

# OFFICIAL PUBLICATIONS OF CORNELL UNIVERSITY

VOLUME V

NUMBER 17

## THE PRESIDENT'S REPORT 1913-14

OCTOBER 1, 1914  
PUBLISHED BY CORNELL UNIVERSITY  
ITHACA, NEW YORK



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## TWENTY-SECOND ANNUAL REPORT BY PRESIDENT SCHURMAN 1913-14

WITH THE TREASURER'S REPORT, AND REPORTS OF THE DEANS OF  
FACULTIES, DIRECTORS OF COLLEGES, THE REGISTRAR,  
THE LIBRARIAN, AND OTHER OFFICERS

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ENTRANCE EXAMINATION

1917-1918

Forms for bequests to Cornell University will be found at the close of the  
Treasurer's Report, page 59

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# PRESIDENT'S REPORT

FOR 1913-14

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*To the Board of Trustees :*

The President of the University has the honor to submit to the Board of Trustees the following Report for the year 1913-14.

## BUSINESS REORGANIZATION

By far the most important matter under consideration during the year—a matter settled unanimously at the June meeting of the Trustees—was that of the business reorganization of the University. Under the statutes the Executive Committee of the Board of Trustees has in the past practically consisted of the Ithaca Trustees. It was generally felt that the time had come when the membership of the Executive Committee should be determined not by the accident of residence but through election by the Board of Trustees, of course from among their own numbers; and, secondly, that just as Trustees outside of Ithaca were already members of the standing committees on Finance and Buildings and Grounds, so also Trustees outside of Ithaca should be elected to the Executive Committee. Thirdly, it was believed that there might be a transfer to and a concentration upon the administrative officers of the University of the minor functions heretofore discharged by the Executive Committee. And, fourthly, it was believed that a simplification of the administration of the University would be effected if the general business of the University, which could not properly be delegated to administrative officers, were divided into three groups and referred to three corresponding committees—the investment of the funds of the University going to a Committee on Finance, the care of the physical property of the University going to a Committee on Buildings and Grounds, and general administrative matters, including educational matters, going to the Executive Committee, which should hereafter be designated the Committee on General Administration.

This whole subject had been referred last year by the Board of Trustees to a special committee consisting of J. H. Edwards, Chairman, M. Van Cleef, F. H. Hiscock, G. C. Boldt, J. H. Barr, H. H. Westinghouse, the Treasurer, and the President. This committee held a number of meetings, to some of which alumni were invited for purposes of advice and consultation, and altogether they gave an extraordinary amount of time and attention to the subject. The report of the committee and their recommendations were unanimously adopted by the Board. They provide for the establishment of the three committees already mentioned, of which the Committee on General Administration may exercise between meetings of the Board all the powers of the Board of Trustees, not inconsistent with the acts and resolutions of the Board itself, and in so far as they do not affect the fixed duties of the other standing committees of the Board. This committee is to meet at fixed times, at least once a month during the University year. Its membership is to consist of seven members elected by the Board, the Chairman of the Committee on Finance and the Chairman of the Committee on Buildings and Grounds, ex-President Andrew D. White, Charles E. Cornell, and, *ex officio*, the President of the University. The members elected by the Board were Trustees J. H. Barr of New York, F. H. Hiscock of Syracuse, M. Van Cleef of Ithaca, T. B. Wilson of Hall, H. H. Westinghouse of New York, C. E. Treman of Ithaca, and C. W. Pound of Lockport.

The Finance Committee, which has full power and authority to administer all the funds of the University, including investment thereof, and which is required to make up the annual budget for submission to the Board of Trustees, consists of five members elected by the Board and, *ex officio*, the President of the University. The members elected by the Board were the following: R. B. Williams of Ithaca, I. A. Place of New York, R. H. Treman of Ithaca, H. R. Ickelheimer of New York, and C. S. Shepard of New Haven.

The Committee on Buildings and Grounds, which is to have general charge and oversight of the buildings and grounds of the University within the limits fixed by the annual budget, with power also to make recommendations regarding new constructions, consists of six members elected by the Board and, *ex officio*, the President of the University. The members elected by the Board were J. H. Edwards of New York, J. C. Westervelt of New York, G. C. Boldt



of New York, H. W. Sackett of New York, C. H. Blood of Ithaca, and J. T. Newman of Ithaca.

The terms of elective members of the aforesaid committees continue until the expiration of their then respective terms as Trustees.

The delocalization of the control of the administration of the University, and the establishment of the elective principle in constituting the membership of the Executive Committee, were just and proper changes, especially in view of the growth of the University and the magnitude, complexity, and importance of the interests to which it ministers. But the old order should not be permitted to pass away without emphatic recognition of the character and services of the Ithaca Trustees from the days of Ezra Cornell and Henry W. Sage down to the present time. The local Executive Committee has always been a board of high average ability. And its members have constantly devoted themselves to their trust with a diligence, fidelity, and devotion unsurpassed, so the President believes, by the governing board of any other institution in the country.

The success of the new organization will depend very largely upon the ability of the out-of-town members to attend regularly the meetings of the standing committees, and especially of the Committee on General Administration, and thus to keep themselves well informed in regard to the current affairs and the larger policies of the University so that they may exercise in proper measure and with wise judgment the influence and control in shaping the destinies of the University which membership on the executive board contemplates and renders possible.

The official title of Mr. Emmons L. Williams is that of Treasurer of the University. His office, however, has always been not only the financial but also the general business office of the University. The new legislation recognizes this situation by the creation of an office called the Comptrollership, to which Mr. Williams was formally elected, and it is provided that subject to the authority of the Board of Trustees the Comptroller shall have charge of the business administration of the University. This officer (so runs the new legislation) "shall be directly responsible to the Committee on Finance, the Committee on Buildings and Grounds, the Committee on General Administration, and the President of the University in respect to such matters as are entrusted to the jurisdiction of said Committees and the President respectively."

The Department of Experimental Engineering occupies two two-story buildings, each about one hundred and fifty feet long by forty feet wide, besides a boiler plant thirty by forty feet, a refrigeration laboratory thirty by forty feet, and the east basement of the main building.

Rand Hall has recently been added to the Sibley College group (at a cost of \$60,000) through the generosity of Mrs. Florence O. R. Lang. This building is a memorial to Jasper R. Rand, Addison C. Rand, and Jasper R. Rand, jr., the father, uncle, and brother of the donor. It is a three-story building the main portion of which is one hundred and seventy feet long and fifty feet wide; it contains the machine shop and pattern shop, and a portion is used temporarily for the electrical laboratories.

The foundry and forge shops occupy a one-story building one hundred and eighty feet long and forty feet wide.

### WORK SHOPS

The foundry occupies floor space of about 4800 square feet, and has an equipment for the production of iron and composition castings. The methods of producing duplicate work are demonstrated by moulding machines of different types selected to illustrate the production of castings of various kinds at lowest labor cost.

The forge shop has the usual equipment of standard forges and small tools, as well as a modern drop-forge plant. Forging by the drop-hammer method, and power press work are demonstrated and discussed.

The pattern shop occupies the top floor of Rand Hall with floor space of 8,440 square feet. The work given the students in this department includes the use of hand and power operated tools under instructors who are skilled in the trade of pattern making.

The machine shop is located on the ground floor of Rand Hall with the same floor area as the pattern shop. It is equipped with an electric traveling crane and representative modern machine tools selected with a view of demonstrating manufacturing methods. A part of the work-shop equipment is installed to illustrate the latest practice in production with specialized labor-saving machinery. The students are not expected to become skilled operators of the machines of this class, but to acquire a general knowledge of their possibilities in the kinds of work to which they are adapted. The equipment is arranged in groups, each in charge of an instructor who has made a special study of the machinery in his group.

### MECHANICAL LABORATORIES

The instruction in the Department of Experimental Engineering is given in several separate laboratories, each of which is thoroughly equipped with the machines, apparatus, and instruments necessary for instruction in research.

**The Materials Testing Laboratory.** This laboratory is equipped for tension and compression tests with an Olsen 300,000 pound machine, a Riehle 100,000 pound machine, a 200,000 pound Emery hydraulic machine, together with several other machines varying in capacity from 10,000 to 100,000 pounds. For transverse tests there is a Riehle machine of 200,000 pounds capacity and a Fairbanks machine of 10,000 pounds capacity. There are two Thurston autographic torsion

and responsibilities. The President once more earnestly expresses the hope that Cornell University will lead the way in the further democratization of the University through the admission of the Faculty, by means of professorial representatives duly chosen, to responsible participation in the control of the institution.

#### TRUSTEES AND FACULTY

The terms of Henry W. Sackett and Frederick C. Stevens having expired in June 1913 and 1914 respectively, the Governor appointed as their successors, J. DuPratt White and John A. Dix. Henry W. Sackett was elected by the Board to fill the vacancy caused by the death of General Stewart L. Woodford. At the June meeting C. Sidney Shepard, Charles H. Blood, and Henry W. Sackett were re-elected Trustees to succeed themselves. The expired alumni trusteeships were filled by the re-election of Ira A. Place of New York and the election of George J. Tansey, B.L. 1888, of St. Louis. John J. Dillon also became a Trustee of the University in place of G. W. Sisson, on his election to the presidency of the State Agricultural Society.

Three members of the Faculty have died during the year: Emeritus Professor Lucien Augustus Wait on September 6, 1913, Professor John Robert Sitlington Sterrett on June 15, 1914, and Professor Ralph Charles Henry Catterall on August 3, 1914. Professor Wait had served the University for forty years as a teacher of mathematics, and for a large part of that time he was in charge of the Department. The distinguishing mark of his work was thoroughness, of his spirit fidelity and devotion to the daily duty. Professor Sterrett came to Cornell in 1901 as head of the Department of Greek. A man of wide and accurate scholarship in his own field he enjoyed recognition at home and abroad as a Hellenist and an archæologist, and students, especially advanced students, found in him both a light and an inspiration. Mr. Catterall was appointed Assistant Professor of Modern European History in 1902 and in 1905 he was promoted to a full professorship. He was a man of robust and virile personality with marked independence of character; his influence on the whole academic community and especially on the student body was large and wholesome; and his mastery of his subject and his skill and effectiveness in its presentation made him one of the most successful teachers in the University.

