Dedication of the George Herbert Jones Laboratory at the University of Chicago

On Monday and Tuesday, December 16 and 17, a new laboratory was presented to the University of Chicago by George Herbert Jones, of Chicago. The building, intended primarily for research, fills the long-felt need of the Department of Chemistry for more spacious and appropriate quarters than afforded by the old Kent Laboratory.

George Herbert Jones Laboratory

The dedication program was opened Monday morning, in Kent Theater, by Julius Stieglitz, who expressed the hope that the new building, just adjoining, would weld a fruitful past with a hopeful future. He then introduced Mr. Jones, who formally presented the newly completed structure to the university.

The speech of acceptance was made by President Hutchins, who, in reviewing the record of the department, commented that it was famous for producing researchers. In order to maintain the high prestige early won, additional quarters have long been necessary.

Presentation of Busts

A bust of Mr. Jones, to be placed in the lobby of the new building, was presented by his daughter, Mrs. Walter J. Jarratt, and accepted for the department by David Evans, president of the Chicago Steel Foundries, who gave a sketch of Mr. Jones' career and character, emphasizing his great modesty and his kindness of heart.

F. W. Upson, '10, presented a bust of the late John U. Nef, first head of the Department of Chemistry, on behalf of alumni and friends. He dwelt on Nef's tremendous enthusiasm for research, and his creation in the department of a definite spirit of research.

John W. E. Glattfeld, '13, a former student of Nef, accepted the bronze for the department, and spoke on "Nef, the Man and Teacher," tracing his career from his birth in 1862 to his death in 1915; after which Herman A. Spoehr, '09, of the Carnegie Institution, Stanford University, told of "Nef, the Investigator."

A bronze bust of the late Alexander Smith was given to the department by Mrs. Sara Bowles Smith, in a letter read by Mary M. Rising, after which W. D. Richardson, '96, '99, chief chemist of Swift and Co., delivered an address on "Smith, the Man and Teacher," followed by R. H. McKee, '01, professor of chemical engineering in Columbia University, who, after extending the felicitations of Columbia to Chicago on this auspicious occasion, spoke on "Smith, the Investigator."

B. B. Freund, '28, presented a bronze bust of Julius Stieglitz, on behalf of 250 friends and former students. He expressed happiness that the bust had caught those outstanding characteristics of the man, which had both made him eminent and endeared him to all who came to know him. Herman Schlesinger, '05, accepted the bust for the department, and told something of Professor Stieglitz's life and achievements.

The Building

On Monday afternoon, after a brief statement by Professor Schlesinger, the visitors were given an opportunity to inspect the new building, the details of which the department owes to the splendid and hard work of Doctor Schlesinger.

The George Herbert Jones Laboratory is immediately adjacent to, and connected with, Kent. In consequence, it is possible to devote the new structure almost entirely to research, whereas the old building is admirably suited, after remodeling, for lecture rooms, class laboratories, administrative offices, shop, and storeroom facilities. While this might tend to decentralize the supply system, it has the advantage of utilizing Kent to its best advantage, at the same time leaving this new laboratory free for its primary purpose—research.

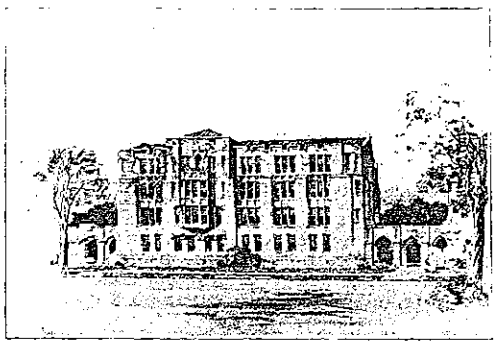
Although a description of the new laboratory has been previously published, it might be well to say a few words about it, because of last-minute changes found advisable.

Adaptability is aimed at, and consequently all partitions and walls are of hollow glazed tile, while benches in the research laboratories are easily moved. Piping is everywhere accessible, and horizontal runs avoided where possible. It has, in general, been considered wiser to use ordinary standard materials, and rely on ease of replacement.

The hood, present in each room, is of the open-face, high-velocity Cornell type, each with its individual two-speed fan, located directly over the hood. The ducts run individually to the roof, thus preventing siphoning of vapors from one hood to the next. This system was decided upon as the most economical and satisfactory, since the motor is run only when the hood is used. Then, too, the attic is made available for storage space, while the motor and fan, both of standard type, are easily repaired or replaced.

The ventilating system is simple, but effective in keeping rooms and corridors free from the odors usually found in a laboratory. Corridors are kept under positive pressure, to prevent diffusion of fumes into the building. Each room equipped with a hood has aluminum louvers over the door, allowing air to be drawn in, but not permitting its passage in the opposite direction, while other rooms have air intake and exhaust. All radiators in the building are controlled by individual thermostats, connected directly to the steam valve.

