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G. ZORRAQUIN

SAFETY PRESSURE INDICATING NEEDLE

Filed July 9, 1923

Fig. 1

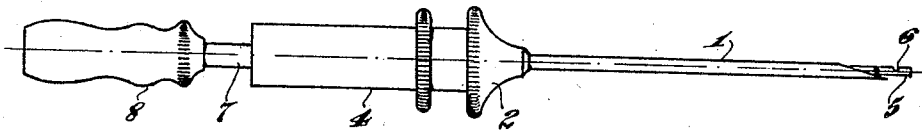


Fig. 2

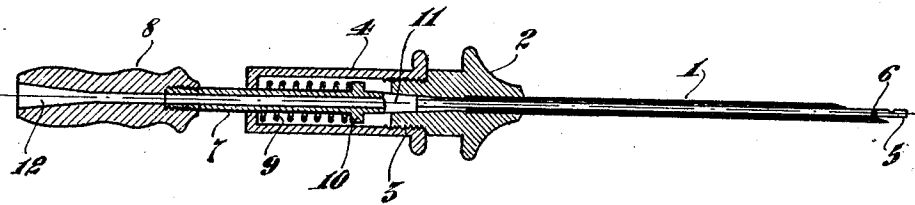


Fig. 3

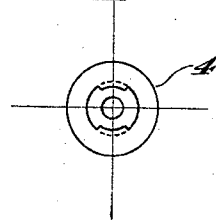
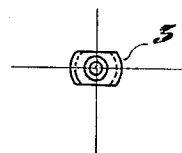


Fig. 4



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UNITED STATES PATENT OFFICE.

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SAFETY-PRESSURE-INDICATING NEEDLE.

Application filed July 9, 1923. Serial No. 650,531.

To all whom it may concern:

Be it known that I, GUILLERMO ZORRAQUIN, citizen of the Argentine Republic, and resident of No. 1167 Libertad Street, Buenos Aires, Argentine Republic, have invented certain new and useful Improvements in a Safety-Pressure-Indicating Needle, of which the following is a specification.

This invention refers to a surgical needle for the safe exploration of cavities, and has for its object an instrument provided with a blunt-pointed element which displaces without penetrating the viscera contained in such cavities, and at the same time enables the operator to detect easily such displacement.

The instrument consists substantially of a perforating sheath in which there slides a blunt-pointed tube actuated by a spring contained in a tube screwed to the perforating sheath.

In the accompanying drawings:—

Fig. 1 is an outer view;

Fig. 2, a longitudinal section with the interior non-perforating tube;

Fig. 3, an end view of the tubular handle showing its quarter-turn screw connection; and

Fig. 4 is an end view of the closing screw of the sheath.

In all the figures like reference numbers indicate like or similar parts.

With reference to said figures, a perforating sheath 1 with an oblique point similar to that of a common hypodermic needle, forms an integral part of a nut 2, the thread 3 of which permits screwing the same to the end of the tubular handle 4. The thread of the nut as well as that of the handle occupy a part only of the circumference of those parts, so that they may be put together and secured firmly in position by a quarter turn only.

Through the perforating sheath 1 there passes freely the tube 5 having a blunt, non-perforating point, and provided with several lateral openings 6. This tube is prolonged rearwardly by another tube of greater diameter, 7, which projects from the rear end of the handle and has screwed to it the cap 8. A spring 9 seated in the handle 4 pushes forward the tube 7, by means of a collar 10

forming an integral part of the said tube. The forward end of the said tube 7 at the base of the small tube has the form of a cone 11 which fits into the corresponding conical cavity of the nut 2.

The rear orifice 12 of the cap 8 is also conical and appropriate for receiving the tubular nozzle of a common syringe for injections.

The operation of the instrument is as follows:—

The needle being assembled, on pressing the point of the instrument against the wall of the organ to be explored, the inner tube is retracted within the penetrating sheath and remains under the tension of the spring so as to be extruded when the resistance against the point of the needle ceases after it has passed through the wall or membrane; the extension being perfectly evident to the operator by the displacement of the cap.

It is evident that various modifications may be introduced in the construction of the instrument without departing thereby from the spirit of the invention as shown in the appended claims.

Having described my invention, what I claim is:—

1. A surgical needle for the safe exploration of cavities such as the pleura, peritoneum, pericardium, etc., consisting substantially of a perforating sheath, a tube slidable within said sheath having a blunt, non-perforating point and provided with lateral openings, a handle, and a spring arranged in the handle, said tube being pushed forwardly by said spring.

2. A surgical needle of the class described a perforating sheath, a tube slidable within said sheath having a blunt, non-perforating point and provided with lateral openings, a handle, a nut carried by said sheath, a quickly detachable threaded connection between the nut and handle, an extension carried by said tube, a collar on said extension, and a spring arranged on said handle and co-acting with the collar normally tending to move the tube forwardly.

Signed at Buenos Aires, Argentine Republic, this sixth day of June A. D. 1923.

GUILLERMO ZORRAQUIN.