Two professors retired under the age rule, John Henry Comstock and Charles DeGarmo. Professor Comstock has spent practically his entire life as youth and man at the University and has built up a Department of Entomology with an American and a European reputation, in which he has trained a large number of scientific workers who now occupy prominent positions throughout the country. The exercises in which during commencement week these former students commemorated Professor Comstock's services to the University and to the world of science were profoundly and nobly impressive. Professor DeGarmo has been in charge of the Department of Education since 1898. Within the University he has inspired his students not only by his teaching but by his cheerful disposition and his fine character, and outside the University he has exerted a wide and helpful influence by his writings and by his lectures and addresses to school teachers and administrators. Both Professor Comstock and Professor DeGarmo are retiring on Carnegie pensions and they are also the first beneficiaries of the supplementary pensions afforded by the University Professorial Pension Fund.

Professor Ernest Merritt retired from the deanship of the Graduate School in order that he might devote himself exclusively to his scientific work. This decision was received with regret by the members of the Faculty, who highly appreciated the services of Dean Merritt. The Faculty, on the recommendation of the President, was authorized by the Trustees to select a candidate to fill the vacancy, and the choice of the Faculty fell on Professor James Edwin Creighton, whom the Trustees accordingly appointed Dean of the Graduate School for a term of three years.

The vacancy in the directorship of the College of Agriculture was temporarily filled in 1913 by the appointment for one year of Professor William Alonzo Stocking, Jr., as Acting Director, and the University is deeply appreciative of the zeal, wisdom, and ability which he devoted to the administration of the College. After a prolonged and careful study of the field, in which the President had the assistance and advice of both Faculty and Trustees, Dr. Beverly Thomas Galloway, the Assistant Secretary of Agriculture of the United States, was appointed as permanent Director of the College of Agriculture and of the Agricultural Experiment Station. Dr. Galloway is an unusual combination of a scientist with a high reputation as an investigator and an administrator with a large, varied, and extensive experience in which he has been highly successful.

His connection for more than twenty years with the Federal Department of Agriculture afforded him a uniquely advantageous position for the study of agricultural interests, for the development of agricultural science, and the fostering of agricultural education in the United States. And as head of the State College and the Federal Experiment Station at Cornell University, he will bring to the farmers and to the agricultural interests of the State of New York the wealth of science, of expert attainment, and of administrative experience which have hitherto been at the service of the Nation.

The following additional appointments have also been made in the College of Agriculture: Maurice Chase Burritt, B.S. in Agriculture, Cornell, 1908, to be Extension Professor in charge of Farm Bureaus. George A. Works was appointed Professor of Rural Education. Mr. Works is a graduate both of the academic and agricultural departments of the University of Wisconsin and has had considerable experience as a high school principal and a superintendent of schools, and more recently he has been Assistant Professor of Agricultural Education in the University of Minnesota. Ralph Sheldon Hosmer was appointed Professor of Forestry and head of the Department. After graduating from Harvard University, Mr. Hosmer served in the United States Departments of Agriculture and Forestry, and he graduated from the Yale Forest School in 1902; since 1903 he has been Superintendent of Forestry in the Territory of Hawaii. Rollin Adams Emerson was appointed Professor of Plant Breeding and head of the Department. Mr. Emerson is a graduate of Nebraska University, and he entered at once the experiment station of that University, becoming in due course Assistant Professor and then Professor of Horticulture. C. H. Myers, O. A. Johannsen, M. F. Barrus, W. C. Baker, and L. H. Cross were promoted from assistant professorships to professorships in plant breeding, entomology, plant pathology, drawing, and agricultural chemistry respectively.

In the College of Law, Dean Irvine was granted a sabbatic leave of absence for 1914-15 and accepted a temporary appointment as Public Service Commissioner, which he had been offered by the Governor of the State. To provide for the conduct of the administrative work of the College, Professor E. H. Woodruff was appointed Acting Dean for 1914-15. Assistant Professor C. Tracey Stagg was appointed to a professorship of procedure, and he was also appointed Secretary of the College for a year to assist the Acting Dean.

The unsatisfactory condition of Professor Drew's health necessitating a leave of absence with probable retirement from the teaching profession, Charles Kellogg Burdick was appointed Professor of Law. Professor Burdick took his Arts degree at Princeton in 1904 and his Law degree at Columbia in 1908; and after a brief period of practice in New York City he was Professor of Law in Tulane University from 1909 to 1912, and since that date Professor of Law in the University of Missouri.

Assistant Professor James Albert Winans after prolonged and successful work as assistant professor was advanced to a professorship in the Department of Public Speaking.

The Jacob H. Schiff Lectureship in German Culture was occupied in 1913-14 by Professor Ernst Elster of the University of Marburg. Professor Elster lectured daily from February 9th to March 27th, offering two courses, the one on "The Poet Heine" and the other on "The Leading German Dramatists of the Nineteenth Century." These lectures were distinguished by the highest scholarship and the presentation was at once lucid and interesting. Through his broad sympathies, his genial disposition, and the great charm of his personality, Professor Elster quickly won the admiration and esteem of the university community.

Dr. Artur Weese, Professor of the History of Art in the University of Bern, Switzerland, was appointed Jacob H. Schiff Lecturer in German for 1914-15. He will lecture on German Art. And the Goldwin Smith Lectureship for 1914-15 was filled by the appointment of Dr. Roscoe Pound, Carter Professor of Jurisprudence in the Law School of Harvard University. He will lecture on "Modern Justice" with special relation to the social and industrial questions of the present day.

Changes in the administration of departments were effected by the appointment of Professor Heinrich Ries as head of the consolidated Geological Department, Professor A. B. Faust as head of the German Department, Professor G. P. Bristol as head of the Greek Department, and Professor J. G. Needham as head of the Department of Entomology, Biology, and Nature Study.

It has already been stated that the headship of two important departments was rendered vacant by the death and two others by the superannuation of the incumbents. One junior professor in the Department of Romance Languages—Professor E. W. Olmsted—resigned to accept promotion to a departmental headship in the

University of Minnesota; and with a view to recognizing more fully the claims of Spanish, the vacancy was, on the recommendation of the head of the department—Professor Comfort—filled by the appointment of Dr. Ralph Hayward Keniston of Harvard University as Assistant Professor with special reference to Spanish.

The following table gives the number of members of the instructing staff by colleges in the entire University at Ithaca during the year 1913-14. (Where a teacher is in more than one faculty he has been counted in the college in which most of his work is done.)

	Physical Education	Arts and Sciences	Law	Medicine 1st Year	Architecture	Civil *Engineering	Mechanical *Engineering	Veterinary Medicine	*Agriculture	Total
Emeritus Professors	—	7	—	1	—	—	—	1	1	10
Professors . . . . .	2	50	4	3	4	5	10	7	45	130
Assistant Professors	—	34	3	2	3	12	13	3	26	96
Lecturers . . . . .	—	2	—	—	—	—	—	—	—	2
Instructors . . . . .	2	57	—	4	4	13	43	5	57	185
Assistants . . . . .	17	61	—	7	—	—	12	7	84	188
	21	211	7	17	11	30	78	23	213	611

\*Work of the first two years mainly in Arts and Sciences.

In the Medical College in New York City the number of members of the instructing staff during the year was as follows:

Emeritus Professors . . . . .	4
Professors . . . . .	15
Clinical Professors . . . . .	18
Assistant Professors . . . . .	15
Instructors . . . . .	59
Assistants . . . . .	28

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With the growth of the University the need has been increasingly felt of suitable facilities for promoting social intercourse among members of the Faculty and their families. The establishment of a Club on the Campus open to all members of the instructing staff and their families has come to be an urgent desideratum. Under the leadership of Mrs. Comstock and other ladies with the co-operation of a number of professors, this Club has now been organized and over 400 persons consisting of university teachers and others connected with the University and their families have become members. Quarters have been secured for the Club in the two lower stories of Sage Cottage, which with the opening of Prudence Risley

Hall has been abandoned as a home for the women students of the University. The new Club is to be opened at the beginning of the academic year 1914-15.

## STUDENTS

The total number of different persons who received instruction in the University in 1913-14 was 6,496. Excluding those enrolled in the Summer Session of the University and in the Summer and Winter Schools and Summer Term in Agriculture, there remain 5,015 as the number of regularly matriculated students.

These 5,015 regularly enrolled students were distributed among the several courses of instruction as indicated in the following table, which for purposes of comparison covers the three preceding years:

Year	Graduate School	Arts and Sciences	Law	Medicine	Veterinary Medicine	Agriculture	Architecture	Civil Engineering	Mechanical and Electrical Engineering	Total Exc. Duplicates
1910-11	372	1017	279	171	105	761	133	558	1073	4412
1911-12	383	1031	328	118	106	967	138	539	1020	4596
1912-13	382	1112	297	150	120	1263	144	503	956	4803
1913-14	383	1194	271	141	131	1462	149	487	902	5015

Of these 5,015 regularly enrolled students 4,481 were men and 534 women.

The most striking feature in the higher education of America in recent years has been the development of colleges of agriculture. There has been a deep and widespread popular interest in agricultural education. State legislatures have made liberal appropriations for their agricultural colleges and new buildings have been erected for the different departments, suitable facilities provided, and above all, scientists secured for teaching and investigation. There have been unbounded hopes as to the possibilities of agricultural education and everywhere high school graduates have been flocking to the agricultural colleges. This new phase of education has striking analogies with the development of engineering education a generation ago. How long the expansion may continue and how rapid the rate of growth can only be conjectured. It is an advancing wave which has probably not yet reached its crest. At Cornell University, as the foregoing table shows, the increase in the number of regularly enrolled students in the College of Agriculture has been



annually about 200, save for the phenomenal year of 1912-13, when it was nearly 300.

