ness of the employer, will hardly pay. Unless his chemist be a fool—and a fool of a chemist is not worth anything—his employer will lose the good will and confidence of the very man whose work is primarily dependent on these indispensable factors.

Faithful and generous observance of these conditions has brought about the most excellent results in many instances; I know that the contract system, with a salary supplemented by a bonus, or some participation in profits in special departments, has been used with great advantage to all concerned, by some of the most successful chemical companies in continental Europe and in some of the more progressive American enterprises.

It has been objected that a contract of the kind merely binds the employer who has tangible assets, while in most cases it would be difficult to enforce it against faithless employees possessing no property. But even then, a clear and well-defined contract will prevent many misunderstandings which may crop up in the course of time. It has been my experience that direct dishonesty and faithlessness are merely exceptions among chemists, whatever their other shortcomings may be.

We know where the work of the chemist begins. We can never tell where it ends and through what unexpected ramifications it may lead. It is just this fact which adds some zest to the life of the struggling, hard-working chemist, and brings to his work frequently as much excitement as the best of sports; his hopes and disappointments can be compared to those of the restless prospector.

Pasteur, while he was professor at the University of Lille, was consulted by a local alcohol distiller about some irregularities in the fermentation processes. Little did the great French chemist dream, when he tried to solve this seemingly trifling industrial problem, that by doing so he was going to lay bare such an amount of new and unsuspected scientific facts destined to upset all formerly accepted notions, not merely on fermentation, but on life, disease, contagion and epidemics; that he was about to revolutionize surgery, sanitation and medicine, and create several new departments of medical science; that he was going to save millions of lives—reduce sorrow and misery. So little were the men of that period prepared for all these stupendous revelations that this great benefactor of the human race had to suffer most from the gibes and violent attacks of some of the best known men of that very medical profession into which he was going to infuse new life by placing it on a true scientific basis. The history of the stubborn polemics and angry discussions at the French Academy show that, at that time at least, the imagination even of men of science, could not expand to the point of perceiving that medicine and surgery were to be remodeled by a mere chemist.

L. H. BAEKELAND

DOCTORATES CONFERRED BY AMERICAN UNIVERSITIES

THERE were last year conferred 556 degrees of doctor of philosophy or science by institutions competent to confer these degrees. This number exceeds the number for last year by 10 per cent., and is double the average number for the decennium beginning in 1898, when these records were begun. During that decennium seven institutions conferred 2,045 degrees and the remaining 38 institutions 685 degrees. The seven institutions still lead decisively, but not to the same extent, and their grouping has been altered. In the first period, Chicago, Harvard, Columbia, Yale and Johns Hopkins each conferred an average of over 30 degrees, while the number at Pennsylvania and Cornell was in the neighborhood of 20. In the course of later years Columbia has surpassed Chicago, and Harvard has not kept equal with these two universities. Yale and Johns Hopkins have remained about stationary

and now are grouped with Pennsylvania and Cornell.

The most notable change has been the increase of advanced work in the state universities. As American students formerly went to Germany for graduate work, so for a period of years students from the central and western states came to the privately endowed eastern universities. They still do so, but the state universities now provide men and equipment making it possible to carry on research work to advantage. Last year Michigan, Illinois, California and Wisconsin each conferred over twenty degrees as compared with an average under five in the earlier period. Iowa, Nebraska and Indiana each conferred six degrees this year.

Of the 556 degrees 309 were in the natural and exact sciences, which represents a relative gain in them over the earlier period during which they were responsible for less than half of the degrees. Chemistry, as always, leads, the 85 degrees being by far the largest number conferred in any subject. Among the sciences botany and geology ranked high this year and appear to be the sciences making the most rapid gains. Botany and zoology followed chemistry and about equalled English and history.

Of 79 degrees conferred by Chicago, 53 were in the sciences; of 70 degrees conferred by Columbia, 27 were in the sciences. At Columbia and Pennsylvania 39 per cent. of all degrees have been in the sciences, at Johns Hopkins it has been 60 and at Cornell 70 per cent.

The institutions which conferred two or more degrees in a science are: *chemistry,* Columbia, 12; Johns Hopkins, 11; Chicago, 9; Yale, 8; Harvard and Illinois, 6 each; California, 5; Cornell and Pittsburgh, 4 each; Michigan, 3; Iowa, Massachusetts Institute of Technology, Minnesota, North Carolina, Pennsylvania and Stanford, 2 each; in *physics,* Harvard, 5; Cornell, 4; Chicago, Clark and Michigan, 3 each; California, Johns Hopkins, Pennsylvania, Princeton and Yale, 2 each; in *zoology,* Columbia, 5; Chicago and Harvard, 4 each; California and Wisconsin, 3 each; George Washington, Illinois, Johns Hopkins and Yale, 2 each; in *botany,* Chicago, 8; Cornell, 7; Washington, 5; California, Johns Hopkins and Pennsylvania, 3 each; Harvard, Illinois, Michigan and Nebraska, 2 each; in *psychology,* Clark, 7; Harvard, 4; Chicago, 3; Michigan, 2; in *mathematics,* Chicago, 7; Harvard, 3; Columbia, Cornell, Pennsylvania and Yale, 2 each; in *geology,* Chicago, 8; Harvard, 4; Columbia, Johns Hopkins and Wisconsin, 3 each; Indiana and Yale, 2 each; in *physiology,* Yale, 3; Chicago and Harvard, 2 each; in *agriculture,* Cornell, 5; Illinois, 4; in *astronomy,* Chicago, 3; Michigan, 2; in *bacteriology,* Brown, 4; in *anthropology,* Columbia, 3; Harvard, 2; in *anatomy,* Minnesota, 2; in *paleontology,* California, 2; in *pathology,* Chicago, 2; in *geography,* Chicago, 3.

