

uates. I think there is no doubt that the engineering courses make the best preparation for engineering and industrial life that has been devised. Good engineers lived before the engineering schools; but the engineering schools are doing a tremendous work in providing men with the mental means to extend engineering knowledge and advance engineering practise.

One of the things that students, to their disadvantage, commonly fail to keep constantly in mind is the fact that a man of ability and courage can usually make of himself that which his ambitions dictate. If you set your ambitions right there need be no fear of your reasonable success. Failure by a man of ability and courage, who also has the advantage of education, is scarcely to be condoned. The only sufficient excuse is an inadequate physique or ill health caused through no fault of the individual. In engineering nothing is ordinarily sufficient to excuse failure.

Samuel Lover says in his humorous but human story of Rory O'More:

Now, it was not merely luck was on Rory's side, for he turned all the accidents to good account, which would have been thrown away on a fool; and this, after all, is what makes the difference in ninety-nine cases out of every hundred between a lucky and an unlucky man. The unlucky man often plays life's game with good cards and loses; while the lucky man plays the same game with bad ones and wins. Circumstances are the rulers of the weak—they are but the instruments of the wise.

If a man concentrates his efforts, is honest, is patient, performs his duties with thoroughness, masters the principles relating to his employment, and thinks (it is remarkable "how many never think, who think they do"), he is sure to succeed. True success is a great achievement, and great achievements require long expenditure of well-directed endeavor for their erection. It is a restlessness and discon-

tent born of a failure to note the last precept, often accompanied by an excessive self-esteem, which leads to Mr. Taylor's criticism of engineering graduates to which I have previously referred. For the cure of that I will refer you to Kipling. He says in a burst of autobiographical confidence:

As there is only one man in charge of a steamer, so there is but one man in charge of a newspaper, and he is the editor. My chief taught me this on an Indian journal, and he further explained that an order was an order, to be obeyed on a run, not a walk, and that any notions as to the fitness or unfitness of any particular kind of work for the young had better be held over until the last page was locked up to press. He was breaking me into harness and I owe him a debt of gratitude which I did not discharge at that time. The path of virtue was very steep, whereas the writing of verses allowed a certain play to the mind, and, unlike the filling in of reading matter, could be done as the spirit served. Now, a sub-editor is not hired to write verses; he is paid to sub-edit. At the time, this discovery shocked me greatly; but some years later, when I came to be a sort of an editor-in-charge Providence dealt me for my subordinate, one saturated with Elia. He wrote very pretty Lamblike essays, but he wrote them when he should have been sub-editing. Then I saw a little of what my chief must have suffered on my account. There is a moral here for the ambitious and aspiring who are oppressed by their superiors.

If every young engineering school graduate who becomes discontented with his duties and the treatment he receives would read, ponder and reflect on these words of Kipling, which express his youthful experiences, I believe Mr. Taylor would have few opportunities to repeat his criticism of the new graduates from engineering schools.

