books depended largely upon the almost incessant travel in which his summer vacations and sabbatical years were spent. In every state in the union, in most of the countries of Europe, in the West Indies and Central America, in Greenland, in Spitzenbergen, in Alaska, Professor Tarr studied. For he traveled not as a sightseer but as a student, as one who would learn the secrets of nature that he might impart them to others. Work and service. These were the keynotes of his life.

The window which has just been unveiled on the south side of Sage Chapel is typical of Professor Tarr's life of work and service. It represents the valley of a river. In the background rise the mountains, capped by the eternal snows, perhaps containing, in their valleys, glaciers such as Professor Tarr made his especial study. Here is the source of the river, which flows steadily because it is fed by the rain and by the melting snow of the mountains, the pure snow which typifies the innocence of youth.

In the middle distance the river is flowing through a broad, open valley, a valley which has been made by the river itself, a valley which, by the erosive action of the stream, is being made broader and therefore more suitable for habitation by man. The river must widen and deepen its valley, it must carry away the material which is here an encumbrance, but which the river will later deposit on the lower land where it will be of most use to man.

In the foreground the river is in a narrow gorge. This stream has encountered a temporary obstacle in its course. To remove this it uses the very material which it is carrying forward to the sea. Soon it will widen the gorge into an open valley like that of the middle distance. Work is necessary in accomplishing this, hard work in order that the valley may have gently-sloping walls upon which man may plant his fields and in order that the stream bed may slope gently so that the river may do its service in carrying the products of the fields to the markets and towns.

Now most rivers also have lower courses, places where there are broad floodplains and deltas, where the river has deposited rich soil, carried down from the mountains, where the river flows slowly, its hard work nearly done. As in the life of rivers with hurried course and hardest tasks in the youthful section near the mountains, and leisurely current and little work near the mouth, where the river terminates in the all-embracing ocean, so with man. Only in the case of Professor Tarr the river which typifies his life shows no leisurely old age. You will recall that he died on March 21, 1912, at the age of forty-eight. His was a life of hard work, of toil and service. But although he was not permitted to enjoy the years of less strenuous labor, the effort was not in vain. We, his relatives and friends and students, will profit largely, throughout the years to come, by the work which he has placed at our service.

May this memorial window which I now, on behalf of Mrs. Tarr, present to Cornell University ever recall the memory of the work and service to others that was performed here by Ralph Stockman Tarr.

SCIENTIFIC NOTES AND NEWS

At the semi-centennial celebration of the National Academy of Sciences to be held next week, the medals and prizes of the academy will be presented by the president of the United States. The first award of the Comstock prize, of the value of $1,500, will be to Professor R. A. Millikan, of the University of Chicago, for his researches on the charge of the electron, the ratio of electric charge to mass and gaseous ionization. The Henry Draper medal has been awarded to M. Henri Deslandres, director of the Astrophysical Observatory at Meudon, for his researches in solar and stellar physics.

The Henry Phipps Psychiatric Clinic, of the Johns Hopkins Hospital, established and erected by Mr. Henry Phipps, of New York, to promote the study of mental disease and its early treatment, was dedicated on April 16, and the exercises will continue during the two following days. Addresses were announced

by Sir William Osler, Professor W. MacDougall, Professor E. Bleuler, Dr. F. W. Mott, Professor O. Rossi, Professor Heilbronner, Dr. Achucarro and a number of leading American psychiatrists, including Professor A. Meyer, the director of the clinic.

THE first lecture on the Joseph Leidy Memorial Foundation was delivered at the University of Pennsylvania on April 17 by Professor Edmund Beecher Wilson, Columbia University. A tribute was paid, on this occasion, to the life and services of Joseph Leidy, the student, teacher and investigator, by Professor Charles Sedgwick Minot, Harvard University.

A MEETING in commemoration of the life and work of the late Dr. John Shaw Billings, late director of the New York Public Library, will be held in the library building on April 25.

KING VICTOR EMMANUEL presided on March 27 at the inauguration of the International Geographical Congress, Rome.

THE National Geographic Society has voted $20,000 to the Norwegian Polar Expedition, which will leave the Pacific coast under command of Captain Roald Amundsen in June, 1914, to explore the polar basin. The voyage, it is expected, will require four years' drifting in the polar ice.

DR. DAVID SHARP, Lawnside, Brockenhurst, Hants, England, and Dr. J. H. Fabre, Serignan, Vancluse, France, were chosen on April 3 as the first two honorary members of the Entomological Society of Washington. The Entomological Society of Washington may elect ten honorary members from among foreign entomologists.