TABLE I

Doctorates Conferred

	Average of 10 Years 1898–1907	'08	'09	'10	'11	'12	'13	'14	'15	Total 18 Years 1898–1915
Columbia	32.2	55	59	44	75	81	66	63	70	835
Chicago	35.6	54	38	42	55	57	46	61	79	788
Harvard	33.8	42	38	35	42	41	52	63	58	709
Yale	31.8	32	44	27	31	31	39	32	36	590
Johns Hopkins	30.5	28	27	23	28	32	32	30	31	536
Pennsylvania	22.5	32	29	26	29	34	31	18	34	458
Cornell	18.1	22	34	35	34	33	35	47	31	452
Wisconsin	8.6	17	16	18	23	27	19	31	21	258
New York	6.7	15	13	11	17	10	16	19	15	183
Clark	8.7	11	9	14	16	6	16	9	12	180
Michigan	6.9	4	13	7	6	11	15	7	26	158
Illinois	.5	5	4	12	11	20	20	22	23	122
California	3.3	4	10	6	6	15	10	14	22	120
Boston	4.4	11	13	6	13	8	9	5	9	118
Princeton	2.6	6	4	8	9	12	13	21	12	111
Bryn Mawr	2.1	4	2	5	5	9	3	7	2	58
George Washington	2.8	3	4	4	5	2	2	5	5	58
Brown	2.3	2	5	1	4	6	1	5	7	54
Virginia	2.8	4	1	4	2	4	4	3	2	52
Catholic	2.0	1	3	3	5	5	3	1	9	50
Minnesota	2.4	3	5	1	2	2	3	3	5	48
Stanford	1.4	2	3	5	4	4	5	5	5	47
Iowa	1.1	2	0	4	3	7	3	4	6	40
Nebraska	2.0	2	2	1	0	3	2	3	6	39
Indiana	.0	3	3	0	2	4	3	4	6	25
Radcliffe	.6	1	2	4	0	2	6	2	1	24
Mass. Inst. Tech.	.3	3	0	3	2	6	1	2	2	22
Washington	.7	1	0	0	2	1	3	1	5	20
Cincinnati	.3	0	2	2	5	3	2	2	0	19
Pittsburgh	.1	4	0	2	1	1	5	1	4	19
Missouri	.4	3	0	2	2	1	1	2	2	17
Ohio	.4	0	2	0	2	5	1	2	1	17
Vanderbilt	.6	1	1	2	0	1	2	0	1	14
Georgetown	1.0	0	0	0	0	0	0	1	1	12
N. Carolina	.5	0	1	0	0	0	0	3	2	11
Syracuse	.2	0	2	1	2	0	0	2	1	10
Colorado	.5	0	1	0	0	0	1	2	0	9
Northwestern	.4	0	1	0	1	0	0	0	3	9
Kansas	.3	0	0	3	1	0	0	0	0	7
Tufts	.5	0	0	1	0	0	0	0	0	6
Wash. and Lee.	.4	1	0	0	0	0	0	0	0	5
Lafayette	.3	0	0	0	0	0	0	0	0	3
Tulane	.1	0	0	0	0	0	1	0	1	3
Dartmouth	.1	1	0	0	0	0	0	0	0	2
Lehigh	.2	0	0	0	0	0	0	0	0	2
Total	273.0	379	391	362	445	484	471	502	556	6,320

TABLE II

Doctorates Conferred in the Sciences

	Average of 10 Years 1898–1907	'08	'09	'10	'11	'12	'13	'14	'15	Total	Per Cent.
Chicago	16.4	37	20	24	35	37	16	28	53	414	53
Columbia	13.4	21	23	11	29	36	27	21	27	329	39
Johns Hopkins	16.8	17	20	15	19	23	21	18	23	324	60
Cornell	10.4	15	24	27	27	28	30	36	26	317	70
Harvard	14.1	13	14	10	20	15	22	28	33	296	42
Yale	12.4	16	27	12	15	21	19	13	20	267	45
Pennsylvania	9.0	18	13	12	10	9	9	5	11	177	39
Clark	7.7	11	8	14	16	6	13	7	10	162	90
Wisconsin	2.8	6	4	13	13	14	5	17	8	108	42
California	2.4	2	6	4	5	12	9	11	16	89	74
Illinois	.3	0	2	9	6	15	11	18	17	81	66
Michigan	2.8	1	5	1	3	8	10	5	15	76	48
Princeton	1.1	3	3	2	5	7	7	7	4	49	44
Geo. Wash't'n	1.7	2	2	3	4	2	1	2	4	37	64
Brown	1.2	2	2	1	3	4	1	4	5	34	63
Stanford	1.1	2	2	1	4	3	5	2	2	32	69
Minnesota	.7	1	2	1	2	2	2	3	4	24	50
Nebraska	1.3	1	2	1	0	0	2	1	3	23	59
Mass. Inst.	.3	3	0	3	2	6	1	2	2	22	100
New York	.6	1	3	2	1	2	3	1	3	22	12
Indiana	.0	3	3	0	2	4	1	2	4	20	80
Virginia	1.1	2	0	1	1	2	2	1	0	20	38
Washington	.7	1	0	0	2	1	3	1	5	20	100
Bryn Mawr	1.0	1	0	2	1	3	0	2	0	19	33
Iowa	.7	0	0	2	1	3	2	2	2	19	48
Ohio	.4	0	2	0	2	5	0	0	1	14	82
Cincinnati	.1	0	1	1	4	1	2	2	0	12	63
Missouri	.3	2	0	2	2	0	1	1	1	12	71
Pittsburgh	.0	0	0	1	1	1	5	0	4	12	63
Catholic	.5	—	2	0	1	1	0	0	2	11	22
Kansas	.3	0	0	3	1	0	0	0	0	7	100
N. Carolina	.3	0	1	0	0	0	0	1	2	7	64
Vanderbilt	.3	1	1	0	0	1	1	0	0	7	50
Boston	.1	0	1	0	0	1	2	0	0	5	4
Northwestern	.2	0	1	0	1	0	0	0	1	5	56
Tufts	.5	0	0	0	0	0	0	0	0	5	83
Wash. & Lee	.3	1	0	0	0	0	0	0	0	4	80
Syracuse	.1	0	0	1	1	0	0	0	0	3	30
Colorado	.2	0	0	0	0	0	0	0	0	2	22
Dartmouth	.1	1	0	0	0	0	0	0	0	2	100
Lehigh	.2	0	0	0	0	0	0	0	0	2	100
Tulane	.0	0	0	0	0	0	1	0	1	2	67
Georgetown	.1	0	0	0	0	0	0	0	0	1	50
Lafayette	.1	0	0	0	0	0	0	0	0	1	33
Radcliffe	.0	0	0	1	0	0	0	0	0	1	4
Total	124.1	184	194	180	239	273	234	241	309	3,095	49