DUGALD C. JACKSON

MASSACHUSETTS INSTITUTE OF TECHNOLOGY

DOCTORATES CONFERRED BY AMERICAN UNIVERSITIES

THERE are given in the accompanying tables data in regard to the degrees of doc-

TABLE I
Doctorates Conferred

	Average of 10 Years 1898-1907	1908	1909	1910	Total for 13 Years 1898-1910
Chicago.....	35.6	54	38	42	490
Columbia.....	32.2	55	59	44	480
Harvard.....	33.8	42	38	35	453
Yale.....	31.8	32	44	27	421
Johns Hopkins.....	30.5	28	27	23	383
Pennsylvania.....	22.5	32	29	26	312
Cornell.....	18.1	22	34	35	272
Wisconsin.....	8.6	17	16	18	137
Clark.....	8.7	11	9	14	121
New York.....	6.7	15	13	11	106
Michigan.....	6.9	4	13	7	93
Boston.....	4.4	11	13	6	74
California.....	3.3	4	10	6	53
Princeton.....	2.6	6	4	8	44
George Washington.....	2.8	3	4	4	39
Minnesota.....	2.4	3	5	1	33
Virginia.....	2.8	4	1	0	33
Bryn Mawr.....	2.1	4	2	5	32
Brown.....	2.3	2	5	1	31
Catholic.....	2.0	1	3	3	27
Illinois.....	.5	5	4	12	26
Nebraska.....	2.0	2	2	1	25
Stanford.....	1.4	2	3	5	24
Iowa.....	1.1	2	0	4	17
Georgetown.....	1.0	0	0	0	10
Vanderbilt.....	.6	1	1	2	10
Missouri.....	.4	3	0	2	9
Massachusetts Institute	.3	3	0	3	9
Washington.....	.7	1	0	0	8
Cincinnati.....	.3	0	2	2	7
Pittsburgh.....	.1	4	0	2	7
Colorado.....	.5	0	1	0	6
Indiana.....	.0	3	3	0	6
Kansas.....	.3	0	0	3	6
North Carolina.....	.5	0	1	0	6
Northwestern.....	.4	0	1	0	5
Syracuse.....	.2	0	2	1	5
Washington and Lee...	.4	1	0	0	5
Lafayette.....	.3	0	0	0	3
Dartmouth.....	.1	1	0	0	2
Lehigh.....	.2	0	0	0	2
Tulane.....	.1	0	0	0	1
Total.....	271.5	378	387	353	3,833

TABLE II
Doctorates Conferred in the Sciences

	Average of 10 Years 1898-1907	1908	1909	1910	Total for 13 Years 1898-1910	Per Cent.
Chicago.....	16.4	37	20	24	245	50
Johns Hopkins.....	16.8	17	20	15	220	57
Columbia.....	13.4	21	23	11	189	39
Yale.....	12.4	16	27	12	179	43
Harvard.....	14.1	13	14	10	178	39
Cornell.....	10.4	15	24	27	170	63
Pennsylvania.....	9.0	18	13	12	133	43
Clark.....	7.7	11	8	14	110	91
Wisconsin.....	2.8	6	4	13	51	37
California.....	2.4	2	6	4	36	68
Michigan.....	2.9	1	5	1	36	38
George Washington.....	1.7	2	2	3	24	62
Princeton.....	1.1	3	3	2	19	43
Brown.....	1.2	2	2	1	17	55
Nebraska.....	1.3	1	2	1	17	68
Stanford.....	1.1	2	2	1	16	67
Illinois.....	.3	0	2	9	14	54
Virginia.....	1.1	2	0	0	13	42
Bryn Mawr.....	1.0	1	0	2	13	40
New York.....	.6	1	3	2	12	11
Minnesota.....	.7	1	2	1	11	33
Iowa.....	.7	0	0	2	9	52
Massachusetts Institute.	.3	3	0	3	9	100
Washington.....	.7	1	0	0	8	100
Catholic.....	.5	—	2	0	7	26
Missouri.....	.3	2	0	2	7	78
Indiana.....	.0	3	3	0	6	100
Kansas.....	.3	0	0	3	6	100
North Carolina.....	.3	0	1	0	4	66
Vanderbilt.....	.3	1	1	0	5	50
Washington and Lee...	.3	1	0	0	4	80
Cincinnati.....	.1	0	1	1	3	43
Northwestern.....	.2	0	1	0	3	60
Boston.....	.1	0	1	0	2	3
Colorado.....	.2	0	0	0	2	33
Dartmouth.....	.1	1	0	0	2	100
Lehigh.....	.2	0	0	0	2	100
Syracuse.....	.1	0	0	1	2	40
Georgetown.....	.1	0	0	0	1	10
Lafayette.....	.1	0	0	0	1	33
Pittsburgh.....	—	—	—	1	1	14
Total.....	123.3	184	192	178	1,787	47

tor of philosophy¹ conferred by the universities of the United States, which are now collected for the thirteenth consecutive year. There were conferred this year 353 degrees, not so many as in the three

¹ One doctorate of science from New York University and one doctorate of engineering from the Massachusetts Institute of Technology are included.

