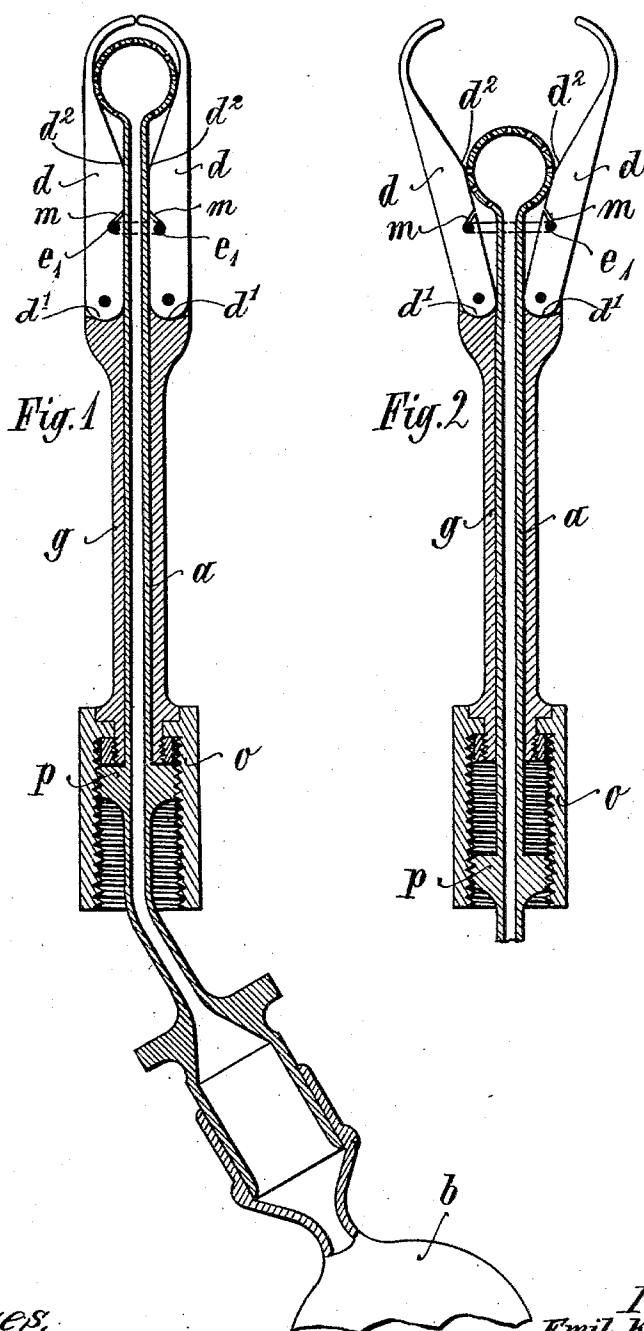


(No Model.)

E. KRÖNING & E. BENSEL.  
GYNECOLOGICAL INSTRUMENT.

No. 597,988.

Patented Jan. 25, 1898.



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# UNITED STATES PATENT OFFICE.

EMIL KRÖNING AND EDMUND BENSEL, OF MAGDEBURG, GERMANY.

## GYNECOLOGICAL INSTRUMENT.

SPECIFICATION forming part of Letters Patent No. 597,988, dated January 25, 1898.

Application filed June 11, 1896. Serial No. 595,207. (No model.)

*To all whom it may concern:*

Be it known that we, EMIL KRÖNING and EDMUND BENSEL, subjects of the King of Prussia, Emperor of Germany, and residents of Magdeburg, Kingdom of Prussia, Germany, have invented certain new and useful Improvements in Gynecological Instruments, of which the following is a specification.

This invention has for its object to provide a new and improved gynecological instrument particularly designed for introducing medicaments into natural channels of the human body which require to be subjected to medical treatment.

To accomplish this object, our invention consists in the features of construction and in the combination or arrangement of parts hereinafter described and claimed, reference being made to the accompanying drawings, in which—

Figure 1 is a longitudinal central sectional view of our improved instrument, showing the pivoted jaws in their closed position; and Fig. 2 is a similar view showing the jaws spread open.

