ing part of their time are otherwise engaged in the Zeiss Works. Full notes were made concerning the apparatus, its installation, its demonstration and its adaptation to our astronomical hall at the American Museum.

In early September eleven of these planetaria had been sold to cities in Germany, and negotiations were in progress with other cities of Europe. Within a few days they expected to close a contract with Vienna. One of the planetaria in the process of building was seen and photographed in Prinzessinen Park in Jena. In this the dome is twenty-five meters, or a little over seventy-five feet in diameter, almost exactly the same diameter as the dome planned for our astronomical hall. In the one at Düsseldorf the dome will be thirty meters or over ninety feet in diameter. For projectional reasons this is considered the maximum limit in size.

Having read an enthusiastic description of the apparatus and on account of the confidence inspired by the fact that it was made by the Carl Zeiss Optical Works at Jena, I approached this investigation with a tendency toward a favorable consideration. Determining, however, to hold this feeling in check and to approach the matter with an open mind, I made the examination with care and thoroughness. As a result I am enthusiastically in favor of securing a Zeiss Projection Planetarium for our new astronomical hall. Judging from the experience at Jena and at Munich I believe it will attract more people to the museum than anything we have ever had here. When it becomes more widely known it is sure to come to America. May the first one come to the American Museum of Natural History!

G. CLYDE FISHER

AMERICAN MUSEUM OF NATURAL HISTORY

EDWARD FULLER HOLDEN[1]

WHILE on a vacation trip with his family, parents and friends, Edward Fuller Holden was drowned at North Deer Isle, Maine, August 5, 1925. In the tragic death of Dr. Holden the department of mineralogy of the University of Michigan lost a valuable member of its staff and the science of mineralogy an energetic investigator with unusual promise for splendid achievement. Dr. Holden is survived by his widow, Beatrice M. Holden, and three small sons.

Edward Fuller Holden was born at Woonsocket, Rhode Island, August 28, 1901, where his father, Amasa Amidon Holden, was principal of the high school. His mother, Mary Barnes Holden, is a direct descendant of Edward Fuller, of the Mayflower group. Dr. Holden's early training was obtained in the schools of Woonsocket, and of York, Pennsylvania, where the family removed in 1913. After completing the high-school course in the latter city, Dr. Holden entered the Pennsylvania State College in January, 1918, where he enrolled as a student of mining engineering. His unbounded energy and exceptional ability as a student permitted him to complete the high school and college courses in seven years. He received the degree of bachelor of science from the Pennsylvania State College in 1921. His advanced degrees were conferred by the University of Michigan, the degree of master of science in 1923 and that of doctor of philosophy in 1925.

At an early age Dr. Holden evidenced great interest in minerals, which was stimulated by a course in general science pursued in the eighth grade. Throughout his high-school course this enthusiasm developed to such an extent that before entering college he submitted for publication in the *American Mineralogist* a short paper on the occurrence of quartz crystals. As an undergraduate student Dr. Holden decided upon a career in mineralogy and accordingly chose his studies with that goal in view. His ability as an investigator now began to manifest itself and by the time he received the baccalaureate degree he had prepared six papers on mineralogical topics which appeared in the *American Mineralogist*. From the autumn of 1921 until his death Dr. Holden held the position of instructor in mineralogy and during this period earned his graduate degrees.

While a student at the Pennsylvania State College Dr. Holden became interested in the cause of color in minerals, and to this problem he devoted much of his time at the University of Michigan, making notable contributions to its solution. His papers on the cause of color in rose quartz, smoky quartz and amethyst established a new standard for publications in this field. Dr. Holden's thorough training in the various phases of mineralogy and in chemistry and physics permitted him to approach this problem from several standpoints, as had not been the case with many of the earlier investigators of this subject. His paper on the pigmentation of amethyst was awarded the Walker prize for 1925 by the Boston Society of Natural History and was adjudged as being of unusual merit. Had Dr. Holden been spared to continue his researches he would have undoubtedly contributed much toward clarifying the perplexing problem of the cause of color in minerals. At the time of his death Dr. Holden had published sixteen papers and in addition had collaborated with me in the preparation of a text-book on "Gems and Gem Materials," which was published shortly after his death.

