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TREATMENT OF MEDICALLY APPLICABLE SALT SOLUTIONS WITH ELECTRIC CURRENTS OF LOW VOLTAGE FOR THE PURPOSE OF STERILISATION AND DISINFECTION

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Fig. 2.

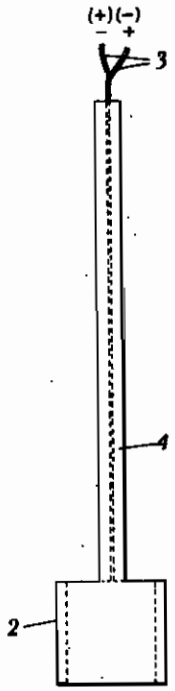


Fig. 1.

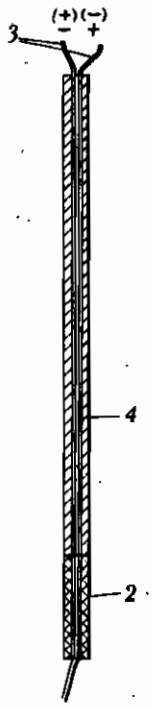
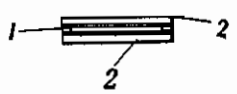


Fig. 3.



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TREATMENT OF MEDICALLY APPLICABLE SALT SOLUTIONS WITH ELECTRIC CURRENTS OF LOW VOLTAGE FOR THE PURPOSE OF STERILISATION AND DISINFECTION

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Application filed November 6, 1937

This is a division of our co-pending application No. 686,426.

The present invention relates to the treatment of medically applicable salt solutions with electric currents of low voltage for the purpose of sterilisation and disinfection.

The invention serves the purpose of providing the doctor with convenient means for himself sterilising the so-called physiological salt solutions required for his purposes, whether they be iso-tonically or hyper- or hypotonically constituted or converting them into strongly disinfectant but still physiological solutions, by the aid of a handy device. The only results similar to these hitherto obtained were brought about by treating the said solutions with high tension galvanic currents. In this procedure, however,—apart from the danger of high voltages—in addition to chlorine, a considerable quantity of ozone is developed which possesses unpleasant and less strongly disinfecting properties. According to the present invention it is proposed to work with currents of low voltage, for example, currents derived from 4–8 volt accumulators, the poles of which are connected with two small platinum plates acting as electrodes, which may, for example, measure 2x2 cm. As a result of the fact that the platinum plates are arranged in an insulating frame parallel to one another and at a distance of only about 1–2 mm. comparatively high currents are obtained which suffice to develop from the chlorides of the salt solutions so much active chlorine that about 1 litre of the solution is sterilised within a few seconds and within 10 to 20 minutes is converted into strongly disinfecting liquids. If it is desired to treat larger quantities of salt solutions then the duration of the currents is increased or the platinum plates are made of larger size.

A preferred constructional form of an apparatus for applying the invention in practice is illustrated by way of example in the accompanying drawing, in which:

Fig. 1 shows an immersion member according to the invention in side view,

Fig. 2 shows the said member in longitudinal section, and

Fig. 3 is a plan from below of the member.

Referring to the drawing:

The apparatus consists of two platinum electrodes 1 having surfaces of about 2 x 2 cm. which are arranged in an insulating frame 2 parallel to one another and at a distance of 1–2 mm. apart and which are connected with the source of current by means of wires 3 which pass through the handle 4 of the immersion member.

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