deciphered "to find the compounds old friends in disguise." A flood of deuterio- names, some of which would be confusing, would be a real handicap in organic chemistry.

An advantage of the Boughton names is their brevity. Contrast, for example, acetic-$d_2$ acid-$d$ with dideuterioacetic deuterioacid or possibly protiodideuterioacetic deuterioacid (this last name, if it seemed necessary to designate protium in naming compounds, would by the Boughton system be acetic-$pd_2$ acid-$d$).

The objection may be raised to the Boughton system that it mixes names and symbols. There is plenty of precedent for this, however, in the naming of chemical compounds. The method grows in favor as one experiments with it. It apparently leads to the least possible change in established names, which is a consideration of fundamental importance. Another objection is the fact that "p" and "d" are in use in organic chemistry to designate para and dextro, respectively. However, "*p*" for para can be avoided and it is suggested that in the rare instance in which the dextro difficulty might arise the word "dextro" should be spelled out. The use of the "*d*" after names instead of before them will also help in keeping this sort of thing clear.

Opinion with reference to such expressions as "heavy water," "heavy ammonia," etc., is that this use of "heavy" is justified no matter what heavy isotope may be represented, whether it be an isotope of hydrogen or another element, and that such expressions, though not scientific, are handy for use in a generic sense.

The committee is willing to try to help individuals working in this field who may be confronted with nomenclature problems during this period when there is little or no precedent and it is so desirable for a consistent and effective nomenclature tool to be forged.

# SCIENTIFIC EVENTS

## THE CENTENARY OF PHOTOGRAPHY

ACCORDING to the London *Times*, a gathering took place at Lacock Abbey, Wiltshire, on June 16, to celebrate the centenary of the invention of photography and to do honor to Henry Fox Talbot, who, in 1834, working in that house, first succeeded in producing photographic impressions on paper. The Royal Photographic Society and other photographic bodies, especially in the west of England, were represented by their presidents and many members.

A large exhibition of Fox Talbot's early apparatus and of his negatives and prints was arranged in the gallery. The pictures included many of his "photogenic drawings," dated 1835 to 1840, before the introduction of a permanent fixing process, and among these was probably the earliest existing photograph—a window in Lacock Abbey, showing the tracery and the diamond leaded lights against the sky. There were a large number of examples of the calotype process, following the discovery of the latent image, and also an exhibition of Fox Talbot's later work in the direction of photo-engraving. Among other relics was a letter from Sir J. F. W. Herschel, in 1839, suggesting the term "photographic" in place of Fox Talbot's word "photogenic."

The *Times* states that the guests were received by Miss M. T. Talbot, granddaughter of the inventor, and the present lady of the manor, and an address on the personality of Fox Talbot was given by a grandson, Prebendary W. G. Clark-Maxwell, who said that it was while on his honeymoon in 1832 that Fox Talbot, having failed to sketch the scenery of Lake Como by means of the *camera obscura*, set himself definitely on the path which led to photographic discovery. The most puzzling feature of his career was his strong insistence on a series of patents, but it was not the need of money which impelled him, for he had no necessity on that score, nor was it greed, for that was not his nature, but it was in order to vindicate by a legal declaration the priority of his discovery.

Herbert Lambert, of Bath, said that, although Fox Talbot's first experiments were carried out in 1834, it was not until 1839 that, stimulated by the work of Daguerre, he announced his invention to the Royal Institution, a few days before Daguerre made his communication to the French Academy. It was a remarkable instance of two men working along independent lines and making what were really two different inventions with the same end in view, for, although Fox Talbot's calotype and the Daguerre process both used as their basis the sensitiveness of silver salts to light, the methods and chemical reactions were quite different. Daguerre used silvered plates which he sensitized with iodine and subsequently developed by mercury vapor, while Fox Talbot produced a sensitive paper which he developed with gallic acid and fixed with hyposulphite of soda. The really important invention by Fox Talbot was made in September, 1840, showing the way in which the latent image could be developed. It was this which distinguished his early photogenic drawings from the calotype or talbotype process which he patented in 1841.

A. J. Bull, president of the Royal Photographic Society, reviewed Fox Talbot's later work, culmina-

ting in the method of photographic engraving in 1858. He said that among the mass of material which Miss Talbot had now unearthed at Lacock Abbey were plates showing the use of fabrics of various textures which her grandfather had used in endeavoring to produce a grain for photo-engraving purposes. He ultimately obtained a very fine grain by folding a piece of black muslin on itself obliquely. Some of the specimen plates of this description were dated 1853, and a particularly interesting one recently unearthed at Lacock Abbey was a small and rather imperfect portrait of Huxley, which had the crossed-muslin grain.

