No. 761,235. PATENTED MAY 31, 1904.

I. F. KEPLER.

CATHETER.

APPLICATION FILED AUG. 7, 1902.

NO MODEL.

Fig. 1.

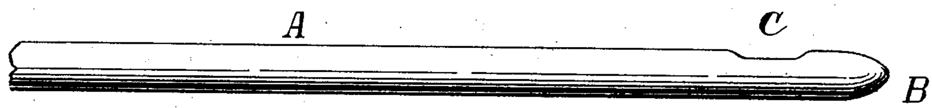
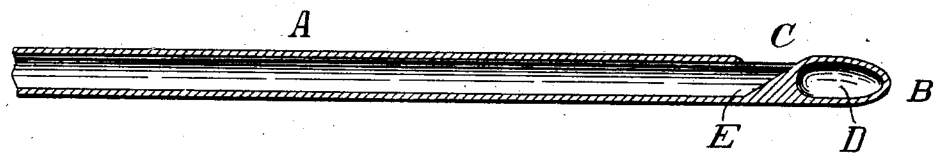


Fig. 2.



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No. 761,235. Patented May 31, 1904.

UNITED STATES PATENT OFFICE.

IRWIN FLOYD KEPLER, OF AKRON, OHIO, ASSIGNOR TO THE B. F. GOODRICH COMPANY, OF AKRON, OHIO, A CORPORATION OF OHIO.

CATHETER.

SPECIFICATION forming part of Letters Patent No. 761,235, dated May 31, 1904.

Application filed August 7, 1902. Serial No. 118,789. (No model.)

To all whom it may concern:

Be it known that I, IRWIN FLOYD KEPLER, a citizen of the United States, and a resident of the city of Akron, county of Summit, and State of Ohio, have invented certain new and useful Improvements in Catheters, of which the following is a specification.

My improvement particularly relates to catheters of rubber. In these catheters the end below the eye is made either hollow or solid. The tip of the hollow-end catheter is not only liable to retain infectious matter, but also lacks that certain degree of rigidity necessary to secure proper penetration. The tip of the solid-end catheter, while avoiding the danger of carrying infection, has the decided disadvantage of being as much too hard as the hollow end is too soft, and consequently is a source of irritation to the patient.

To make a catheter combining the advantages of both structures and free from their disadvantages is the object of my invention. I effect this by confining air in a cell formed in the otherwise solid end of the catheter, so as to form a pneumatic cushion.

In the accompanying drawings, illustrating my improvement, Figure 1 is a view of a flexible catheter, shown in section in Fig. 2.

Similar reference-letters indicate corresponding parts in each view.

A is the tube of the catheter, and B is its rounded distal end. C is the eye. D is the inclosed air-cell between the extremity B and E, which is a dam or partition sloping from the distal extremity of the eye to the back inner wall of the tube and integral therewith, confining air in the cell D between the distal end B and the said dam E. The extremity of the instrument so formed is exceedingly soft, yet has the rigidity required for penetration, and the further advantage of constantly and positively tending to retain its shape combining with a catheter the positive action of a dilator. This construction affords the desirable qualities of suppleness, flexibility, elasticity, resiliency, and compressibility in higher degree than is attainable in any of the prior forms of instrument.

It is obvious that my improvement is not limited to catheters only, but is equally applicable to other forms of tubular surgical exploring instruments of rubber in which a firm yet soft and resilient part is desirable.

Having thus described my invention, what I desire to claim is—

An elastic catheter having an inclosed air-cell in its distal end.

IRWIN FLOYD KEPLER.

Witnesses:
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