

E. SPARDEL.  
 IRRIGATOR.  
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1,082,142.

Patented Dec. 23, 1913.

Fig. 1.

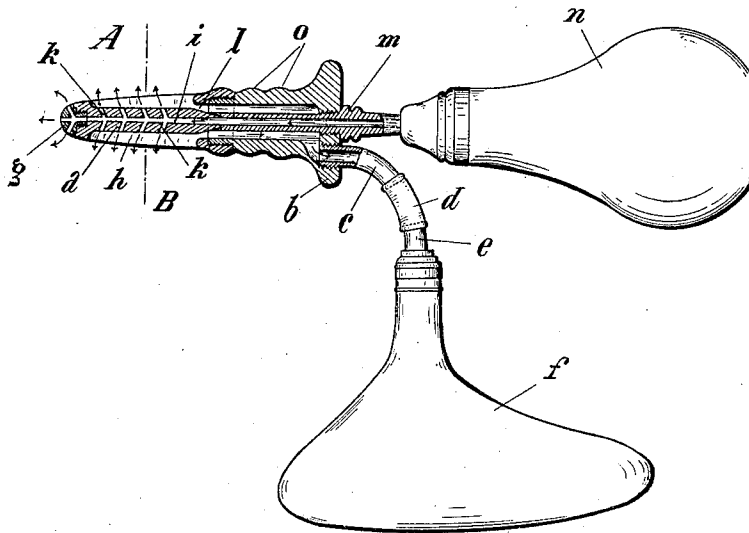
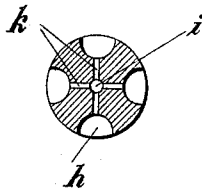


Fig. 2.



Witnesses:

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 Attorney

# UNITED STATES PATENT OFFICE.

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## IRRIGATOR.

1,082,142.

Specification of Letters Patent.

Patented Dec. 23, 1913.

Application filed February 24, 1913. Serial No. 750,460.

To all whom it may concern:

Be it known that I, EMIL SPARDEL, a citizen of the Free State of Hamburg, residing at Hamburg, Germany, have invented certain new and useful Improvements in Irrigators, of which the following is a specification.

The invention relates to an irrigator and its object is to provide an instrument that may be used with the patient in a recumbent position.

In the accompanying drawings the improved irrigator is shown by way of example.

Figure 1 is a side elevation partly in longitudinal section. Fig. 2 is a cross section on line A—B of Fig. 1 on a larger scale.

According to the invention the irrigator is composed of the douche proper *a*, a cap *b*, a ball shaped rose *g* at the front end, the india-rubber ball *n* for the douche and a collector *f* for the liquid which flows back into the instrument after it has been injected. In the cap *b* which surrounds the rear end of the douche *a*, a tubular socket *c* is mounted which is connected by a short india-rubber hose *d* with the tubular socket *e* of a collector *f* for the flushing liquid. This collector *f* is made of soft india-rubber.

The douche *a* has a central boring *i* extending over its entire length. The douche *a* is of circular cross section and slightly conical toward the front end. In the front end of the douche a ball rose *g* of well known construction is arranged. The douche *a* is either made in one piece with the cap *b* or screwed into the same. In the outer wall of the douche *a* four grooves *h* of semi-circular cross section are arranged parallel with the inner boring *i* of the douche. The inner boring *i* is connected with the outer longitudinal grooves *h* by a certain number of radial borings *k*. The longitudinal grooves *h* are connected with the annular space formed between the inner wall of the cap *b* and of the outer wall of the douche *a* by means of passages *l*. The rear end of the douche *a* is connected with the india rubber ball *n* by means of a tubular connecting pin *m* which is screwed into the cap *b* so

that it bears against the rear end of the douche.

The cap *b* has undulations *o* on its outer surface with which correspond undulations at the rear part of the douche, said undulations extending into the rear ends of the longitudinal grooves *h*. The undulations *o* serve for securely maintaining the irrigator in the vagina and for preventing the flushing liquid from flowing back along the outer wall of the cap *b*. The diameters of the rings formed by the undulations *o* gradually increase toward the rear end of the cap *b* so that the instrument is securely maintained in operative position even if the vagina is not very narrow.

It will readily be understood from the foregoing description that certain parts of the construction may be modified without departing from the nature of the invention.

I claim:—

An improved irrigator comprising in combination a douche having a central boring four longitudinal outer grooves of semi-circular cross section and four radial channels connecting said central boring with said longitudinal grooves, a ball shaped rose in the front end of the douche, a cap fixed upon the rear end of said douche so that an annular chamber is arranged between the inner wall of said cap and the outer wall of said douche with which space the longitudinal grooves are connected said cap having a tubular socket in its rear part connected with said annular chamber, a collector for the liquid which flows back after flushing connected with said tubular socket, an india rubber ball fixed in said cap so that it is connected with the rear end of said douche and undulations upon the outer surface of said cap and the rear end of said douche for insuring the maintaining of the instrument in the vagina, subsequently as described and for the purpose set forth.

In witness whereof I have hereunto set my hand in the presence of two witnesses.

EMIL SPARDEL.

Witnesses:

ERNST BRUGER,  
WLADIMIR FRICK.