WE regret to learn that Professor Willet M. Hays, assistant secretary of agriculture, under the Roosevelt and Taft administrations and formerly professor of agriculture in the University of Minnesota, is suffering a serious nervous breakdown and is taking treatment at a sanitarium near Washington. Professor Hays had recently accepted a commission from the government of Argentina to reorganize the rural educational system of that republic, but his illness will make it impossible to assume the duties.

DR. L. A. BAUER sails from New York on April 22, to be gone for about two months, in order to arrange for cooperative magnetic work between the Department of Terrestrial Magnetism and various foreign institutions. On May 22 he will deliver the Halley lecture on "Terrestrial Magnetism" at the University of Oxford.

PROFESSOR H. T. BARNES, of McGill University, will accompany the government steamer *Montcalme* to patrol the entrance of the Gulf of St. Lawrence, to report the presence of icebergs. Professor Barnes will use his microthermometer to detect the presence of ice.

PROFESSOR H. T. FERNALD, of the Massachusetts Agricultural College, sails for Europe the last of April, for study in various European museums. He will return about the middle of September.

A JAPANESE translation of "The Elements of Statistics," by Wilford I. King, of the economics department of the University of Wisconsin, has been made. The book has just passed through its second English edition.

DR. LAFAYETTE B. MENDEL, professor of physiological chemistry in the Sheffield Scientific School of Yale University, addressed the students of the Pratt Institute in Brooklyn, on April 11 on "Nutrition and Growth."

ON April 7, before the Southern California Academy of Sciences, Los Angeles, Dr. D. T. MacDougall, director of the department of botanical research of the Carnegie Institution, delivered an address on "Some Physical and Biological Features of American Deserts."

DR. H. L. FAIRCHILD, professor of geology in the University of Rochester, delivered a lecture at Syracuse University under the auspices of the Syracuse Chapter of Sigma Xi, on the evening of April 11. He took for his subject "Remarkable Glacial Drainage Features about Syracuse."

PRESIDENT CHARLES R. VAN HISE, of the University of Wisconsin, delivered an address on "Waste in Distribution" before the first

National Conference on Marketing and Farm Credits, held in Chicago on April 8.

The New York Academy of Sciences will hold a reception on April 21, when an illustrated lecture will be given by Professor Bergen Davis, of Columbia University, on "Electricity as Revealed by its Passage through Gases." The lecture will be followed by a reception.

Oscar Dana Allen, whose death has been noted in Science, was born in Maine in 1836. In 1871 he was elected professor of metallurgy in the Sheffield Scientific School of Yale University. In 1874 he was also made professor of analytical chemistry. Prolonged ill health obliged him to resign these two positions in 1887, when he moved to California for four years. After that he lived at what is now called Ashford, a remote place situated at the base of Mount Ranier in Washington. There he devoted himself to horticulture, botany and biology, making the flora of the mountain near which he lived his special study.

Dr. Bela Lengyel, professor of chemistry at Budapesth, has died at the age of fifty-nine years.

Dr. Eduard Schmitt, formerly professor of engineering in the Darmstadt Technical School, has died at the age of seventy-one years.

A site of about seven acres, in the District of Columbia and near Rock Creek Park, has been purchased by the Carnegie Institution of Washington to provide the necessary facilities for the office and experimental work of the Department of Terestrial Magnetism. The building to be erected is to embrace the office, laboratory and instrument shop; according to present expectations, it will be ready for occupancy early in 1914.

The magnetic survey yacht *Carnegie* left St. Helena on April 9, bound for Bahia, and is expected to return to her home port at the end of the year, thus completing the three years' circumnavigation cruise. On the trip from Coronel, Chile, to Port Stanley, Falkland Islands, made in December and January last, she encountered an exceptionally smooth passage in rounding the Horn. However, on her run from the Falkland Islands to St. Helena, February 22 to April 3, twenty-three icebergs were sighted. The vessel is in command, as heretofore, of Mr. W. J. Peters.

The annual report of the National Academy of Sciences shows that appropriations from the Bache fund amounting to $2,000 were made as follows:

J. A. Parkhurst, Yerkes Observatory, Williams Bay, Wis., for the determination by photographic methods of the visual and photographic magnitudes and the spectral types of faint stars, $500.

M. A. Rosanoff, Clark University, Worcester, Mass., for the determination of the several factors that influence the velocity of sugar hydrolysis, $500.

S. C. Chandler, Wellesley Hills, Mass., for the definitive discussion of the latitude variation from 1725 to the present time, $350.