TABLE III

Doctorates Distributed According to Subjects

	Average of 10 Years 1898–1907	'08	'09	'10	'11	'12	'13	'14	'15	Total
Chemistry	32.3	54	43	48	68	78	68	71	85	838
Physics	15.5	22	25	25	33	30	22	23	31	366
Zoology	15.2	25	18	25	25	20	26	25	32	348
Botany	12.6	11	16	10	20	30	28	34	40	315
Psychology	13.5	23	21	20	23	29	24	12	22	309
Mathematics	12.1	23	14	23	25	22	21	25	23	297
Geology	7.1	5	13	10	15	23	14	13	26	190
Physiology	4.1	7	13	4	2	12	2	8	8	97
Agriculture	1.0	2	7	4	11	11	8	9	9	71
Astronomy	3.4	1	7	3	4	2	11	2	7	71
Bacteriology	1.4	1	5	1	4	6	3	6	4	44
Anthropology	1.0	4	4	2	2	0	3	2	6	33
Anatomy	.9	2	0	1	1	6	1	2	5	27
Paleontology	1.6	1	0	2	0	0	0	4	2	25
Engineering	.8	0	0	1	2	2	0	4	2	19
Pathology	.5	2	3	1	1	2	2	1	2	19
Mineralogy	.6	0	3	0	1	0	0	0	1	11
Geography	.1	1	1	0	1	0	1	0	3	8
Metallurgy	.3	0	1	0	1	0	0	0	1	6
Meteorology	.1	0	0	0	0	0	0	0	0	1
Total	124.1	184	194	180	239	273	234	241	309	3,095
English		30	28	32	35	32	42	42	38	279
History		32	22	25	28	20	26	36	34	223
Economics		17	42	7	17	26	16	27	22	174
Philosophy		25	15	20	26	15	22	19	25	167
Education		6	9	13	23	21	25	27	26	150
German		14	14	16	8	15	23	23	23	136
Latin		13	12	16	13	17	19	16	15	121
Sociology		6	6	14	18	12	11	22	16	105
Romance		12	16	6	12	15	9	15	7	92
Political Science		9	4	9	6	9	15	7	11	70
Oriental		9	15	11	1	10	8	2	10	66
Greek		13	11	5	7	5	8	10	5	64
Theology		7	2	1	7	7	6	8	8	46
Philol. and Comp. Lit.		0	1	5	1	2	4	2	0	15
Law		1	0	1	2	1	1	3	2	11
Classical Archeology		0	0	0	1	3	1	1	4	10
Fine Arts		0	0	0	0	1	1	1	1	4
Music		1	0	1	1	0	0	0	0	3
Total		195	197	182	206	211	237	261	247	1,736

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:

UNIVERSITY OF CHICAGO

Hanna Caroline Aase: "Vascular Anatomy of the 'Megasporophyll' in Conifers."

Edward Moore Jackson Burwash: "The Geology of Vancouver and Its Surroundings."

Joseph Stuart Caldwell: "A Study of the Effects of certain Antagonistic Solutions upon the Growth of Zea mays."

John William Campbell: "Periodic Solutions of the Problem of Three Bodies in Three Dimensions."

Joel Ernest Carman: "The Pleistocene Geology of Northwestern Iowa."

Elizabeth Caroline Crosby: "The Telencephalon of Alligator Mississippiensis."

Hermann Bacher Deutsch: "Effect of Light upon the Germination of the Spores of the True Ferns."

Charles Ross Dines: "Functions of Positive Type and Related Topics in General Analysis."

Ellsworth Faris: "The Psychology of Punishment."

Mary Louise Foster: "Studies on a Method for the Quantitative Estimation of Certain Groups in Phospholipins."

Meyer Grupp Gaba: "A Set of Postulates for General Projective Geometry of '*n*' Dimensions."

Walter Lee Gaines: "A Contribution to the Physiology of Lactation."

James Frederick Groves: "Life Duration of Seeds."

Olive Clio Hazlett: "On the Classification and

Invariantive Characterization of Nilpotent Algebras.''

Oscar Fred Hedenburg: ''On the Esters, as well as the Monomolecular *B*- and *y*-Lactones of *d*-Mannonic and *d*-Gluconic Acids; On Ortho-Bis-*d*-Galactonic Acid, *d*-Galactonic *y*-Lactone and Its Mono-Hydrate.''

Lewis Victor Heilbrunn: ''Studies in Artificial Parthenogenesis: II. Physical Changes in the *Arbacia* Egg.''

Albert Edward Hennings: ''A Study of the Contact Potentials and Photo-Electric Properties of Metals in Vacuo.''

Edwin Frederick Hirsch: ''An Experimental Study of the Influence of Iodin and Iodides on the Absorption of Granulation Tissue and Fat-free Tubercle Bacilli.''

Louis Allen Hopkins: ''On the Theory of the Motion of the Small Planets with a Periodic Orbit for the Hilda Type.''

Edmund Charles Humphrey: ''Surface Tension at the Interface between Two Liquids.''

Andrew Henderson Hutchinson: ''Fertilization in *Abies balsamea*.''

Libbie Henrietta Hyman: ''An Analysis of the Process of Regeneration in Certain Microdrilous Oligochætes.''

Wellington Downing Jones: ''Geography of Northern Patagonia.''

Frank Craig Jordan: ''The Color Changes of Certain Variable Stars of Short Period.''

George Frederick Kay: ''The Geology and Ore Deposits of Riddle's Quadrangle, Oregon.''

Charles Edwin King: ''The Origin of the Diastases of the Blood and the Lymph.''

Harold Reynolds Kingston: ''Metric Properties of Nets of Plane Curves.''

Harry Dexter Kitson: ''The Scientific Study of the College Student.''

Francis Leroy Landacre: ''The Origin of the Cranial Ganglia in *Ameiurus*.''

John Yiu-Bong Lee: ''The Determination of '*e*' by the Small-Drop Method Using Solid Spheres.''

James Henry Lees: ''The Geological History of the Des Moines Valley.''

Edwin Daniel Leman: ''The Relation between the Alpha-Ray Activities and Ranges of Radioactive Substances.''

Julian Herman Lewis: ''The Absorption of Substances Injected Subcutaneously and the Inhibitory Action of Heterologous Protein Mixtures on Anaphylaxis.''

William Vernon Lovitt: ''A Type of Singular Points for a Transformation of Three Variables.''

Bertha Edith Martin: ''Tooth Development in *Dasypus novemcinctus*.''

Kirtley Fletcher Mather: ''The Fauna of the Morrow Group of Arkansas and Oklahoma.''

