made available for the use of the universities and the government agencies concerned.

I think it is fair to say that, while the establishment of the Woods Hole Oceanographic Institution is in many respects the most conspicuous aspect of its work, the committee did not forget the broad assignment "to consider the share of the United States of America in a world-wide program of oceanographic research," and has supported the development of existing oceanographic stations on the Pacific coast and of the Bermuda Biological Station for Research on an international basis.

The responsibility for the continuation of the program assigned by the academy to its committee on oceanography has been transferred to the agencies thus set up, and the committee was accordingly discharged at its request in 1938.

FRANK RATTRAY LILLIE

PRESENTATION OF THE PUBLIC WELFARE MEDAL TO JOHN EDGAR HOOVER

BY temperament, by tradition and by resolution, the people of the United States are devoted to the ideal of human freedom and human dignity. This ideal may be threatened from without our country or from within, and the dictum that eternal vigilance is the price of liberty applies as well in the one case as in the other. The great science of medicine has been developed to preserve the physical and mental health of the individual. Of equal importance is the safeguarding of the health of our social organism. There exist constantly in this organism malignant cells, often combined into groups, enemies of the wholesome life.

To maintain law and order in our society is more than to preserve property or safeguard life. It is to maintain a social framework in which the good life may be lived to free men from the threat of vicious cruelty of the criminally minded. Respect for government itself grows as governmental agencies succeed in this vital work of the preservation of freedom.

To-night the National Academy of Sciences presents the Marcellus Hartley Medal for great public service to the director of the Federal Bureau of Investigation of the United States Department of Justice. John Edgar Hoover was born and educated in the District of Columbia. At the completion of his legal training he entered the Department of Justice in 1917, and in 1919 was appointed a special assistant to the Attorney General. In 1921 he became assistant director of the Bureau of Investigation and in 1924 was named its director.

Hoover brought to this great agency of American law enforcement a high idealism, great organizing ability and a trained mind. He insisted at once on freedom in making appointments to his staff from any political pressure, and rapidly raised to a high level the requirements in character and training for the personnel of the bureau. Brain and character—not brawn—became the word. College graduates—not political cast-offs—became his special agents. Specialized functions were organized and raised to a high efficiency. Their names are familiar to all: the Identification Bureau, the Crime Laboratory, the Department of Crime Statistics. Through the National Police Academy with an outstanding group of instructors, police officers from the entire country share the intensive training of the agents of the Federal Bureau. Through this organization the dignity and ability of a profession are being brought to a level consistent with its social importance.

The potential value of the work of Hoover is great, but its worth has already proved itself with startling and dramatic force in present performance. Since the Federal Bureau was given authority to investigate bank robberies there has been a reduction in this crime of 75 per cent. The percentage of convictions secured in cases investigated by the Bureau is 96. In the most recent fiscal year 5,162 convictions were secured. During the past five years for every dollar expended in the operation of the Bureau $6.33 has been returned to the government in recoveries and savings. In 1932, when Congress passed the Federal Kidnapping Statute, this vicious crime was a national menace, a challenge to the decency of American life. Since that time the Bureau has investigated 178 kidnapping cases. All but two have been solved. In 1939, 20 kidnapping cases were reported to the Bureau. All were solved.

The Federal Bureau has rendered these great services to the American people. Its activities are a part of the great non-political functions of government. As Hoover has kept its personnel and its activity free from political influence, so do we expect that its services for good government will proceed unharrassed by political interference.

In spirit and performance the work of John Edgar Hoover has exemplified the scientific way of life. To the many formal expressions of appreciation which he has received we add to-night that of the National Academy of Sciences for great public service performed in a scientific manner and by the aid of science.

MAX MASON

RESPONSE BY THE MEDALIST

IN accepting the Public Welfare Medal of the National Academy of Sciences, I first want to acknowledge the contributions which this academy has made to the furtherance of science in America. Secondly, I accept this medal, not for myself alone, but also as a tribute to my associates—the patriotic men and women

of the Federal Bureau of Investigation whose personal sacrifices have made possibe its achievements.