preceding years, when the numbers were 366, 378 and 387. A fluctuation of this character is not significant, though it is certainly the case that the increase in the number of degrees is smaller than might be hoped and might be expected. There is no change in the order of the leading universities in respect to the number of degrees that they have conferred. Chicago

TABLE III

	Average of 10 Years 1898-1907	1908	1909	1910	Total for 13 Years 1898-1910
Chemistry	32.0	54	42	48	464
Physics	15.5	22	25	25	227
Zoology	14.7	25	18	24	214
Psychology	13.4	23	21	20	198
Mathematics	12.1	23	13	23	180
Botany	12.6	11	16	10	163
Geology	7.1	5	13	10	99
Physiology	4.1	7	13	4	65
Astronomy	3.4	1	7	2	44
Agriculture	1.0	2	7	4	23
Bacteriology	1.4	1	5	1	21
Anthropology	1.0	4	4	2	20
Paleontology	1.6	1	0	2	19
Anatomy .....	.9	2	0	1	12
Pathology .....	.5	2	3	1	11
Mineralogy .....	.6	0	3	0	9
Engineering .....	.8	0	0	1	9
Metallurgy .....	.3	0	1	0	4
Geography .....	.1	1	1	0	3
Meteorology .....	.1	0	0	0	1
Total	123.3	184	192	178	1,787

	1908	1909	1910	Total for 3 Years
English	30	27	30	87
History	32	22	24	78
Economics	17	42	6	65
Philosophy	25	14	19	58
German	14	14	16	44
Latin	12	12	15	39
Oriental Languages	9	15	11	35
Romance	12	16	6	34
Greek	13	11	4	28
Education	6	9	13	28
Sociology	6	6	14	26
Political Science	9	4	9	22
Theology	7	2	1	10
Philology and Comparative Literature	0	1	5	6
Law	1	0	1	2
Music	1	0	1	2
Total	194	195	175	564

still stands first, having granted 490 degrees in the course of the past thirteen years. Columbia follows closely with 480, and there then follow Harvard with 453, Yale with 421, Johns Hopkins with 383, Pennsylvania with 313 and Cornell with

271. There is then a considerable drop to Wisconsin, Clark, New York and Michigan. The most notable fact in regard to last year is the conferring of twelve degrees by Illinois, nearly as many as in the preceding twelve years. Wisconsin, by conferring 18 degrees, also maintains the position which it has recently assumed. These two institutions this year surpass Michigan with 7 degrees, California with 6 degrees, and Minnesota and Nebraska with one degree each, these being the six state universities in which graduate work is the most developed.

Almost exactly half the degrees conferred last year were in the natural and exact sciences. The universities, however, differ considerably in the relative importance of their work in the sciences. Chicago appears to be the best balanced; it has conferred just half its degrees in the sciences and half in other subjects. At the Johns Hopkins and Cornell about sixty per cent. of the degrees are in the sciences, whereas the percentage is about forty at Harvard, Yale, Columbia and Pennsylvania. There is not a preponderance of the sciences in the state universities, the percentage of degrees at Wisconsin being only 37 and at Michigan 38. Boston University appears to have the most curious record, having conferred only three scientific degrees out of seventy-four. There was this year a large fall in the number of degrees in the sciences conferred by Columbia, 11 as compared with 21 and 23 in the two preceding years. Cornell, on the other hand, conferred this year 27 degrees in the sciences, surpassing all other institutions.

Table III. gives the distribution of the degrees among the different subjects. Chemistry, with 48 degrees, leads, as always, having about double the numbers in

physics, zoology, psychology and mathematics. Botany comes next and there is then a considerable drop to geology, followed by physiology and astronomy. In the case of the subjects not ranked under the natural and exact sciences, most degrees have been given in English, history, economics and philosophy. The number of degrees in the languages appears to be small, when the large number of teachers in these subjects in our colleges and schools is considered. Teachers of French and German are, however, largely foreigners, and Americans who study these subjects would perhaps be more likely than others to take their degrees abroad.