Agnes Fay Morgan: ''I. Viscosities of Various Methyl and Ethyl Imido-benzoates and of the Sodium Salts of Para and Meta Nitrobenzoylchloroamides in Moderately Concentrated Aqueous Solutions. II. The Molecular Rearrangement of Some Triaryl Methylchloroamines.''

Roberts Bishop Owen: ''The Psychology of Recognition.''

Harry Morrill Paine: ''The Effects of Salts on the Solubility of Other Salts: I. The Solubility Relations of a Very Soluble Bi-univalent Salt. II. The Ionization of Bi-bivalent Salts.''

Almon Ernest Parkins: ''The Historical Geography of Detroit.''

Harley Martin Plum: ''The Extraction and Separation of the Radioactive Constituents of Carnotite.''

Vincent Collins Poor: ''A Certain Type of Exact Solution of the Equations of Motion of a Viscous Liquid.''

Terence Thomas Quirke: ''Geology of Espanola District.''

Isaiah March Rapp: ''Flow of Air through Capillary Tubes.''

George Burton Rigg: ''Decay and Soil Toxins.''

Eva Ormenta Schley: ''Physical and Chemical Changes Involved in Geo-presentation and Geo-reaction.''

Luther Crocker Snider: ''The Geology and Paleontology of the Mississippian Rocks of Northwestern Oklahoma.''

Bert Allen Stagner: ''On the Molecular Rearrangements of Triarylmethyl Hydroxylamines.''

Eugene Austin Stephenson: ''Hydrothermal Alteration of Feldspars.''

James Palm Stober: ''A Comparative Study of Winter and Summer Leaves of Various Herbs.''

Clare Christman Todd: ''The Action of Alkaline Hydrogen Peroxide on *d. Galactose*.''

Stephen Sargent Visher: ''The Geography of South Dakota.''

Forbes Bagley Wiley: ''Proof of the Finiteness of the Modular Covariants of a System of Binary Forms and Cogredient Points.''

HARVARD UNIVERSITY

Frederick Osband Anderegg: I. A Contribution to the Study of the Silver Coulometer. II.

The Activities of Concentrated Chloride Solutions from the Electromotive Forces of Silver Concentration-cells. III. The Investigation of the Electromotive Forces of Concentration-cells involving Alloys of Tin and Cadmium and a Fused Electrolyte.''

Leslie Brainerd Arey: ''The Movements in the Visual Cells and Retinal Pigment of the Lower Vertebrates.''

Edward Payson Bartlett: I. ''A Study of certain Oxidation Potentials.'' II. ''The Compressibility of certain Elements and Compounds.''

James Winfred Bridges: ''An Experimental Study of Decision Types and their Mental Correlates.''

Harold Ernest Burtt: ''Factors Influencing the Arousal of the Primary Visual Memory Image.''

Thorne Martin Carpenter: ''A Comparison of Methods for Determining the Respiratory Exchange in Man.''

William John Crozier: ''Studies on Sensory Stimulation.''

Wilbur Garland Foye: ''The Glamorgan Gabbro Body and its Associated Rocks.''

Robert Gorham Fuller: ''Observations on a Collection of Crania from the Prehistoric Stone Graves of Tennessee.''

Irvine Clifton Gardner: ''Metallic Reflection in the Region of extremely Short Wave Lengths.''

Fred Leslie Grover: ''The Atomic Weight of Lead.''

Frederick Simonds Hammett: ''Uric Acid in Tissues.''

Gorham Waller Harris: ''A Revision of the Atomic Weight of Arsenic and Further Applications of the Method of Floating Equilibrium.''

Miner Ludwig Hartmann: ''I. The Free Energy of the Formation of Silver. II. The Atomic Weight of Cadmium.''

Charles Ruglas Hoover: ''The Atomic Weights of Iron, Carbon and Sulphur.''

Max Mayo Miller: ''A Study of the Hypophysis Cerebri in the Pig.''

William Edmund Milne: ''On the Degree of Convergence of Birkoff's Series.''

Joseph Murdoch: ''The Microscopic Determination of the Opaque Minerals: A Contribution to the Study of Ores.''

Christian Nusbaum: ''Eddy Current and Hysteresis Losses in Iron at High Frequencies.''

Sidney Powers: ''The Acadian Triassic.''

Guilford Bevil Reed: ''Studies in Plant Oxidases.''

William Rees Brebner Robertson: ''Chromosome Studies: I. Taxonomic Relationships shown in the Chromosomes of the Tettigidæ and other Sub-families of Acrididæ: V-shaped Chromosomes and their Significance in Acrididæ, Locustidæ, and Gryllidæ: Chromosomes and Variation. III. Inequalities and Deficiencies in Homologous Chromosomes: their Bearing upon Synapsis and the Loss of Unit Characters.''

Arnold Romberg: ''The Ratio of the Calorie at 73° to that at 20°.''

Paul Earls Sabine: ''The Energy of Photoelectrons as a Function of the Frequency for Light of extremely Short Wave Lengths.''

Ellis William Shuler: ''The Geology of the Walker Mountain Overthrust Block in Southwestern Virginia.''

Francis Briggs Silsbee: ''A Study of the Inductance of Four-terminal Resistance Standards.''

Frederick Henderson Sterns: ''The Archeology of Eastern Nebraska, with special Reference to the Culture of the Rectangular Earth Lodges.''

Edward Chace Tolman: ''Studies in Memory.''

Leonard Thompson Troland: ''Studies of Visual Equilibria.''

David Henry Wenrich: ''The Spermatogenesis of *Phrynotettix magna*, with special Reference to Synapsis and the Individuality of the Chromosomes.''

William Henry Weston, Jr.: ''On the Development of *Thraustotheca*, with a Comparative Examination of *Dictyuchus*.''

Charles Edward Wilder: ''Problems in the Theory of Ordinary Linear Differential Equations with Auxiliary Conditions at more than Two Points.''

Levi Thomas Wilson: ''Conformal Transformation of Curvilinear Angles.''

COLUMBIA UNIVERSITY

Leverett Allen Adams: ''Philogeny of the Jaw-muscles in Recent and Fossil Vertebrates.''

Clive Morris Alexander: ''The Time Factor in making Oil Gas.''

Everend Lester Bruce: ''Geology and Ore Deposits of the Rossland District, B. C.''

Fay-Cooper Cole: ''A Study of Tingrican Folklore.''

Clarke Edwin Davis: ''The Surface Tension of Sulphuric Water Mixtures.''

Pauline Hamilton Dederer: ''Oogenesis in *Philosamia Cynthia*.''

