

GENERAL SCIENCE

Navy, Inventor of FM and Indian Physicist Honored

Franklin Institute Awards Ten Honors at Its Annual Medal Day Exercises; First Award of Brown Medal

THE United States Navy, an East Indian physicist and an American electrical engineer known for his invention of static-free "frequency modulated" radio, were among the recipients of the ten awards presented by the Franklin Institute at its annual Medal Day exercises.

To the Navy was awarded the gold Cresson medal for the "development of means for saving human lives in disabled submarines and the successful application of the United States lung and rescue chamber to this end." This is the apparatus that rescued the survivors of the Squalus disaster in 1939.

Dr. Edwin H. Armstrong, professor of electrical engineering at Columbia University, known for many earlier contributions in radio as well as his invention of F. M., is one of the two recipients of the Institute's highest award, the gold Franklin Medal. His citation reads: "In recognition of his pioneer work in regeneration and the oscillating vacuum tube circuits, in the invention of the superheterodyne circuit, the super-regenerator, and a system of wide-swing frequency modulation, each an outstanding contribution to the communication art." Following the award of this medal, Dr. Armstrong addressed the meeting on "The New Radio Freedom."

The other Franklin Medal was given to Sir Chandrasekhara Venkata Raman, director of the Indian Institute of Science at Bangalore, Mysore, India, "in recognition of his many brilliant contributions to physical science and of his leadership in the renaissance of scientific work and scientific education that has occurred in India during the last thirty years." He is known for his discovery of the "Raman effect," a change in color of light scattered by certain very pure liquids, which has been important in physical science. He was awarded the Nobel prize for his work in 1930.

As Sir Chandrasekhara has not been able to come to the United States, his medal was received by the British minister, Sir Gerald Campbell. A paper by Sir Chandrasekhara on the scattering

of light in crystals was read at the meeting.

Other awards were: To Dr. Harold E. Edgerton, of Massachusetts Institute of Technology, the Potts gold medal, for high speed motion pictures. To John M. Lessells and Dr. Charles W. MacGregor, also of M. I. T., the Levy gold medal for their studies on a nickel-chrome-molyb-

denum steel alloy. The Walton Clark gold medal to Raymond M. Conner, organizer and director of the American Gas Association's Testing Laboratory in Chicago. The Brown medal (of silver), given for the first time, to Dr. Willis H. Carrier, of the Carrier Corporation, for achievements "in the field of Heating, Ventilation and Air Conditioning."

To Harold S. Black, of the Bell Telephone Laboratories, the silver Wetherill medal, for his invention of the negative feedback amplifier. To Benjamin J. Wilson, of the Leeds and Northrup Company, for a new type of meter for measuring the flow of liquids, the Longstreth silver medal. To Charles W. Akers, president of the Breeko Corporation, a certificate of merit for a block for floor construction.

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PHYSIOLOGY—ANATOMY

Thyroid is Fast-Working Organ

Radioactive Iodine Shows

THE THYROID gland in the throat, which secretes and stores iodine for the body's physiological needs, is a fast-working organ. Six minutes is all it needs to receive and concentrate iodine taken into the blood stream, it is indicated in researches reported before the meeting of the American Association of Anatomists, by Dr. Charles Philippe Leblond and Dr. Pierre Sue, formerly of the Laboratoire de Synthèse Atomique at Ivry, France, and now of the University of Rochester.

The two French physiologists used the now familiar technique of tracing elements artificially made radioactive through the bodies of experimental animals. In the present instance, of course, iodine was the radioactivated element employed. Within six minutes after it had been injected into the veins of their rats and guinea pigs its concentration in the various body tissues had reached a constant level.

In the thyroid this level was 20 times greater than it was in other body tissues. Within the gland itself the high concentration was altogether in the storage material known as the colloid; the active cells of the thyroid contained no more iodine than did cells of other body parts.

Evidence confirming the belief that the thyroid acts under the physiological direction of the hypophysis, "master gland" located within the skull, was produced

when Drs. Leblond and Sue removed this gland from some of their animals. Thyroid iodine thereafter declined in concentration, and four months after the operation was only one-sixth of what it was in normal animals, although remaining greater than in other organs.

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New Find in the Head

IT MIGHT be supposed that the anatomy of the human head is pretty completely known; nevertheless a new structure was revealed at the meeting by Dr. Stacy R. Guild of the Johns Hopkins University. The new-found structure consists of a tiny flattened mass of exceedingly fine blood vessels, intermixed with flattened cells and supplied with nerves, the whole affair being smaller than the head of a pin. It is located immediately below the bony floor of the middle ear, close to one of the more important head nerves.

Dr. Guild proposed the name "glomus jugularis" for the structure. Its function is not known, but its discoverer suggested that it may have something to do with the regulation of blood circulation. He also suggested that similar bodies may exist elsewhere along the peripheral circulatory system.

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