The institutions which this year conferred two or more degrees in a science are: in *chemistry*, Chicago, 8; Johns Hopkins, 7; Illinois, 6; Wisconsin and Yale, 5 each; Cornell and Pennsylvania, 4 each; Columbia, 3; Harvard, 2; in *physics*, Cornell, 6; Chicago, 4; Clark and Pennsylvania, 3 each; Illinois, 2; in *zoology*, Cornell, 4; Columbia and Johns Hopkins, 3 each; California and Harvard, 2 each; in *psychology*, Clark, 9; Cornell and Harvard, 3 each; in *mathematics*, Chicago, 4; Cornell, Harvard, John Hopkins, Kansas, Princeton and Yale, 2 each; in *botany*, Cornell, 3; Pennsylvania and Wisconsin, 2 each; in *geology*, Wisconsin, 3; in *physiology*, Chicago, 3; in *agriculture*, Cornell, 2; in *anthropology*, Columbia, 2.

The names of those on whom the degree was conferred in the natural and exact sciences, with the subjects of their theses, are as follows:

CORNELL UNIVERSITY

James Theophilus Barrett: "Studies of some Phycomycetes."

James Chester Bradley: "The Wings of Hymenoptera, with particular reference to the Ichneumon Flies."

Harry Bates Brown: "The Form and Structure of certain Plant Hybrids as compared with the Form and Structure of their Parents."

Ormond Butler: "A Study of Gummosis of *Prunus* and *Citrus*, with Observations on Squamosis and Exanthema of the *Citrus*."

Helen Maud Clarke: "Conscious Attitudes."

Harold Bartlett Curtis: "Hyperabelian Functions Expressible by Theta Series."

George Charles Embody: "The Ecology, Habits and Growth of the Pike (*Esox lucius*)."

Clarence Errol Ferree: "An Experimental Examination of the Phenomena usually attributed to Fluctuation of Attention."

Otis Amsden Gage: "The Point Discharge in Air for Pressures greater than One Atmosphere."

Roswell Clifton Gibbs: "The Effect of Temperature on Fluorescence and Absorption."

Horace Wadsworth Gillett: "Temperature Measurements in an Experimental Carborundum Furnace."

Harry Alexis Harding: "The Constancy of certain Physiological Characters in the Classification of Bacteria."

Leonard Haseman: "Structure and Metamorphosis of the Alimentary Canal of the Larva of *Psychodaal ternata* Say."

Eugene Peter Humbert: "A Biometrical Study of Variation, Natural and Induced, in Pure Lines of *Silene noctiflora*."

Harriett Marie Martin: "An Orchard Survey of Ontario County, New York."

Fred A. Molby: "The Effect of Low Temperatures upon the Rotatory Power of the Optically Active Substances."

George William Nasmith: "Undamped High Frequency Oscillations in Radiotelegraphy and Radiotelephony."

Tamekichi Okabe: "The Psychology of Belief."

Helen Brewster Owens: "Conjugate Line Congruences of the Third Order defined by a Family of Quadrics."

Edwin Frederick Rathjen: "The Pterates of the Rare Earths."

Floyd Karker Richtmyer: "On the Photo-electric Effect as exhibited by the Alkali Metals."

Jacob Parsons Schaeffer: "The Lateral Wall of the Cavum Nasi in Man."

Fred Floyd Shetterly: "On the Oxidation of Hydrazine."

William Henry Shideler: "The Evolution of the North American Spirifers."

Albert Alexander Somerville: "The Electrical Resistance of Metals at High Temperatures."

Charles John Triggerson: "A Study of *Dryophanta erinacei*."

Gorrell Robert White: "The Electrolytic Corrosion of some Metals."

UNIVERSITY OF CHICAGO

Ernest Anderson: "The Action of Fehling's Solution on d-Galactose."

Francis Christian Becht: "The Concentration of Hempronus and related Hadeis in the various Body Fluids of Normal and Immune Animals."

Charles Brookover: "The Olfactory Nerve, the Nervus Terminalis and the Preoptic Sympathetic System in *Amia Calvia* Linn."

Herbert Horace Bunzel: "The Mechanism of the Oxidation of Glucose by Bromine."

Benjamin Franklin Davis: "The Immunological Reaction of Blastomycosis."