John Smith Dexter: ''The Analysis of a Case of continuous Variation in *Drosophila* by a Study of its Linkage Relations.''

Arthur Donaldson Emmett: "Metabolism Studies of Fatigue, Rest and Recuperation."

Frederick Grosvenor Goodridge: "Bio-chemical Studies of Mercaptan."

Edward Gray Griffin: "Inosite and Pinite and some of their Derivatives."

Herman Karl Haeberlin: "The Idea of Fertilization in the Culture of the Pueblo Indians."

Mildred Albro Hoge: "The Influence of Temperature on the Development of a Mendelian Character."

Samuel L. Hoyt: "Copper Alloys."

Roscoe Raymond Hyde: "Sterility and Fertility in *Drosophila ampelophila*."

Israel Jacob Kligler: "Biochemical Studies and Differentiation of Oval Bacteria with special reference to Dental Caries."

Robert Hamilton Lombard: "The Densities and Degrees of Dissociation of the Saturated Vapors of the Ammonium Halides and the Related Thermal Data."

Alexander Lowy: "The Preparation, Properties and Composition of Silundum."

Melvin Albert Martin: "The Transfer-effects of Practise in Cancellation Tests."

Charles Craig Mook: "A Study of the Morrison Formation."

Dora Estelle Neun: "An Examination of Certain Methods for the Study of Proteolytic Action."

George Adam Pfeiffer: "Contributions to the Conformal Geometry of Analytic Arcs."

Percy Withers Punnett: "A Study of the Products of the Action of Different Amylases."

Caroline Eustis Seely: "Certain Non-linear Integral Equations."

Arthur Percival Tanberg: "Experiments on the Amylase of *Aspergillus Orygal*."

Arthur Waldorf Spittell Thomas: "The Influence of Certain Acids and Salts upon the Activity of Malt Amylase."

Francis Maurice Van Tuyl: "The Origin of Dolomites."

Thomas Talbot Waterman: "The Explanatory Element in the Folk Tales of the North American Indians."

CORNELL UNIVERSITY

Elmer Eugene Barker: "Heredity Studies in the Morning Glory (*Ipomea purpurea*)."

Harry Phillip Brown: "Growth Studies in Forest Trees."

Josephine Nash Curtis: "Duration and the Temporal Judgment."

Alan Estis Flowers: "Viscosity Measurement and a New Viscosimeter."

Harvey Nicholas Gilbert: "The Copper Lakes of Eosin."

Ralph John Gilmore: "Variation in the Attachment of the Pelvic Girdle in *Diemictylus vidiscens*, Rafinesque."

Horace Leonard Howes: "The Fluorescence of Some Frozen Solutions of the Uranyl Salts."

Robert Waldo King: "A Method of Measuring Heat Conductivities."

Millard Alschuler Klein: "Studies in the Drying of Soils."

Carl Edwin Ladd: "Cost Accounts on Some New York Farms for 1912–13."

Ira Elver Lee: "Pressure, Temperature and Concentration Relations in the Systems of Sodium Chloride, Ammonia; Sodium Bromide, Ammonia; and Sodium Iodide, Ammonia."

Leonard Amby Maynard: "The Fixation of Nitrogen by Sweet Clover."

Carleton Friend Miller: "Electrolysis of Certain Inorganic Salts in Liquid Ammonia."

George Adin Osner: "Leaf Smut of Timothy."

James Kemp Plummer: "The Effect of Oxygen and Carbon Dioxide on Nitrification and Ammonification in Soils."

Carleton Elderkin Power: "The Effects of Temperature upon the Phosphorescence of Certain Sulphides."

William Jacob Robbins: "Digestion of Starch by *Penicillium* (*Camembertii*)."

Joseph Rosenbaum: "The Phytophthora Disease of Ginseng. Plant Pathology."

Joseph Rosenbaum: "On Mixed Linear Equations over a Two-Dimensional Region."

Peter Juriaan van der Heyde Schreuder: "The Cape Horse—Its Origin, Breeding and Development in the Union of South Africa."

Constantine Demetry Sherbakoff: "Fusaria of Potatoes."

Ransom Evarts Somers: "Copper Deposits of the Burro Mountains."

Arthur Lee Thompson: "The Cost of Producing Milk on 174 Farms in Delaware Co., N. Y."

Carl Joseph West: "On Certain Formulas for Representing Statistical Data."

James Kennith Wilson: "Physiological Studies of *Bacillus radicola* of Soy Bean (*Sojus max* Piper) and of Factors Influencing Nodule Production."

Peter Irving Wold: "The Hall Effect and Allied Phenomena in Tellurium."

THE JOHNS HOPKINS UNIVERSITY

Walter Hatheral Coolidge: "Osmotic Pressure Measurements of Glucose Solutions at 10° and 20°."

Grace Adelaide Dunn: "A Study of the Development of *Halosaccion Ramentaceum*."

Arthur Feddeman Gorton: "Reflection from, and Transmission through, Rough Surfaces."

James Eugene Levering Holmes: "The Difference in Chemical Behavior of Free and Combined Water as Illustrated by the Saponification of Esters."

Marion Byrd Hopkins: "The Chlorides of Orthosulphobenzoic Acid."

Helen B. Hubbert: "The Effect of Age on Habit Formation in the Albino Rat."

Edward Olson Hulburt: "The Reflecting Power of Metals in the Ultra-violet Region of the Spectrum."

Howard Huntley Lloyd: "A Study of the Conductivity of Certain Organic Acids in Absolute Ethyl Alcohol at 15°, 25° and 35°."

Forman Taylor McLean: "A Preliminary Study of Climatic Conditions in Maryland as Related to the Growth of Soy Bean Seedlings."

Austin Ralph Middleton: "Heritable Variations and the Results of Selection in the Fission Rate of *Stylonychia Pustulata*."

Ellis Miller: "A Study of the Vapor Pressure of Aqueous Solutions of Potassium Chloride by an Improved Static Method."

Richard Nicholas Mullikin: "A Study of the Vapor Pressure of Aqueous Solutions of Mannite by an Improved Static Method."

Amos Sentman Musselman: "Osmotic Pressure Measurements of Glucose Solutions at 30°, 40°, 50° and 60°."

Robert Milton Overbeck: "The Copper Ores of Maryland."

Max G. Paulus: "Radiometric Measurements of the Ionization Constants of Methyl Orange and Phenolphthalein."

Lyde Stuart Pratt: "The Esterification of Benzoic Acid by Mercaptans."