F. B. Sumner, additional grant for the continuation of experiments on the effects of external conditions on growing white mice, $150.

T. A. Mann, Concord, N. H., for the determination of the cause and mode of spread of septic sore throat, $100.

S. F. Acree, Johns Hopkins University, Baltimore, Md., for the completion of the study of the action of alkyl halides on sodium phenolate, $500.

E. H. Hall, Harvard University, for the study of the electromagnetic and thermomagnetic behavior of metals, $500.

One of the last official acts of President Taft was the signing of a proclamation eliminating 41,150 acres from the Kansas National Forest. The tract eliminated is in the extreme western section of the forest, and includes all that part which lies west of the fifth guide meridian. It is principally a sandhill country and while it could be reforested, there is such a large proportion of alienated or privately owned land within the forest boundaries that the government's reforestation work would have to be confined to more or less isolated areas. Since the area is valuable for grazing, its restoration to the public domain was deemed advisable. At the same time that the land was eliminated from the forest it was withdrawn from entry, under the authority which congress has given the

president to withdraw land from all forms of entry except as to mineral claims for the development of metalliferous ores. The land will be restored to settlement and entry after such advertisement in the local papers as the secretary of the interior may consider necessary. The Forest Service is successfully reforesting a considerable area in the sandhills of Nebraska and Kansas, where the soil is so loose in texture that it blows away as soon as it is cultivated. Therefore, according to the government's foresters, the problem has been to grow trees in competition with the native grasses, both making rival demands on the small amount of moisture. If the grass cover is removed the soil blows out completely and exposes the roots of the trees. The success already attained indicates, in the judgment of the government foresters, that a large part of the sandhill country will become timber-producing.

THE quantity of briquetted fuel manufactured in the United States in 1912 showed a small gain over the output for 1911, and according to E. W. Parker, of the United States Geological Survey, the briquet industry may be considered as now passing out of the experimental stage and assuming a more substantial and permanent character. The quantity of briquetted fuel made in 1912, at 19 plants, was 220,064 short tons, valued at $952,-261, as compared with 218,443 tons valued at $808,721 in 1911. Of these plants 7 used anthracite culm, 9 used bituminous or semi-bituminous slack, 1 used residue from gas manufactured from oil, 1 used mixed anthracite culm and bituminous slack, and 1 used peat. The largest producer of briquets in the United States in 1912 was the Berwind Fuel Company, of Superior, Wis., the output of which was a little in excess of 50,000 short tons. The quantity of raw material available for the manufacture of briquets, as stated by Mr. Parker, is ample and may be obtained at slight cost. The most desirable material for producing a smokeless product is anthracite culm, a plentiful supply of which still remains in the anthracite region of Pennsylvania and more is produced daily in the mining operations. It is not too much to believe or to hope that in the near future the small sizes of anthracite, such as buckwheat and smaller, that are now sold for making steam, in competition with bituminous coal and at prices below the actual cost of production, will become more valuable as a raw material for the briquet manufacturer. The output of these small sizes, produced by breaking up large coal to obtain the domestic grades—egg, stove and nut—exceeds 20,000,000 long tons annually, exclusive of 3,000,000 to 4,000,000 tons annually recovered from the culm banks by washeries. The present revenue from this product will not exceed $30,000,000. Washery and small size coal is worth from 50 cents to $1.50 a ton, the price depending on the size. As briquetted fuel it should be worth as much as stove or egg coal, or $3 to $4 per ton. The cost of briquetting is $1 to $1.25 per ton. The uniform size of the briquets makes them desirable as a domestic fuel; besides if properly made they are completely consumed and do not produce clinkers.

UNIVERSITY AND EDUCATIONAL NEWS

PRINCETON UNIVERSITY has received three gifts: $100,000 from Mr. and Mrs. Russell W. Moore, of New York City, to endow a professorship of chemistry; $125,000 given anonymously for a professorship not named, and $30,000 from Mr. John D. Cadawallader, of New York City. About $70,000 were received for current expenses.

THE decision of the jury in the case of the will of Mr. C. H. Pratt being in its favor, the Massachusetts Institute of Technology will receive the bequest, amounting to three quarters of a million dollars, to be devoted to the establishment of a Pratt School of Naval Architecture and Marine Engineering. The requirement that the money actually in hand shall be held by the trustees till it amounts to the specified sum will not cause any delay, since the estate has proved to be of such value as to lack only a few thousand dollars, and will be of the requisite amount by the time the institute is ready to use it.