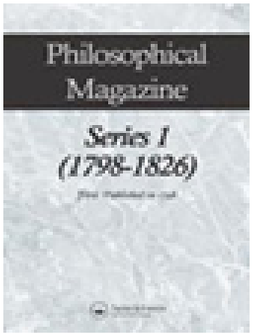

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XIII. On the discovery of that salt known under the name of Seignette's salt (tartrite of soda)

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journal. We ſhall therefore only obſerve that, about the end of July, this year, Eſchen undertook, in company with M. Theodore Ziemſſen his friend and countryman, a tour to the borders of the lake of Geneva and the valley of Chamouni. They aſcended together the Buet, a high mountain behind the village of Servoz, celebrated by the experiments made there by De Luc and Sauſſure, and which commands a view of the country round Mount-Blanc. They were juſt on the point of reaching the ſummit, and nothing ſeemed to announce that any danger was to be apprehended; Eſchen was walking forwards in high ſpirits before his friend and their guide, when, all of a ſudden, his two companions loſt ſight of him. A thin cruſt of ſnow, which covered a deep fiſſure, had given way under his feet, and he fell into the abyſs; where he periſhed as already related.

XIII. *On the Diſcovery of that Salt known under the Name of Seignette's Salt (Tartrite of Soda).* *By Profeſſor* BECKMANN.

THIS neutral ſalt, which conſiſts of the mineral alkali (ſoda) and the acid of wine-ſtone (tartareous acid), was prepared and made known by a Frenchman named Peter Seignette, towards the end of the laſt century. The confidence with which the inventor recommended it, and the care he took to conceal the method of making it, had, as is uſual, ſuch an effect, that it was employed in preference to many other medicines, long known, which had been equally ſerviceable; and by theſe means he was enabled, without much trouble, to acquire a fortune. It muſt, however, be allowed that he was a ſkilful chemiſt, who, by his writings and the invention of various other medicines, had obtained conſiderable reputation as a phyſician and naturaliſt. He was eſtabliſhed as an apothecary at Rochelle; publiſhed papers on various natural objects which he had obſerved in his neighbourhood, in the Memoirs of the Academy of Sciences at Paris, as well as in other works, and died on the 11th of March

March 1719*. He recommended this salt, which enriched him and rendered his name famous, in some small treatises printed, in particular, about the year 1672. He called it sometimes *alkaline salt*, sometimes *sal polychrest*, and sometimes *Rochelle salt*. After his death, his son continued to prepare and to vend it with the greatest success.

Manufacturers and mechanics have been often reproached with the jealousy which they entertain of literary men; but, in my opinion, the latter are the cause of it. It must indeed be confessed, though humiliating for human knowledge, that the most useful discoveries have at first presented themselves to the former, while engaged in the various operations which their employments require; but their merit consists principally in remarking and following phænomena till they produce from them something useful. If they are so fortunate as to succeed, they keep their discoveries secret in order that they may enjoy a monopoly of them; but no sooner has the man of letters heard of a new discovery than he wishes to have a share in the honour of making it known; and his zeal in this respect is proportioned to its importance and the care with which it is concealed; because, in general, he can gain only by rendering it public. The man of letters, however, has a great advantage over the mechanic or manufacturer, as his exertions never fail to be approved; because, by endeavouring to diffuse an important benefit, he appears in the character of a patriot, a friend to mankind, and a citizen of the world; and may thus place the merit of the mechanic or manufacturer in a disadvantageous point of view. This opposition of private interest proves of great utility to the whole society of which both parties are members. When the mechanic or manufacturer makes discoveries, they are communicated to the public by the man of letters; who, by these means, renders them useful; prevents their being hurtful by a monopoly; secures them from dying with the discoverer; and, by investigating the principles on which they

* Some of Seignette's papers are printed in *Bibliotheque Historique de la France par Fevret de Fontelte*, Paris 1778, 5 vols. fol. such as a paper taken from *Memoires de l'Acad.* 1701, p. 115; and also in *Histoire de la Rochelle, par M. Arcére*, Vol. II. p. 424.

depend,

depend, makes their benefit to mankind more certain, and ſhows how they may be applied in various caſes of which the artiſt or manufacturer never had an idea*. If, by this conduct, he leſſen the merit of one, he on the other hand points out employment to many; and gives riſe to eſtabliſhments in which thouſands participate, and by which they acquire riches.