In order to enable those skilled in the art to make and use our invention, we will now describe the same in detail, referring to the drawings, wherein—

The letter *a* indicates a tube connected at one extremity with an atomizing-bulb *b* for introducing medicine in a powdered state. The opposite extremity of the tube is provided with a uniformly-perforated spherical nozzle or rose *c* for the distribution of the medicine used. Around this nozzle or rose a number of radially-separating levers *d* are grouped, each lever engaging by means of a semicylindrical pivot or journal *a'* with a corresponding recess or bearing arranged at the outer end of a sleeve *g*. For the sake of clearness only two of the levers *d* have been illustrated. The said levers are provided with conical shoulders *d'*, which bear against the nozzle or rose *c*, as in Fig. 2, when the sleeve *g* is moved outward.

The sleeve *g* can be moved longitudinally upon the tube *a*. This is preferably effected by means of an internally-screwed socket *o*, which is revolubly mounted upon the sleeve *g* and can be screwed forward and backward upon a corresponding screwed enlargement

*p* of the tube *a*. The socket *o* when rotated carries the sleeve *g* along with it. In the device illustrated an india-rubber or other elastic ring *e'*, having the tendency to always force the separating-levers into the closed position, is arranged in suitable grooves *m*, provided near the inner edges of the levers.

When the sleeve *g* is moved outward or in a direction toward the nozzle or rose *c*, the conical shoulders *d'* act against the nozzle or rose in such manner that the levers are spread outward, as represented in Fig. 2, to secure an enlargement of the organ to be treated and thus obtain the efficient introduction and distribution of the medicaments employed. When the sleeve *g* is moved inward or in a direction away from the nozzle or rose, the elastic ring *e'* forces the levers toward one another to the position represented in Fig. 1, in which position of the parts the instrument is readily introduced.

As hereinbefore indicated, the instrument is principally intended to serve for the introduction of medicaments into the vagina. The apparatus is not, however, restricted to this special use, but may be employed in all instances where natural channels of the human body are required to be subjected to medical treatment. In this latter respect dimensional modifications might be required. Moreover, the invention would not be materially altered if, instead of the atomizing-bulb, an analogous means—for example, a syringe—were connected to the apparatus. In this case the apparatus may also serve for the injection of liquids. The number and shape of the separating-levers may of course be variable, being dependent upon the requirements of the special purpose for which the instrument is to be used.

What we claim is—

1. A gynecological instrument for introducing medicaments into natural channels of the human body, consisting of an inner tube provided at its end with a bulbous nozzle, an exterior sleeve movably arranged on said tube, a series of levers pivotally mounted on the sleeve and having conical shoulders which bear against the bulbous nozzle, means for drawing the levers against the bulbous nozzle, and screw-threaded devices at the inner ends of the tube and sleeve for adjusting

said sleeve longitudinally on the tube to expand the levers over the bulbous nozzle, substantially as described.

2. A gynecological instrument for introducing medicaments into natural channels of the human body, consisting of an inner tube provided at its end with a bulbous nozzle, an exterior sleeve movably arranged on said tube, a series of levers pivotally mounted on the sleeve and having conical shoulders which bear against the bulbous nozzle, a spring for drawing the levers against the bulbous nozzle, and screw-threaded devices at the inner end of the tube and sleeve for adjusting said sleeve longitudinally on the tube to expand the levers over the bulbous nozzle, substantially as described.

3. A gynecological instrument for introducing medicaments into natural channels of

the human body, consisting of an inner tube carrying a nozzle, an exterior sleeve, a series of levers mounted on the sleeve and having conical shoulders which bear against the nozzle, screw-threaded devices at the inner ends of the tube and sleeve for adjusting said sleeve longitudinally, and an elastic ring which forces the separating-levers into their closed position, substantially as described.

In testimony that we claim the foregoing as our invention we have signed our names, in presence of two witnesses, this 4th day of May, 1896.

EMIL KRÖNING.  
EDMUND BENSEL.

Witnesses:

A. SIEBER,  
CHARLES H. DAY.