts without departing from the spirit of the invention as claimed.

Referring to the drawing:

Figure 1 is a side elevational view showing an insemination tube with the attachment as placed thereon.

Fig. 2 is a longitudinal sectional view there-through.

Fig. 3 is a sectional view taken on line 3—3 of Fig. 2.

Fig. 4 is a sectional view taken on line 4—4 of Fig. 2.

Fig. 5 is a fragmental elevational view illustrating a modified form of the device as constructed of glass.

Referring to the drawing in detail, the reference character 5 indicates the usual insemination tube, which is constructed of plastic or glass material, the outer surface thereof being ground throughout a portion of its length, when glass is used in the construction of the tube. The attachment forming the important feature of the invention, and by means of which the usual insemination tube is converted into a syringe, is indicated by the reference character 6, the attachment being of barrel-like formation with its outer end closed. This member 6 is also constructed of glass or plastic material as shown by the drawing. The inner surface of this attachment 6 is also ground to cooperate with the ground surface of the insemination tube 5 insuring an air-tight fit between the attachment

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6 and tube 5, when glass is used in the construction of the member 6.

As clearly shown by the drawing, the member 6 is formed with the annular bead 7 at its open end, the bead providing an enlargement over which one end of the rubber adapter 8 is positioned, which moves with the attachment 6 in contact with the outer surface of the insemination tube, providing an air-tight connection to prevent contamination of the fluid by air entering between the members 5 and 6.

When using the device, the member 6 may be drawn outwardly over the tube 5 with the result that a vacuum is produced within the insemination tube, causing fluid to be drawn into the tube.

When it is desired to expel the drawn fluids, it is only necessary to move the barrel-like attachment 6 in the opposite direction, forcing the fluids from the insemination tube.

By using this construction, it is obvious that the insemination procedure may be carried out with facility, the chances of contamination being reduced to a minimum.

The barrel-like attachment 6 may be provided with calibrations so that the quantity of fluid handled may be gauged.

Having thus described the invention, what is claimed is:

A combined insemination tube and syringe, comprising a tubular section, a barrel-like member having an open end fitted over the tubular section movable longitudinally of the tubular section in contact therewith, an annular bead formed at the open end of the barrel-like member, a substantially long rubber adapter tube, one end of the adapter tube being stretched over the annular bead securing the rubber adapter tube to the barrel-like member with the major portion of the adapter tube embracing the tubular section as the barrel-like member moves thereover, providing an airtight fit between the tube section and barrel-like member.

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The following references are of record in the file of this patent:

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