

"A Pitot Tube Steam Meter," E. H. Lockwood, New Haven, Conn.

"Production Engineering," A. A. Hamerschlag, Pittsburgh, Pa. (Presented by the secretary.)

"Recent Improvements in Ore Concentration Machinery," R. H. Richards, Boston, Mass.

"A Parallel Rule," H. E. Wetherill, Philadelphia, Pa. (Read by title.)

"The Photographic Lens as an Engineering Instrument," E. H. Berry, East Orange, N. J. (Read by title.)

WEDNESDAY A.M., DECEMBER 29

"The Changes of the Wind with Altitude," A. J. Henry, Mount Weather, Va. (Presented by W. J. Humphreys.)

"Wind Pressure and Velocity," S. P. Ferguson, Hyde Park, Mass.

"The Relation of Wind to Aeronautics," A. Lawrence Rotch, Hyde Park, Mass.

"Turbulent Surface Winds," W. J. Humphreys, Washington, D. C.

"Aerodynamics," A. M. Herring, New York, N. Y.

"Vertical Air Currents and their Office in Supporting a Moving Aerofoil," F. W. Very, Westwood, Mass.

"The Center of Pressure on Arched Surfaces," M. B. Sellers, Fireclay, Ky. (Read by title.)

"Interference of Aeroplane Surfaces due to Grouping," M. B. Sellers, Fireclay, Ky. (Read by title.)

"Vagaries of Air Currents," A. T. Atherholt, Philadelphia, Pa. (Read by title.)

"The Pneumodynamic and the Thermodynamic Function," J. M. Siebel, Chicago, Ill. (Read by title.)

"General Design for an Aerial Machine of High Speed and Efficiency," David Todd, Amherst, Mass. (Read by title.)

"Some Applications of the Laws of Aerial Viscosity to Problems of Aviation," F. W. Very, Westwood, Mass. (Read by title.)

WEDNESDAY P.M., DECEMBER 29

Vice-presidential address¹—"The Profession of Engineering and its Relation to the American Association for the Advancement of Science," G. F. Swain, Boston, Mass.

"The Development of the Modern Textile Mill," C. J. H. Woodbury, Boston, Mass.

"The Present Status of Aerial Navigation,"²

¹ Published in full, *SCIENCE*, February, 1910.

² To be published in full in *SCIENCE*.

Octave Chanute, Chicago, Ill.

The meetings of the section were well attended, the papers were valuable contributions and the discussions interesting. Those responsible for the program appreciate the efforts of the members who prepared and presented the papers and feel that the meeting was in all respects very encouraging.

G. W. BISSELL,
Secretary

EAST LANSING, MICH.

THE AMERICAN PHYSIOLOGICAL SOCIETY

THE twenty-second annual meeting of the American Physiological Society was held in the physiological laboratories of the Harvard Medical School, Boston, Mass., December 28-30, 1909. Sixty-nine of the one hundred and sixty members of the society were in attendance. The officers of the meeting were W. H. Howell, president, and R. Hunt, secretary.

The following papers and demonstrations occupied the six scientific sessions:

JOINT MEETING WITH SECTION K—PHYSIOLOGY AND EXPERIMENTAL MEDICINE—AMERICAN ASSOCIATION FOR THE ADVANCEMENT OF SCIENCE

Address of the retiring vice-president—"Chemical Regulation of the Body-processes by Means of Activators, Kinases and Hormones," W. H. Howell.

Symposium on Internal Secretion:

"A General Review of the Chemical Aspect of Internal Secretion," R. H. Chittenden.

"The Internal Secretion of the Pancreas," W. G. McCallum.

"Our Present Knowledge of Thyroid Function," S. P. Beebe.

"Metabolism after Parathyroidectomy," J. V. Cooke.

"Physiological Consequences of Total and of Partial Hypophysectomy," H. Cushing.

JOINT SESSION WITH THE AMERICAN SOCIETY OF BIOLOGICAL CHEMISTS

"On the Reversible Reaction for the Liberation of Carbonic Acid from the Blood in the Lung," L. J. Henderson.

"The Action of Certain Substances on the Respiratory Center," A. S. Loevenhart (with W. E. Grove).

"Some Reactions of Lipase of Human Pancreatic Juice," H. C. Bradley.