The figures show a decrease in the number of engineering students. But this decline is no more a local phenomenon than is the increase in the attendance of agricultural students. The subject was discussed in the Bulletin of the Society for the Promotion of Engineering Education, Vol. iv, No. 3, November, 1913, which contains a curve showing the attendance at fifty-five engineering schools in the United States since 1903. The curve rises rapidly until 1909 and since that period it shows a marked decline. This curve and the statistics on which it is based were worked out by a committee of the Society which presented a preliminary report at the Minneapolis meeting and was to bring in a final report at the Princeton meeting in the course of the present year. With reference to this diminution in the attendance at engineering schools since 1909, which the Bulletin characterized as "startling," the committee in this preliminary report attributed it to the four following causes: the general raising of standards, the greater interest in agriculture, the greater interest in commercial courses, and the prevailing opinion that the engineering profession is overcrowded. There has undoubtedly been a raising of standards in the engineering courses in Cornell University, both by a rigorous administration of the entrance requirements and an insistent demand for a higher quality of mathematical and scientific training. And the popularity of courses bearing upon business life has been a noticeable feature of recent years while the interest in scientific agriculture has, as already noted, been deep and intense.

The remaining figures of the table call for little comment. The growth of the College of Arts and Sciences continues unabated, having risen from 1,017, in 1910-11 to 1,194 in 1913-14. The enrollment in Law in 1911-12, in anticipation of the entrance requirement of at least a year of college work, was abnormal and its influence was felt in the enrollment of 1912-13. But with those exceptions the attendance in the College of Law remains practically unchanged. In the Medical College in the City of New York the requirement of a college degree for admission continues to keep down the attendance, though it is now not far below that of 1910-11, which witnessed the graduation of the last class entering with a high school preliminary education. The enrollment in the Graduate

School is practically the same as last year. There is a slight increase in Architecture, and a larger increase in Veterinary Medicine.

In 1909-10 the number of women in the University was 397, of whom (not excluding 18 duplicates) 52 were in the Graduate School, 274 in the College of Arts and Sciences, one in Law, 57 in Agriculture, 25 in Medicine, and 5 in Architecture. Of the 534 women enrolled in 1913-14, there were (not excluding 10 duplicates), 56 in the Graduate School, 244 in the College of Arts and Sciences, 2 in Law, 25 in Medicine, 215 in Agriculture, and 4 in Architecture. These figures show a remarkable increase in the registration of women in the College of Agriculture and an appreciable diminution in the College of Arts and Sciences, with little variation throughout the rest of the University. The large and rapid increase in the attendance of women in the College of Agriculture may be explained in part by free tuition and in part by the attraction of the Department of Home Economics, though it is quite possible that other causes may be in operation.

Apart from the 5,015 students regularly enrolled during the academic year from September to June, the number of persons indicated below received instruction in the following special divisions of the University:

University Summer School, 1914.....	1126
Agricultural Winter School.....	555
Agricultural Summer School.....	389
Agricultural Summer Term.....	41

The number of degrees conferred during the year was 958. Of these 850 were first degrees, and 108 advanced degrees, of which 47 were Doctors of Philosophy. The total number of first degrees granted since the foundation of the University is now 14,101 and of advanced degrees 1,524.

#### MILITARY AND PHYSICAL TRAINING AND ATHLETICS

The outstanding event of the year for the Military Department was the enactment by the Legislature of the State of a bill providing for the erection of a drill hall for the use of the Military Department of Cornell University at a cost of \$350,000, of which \$50,000 immediately became available. It is expected that the new building will have eight or ten times the floor area of the present armory, which was built when the total enrollment of students in the University was numbered only by hundreds. It is to be located between

Garden Avenue and the rear of the cottages on East Avenue, immediately south of the Veterinary College buildings and the adjoining green. When this new drill hall is completed the Department will have admirable facilities for indoor work, which have been lacking for a good many years past.

That Cornell has made the best use of its facilities, however, is demonstrated by the fact that the War Department in June last included the University in a list of six collegiate institutions in the country "announced as having been especially commended for the work of their military departments during the past year." This honor is a certificate of the good work done by Lieutenant Bull. Two new features may be noted in the work of the department. Practical instruction in rifle practice has been emphasized, each cadet being put through a required course at 200 and 300 yards, with an optional course at 500 yards. Secondly, the department has followed the practice of the regular army in getting away from close order drills and ceremonies, and laying stress on extended order and field problems, as well as target practice, thus training the students in methods used in actual practice and combat. The University continues to provide generous support for the work of the department. An additional appropriation has been authorized for the supplementary pay of a retired non-commissioned officer for whose detail application has been made to the War Department. Further appropriations have also been authorized for two additional company officers for the signal corps company.

The Professor of Physical Culture and Director of the Gymnasium having had sabbatic leave during the second term of the year, devoted a large portion of his time to an investigation of physical training in leading colleges and universities both in the east and in the middle west. He reports that the work in physical training in the western universities is better organized and on a more substantial basis than is the case in most of the eastern institutions. The most radical point of difference between the two groups is in the matter of athletic control. In the west the coaches are not only engaged for the full academic year, but they are regular members of the teaching staff. The regulations governing participation in athletic contests are also stricter in the west. Professor Young recognizes, however, the danger of over-regulation to the spirit of sports, the essence of which is spontaneity. In this regard Cornell is in a very fortunate situation. Professor Young himself remarks "that the

number of students at Cornell engaged in voluntary games and exercises seems to far exceed anything that I observed anywhere on my trips."

There was considerable discussion in University circles during the year on the effect of intercollegiate sports on the work of students participating in them. There are two criteria by which the effect of these activities may be judged: one, the absence of students from the University, and the other, their scholastic records. A statistical investigation showed that the average number of days' leave of absence for intercollegiate athletics, including also social and miscellaneous functions, was for those participating in them 1.23 in 1913-14 as against 2 in 1912-13 and 2.2 days in 1911-12. The maximum athletic schedule seldom exceeds five days' leave of absence. A comparison made with three leading universities showed that the total number of games played both on the home grounds and away from home, including both major and minor sports, was smaller at Cornell than at any one of the other three universities. The percentage of major sports which Cornell plays away from home is about the average of the other three universities. On the other hand, Cornell has more intercollegiate contests in minor sports away from home than any of the other three universities; the respective proportions being as follows: Cornell 63 per cent and the other universities respectively 55 per cent, 53 per cent, and 39 per cent. Some of these contests, however, occur in vacations. Nevertheless in the field of minor sports it seems probable that Cornell has too many contests away from home. Some of them might perhaps be forbidden altogether without any detriment to the best athletic interests of the University.

As regards the scholastic standing of the men engaged in intercollegiate athletics, a statistical investigation showed that it was on the average as high as the scholastic standing of men in the fraternities or even higher. This showing was more favorable than had been generally anticipated, though no one will pretend that the scholarship of either group is what it should be. It is only just, however, to state that coaches and others specially concerned with the athletic interests of the University show a growing tendency to insist on at least a fair academic record for the students engaged in intercollegiate athletics.

Rivalry in games and sports between the different colleges of the University and the different classes and other organizations

continues unabated. It has undoubtedly been fostered by the playground which the alumni have provided for the University, and it is likely to develop still more rapidly when the athletic field is completed and all games and sports are played on the Campus.

It is to be desired that all members of the University should day after day engage in sports and games as a means of enjoyment, recreation, and bodily health and vigor. That ideal is more or less completely realized at the oldest English universities—Oxford and Cambridge. It is being increasingly realized at Cornell University. But at Cornell it is modified by the fact that military drill is required of freshmen three days of the week and after the completion of the new drill hall it is likely to be elected by increasing numbers from the other classes. This blending, however, of prescribed military exercises and of voluntary athletic sports may turn out to be the best solution of the problem of physical training yet devised. It combines physical recreation with moral discipline and patriotic service, and the results are beneficial alike to the student, the University, and the Republic.

The present gymnasium was built when the students were numbered by hundreds. Now that several thousand are enrolled it is pitifully inadequate for its purpose. Will not some friend of Cornell, who appreciates the great importance of the physical training of young men, supply the University with a new gymnasium? Like the new drill hall it could be placed beside the playground and athletic field which the University owes to the generosity of its alumni and old students and which for extent, accessibility, convenience, and beauty of outlook is unsurpassed and probably unequalled anywhere.

The experiment of holding meetings of the entire University, to be known as University Assemblies, was provisionally authorized by the Faculty in response to a petition from undergraduates. Other matters affecting the academic work and the social life and conduct of students are instructively discussed in the report of the Secretary of the University Faculty (Appendix I).

#### GRADUATE SCHOOL

The object of a Graduate School, as Dean Merritt explains, is on the one hand to contribute to the advancement of knowledge through the efforts of the members of the Faculty, and on the other to train, through association with them, independent and progres-

sive investigators and thinkers. Organized as American universities are, and exercising the functions which have been assigned to them they are likely to have in their faculties professors who are genuinely devoted to teaching with a minor interest in research, and professors whose principal interest is in research but who do the teaching which is required of them if not with pre-eminent zest and enjoyment, for the most part at any rate with efficiency and conscientiousness. It is this latter class of professors who especially create the atmosphere that makes a university attractive to scholars and scientists. And the recognition of young men qualified to pursue research is a primary duty devolving upon departmental heads and through them upon the administration of the university. The young man who is possessed of an enthusiasm for ideas and who has faith in their application to new fields, who would devote his life to making inroads on the unknown, is the type of man to hold our universities up to their highest ideals and enable them to render their greatest service to the cause of civilization and the advancement of humanity. In spite of the heavy duties of instruction required of all members of the Faculty of Cornell, there is much devotion to such productive work. Taking publications by members of the Faculty of Arts and Sciences, Dean Nichols finds that in the year 1902-03, 49 members of the Faculty (out of a total of a hundred) published 105 papers which might be regarded as serious contributions to knowledge. And in 1912-13, with the Faculty increased to 134, there were published 175 such contributions by 71 members. Dean Nichols concludes that a slightly larger proportion of the Faculty are publishing than was the case ten years earlier and that the average productivity had also somewhat increased.

