laboratory facilities offered by the institute, is the latest step in forming closer relationships with the industrial world. This Boston-controlled corporation is one of the two large companies of the kind in this country. With the ability of Technology to undertake the work, it has expressed itself, through its president, William G. Sharp, as desirous of availing itself of the advantages offered by the institute. Instead of establishing a private research laboratory of its own it will bring its problems to Technology.

The advantages which accrue to a corporation which makes such an agreement include the economy afforded by not being obliged to establish a laboratory parallelling that of the institute. Such laboratories are very costly, construction and equipment running into the scores of thousands. The institute presents a further advantage that no private laboratory can afford, in that it maintains a great group of allied laboratories. There are unlimited quantities of water, steam, electricity and anything else that is needed, a great library, a large active force for investigation in the student body and unequalled facilities for quick and satisfactory conferences with the instructing staff. Then there is the ease with which other laboratories may be called to help in the solution of any problem. So related are the different industries that hardly any problem lies entirely within the sphere of only one of them. Chemistry turns to electricity, metallurgy to both of these, while mechanical engineering is fundamental.

On the other hand there are advantages to the institute. It has a very costly equipment which it really holds in trust for the community. It is the duty of its officers to make the fullest returns possible. Every use of its facilities by the industrial world is a step towards the realization of its ideals. Cooperation like that with the United States Smelting Co., in the solution of industrial problems makes it the more valuable to the people and the more valuable it becomes the better the chance of greater importance in the future, with the better outlook for the carrying forward of research work that may be of general benefit. That the latter may truly be assured the institute has in its agreement the provision that publication of results be not unduly delayed.

To carry on the special work which this cooperation necessitates, the corporation of Technology has named Henry M. Schleicher, B.S., a graduate of 1910, to be research associate in charge of the work, the general direction resting on Professor H. O. Hoffman, professor of metallurgy. Mr. Schleicher since his graduation has been engaged in research work with two Boston firms, with especial attention to electrolytic separation and flotation.

CHEMISTRY AND THE WAR

THE registrar of the Institute of Chemistry of Great Britain and Ireland, according to *The British Medical Journal,* prefaces an account he has written of the work done by chemists in the war by observing that the government has secured the guidance of chemists and other men of science to assist in the investigation of suggestions and inventions and to bring their knowledge and experience to bear on measures and devices of offense and defense. The country had come to rely so much on foreign sources of supply that means had to be found for dealing promptly and efficiently with the difficulties which arose so soon as importation was stopped by the war. The laboratories of universities and colleges quickly became small factories for the preparation of drugs and medicaments, and many were entrusted with the examination of materials used in the manufacture of explosives. Uniformity in method and the standardization of processes was secured, and students unfit for service with the colors were set to work under the supervision of their professors. Several hundred chemists were engaged to assist in the laboratories and in government and controlled establishments supplying armaments, munitions and other materials of war, and in some branches arrangements were made for probationary training. The staffs of the chemical department of Woolwich arsenal, and of the government laboratory responsible for the examination of foodstuffs and many other requirements of the expeditionary force, were

enlarged. A number of chemists were early given commissions in the army for scientific work, and after the employment of poisonous gases by the enemy men with training in chemistry were enlisted for service in the field. With the assistance of the universities and technical colleges, and various bodies interested in chemistry, an entirely new force was brought into existence; the officers were mainly selected from chemists who already held commissions, whilst non-commissioned officers with knowledge of chemistry were transferred from other units. Both Lord French and Sir Douglas Haig had in their dispatches spoken highly of the work done by this force, which was obtained entirely by voluntary enlistment. The majority of the university graduates and men possessing recognized diplomas who originally enlisted as corporals subsequently received commissions, and when the force was more completely organized a considerable number were transferred to the ministry of munitions. During the campaign against the rebels in South Africa and the Germans in Southwest Africa chemists were attached, by direction of General Botha, to the different brigades, and rendered valuable service. The experience gained in the campaign proves, the registrar thinks, that it is advisable that the state should have control of an organization of professional chemists which would at any time ensure their efficient service to meet the many requirements of the naval, military and air forces. Chemists were required to control the manufacture of munitions, explosives, metals, leather, rubber, oils, gases, food and drugs; for the analysis of all such materials and for research; on active service chemists were required to assist in the control of water supplies, in the detection of poison in streams, in the analysis of water and food, and in the disposal of sewage, and both at home and on active service to assist in devising safeguards against enemy contrivances of a scientific nature, in devising methods of offense, and to instruct the troops in such matters. In summing up the matter, it is said that

chemists have met the situation with a spirit of true patriotism and have been promptly organized for the service required of them. It is not too much to hope that, as the discoveries of science have been applied to the destruction of humanity, they may be devoted more and more to the furtherance of the arts of peace, to the uplifting of civilization, and the pacification of the world.

SCIENTIFIC NOTES AND NEWS

The spring meeting of the Council of the American Association for the Advancement of Science will be held in Rooms 39–41, new building of the U. S. National Museum, Washington, D. C., on the afternoon of Tuesday, April 17, 1917, at 4:45 o'clock.

The afternoon session of the National Academy of Sciences on April 17 will be devoted to the work of the National Research Council. Reports will be presented by George E. Hale, chairman, National Research Council; Charles D. Walcott, chairman, Military Committee; R. A. Millikan, chairman, Physics Committee; Marston T. Bogert, chairman, Chemistry Committe, and Victor C. Vaughan, chairman, Committee on Medicine and Hygiene.

The evening lecture before the American Philosophical Society will be given in the hall of the Historical Society of Pennsylvania on April 13, by Dr. George E. Hale, his subject being "The Work of the Mount Wilson Observatory."

It is reported that the Rockefeller Institute for Medical Research has appropriated $200,000 for the establishment of a hospital to be used for the instruction of surgeons in the Carrel-Dakin treatment of the wounded. It is expected that Dr. Alexis Carrel will be granted a leave of absence from France to return to New York and assume supervision of the work.

A committee to perfect an organization for an effective mobilization of the medical resources of Massachusetts to aid in obtaining officers for the army and naval medical corps, and to arrange suitable instruction in medical military preparedness, has been formed and is called the Auxiliary Medical Committee for National Defense. Dr. R. P. Strong, professor of tropical medicine in the Harvard Medical School, has been chosen as permanent