

steam boilers. Melsens concluded that when the bottom of the boiler is provided with numerous points, the ebullition is produced with ease and the water does not assume the spheroidal state under circumstances in which that phenomenon would be produced in presence of a smooth metallic surface. M. le Blanc invited Prof. Melsens to exhibit his experiments before the "Société d'encouragement pour l'Industrie Nationale." They were very satisfactory and were highly appreciated by all who witnessed them.—*Bull. de la Soc. d'Encour.*, Nov., 1883. C.

PROUT'S LAW.—Marignac, in his late re-examination of some of the atomic weights, considers that Prout's law is only approximate, and that, since the numbers which express the atomic weights only represent ratios, there is no reason for taking the hydrogen unit in preference to 16 or 100; but the choice of 16 is justified by its practical advantage. It allows us to represent the atomic weights of the greatest number of elements, and especially of those which are most important, by the most simple possible integers, and with the least difference from the rigorous results of experiment. The fact that the atomic weights exhibit more exact ratios to the oxygen than to the hydrogen unit was pointed out by Chase in his 138th photodynamic note (*Proc. Amer. Phil. Soc.*, Nov. 4, 1881).—*Ann. de Chim. et de Phys.*, March, 1884. C.

MANGANESE IN WINE.—Maumené has analyzed three specimens of wine: 1, a red wine of Grave, of the vintage of 1865; 2, a similar wine of 1882; 3, a white wine of 1883. In the first specimen he found manganese under the form of a tartrate of potassa and manganese. The second wine contained a like compound in a slightly different proportion; the same is true of the third specimen. It is to be observed that the lands where the three vineyards were situated belong to a region in which manganese abounds.—*Chron. Industr.*, April 13, 1884. C.

NEW APPLICATIONS OF ELECTROLYSIS.—Two new applications have been lately reported which seem worthy of further trial. The first is a system of tanning, in which the skins are suspended in a tannin bath, which is traversed by an electric current. The skins are at first placed at the negative pole, in order to destroy the nitrogenous matters; after eight days a more concentrated solution is introduced, and the direction of the current is reversed. This is said to oxidize the tannin and to hasten its precipitation in the cells of the hides. In the second application, M. Abadie seeks to recover the tin from the scraps of tinned iron which are so abundant about tinner's shops. He places them in an electrolytic bath formed of a solution of chloride of sodium with the addition of chlorhydric acid. The anode is metallic and the tin is deposited upon it, in crystals if the current is intense, or in an amorphous layer when the current is moderate. The rapidity and thickness of the deposit is said to be proportioned to the acidity of the bath.—*L'Electricien*, March 15, 1884. C.

TRANS-NEPTUNIAN PLANET.—Flammarion has followed the line of investigation which was marked out by Forbes and has published the indications which he has discovered of a probable planet, at the first of the