James Richard Greer: "The Concentration of Bacterial Oponins and Related Bodies in the various Body Fluids of Normal and Immune Animals."

William Ross Ham: "Polarization of Roentgen Rays."

William Weldon Hickman: "The Catalysis of Imido-Esters."

Theophil Henry Hildebrandt: "A Contribution to the Foundations of Frechet's Calcul Fonctionnel."

John Mathias Kuehne: "The Electrostatic Effect of a Changing Magnetic Field."

Winford Lee Lewis: "The Action of Fehling's Solution on Maltose."

Harris Franklin MacNeish: "Linear Polars of the k-hedron in n-space."

Walter Joseph Meek: "Physiological Restoration and Anatomical Regeneration of the Small Intestine after Transection."

Alan Wilfrid Cranbrook Menzies: "Studies in Vapor Pressure."

Egbert J. Miles: "The Absolute Minimum of a Definite Integral in a Special Field."

Anna Johnson Pell: "Biorthogonal Systems of Functions with Applications to the Theory of Integral Equations."

Peter Powell Peterson: "Stereoisomerism of Chlorimidoketones."

Charles Albert Proctor: "Variation of e/m with Velocity of Cathode Rays."

Lemuel Charles Rayford: "Chlorimido Quinones."

Newland Farnsworth Smith: "The Effect of Tension on Thermal and Electrical Conductivity."

Herman Augustus Spoehr: "On the Behavior of the Ordinary Hexoses towards Hydrogen Peroxide in the Presence of Alkaline Hydroxides as well as of various Iron Salts."

Arthur Howard Sutherland: "Word Association Reactions: A Contribution to the Analysis of Ideational Complexes."

Edith Minot Twiss: "Prothallia of *Aneimia* and *Lygodium*."

Joseph Bertram Umpheby: "Geology and Ore Deposits of the Republic District, Washington."

JOHNS HOPKINS UNIVERSITY

Oscar Ellis Bransky: "The Diffusion of Crude Petroleum through Fuller's Earth."

William Henry Brown: "The Development of the Ascocarp of *Lachnea Scutellata*."

William Mansfield Clark: "A Contribution to the Investigation of the Temperature Coefficient of Osmotic Pressure—A Redetermination of the Osmotic Pressures of Cane Sugar Solutions at 20°."

Arthur Howard Estabrook: "Effect of Chemicals on Growth in *Paramecium*."

Rogers Harrison Galt: "The Cathode-ray Fluorescence of Sodium Vapor."

Benjamin Harrison Grave: "Anatomy and Physiology of *Atrina (Pinna) rigida* Dillwyn."

Joseph Ellis Hodgson: "Orthocentric Properties of the Plane Directed N-Line."

Henry Royer Kreider: "The Dissociation of Electrolytes in Non-aqueous Solvents as determined by the Conductivity and Boiling-point Methods."

Homer Payson Little: "The Physical Features of Anne Arundel County, Maryland."

Sylvester Kline Loy: "The Reactions of Sodium Ethylate with Alkyl Halides."

Chester Newton Myers: "Deposition of Copper Ferrocyanide Membrane by the Electrolytic Method."

Henry Clarence Robertson, Jr.: "The Reactions of Alkyl Halides with Sodium Phenolate."

Joseph Eugene Rowe: "A Complete System of Invariants for the Plane Rational Quartic Curve, and other Facts in regard to Rational Curves."

George Frederic White: "The Conductivity and Dissociation of Organic Acids in Aqueous Solution at different Temperatures."

Charles Branch Wilson: "The Development of *Achtheres ambloplitis* Kellicott."

CLARK UNIVERSITY

Rudolph Acher: "Psychology and Hygiene of Sex."

Harry Woodburn Chase: "Psycho-analysis and the Unconscious."

Elnora Whitman Curtis: "The Dramatic Instinct in Education."

Hobert Cutler Dickinson: "Combustion Calorimetry and the Heats of Combustion of Cane Sugar, Benzoic Acid and Naphthalene."

William Trowbridge Merrifield Forbes: "A Structural Study of some Caterpillars."

