Toronto, died of a heart attack in the Paris-Boulogne train on October 9. He was sixty-eight years old.

SIR FREDERICK CONWAY DWYER, formerly president of the College of Surgeons of Ireland and operating surgeon to the King George V Military Hospital, died on October 10. He was seventy-five years old.

# SCIENTIFIC EVENTS

## THE ANNUAL INSPECTION OF THE BRITISH NATIONAL PHYSICAL LABORATORY

AT the annual inspection by the General Board of the British National Physical Laboratory at Teddington, a large gathering of scientific men was received by Sir F. Gowland Hopkins, chairman of the board, Lord Rayleigh, chairman of the executive committee, and Sir Joseph Petavel, director of the laboratory.

The London *Times* gives the following account of some of the more important exhibits:

In the oppressive heat many of the guests would have liked to turn the Alfred Yarrow tank into a swimming bath, but instead they were shown how the laboratory hopes to reduce the pitching and heaving of ships. As in all scientific problems, the first step is to gain knowledge of the conditions under which pitching and heaving take place. A model of a twin-screw cross-channel steamer was driven by its own screws through the rough water created in the tank by a motor-driven wave-maker. The power required to propel the model, and the revolutions and thrust of the model screws, were automatically inscribed on apparatus installed in the hull, together with the pitching and heaving motions to which it was subjected. Research into the effects produced by changes in hull form upon the behavior of such craft has already produced ideas which should lead to the reduction of pitching and heaving, and therewith of seasickness.

Another piece of apparatus demonstrated in the William Froude Laboratory was the Lithgow Propeller Tunnel. When a ship propeller rotates in water there is a serious erosion or destructive action on that side of the blades which is under reduced pressure. Little is known of the cause of this action, and through the generosity of Sir James Lithgow a propeller tunnel has recently been built for its study. The tunnel consists essentially of a large hoop of steel tube through which water circulates at known speed, and in which the pressure can be greatly reduced. A model propeller is rotated in the stream of water, and its action is observed through a window. The thrust and torque on the propeller and the number of revolutions are automatically recorded.

The physics department showed apparatus, nicknamed the "clucking hen," for finding lost radium. Despite all care needles containing radium are occasionally lost after operations in hospitals, and may be whisked away immediately to the incinerator, after which they become exceedingly difficult to trace. The new apparatus constructed by the laboratory includes a loud-speaker which makes a "clucking" noise when in the neighborhood of radium, and as it approaches more closely to the radium the louder and more frequent do the "clucks" become. The investigator proceeds in his search, getting "warmer" until the radium is located.

The physics department also gave a demonstration of the nuisance which may be caused to the occupants of a flat by people walking over the floor above them; it was shown how the noise might be greatly reduced by the placing on top of the ordinary floor of a floating floor consisting of concrete slabs resting on rubber pads.

The Ministry of Transport requires the red rear reflectors of cyclists to meet a standard laid down. The laboratory carries out tests of specimen reflectors to ensure that they comply with the regulations, and the test was demonstrated. About four specimens in five submitted fail to meet the test.

The aerodynamics department showed why aeroplanes should have smooth surfaces, and the new wind tunnel, in which speeds of 650 miles an hour can be simulated, was shown working.

## CHEMISTRY AT THE BROOKLYN COLLEGE

AFTER almost a year of intensive preliminary planning, construction on the permanent home of Brooklyn College was officially begun on October 2, when Mayor La Guardia turned the first spadeful of earth at the site at Bedford Avenue and Avenue H in Flatbush. Funds for housing this newest member of New York's system of municipal colleges have been provided by the Federal Public Works Administration and by the city, and will suffice to erect at present four of the principal units of the plant: the Academic Building, the Science Building, the Gymnasium and the Power Plant. The total cost of the project will be $5,500,000.

The work of the department of chemistry will be carried on in the Science Building, in a section extending vertically through the six stories. Provision has been made for two thousand students enrolled in the eighteen or more courses offered. Lectures and recitations for all classes will be held in three fully equipped lecture rooms, with a total capacity of six hundred, and a number of small recitation rooms; while laboratory work will be conducted in small rooms designed to accommodate sections of twenty students in organic chemistry and twenty-four in other subjects. The largest courses, those in general chemistry, will require nine laboratory rooms. Four laboratories have been assigned to qualitative analysis, and four to organic chemistry, and additional rooms for upper-class work in quantitative analysis, in biochemistry and in physical chemistry. Connected with the various laboratories will be accessory balance

rooms and dark rooms, a combustion room and a steam room and there will be a general laboratory for special advanced work.

