be abundant reasons for its present larger use for that purpose. These considerations are: First, the concrete ship can be made practically waterproof; second, the reinforcement can be completely inclosed by the concrete so as to prevent rusting; third, concrete and reinforced concrete are absolutely fireproof.

Concrete used as construction material improves with age; there is no definite knowledge to-day as to the limits of its durability in time. It is not known to be attacked by insects; mould, vermin and bacteria find no soil for growth in it, and consequently ferroconcrete vessels can easily be kept clean. The ease of repairing a concrete ship by the simple application of new concrete is also a distinct advantage.

A chapter of "Mineral Resources of the United States" on cement in 1917, published by the United States Geological Survey, Department of the Interior, includes a section on concrete ships, by Robert W. Lesley, associate of the American Society of Civil Engineers, one of the pioneer manufacturers of Portland cement and a member of the committee on concrete ships of the American Concrete Institute. Mr. Lesley gives a full account of the ship *Faith*, the investigations of the American Concrete Institute, government construction, and patents for concrete ships, also a bibliography of concrete in shipbuilding.

In carrying out its emergency shipbuilding program the government made contracts for a large number of concrete ships. After the armistice the general program was changed; the total output of steel, wood and concrete ships was curtailed, but the infant concrete shipbuilding industry will probably continue to grow, for it still affords great opportunities for research and development.

EDUCATION AND SCIENCE IN THE BRITISH CIVIL SERVICE ESTIMATES

The estimates for civil services for the year ending March 31, 1920, as quoted in *Nature*, amounted in Class IV. (Education, Science and Art), to £41,251,610. The following are among the estimates:

United Kingdom and England

Service	Compared with 1918–19	1919–20 £
Board of Education	31,353,111	12,243,406
British Museum	209,714	83,572
Scientific investigation, etc.	113,974	59,733
Department of Scientific and Industrial Research	242,815	94,465
Universities and Colleges, United Kingdom, and Intermediate Education, Wales	945,700	624,000
Universities, etc., special grants	500,000	470,000
Scotland		
Public education	4,677,220	1,635,675
Ireland		
Public education	2,721,356	519,752
Intermediate education	90,000	—
Science and art	190,498	27,105
		Decrease
Universities and colleges	85,000	11,350

Details of some of these estimates of particular interest to men of science are as follows:

SCIENTIFIC INVESTIGATIONS, ETC.

	£
Royal Society:	
(i) Grant in aid of (*a*) scientific investigations undertaken with the sanction of a committee appointed for the purpose (£4,000) and (*b*) scientific publications (£1,000)	5,000
(ii) Grant in aid of salaries and other expenses of the Magnetic Observatory at Eskdalemuir	1,000
Meteorological Office	47,000
Royal Geographical Society	1,250
Marine Biological Association of the United Kingdom	1,000
Royal Society of Edinburgh	600
Scottish Meteorological Society	100
Royal Irish Academy	1,600
Royal Zoological Society of Ireland	500
British School at Athens	500
British School at Rome	500
Royal Scottish Geographical Society	200
National Library of Wales	8,900
National Museum of Wales:	
Grant in aid of the expenses of the museum	4,000
Special building grant in aid	20,000
Solar Physics Observatory	3,000
School of Oriental Studies	4,000

North Sea Fisheries Investigation	1,250
Imperial Mineral Resources Bureau	11,000
Edinburgh Observatory	1,974

SCIENTIFIC AND INDUSTRIAL RESEARCH	£
Salaries, wages and allowances	11,870
Traveling and incidental expenses	1,500
Grants for Investigation and Research:	
(1) Grants for investigations carried out by learned and scientific societies, etc.	13,570
(2) Grants for investigations directly controlled by the Department of Scientific and Industrial Research	55,000
(3) Grants to students and other persons engaged in research	25,000
Fuel Research Station	12,775
National Physical Laboratory	154,650

SCIENTIFIC NOTES AND NEWS

THE American Philosophical Society will procure a portrait of the late Edward C. Pickering to be hung in the hall of the society "as a token of the affectionate regard in which he was held by his fellow members." Professor Pickering was a vice-president of the society from 1909 to 1917.

DR. J. A. ALLEN, curator of mammals in the American Museum of Natural History, New York City, has been elected the first honorary member of the American Society of Mammalogists and the only person to be elected to such membership during the present year.

THE Harris lectures for 1920 at Northwestern University, are to be delivered by Professor Edward Sharpley Schafer, professor of physiology in the University of Edinburgh.

DR. E. H. SELLARDS, who has been state geologist of Florida since the organization of the survey in 1907, has resigned, and has accepted appointment as geologist in the Bureau of Economic Geology of the University of Texas. Herman Gunter who has been assistant geologist since the department was established has been appointed state geologist.

DR. HERMAN BIGGS, public health commissioner, New York state, presided over the Red Cross Conference held at Cannes this month.

CONSEQUENT upon the occupation of Alsace-Lorraine by the French, M. Esclangon, formerly assistant at the Bordeaux Observatory, has been appointed director of the Strasbourg Observatory.

W. M. SMART, M.A., Trinity College, Cambridge, has been appointed chief assistant at the Cambridge Observatory.

PROFESSOR VAUGHAN HARLEY has resigned the chair of pathological chemistry, which he has held for twenty-three years at the University of London.

CONCLUDING a study of the various phases of the food problem in Army aviation camps, Guy R. Stewart, assistant professor of agricultural chemistry, has resumed his duties at the University of California. Dr. Roy E. Clausen, assistant professor of genetics, has also returned to the university after nearly two years' service in the army.

THE following members of Stanford University have been released from government service and resumed their academic duties with the opening of the spring quarter, March 31, 1919: Bailey Willis, professor of geology; William Frederick Durand, professor of mechanical engineering; Ernest Gale Martin, professor of physiology; Clelia Duel Mosher, assistant professor of personal hygiene and medical adviser of women; Albion Walter Hewlett, professor of medicine and Stanley Stillman, professor of surgery.

A COMPLIMENTARY dinner was tendered Colonel Alexander Lambert, M. C., U. S. Army, president-elect of the American Medical Association, by his professional friends in New York City, on April 12. About 400 of the leading physicians of New York and the east attended. Dr. George D. Stewart acted as toastmaster. The speakers were Colonel Frank Billings, M. C., U. S. Army, Chicago; Dr. William S. Thayer, of Baltimore; Dr. George E. Brewer, of New York, and Rev. Charles A. Eaton, of New York. Dr. Lambert responded with an account of his experiences abroad as chief medical director of the American Red Cross hospitals.