Gordon Scott Fulcher: "Experiments on the Intensity of Light from Canal Rays."

William Henry Holmes, Jr.: "The Adjustment of School Organization to the Needs of the Individual Child."

George Alexander Hutchinson: "Psychology of Symbolism."

Raymond Kurtz Morley: "On the Fundamental Postulate of Tamisage."

Thomas Lansing Porter: "Experiments on a New Dynamical Method for the Study of Elastic Hysteresis."

Leroy Walter Sackett: "The Canada Porcupine: A Study of the Learning Process."

George Henry Steves: "Industrial Education of Boys and Girls."

John Howard Stoutemyer: "A Comparative Study of Mission Methods."

Edward Ebenezer Weaver: "Psycho-therapeutic Evangelism."

UNIVERSITY OF WISCONSIN

Ruth Florence Allen: "Studies in Spermatogenesis and Apogamy in Ferns."

Sydney Hobart Ball: "General Geology of Georgetown (Colorado) Quadrangle."

Raymond Calvier Benner: "The Fractionation of the Yttrium Earths by Means of the Succinates."

James Miller Breckenridge: "Calcium Alloys."

Francis Todd H'Doubler: "On certain Functional Equations."

Charles Warren Hill: "The Separation of the Gadolinium Earths as Stearates."

David Klein: "On the Interaction of Hydrogen Sulphide of Sulphur Dioxide."

Francis Craig Krauskopf: "Vapor Pressure of Water and Sodium Chloride Solutions."

Benjamin Franklin Lutman: "Some Contributions to the Life History and Cytology of the Smuts."

Henry Herman Paul Severin: "A Study on the Structure of the Egg of the Walking Stick, *Diapher omera femorata* Say; and the Biological Significance of the Resemblance of the Phasmid Egg to Seeds."

Edward Steidtmann: "The Origin of Dolomite."

Earle Melvin Terry: "The Effect of Temperature on the Magnetic Properties of Electrolytic Iron."

Wendell Garrett Wilcox: "Studies in Osmotic Phenomena."

UNIVERSITY OF PENNSYLVANIA

Maurice Jefferis Babb: "The Second Category of the Groups of Order 2^m which contain Self-conjugate Cyclic Subgroups of Order 2^{m-4} ."

Walter Martinus Boehm: "A Method of Measuring the Intensity of Sound."

Glenn Vinton Brown: "The Determination of Manganese."

Gideon Stanhope Dodds: "Segregation of the Germ Cells of the Teleost *Lophius*."

Daniel Roberts Harper, 3d: "Vacuum Jacketed Calorimeter and the Specific Heat of Copper."

Dicran Hadjy Kabakjian: "The Silent Discharge and the Formation of Ozone."

John Hughes Müller: "The Behavior of the Metallic Acids with Salicylic Acid."

George William Plummer: "The Chemical Constitution of Marcasite and Pyrite."

Dámaso Rivas: "Bacteria and other Fungi in Relation to the Soil."

Aaron Moyer Snyder: "A Statistical Analysis of the Retardation and its Causes in the Reading, Pennsylvania, Public and Parochial Schools."

Elmer Bixler Ulrich: "Leaf Movements in the Family Oxalidaceæ."

Calvin Naftzinger Wenrich: "A Study in the Time Interval in a Productive or Circuit Breaking Device."

YALE UNIVERSITY

Edward Monroe Bailey, Jr.: "Biochemical and Bacteriological Studies on the Banana."

Alice Frances Blood: "The Proteolytic Enzymes in certain Plants."

DeLorme Donaldson Cairnes: "The Wheaton River District, Yukon Territory, Canada."

David Breese Jones: "The Conversion of Halides of the General Formula— $X.OH_2$, CH hal. CH_3 —into Allyl and Propenyl Compounds."

John Kenyon Lamond: "Improper Multiple Integrals depending on a Parameter."

Ralph Walter Langley: "Studies of the Oxides of Tantalum and Columbium."

William Harding Longley: "The Maturation of the Egg and Ovulation in the Domestic Cat."

Edwin Cyrus Miller: "A Physiological Study of the Germination of *Helianthus annuus*."

