ALFRED HULSE BROOKS[1]

JULY 18, 1871–November 22, 1924: Not a long life as we count years, but a rich life as we weigh results.

Born in Michigan, Alfred Brooks spent his youth in New York, Georgia and Germany. His seventeenth birthday found him already doing field work as a topographic assistant in the United States Geological Survey, and on his graduation from Harvard he was appointed an assistant geologist, one of that group of Harvard graduates who brought so much of strength and enthusiasm to the Survey in the early 90's.

The one word that best describes Alfred Brooks is loyal: he was loyal to those he loved—his family and his friends; he was loyal to his science and to the organization of which he was a member for thirty years; he was loyal to his chosen field of activity and to his country. This unswerving allegiance, the outstanding trait of the man, translated itself into abiding friendships, devoted service and effective patriotism.

Among his associates Alfred Brooks made friends and kept them. He was honored and admired the whole length and breadth of Alaska; his fellow geologists can testify to the high regard in which those who knew him longest and best will hold his memory. He was the associate to whom I, like others, turned most frequently for wise counsel and frank criticism.

As a geologist, Alfred Brooks sought his ideals in his own way. He had a genius for truth, and his loyalty to scientific truth made pretense impossible, although his unfailing humor often concealed his real contempt for any effort to make science appear what it is not. His service to pure science was not a lip service.

His loyalty to the United States Geological Survey differed not in quality from that to his family, his friends and his science. He gave his best, without stint and at sacrifice of health. His spirit as a worker was to give without thought of return; the unselfishness of his service is well shown by the fact that although the scientific leadership of the Geological Survey, the position of chief geologist, was twice offered to him, each time, while expressing his willingness to obey orders, he urged the selection of another as better fitted for that leadership and asked that he might continue his Alaskan work.

No other public official, probably, has had the satisfaction of seeing the country he served develop as did Alaska in the quarter of a century that Geologist Brooks was in charge of the work there. And he was far more than a witness of that growth, he was the one man who contributed most to it. Twenty-four times he made the trip to Alaska, not only as geologist-explorer and administrator of scientific work but also, in 1912 and 1913, as vice-chairman of the Alaska Railroad Commission.

All these years Brooks of Alaska—to give him the name he earned—served this outpost territory as the tireless collector of facts, as the ever-ready source of authoritative information (though never as the propagandist), and above all as the man with an intensely practical vision of the Alaska that is to be. When stricken at his office desk he had just completed, for presentation before the Brooklyn Institute on the following evening, an inspiring address on "The future of Alaska." No man saw that future with clearer vision, no man had a firmer faith in that future, no man did more to lay a sure foundation for that future than Alfred Brooks.

But his loyalty to the Geological Survey and to Alaska was only an expression of his intense devotion to his country. It was America that he loved most and that he invested with high ideals, and he inherited his ideals in both science and patriotism from his father, Major Thomas Benton Brooks, geologist and Union soldier. The military history of his country had been a special study of Alfred Brooks, and it was not a mere passing interest that led to the transmittal in May, 1915, of the Brooks memorandum on a plan for creating a professional reserve corps—a plan which was immediately made the subject of study at the Army War College. Two years later the opportunity came for the second Major Brooks to contribute personally to the military efficiency of his country by putting his engineering ability into service at General Headquarters in France, where from September, 1917, to February, 1919, he acted as chief geologist of the American Expeditionary Forces, receiving the rank of lieutenant colonel in October, 1918. With him, as with so many other true Americans, the well-ordered routine of a career counted for little at that time of stress: his country needed different service, and this he gave without hesitation. Above all else Colonel Brooks was loyal to America.

On the completion of 25 years of federal service a congratulatory telegram was sent to Brooks, then in Alaska. His characteristic reply, from which I quote in closing this memorial, tells lightly yet seriously and modestly of his life work. Those who knew him well can read much between those lines written from Anchorage in August, 1919:

> Were the day clear I could see Mt. McKinley from the window. As I picture in my mind its stupendous height, I compare it to our science. Many have assailed its flanks; some have proclaimed untruths about it; some have climbed by great effort well up the slopes; a very

[1] Presented at the meeting of the Geological Society of America at Ithaca, on December 29, 1924.

few, the best by natural selection, have reached the summit and there attained the broad vision denied those at lower altitudes. As for me, I am satisfied to have been able to traverse the great lowland to the base, and to climb the foothills.

