

for special expeditions. It was hoped that the opening of the Panama Canal would afford the opportunity for concerted research in the Atlantic by the ships taking part in the ceremony, but the war frustrated the plan. Now, it is pointed out, a new opportunity presents itself through the offer for sale of *L'Hirondelle*, the yacht of the late Prince of Monaco, fitted up for oceanographic research in the most complete manner possible. It is proposed that this should be acquired for an expedition embracing all the oceans and lasting perhaps four years, the total cost being reckoned at from £120,000 to £140,000—a sum which, it is held, could be provided by the cooperation of all the countries interested. General approval of the scheme on the part of the International Council was expressed in a resolution passed during the Paris meeting.

THE BIRD SANCTUARY IN THE FARNE ISLANDS

ANOTHER important bird sanctuary, the Farne Islands, off the coast of Northumberland, has been secured in perpetuity for Great Britain. According to an announcement made by Mr. Collingwood Thorp, of Alnwick, the necessary funds for purchasing the islands for the National Trust have now been received or promised.

Earlier in the month Lord Grey of Fallodon had drawn attention to the movement to secure the islands, which are described as one of the most remarkable and wonderful breeding places for sea birds in the British Islands. They are the northernmost breeding place of the Sandwich Tern and the southernmost breeding place of the Eider duck, and without organized protection the islands would, under modern conditions, be destroyed as a breeding place for the rarer species. Now continuous protection is assured, and when the islands have been handed over to the National Trust they will still be managed, financially and otherwise, by a local committee. This body will require funds to provide watchers during the breeding season, and so the existing Farne Islands Association will continue as before.

This will make the fourth sanctuary for birds vested in the National Trust. There are already two other reserves on the east coast, 1,700 acres at Blakeney Point in Norfolk, which is largely used by migratory birds, and Scolt Head, not far away, which comprises some 1,200 acres. These are tracts of wild land and seashore, and during the breeding seasons watchers are maintained to prevent thoughtless interference with the birds. Wicken Fen, near Soham, in Cambridgeshire, is really an insect reserve, but is used by several of the rarer birds.

PROPOSED INVESTIGATIONS IN HEAT TRANSMISSION

THE National Research Council has been requested to undertake investigations in heat transmission, the results of which will provide the designing, operating and research engineer with more reliable information.

Heat transmission is in an unsatisfactory state. There is the greatest need for quantitative information that can be safely generalized, for the sifting and correlation of present knowledge and for laying out a careful program of investigations to secure the information that is lacking. Data is needed by the refrigerating, heating and ventilating, electrical, automotive and mechanical engineers.

In accordance with the general policy of the National Research Council a suitable committee will be organized, which will include experts of all branches. A program will be laid out, and then solicitation will be made to secure the necessary funds and facilities.

An executive committee has been selected consisting of:

F. Paul Anderson, Director, Research Laboratory of American Society of Heating and Ventilating Engineers, at U. S. Bureau of Mines, Pittsburgh, Pa.

W. L. Badger, Professor of Chemical Engineering, University of Michigan, Ann Arbor, Mich.

W. H. Carrier, President, Carrier Engineering Corp., Newark, N. J.

Harvey N. Davis, Professor of Mechanical Engineering, Harvard University, Cambridge, Mass.

H. C. Dickinson, Chief Div. III, Heat and Thermometer, Bureau of Standards, Washington, D. C.

H. Harrison, Brunswick-Kroeschell Company, New York City.

F. E. Mathews, Consulting Mechanical Engineer, Leonia, N. J.

George A. Orrok, Consulting Engineer, 124 East 15th Street, New York City.

T. S. Taylor, Research Physicist, Westinghouse Electric and Mfg. Co., East Pittsburgh, Pa.

A meeting of this committee will be held in the near future and the necessary steps taken to launch the project.

HEAT TRANSFER SYMPOSIUM

THE Division of Industrial and Engineering Chemistry, American Chemical Society, will start the Heat Transfer Symposium of which Professor W. H. McAdams is chairman on Tuesday afternoon, April 22. A large number of papers have been prepared for this symposium among which are the following:

Heat transmission in an inclined rapid circulation type vacuum evaporator: D. J. VANMARLE, Buffalo Foundry and Machine Co.

Evaporator scale formation: W. L. McCABE and C. S.

ROBINSON, Department of Chemical Engineering, Massachusetts Institute of Technology.

Heat transfer in enamel-lined equipment: E. P. POSTE, Elyria Enameled Products Co.

Forced convection of heat in cases and liquids, II: C. W. RICE, Research Laboratory, General Electric Co.

