some shipments of the Dutch elm disease fungus, and all the eight shipments entering since July 25 of this year were found to be more or less heavily infested with elm bark beetles, insects known to be important means of spreading the disease in Europe, where the disease has been distributed widely during the last decade and, on a large scale, has destroyed or seriously damaged elm shade trees.

With the willing cooperation of the importers of these logs, all shipments so far entered since this discovery have been treated in an attempt to safeguard them against escape of the insect carriers, and prompt action has now been taken by the Department of Agriculture to guard against future danger.

Secretary Wallace notes that the new quarantine seeks to close as effectually as possible every avenue to the entrance of the disease but at the same time seeks not to hamper any trade movement that could be permitted with safety. Under this quarantine, elm burl logs are to be allowed entry under permit with regulations providing that they arrive in this country free from bark so that no dangerous insect carriers of the fungus can be introduced with them. The regulations further require a hot water or other approved treatment to destroy any of the Dutch elm disease fungus that might be present in the logs.

In view of the important part which these elm bark beetles are said to play in spreading the fungus from dead or dying elm wood to living trees, the quarantine also stipulates that all lumber, timber, crates, boxes or other containers and manufactured articles derived from the wood of elm and related plants entering this country from Europe must be free from bark.

THE CALIFORNIA WILD LIFE ADMINISTRATION AND PEST CONTROL COMMITTEE

PROVIDED by the last California Legislature, the Wild Life Administration and Pest Control Committee held its first meeting at the University of California on December 19. This committee, established by authority of Senate Concurrent Resolution No. 26, includes representatives of all groups interested in the wild life of the state, its administration and control.

This committee grew out of an investigation inaugurated by President Robert G. Sproul within the university, to determine the basis of discord that existed among various agencies dealing with the many phases of wild life control and administration. The committee, in its report, suggested the formation of such a committee as that now provided, to act as a clearing house for controversial questions that arise, so that the administration of wild life may be harmonious and necessary control measures agreed upon for the benefit of the state.

The organizations, designated by the resolution, have appointed representatives as follows: State Department of Public Health, Edwin T. Ross; State Division of Fish and Game, John L. Farley; State Department of Agriculture, W. C. Jacobson; State Association of Agricultural Commissioners, Gordon Laing, Alameda County; Agricultural Department, State Chamber of Commerce, R. N. Wilson; Conservation Department, State Chamber of Commerce, Charles G. Dunwoody; Zoology Division, University of California, C. A. Kofoid; Pharmacology Department, Medical School, University of California, C. D. Leake; Hooper Foundation for Medical Research, University of California, Karl F. Meyer; College of Agriculture, University of California, T. I. Storer, Davis.

Other groups to be represented, but which have made no appointments as yet, are the United States Biological Survey, California Academy of Sciences, California Farm Bureau Federation, Cooper Ornithological Club and a state-wide sportsmen's organization. In addition, these representatives will name three members-at-large.

INTERNATIONAL MATHEMATICAL CONGRESS MEDALS

EVERY four years there is held an international gathering of mathematicians, known as the International Congress of Mathematicians. At the next meeting, to be held in Oslo in 1936, two Gold Medals will be awarded to mathematicians selected for their outstanding contributions to mathematics by an international committee appointed for the purpose. The foundation of these medals is due to the efforts of the late Dr. J. C. Fields, F.R.S., research professor of mathematics at the University of Toronto. Dr. Fields was responsible for assembling the Mathematical Congress in Toronto in 1924—the only meeting which has been held on this continent. He was president of the congress and the editor of its *Proceedings,* which constituted two large volumes, published by the University of Toronto Press. With funds remaining after the completion of the work, Dr. Fields suggested the foundation of these medals, as a Canadian contribution to the cause of international scientific cooperation, which he always had much at heart. Unfortunately Dr. Fields did not live to see the realization of his scheme, as he died in August, 1932, a month before the meeting of the Congress in Zurich, which gave international approval to the foundation of the medals. The medals will be awarded at each International Congress of Mathematicians in future.

In spite of the fact that the medals are of Canadian origin and are due to the personal efforts of Dr. Fields, it was his particular wish that in design and award they should be truly international in character, and should not be associated with any country or person. The task of designing a suitable medal was entrusted to the distinguished Canadian sculptor, Dr. R. Tait McKenzie, R.C.A., who has now completed his work.

The medal is two and a half inches in diameter.

