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E. KALLMEYER

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CATHETER

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Fig. 2.

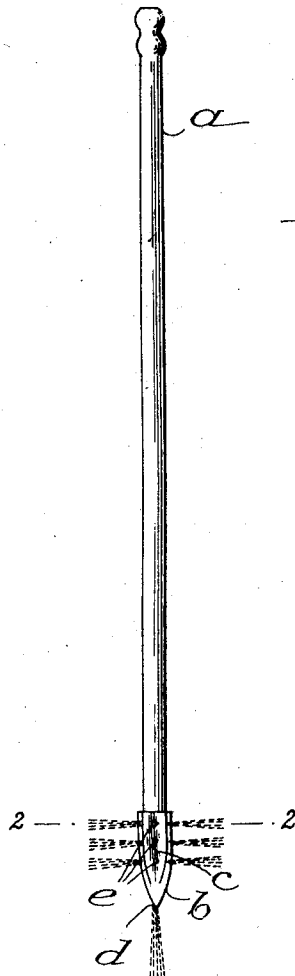


Fig. 1.

Inventor:
Ernst Kallmeier

By C. P. Goepel
Attorney

UNITED STATES PATENT OFFICE.

ERNST KALLMEYER, OF BURGBERNHEIM, GERMANY, ASSIGNOR TO HENRY W. REESE,
OF NEW YORK, N. Y.

CATHETER.

Application filed April 24, 1922, Serial No. 556,352, and in Germany April 28, 1921.

My invention relates to a catheter for irrigating narrow passages of the body, especially of the urethra, and has for its object the production of a device whereby the irrigation of the whole inner surface of the urethra is assured.

In order to obtain this result I propose to employ a conical head connected with a fluid feed pipe of a diameter substantially smaller than the base of the conical head and to provide for two types of channels in the head, the one type being presented by channels connecting the conical surface of the head with the fluid feed pipe and the other type by channels connecting the conical surface with the base of the conical head for the return of the fluid.

Of the drawings Fig. 1 represents a side view of the catheter, Fig. 2 represents a transverse section of the same, taken on line 2—2 of Fig. 1.

In the drawings *a* is the feed pipe, through which the irrigating fluid is injected. To the upper end of the feed pipe a rubber tubing may be fastened (not shown in the drawings); *b* is the head of the catheter, which during insertion causes the urethra to expand.

Along the head and in planes of the axis of the head are grooves *c*. A part of the irrigating fluid escapes at *d* and another part at *f* through channels *e* as clearly shown in Fig. 2.

In this manner the portion of the fluid escaping from *d* irrigates the parts in front of the conical head, whereas the return of this portion irrigates, in connection with the

portion of the fluid escaping at *e*, the inner surface of the urethra adjacent to the head and along the feed pipe. Therefore all parts of the inner surface of the urethra are surely irrigated. By the provision of the grooves *c* a pressure high enough to open the connection to the bladder is avoided. On the other hand, by the provision of the channels *e* the folds on the inner surface of the urethra are mechanically opened, whereby the bacteria lodged therein may be forced out completely.

Having now particularly described the nature of my said invention and in what manner the same is to be used, I declare that what I claim is:—

An irrigating catheter comprising a tubular body terminating at one of its ends in a conically formed distending head of greater diameter at its base than said body and having an axial fluid receiving passage opening through the apex of the head and communicating with the bore of said tube, the surface of said head being provided with alternate ribs and grooves extending longitudinally thereof from the base of said head and merging into the peripheral surface thereof at a point spaced from the apex of the head, and said head being additionally provided with a series of transverse apertures opening at their outer ends into each of said grooves and communicating with the axial fluid passage in said head.

In testimony that I claim the foregoing as my invention, I have signed my name.

ERNST KALLMEYER.