GEORGE OTIS SMITH
U. S. GEOLOGICAL SURVEY

SCIENTIFIC EVENTS

APPLIED SCIENCE AT THE UNIVERSITY OF BRUSSELS[1]

THE highly successful celebrations in connection with the fiftieth anniversary of the founding of the Applied Science School of the University of Brussels were held in the latter half of November, and were attended by the King of the Belgians, who received the foreign delegates, and also by the Duke of Brabant, who laid the foundation stone of a new building which will continue the development of the university. The city of Brussels and private donors have contributed largely to this scheme, as also the American Committee for the Relief of Belgium, Great progress has been made in the buildings for pure and applied science at Solbosch, on the outskirts of Brussels, where, with ample space at disposal, it has been possible to erect a very fine block of buildings in the form of a hollow square.

Physics and chemistry are very well housed and equipped, and especial care has been taken to provide a number of small rooms for research work. The electrical engineering laboratories are remarkably well planned, and especially so as regards the arrangement of their numerous power circuits, which are carried round the walls below the windows and are protected by wire grillages. These circuits are connected to a number of panel units also completely enclosed and provided with the usual resistances, switch gear and measuring instruments all connected up in such a manner that students can readily trace out the various circuits, to which access is gained by numerous doors.

The main laboratory for investigating the strength and other physical properties of materials is chiefly notable for a fine equipment of Amsler testing machines housed in a spacious room provided with an overhead crane, and there are also a considerable number of accessory instruments for measurement and calibration work. A special photo-elastic laboratory is also arranged for in connection with this department.

The laboratories for technical thermodynamics and hydraulics are now in course of equipment and are on a large scale typical of continental views of such matters, and, like the other laboratories, have well-lighted basements with considerable head room, an arrangement which is especially convenient for steam plants and machinery dealing with the flow of liquids.

In connection with the celebrations, a number of scientific and technical addresses were given, and numerous other functions were arranged by the government, the university and the civic authorities.

[1] From *Nature*.

ANNUAL EXHIBITION AT THE CARNEGIE INSTITUTION OF WASHINGTON

THE annual exhibition of the results of recent research activities of the Carnegie Institution of Washington was opened to the public for a few days beginning December 13. The exhibits were also retained intact in the administration building of the institution throughout the Washington meetings of the American Association for the Advancement of Science as a part of the exhibit program of the local committee of the association.

In this exhibition no attempt was made to include materials representative of all research work of the institution, but effort was directed toward presentation of a visual story of major research accomplishments of the past year. In this way it is hoped that recurrent exhibits may illustrate the latest results of continued research as an aid in the dissemination of information concerning progress of work of the institution, and may serve as a stimulating means to more effective cooperation among investigators connected with the institution and with other research organizations.

The success of the exhibition was due largely to demonstration and explanation by the scientists whose work was represented, or by qualified attendants. Attention may be directed to the following exhibits which related especially to the results of most recently undertaken investigations:

Demonstration of a new modification of respiration apparatus to determine the heat of combustion or the energy in different kinds of food. This apparatus was demonstrated by Dr. F. G. Benedict and Mr. E. L. Fox of the Nutrition Laboratory.

Dr. A. H. Schulz, of the department of embryology, exhibited some interesting charts showing variability in human body proportions in illustration of his conclusion that environment plays very little part in such development.

The Geophysical Laboratory, Dr. A. L. Day, director, presented a model composition of the earth, a new microscope furnace for use with high magnification, a new model illustrating sinking of crystals in a laboratory crucible and in natural molten rock, a spectrographic method for determination of metallic constituents in volcanic materials, and a new gravity balance recently devised by Dr. F. E. Wright.