Willis S. Putnam: "I. The Conductivity and Viscosity of Certain Rubidium and Ammonium Salts in Ternary Mixtures of Glycerol, Acetone and Water at 15°, 25° and 35°. II. The Conductivity and Viscosity of Solutions of Binary and Ternary Salts in Formamid."

John Bernard Reeside, Jr.: "The Helderberg and Tonoloway Formations of Central Pennsylvania."

John Wesley Shive: "A Study of Physiological Balance in Nutrient Media Resulting in a Simplified Culture Solution for Plants."

Clarence Piersall Sousley: "Invariants and Covariants of the Cremona Hexahedral Form of the Cubic Surface."

Ruth Jennings Stocking: "Inheritance and Variation in Abnormalities occurring after Conjugation in *Paramecium Caudatum*."

Benjamin Franklin Wallis: "The Geology and Economic Value of the Wapanucka Limestone of Oklahoma."

Charles Watkins: "The Conductivity, Percentage Dissociation and Temperature Coefficients of Some Rather Unusual Salts in Aqueous Solution."

YALE UNIVERSITY

Frederick James Alcock: "The Geology of the Lake Athabaska Region."

Stanley Crittenden Ball: "The Natural History and Embryology of the Rhabdocœle *Paravortex Gemellipara*."

Joseph Sumner Bates: "The Synthesis of Dipeptide-Hydantoins, together with a short study of Michigan Hard-wood Tar."

Emil Jacob Baumann: "The Question of Fat Absorption from the Stomach."

Harold Saxton Burr: "The Effect of the Removal of the Nasal Pits on the Behavior, and on the Development of the Head, of *Amblystoma*."

Isaac Faust Harris: "Chemical and Physiological Studies of the Castor Bean and Soy Bean."

Henry Benjamin Hedrick: "Some Principles and Processes in the Construction of Mathematical Tables."

Byron Murray Hendrix: "Studies in the Physiological Action of Some Protein Derivatives."

Henry Daggett Hooker, Jr.: "Thermotropism and Hydrotropism."

Edward Frederick Kohmann: "The Constitution of Mono- and Dinitrotyrosine, and the Xanthoproteic and Millon's Reactions."

John Milton Miller: "The Effective Resistance and Inductance of Iron and Bimetallic Wires."

Harley Dyer Minnig: "A Method for the Separation of Aluminium from Iron and Beryllium."

Robert Alexander Patterson: "The Structure of the Third Cyanogen Band."

John Henry Reedy: "Anodic Potentials of Silver."

Paul Reece Rider: "An Extension of Bliss's Form of the Problem of the Calculus of Variations, with Applications to the Generalization of Angle."

Blair Saxton: "The Nature of Certain Precipitated Inorganic Colloids."

Walter Moody Scott: "The Hydroxyl Derivatives of Phenylalanine, and their Biochemical Interests."

Raymond Louis Stehle: "The Rôle of the Digestive Glands in the Excretion of Endogenous Uric Acid."

Richard Wrenshall: "Synthesis of α-Amino-δ-Phenylvalerianic Acid."

William Josiah Wright: "Geology of the New Ross Map-Area, with an Introductory Chapter on the Gold-bearing Series and the Granites of Southern Nova Scotia."

UNIVERSITY OF ILLINOIS

Demetrius Ion Andronescu: "The Physiology of the Pollen of *Zea Mays* with Special Regard to Vitality."

Albert John Becker: "The Strength and Stiffness of Steel under Bi-Axial Loading."

William Leonidas Burlison: "Availability of Mineral Phosphates for Plant Nutrition."

Harry Peach Corson: "Manganese in Water Supplies."

Oscar Edward Harder: "Alloys of Chromium, Copper and Nickel."

Joseph Whitney Howard: "The Rearrangement of Alkyl Anilines."

Lloyd Theodore Jones: "An Experimental Verification of the Law of Variation of Mass with Velocity for Cathode Rays."

Oliver Kamm: "The Structure of the Dihydro-B-Naphthoic Acids and the Correlation of Ionization and Structure in Unsaturated Acids."

Wallace Macfarlane: "Solubility of Lime Carbonates in Relation to Their Endurance in Soils."

Harold Hanson Mitchell: "Feeding Experiments on the Substitution of Proteins by Definite Mixtures of Isolated Amino Acids."

Edna Mosher: "A Classification of the Lepidoptera Based on Characters of the Pupa."

Fred Weaver Muncie: "The Effect of Large Applications of Commercial Fertilizers upon Carnations."

George Leo Peltier: "Parasitic Rhizoctonias in America."

George Rutledge: "The Number of Abelian Subgroups of Groups whose Orders are the Powers of Primes."

Minnie Elizabeth Watson: "Studies on Eugregarines Including Descriptions of Seventeen New Species and a Synopsis of the Eugregarine Records from the Myriapoda, Coleoptera and Orthoptera of the World."

Morris Miller Wells: "The Relation of Fishes to Ions in their Natural Environment. I. Reactions and Resistance to Acidity, Alkalinity, and Neutrality. II. Reaction and Resistance to Salts."

Frank Archibald Wyatt: "The Influence of Calcium and Magnesium Compounds on Plant Growth."

UNIVERSITY OF CALIFORNIA

William Lind Argo: "The Potential of the Rubidium Electrode."

Gerald Eyre Kirkwood Branch: "The Free Energy of Formation of Formic Acid."

Oscar Leo Brauer: "The Rate of Conversion of Cinchonine into Cinchotoxine."

John Peter Buwalda: "A New Mammalian Fauna from Miocene Sediments near Tehachapi Pass on the Summit of the southern Sierra Nevada."

Lee Raymond Dice: "Distribution of the Land Vertebrates of southeastern Washington."

Helen Margaret Gilkey: "A Revision of the Tuberales of California."

Richard Morris Holman: "The Orientation of Terrestrial Roots with Particular Reference to the Medium in which they are Grown."

William Noble Lacey: "The Free Energy of Formation of Carbon Oxysulphide."

Seth Barnes Nicholson: "Discovery, Observations and Orbit of the Ninth Satellite of Jupiter."

Earl Leroy Packard: "Faunal Studies in the Cretaceous of the Santa Ana Mountains of Southern California."

Frederick Eugene Pernot: "Alternating and Transient Currents in Coupled Electrical Circuits."

Charles Walter Porter: "Temperature Coefficients and the Effects of Acids, Bases and Neutral Salts in Reaction Velocities of the Triphenylmethane Dyes."