For strengthening and developing the spirit of independent scholarship and investigation in the University the establishment of a Research Fund would be a most helpful agency. It would be difficult to imagine a better investment of funds for the intellectual advancement of mankind. Such an endowment is greatly needed and would be fruitfully applied at Cornell. With or without such external aid, however, there is another means of fostering and stimulating the atmosphere of scientific and scholarly research in the University which is within the power of the Faculty itself. This is the constant confession of faith in the value of original investigation, the proclamation that productive work is in all cases a part of the duty of a university teacher, and the adoption and conscientious

application of the policy of watching carefully in each department for the appearance of promising young men as investigators and recognizing them by recommendation for appointment to instructorships, assistant professorships, and professorships. This is a responsibility with which every department is now invested, for instructors and assistant professors and to a considerable extent professors also in the several departments, are practically appointed on the recommendation of the heads of those departments, while independent professorships are filled only after the President has advised with the heads of cognate departments.

The value of fellowships and scholarships in fostering original investigation is discussed in an interesting way and with the evidence of statistical data in Dean Merritt's report, to which reference is made for this and other matters affecting the Graduate School.

#### COLLEGES AND DEPARTMENTS

The College of Arts and Sciences is the *fons et origo* of all technical and vocational courses. These become differentiated as soon as the sciences on which they rest have been sufficiently developed, and the applications of those sciences to the industries and vocations of life are of sufficient economic advantage. Engineering is the most conspicuous example of a completely differentiated technical course. The course in chemistry, which still remains under the jurisdiction of the College of Arts and Sciences though having a separate degree, is a good example of a semi-technical and partially differentiated vocational course. Similar developments must be expected in the future; and while from an economic and industrial point of view they are inevitable, they have also educational advantages of considerable importance, for they not only fit students for specific vocations in life of a more or less scientific character but they appeal to different tastes and aptitudes and they enlist the student's interest as an inspiration to good work.

The College of Arts and Sciences, which develops and throws off as separate organisms these technical departments, has only one danger to guard against. That is that it shall itself not lose possession or control of the pure sciences and the liberal arts in which it lives and moves and has its being. It would, for example, be a great misfortune if the Department of Physics or Chemistry ever ceased to be an integral part of a College of Arts and Sciences. To that college also belong geology, biology, and psychology as vital

parts of its organization. Instruction in these subjects is indeed an indispensable requirement for students in mining, or agriculture, or medicine, or pedagogy, but if the control of any of these subjects is transferred to a professional or technical department, the College of Arts and Sciences, whose mission is the cultivation of pure science and the liberal arts, is to that extent maimed and dismembered. This is the only sound policy for the development of a College of Arts and Sciences, both with regard to its own organization and its relation to professional and technical courses. If modifications of the policy are sometimes adopted they should frankly be treated as temporary arrangements and excused on the ground of poverty or similar necessity.

The fundamental importance of the biological sciences for the work of the College of Agriculture has led to a considerable development of these sciences in that College; and anatomy, histology, and physiology have been especially developed under the auspices of the Ithaca Division of the Medical College. By the device of dual faculty membership, however, the Faculty of Arts and Sciences maintains a certain touch with all biological work in the University. And nothing is needed but a liberal endowment fund to establish in the College of Arts and Sciences a Department of Biology as strong and self-contained as, for example, the Department of Physics.

Dean Nichols observes that there is a widespread discontent with American college education as a whole, which is, however, directed against the academic rather than the technical side. There is too little devotion to ideas, too general a lack of intellectual interest and scholarly ambition. How is greater interest in the intellectual life to be awakened? The Dean lays stress on research and on the creation of an environment as free as possible from petty exaction and artificial enforcement of every kind. On the other hand, the Dean is of the opinion that there is a natural distribution of talent within the student body which is fairly constant. If this opinion be correct, it would seem that an improvement in the work of the College of Arts and Sciences might be effected if the student body were differentiated as has long been the case at Oxford and Cambridge into "pass men" and "honor men," and the teaching of the professors and instructors and also the regulations of the College adapted to these two distinct groups of students. The result would be to give undergraduates of superior ability and intellectual ambition a foretaste of the advantages which under the organization of Ameri-



can universities are apt to be treated too exclusively as the monopoly of graduate students.

Dean Nichols discusses the possibility of allowing college work freely to carry its own appeal, without any support from artificial enforcements and exactions. And he notes that during the year faculty action has tended in the direction of freer and more flexible conditions for undergraduates. Sick excuses have been abolished; grades have been substituted for numerical marks to record the results of examinations; and a greater latitude has been given in the combination of studies to meet the needs of individual students.

There were two special examples during the year of sustained undergraduate interest in scientific problems reinforced by humanitarian considerations. One was the course in Citizenship arranged and in the main conducted by alumni of the University which had a large registration of students and which awakened an enthusiasm in civic and social work. The other was the course of lectures on Eugenics arranged principally by Professor Gilbert, which, though no credit was given for it, attracted large audiences and aroused much interest in the subject.

The Faculty of Arts and Sciences adopted during the year a measure of great importance to the School of Education. It voted that a student who had completed at the end of the first term of his senior year the hours necessary for graduation might, upon the recommendation of the head of the Department and of the Director of the School of Education, be allowed to do practice teaching for the remainder of his senior year in an approved high school and have the time thus spent counted toward the residence required for his degree. In the College of Arts and Sciences two professors have had charge of the work in educational psychology and the principles and practice of education. And in the Departments of Philosophy and Psychology, as well as other departments, courses are given which, if not actually prescribed, are of great obvious advantage to the student in education. But it is not only the College of Arts and Sciences which supports the School of Education at Cornell. Professor Kimball of Sibley College provides a course in Industrial education. And the College of Agriculture has just increased its potencies in this field by the appointment of a Professor of Rural Education. Altogether this is a promising combination of men, facilities, and opportunities. It must, however, be acknowledged that a professorship dealing with school organization and administra-

tion is an urgent and almost indispensable necessity, and in time no doubt further specialization would be desirable.

In the College of Law provision has been made not only for continuing the special courses by non-resident lecturers in admiralty and in patent law, but also for establishing similar lecture courses in mining law, irrigation, and federal jurisdiction. The Dean's report calls attention to an interesting modification of the curriculum which has been occasioned by modern economic conditions. It is the practice to-day to transact business by corporations rather than by partnerships. As this change has greatly diminished the practical importance of the law of partnership, the time devoted to instruction in that subject has been reduced and the curriculum reinforced in other directions.

In the report of the Director of Sibley College attention is concentrated on the subject of research. The general public and even the University community itself have little idea of the number and variety of experiments and investigations which are constantly in progress in the different departments of Sibley College. A brief descriptive list which appeared in the April number of *The Sibley Journal of Engineering*, enumerates about forty investigations or systematic tests. Professors Carpenter, Diederichs, Sawdon, and Daugherty were active in these investigations in which also an honorable share was taken by fellows and advanced students. Professor Upton is engaged on a study of the effect of repeated stress-cycles in machine parts and structures, which is a subject of prime importance not only with reference to the endurance or failure of machines and structures, but also for the safety of human life and property. In this investigation Professor Upton has made an exhaustive survey of all existing knowledge on the subject and submitted it to reliable tests; he has adopted new fundamental methods for experimentation, and has designed a special machine which gives an autographic record of both stress and deformation throughout the life of the test piece from start to rupture. Director Smith says that no more important piece of work has been undertaken in the laboratories of Sibley College, and that it promises very important results.

Such scientific research applied to engineering problems it is the earnest desire of Sibley College to develop and foster. Investigation is at present restricted by the limited funds available,—for men, for apparatus and equipment, and for fellowships for the

encouragement of promising young investigators. The portion of Mr. Hiram W. Sibley's gift of \$10,000 which became available during the year was used to secure new apparatus for the electrical laboratory. An industrial fellowship for the scientific investigation of the cement used in making commercial concrete was provided by the Raymond Concrete Pile Company of New York; and an experienced man has been secured to conduct this scientific investigation while the College is putting at his disposal its equipment and aiding him with its co-operation.

The differentiation of vocations constantly taking place in the modern industrial world puts new obligations upon a University like Cornell. There is now a call to train men for commercial careers in connection with engineering. Such students would need courses in engineering and courses in economics, finance, and business. Director Smith suggests a curriculum of three years in Sibley College and the fourth year in the College of Arts and Sciences with the degree of B.S. on the satisfactory completion of the course. The proposal is in harmony with the views and practices of the University, and a plan for its administration should not be difficult to work out.

The men who study in the College of Civil Engineering are apt to become and remain engineers. The Director has compiled statistics showing the occupations of all living graduates of the College up to and including the Class of 1912. The total number is 1,303. Of these 40 are chief engineers, 64 consulting engineers, 34 contractors, 69 teachers of engineering, and 953 engineering practitioners, showing 89 per cent of the graduates following their chosen profession. This table shows a stricter adherence to the profession on the part of graduates in Civil Engineering than would be found among graduates in Mechanical Engineering, who easily adopt cognate lines of business, or even among the members of an older profession like Law, many of whom turn to other pursuits, especially in connection with the large corporations.

The appropriations of the College of Civil Engineering were increased both for the improvement of its general work and for the beginning of extension instruction in highway engineering, which is now a matter of great practical importance for the State of New York and some of the neighboring states. The increasing development of electricity from water power augments the importance of hydraulic engineering; and with the constantly growing sensitiveness of

the public to the duty of preventing disease and protecting the health of the people, sanitary engineering has assumed a new importance. The College needs funds to enable it to make enlarged and more adequate provision for instruction and investigation in these branches, while maintaining and strengthening the standard courses of the curriculum.

The normal growth of the College of Architecture makes the question of additional space a serious one. The classes in descriptive geometry and mechanics have this year been taught in the basement of Franklin Hall, but there is no relief of congestion in the large drafting rooms used by the Department of Design. These have an estimated capacity of 120 students and places had to be provided in them during the year for over 160 students. The result is not only to cut down the working space available for each student but to make it difficult for the seniors to render large problems, which are considered an important part of the instruction.

The summer work in design tentatively given during the past two years was continued in the summer of 1914 under the direction of Professor Mauxion to an increased number of students. The Director suggests the regular organization of this work as a part of the Summer Session and the addition to it of courses of freehand drawing and the history of architecture.

#### STATE COLLEGE OF AGRICULTURE

The College of Agriculture has had to grapple with the problem of providing instruction for increasing numbers of students in a new and therefore unorganized field of education. But the professors of agriculture are gradually getting their subjects into pedagogical form and their success in this direction has been promoted by the differentiation of extension work from college work proper. The ideal is that no member of the teaching staff should be called upon to engage in extension work during any term in which he is scheduled to give instruction to students in the College.

