Science News a Century Ago

Maury's Work on Navigation

MATTHEW FONTAINE MAURY (1806–73), the distinguished American meteorologist and hydrographer, wrote the first of his books, his work on "Navigation", while serving as master of the United States sloop *Falmouth*, to which he was appointed in 1831. It was during his voyage from New York to the Pacific that he conceived the idea of his celebrated wind and current charts.

Writing to his brother from Philadelphia about his book, Maury said, "Without wishing to excite your expectations, I will let you into the secret of my plans, which I wish you to preserve as a secret, in order that if I should not succeed in what I undertake, my friends and family may not feel the effects of disappointment. You must bear in mind that this is the first nautical work of science that has ever come from the pen of a naval officer; and upon its merits I intend to base a claim for promotion. Such a case has no precedent. Therefore you must look upon it as an experiment, in which I may or may not be successful. If I succeed, I shall be put over the heads of many who are now above me. . . . I wish to impress upon you that I am not sanguine of success, but am resolved to try every honourable means to accomplish the object, and to take the most favourable time for it. The book, I hope, will be out in about six weeks. . . ."

When Maury's book appeared, it was favourably noticed by the highest nautical authorities in Great Britain, and it became the textbook of the United States Navy.

Lindsay's Electric Lighting Experiments

ON October 30, 1835, a letter from James Bowman Lindsay on his electric light appeared in the *Dundee Advertiser*. "As a notice of my electric light," the letter ran, "has been extensively circulated, some persons may be anxious to know its present state, and my views respecting it. The apparatus that I have at present is merely a small model. It has already cost a great deal of labour, and will yet cost a good deal more before my room is sufficiently lighted. . . . I am writing this letter by means of it at 6 in. or 8 in. distant; and, at the present moment, can read a book at the distance of 1½ feet. From the same apparatus I can get two or three lights, each of which is fit for reading with. . . . Brilliant illumination will be obtained by a light incapable of combustion; and, on its introduction to spinning mills, conflagrations there will be unheard of. . . . Exposed to the open air, it will blaze with undiminished lustre amidst tempests of wind and rain; and, being capable of surpassing all lights in splendour, it will be used in lighthouses and for telegraphs. The present generation may yet have it burning in their houses and enlightening their streets. Nor are these predictions the offshoots of an exuberant fancy or disordered imagination. They are the anticipated results of laborious research and of countless experiments. Electricity, moreover, is destined for mightier feats than even universal illumination."

On January 15, 1836, Lindsay gave a lecture in the Thistle Hall, Dundee, on his experiments, and publicly exhibited his electric light.

Societies and Academies

PARIS

Academy of Sciences, September 16 (*C.R.*, **201**, 510–512). JEAN LEGRAND: New data for the study of periodicity. Study of the periodic relations between rainfall, mean tide-level, and sunspots.

September 23 (*C.R.*, **201**, 513–532). CHARLES RICHET: Notice on the work of the late Léon Fredericq. I. VINOGRADOV: The summations of H. Weyl. VLADIMIR KOSTITZIN: The intoxication of a medium by the catabolic products of a population. LÉOPOLD ESCANDE: Remarks on the perturbations maintained in resonance at the lower end of a water main. MAURICE ROBERT and JULES FOGLIA: The measurement of the flux in coils with iron core, and the realisation of a direct reading Henrymeter for any self-induction. GABRIEL VALENSI: The oxidisability of nickel. The results of experiments on the rate of oxidation of nickel foil are given graphically. The data can be expressed by the Arrhenius formula, $n = 11{\cdot}46^{-11210/T}\sqrt{t}$, in which n is the grams of oxygen fixed per cm.^{2}, T is the absolute temperature and t the time in hours. JEAN TIMMERMANS and GUSTAVE POPPE: The mutual solubility of heavy water and organic liquids. JACQUES DE LAPPARENT: The place of montmorillonite in the category of phyllitous silicates. RENÉ SOUÈGES: The embryogeny of the Verbenaceæ. The first terms of the development of the albumen in *Verbena officinalis*. JEAN MARIE LE GOFF: The differential biological reaction of cobalt compounds and of certain complex cobalt compounds (cobalt-ammines).

CAPE TOWN

Royal Society of South Africa, August 21. J. A. PRINGLE: Observations on certain wood-boring Coleoptera occurring in South Africa. C. VAN RIET LOWE: The Smithfield 'N' culture. Attention is directed to the wide range of artefacts employed by those who practised this variation of the main Smithfield culture. Sites and assemblages of artefacts are described, and it is suggested that this peculiar variation of the parent culture owes its characteristics to a changed environment—necessitating a change in employments and in consequence a new variety of tools—brought about by a migration and probably influenced by other cultures. A description is given of the diffusion of the culture, and the five marked, yet intimately related, variations of the common parent are linked up and explained.

SYDNEY

Royal Society of New South Wales, September 4. F. P. DWYER and J. W. HOGARTH: Oxidation of cobalt amalgam. Cobalt amalgam prepared by electrolysis is shown to have the composition, Co_2Hg_3. Although rapidly oxidised in the air to a mixture of Co and CoO, in the ratio of 3 : 1, it is perfectly stable in dry air, oxygen-free water, and inert gases. Cobalt suboxide, Co_4O, is suggested as an intermediate in the oxidation of the amalgam. The oxidation product readily reduces nitrites and nitrates in neutral solution to ammonia, and, on being freed from oxide by ammonium salts, gives a pyrophoric form of cobalt.