The research rooms are planned to accommodate one, two, and four men each, with the two-man laboratory as the standard, and most common type. All have service shelves along the two side walls, carrying gas, water, steam, and air. Directly above these are wall brackets for adjustable shelves, and useful in supporting apparatus. Ducts leading to the hall, neighboring rooms, and through ceiling and floor, allow for passage of pipe or wire. An alternating current outlet is provided for each man; into this is plugged a special fused outlet box, to accommodate as many as four pieces of apparatus. Hot water is obtained by means of a steam injector at each sink. The movable benches are of two types, both with acid-proofed wooden tops. One has the ordinary drawers and cupboards, except for one drawer which can also serve as a desk. The other type bench, six inches lower, but with the same top dimensions, is especially suited for certain physical-chemical work.



George Herbert Jones Laboratory

The three classroom laboratories differ from the research rooms in having permanent desks, topped with alberene stone.

The basement houses the cave, electrical equipment, and pumps, beside special rooms for physical-chemical work. The latter all have concrete slabs sunk into the ground, and separated from the floor, to serve as non-vibrating bases for delicate instruments. Cold and contant-temperature rooms are found here, in addition to the unusually large laboratories furnished for work with light, etc.

On the first floor, devoted primarily to physical chemistry, is the lobby in which are placed the busts previously mentioned; while on the second floor are the library, stacks, social rooms, departmental offices, and organic research rooms. The third floor houses the general dispensing stock room, beside work primarily in organic chemistry; while the fourth floor, devoted primarily to inorganic chemistry, has an electric furnace room. In addition, there are on each floor balance and dark rooms, first-aid equipment, and many direct current outlets, from each of which may be obtained 4, 6, 8, 12, or 110 volts.

Evening Lectures

The dedication ceremonies continued Monday evening with William D. Harkins presiding, and the general topic of discussion was "Some Present and Future Problems in Chemistry."

G. N. Lewis, head of the Department of Chemistry in the University of California, was the first speaker. In referring to the fact that the spectroscope is coming into its own in chemical work, Doctor Lewis recalled that it was invented by Bunsen, who used it to great advantage, with his burner, in the study of elements, their identification, and discovery from new sources. After that and until very recently, the instrument was used almost exclusively by the physicist.

Doctor Lewis took up the subject of atomic, and particularly nuclear, structure, and showed how the spectroscope has proved

itself an invaluable tool in this field. Determination of isotopes, identification of molecules and organic groups are other possibilities. From data obtainable spectroscopically, dissociation of molecules into atoms may be accurately predicted—a thing not possible by means of thermal data alone.

C. H. MacDowell, president of the Armour Fertilizer Works, and Edward R. Weidlein, director of the Mellon Institute of Industrial Research, spoke on "Chemistry Applied to Industry." Doctor MacDowell remarked that science is peculiarly a flower of our modern western civilization, and may well be the means by which it shall survive.

Doctor Weidlein said that the near future would show a bringing together of pure and applied science. The universities must be put in a position to keep the ablest researchers, train new men, and carry on fundamental research; for it is only by these means that industry can hope to maintain the progress it has shown in the past.

Scientific Program

Tuesday morning, Charles H. Kraus, head of the Department of Chemistry in Brown University, spoke on the future of inorganic chemistry. The metals constitute the largest class of elements in the periodic system, yet we know the least about them, chiefly because of the difficulty in finding a solvent. Even the physicists have found little by means of spectrum and x-ray.

Some progress may be made from a purely chemical point of view, since the alkali and alkaline earth metals are soluble in liquid ammonia. Doctor Kraus then went on to tell of work done in this medium on metals and metallic compounds. The behavior of metals in the negative condition, ammonia and its analogs, and metallo-organic compounds in liquid ammonia might all be studied to advantage.

Other profitable inorganic fields of investigation are water, about which surprisingly little is known, and boron, which might hold the key to the problem of compound formation.

M. Gomberg, head of the Department of Chemistry in the University of Michigan, spoke on "Organic Free Radicals." An extension of preparative methods in this field is indicated, since at present we rely entirely on two general methods. The speaker then told of the possibilities of thermal decomposition, of the various free radicals which are of interest to the chemist, and of the difficulty in determining the presence of a free radical. The cryoscopic and the colorimetric methods are both somewhat doubtful at times. It has been shown almost conclusively, by means of the spectroscope, that the color is due to a quinoidal tautomer.

"Chemistry in Medicine" was handled by Carl Voegtlin, of the U. S. Public Health Service, and A. P. Locke, '22, Seymour Coman Fellow in Chemistry Applied to Medicine. Doctor Voegtlin stated that the great chemical problem in biology lies in oxidation and reduction. He showed the effect in the body of arsenic compounds which may be oxidized or reduced to the toxic RAsO form. Some believe that oxidation in the body takes place because of some iron-bearing catalyst, for which HCN, CO, arsenicals, etc., are specific poisons. Probably, however, there are other catalysts, such as sulfur compounds, which occur in combination in protoplasm. For the study of this subject, a series of oxidation-reduction indicators was used, and a new potentiometer developed for use in measuring electrode potentials.