The new summer term, which extends from June 8 to September 23, went into effect in 1914. The departments most interested in it are those having to do with the plant industries, including botany, plant breeding, plant pathology, pomology, soil technology, floriculture, vegetable gardening, and also entomology, biology, and poultry husbandry. It is expected that the work of the summer term will be in the main restricted to these departments, though other departments

are free to offer courses if they so desire. A restriction on the attendance is that students are not admitted until they have fully satisfied the fundamental work required in the freshman and sophomore years of the regular curriculum in agriculture.

For the better correlation of the College of Agriculture with the agricultural courses recently introduced into the high schools of the State, the Faculty of Agriculture recommended that the agricultural subjects which may be offered for admission to the College be increased from a maximum of one unit to a maximum of four units, with the proviso that in no case should more than four units be accepted in vocational subjects, and this recommendation was forthwith adopted by the University Faculty. The new legislation will enable pupils in the high schools in which four-year courses in agriculture have been introduced to present those subjects for admission to the College and at the same time it safeguards the established requirements of scholarly attainments in standard subjects by limiting to four units the amount of vocational subjects, agricultural or other, which will be accepted for admission.

The Faculty has protected the standing and value of the baccalaureate degree by the provision that under no conditions will less than eight terms of residence for graduation be accepted, except in the case of students who, having completed the undergraduate work in seven terms, enter the Graduate School and satisfactorily complete the eighth term of work therein.

In the construction of buildings considerable progress has been made during the year. The auditorium was practically completed and occupied during Farmers' Week in February. The forestry building has been occupied by the Department since May, and is now completed. The animal husbandry building and the stock judging pavilion should be ready for occupancy soon after the opening of the University in September and the agronomy building will be completed at a somewhat later date.

By action of the Board of Trustees the main administration building of the College of Agriculture has been named "Roberts Hall" and the auditorium, "Bailey Hall" in recognition of the able, devoted, and fruitful services rendered by the two former Directors of the College.

Although several buildings have been erected for the College of Agriculture in recent years, the supply is still altogether inadequate to the demands made by the increasing numbers of students. More

buildings must be provided in the near future, and one is urgently needed at the present time—a building for the Departments of Plant Industry.

In other lines also the increase in the number of students has called for expansion. To furnish the instruction needed in the Department of Animal Husbandry, it has become necessary to maintain more live stock, which in turn has called for the production of additional hay and silage and a larger area for pasture purposes. To meet these demands another farm of about 130 acres was purchased in the spring.

Research in the College of Agriculture is fostered by professorships devoted exclusively to that interest. But the professors who give instruction to undergraduates are as a rule also engaged in special lines of investigation connected with their instruction. Many of these investigations are of direct practical value to the agricultural interests of the State.

For the extension work there is now a special staff of about 20 persons who give to it almost the whole of their time. In the winter they conduct extension schools lasting for a week throughout the different parts of the State. And for the rest of the year they devote themselves to specific needs and problems presented to them by farmers and farming organizations throughout the State. Their services may take the form of lectures, exhibits, co-operative experiments, demonstrations, visits to farms, conduct of traveling and extension schools, not to mention the vast and varied correspondence which the officers of the Extension Department are constantly carrying on from the College at Ithaca.

Much interest is being aroused throughout the State in the work of the farm bureaus. These bureaus are organized as a direct result of local initiative, and are serving as an effective means of bringing the activities of the College of Agriculture and of other agricultural agencies directly home to the people. The work is co-operative between the State Department of Agriculture, the State College of Agriculture at Cornell University, and the United States Department of Agriculture. Twenty-six county bureaus are now in active operation, and associations of farmers have been organized in five additional counties preliminary to the development of the farm bureau plan in each. The Federal Government is extending its activities in this field, and through a plan now under consideration it is the intention to so reorganize the work during the next year as to make

practicable the organization of a farm bureau in the majority of the counties in the State.

On May 8, 1914, the President of the United States affixed his signature to a far-reaching educational measure which has come to be known as the Lever Extension Act. The measure is in a sense the capstone of federal legislation included in the two Morrill acts, the Nelson Act, the Hatch Act, and the Adams Act. It provides for co-operative extension work between the United States Department of Agriculture and the land-grant colleges in the respective states. The author of the bill, Honorable A. F. Lever, of South Carolina, says that in practical effect it undertakes to provide such machinery as will bring to the attention of the farmer, the farmer's wife, and the farmer's children, in the most striking manner, such demonstrated truths and practices of successful agriculture as will make farming desirable and profitable as an occupation. The Governor of the State of New York has accepted the terms of the act and has notified the Secretary of Agriculture that the New York State College of Agriculture at Cornell University is the agency through which the work is to be done. The Secretary of Agriculture and the President of Cornell University have signed a Memorandum of Understanding covering the work to be undertaken. The various projects have been prepared by the Director of the College of Agriculture and have been submitted to and approved by the federal authorities, and the important work is now under way. All work conducted under the terms of the Lever Act will be articulated closely with the extension activities of the College. The funds appropriated by the Federal Government are cumulative, reaching their maximum at the end of seven years. Under the terms of the act the State, or other agencies within the State, must supplement the federal funds by the appropriation of an equal amount after the initial appropriation; but as the annual increases are not large, it is expected that the State will be able to meet them.

At the beginning of what promises to be one of the most successful years of the State College of Agriculture, so far as is indicated by the interest of the people of the State and the number of students demanding admission, the institution finds itself embarrassed for lack of funds. When the needs of the College were considered last year, it was decided that in view of the financial situation in the State the appropriations requested should be kept to the very lowest minimum consistent with the welfare of the work in hand. Practi-

cally no increases were requested for maintenance, and only a few very urgent ones were presented for improvements and repairs. After these appropriations had passed both houses, the Governor, exercising his prerogative, found it necessary to reduce certain of the items in order to relieve the financial stringency and prevent a deficiency in state funds.

The items not approved by the Governor included one for additions and repairs amounting to \$5,000. The original estimate for this item was \$10,000, and it was cut by the Legislature to \$5,000. In an institution such as the State College of Agriculture, it is absolutely necessary that there should be a suitable fund for the large number of minor changes that from time to time must be made in the various buildings for repairs and betterments, including plumbing, carpentering, electric wiring, and the like. The item of \$10,000 was none too large for this work; and to be left without any funds whatever is seriously embarrassing.

The second item disapproved was for constructing conduits, underground steam connections, and other equipment, in order to complete the plan for a central heating plant which the State has recently erected. This item amounted to \$38,000. While the item is of the greatest importance because of the difficulty in heating the new buildings by means of temporary heating plants, and if allowed would have resulted in considerable economizing of expenditures, it is now so late that a deficiency appropriation will not be needed if the item is provided for in the regular appropriation bill.

The third item was for the purchase of forestry land and timber to be used for instruction and practical demonstrations in forestry. This item amounted to \$40,000, and, while it is of great importance to have an appropriation made ultimately, it can now wait for the regular course.

The fourth item is of vital importance to the institution, as it has to do with work which is already under way and which would be seriously crippled if the funds were not forthcoming. The item is for \$12,350 for extension work. The total appropriation made by the State for extension service was \$70,000, and the amount eliminated was for the support of extension work in connection with farm demonstrations, farmers' institutes, inspections, and consultations.

The fifth item eliminated was for the Summer School in Agriculture for school teachers and others, amounting to \$10,000. The Summer School has grown to be one of the important activities of



the College, and to discontinue the work at this time would be a serious disadvantage to the institution and to the teachers of agriculture and home economics in the State. Started in the summer of 1911 with a registration of 128 students, the Summer School has grown rapidly until 388 students were registered during the past summer, showing that the school is supplying a real need. The fact that the summer is the only time when school teachers can utilize the facilities of the College makes the continuance of the Summer School imperative. It is believed, therefore, that steps should be taken to relieve the immediate situation by securing an appropriation of not less than \$30,000 to make up the deficit in the three pressing items, namely, additions and repairs, the extension work, and the Summer School.

It is poor economy for the authorities of the State to withhold appropriations for the State College of Agriculture when they are absolutely necessary for the prosecution of some of the most important and useful work which in the interests of agriculture and for the benefit of the farmers of New York the College is under obligation to perform. The public recognize that no monies spent by the State bring such large and fruitful returns as those spent for improving agriculture, and the public demand that the work of the State College of Agriculture alike with students, school teachers, and farmers be adequately and even generously supported.

The appointment of Dr. B. T. Galloway, Assistant Secretary of Agriculture of the United States, as Director of the State College of Agriculture and other appointments in the College have been noticed in the section dealing with faculty changes during the year.

#### STATE VETERINARY COLLEGE

The outstanding event was the opening of the new hospital and clinic buildings for large and small animals in the month of November. They are well adapted to their purposes; and the enlargement of the hospital facilities of the College has made it possible to increase the clinics and to give better instruction in clinical medicine. A significant feature in the clinics is the constantly increasing number of cattle, hogs, and sheep under treatment. The ambulatory clinic furnishes additional facilities for the study and treatment of diseases in these and other animals.

In the new buildings there has been established a farriery in which for the first time in the history of the College practical instruction

has been given in horseshoeing. This course has not only aroused enthusiasm among the students who have taken it but awakened an interest among stock owners in the State and beyond.

As in the past, the College has striven to be of assistance to the veterinary profession of the State. That the veterinarians appreciate its services is indicated by the fact that more than fifteen per cent of them attended the January conference at the College. Most helpful to practitioners of veterinary medicine is the making by the College of laboratory examinations for the diagnosing of diseases. Of such examinations there were in 1912 and 1913, 76 for anthrax, 1,173 for glanders, 81 for poultry diseases, 285 for rabies, 68 for tuberculosis, 39 for tumors, and 136 for miscellaneous diseases. During the same time there were made and sent out through the State by the College 11,680 doses of anthrax vaccine, 7,867 doses of anti-hog-cholera serum, 3,678 doses of mallein, and 61,372 doses of tuberculin.

