tributions to that phase of the history of science which goes to make this subject interesting and fascinating. The labor and excellent arrangement of these beautiful memorials was carried out under the personal direction of Dr. David Eugene Smith. From Dr. Smith's private collection came 125 of the most exquisite and beautiful portrait prints of Newton, of various ages and painters; also 25 medals of about that many engravers and also the largest assortment of letters and autographed documents. Dr. Smith loaned also over 40 various editions of Newton's "Principia," "Opticks," "Fluxions," "Universal Arithmetics," as well as essays on Newton's life and work.

Besides the Newton material from this same private collection came portraits and autographed letters of Halley, Barrows, Cotes, Wren, Wallis, Huyghens, Cassini, all friends and coworkers of Newton. There were also exhibited portraits of Flamsted, Leibnitz, Descartes, Bernoullis, Wolf, Gauss, LaPlace, Gassendi, Pascal, Kepler, Galileo and Copernicus. Most interesting probably was a collection of letters from Leibnitz to Newton with notes in Newton's handwriting. This copy of bound letters was from Newton's private library. Another collection of letters to Newton came from four generations of astronomers royal of France, the Cassini family, to whom Newton was indebted for his data on the size of the earth. From the Babson Institute, Wellesley, came also a magnificent collection of 36 items representing the various editions of Newton's work, the most interesting and valuable being a copy of the first edition of the "Principia Mathematica," 1687, and the reissue of the same book. The first item contained notes and corrections in Newton's own handwriting. Copies of the 1713 edition of "Principia," edited by Cotes, with an enlarged chapter on the "Lunar Theory and of Comets," and the 1726 edition edited by Pemberton, the last published during Newton's lifetime. There was also a copy of Newton's "Opticks," 2nd edition, with notes in his handwriting. All these contained Newton's book-plate and autograph, showing they were from his private library. Besides a collection of portrait prints of Newton, a cast of the sun-dial as well as of his inscription cut on the window sill of the Grantham grammar school made by the boy Newton.

From Mr. George A. Plimpton's (New York) great collection of rare arithmetics came 12 items of Newtonian collected works, as well as single volumes. One item was Newton's copy of a journal with his signature and numerous notes.

Through the courtesy of Dr. A. Koegh, librarian of Yale University, were loaned two books by Newton which have more than passing interest. A copy of the "Principia," 1713 edition, and of the "Opticks," 1706 edition, were presented to the colonial college in New Haven in 1714 by Sir Isaac himself.

Through the courtesy of Dr. L. C. Newell, of Boston University, Dr. S. Brodetsky, Leeds University and Grantham Public Library, came an interesting collection of prints, pamphlets and newspapers giving an elaborate account of the Newton birthplace, of his boyhood and of the bicentenary celebration at Grantham on March 20, 1927.

Six interesting photostat copies of various leaves of a precious commonplace note-book of Newton when a boy of seventeen years were exhibited. The original note-book is in the Pierpont Morgan Library, New York.

Mr. James Stokley, of Science Service, exhibited a copy of Riccioli's Almagestum Novum which came from Newton's library with his annotations, and Dr. Florian Cajori, University of California, exhibited single special items bearing upon Newton's religious writings.

Following are the members of the committee on arrangements: Dr. Lao G. Simons, *Chairman*, Hunter College; Dr. Vera Sanford, The Lincoln School; Miss Frances M. Clark, Teachers College; Miss Helen Walker, Teachers College; Dr. Lester S. Hill, Hunter College, and Mr. John A. Swenson, Wadleigh High School.

FREDERICK E. BRASCH,
Secretary

LIBRARY OF CONGRESS,
WASHINGTON, D. C.

FRANK W. VERY

SUPPLEMENTING the excellent article by H. H. Clayton, in a recent number of SCIENCE, concerning the passing of Professor Frank W. Very, may I be permitted the privilege of adding the sincere tribute of one of his former pupils?

From 1885 until 1895 it was the great privilege of the writer to be associated with Professor Very in the class room and in the field. Every Saturday afternoon, it was Professor Very's delight, in company with a number of young people, to go forth seeking the hidden treasures of field and forest, mine and hill-side, railroad cuttings, and ancient river beds and terraces. With scientific nicety he followed the wonderful trail made by old Mother Nature, and even the most arrant tyro among us was inspired by the keenness of our leader's perception, and the wonderful deductions made by him in the simplest language. We collected fossils, water-worn stones, cocoons, flowers, mosses, lichens, ferns, insects—in fact everything of scientific interest we happened to come across.