Doctor Locke spoke on catalytic oxidation processes, with emphasis on the effect of a change in the copper-iron ratio in the cell.

Convocation

At the university convocation, on Tuesday afternoon, the honorary degree of doctor of science was conferred on Moses Gomberg, Gilbert N. Lewis, and Herman A. Spoehr, '09.

Banquet in Honor of George Herbert Jones

In the evening, at a banquet given in honor of George Herbert Jones, donor of the new laboratory, Vice-President Woodward announced, for the first time publicly, the receipt by the university of $10,000 a year for five years, from the Chemical Foundation, this money to be expended on chemical research applied to medicine under the direction of Doctor Stieglitz, and to be known as "The Julius Stieglitz Fund."

Doctor Stieglitz reviewed past achievements of the department, after which he enumerated steps taken to insure future success. The greatest problem is to attract ambitious and talented men. The new laboratory, with increased endowment recently given by the Rockefeller Foundation, helped solve this difficulty. Consequently, there have been added to the staff Doctors Hogness, Harris, and Kharasch, all of whom are already well known to the scientific world; and a trained research assistant for Professor Harkins. Then, too, there is $10,000 for new instruments, which would soon have been rendered useless in the fume-laden atmosphere of the old building; the Pierre du Pont gift of $ 20,000 for chemical research on cancer, and six new fellowships and scholarshi.

Dean H. G. Gale told of the first years of the university, and of the handicaps under which the science departments labored. He further said that coöperation in the future will take place not only within the department, but between departments, for work in the borderline sciences. A great step in this direction has been taken by Professor Stieglitz, in his application of chemistry to medicine.

The next speaker, W. L. Lewis, '09, former head of the Department of Chemistry in Northwestern University, brought out that formerly great pride was taken in economy, while now it is in wise spending of accumulated capital. The George Herbert Jones Laboratory is an example of the latter.

President Hutchins, the last speaker of the evening, very humorously commented on previous talks, and then took up the problem of education. In the graduate school he calls for more rigid admission requirements, as well as division of training with respect to the branch of the profession to be entered. In the undergraduate school, there should be two types of science courses—one for those who intend to continue in the subject, and the other, with little or no laboratory work, for those who merely wish to become acquainted with the subject. By this plan the departments will not be swamped, and those desiring training will not be deprived of it.

Chemical Society Encourages Election of Fellows

The Chemical Society aims at encouraging the development of chemical science in all its branches, and at providing a regular and complete record of all new additions to chemical knowledge.

Fellowship of the society is open to men and women who desire to be associated with the development of chemical science and are anxious to keep in direct touch with the advance of chemistry in this and other countries. Corporate bodies are not eligible for election as fellows.

The annual subscription is £3.0.0.

Election is by ballot. Every candidate for election as a fellow must be proposed according to a form of recommendation which must be signed by three fellows of the society to whom he is personally known. In the case, however, of a candidate for fellowship resident abroad, who is unable to obtain the signatures of three fellows, the council is empowered to accept a form of recommendation signed from personal knowledge by one fellow of the society.

Among other privileges, fellows receive post free:

(1) The *Journal of the Chemical Society* (published at £3.3.0.), which is a medium for the publication of original memoirs on chemistry, numbering over 400 in a normal year, and of special lectures delivered before the society.

(2) Abstracts "A" in Pure Chemistry (published at £3.13.6.), which contain abstracts of recent British and foreign papers covering all branches of chemistry.

The society also issues annually a volume of reports on the recent progress of chemistry in its various aspects. These reports are contributed by men eminent in their respective branches and furnish a compact and valuable record of the advance of the science from year to year. The price of the volume to fellows is 5s. 6d., post free (published at 11s., post free).

Forms of application can be obtained from the Assistant Secretary, The Chemical Society, Burlington House, Piccadilly, London, W. 1.

Akron Rubber Group Holds Meeting

About 250 members of the Akron Rubber Group met on December 9 at the Firestone Clubhouse. W. K. Lewis, of the Massachusetts Institute of Technology, gave a very interesting lectur on "The Amorphous State." Doctor Lewis' talk consisted in large part of a plea for more clear-cut teaching of colloidal chemistry. It was pointed out that even the obvious facts are not clearly stated in our university courses. In consequence, the student goes out into the industrial field in a state of bewilderment, with few or no facts as a basis upon which to build his further experience. Doctor Lewis expressed the hope that the men in the chemical industries would use their influence in trying to get more effective teaching of the subject. The talk was very well received, and elicited a lively discussion.

The officers elected for the ensuing year are: *Chairman*, Clifford W. Sanderson, Goodyear Tire & Rubber Co.; *Vice Chairman*, W. E. Shiveley, Goodyear Tire & Rubber Co.; *Secretary*, Lester Brock, Cabot Co.

Report on Nomenclature Available

Copies of the report of the commission on the reform of the nomenclature of organic chemistry are now available, and may be procured by requesting them of the Chairman of the Division of Chemistry and Chemical Technology, National Research Council, Washington, D. C.