

(No Model.)

O. DE PEZZER.
SURGICAL CATHETER.

No. 504,424.

Patented Sept. 5, 1893.

Fig. 1.

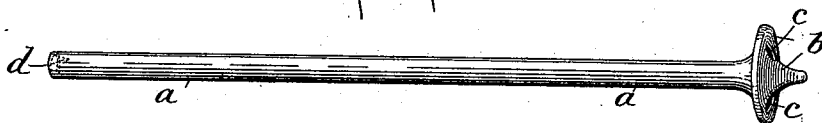


Fig. 2.

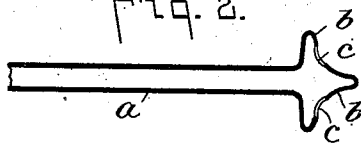


Fig. 3.

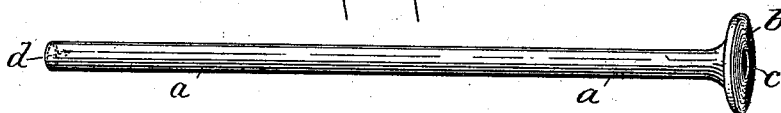


Fig. 4.

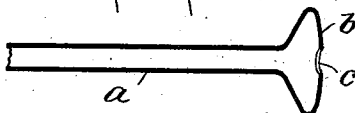
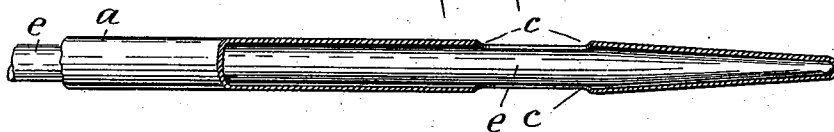


Fig. 5.



WITNESSES:

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OSCAR DE PEZZER, OF PARIS, FRANCE.

SURGICAL CATHETER.

SPECIFICATION forming part of Letters Patent No. 504,424, dated September 5, 1893.

Application filed December 8, 1891. Serial No. 414,389. (No model.) Patented in France April 2, 1891, No. 212,525; in Belgium July 28, 1891, No. 95,805, and in England July 28, 1891, No. 12,833.

To all whom it may concern:

Be it known that I, OSCAR DE PEZZER, of the city of Paris, France, have invented Improvements in Catheters or Flexible Drain-Tubes for Surgical Use, (for which I have obtained Letters Patent in France, for fifteen years, dated April 2, 1891, No. 212,525; in Belgium, for fifteen years, dated July 28, 1891, No. 95,805, and in England, for fourteen years, dated July 28, 1891, No. 12,833,) of which the following is a full, clear, and exact description.

My invention relates to an improvement in surgical instruments of the kind known variously as catheters or drain tubes which are intended to be introduced into the natural cavities of the body such as the bladder, the urethra, the ureters, the kidneys, lungs, &c., or into accidental or surgically-made cavities for the purpose of evacuating liquid secretions which are not expelled in the normal manner, and the invention has for its object to provide an instrument of the kind which while possessing a high degree of flexibility will maintain itself permanently in position in the cavity into which it may be introduced without any extraneous means of attachment or fixation, whereas it has heretofore been necessary in certain cases requiring a catheter to be permanently retained in the bladder for instance, to employ either a rigid instrument or a flexible one secured in position by a means of attachment which will prevent its expulsion by the natural contractions of the organ in question.

To obviate this objection, my invention consists essentially in providing the end of the instrument to be introduced into the cavity with a flexible self-expanding disk shaped bulbous or other shaped enlargement of a much greater diameter than that of the stem, and which is capable of being extended longitudinally and contracted in diameter by means of a mandrel inserted through the instrument, to permit the easy introduction of the latter into the cavity of the body, and which when so introduced will, on the withdrawal of the mandrel, automatically re-expand and by regaining its original form will retain the instrument in position.

Reference is to be had to the accompanying drawings, forming part of this specification, wherein I have represented various examples of the improvement as applied in different forms to instruments of different sizes or for different corporal uses.

Figure 1 is an external view, and Fig. 2 a longitudinal section, of a catheter with a disk shaped bulbous enlargement. Figs. 3 and 4 show similar views of a modified form of flattened enlargement which permits of this part of the instrument applying itself against the walls of the neck of the bladder and of so occupying the minimum of space when this organ is empty and contracted. This flattened form of enlargement may be hollow, as shown, or solid and in that case of less thickness. Fig. 5 is a view, drawn to a larger scale than Fig. 1, showing the form the instrument is made to assume while distended by the mandrel or probe for introduction into a cavity.

The same letters of reference indicate like parts in all the figures.

a is the flexible tubular stem of the instrument terminating in the hollow self-expanding flexible enlargement *b* generally made of the same material as the tube which is preferably pure caoutchouc such as that known commercially in France under the name of "feuille Anglaise" or "mackintosh." This enlargement is pierced with one or more holes *c* communicating with the bore of the stem *a*. The outer end of the stem is also provided with an opening or outlet *d*.

In order to introduce the instrument into the cavity of the body, a probe or mandrel *e* is pushed through the stem until the enlargement is so far elongated longitudinally and contracted in diameter, that it forms temporarily a prolongation of the same or less diameter as the stem *a*, as shown in Fig. 5, and while maintained in this form it may be easily inserted through the urethra for example. When the mandrel *e* is subsequently withdrawn, the enlargement regains its normal bulbous form, as shown in Figs. 1, 2, 3 and 4, and so prevents the expulsion of the instrument by the contractions of the bladder without the use of any extraneous means of fixation while permitting its easy withdrawal by

pulling on the outer end of the instrument. The instrument may be introduced for example after hypogastric or perineal cutting; in the case of a female it may be introduced by
5 the meatus by folding it in a suitable clip.

I claim—

As a new article of manufacture, an elastic flexible catheter, having a tubular stem provided at the end to be inserted into a
10 cavity with a perforated disk shaped enlargement whose faces extend at substantially

right angles to the stem substantially as described.

The foregoing specification of my improvements in catheters or flexible drain-tubes for
15 surgical use signed by me this 16th day of November, 1891.

OSCAR DE PEZZER.

Witnesses:

ROBT. M. HOOPER,
ALBERT MOREAU.