

## The Benjamin Franklin Memorial, Philadelphia

THREE days of stately ceremonies, including the unveiling of a heroic white marble statue of Benjamin Franklin, lectures on pure and applied science, a two million dollar philatelic exhibition, military and naval displays, exhibits contrasting the science of Franklin's time with that of to-day, marked the formal dedication of the Benjamin Franklin Memorial on May 19-21, at the Franklin Institute, Philadelphia, Pa.

The French Ambassador to the United States, Count René Doynel de Saint Quentin; Herbert C. Hoover, former President of the United States; Daniel C. Roper, Secretary of Commerce; George Wharton Pepper, formerly a senator of the United States; Roland S. Morris, president of the American Philosophical Society and formerly ambassador from the United States to Japan; Sir James Colquhoun Irvine, principal and vice-chancellor of the University of St. Andrews, Scotland; and Dr. Louis Martin, director of the Pasteur Institute, Paris, were among the notable figures participating in ceremonies honouring the Philadelphia printer who became a world-famed man of science and statesman.

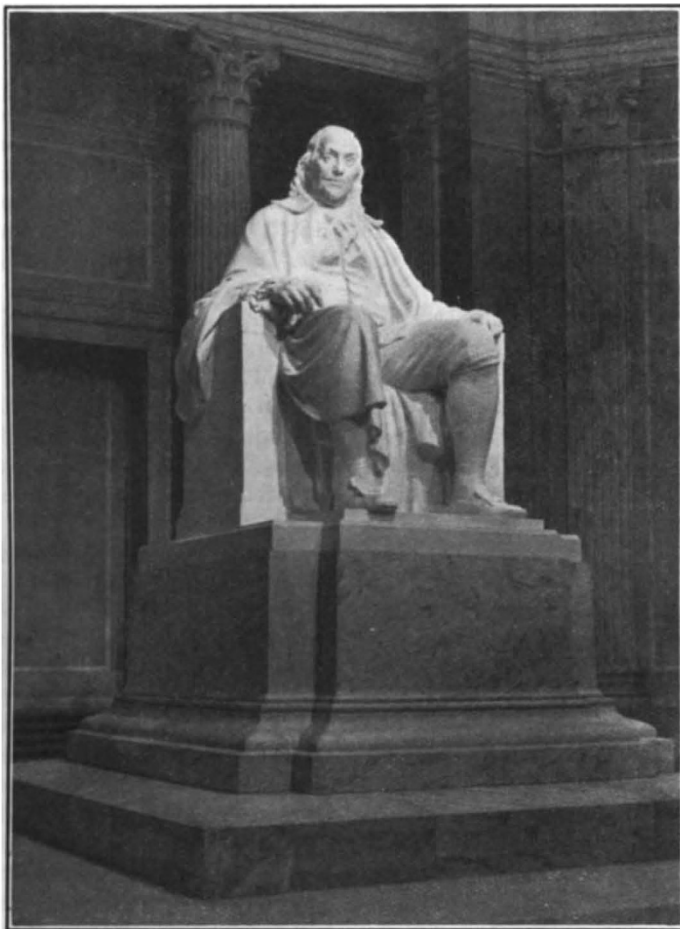
The annual award of medals by the Franklin Institute; the conferring of degrees by the University of Pennsylvania, which is the outgrowth of an academy founded by Franklin; the participation by thousands of school children in massed choruses and bands and in a colourful "Young Philadelphia Parade"; and a pilgrimage

to the new Franklin shrine by representatives of to-day's printing industry were prominent features of the dedication.

"From this time forward the Benjamin Franklin Memorial will be his [Benjamin Franklin's]

permanent home, and I extend a hearty invitation to all people everywhere to visit him and make him their friend," said Mr. Pepper in a dedicatory address.

The new 'home' of the eighteenth century sage who revealed the identity of lightning and electricity and made important investigations and discoveries in many other fields of natural philosophy, is fittingly located in a classic structure dedicated to scientific progress. In the spacious building on Benjamin Franklin Parkway in Philadelphia, the Franklin Institute, founded in 1824 and active in the promotion of science and the mechanic arts, maintains its "Wonderland of



STATUE OF BENJAMIN FRANKLIN IN THE FRANKLIN HALL, FRANKLIN INSTITUTE, PHILADELPHIA

Science" Museum, where more than 4,000 action exhibits reveal the part played by science in everyday life; and its Fels Planetarium, noted for its reproductions of the heavens. The spiritual centre of this building, and a public shrine to the memory of the great statesman and natural philosopher, is the new Franklin Memorial. There, in a lofty memorial room inspired by the Pantheon in Rome, rises the heroic statue; a seated figure in white Seravezza marble, more than twice life-size. Upon its huge pedestal of rose aurora marble from Portugal, it extends to a height of 18 feet above the floor. The sculptor, James Earle Fraser, whose



notable statues, groups and relief portraits grace many parks and public buildings throughout the United States and Canada, began work on the Franklin statue five years ago, and has described his own conception in the following words :

"A massive figure, tranquil in body, with latent power in his hands, but with an inquisitive expression in the movement of his head and the alertness of his eyes, ready to turn the full force of his keen mind on any problem that concerned life."