"The Action of the Blood Proteins on the Isolated Mammalian Heart," W. H. Howell (for L. W. Gorham and A. W. Morrison).

"The Absorption of Fluid from the Peritoneal Cavity," L. Loeb (with M. L. Fleisher).

"The Distribution of Glycogenolytic Ferment in the Animal Body," J. J. R. Macleod.

"Sugar Production from Amino-acids in Metabolism," A. I. Ringer and G. Lusk.

"Further Studies on the Internal Secretion of the Thyroid," A. J. Carlson and A. Woelfel.

"Metabolism of Purin Derivatives," L. B. Mendel and J. F. Lyman.

"The Relation of Ptyalin Concentration to the Diet and to the Rate of the Secretion of Saliva," A. L. Crittenden and A. J. Carlson.

"The Action of Isotonic Solutions of Neutral Salts on Unfertilized Echinoderm Eggs," R. S. Lillie.

"The Food Requirements for Growing Children," E. W. Rockwood.

"The Sensitizing and Desensitizing Action of Various Electrolytes on Muscle and Nerve," R. S. Lillie.

"Sudan III. and the Absorption of Fat," R. H. Whitehead.

"The Effect of Inanition and of Various Diets upon the Resistance of Animals to Certain Poisons," R. Hunt.

"Do Muscle and Blood Serum contain Kreatinin?" P. A. Shaffer.

PAPERS PRESENTED AT THE OTHER SESSIONS

"The Effect of External Temperature upon the Peripheral Circulation," A. W. Hewlett.

"The Effect of Exercise upon Venous Pressure," D. R. Hooker (with J. M. Wolfsohn).

"Changes in the Heart during Hemorrhage," C. J. Wiggers.

"On the Relation of the Vasomotor Center to Afferent Impulses," W. T. Porter.

"Effect of Stimulation of the Splanchnic Nerve on the Glycogenolytic Ferments of Lymph and Blood," J. J. R. Macleod.

"The Influence of Alcohol on Metabolism," L. B. Mendel (with W. W. Hilditch).

"The Summation of Stimuli," F. L. Lee (with M. Morse).

"Influence of Ethyl Alcohol upon the Life Cycle of *Paramecium*," C. F. Hodge (with W. A. Matheny).

"The Influence of Thyroid-parathyroidectomy on the Ammonia-destroying Power of the Liver," A. J. Carlson (with Clara Jacobson).

"Energy Metabolism in Parturient Women," T. M. Carpenter and J. R. Murlin.

"Mammalian Heart Strips together with a Theory of Cardiac Inhibition," J. Erlanger.

"The Velocities of some Physiological Actions," C. D. Snyder.

"On the Mode of Action of the Glomerulus of the Kidney" (with demonstration), T. G. Brodie.

"Apnea Vera in Anesthesia," M. M. Scarborough and Y. Henderson.

"The Cortico-spinal Tract in the Rat," J. L. Kin.

"On Protein Assimilation," P. A. Levene (with G. M. Meyer).

"On the Condition of the Spinal Vaso-motor Pathways in Shock," F. H. Pike.

"The Influence of Dietetic Alterations on the Types of Intestinal Flora," C. A. Herter (with A. I. Kendall).

"Observations upon the Blood Pressure of the Sheep under Local and General Anesthesia," M. Dresbach.

"On the Distribution of Antibodies in Normal and Immune Animals," L. Hektoen and A. J. Carlson.

"On the Cause of Diurnal Variation in Body-temperature," S. Simpson.

"The Pressure of Bile Secretion in the Herbivora," S. Simpson.

"Microscopical Structure of the Neurite," C. F. Hodge (with H. B. Davis).

"Respiratory Waves of Blood Pressure in Man," J. Erlanger (with E. G. Festerling).

"Further Studies on the Influence of Copious Water Drinking with Meals," P. B. Hawk.

"An Observation on the Chemical Regulation of Respiration," Y. Henderson.

"The Gaseous Metabolism of the Heart during Vagus Inhibition," W. H. Howell (for J. M. Wolfsohn and L. W. Ketron).

"Congenital Thyroidism; an Experimental Study of the Thyroid in Relation to Other Glands of Internal Secretion," R. G. Hoskins.

"The Primitive Movements of the Vertebrate Embryo," S. Paton.

"The Action of Urea upon the Heart," F. P. Knowlton.

