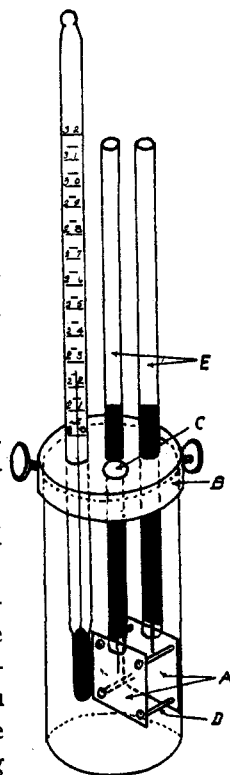


A thermometer and two glass tubes pass through the cap. The hole C allows the air to escape when the electrode is immersed into a solution. The platinum connecting wires, which are welded to the electrodes, are protected by being sealed in the tubes E, in which mercury is placed to connect the electrodes with the bridge leads.

The electrodes A are of No. 30 B & S gauge platinum foil 2 x 2 cm. squares set one cm. apart. They are firmly fastened together by means of four glass pins as shown (D). The pins have small enlargements two millimeters from each end, which serve as collars and prevent the electrodes from being crowded together. The ends of the pins pass through the electrodes and are clinched. In this way they are firmly held in place.

An ordinary 100 cc. hard glass beaker may be used to complete the cell.

The electrode has proven so convenient and trustworthy, that the writer desires to bring it to the notice of his fellow chemists and others who may perhaps find use for it, since it can well be adopted in other lines of work on conductivity. It can easily be constructed by any one having a little skill in making apparatus.



G. J. VAN ZOEREN.

MACDONALD COLLEGE,
QUEBEC, CANADA.

CORRECTION.

In the February JOURNAL, page 361, line 25 should read " $\gamma = 10 \div \text{no. of centimeters}$," instead of " $\gamma = 1 \div \text{no. of centimeters}$."

[CONTRIBUTIONS FROM THE CHEMICAL LABORATORY OF HARVARD COLLEGE.]

THE REARRANGEMENT OF ISO INTO TERTIARY BUTYL BROMIDE.

BY A. MICHAEL, E. SCHARF AND K. VOIGT.

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The structural rearrangement of an alkyl halide was first proven by Eltekow,¹ who found that isobutyl and isoamyl bromides are partially converted, by heating in a sealed tube to 230°, into the corresponding tertiary derivatives. Eltekow, and also Aronstein,² who later demon-

¹ *Ber.*, 6, 1258 (1873); 8, 1244 (1875).

² *Rec. trav. chim.*, 1, 1346 (1882).