The film concept of heat transmission applied to a commercial water heater: D. K. DEAN, Alberger Pump and Condenser Co., Boston.

Characteristics of air blast heaters: F. R. ELLIS and J. D. WHITE, B. F. Sturtevant Co., Hyde Park, Mass.

Heat transfer from bare and insulated pipes: R. H. HELLMAN, Mellon Institute of Industrial Research.

Loss of heat from furnace walls: R. CALVERT and LYLE CALDWELL, the Celite Company, Lompoc, Calif.

Optimum operating conditions for pipe heating and cooling equipment: W. K. LEWIS, J. T. WARD and E. VOSS, Chemical Engineering Department, Massachusetts Institute of Technology.

A heat meter: PERCY NICHOLS, Research Laboratory, U. S. Bureau of Mines Experiment Station, Pittsburgh.

Heat losses from various shapes: L. B. McMILLAN, Johns-Manville Co., New York City.

Evaporator design: W. L. BADGER, Department of Chemical Engineering, University of Michigan.

Practically all of the papers of this symposium, which will occupy all of Tuesday afternoon and Wednesday morning, have been preprinted and distributed to the paid members of the industrial division. By this method it is anticipated that much valuable discussion will take the place of the formal reading of the papers. It is planned to edit this discussion and print it at a later date. This symposium promises to be one of the most important which the division has ever held.

THE YALE SCHOOL OF FORESTRY

SAGE HALL, the building of the Yale School of Forestry, was dedicated on February 23. The building, one of the finest of its kind in the country, is the gift of William H. Sage, Yale, 1865, Albany, in memory of his son, De Witt Sage. Mr. Sage, who was unable to be present at the dedication, was represented by his son, Henry W. Sage, Yale, 1895.

Dean Henry S. Graves, of the School of Forestry, presided at the formal dedicatory exercises. The keys to the building were accepted by President James Rowland Angell in behalf of the university. The program included a short address by the architect, William Adams Delano, Yale, 1895, of New York City. The principal address was made by Professor James W. Toumey, former dean of the school.

At the close of the formal exercises the alumni and other guests inspected the building, reassembling at 3:30 P. M. for a program of addresses on forestry subjects by foresters of prominence in their fields. These included Earl H. Frothingham, director of the

Southern Appalachian Forest Research Station of the United States Forest Service; Professor John S. Ferguson, for many years director of forest education in the Pennsylvania State College of Agriculture and Mechanic Arts; Rufus S. Maddox, head of the State Forest Research Service in Tennessee, and Ferdinand A. Silcox, formerly of the United States Forest Service.

SCIENTIFIC NOTES AND NEWS

THE Nichols Medal of the New York Section of the American Chemical Society was presented to Professor Charles A. Kraus, of Brown University, at the Chemists' Club on March 7. Presentation addresses were made by Dr. Clarke E. Davis, Dr. F. G. Cottrell and Professor Marston T. Bogert, and Dr. Kraus made an address on "The theory of radicals as applied to modern chemistry."

A CHAPTER of Sigma Xi was installed at the University of Virginia on February 28. Professor F. K. Richtmyer, of Cornell University, president of the national society, made an address on "X-rays and the structure of the atom."

PROFESSOR MICHAEL I. PUPIN, of Columbia University, delivered the first annual Willard Gibbs memorial lecture under the auspices of the American Mathematical Society in the Engineering Societies Building, on February 29. His subject was "Coordination."

ON the evening of February 11, the seventy-seventh anniversary of the birth of Thomas A. Edison, an address in celebration of the occasion was broadcasted by L. D. Gibbs, chairman of the public speaking committee of the National Electric Light Association.

A TESTIMONIAL number of *The Boston Medical and Surgical Journal*, dedicated to Dr. John P. Sutherland, dean-emeritus of Boston University School of Medicine, has been issued. The contributors to the number are members of the faculty of the school of medicine with the exception of Dr. Murray P. Horwood, who was formerly instructor at the school and is now teaching at Massachusetts Institute of Technology. Among the faculty members whose articles appear in the number are the following: Dean Alexander S. Begg, Dr. W. H. Watters, Dr. David W. Wells, Dr. Leroy M. S. Miner, Dr. Charles T. Howard, Dr. Samuel R. Meaker, Dr. Allan Winter Rowe, Dr. Sanford B. Hooker, Dr. David L. Belding, Dr. Frederick A. Pratt, Dr. Charles H. Lawrence, Dr. Walter L. Mendenhall and Dr. Solomon C. Fuller.

THE annual general meeting of the Physical Society of London, held on February 8, was marked, as we learn from *Nature*, by the presentation to Professor