"Physiological Effects of the Marathon Race, Circulatory and Renal Systems," J. H. Barach (with J. W. Boyce and W. L. Savage).

"The Relation of the Pancreas to Sugar Metabolism," W. M. Baldwin.

"Some Urinary Findings in Eclampsia," L. B. Stookey. (Read by title.)

"The Action of Magnesium Salts on Internal Respiratory Processes," C. C. Guthrie. (Read by title.)

DEMONSTRATIONS

E. G. Martin: Some apparatus used in the quantitative study of faradic stimuli.

W. B. Cannon: Nerve cells of the myenteric plexus subjected to anemia for different periods.

W. B. Cannon: The influence of tonus on peristalsis.

Y. Henderson: Demonstration of a simple gas meter.

D. R. Joseph and S. J. Meltzer: The mutual antagonism between magnesium and barium.

J. Auer (with P. Lewis): Demonstration of anaphylactic immobilization of the lungs in guinea-pigs.

W. H. Schultz: A simple respiration apparatus.

S. J. Meltzer: A demonstration of the method of respiration by continuous intratracheal insufflation.

In the afternoon of December 29 the members of the society visited the Carnegie Nutrition Laboratory, where demonstrations were given by Dr. F. G. Benedict and assistants.

Owing to the rapidly increasing number of active workers in physiology in this country and the consequent growth of the society, the number of papers presented at the annual meetings has now become so great that their reading and adequate discussion in the time allotted for the meeting is practically impossible. In the hope of remedying this situation, at least in part, it was voted to limit henceforth the time of presentation of all papers to ten minutes, and that abstracts of the papers be furnished the secretary in time for printing before the meetings. It is hoped that with printed abstracts of the papers in the hands of every member attending, less time will be required for their presentation and more time given to the discussions.

An appropriation of \$50 was voted for the fund now being raised by the French physiologists for the erection of a monument to Marey.

The following new members were elected: F. C. Becht, of the University of Chicago, and J. B. Leathes, of the University of Toronto.

The president appointed the following delegates to the International Zoological Congress at Graz: R. G. Harrison and A. J. Carlson; to the International Congress of Physiologists at Vienna: R. Hunt and A. J. Carlson.

Officers for the ensuing year:

President—W. H. Howell.

Secretary—A. J. Carlson.

Treasurer—W. B. Cannon.

Additional Members of the Council—J. Erlanger and F. S. Lee.

A. J. CARLSON,
Secretary

THE UNIVERSITY OF CHICAGO

SOCIETIES AND ACADEMIES

THE ANTHROPOLOGICAL SOCIETY OF WASHINGTON

At the 442d regular meeting, held February 15, 1910, Miss Rovena Buell, of the American School for Classical Studies at Rome, presented a paper on "Amulets," illustrating her discourse with interesting specimens collected by herself chiefly in Italy. In the making of this collection of Italian amulets the effort has been to bring together those in modern use and their ancient parallels. The sixty specimens may be roughly divided thus:

1. Prophylactics against the evil eye, having in form some relation to a horn and representing phallicism, Diana worship, and defensive symbolism by means of the hand. Examples—a phallus, a tiger's claw, a boar's tusk, a crab's claw, coral and shell horns, lunar crescents, composite horned animals, hands making the sign of the *fico* and the sign of the horns.

2. Amulets that make the sound of metal, hateful to evil spirits. Examples—bells, clashing disks and pendants.

3. Grotesque and ocular guards against malevolence. Examples—masks, a humpback, compositions or stones resembling eyes.

4. Preventives and cures by suggestion. Examples—a fossilized trochus, "eye of Santa Lucia," for eye maladies, a limonite concretion with a loose inner particle, "*pietra gravida*," for miscarriage, fossilized corals, "witch stone," for witch spells, carnelian and jasper, "blood stones," for heart disease and hemorrhages, bronze and silver fish, for female sterility, a comb, for caked breasts (caused by the presence of a witch's hair), a dried sea horse, to increase milk in the breasts, a red woolen sack containing bread crumbs, salt, incense and wheat from a field ripe but unspoiled by the harvester's iron, to guard against the evil eye and witchcraft.

5. Charms pertaining to animals. Examples—badger's hairs, for defense against witches, claw of a paradise bird and a monkey's paw, valid against the evil eye.

6. Roman Catholic amulets. (a) Authorized by