Howard Earle Palmer: "The Use of Potassium Ferrocyanide and Potassium Ferricyanide in Analysis."

Chester Albert Reeds: "The Stratigraphy of the Hunton Formation, with Introductory Chapters on the Physiography and Structure of the Arbuckle Mountains, Oklahoma."

Ernest Wilson Sheldon: "Critical Revision of de Haan's Tables of Definite Integrals." 2 vols.

Frank Elbert Wheelock: "On the Nature of the Ionization produced by α -rays."

COLUMBIA UNIVERSITY

Carl Gustave Amend: "On 4- and 5-Acetamino Acetantloranils and Quinazolines derived Therefrom."

Clark Wells Chamberlain: "The Radius of Molecular Attraction."

Ernest Dunbar Clark: "Plant Oxidases."

Leo Joachim Frachtenberg: "Grammar of the Coos Language of Oregon."

Abraham Julius Goldfarb: "Influence of the Nervous System in Regeneration."

Alexander A. Goldenweiser: "Totemism."

William King Gregory: "The Orders of Mammals."

Edward Calvin Kendall: "A Quantitative Study of the Action of Pancreatic Amylase."

Max Withrow Morse: "The Nuclear Components of the Sex Cells of Four Species of Cockroaches."

Henry Alford Ruger: "The Place of Analysis in the Curve of Efficiency."

Elvira Wood: "The Phylogeny of Certain Cerithidæ."

HARVARD UNIVERSITY

Harold Canning Chapin: "A Revision of the Atomic Weight of Neodymium."

Lawrence Wooster Cole: "An Experimental Study of Racoons."

Griffith Conrad Evans: "Volterra's Integral Equation of the Second Kind with Discontinuous Kernel."

Frank Lauren Hitchcock: "Vector Functions of a Point."

Roy Graham Hoskins: "Interrelations of the Organs of Internal Secretion."

William Hammett Hunter: "The Action of Alkali Iodides on Bromanil and the Red and White Silver Salts of some Bromphenols."

Edmund Jacobson: "Inhibition."

Henry Clay McComas, Jr.: "Types of Attention."

Sergius Morgulis: "Studies of Inanition in its Bearing upon the Problems of Growth."

William Albert Willard: "The Cranial Nerves of *Anolis carolinensis*."

UNIVERSITY OF ILLINOIS

Clarence George Derick: "Molecular Rearrangements and the Constitution of Laurolene."

Thomas Reuben Ernest: "Chemistry of Sandlime Brick."

Alfred Wilhelm Homberger: "Molecular Rearrangements in the Camphor and Fenchone Series."

Paul Edward Howe: "Nitrogen Partition in Repeated Fasting."

John Anton Kostalek: "Nitrogenous Acid Derivatives of Ethyl Malonate."

Henry Albright Mattill: "The Influence of Water-drinking with Meals upon the Digestion and Utilization of Proteins, Fats and Carbohydrates."

Elizabeth Ruth Bennett: "Primitive Groups with a Determination of the Primitive Groups of Degree 20."

Edward Beattie Stephenson: "Magnetic Properties of Heusler Alloys."

Elmer Howard Williams: "The Nature of Spark Discharge at Very Small Distances."

UNIVERSITY OF CALIFORNIA

Charles Bernard Lipman: "Toxic and Antagonistic Salt Effects, and Physiologically Balanced Solutions in their Relations to Ammonification by *Bacillus subtilis*."

Edward Hindle: "A Cytological Study of Artificial Parthenogenesis in *Strongylocentrotus purpuratus*."

Henry Walter Stager: "On Numbers which contain no Factors of the Form $p(kp+1)$."

Edna Earl Watson: "The Genus *Gyrocotyle* and its Significance for Problems of Cestode Structure and Phylogeny."

GEORGE WASHINGTON UNIVERSITY

James Henry Gardner: "The Naciminto and Torrejon Formations of the Puerco Group."

Herbert Harvey Kimball: "Solar Radiation, Atmospheric Absorption and Sky Polarization."

William Thomas Sheperd: "On some Mental Processes of the Rhesus Monkey."

