THE Henry Herbert Wills Physics Laboratory, an imposing addition to the buildings of the University of Bristol, was formally declared open on October 21, by Sir Ernest Rutherford, president of the Royal Society. The laboratory is one of the finest and best equipped in the world. It stands on the Royal Fort Estate, overlooking the city. The late Mr. H. H. Wills was the donor, his gift amounting to £200,000. The opening ceremony took place in the main lecture theater of the laboratory, and the chancellor of the university, Lord Haldane, who presided, was supported by officers of the university and academic staff and by a group of distinguished physicists who visited Bristol for the occasion. Subsequently the chancellor admitted to the degree of doctor of science *honoris causa* Professor Max Born (Göttingen), Sir William Bragg (Royal Institution, London), Professor A. S. Eddington (Cambridge), Professor Alfred Fowler (Imperial College of Science and Technology, London), Professor P. Langevin (Paris) and Sir Ernest Rutherford (Cambridge).

A FIVE years' program of scientific studies in the physical chemistry of steel making to be carried out by the Carnegie Institute of Technology, the U. S. Bureau of Mines and an advisory board of Pittsburgh steel executives and metallurgists has been launched. Twenty-six steel companies located east of the Mississippi River will cooperate in the work. Pledges of support in undertaking the research program were given by 65 representatives of the 26 cooperating steel companies at a dinner given for them and members of the advisory board by President Thomas S. Baker at the Carnegie Institute of Technology on October 19. The dinner meeting was preceded by inspection in the afternoon of the metallurgical laboratories of the Bureau of Mines and the laboratories of the department of metallurgy and the bureau of metallurgical research at the Carnegie Institute of Technology. Speakers at the meeting included Dr. Thomas S. Baker, president of the Carnegie Institute of Technology; Dr. John Johnston, director of the department of research and technology, United States Steel Corporation; Scott Turner, director, U. S. Bureau of Mines, and Dr. C. H. Herty, Jr., head of the ferrous metallurgical section of the U. S. Bureau of Mines, who gave a progress report on the cooperative research.

THE Captain Marshall Field Brazilian Expedition, which left Chicago in June, 1926, ended with the return to the Field Museum of Natural History on October 27 of Colin C. Sanborn, the last of its members to remain in the field. The zoological section of the expedition originally included in its personnel, besides Mr. Sanborn, George K. Cherrie as leader, Mrs. Marshall Field, Curzon Taylor and Karl P. Schmidt. These other members returned at various times after completing the particular branches of the work they were interested in. They obtained for the museum 4,333 specimens of mammals, birds, reptiles, amphibians, fishes, insects and other creatures. The original expedition also had a botanical division in charge of Dr. B. E. Dahlgren, acting curator of botany, and a geological division headed by Henry W. Nichols, associate curator of geology, which obtained valuable collections for those departments of the museum.

UNIVERSITY AND EDUCATIONAL NOTES

AN anonymous gift of $150,000 has been made to Princeton University for the establishment of a chair of geography to be known as the Knox Taylor professorship.

THE Harvard Medical School has been made the beneficiary of a sum amounting to $150,000 by the will of the late William A. Purrington. The bequest is made "for research work in the field of medicine, with special reference to the application of medical knowledge to the department of dentistry."

DR. ERNEST SHAW REYNOLDS has been appointed professor of plant physiology in the Henry Shaw School of Botany of Washington University and physiologist to the Missouri Botanical Garden. Dr. J. M. Greenman, curator of the herbarium, Missouri Botanical Garden, and professor of botany in Washington University, has been placed in charge of graduate work in the Henry Shaw School of Botany. Dr. Roland V. L. La Garde has been appointed research assistant on the staff of the Missouri Botanical Garden.

RALPH L. SHRINER has resigned his position as associate in research at the New York Agricultural Experiment Station, Geneva, N. Y., to accept an assistant professorship in organic chemistry at the University of Illinois.

DR. CHARLES L. SWISHER, professor of physics at North Dakota College, and Dr. John E. Pomeroy, formerly of Bethany College, have been appointed assistant professors in the department of physics at Yale University.

DR. W. F. WENNER and Dr. L. A. Brown have been appointed to assistant professorships in zoology at the State University of Iowa.

DR. MELVILLE J. HERSKOVITS, lecturer in anthropology at Columbia University, has joined the faculty of Northwestern University.