In the work of research the professors have in the main been chiefly engaged in the continuation of earlier investigations. There will be found in the annual report which the College made to the Legislature results of investigations on bob veal, infectious abortion, the differentiation of glanders nodules from those caused by parasites, hog-cholera serum, and other subjects.

Although the number of students shows a steady increase, and although the prevalence of diseases among animals calls for further research, it is possible to conduct the work of the College for a time without any material enlargement of the faculty. On the other hand, the additional space so long needed has now become a practical necessity. If the south wing as originally planned were added to the main building, it would furnish the rooms needed for museum, library, and administrative offices, at a cost of perhaps \$75,000. The other building needed is a laboratory for bacteriology and pathology and the diagnosis work which the College conducts on so large a scale for the benefit of the State.

#### THE MEDICAL COLLEGE IN NEW YORK CITY

The funds for the foundation and maintenance of the Medical College have, as is well known, been donated by a single individual. During the year this generous patron of medical education and research transferred to the Trustees of the University securities for the endowment of the Medical College which yield an income of

over \$200,000. No medical college in the country has ever before received a single endowment of this magnitude. And all that the munificent benefactor asks is, first, that he himself shall be permitted to remain in the background, and, secondly, that the institution shall make the most effective use possible of those funds for the improvement of medical education, the advancement of the medical sciences, and the relief and prevention of human suffering. It is not easy to find expressions of appreciation commensurate with this act of philanthropic generosity. Perhaps the best response on the part of both faculty and Trustees is to recognize seriously the grave obligation which the gift lays upon them and to devote themselves earnestly and resolutely to the accomplishment of those humane and civilizing objects which it was designed to promote.

Another benefactor, Mr. Geroge F. Baker, had already by a splendid gift, as announced last year, made the New York Hospital available for the clinical instruction of the students of the Medical College. And now thanks to the wise generosity of Dr. James Douglas an agreement has been consummated with the General Memorial Hospital whereby the College shall have charge of the research work in cancer in connection with the cancer patients to whom that Hospital will hereafter be exclusively devoted. This arrangement, which will immensely increase the facilities of Dr. Ewing's department, may be described as in no small degree a recognition on the part of a generous philanthropist of the value of the scientific investigation Dr. Ewing has already conducted.

The different lines of research carried on by the members of the Faculty are summarized in the report of Dean Polk (Appendix V). It will be seen that in physiology Professor Lusk, in anatomy Professor Stockard, and in pathology Professor Ewing have with the co-operation of their respective associates been carrying on important investigations, and that among other departments those of chemistry, pharmacology, and therapeutics have been especially active. These investigations are naturally of a highly technical character. But even the lay reader can appreciate the valuable work on Occupational Diseases which Professor Thompson has just published—a work combining the results of scientific research with the results of a large professional experience both in general practice and in dispensary and hospital service.

As indicated elsewhere in this report the attendance in the Medical College since the adoption of the requirement of college gradu-

ation for admission has exceeded the expectations which the faculty entertained at the time the action was taken. This result may in considerable part be attributed to the excellence of the opportunities which the College offers for procuring a medical education. And its future success as a teaching institution will no doubt be mainly determined by this vital factor. Able professors, imbued with the scientific spirit, versed in the latest results and trained in the best methods of modern science, capable of applying the discoveries of the laboratory to the clinical problems which constantly confront the practitioner, and skilled not only in presenting the facts to their students but in stimulating them to personal observation, reflection, and independent investigation: such men, and such men only, will make a medical school of the highest standing and qualify it as a place for the professional instruction of college graduates of the highest capacity and best preliminary education. In the faculty discussions in the course of the year this crucial point was kept well in the foreground; and still further progress was made in improving the course of instruction, more particularly by arrangements to bring the laboratories into closer touch with bedside work, and that not exceptionally but as a general working plan. On every side there is gratifying evidence of the earnest desire of the faculty to make a really great medical school, that is, a school worthy of the subject of medicine, and equal to its opportunity,—a school which shall be an honor to American civilization.

Only the first year of the medical curriculum is now given at Ithaca. The subjects are the biological sciences, for which a university that has no medical department is under as much obligation to make provision as for other sciences or for the liberal arts. The number of candidates for the degree of Doctor of Medicine registered in the first-year course in Ithaca is fourteen, which is an increase beyond the numbers of recent years. But students from other colleges take work in histology and embryology, and in physiology nearly 500 of them were registered last year. As the Professor of Anatomy has now been made a member of the Faculty of Arts and Sciences, his work may hereafter be taken by students from that College.

The maintenance of scientific departments is very expensive. But the cost of the maintenance of the departments housed in Stimson Hall must not be regarded as a charge against the Ithaca Division

of the Medical College (which is the administrative name of the group) but against the University for the support of the sciences of physiology, anatomy, histology, embryology, etc., of which the Medical College makes use in its curriculum. The suggestion, wholly unauthorized, that with the complete endowment of the Medical College in New York the first-year course in Medicine at Ithaca might be abandoned as an unnecessary duplication of work is nothing less than a proposal to cut out the heart of the biological department from Cornell University. No scheme of economy, nothing but a financial disaster, would justify such a truncation of the University.

#### THE LIBRARY

The general and other libraries of the University now comprise collections of about 440,000 volumes and 65,000 pamphlets, with an annual increase of about 16,000 volumes a year.

The report of the Librarian specifies the gifts for last year. Most important is the donation by Professor J. M. Hart of his entire library numbering several thousand volumes specially rich in English and Celtic philology. This is a most precious gift in itself, and its intrinsic value is enhanced by the fact that it will associate for all time with the Library the name of one of the most scholarly professors in the University. Both for its own sake and as an illustration of art collections in America should be mentioned the gift of Mr. J. G. Johnson of Philadelphia of the privately printed and richly illustrated catalogue of his collection of paintings and art objects in three volumes. Mr. Hermannsson's catalogue of the Icelandic collection bequeathed by Willard Fiske, a handsome quarto volume of about 760 pages, was published in February. This catalogue includes the whole of the Fiske collection of over 10,000 volumes with the exception of the 500 books devoted to the Runic Literature. Mr. Fiske had himself directed the preparation of a manuscript card catalogue by author and title which has been revised and brought down to date by Mr. Hermannsson, and Mr. Hermannsson has also prepared a subject index, which was a feature that Professor Fiske contemplated but never attempted to execute.

The income of the Sage Endowment Fund is used wholly for the purchase of books. Although the bulk of the Fiske Fund was bequeathed to the University for the general purposes of the Library, one-third of the free or undesignated income has been set aside by

resolution of the Trustees for the purchase of books. Together these funds, along with other special funds, provide for the reasonable growth of the Library and the satisfactory meeting of the needs of the scholars and scientists who use it. In a few years the annual accessions of volumes will have filled the present stacks. The recent conversion of the large auditorium into a two-story stack with steel shelving was completed during the year, and the moving of books into the new stacks taken in hand. Owing to the height of the shelves from the floor and to the remoteness from the delivery desk it was deemed wise to put into these new stacks little-used books, such as duplicates and patent and document collections. Directly and indirectly this led to considerable readjustment throughout the Library as a whole.

#### RESIDENTIAL HALLS

The appeals which the University has made for so many years for residential halls for the accommodation of the young men have at last borne fruit. Among the Trustees Mr. George C. Boldt, Chairman of the special Committee on Residential Halls, has been distinguished by his interest in this project and by the generosity with which he has devoted his time and efforts to its promotion. The first step was to secure a plan for the entire group of residential halls. This was prepared by Messrs. Day & Klauder, the Philadelphia architects, who have had much experience with such college work.

The site is that part of the Campus just below the library slope extending from West Avenue to Stewart Avenue, and commanding an uninterrupted view of the lake and valley. The style adopted is the English collegiate architecture. The material of construction is local stone. The entire group of halls will provide accommodation for about twelve hundred men. The portion first to be erected, that occupying the northern end of the site, consists of six halls, each of which will house a number of students varying from forty-eight in the smallest to ninety in the largest. Commanding this portion of the group is the hall at the angle of University Avenue and West Avenue surmounted by a massive tower and entered by an archway which leads to the quadrangle or open court beyond.

For the erection of this stately hall a generous benefactor, disconnected with the University, but appreciative of its work, has now made a gift of \$150,000. The name of the benefactor is for the

present withheld. But it is hoped that the friends of the University may hereafter have an opportunity of expressing to him their grateful appreciation of his splendid and timely gift. He has taken the lead in converting the dream of residential halls for the young men of Cornell University into a reality. And for that reason his gift marks an important epoch in the life of the University.

Cascadilla Hall was occupied during the year by young men, though the reconstruction was not quite finished when the University opened in September. The improvements have converted it into an attractive hall with modern conveniences which is likely to prove increasingly attractive, especially after the dining hall is installed in the summer of 1914.

Prudence Risley Hall was opened to the young women in September and was occupied continuously throughout the year, though the dining hall was not completed before December. It is a beautiful building to look at, and the dining hall, parlors and other rooms devoted to social purposes are all of such generous proportions and so handsomely appointed and furnished that they have notably raised the standard of the social life of the women of Cornell University. Sage College has suffered from the contrast, and some changes have been authorized on the first floor with a view to enlarging and improving the section assigned to the young women for social purposes.

For the administration of the various halls now used or hereafter to be used by the University for the rooming and boarding of students there has been created under the authority of the Comptroller a new office known as the Manager of Residential Halls. This office will absorb the duties of the managership of Sage and Risley Halls, which has accordingly been abolished.

#### ALUMNI CO-OPERATION

The interest of alumni and former students in the University has never been deeper or more general. It has been manifested in their gatherings for social or business purposes, in the activities of their officers and committees, and in many other ways less formal though equally effective. With this interest there is blended a deep loyalty to Alma Mater, a just pride in her achievements, and an increasingly earnest desire to aid and strengthen her to meet the larger demands of the future. The contributions from alumni and old students received by the University through the Cornellian

Council amounted in 1912-13 to \$20,000 and the same amount was contributed in 1913-14. It was the alumni and old students too who contributed in recent years nearly \$150,000 for the construction of the athletic field and the University playground. And a beautiful and commodious building for the use of the Varsity athletic teams is now approaching completion on those grounds at a cost of about \$100,000, which is almost entirely the gift of a single alumnus, who has stipulated that the building shall bear the name of a lamented Cornellian equally distinguished as a scholar and an athlete, Henry Schoellkopf, '02.