Arthur Herbert Saxer: "The Nature and the Velocity of Migration of the Positive Ions in Flames."

Olive Swezy: "The Kinetonucleus of Flagellates and the Binuclear Theory of Hartmann."

Charlie Woodruff Wilson: "On the Life-history of a Soil Amœba."

Harry Stanley Yates: "The Comparative Histology of Certain California Boletaceæ."

UNIVERSITY OF MICHIGAN

Ernest Franklin Barker: "Selective Radiation from Osmium Filaments."

William Howard Batson: "Acquisition of Skill."

George Herbert Coons: "A Study of the Fac-

tors Involved in the Growth and Pycnidia Formation of *Plenodromus Fusco-Maculans.*''

George Morris Curtis: ''The Morphology of the Mammalian Seminiferous Tubule.''

Floyd Carlton Dockeray: ''The Effects of Physical Fatigue upon Mental Efficiency.''

Alfred Lynn Ferguson: ''Activity and Concentration, Transport Numbers and Boundary Potential.''

Chester Hume Forsyth: ''Vital and Monetary Losses in the United States Due to Preventable Deaths.''

Laurence Hadley: ''A Study of ζ Ursæ Majoris.''

William Vernor Hoyt: ''The Constitution of the Nitro-α-Carbopyrrolic Acids.''

Walter Fred Hunt: ''The Origin of the Sulphur Deposits of Sicily.''

Robert Lee Jickling: ''Thiophene Analogs of Triphenyl-methyl.''

Carleton Volney Kent: ''The Optical Constants of Liquid Alloys.''

Adrian John Pieters: ''The Relation between Vegetative Vigor and Reproduction in some Saprolegniaceæ.''

Daniel Leslie Rich: ''Oscillatory Spark Discharges between Unlike Metals.''

Will Carl Rufus: ''The Spectra of Stars belonging to Class R of the Draper Classification.''

UNIVERSITY OF PENNSYLVANIA

William Henry Adolph: ''A Study of the Quantitative Methods for Fluorine.''

Thomas Rush Alexander, Jr.: ''The Quantitative Determination of Chromium.''

Krikoris Garabed Bohjelian: ''Observation and Reduction of Occultations of Stars by the Moon.''

Thomas Darlington Cope: ''An Application of the Radiometer to the Measurement of Electric Current.''

Ernest William Hawkes: ''Skeletal Measurements and Observations on the Point Barrow Eskimo with Comparisons with Other Eskimo Groups.''

Louis Kossuth Oppitz: ''Optical Constants of the Binary Alloys of Silver with Copper and Platinum.''

John Young Pennypacker: ''Observations on the Beach Plum: A Study in Plant Variation.''

Henry Ferris Price: ''Fundamental Regions for Certain Finite Groups in Two Complex Variables.''

Lowell Jacob Reed: ''Some Fundamental Systems of Formal Modular Invariants and Covariants.''

David Walter Steckbeck: ''Comparative Histology and Irritability of Sensitive Plants.''

Heber Wilkinson Youngken: ''The Comparative Morphology, Taxonomy and Distribution of the Myricaceæ of the Eastern United States.''

CLARK UNIVERSITY

Charles Lewis Brightman: ''Thermo-elastic Relations in Steel in the Region of Recalescence.''

Burchard Woodson DeBusk: ''The Vital Index in Relation to Development.''

Elmer Adna Harrington: ''The Dielectric Constant of Aqueous Solutions.''

William Henry Hayes: ''Religion as a Psychic Factor in Social Development.''

Yoshihide Kubo: ''Some Aspects of Recent Child Study.''

William Thomas Sanger: ''A Study of Senescence.''

George Samuel Snoddy: ''An Analysis of Trial and Error Learning in the Human Subject.''

Harold Frederic Stimson: ''Elastic Hysteresis in Metal Diaphragms.''

Raymond Holder Wheeler: ''An Experimental Investigation of the Process of Choosing.''

Edward Clinton Wilson: ''The Psychology of the Story.''

UNIVERSITY OF WISCONSIN

Nathan Fasten: ''Gametogenesis in the Crustacea.''

Edmund Cecil Harder: ''Contact Metamorphism as represented by Various Iron Ore Deposits.''

John Nicholas Lowe: ''Action of Chemical Stimuli on the Chromatophores of the Brook Trout *Salvelinus fontinalis mitchill.*''

Charles August Mann: ''Chemistry of San Palmetto Berries.''

Howard Edward Pulling: ''The Movement of Water in Aerotid Soils.''

Elizabeth Anita Smith: ''Spermatogenesis of the Dragon Fly *Sympetrum semicenctum* (Say).''

Thomas Leslie Tanton: ''The Relative Importance of Meteoric and Magmatic Waters in the Deposition of Certain Primary Ores.''

William Lawrence Uglow: ''A Study of Methods of Mine Assessments and Valuation.''

BROWN UNIVERSITY

Ralph Gibney Hurlin: ''The Histogenesis and Distribution of the Connective Tissue Pigmentation of the Silky Fowl.''

Benjamin Samuel Levine: "The Removal of Natural Impurities of Cotton Cloth by Action of Bacteria."

Courtland Sawin Mudge: "The Effect of Sterilization on the Sugars of Culture Media."

George Hathorn Smith: "The Parenteral Digestion of Bacterial Protein."

Albert Whitman Sweet: "A Sanitary Survey of the Seekonk River."

WASHINGTON UNIVERSITY

Alva Raymond Davis: "Enzyme Action in the Marine Algæ."

William Harrison Emig: "The Occurrence in Nature of certain Fungi Pathogenic for Man and the Higher Animals."

Joseph Charles Gilman: "Cabbage Yellows and the Relation of Temperature to its Occurrence."

Melvin Clarence Merrill: "The Electrolytic Determination of Exosmosis from the Roots of Plants Subjected to the Action of Various Agents."

Lee Oras Overholts: "Comparative Studies in the Polyporaceæ."

GEORGE WASHINGTON UNIVERSITY

Maurice Crowther Hall: "Nematodes of Rodents."

Samuel Palkin: "Investigation of the Halogen Derivatives of the Pyrazolons and the Determination of Antipyrene in Mixtures."

Joseph Duerson Stout: "Studies of the Functions of the Cerebral Motor Cortex of the Cat."

