Had a gas best be ejected from projectors brought close to the enemy's lines, or should it be put into shells? Is it advisable to disguise the odor of a gas by the admixtures of other gases? These are questions on which his decision should be final. This officer must be a man of intelligence, for it is up to him to either carry out new ideas or else pass them back to the laboratory to strengthen them for actual combat use, but his authority should not be allowed to extend beyond these specialized tasks.

The fourth type of mind is that of the general director who has before him an over-all picture of the entire war and whose word alone can release the invention. His judgment, not that of the military staffs or any other groups, should decide if, when and how a new weapon is to be put to practical use. If he fails, the invention fails, no matter how meritorious it may be *per se*. The German generals should not have shouldered a responsibility that properly belonged to a type of mind they did not possess.

The great achievement of chemistry in the first World War was the lesson we learned—or should have learned—how to utilize new chemical ideas correctly. Gases may or may not play a prominent part in our present conflict, but other chemical inventions may take their place, carrying with them that element of surprise which is so essential to military success. If such an invention should be brought forth, it will undoubtedly be developed and used with full consideration of the lesson the Germans taught us unwittingly by their abortive gas attack at Ypres almost thirty years ago.

Above all, of course, the first World War confirmed what the Civil War had indicated—that war has become an enormous business and that its direction should no longer rest exclusively on the military branch of the government; strategy, arms and manpower have ceased to be the only means by which war is waged. Each nation needs in addition much other new equipment, such as a research department—scientists. But equally important is a board of directors to coordinate all branches and infuse into the whole structure the shrewdness, experience and all-around brain-power without which no Big Business can be successfully conducted.

(To be concluded)

SCIENTIFIC EVENTS

DEATHS AND MEMORIALS

DR. EDMUND S. CONKLIN, formerly head of the department of psychology of Indiana University, died on October 6 at the age of fifty-eight years. Before going to Indiana University, Dr. Conklin was head of the department of psychology at the University of Oregon.

DR. WINFIELD SCOTT HALL, since 1919 emeritus professor of physiology of Northwestern University, died on October 2 at the age of eighty-one years.

DR. FRANK WILLIAM MARLOW, professor emeritus of ophthalmology of the College of Medicine of Syracuse University, died on October 4. He was eighty-four years old.

DR. HERBERT POTTS, professor emeritus of oral surgery of the Dental and Medical School of Northwestern University, died on October 7 at the age of sixty-nine years.

THE death is announced, while a prisoner of Japan, of Dr. Robert Cecil Robertson, professor of bacteriology at the University of Hongkong and a member of the League of Nations Medical Mission. He was fifty-three years old.

Nature announces the death of Dr. L. Aschoff, professor of pathological anatomy at the University of Freiburg in Breisgau, aged seventy-five years, and of Dr. H. C. Lawrence, formerly of the Imperial Forestry Service, Burma, on August 25, at the age of sixty-seven years.

THE Soviet Academy of Sciences has set up a special committee, under the chairmanship of M. Krylov, the mathematician, who translated Sir Isaac Newton's works into Russian, to celebrate the tercentenary of Newton in December.

MICROFILM RECORDS OF THE LINNEAN SOCIETY OF LONDON

SOME time ago a grant was made by the Carnegie Corporation to the Linnean Society for the purpose of making a complete photographic record of all Linnean manuscripts and specimens. Although these documents were in storage outside London the task of photographing the material has now been completed. At the time the grant was made the officials of the Linnean Society offered to deposit a complete microfilm record in some American institution, and later the council of the society selected Harvard University as the place of deposit. The extensive series of microfilms, transmitted from London through British government channels, is now at the Arnold Arboretum. As soon as the necessary descriptive data are received these will be deposited at the Gray Herbarium, Harvard University. Once the material is organized arrangements will be made to supply

individuals and institutions with prints at the cost of reproduction.

E. D. MERRILL

POSTGRADUATE COURSE IN INDUSTRIAL MEDICINE AT THE LONG ISLAND COLLEGE OF MEDICINE

THE industrial health problem, measured by the soaring curve of accidents and absenteeism due to illness, appears to be most critical. It is well known that industrial illnesses and accidents are rising, at a rate which in some states is outrunning the rise in employment. Sound industrial health measures more widely applied should help to arrest this trend, conserve manpower and thus aid the war effort. These figures have been cited to indicate the scope and increasing gravity of the situation.

By the end of 1942 twenty million Americans will be at work in war plants—almost three times as many as were at work in such plants on January 1. Sixty million persons will have employment in all types of gainful occupation by the end of 1943. One third of these sixty million will be women, many of whom are new to industrial work. The rest will be men, most of whom are either too old, too young or who are physically unfit for service.

If the health problem in industry is critical now, consider what it will be when these millions of workers, most of whom are poor health risks and inexperienced in industrial work, are in the factories. In the last analysis industrial health is a medical problem. It is to the plant physician, be he full-time, part-time or "on call," that management must look in solving its health problems. Upon the medical profession rests the responsibility for safeguarding industrial health. Medical schools share in that responsibility, for they are one of the media through which training for medical service in industry is carried on.

The supply of physicians with industrial medical training is limited. Yet many more physicians with a grounding in industrial health are needed to serve in new and expanded war plants and in civilian industry and service. Many physicians now serving industry part-time or "on call" will be needed for full-time service, possibly in more than one plant.

Granting all this, the college had the problem of deciding on the type of course it would offer. It appeared that at least two conditions should be met: (1) the course should be so arranged that physicians within commuting distance could enroll and still carry on their practise; (2) the course should be organized to meet the requirements for grounding in the fundamentals of the subject that would fit the needs both of physicians with some experience in industrial medical practise and physicians with little or none.

In its planning the college had the benefit of the advice of a number of industrial physicians, notably Dr. Cassius H. Watson, medical director of the American Telephone and Telegraph Company, and Dr. John J. Wittmer, medical and personnel director of the Consolidated Edison Company, both of them alumni of the college. The principle they stressed from the start was: Keep it practical.

As it was finally developed, the course, which will be given from November 2 to 13, consists of two weeks of afternoon and evening lectures with morning clinics in the medical departments of industrial concerns. The material for the first week will cover the organization and operation of typical medical departments, physical examinations, study of absenteeism and a review of the human factors in industrial medical work. In the second week lectures and seminars on accidents and their prevention, industrial toxicology, traumatic surgery and nutrition have been scheduled. It was hoped that these topics would provide orientation in the main problems of industrial medicine for the physician new to this special type of practise and a new approach to some of these problems on the part of the physician with some experience in industrial practise.

A series of nine morning clinics, most of them to be held in medical departments of industrial concerns, have been arranged with the object of demonstrating to the students the subjects covered by the lectures of the previous day. A plan of internships of a month's duration in industry immediately following the course was devised for physicians who desire further training and who could be placed. Thirty-nine industrial physicians and experts in related fields such as compensation insurance will lecture in the afternoon and evening sessions. Twenty-three of these are from the metropolitan New York area and sixteen from other parts of the east.

The fee for the course is $50, $10 of which is payable in advance. Students may apply for admission for a part of the course, although they must elect to attend at least two full days of afternoon and evening lectures. The "per diem" charge is $5. The number of full-time students will be limited to fifty.

ALFRED H. CRAWFORD

THE VAUGHAN RESEARCH AWARDS IN HORTICULTURE

AWARDS of $500 each are to be provided by the American Society for Horticultural Science for the two outstanding papers of the year presented before the society. These awards are made possible through the generosity of L. H. Vaughan, of the Vaughan's Seed Stores of Chicago. They will be known as the Vaughan Research Awards in Horticulture. One award is to be made in the field of flori-