

THE following appointments have been made at Armstrong College, Newcastle: Dr. H. L. Riley to be professor of inorganic and physical chemistry; Prof. G. R. Clemo to be director of the Department of Chemistry.

A CHELSEA Polytechnic Old Students' Association is to be inaugurated at a meeting to be held on Nov. 4, on the occasion of the opening of the Polytechnic extension by the Parliamentary Secretary to the Board of Education, Mr. H. Ramsbotham, M.P. Old students wishing to be present at the meeting, or who desire particulars of the Association, should address communications to the Honorary Secretary, Chelsea Polytechnic Old Students' Association, Manresa Road, Chelsea, S.W.3.

DR. C. B. MARSON has been appointed head of the Chemistry Department of the Hull Municipal Technical College. Dr. Marson received his early training as an analytical chemist with Capt. J. A. Foster of Hull, and was for some time in the laboratories of the British Thomson-Houston Company at Rugby. After War service, he took a course in fuel and metallurgy at the University of Leeds, leading up to the B.Sc. degree, and for two years held the gas research fellowship of the Institution of Gas Engineers, working on the influence of inorganic constituents on the properties of coke. He was then appointed on the staff of the Joint Research Committee of the University of Leeds and the Institution of Gas Engineers, from which he proceeded to the position of chief chemist to the Northern Coke Research Committee.

SCHOOL buildings obviously condition the efficiency of school work just as factory buildings condition industrial efficiency in ways that admit of exact measurement, and the methods of investigation which the National Institute of Industrial Psychology has applied with notable success in the latter field are now being applied, on the initiative of the National Union of Teachers, in the former. The N.U.T. has issued a pamphlet containing a report, presented at a recent conference of local education authorities, on the progress of the enterprise. The problems dealt with include lighting, ventilation, heating, seating, staff rooms, workshops, playgrounds, cloakrooms, and blackboards, but the report is concerned chiefly with lighting. Exact measurements have demonstrated the supreme importance of good illumination, owing to its twofold influence in decreasing the time required for perception and in decreasing nervous and ocular strain, with consequent improvement in both quantity and quality of work. The value of window cleaning (so justly emphasised in a less enlightened age by that underrated educationist, Dr. Squeers) assumes a new importance when exhibited in graphs and percentages, and surprisingly good results are shown to be obtainable by attention to the amount of light reflected from furniture and walls. Some of the diagrams used are reproduced from "Seeing", by M. Luckeish, director of the Lighting Research Laboratory, Cleveland, U.S.A.

A SCIENTIFIC basis for national development was the aim of Senator Morrill, the promoter of the remarkable movement which, seventy years ago, brought into existence the 'land-grant' universities and colleges of the United States of America. In a summary—published as *Bulletin* No. 20, 1931, of the Office of Education, Washington—of an exhaustive report on these institutions, it is claimed that this aim has been achieved, and that they not only have added enormously to the nation's wealth, but also have

helped to develop a new concept: government by science. By humanising scientific knowledge, they have, it is said, immeasurably improved the social life of millions of citizens who otherwise would tend to isolation from more favoured groups. The aggregate amount of their annual budgets exceeds one hundred million dollars, and their student enrolment exceeds three hundred thousand. Obviously they must have been and still are a potent factor in American culture, but as for the claim that they have achieved Morrill's object, this cannot easily be reconciled with Prof. John Dewey's contention in "Philosophy and Civilisation" (reviewed in *NATURE* of March 5) that the "disorder, confusion, and insecurity" characteristic of American social life are due to "our half-way and accidental use of science". In the same bulletin are summarised the results of another important national survey, that of negro colleges and universities, and a description is given of the purpose and organisation of three others now under way, those of secondary education, the education of teachers, and school finance.

### Calendar of Geographical Exploration

#### July 24, 1862.—Central Australia

J. M. Stuart reached the coast of north Australia at the mouth of the Adelaide River near Port Darwin, thus achieving his aim of a land journey from south to north of the continent. Stuart's explorations began in 1858 in the country north of Lake Gairdner; in 1860 he discovered the Alberga and Finke Rivers and the MacDonnell range of mountains.

#### July 26, 1529.—Discovery of Peru

Francisco Pizarro was appointed governor of the newly discovered regions in Peru (New Castile). Pizarro had accompanied Balboa in the discovery of the Pacific and had there heard of the gold of Peru. In 1524 he had sailed from Panama and after three years of hardship reached the River San Juan. From that river one of his officers, Bartolomé Ruiz, set out in a small ship, crossed the equator, and sighted Peru. He brought back glowing reports of its gold and silver, and this led Pizarro to return to Spain to obtain help from the Emperor, Charles V. He started his return journey from San Lucar in 1530 and at the beginning of 1531 was *en route* for Cajamarca. By the end of 1533, Pizarro, like Cortes, sent out numerous exploring parties, the marches of which opened up much of the interior of South America.

#### July 27, 1767.—Discovery of Tahiti

Capt. Samuel Wallis left Tahiti (Otaheite), which he had discovered and where he made a long stay, sending an exploring party to the interior which reported on its great fertility. Various other small islands were discovered by Wallis on this voyage, which lasted from 1766 until 1768.

#### July 30, 1774.—South Russia and Siberia

P. S. Pallas returned to St. Petersburg after a journey which had lasted since June 21, 1768. He first investigated South Russia and the Caspian region. Later he wintered at Tobolsk, and then carried out researches into the morphology of the Altai Mountains and the region of the Upper Irtish. In 1772 he crossed Lake Baikal and explored the Upper Amur, and in the following year worked in the region of the Lower Volga. His observations helped to elucidate the problem of the origin of mountain ranges; he also collected much information about the natural history and economic conditions of the regions he studied.