In a manner that would have aroused the keen interest of her famous ancestor, ten-year-old Miss Louisa Johnston Castle, of Wilmington, Delaware, a lineal descendant of Franklin, unveiled the statue by turning a searchlight upon a photo-electric cell.

In the three-day programme, Franklin was commemorated as "Patriot and Man", as "Philosopher and Educator", and as "Printer and Business Man". Special exhibits depicting the advance of science from Franklin's day to the present time, on display in the Wonderland of Science Museum, vied with lectures by noted men of science and educators of two continents in the tribute to the great American's scientific achievements. Developments in electricity were shown, from an electrical machine which Franklin once owned to a modern half-million volt surge generator producing man-made lightning. Progress in printing, 'Poor Richard's' own craft, was demonstrated from a hand-press used in Franklin's original printing shop to modern presses that print in four colours. Paper-making was performed by hand just as it was in Franklin's day, and the entire modern process from pulp to finished paper also was demonstrated on a miniature scale-model Fourdrinier paper-making machine. A replica of the "Pennsylvanian Fireplace", one of Franklin's outstanding inventions, was shown in contrast with an exhibition of the development within the last twenty years in automatic oil-heating equipment for home use.

In a notable series of lectures on pure science, given at the Franklin Institute on May 20, Sir James C. Irvine spoke on "Benjamin Franklin in Saint Andrews, 1759", Dr. C. E. K. Mees, director

of the Research Laboratory of the Eastman Kodak Company, Rochester, N. Y., who is a native of Wellingborough, England, and was educated at Harrogate and St. Dunstan's, on "Photography and the Advance of Pure Science"; Dr. Gilbert N. Lewis, dean of the College of Chemistry, University of California, Berkeley, Calif., on "Old and New Views of Acids"; Dr. George D. Birkhoff, the distinguished mathematician of Harvard University, Cambridge, Mass., on "Electricity as a Fluid"; Dr. Forest Ray Moulton, permanent secretary of the American Association for the Advancement of Science, Washington, D.C., on "The Influence of Astronomy on Science"; Dr. Arthur L. Day, formerly director of the Geophysical Laboratory, Carnegie Institution, Washington, D.C., on "Volcanoes, Geysers and Hot Springs"; Dr. Louis Martin, director of the Pasteur Institute, Paris, on "L'Hospitalisation des Maladies Contagieuses"; Dr. Thomas H. Morgan, of the California Institute of Technology, Pasadena, Calif., on "Human Heredity and Modern Genetics"; and Dr. Merritt L. Fernald, of Harvard University, on "Must All Rare Plants Suffer the Fate of *Franklinia*?"

Lectures on applied science were given at the Franklin Institute on the following day by Dr. Willis R. Whitney, vice-president in charge of research, General Electric Company, Schenectady, N.Y., who spoke on "It's Called Electricity"; Dr. Abel Wolman, professor of sanitary engineering, Johns Hopkins University, Baltimore, Md., on "The Trend of Civil Engineering since Benjamin Franklin"; and Dr. Harvey N. Davis, president of the Stevens Institute of Technology, Hoboken, N.J., on "Engineering and Health".

Delegates from leading learned societies and educational institutions of the United States and Europe were welcomed at the dedication ceremony by Philip C. Staples, president, and Dr. Henry Butler Allen, secretary and director of the Franklin Institute. Sir Albert Seward, delegate from the Royal Society of London, was in attendance with Lady Seward, and presented to the Institute a photostat copy of the certificate making Franklin a fellow of the Royal Society in 1756.

## Artificial Production of Snow Crystals

IN NATURE of August 28, 1937, p. 345, an account was given by G. Seligman of experiments carried out at the University of Hokkaido by Prof. U. Nakaya. Since that article was written, Prof. Nakaya has made considerable progress towards his aim to produce, artificially and under strictly controllable conditions, the

great variety of natural snow crystals\*. He assumes that we can trace the entire history of the fallen snow crystal from observations of its size, form and habit, and infer the physical state of

\* "Preliminary Experiments on the Artificial Production of Snow Crystals". By Ukitirō Nakaya, Isonosuke Satō and Yatarō Sekido. "Further Experiments on the Artificial Production of Snow Crystals". By Ukitirō Nakaya, Yasuaki Toda and Syūzō Maruyama. (*J. Fac. Sci., Hokkaido Univ., Series II, Vol. II, No. 1; 1938.*)