And then in the evening we assembled around his study table, either in the Allegheny Observatory, or in his own home, and went over the treasures of the day.

First of all, we were made to draw with scrupulous care the various objects, in order that we might see what was really there. Then there was a great hunting through the library for articles and descriptions. Professor Very superintended this research and illumined what we found with the light of his almost omniscient knowledge. It has never been my privilege to know a man more learned than he in so many different departments of science.

The writer is sure that throughout this broad land, there are thousands who have come under the gracious, kindly influence of Professor Very, and who will endorse these words of tribute to a great teacher.

J. GORDON OGDEN

FIFTH AVENUE HIGH SCHOOL,
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SCIENTIFIC EVENTS

EXPEDITION TO COMBAT SLEEPING SICKNESS IN FRENCH AFRICA

THE organization of a government expedition to fight sleeping sickness in French equatorial Africa is reported by the New York *Herald*. Thirty-three French physicians and scientific men, under the auspices of the Pasteur Institute, will devote five years to combatting the disease and attempting to rid the colonies of the fatal tsetse fly.

Accompanying the decree authorizing the expedition was a letter from Leon Perrier, minister of colonies, to President Doumergue, stating that the present conditions in Africa made necessary special efforts to stamp out sleeping sickness above all other diseases.

The minister said sanitary conditions had become worse, due to the concentration of native labor in connection with railroad building. He suggested that, owing to the hazardous nature of the task and the length of service necessary, special awards be offered to those who volunteer. This was provided in the decree issued by the president. M. Perrier said he had suggested the expedition after consultation with the Pasteur Institute and that the director of the institute's branch at Brazaville had named a technical adviser for the expedition. Enlistment in the expedition is open to both army and civilian scientific men.

The decree signed by President Doumergue fixes the size of the party at ten physicians, ten hygienists, one veterinarian and twelve hospital attendants, all Europeans, and 105 natives. While the salaries are not unusually high—28,000 francs a year for the physicians and 18,000 and 13,000 for the other classes—they are offered many immunities from taxation and allowances for their families.

In addition they will be given a bonus of 10,000 francs after two years' service, 30,000 after four years and 60,000 if they enlist for an additional two years' service. The last clause implies that the government intends to keep the expedition in operation longer than the original five years mentioned in the decree.

The volunteers must pass three months in study at the Pasteur Institute in Paris or at the branch at Brazaville. They must enlist for two years' continuous service, followed by a vacation of six months, and then for another two years without interruption.

CASTING OF A LARGE DISK OF OPTICAL GLASS BY THE U. S. BUREAU OF STANDARDS

THE *Technical Bulletin* of the U. S. Bureau of Standards gives an account of the casting of a large disk of optical glass for Ohio Wesleyan University. On January 21 the mold containing the disk of optical glass, cast on May 7, 1927, was opened and the glass found to be very good. It appears to be quite uniform throughout, and although it contains some seeds and striae, they will not affect its value as a telescope mirror.

The cover was removed in the presence of several distinguished scientists, including Dr. S. W. Stratton, president of Massachusetts Institute of Technology; W. R. Warner, of the firm of Warner and Swasey, telescope makers, and Dr. George K. Burgess, director of the Bureau of Standards.

The disk, which is about 70 inches in diameter, 11 inches thick and weighs 3,500 pounds, will be used as a great concave mirror for the new reflecting telescope of the Perkins Observatory at Ohio Wesleyan University, Delaware, Ohio.

The money with which to establish this observatory was left to the university by Professor Hiram Mills Perkins, of Ohio Wesleyan, who during 50 years of hard work through most rigid economy and sound investment had been able to amass a small fortune, nearly a quarter of a million dollars. It was his desire to establish an observatory of the first rank at the university and that the entire equipment be of American manufacture. The mounting of the telescope was constructed by the American telescope makers, Warner and Swasey, of Cleveland, Ohio, but difficulty was experienced in getting any bids on the mirror from American glass manufacturers. In particular, no one was willing to state, even approximately, when the disk could be completed. Finally, the director of the observatory, Dr. Clifford C. Crump, called upon the Department of Commerce for assistance. Although the Bureau of Standards has been