

(No Model.)

G. BECK.
SYRINGE.

No. 519,014.

Patented May 1, 1894.

Fig. 1.

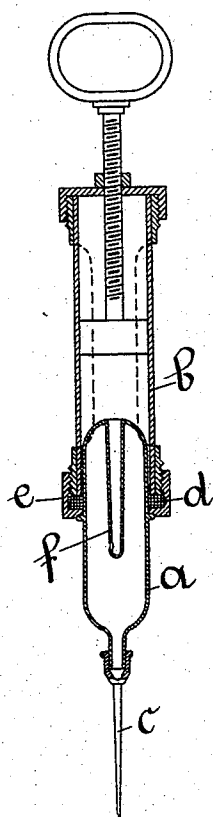


Fig. 2.

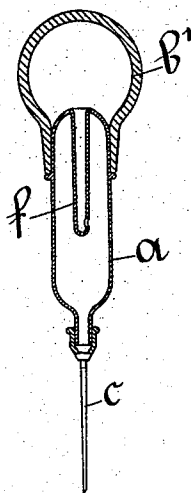
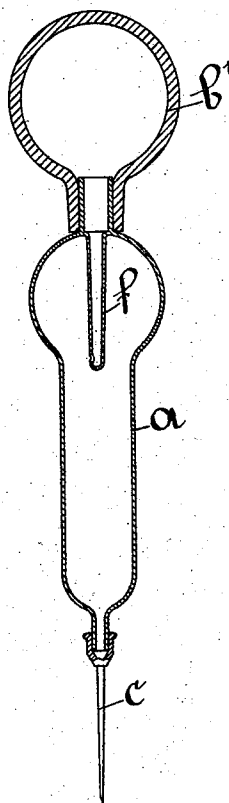


Fig. 3.



Witnesses
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UNITED STATES PATENT OFFICE

GUSTAV BECK, OF BERN, SWITZERLAND.

SYRINGE.

SPECIFICATION forming part of Letters Patent No. 519,014, dated May 1, 1894.

Application filed October 28, 1893. Serial No. 489,421. (No model.)

To all whom it may concern:

Be it known that I, GUSTAV BECK, a citizen of the Republic of Switzerland, and a resident of 37 Brunnmattstrasse, Bern, in the Republic of Switzerland, have invented a certain new and useful Improvement in Syringes, of which the following is a specification.

This invention relates to an exchangeable liquid receptacle or reservoir applied to medical syringes serving to prevent the injection liquid from coming in contact with the pump chamber or the piston, or where instead of the usual syringe an india-rubber ball is used, to prevent the liquid from coming into contact with such ball, said receptacle rendering it possible at the same time to use different injection liquids successively without the syringe itself necessarily requiring cleansing.

In the annexed drawings three different methods of construction of this improved exchangeable liquid receptacle are represented, Figure 1 showing the receptacle in connection with the usual syringe consisting of a pump chamber and piston, while Figs. 2 and 3 show the liquid receptacle in connection with an india-rubber ball.

The liquid receptacle consists of a reservoir *a* preferably of glass which at the one end communicates with the pump chamber *b* of the syringe or with the hollow space of an india-rubber ball *b'* and at the other end with a nozzle *c*. The reservoir *a* may be of any suitable shape provided the one end is constructed so that it can be fitted in the under part of the pump chamber *b* or in the cylindrical part of the india-rubber ball *b'*. A tight joint between the reservoir and the pump chamber *b* is effected by a packing ring *d* of india-rubber in connection with a female screw *e* placed over the latter; the tightening between the receptacle and india-rubber ball

is produced by the cylindrical portion of the india-rubber ball *b'*.

To prevent the injection liquid within the reservoir *a* from entering the pump chamber *b* or the ball *b'* when the syringe is laid over, the communicating orifice provided between the reservoir *a* and pump chamber or ball *b'* respectively is placed in the interior of the reservoir *a* in a tube *f* so that this tube projects into the reservoir *a* sufficiently far that the entering of the injection liquid through the communicating orifice in the pump chamber or ball respectively is rendered impossible. The lower end of the tube *f* is preferably closed and the communicating orifice most suitably arranged on the side of the tube between the receptacle or reservoir and pump chamber or ball respectively.

The exchangeable reservoirs or receptacles *a* may also serve for storing injection liquids and it is only necessary to close those reservoirs or receptacles at both ends when filled, which can easily be effected by letting sealing wax drop onto the openings or in any other suitable way.

I claim as my invention—

A receptacle adapted to contain liquid and to be attached to the compressor of a syringe, the said receptacle having an orifice for delivering fluid and an orifice for communicating with said compressor, the latter orifice being at the inner termination of a tubular extension of the wall of said receptacle projecting into the interior of the latter.

In witness whereof I have signed this specification in presence of two witnesses.

GUSTAV BECK.

Witnesses:

JOHN WÄBER,

MAX GYSI,

Engineer.