The obverse shows the head of Archimedes facing right. As there are no authentic portraits of this perhaps greatest of all mathematicians, recourse was had to the fine collection of over thirty pictures collected by Professor David Eugene Smith, and placed by him in Columbia University. They show the ideas of as many artists, ancient and modern, of what his appearance may have been.

AWARD OF THE EDISON MEDAL TO PROFESSOR ARTHUR E. KENNELLY

THE Edison Medal for 1933 has been awarded by the American Institute of Electrical Engineers to Dr. Arthur E. Kennelly, "for meritorious achievements in electrical science, electrical engineering and the electrical arts as exemplified by his contributions to the theory of electrical transmission and to the development of international electrical standards."

The Edison Medal was founded by associates and friends of Thomas A. Edison, and is awarded annually for "meritorious achievement in electrical science, electrical engineering or the electrical arts" by a committee consisting of twenty-four members of the American Institute of Electrical Engineers.

The following eminent engineers and scientific men have been recipients of the medal: Elihu Thomson, Frank J. Sprague, George Westinghouse, William Stanley, Charles F. Brush, Alexander Graham Bell, Nikola Tesla, John J. Carty, Benjamin G. Lamme, W. L. R. Emmet, Michael I. Pupin, Cummings C. Chesney, Robert A. Millikan, John W. Lieb, John White Howell, Harris J. Ryan, William D. Coolidge, Frank B. Jewett, Charles F. Scott, Frank Conrad, Edwin W. Rice, Jr., and Bancroft Gherardi.

Arthur Edwin Kennelly was born near Bombay, India, December 17, 1861. Coming to the United States in 1887, he was engaged as principal electrical assistant to Thomas A. Edison until 1894, when he became associated with Edwin J. Houston in the firm of Houston and Kennelly, consulting electrical engineers.

He was appointed professor of electrical engineering at Harvard University in 1902 and continued in that position until the close of the academic year 1929–30, when he retired from active service. In addition to his work at Harvard, he served as professor of electrical engineering at the Massachusetts Institute of Technology from 1913 to 1924 and was for some years director of electrical engineering research there, as well as chairman of the faculty. During the year 1921–22, he represented seven cooperating American universities as first exchange professor in engineering and applied science at several French universities.

Dr. Kennelly has published about twenty-eight books, of which he is sole author of ten, including: "Theoretical Elements of Electro-Dynamic Machinery," "Wireless Telegraphy," "Electrical Vibration Instruments," "Electrical Lines and Nets" and several on hyperbolic and other complex functions. He is the author of more than 350 papers, many of which were presented before leading technical and scientific organizations in the United States and abroad, and have been widely distributed in technical publications.

One of his chief contributions to applied science is a paper on "Impedance" presented in 1893 before the American Institute of Electrical Engineers, containing the first use of complex numbers as applied to Ohm's Law in alternating-current engineering. He has also presented numerous other papers on the same general subject, many of which contain the first applications of complex hyperbolic angles to the problems of power and communication engineering and to artificial networks. Dr. Kennelly, in 1902, expounded a theory on the influence of a conducting layer in the atmosphere on long-distance radio transmission, which has since been verified experimentally and has resulted in the naming of the so-called ionized layer of reflection the Kennelly-Heaviside layer.

ENGINEERING AT THE BOSTON MEETING

THE program of Section M at the December meeting of the association will be of unusual interest and particularly appropriate in view of the current of national affairs at the present time and the attention which is being focussed on the farm problem. The first of the two most important features of the program is an evening lecture on Friday, December 29, by the Honorable Henry A. Wallace, Secretary of Agriculture, on "What Can Engineers Do for Agriculture?" On the following morning there will be a symposium on the general subject for which Secretary Wallace's address on the previous evening will serve as an introduction. Dr. Charles F. Kettering, chairman of Section M, will preside at this symposium, which will be a joint session of Sections M, K and O. It will be opened by the address of Professor D. C. Jackson as retiring chairman of Section M.

Because of the prominent part which the agricultural problem is occupying in the Administration's Recovery Program, it is particularly appropriate at this time to consider the engineer's part in the farm problem. A discussion of the ideas which are put forth at this symposium should result in an increasing recognition on the part of engineers of their responsibility in connection with our national problems generally and our agricultural problem in particular. The arousing of interest and active consideration of such a problem should tend to bring about a greater sympathy and understanding between the engineer and the farmer.