The planning of the general layout and complete laboratory services for the department and the preparation of equipment specifications are in the hands of a departmental committee consisting of the acting chairman, Professor Martin Meyer, and Professors Hart, Stone, Mossman and Masterson, Drs. Weber, Sattler, Whittaker, Bacharach, Tobin and Livingston and Mr. Hübner. This group, which has been assisted by all the members of the department, is collaborating with the college committee in charge of plans, of which Professor Frederick E. Breithut is chairman, and with the architects and engineers.

Construction bids for the Science Building were opened on October 16 and equipment bids will be opened by November 1. A time limit of one year has been set for the completion of the whole project.

## CONSERVATION OF MIGRATORY BIRDS

ANY doubts entertained by sportsmen as to the constitutionality of Federal restrictions on the hunting of migratory birds have been answered, says the U. S. Biological Survey in commenting on a recent decision in Federal court at Savannah, Ga. The survey administers the regulations adopted under the act of Congress giving effect to the treaty for the protection of birds migrating between this country and Canada.

Overruling a demurrer to an indictment for hunting mourning doves over a baited area, Federal Judge William H. Barrett has upheld the power of the Secretary of Agriculture to regulate hunting methods. Judge Barrett's decision, following by only a few days a similar decision by Judge H. Church Ford at Lexington, Ky., sustaining the secretary's power to limit open seasons, led survey officials to express the opinion that these two decisions effectively answer all constitutional objections to this year's hunting regulations.

"The principal question presented in this case," said Judge Barrett in the Savannah decision, "is: Has Congress the right to delegate to the Secretary of Agriculture the authority to make penal the shooting of doves over a baited field when neither the treaty between the United States and Great Britain nor the Act of Congress creates such a penalty?" The defendants argued that the regulations represented an unconstitutional grant of legislative power.

The rule to be followed is well established and quoted from the recent Schechter NRA case as follows: "So long as a policy is laid down and a standard established by a statute, no unconstitutional delegation of legislative power is involved in leaving to selected instrumentalities the making of subordinate rules within prescribed limits and the determination of facts to which the policy as declared by the legislature is to apply."

In providing for the conservation of migratory birds, Congress, in delegating power to the Secretary of Agriculture, "surely," said Judge Barrett, "lays down 'its policies and establishes its standards,' namely, the policy that there shall be no hunting of migratory birds except as may be permitted by the Secretary of Agriculture. The standard is that the means of hunting shall be 'compatible with the terms of the convention.' It seems clear to me that this delegation is well within the prescribed rule."

The decision was handed down on September 5.

## THE ANDREW CARNEGIE CENTENNIAL CELEBRATION

AN announcement of the program of the Andrew Carnegie Centennial Celebration, which will be held on November 25, 26 and 27 in New York, Pittsburgh, Washington and other cities and communities throughout the country, has been made by Dr. F. P. Keppel, president of the Carnegie Corporation of New York, the largest of the six Carnegie foundations in the United States.

Andrew Carnegie was born on November 25, 1835, in a weaver's cottage in Dunfermline, Scotland, the ancient Caledonian capital from which his family emigrated to America in 1848. It was in Dunfermline that Carnegie built his first library and began in 1881 his series of library benefactions that continued until 1917, by which time he had built 1,946 free public libraries in the United States and 865 in other parts of the English-speaking world.

The different Carnegie trusts in this country which will participate in the centennial celebration, in the order of their establishment, are:

Carnegie Institute of Pittsburgh, 1896, which conducts an institute of technology, a museum of fine arts, a music hall, a museum of natural history, a public library and a library school.

Carnegie Institution of Washington, 1902, devoted to scientific research.

Carnegie Hero Fund Commission, 1904, to recognize heroic acts performed in the peaceful walks of life.

The Carnegie Foundation for the Advancement of Teaching, 1905, to provide retiring pensions for teachers and to advance higher education.

The Carnegie Endowment for International Peace, 1910, to serve the purpose indicated by its name.

Carnegie Corporation of New York, 1911, for the advancement and diffusion of knowledge and understanding among the people of the United States and the British Dominions and Colonies.

While each of these organizations will observe the centennial with its individual program, all will join in the three principal events in New York City. These