The history of the development of science throughout the world reflects a long combat with scorn, ridicule, sacrifice and even torture. Despite temporary setbacks from these sources, the march of science never has been permanently impeded. All obstacles and barriers have been hurdled because truth has triumphed. The development of science in the field of crime detection has not been without its annoying interruptions. With the inauguration of the Technical Laboratory of the FBI in 1932 came ridicule and scorn. On more than one occasion our men have been ironically depicted as impractical young men pursuing criminals while clad in academic gowns carrying magnifying glasses.

Old-line police officers of another school were ever ready to scoff at the special agents who photographed crime scenes, processed everything for fingerprints, and then sought the assistance of the white-garbed scientist often hundreds of miles away to analyze and identify some tell-tale bit of evidence left behind by a fleeing criminal. They denounced the new method of seeking facts rather than the old one of seeking men with the hope that if enough were rounded up the guilty one might be found. Even unenlightened judges claimed the right to ridicule the science of the test-tube, the microscope, the spectrograph and other precise methods of identifying bits of evidence that pointed an unflinching finger at the guilt of the wrong-doer and cleared the innocent suspect. This was circumstantial evidence, they claimed, and was at its best open to doubt.

Then with the development of scientific crime detection came the fakir and the pseudo-scientist whose testimony was determined by the side that retained him and the size of the fee that was paid him. To-day, fortunate for the cause of justice, the pseudo-criminologist is justly held in disrepute. The once ready ridicule and scorn for the investigator who utilized the scientific aids available in crime detection have changed to praise.

The evidence from laboratory analyses to-day is regarded as far more unbiased and certain than eye-witness testimony. Certainly, it is safer because the photo-micrograph made by the honest expert of physical bits of evidence, revealing to the eyes of jurors the basis for expert conclusion, does not and can not falsify, neither is it affected by the vagaries of the human senses.

If the record of the Federal Bureau of Investigation means anything, it has proven that science is the greatest weapon next to intelligent, well-trained personnel that society possesses to cope with the criminal. No longer do courts question the validity of the qualified scientific expert.

The experiences of the past few years have demonstrated conclusively that science protects the innocent and convicts the guilty. Surely a record of over 95 per cent. convictions in all cases tried in court after investigation by special agents of the FBI is a tribute to the place of science in the world of law enforcement. There can be no question that we have been justified in investing the taxpayers' money in the equipping and maintenance of a Scientific Crime Detection Laboratory that is regarded as a model throughout the world, when over a period of years every dollar spent in the cost of operations of the FBI has resulted in a dividend of over six dollars for the taxpayers of America.

Thus it is with pardonable pride that I accept the Public Welfare Medal of the National Academy of Sciences for and in behalf of the entire personnel of the organization that I have been proud to head for the past sixteen years; for ours is truly a "We" organization and not an "I" organization, and no finer recognition could be bestowed upon the FBI for its part in furthering science in the detection of crime than this award. May we regard the past as a period of introduction of science into the profession of law enforcement which will blossom and bear fruit in the years to come in every community in America, in order that justice may ever remain triumphant.

JOHN EDGAR HOOVER

PRESENTATION OF THE CHARLES DOOLITTLE WALCOTT MEDAL AND HONORARIUM TO A. H. WESTERGAARD

THE Walcott Medal was founded by Mrs. Mary Vaux Walcott in honor of her husband, a former president of this academy, Dr. Charles Doolittle Walcott. Dr. Walcott was an exceedingly active and influential figure in the scientific development of the United States. For many years chief of the U. S. Geological Survey, he was also a pioneer in promoting conservation, especially in forestry. He took a leading part in organizing the Carnegie Institution, the National Research Council, the National Advisory Committee for Aeronautics and in the expansion of the National Academy of Sciences. For twenty years he was secretary of the Smithsonian Institution.

But Dr. Walcott's first love, and the subject which he indefatigably pursued throughout his career, was the discovery and investigation of the earliest forms of life. Measured by present radioactive means, the Cambrian period, wherein were laid down the earliest fossil forms yet known, dates from several hundred million years ago. Yet at that remote period creatures of great complexity and beauty of structure had already evolved. Knowing so intimately Dr. Walcott's great love for the study of the Cambrian