A sequel to the Schoellkopf Memorial is a gift of \$70,000 from members of the Schoellkopf family. It is to be used for the completion of a cinder track and the erection of a football stadium to seat 9,000 persons. In order to record the University's appreciation of the donor's generosity, the Alumni Field Committee voted to name the track and football area "Schoellkopf Field" in memory of J. F. Schoellkopf, founder of the family in this country, and the grandfather of Henry Schoellkopf.

Now that athletic interests are so well provided for, the alumni and old students will be free to exercise their generosity in support of the intellectual work of the University, both teaching and investigation. A hopeful beginning was made at some of the class reunions—notably the twenty-fifth—during commencement week. The President ventures to suggest the endowment of professorships bearing the names of the classes.

As the University needs the sympathetic co-operation and assistance of its old students and graduates, so they represent the University to the outside world. For both reasons it is of the utmost importance that they should be well informed of the affairs of the University and that it should have the benefit of their views and suggestions. The system of alumni trusteeships is an agency for the accomplishment of these ends. And, to supplement it, the President invites correspondence on any subject whatever affecting the University which may be of interest to any Cornellian. Furthermore, that the official activities of the alumni may be more generally known the annual report of the Board of Directors is published herewith as Appendix XVI. And the work which the University is doing in connection with the alumni through the office of the Secretary of the University is outlined in the Secretary's report, herewith published as Appendix XVII.



## ENLARGEMENT OF THE CAMPUS AND GROUNDS

Now that the matter is happily settled the President may report that it required a hard contest in 1911-12 to secure the location of Prudence Risley Hall on the site north of Fall Creek Gorge where it now stands. The alternative proposal was to locate it beside, and to the north of, Sage College. To this proposal the President objected on the ground that that space would in the course of the next generation or two be needed for University buildings devoted to instruction or research; and, furthermore, that the quarter had been rendered unsuitable for women's halls of residence by the location, in the immediate vicinity, of the new athletic field, beside which would undoubtedly be placed in the future a new gymnasium and a new armory. It was the President's earnest recommendation that the new hall and all future halls for women should be located on the northern side of Fall Creek Gorge, and that land for Prudence Risley Hall should be purchased at once immediately below Fall Creek Bridge, and also that the land above that bridge on the north of the gorge as far up the stream as Forest Home should be purchased as soon as satisfactory terms could be secured and, when purchased, held by the University with special reference to the needs of future halls for women.

The recommendation of the President regarding the location of Risley Hall was adopted by the Board of Trustees, Mr. Emerson McMillin donating \$20,000 for the purchase of the lot, which embraces about five acres. It is no exaggeration to say that every one is now delighted with the site. Furthermore an opportunity to secure the remaining strip of land mentioned above,—the tract north of and bordering on Fall Creek, and extending from the neighborhood of Fall Creek Bridge to Forest Home embracing some 22 acres,—having presented itself, the Board of Trustees last winter voted to make the purchase, and the bargain was consummated, the price paid being \$20,000. This land connects at Forest Home with the Hasbrouck property of 54 acres, which the owner—a Cornell graduate—bequeathed to the University in 1910.

The University domain now embraces 1,344 acres. It was only about 260 acres when in 1902 the President recommended to the Board of Trustees the purchase for \$100,000 of the 16-acre tract between Stewart Avenue and West Avenue, and the Board after listening to the President's remarks and adjourning for a few minutes to inspect the field adopted the recommendation without any further

discussion. Later the President recommended the purchase of adjoining farms and the Trustees adopted the recommendation. The steady increase of holdings made in pursuance of this policy of expansion has to-day given the University an adequate local habitation and also provided for its future expansion, including the riparian lands necessary for the installation of a new system of water supply and power development by means of a large dam to be constructed a few miles up Fall Creek Gorge.

#### FINANCES

The great financial event of the year 1913-14 was the endowment of the Medical College in New York City, to which reference has already been made. Securities of the value of \$4,350,000 and producing an income of somewhat over \$200,000 were handed over to the Trustees of the University by the generous benefactor who had already spent millions of dollars on the buildings, equipment, and annual maintenance of the College.

An unconditional gift of \$150,000 for the first hall in the proposed group of residential halls has been made this summer, though the donor's name has not yet been announced. There is no impropriety, however, in saying that this benefactor is a gentleman altogether disconnected with the University, who makes this gift because of his high appreciation of the service which the institution is rendering to the country. It is hoped that this example may prove contagious and that the entire group of halls (as described elsewhere in this Report) will soon be provided by other benefactors.

Not less urgent are endowments for professorships of (say) \$100,000 each. Since it is the professoriate that constitutes the university there is no object that ought to appeal more strongly to philanthropists who desire to use their wealth for the support of higher education and the advancement of civilization. Names of men and women who have been dead hundreds of years are still gratefully perpetuated in the memory of mankind by the professorships they founded in the old universities at Oxford and Cambridge. And a score or more of such endowed chairs in departments already embraced in the Cornell curriculum—for it is not a question of further expansion—would at once reinforce the endowment of the University (which is its greatest need) and dignify the positions of the professors by inviolably guaranteeing them suitable salaries.

The amount received from the State of New York during the year was for the College of Agriculture \$667,640.56 and for the Veterinary College \$97,605.05. The students' fees in the College of Agriculture aggregated \$49,119.29 and in the Veterinary College \$4,369.62. The departmental receipts (from the sale of products, etc.) will be found in the Treasurer's Report, to which reference is also made for a detailed statement of the expenditures of these State Colleges.

For the University in its entirety the aggregate income for the year was \$2,425,781.05 and the aggregate expenditure \$2,714,105.10. This expenditure includes new buildings for which funds had been received prior to the year 1913-14.

Apart from the Medical College and the State Colleges (which are maintained from separate funds) the income of the University for the year 1913-14 was \$1,109,134.95, of which \$485,664.01 was derived from invested funds, \$467,462.39 from tuition and other fees, \$45,333.96 from the rental of dormitories, \$77,000 from the United States, \$10,940 from gifts for current use, and the rest from miscellaneous sources. The expenditures of the year (including the purchase of the Kline property to the north of Fall Creek) exceeded the available income by \$1,014.67.

A new building for the use of the Military Department has long been needed and last winter the State provided for the construction of an adequate drill hall at a cost of \$350,000. This building will enable the University to perform in an entirely satisfactory manner the work in military drill, which, along with agriculture and the mechanic arts, is one of the charter objects of the institution. Military drill is good physical exercise for young men; it inures them to hardship; it trains them in such virtues as punctuality, obedience, and loyal co-operation; and it qualifies them in case of war to serve their country. With the facilities afforded by the new drill hall the officers whom the War Department details as instructors at Cornell University can easily give undergraduates during their course a training which will enable them to qualify as lieutenants in the emergency of war, when their first duty would undoubtedly be the drilling of volunteers, who would of course constitute the main part of the army of this peaceful and peace-loving Republic.

Valuable as a military training is for the individual himself and for the Republic, it is of course only an incident in the main work and business of the university. And to-day, when the greatest war the world has ever seen is convulsing Europe and disturbing all the

continents and oceans of the globe, so that men's minds are everywhere absorbed with the varying spectacle of contending physical forces, it is more than ever necessary to recognize that civilization consists in peaceful industry, in the physical well-being of the people, in good government, in virtuous character and righteousness, in education and intelligence, and in the activities of art, science, and the highest functions of the human spirit. To these intellectual and spiritual objects colleges and universities are dedicated. They are the antithesis to brute force and in their essential idea the everlasting protest against it. So long as the European upheaval continues, it will devolve on the colleges and universities of America to take the lead in upholding the civilization of the world. That Cornell may prove worthy of this high calling, that her intellectual forces may be stimulated to their utmost capacity, and that character may develop along with intellect, is the earnest hope of the President, in which he is conscious also of expressing the sentiments of the Faculty, Trustees, Alumni, and all the friends of the institution.

JACOB GOULD SCHURMAN

President.

# REPORT OF THE TREASURER OF CORNELL UNIVERSITY

1913-1914

To the Board of Trustees:

Gentlemen:

I have the honor to submit herewith my report as Treasurer of Cornell University for the fiscal year ending July 31st, 1914.

## INCOME AND EXPENSE

During the fiscal year 1913-1914 the University expended or incurred obligations for \$1,014.67 more than its available income. By strict economy it had been thought possible to show a credit balance of income at the close of the year and a consequent beginning of the task of wiping out the accumulated deficit which now amounts to \$165,514.24. However, late in the year, a portion of the Kline farm lying north of Beebe Lake and connecting the property already owned by the University opposite Prudence Risley Hall with the Hasbrouck farm at Forest Home came on the market. The University has for some time desired this land for future development and about twenty-two acres were secured at a cost of \$20,000.00.

## NEW CONSTRUCTION

Prudence Risley Hall, the new dormitory for women students, erected at a cost of \$300,000.00, through the munificence of Mrs. Russell Sage, was completed early in the year.

The changes in Cascadilla Building to convert it into a dormitory for men students were completed and the Building, except the dining room, used throughout the college year. The dining room will be conducted during the coming year as a cafeteria.

The Auditorium (\$138,000), of the Agricultural College and the Clinic and Hospital Building (\$140,000) for the Veterinary College were completed early in the year. The Headquarters Building for the Department of Animal Husbandry (\$91,000), the Forestry section of the Plant Industry Building (\$100,000), and the Stock Judging Pavilion (\$38,000) are nearly completed and will be ready for occupancy at the opening of the University or soon after. Work is well under way on the Agronomy Building (\$100,000). Plans are nearly completed for the several small buildings, appropriations for which were made by the Legislature of 1913.

The Legislature of 1914 provided for the construction and equipment of a Drill Hall at a cost of \$350,000.00. The plans by the State Architect, Hon. Lewis F. Pilcher, for this building are well under way. It is to be placed between the Veterinary College and the Base Ball Section of the Alumni Field and it is hoped that construction will be begun this fall. Provision was also made by the Legislature for the preparation of plans and specifications for the main section of the Plant Industry Building of the College of Agriculture.