In 1921 Dr. Holden began abstracting papers on

[1] Presented before the Mineralogical Society of America, at New Haven, Conn., December 29, 1925.

mineralogical and geological subjects for *Chemical Abstracts* and in 1922 became associate editor of that division of the journal. He also contributed numerous abstracts to the *American Mineralogist* and the *Revue de Géologie*. In all he prepared over twelve hundred abstracts for these publications, in addition to several book reviews. In 1923 he was also appointed associate editor of the *American Mineralogist*.

Dr. Holden attended the organization meeting of the Mineralogical Society of America in December, 1919, and became a charter member. In 1922 he was elected to fellowship in the society. He was also a fellow of the American Association for the Advancement of Science and a member of the Michigan Academy of Science and of the Junior Research Club of the University of Michigan. He also held membership in the Tau Beta Pi, Phi Kappa Phi and Sigma Xi societies.

The intense scholarly activity and splendid scientific achievement of this short life of twenty-four years will remain an exceptional record in the history of American mineralogy.

EDWARD H. KRAUS

MINERALOGICAL LABORATORY,
UNIVERSITY OF MICHIGAN

SCIENTIFIC EVENTS

THE MERGER OF THE ARMOUR INSTITUTE OF TECHNOLOGY WITH NORTHWESTERN UNIVERSITY

FORMAL steps toward the merger of Armour Institute of Technology with Northwestern University were taken on January 9, when the trustees of the two institutions signed contracts detailing the affiliation plan.

The plan includes the raising of a $10,000,000 endowment fund; erection on Northwestern University's Evanston campus of 10 new dormitories for men at an estimated cost of $80,000 each; expansion to three times its size of the Swift hall of engineering at Northwestern; construction of one addition to machinery hall; construction of two new science buildings and the erection of one machinery hall on Northwestern's downtown campus to accommodate between 800 to 1,000 part-time students.

The new engineering school will be known as the Armour College of Engineering of Northwestern University. The retention of the Armour name is in memory of Philip D. Armour, whose initial contribution of $1,000,000 in 1893 founded the Armour Institute.

The plan assumes that the Chicago Art Institute will continue to house the Armour School of Architecture. Pointing to the need for a great college of engineering and architecture, Dr. Howard M. Raymond, president of the Armour Institute of Technology, said:

> It seems justly logical that a union with Northwestern University should result in a greater educational efficiency and an ability for public service such as could never be attained by either as they exist to-day.

President Walter Dill Scott, of Northwestern University, said:

> Chicago's motto is "I will." The men behind this fine plan are among the leaders of this great center. They represent that spirit. I think that answers the question—can this worthy thing be done?
>
> The fast-growing population of the Mississippi Valley is causing constant expansion and enlargement of the facilities for supplying electricity, gas, street cars and related utilities. With the existing limited facilities for training engineers, competent ones can not be graduated rapidly enough to meet the demand.
>
> Mr. Insull visualizes for Chicago the finest school of engineering in the middle west, if not in the country. He is a man of foresight and his cordial endorsement of our plans has encouraged Armour Institute and Northwestern to approach the merger with greater confidence.

THE NEW YORK ZOOLOGICAL SOCIETY

THE executive committee of the New York Zoological Society has submitted a report to the board of managers covering the period June 20, 1925, to October 15, 1925:

On January 29, 1925, the appropriation for the alteration of the aquarium became available and contracts amounting to $33,818 have been awarded and work has been commenced. The contracts call for the completion of the interior and for a coat of stucco on the exterior, but the appropriation is insufficient to provide for a parapet on top of the wall, which is much needed for the appearance of the building and must be added later.

On July 31, an appropriation of $24,000 became available for the substitution of a copper roof for the present polychrome tiles on the dome and flat roofs of the elephant house. Contracts will be shortly awarded, but the work can not be commenced until early next spring. An appropriation of $32,000 was made for much needed improvements and repairs at the park. This work is now under way. The chief repairs consist of: Repairs to the smaller buildings, reconstruction of the blacksmith shop, new boundary fence, replacement of wornout water lines and repaving the Concourse.

On September 30, the balance to the credit of the several funds of the society amounted to $66,681.80.

The attendance at the park from June 15, 1925, to October 16, 1925, was 1,171,457, while the attend-