DR. J. DUESBERG, professor of anatomy at the faculty of medicine of Liége, who, during the war, served

in the Johns Hopkins Hospital at Baltimore, has been appointed rector of the University of Liége for the period 1927–1930.

PROFESSOR H. VILLAT, of the University of Strasbourg, has been appointed to the newly established chair of the mechanics of fluids at the Sorbonne.

DISCUSSION AND CORRESPONDENCE

THE TILDEN METEOR, AN ILLINOIS DAYLIGHT FALL

ON the afternoon of July 13, 1927, at about 1:00 P. M. central standard time, a stony meteor, hereafter referred to as the Tilden meteor, fell near Tilden, Illinois, about forty-five miles southeast of St. Louis, Missouri. The meteor fell in an area roughly two by seven miles, and four stones have been recovered, three of which weigh, respectively, one hundred and ten, forty-six, and nine pounds. The fourth is a small piece weighing a fraction of a pound.

The meteor came from the southeast, its path being inclined at an angle of perhaps fifty degrees to the horizontal, and with a velocity equal to, or slightly in excess of, the parabolic. Its brilliancy was such that at a distance of more than a hundred miles it appeared as "a piece falling off the sun." At a height of fifteen or twenty miles it burst, showing green and then purple, and after a second bursting was invisible to persons at a distance. A cloud of smoke was visible near the point of fall, but the falling pieces quickly had their velocity reduced so that they were no longer luminous by daylight, and only one piece was actually seen while falling. It was seen as "a dark streak, like smoke, for an instant."

The sky was partly cloudy in the vicinity of the fall, so few there saw anything, although nearly every one was looking, after the house-shaking blasts of the detonations. Following the detonations a roar like a tornado, or an earthquake, rolled to the southeast and died away in the distance. The meteor travelled with a velocity greater than that of sound, so the roar from the more distant portions of the path was heard after the detonations of the bursting in the nearer portion. This helped in evaluating the stories of the few who saw anything, for every one heard the sound rolling toward the southeast and assumed the meteor was travelling in that direction. The stones were actually seen to fall, and the smoke to roll, in the opposite direction.

The falling stones made a hum like an airplane flying high. The two larger stones could both be heard over considerable territory and at one place five men were out in a group straining their eyes to see an aviator who "flew over and passed out of hearing in the northwest, then came back flying much lower and landed a little to the north of the group."

The three larger pieces were heard to strike, the largest a few seconds after the blasts, the forty-six-pound piece "perhaps three minutes after," and for the nine-pound piece we have two careful estimates, "three to five minutes" and "five to eight minutes." The fact that for even the largest stone the thud of striking the earth was heard after the detonations of the bursting meteor shows that the average velocity of the fall from the point of bursting to the earth must have been less than the velocity of sound. Since the velocity of this meteor was twenty-five to thirty miles per second in the upper atmosphere, and sound travels at the comparatively leisurely rate of a mile in some five seconds, we have a striking illustration of the tremendous resistance of the lower atmosphere to bodies travelling at high velocities.

The soil of the territory is rather a stiff clay, and it was very hard because of no rain for weeks. The largest piece struck on the edge of a field of cow-peas, and went down three feet ten inches. The forty-six-pound piece went down fifteen inches in a clover pasture. The nine-pound piece went down five inches in grass in a back yard, and the small piece was found lying on a lawn. The fall was nearly vertical at the last, the largest stone departing about six inches from the vertical in penetrating three feet ten inches. The impact in no case noticeably scattered the soil; the holes were simply driven into the ground. The nine-pound stone was easily lifted out of the hole. For the forty-six-pound piece a little digging with a pocket knife was necessary; and the removal of the one hundred and ten-pound stone required two hours' hard work for two men with spade, pick and crowbar. It was wedged "as if it were set in concrete."

The meteorites are composed of a light gray stone, and show small silvery globular aggregates, presumably of nickel-iron. The surfaces show typical pittings and a typical black crust, being blackened and pitted in fairly uniform fashion. From a preliminary study of the literature available, this fall appears to be the first recorded from the state of Illinois, and the one hundred and ten-pound stone ranks among the largest seen to fall and preserved reasonably intact. Plaster casts will be made of the larger stones of this fall.

It should be said that the information in this note was obtained by personal interview, the writer visiting people, not only in the vicinity of the fall, but more than a hundred miles from that point.

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ETIOLOGY OF EUROPEAN FOUL-BROOD OF BEES

SINCE Cheshire and Cheyne investigated the cause of foul-brood of bees in England and attributed the