Thus Seignette diſcovered ſal polychreſt while he was engaged in making ſoluble tartar (tartrite of potaſh), and, according to the old opinion, imagining that both the fixed alkalis were the ſame, uſed ſoda inſtead of the alkali of tartar (potaſh). By theſe means he procured, not without ſurpriſe, a ſalt different from the common ſoluble tartar, which he wiſhed to prepare, and from the other well known ſalt alſo. He was induced therefore, to examine it; and having found it to be a new laxative, he recommended it and became rich. The experiments of learned chemiſts diſcovered the component parts of this ſalt; the mode of preparing it was then made publicly known; and, by more accurate examination, the difference, before overlooked, between vegetable and mineral alkali† was determined: by which new light was thrown upon chemiſtry, and an important ſervice rendered to a variety of arts.

Among thoſe who contributed to bring this ſalt into repute was Nicholas Lemery, to whom Seignette ſent a large quantity of it, which he diſtributed at Paris, though unacquainted with its component parts‡. Its compoſition was diſcovered at the ſame time, about the year 1731, by two French chemiſts, Boulduc and Geoffroi. The former publiſhed his obſervations in the Memoirs of the Academy of

* Nam invenire præclare, enuntiare magnifice, interdum etiam barbari ſolent; diſponere apte, figurare varie, niſi eruditis, negatum eſt. *Plin. Epiſt.* III. 13.

† Profeſſor Gmelin, in anſwer to the queſtion, Who firſt remarked the difference between the vegetable and mineral alkalis, replied that, at any rate, it was firſt properly defined by Stahl. See G. E. *Stahlii Fundamenta Chymiæ dogmaticæ et experimentalis.* Norimbergæ. 1746. 3 vol. 4to. III. p. 268 and 304.

‡ Lemery Vollkommene Chymiſt. Dreſden und Leipzig, 1734. 2 vol. 8vo. I. p. 512.

Sciences ſ

Sciences *; and the latter communicated his to Sir Hans Sloane, who cauſed them to be printed in the Philoſophical Tranſactions †. I ſhall here obſerve that chulz ‡ has aſſerted falſely that Neumann made known the compoſition of Seignette's ſalt in his Treatiſe on Saltpetre; for Neumann's *ſal polycbreſt* is eſſentially different; and he himſelf confeſſes § that he was not acquainted with the Rochelle ſalt. After the above period, the nature and properties of the mineral alkali were examined with more accuracy by Groſſe, Duhamel, Brand (a Swede), and ſeveral others ||.

XIV. *On the Proportions of Charcoal, or Oxyd of Carbon, contained in certain Kinds of Wood and in Pit-Coal; and on a Carburet of Sulphur newly diſcovered. By* M. PROUST ¶.

GREEN oak yields of charcoal 20 *per cent.*; wild aſh 17; willow 17; white aſh 17; pine 20; heart of oak 19; black aſh 25; guaiacum 24 *per cent.*: but all good pit-coals afford 70, 75, or 80 *per cent.* of carbonaceous matter; and there are ſome kinds which exhibit no ſigns of containing hydrogen; and which burn without either flame or ſmoke.

This abundance of carbonaceous matter yielded by pit-coals does not depend on their containing a larger proportion of earth; for good pit-coal yields as ſmall a proportion of aſhes as dried pine-wood. The pit-coal of Aſturia and Andaluſia yields only 2 or 3 *per cent.* of aſhes; that of Eſtremadura not more than 6 or 7 *per cent.*

Beſides the known products obtained from the diſtillation

* *Memoires de l'Academ. des Sciences, Année* 1731, p. 124.

† No. CCCCXXXVI. p. 3.

‡ Chemiſchen Verſuchen, Halle, 1745. 8vo. p. 50.

§ Neumann's Chymie nach Keſſels auſgabe. I. 3. p. 160.

|| An account of the principal writings on Seignette's ſalt may be found in *Weigel's Chymie*, Griefswald, 1777, 2 vol. 8vo. II. p 225. See alſo *Georgii Ludov. Enckelmann Diſſ. de Sale Alkali de Seignette, ejuſque Natura et Uſu.* Argentorati, 1756. 4to.

¶ From the *Journal de Phyſique.*