UNIVERSITY OF KANSAS

Fred W. Faragher: "Improved Processes of Laundering."

Arthur Bowes Frizell: "Foundations of Arithmetic."

Robert Spencer Pond: "Collineations in Space of Four Dimensions."

MASSACHUSETTS INSTITUTE OF TECHNOLOGY

Charles Horace Clapp: "The Igneous Rocks in Essex County, Massachusetts."

Harold Smith Osborne: "An Investigation of the Potential Stress in Dielectrics."

Richard Chace Tolman: "The Electromotive Force produced in Solutions by Centrifugal Action."

BRYN MAWR COLLEGE

Alice Middleton Boring: "A Study of the Spermatogenesis of Twenty-two Species of the Membracidae, Jassidae, Cercopidae and Fulgoridae."

Grace Potter Reynolds: "The Reaction between Organic Magnesium Compounds and Unsaturated Compounds containing Alkoxy Groups."

UNIVERSITY OF IOWA

Albert Kuntz: "The Development of the Sympathetic Nervous System of the Mammalia."

Lee Paul Sieg: "Peculiarities in the Elastic Properties of Certain Wires."

UNIVERSITY OF MISSOURI

Charles Kenworthy Francis: "Phosphorus in Beef Animals."

Louis Lazarus Silverman: "On various Definitions of the Sum of a Divergent Series."

NEW YORK UNIVERSITY

Patrick J. O'Donnell: "The Role of Attention and Habit in the Determination of Social Mind and Corporate Life."

John Paul Simmons: "Isomerisms in the Cobalt Ammines."

PRINCETON UNIVERSITY

Howard Hawks Mitchell: "The Subgroups of the Linear Group $LF(3, p^n)$."

Ulysses Grant Mitchell: "Geometry and Collineation Groups of the Plane $PG(2, 2^n)$."

BROWN UNIVERSITY

Henry Carroll Tracy: "The Morphology of the Swimbladder in Teleosts."

UNIVERSITY OF CINCINNATI

Elliott Smith: "Personal Equation and its Variation."

UNIVERSITY OF MICHIGAN

Harvey Lincoln Curtis: "Mica Condensers as Standards of Capacity."

UNIVERSITY OF MINNESOTA

Hal. Downey: "The Lymphatic Tissue of the Kidney of *Polyodon spathula*."

UNIVERSITY OF NEBRASKA

Franklin Davis Barker: "The Trematode Genus *Phisthorcis* Blanchard."

UNIVERSITY OF PITTSBURGH

Robert Horace Baker: "The Spectroscopic Binary, Beta Aurigæ."

STANFORD UNIVERSITY

Solon Shedd: "The Clays and Clay Industry of Washington."

SYRACUSE UNIVERSITY

Floyd Fiske Decker: "On the Order of a Restricted System of Equations."

SCIENTIFIC NOTES AND NEWS

On the occasion of the celebration of the seventieth birthday of Dr. Hermann Wagner, professor of geography at Göttingen, his bust was presented to the Hall of Fame of the university by his students and friends.

DR. ALBRECHT PENCK, professor of geography at Berlin, has celebrated the twenty-fifth anniversary of his professorship.

DR. JULIUS HANN, professor of cosmical physics at Vienna, has retired from the active duties of his chair.

DR. OSKAR VON HERTWIG, professor of zoology at Munich, has been elected rector of the university for the next academic year.

THE Paris Academy of Sciences has awarded the "Fondation Leconte," a prize of 2,500 francs, to Mr. A. R. Hinks, of Cambridge Observatory, for his astronomical researches.

THE *Observatory* says that English men of science will rejoice in the election of two more Englishmen—Sir William Ramsay and Sir E. Ray Lankester—into the select body of twelve foreign associates of the Paris Academy of Sciences. There were only eight foreign associates of the academy until December of last year, when the number was increased to twelve. Of the eight associates on the list last year, two were Americans, namely, Newcomb and Agassiz; but it appears that no Americans have been found to fill the places left vacant by their deaths. There is at present one vacancy to be filled, the eleven associ-