## VISIT OF AMERICAN FORESTERS TO GERMANY AND AUSTRIA

A GROUP of leading foresters and lumbermen from the United States will sail on July 26, under the auspices of The Oberlaender Trust of the Carl Schurz Memorial Foundation, Inc., to study the methods employed in Germany and Austria, by which private forests have become a profitable enterprise. The group includes Dr. Cedric H. Guise, professor of forest management at Cornell University, and Wilson Compton, secretary-manager of the National Lumber Manufacturers Association, Washington, D. C. Sustained forest production, as it has been practiced in these countries for many generations, as well as forest management, game preservation, selected cutting, reforestation, and markets for wood products will be studied.

Dr. Franz Heske, the director of the forestry school at Tharandt near Dresden, has been in the United States during the last three months, getting acquainted with conditions that face American foresters, and he will take charge of the group upon arriving in Germany. They will travel by bus from Berlin through eastern and southeastern Germany, into Czechoslovakia, Austria, and perhaps parts of Hungary. They will have an opportunity not only to see the forests, but to study costs, distribution of material and actual operations.

This tour is part of the program of the Carl Schurz Memorial Foundation, Inc., and The Oberlaender Trust, the purpose of which is to benefit the American people by studying those special achievements of the German and Austrian people which are outstanding, and introducing into the United States such as are adaptable to American conditions. Private forests for private profit is one of the fields in which the German people have excelled; and first-hand study of successful private forestry operations by influential American timberland owners will, in the opinion of the foundation, assist in developing the important program of permanent forest management now required by the Lumber Code.

The Trust's Advisory Committee in the field of forestry is composed of Dean Henry S. Graves, Yale University, School of Forestry; Dr. Cedric H. Guise, professor of forest management, Cornell University, and Earle H. Clapp, of the United States Forest Service. Mr. Ward Shepard, special adviser on land policies in the U. S. Office of Indian Affairs, has been of special help in making arrangements.

The trustees of The Oberlaender Trust are: Gustav Oberlaender, *president;* Carl W. Ackerman, dean of the School of Journalism, Columbia University; Dr. Haven Emerson, College of Physicians and Surgeons, Columbia University; Henry Allen Moe, executive director of the Guggenheim Foundation, and Mr. Wilbur K. Thomas, executive director of the Carl Schurz Memorial Foundation, Inc. Mr. Ferdinand Thun, of Reading, Pa., is president of the foundation.

## EXHIBIT OF THE PATENT OFFICE AT THE CHICAGO WORLD'S FAIR

AT the World's Fair of 1934 at Chicago, the Patent Office, in its exhibit in the U. S. Government Building, surveys the American record of inventions.

Since the organization of our federal government 1,897,932 patents have been issued by the Patent Office up to January 1, 1934. Nearest to this record is France with 871,532. Great Britain has 797,153, Germany 583,728 and Italy 273,598. Canada rates high in inventiveness in proportion to population, with a total of 325,800 patents issued. Japan since its modernization has issued 83,361 patents and the U.S.S.R. has issued 63,992.

In the United States last year New York led with 8,017 patents. Illinois was next with 4,923. Ohio and Pennsylvania almost tied for third honors with 3,880 and 3,876, respectively. Mississippi is on the list with 49 patents for the year while Louisiana and Georgia have 141 each. A graphic chart shows the steady increase of the output of inventions in America. From 109 patents in 1836 to 56,856 in 1932 the rate of increase is almost unbroken, the chart lines forming nearly a perfect triangle.

Working models of inventions give a record of the past century of industrial advancement. In the exhibit is a compound steam engine model on which a patent was issued December 20, 1845, to John Ericsson, who later created the *Monitor* for the Federal Navy in the war between the states. Dated May 9, 1865, is a model of the four-barreled, water-cooled machine gun with which R. J. Gatling introduced a new method of wholesale destruction. A disappearing carriage for large cannon invented by James B. Eads, the bridge builder, is dated February 26, 1871. December 5 of the same year, is the date of a model by Thomas A. Edison of a machine for perforating tape to send telegraph messages.

The cases exhibiting patents issued include: the sewing machine, E. Howe, Jr., Sept. 10, 1846; the