Charles Henry Tyler Townsend: "Contribution to a Thorough Knowledge of the Muscoid Flies; On the Female-reproductive and Early-stage Characters as indicating Phylogeny and a Basis for Taxonomy, together with a Consideration of Host Relations, General Bionomics and Distribution."

INDIANA UNIVERSITY

Halbert Pleasant Bybee: "The Flood of 1913 in the Lower White River Region of Indiana."

John Benjamin Dutcher: "The Nature of the Explosion Wave in an Electrolytic Gas."

Grover Cleveland Mance: "Power Economy and the Utilization of Waste in the Quarry Industry of Indiana."

Fermen Layton Pickett: "*Arisæma triphyllum*: A Biological Study."

UNIVERSITY OF MINNESOTA

William Fitch Allen: "The Spinal Cord of *Bdellostoma*."

Edwin Baumgartner: "Development of the Liver, Gall Bladder and Hepatic Ducts in *Amblystoma punctatum*."

Morris Joslin Blish: "The Chemical Constitution of Wheat Proteins and Their Relation to Baking 'Strength' in Flour."

Sterling Nelson Temple: "Equilibria in Systems of the Higher Alcohols, Water and Salts."

UNIVERSITY OF PITTSBURGH

Raymond Augustine Dumphy: "Partial Vapor Pressures and Distillation."

Sidney Liebovitz: "Theory of Esterification."

Harold Arthur Morton: "Specific Rotary Power of Organic Substances."

Joshua Chitwood Witt: "Oxidation and Reduction without Addition of Acid."

PRINCETON UNIVERSITY

Albert Arnold Bennett: "An Algebraic Treatment of the Theorem of Closure."

Henry Higgins Lane: "The Correlation between Structure and Function in the Development of the Special Senses of the White Rat."

Horace Hardy Lester: "The Determination of the Work Function, when an Electron Escapes from the Surface of a Hot Body."

Keith Kuenzi Smith: "Negative Thermionic Currents from Tungsten."

UNIVERSITY OF NEBRASKA

Richard Hans Boerker: "Ecological Investigations with Certain Forest Trees."

George Borrowman, Jr.: "The Clays of Nebraska."

Clarence Jerome Elmore: "The Diatoms (Bacillarioireæ) of Nebraska."

NEW YORK UNIVERSITY

Alphonse Andrew Adler: "A Method of Measuring Capillarity at Varying Temperatures."

Frank Owen Amon: "The Effect of Acids on the Solubility of Electrolytes."

John Hudson Ballard: "Some Phases of the Psychology of Puzzle Learning."

CATHOLIC UNIVERSITY

Daniel Da Cruz: "A Contribution to the Life History of *Lilium Tennifolium*."

Othmar Frederick Knapke: "A History of the Theory of Sensation from St. Augustine to St. Thomas."

UNIVERSITY OF IOWA

Edward X. Anderson: "Electrical Conductivity of Certain Salts of Pyridine Solutions."

Perry Avery Bond: "4-nitro-5-methyl-2-sulphobenzoic Acid and some of its Derivatives."

MASSACHUSETTS INSTITUTE OF TECHNOLOGY

Frederic Hastings Smyth: "The Potential of the Bismuth Electrode and of Sodium Lead Compounds in Liquid Ammonia Solutions."

Louis Weisberg: "The Equilibrium of the Reaction between Carbon and Ammonia at High Temperatures; a Study of the Free Energy of Dilution of Hydrochloric Acid."

UNIVERSITY OF NORTH CAROLINA

Victor Clyde Edwards: "1-, 4-, 5-, 6-tetrahydroxynaphthalene. I. A New Case of Desmotropy. II. A Series of Bromine Derivatives."

William Lewis Jeffries: "The Function of 'Cooking' Fossil Resins in Varnish Manufacture."

STANFORD UNIVERSITY

Elton Marion Hogg: "Studies on the Passive State of Iron."

Roland Neal: "Colloidal Solutions of Copper Sulphide."

UNIVERSITY OF MISSOURI

Eula Adeline Weeks: "A Symmetrical Generalization of the Theory of Functions."

NORTHWESTERN UNIVERSITY

Siegel Buckborough: "The Structure of Maltose and its Oxidation Products with Alkaline Peroxide of Hydrogen."

OHIO STATE UNIVERSITY

John Bernard Parker: "A Review of North American Bombicini."

TULANE UNIVERSITY

Willard Van Orsdel King: "The Mosquitoes of New Orleans and Vicinity."

THE TRUSTEES OF THE UNIVERSITY OF PENNSYLVANIA ON ACADEMIC FREEDOM

THE following resolution was offered by Mr. Wharton Barker at the October meeting of the board of trustees of the University of Pennsylvania, and was unanimously adopted:

Because a university has three duties to perform:

1. To aid students to acquire knowledge of information heretofore gathered.

2. To make investigation in every department of human knowledge without restriction.

3. To cause publication of the result of this investigation both within and without the university:

Resolved, That the trustees of the University of Pennsylvania adopt and declare as an adequate expression of their views and purpose the statement of Thomas H. Huxley upon his installation as rector of Aberdeen University in 1874:

"Universities should be places in which thought is free from all fetters, and in which all sources of knowledge and all aids of learning should be accessible to all comers, without distinction of creed or country, riches or poverty."

The following resolution was offered by Mr. Effingham B. Morris, and was unanimously adopted:

In order to avoid misunderstanding of the position of the university toward freedom of academic opinions, speech, teachings and public discussions, by members of its faculties, this minute is entered upon the records of the board of trustees.

Under the original charter and statutes of the university, the trustees are charged with the duty and responsibility of selecting and appointing fit persons as professors to instruct students. Because of the decision of the board at its last meeting not to renew Dr. Scott Nearing's contract of employment as an assistant professor in the Wharton School—which expired by its terms at the end of the academic year—an assumption has been made and circulated that this action indicated a policy to restrict or to prevent free academic discussion. This belief is unwarranted. Indeed nothing could be further from the truth.

The trustees have not only always recognized fully the right of members of the teaching staff to hold and to give proper expression to individual views upon all questions, but there is not now and never will be the slightest wish on the part of the board or of a single one of the trustees to restrict the broadest latitude of opinions, research and discussion. When individual opinions of members of the teaching staff are expressed in a proper manner, upon proper occasions, and with proper respect for the dignity of their relationship to the university, and their consequent responsibility to the institution, such opinions and utterances are welcomed as indicative of progressive growth—no matter how divergent they may be from current or general beliefs.

It is not only not possible, but most undesirable, for any board of trustees to lay down definite