

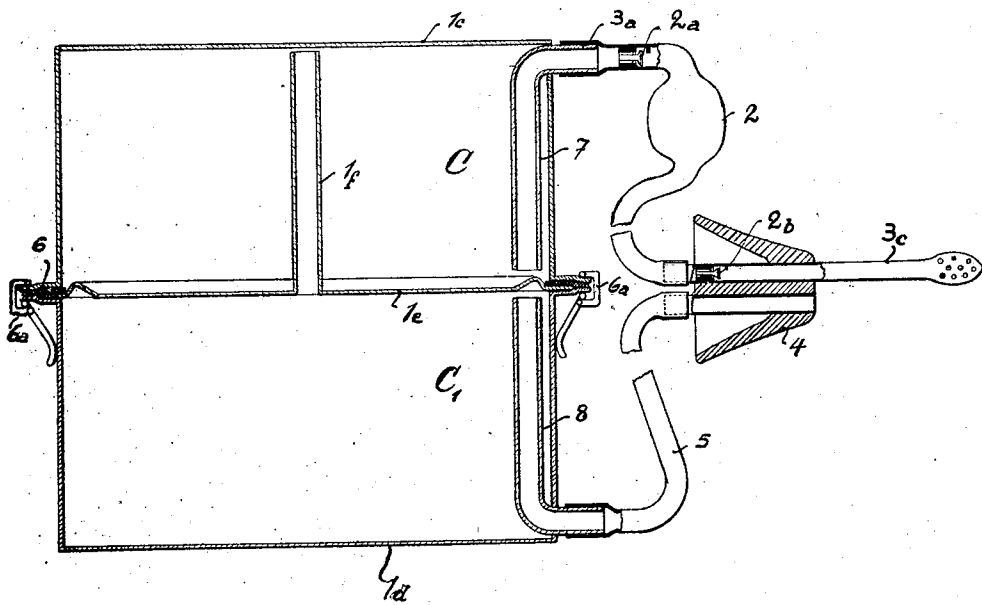
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F. C. BECK

SYRINGE FOR HYGIENIC PURPOSES

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UNITED STATES PATENT OFFICE.

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SYRINGE FOR HYGIENIC PURPOSES.

Original application filed September 2, 1921, Serial No. 498,016. Divided and this application filed January 22, 1923. Serial No. 614,244.

To all whom it may concern:

Be it known that I, FRIEDRICH CONRAD BECK, a citizen of the Republic of Switzerland, and resident of Winterthur, in the Canton of Zurich, Switzerland, have invented certain new and useful Improvements in Syringes for Hygienic Purposes, of which the following is a specification.

This application is a division of my co-pending application filed September 2, 1921, Serial No. 498,016.

This invention is for improvements in syringes for hygienic purposes having a shut-off receptacle or container for the syringing liquid in combination with a pumping device, and tubing connecting the receptacle with the pump and an injecting member. The purpose of this improved syringe is to cause the cleansing liquid, by the action of the pump, to be pumped and made to circulate from the liquid container to the place of injection, especially the vagina, and thence back again through a tube to the container, in such a manner that a soiling, that is a wetting of the surroundings either before or during or after the syringing operation, is prevented.

The pump according to my invention possesses the advantage that the utilized and returning liquid, owing to the downward pressure caused by the pumping action in the receptacle or container, is sucked off into a separate compartment and thus prevented from mixing with the unused liquid. Furthermore, by means of this improved device it is possible, in connection with the cleansing operation by the liquid, also to pump air to the wound to be syringed in order to subsequently draw off even the last remains of the liquid from the receptacle and thereby prevent wetting of the surroundings after the use of the apparatus.

In order that this invention may be clearly understood reference is made to the accompanying drawing, in which:—

The figure shows a section partly in elevation of a construction of the syringe.

According to the construction shown in the figure provision is made of a liquid container which is made of three parts: 1^a, 1^b and a central and horizontally disposed division wall 1^c, the latter being formed with a ventilating pipe 1^d. These three parts form a rectangular housing and are joined and firmly clamped together by

means of clamps 6^a or other convenient means, a layer 6 of rubber or other material interposed between the flanged parts 1^a and 1^b rendering the whole air-tight. Thus two compartments C and C¹ are formed, the upper compartment C having a suction pipe 7 and the lower compartment C¹ having a return pipe 8 mounted therein. The pipe 7 extends through one side of the upper compartment containing the syringing liquid, its bend 3^a being connected to and made to communicate with a pump 2 fitted with valves 2^a and 2^b and a clyster-pipe or tube 3^c. The inserting member 4 is adapted to carry the said clyster-pipe 3^c and the end of the return pipe 5, both penetrating or extending through the member 4.

In use this device operates as follows:

When the clyster-pump 2 is actuated liquid is sucked from the upper compartment C of the container through the pipe 7 and forced into the wound to be syringed. This results in the production in the compartment C of a space rarefied of air, a similar effect being produced in the lower compartment C¹ owing to the ventilating pipe 1^d, which rarefaction of air the pipe 8 and extension 5 thereof tend to neutralize. The already utilized liquid is therefore sucked from the syringed wound back through the said pipe 8 into the lower compartment C¹ so that all remains of the liquid likely to be still in the wound are carried away. By this means and when the syringe is removed any soiling or wetting of the surroundings is prevented.

Having thus fully described my said invention what I claim and desire to secure by Letters Patent is:—

1. In a syringe for hygienic purposes, the combination with a member adapted to be inserted into the wound to be syringed, and a shut-off receptacle comprising two superposed compartments of which the upper receives the syringing liquid, of a ventilating pipe fitted in the upper compartment and making communication between the two compartments, a pumping device, a supply tube forming part of the pumping device and being connected to and communicating with the said upper compartment on the one hand and with the aforesaid inserting member on the other hand, a return tube communicating with the lower compartment of the liquid container and carrying and

extending through the inserting member, and means to cause the syringing liquid to circulate from the said upper compartment to the wound and thence back to the lower
5 compartment when the pumping device is actuated.

2. In a syringe for hygienic purposes, the combination, with a member adapted to be inserted into the wound to be syringed,
10 and a shut-off receptacle comprising two superposed compartments of which the upper forms the liquid container, of a ventilating pipe fitted in the top compartment and making communication with the lower
15 compartment, a suction pipe and a return pipe mounted in the upper and lower compartments, respectively, and extending through one side thereof, a pumping device, a supply tube forming part of the pumping

device and being connected with the said
20 suction pipe on the one hand with the inserting member on the other hand, a return tube connected with the aforesaid return pipe and extending through and carrying the
25 inserting member, and means to cause the syringing liquid to circulate from the said upper compartment to the wound to be syringed and thence back to the lower compartment when the pumping device is actuated.
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The foregoing specification signed at Winterthur, Switzerland, this 8th day of December, 1922.

FRIEDRICH CONRAD BECK.

In presence of two witnesses—
CH. VINLLIEN,
F. HEIM.