## SUMMARY OF INCOME AND EXPENSE

In accordance with the policy of the University of keeping the accounts of the State appropriations and property distinct from the University funds, it will be noted that the figures in this report do not include the appropriations to, or the property of, the New York State College of Agriculture and the New York State Veterinary College, unless specifically mentioned.

Income for year 1913-14:		
University at Ithaca (See Schedule I) .....		\$1,109,134.95
University at New York including \$22,595. advanced by the University at Ithaca (See Schedule I) .....		202,430.01
		<hr/>
		\$1,311,564.96
Expended at Ithaca (See Schedule II) .....	\$1,270,049.57	
Expended at New York (See Schedule II) .....	221,177.18	1,491,226.75
		<hr/>
Cash deficit for year .....		179,661.79
Less:		
Decrease in amount due special funds .....	179,240.92	
Increase in re-appropriations .....	593.80	178,647.12
		<hr/>
Deficit for year 1913-1914 .....		1,014.67
Accumulated deficit Aug. 1, 1913 .....		164,499.57
		<hr/>
Accumulated deficit Aug. 1, 1914 .....		165,514.24
		<hr/>
Total deficit in current income August 1, 1914 Summarized as follows:		
Cash deficit .....	93,226.59	
Amount due special funds .....	40,003.60	
Amount necessary to complete contracts .....	32,284.05	\$ 165,514.24
		<hr/>
Cash surplus August 1, 1913 .....	\$86,435.20	
Year's Cash deficit .....	179,661.79	
		<hr/>
Cash deficit August 1, 1914 .....	\$93,226.59	
		<hr/>
Total current income (except State Colleges) ..		\$1,311,564.96
Received from New York State for Veterinary College (Schedule I) .....	\$97,605.05	
Received from fees, etc. ....	11,541.28	109,146.33
		<hr/>
Received from New York State for State College of Agriculture (Schedule I) .....	667,640.56	
Received from fees, sale of stock, etc. ....	337,429.20	1,005,069.76
		<hr/>
Total income for the year .....		\$2,425,781.05
		<hr/>
Received from Carnegie Foundation for pen- sions to retired professors. ....		\$28,240.24
		<hr/>
Received from New York State for students holding \$100 Regents Scholarships .....		15,000.00

## CONDENSED AND COMBINED INCOME STATEMENT

	University at Ithaca	University at New York	State Vet. College	State Agr. College	Total
Tuition	\$ 320,169.26	\$ 10,320.00	\$ 1,630.00	\$ 27,939.50	\$ 360,058.76
Summer Session	31,649.85			1,950.00	33,599.85
Laboratory and other fees	115,643.28	4,075.10	2,739.62	19,229.79	141,687.79
<b>Total from students</b>	<b>\$467,462.39</b>	<b>\$14,395.10</b>	<b>\$ 4,369.62</b>	<b>\$49,119.29</b>	<b>\$ 535,346.40</b>
From Dormitories	45,333.96				45,333.96
From invested funds	451,235.21	158,973.12			610,208.33
College Land Scrip Fund	34,428.80				34,428.80
From United States	77,000.00				77,000.00
From State of New York			97,605.05	667,640.56	765,245.61
Rents of Buildings	3,068.90				3,068.90
Donations to Current Income	7,940.00	683.32			8,623.32
Donations for increase of plant	3,000.00				3,000.00
Departments for sales and services	15,327.93	4,925.94	6,972.36	278,114.17	305,340.40
Advance by University		22,595.00			22,595.00
Miscellaneous	4,337.76	857.53	199.30	10,195.74	15,590.33
	<b>\$1,109,134.95</b>	<b>\$202,430.01</b>	<b>\$109,146.33</b>	<b>\$1,005,069.76</b>	<b>\$2,425,781.05</b>

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## CONDENSED AND COMBINED EXPENSE STATEMENT

Salaries for Instruction and Research	\$ 534,813.97	\$123,900.68	\$39,024.09	\$213,307.19	\$ 911,045.93
Departments	132,919.29	28,204.76	17,778.84	428,963.86	607,866.75
Administrative Salaries	39,204.19	7,480.00	900.00	20,204.00	67,788.19
General Expense	110,180.67	61,091.74	14,279.97	113,351.33	298,903.71
Prizes, Scholarships, Fellowships and Loans	39,230.98	500.00			39,730.98
Dormitories	27,907.80				27,907.80
Summer Session	30,554.49				30,554.49
Agricultural Experiment Station	27,316.27				27,316.27
Library	48,008.56				48,008.56
New Buildings	115,660.13		32,856.82	208,712.92	357,229.87
New Equipment	61,749.09			33,977.88	95,726.97
Alterations and Repairs	27,771.03		4,052.75	22,034.20	53,857.98
Agricultural Special Extension				72,101.41	72,101.41
Industrial Fellowships	9,666.79				9,666.79
Purchase of Kline property	20,000.00				20,000.00
Miscellaneous	13,907.97			1,333.09	15,241.06
Income transferred to principal	17,824.89				17,824.89
Income transferred to Medical College	13,333.45				13,333.45
	<b>\$1,270,049.57</b>	<b>\$ 221,177.18</b>	<b>\$ 108,892.47</b>	<b>\$1,113,985.88</b>	<b>\$2,714,105.10</b>

## TREASURER'S REPORT

## TOTAL PROPERTY

The property of the University increased during the year as follows:

	Aug. 1, 1913	Aug. 1, 1914	Increase
Productive Funds .....	\$9,586,117.03	\$13,973,542.87	\$4,387,425.84
Income due Special Funds .....	219,244.52	40,003.60	* 179,240.92
Premium and Discount .....	118,833.61	132,326.76	13,493.15
	<u>\$9,924,195.16</u>	<u>\$14,145,873.23</u>	<u>\$4,221,678.07</u>
Less deficit of Income not including amounts due to complete contracts .....	132,809.32	133,230.19	420.87
	<u>\$9,791,385.84</u>	<u>\$14,012,643.04</u>	<u>\$4,221,257.20</u>
Real Estate Account .....	\$4,106,997.64	\$4,429,186.75	\$ 322,189.11
Equipment .....	1,902,802.93	1,992,401.10	89,598.17
	<u>\$15,801,186.41</u>	<u>\$20,434,230.89</u>	<u>\$4,633,044.48</u>
Buildings in course of construction .....	183,623.73		* 183,623.73
Total University property exclusive of the value of 600 acres of Western Lands .....	<u>\$15,984,810.14</u>	<u>\$20,434,230.89</u>	<u>\$4,449,420.75</u>
State College Buildings .....	1,048,633.31	1,276,431.43	227,798.12
State College Equipment .....	293,850.34	459,255.82	165,405.48
	<u>\$17,327,293.79</u>	<u>\$22,169,918.14</u>	<u>\$4,842,624.35</u>

The Productive Fund account represents the total endowment of the University, together with certain funds in which the University has a contingent interest. They are the income producing funds. The average rate received upon them during the past year was 5.072%.

The principal increase during the year was securities of the face value of \$4,350,000.00 producing an income of \$201,250.00 per annum, to be used for the maintenance of the Cornell University Medical College in New York City. This generous gift was from Col. Oliver H. Payne, through whose munificence the Medical College has been housed, equipped and maintained since its foundation. Other additions to the Productive Funds were: \$575 from the students of the College of Agriculture to increase the fund available for loans to needy students in that College; \$2,367.71 from the estate of Miss Florence E. Dearstyne to be used in assisting needy women students; \$400 from G. W. Graves, A.B., 1905 M.D., 1908, being the equivalent of the state scholarship held by him while in college and given as a nucleus of a fund which he hopes may be established by other holders of State scholarships, to assist needy students; and \$2,340.96 raised by students and alumni as a memorial to Professor John Henry Comstock at the time of his retiring from active service in June, 1914, and presented by Professor Comstock to the University as a fund for the purchase of books for the Department of Entomology. \$20,000 was received from the Alumni, through the Cornellian Council, but the purpose to which this money is to be put has not yet been determined.

\*Decrease.



The class of securities in which the funds of the University are invested is shown by the following table:

CLASSIFICATION OF INVESTMENTS

	Aug. 1, 1913		Aug. 1, 1914	
Municipal Bonds . . . . .	.080	\$ 778,782.11	.061	\$ 854,704.54
State of New York Scrip . . . . .	.068	688,576.12	.049	688,576.12
Foreign Government Bonds . . . . .	.030	291,870.00	.020	277,870.00
Bank Stocks . . . . .	.008	81,200.00	.006	79,970.00
Steam Railroad Bonds . . . . .	.139	1,359,475.00	.090	1,262,191.29
Railroad Equipment Notes . . . . .	.029	279,000.00	.008	105,000.00
Traction Bonds . . . . .	.099	969,970.00	.177	2,479,970.00
Light & Power Co. Bonds . . . . .	.122	1,190,000.00	.084	1,181,000.00
Lumber Bonds . . . . .	.039	375,000.00	.030	424,600.00
Miscellaneous Corporation Bonds . . . . .	.109	1,067,180.00	.267	3,743,200.00
Stock other than Bank . . . . .	.095	932,900.00	.076	1,062,683.00
Loans on Collateral . . . . .	.008	74,795.29	.005	67,045.29
Real Estate Mortgages . . . . .	.135	1,315,420.24	.089	1,250,793.02
Land Contracts . . . . .	.001	8,569.69	.001	8,319.69
Real Estate . . . . .	.013	131,098.88	.009	131,098.88
Special Deposits . . . . .	.003	30,837.21	.006	86,941.82
Cash and Ledger Balances . . . . .	.022	216,711.30	.022	308,679.39
	1.000	\$9,791,385.84	1.000	\$14,012,643.04

DONATIONS

The following is a list of gifts to the University which passed through this office. It does not include many donations made directly to departments:

Agricultural Student Loan Fund . . . . .	\$ 575.00
James Gordon Bennett Veterinary Prize . . . . .	250.00
Class '98 Endowment Fund, (F. H. Waterman) . . . . .	16.00
Class '13 Fund . . . . .	1,450.00
Class '14 Fund . . . . .	800.00
S. H. Clark—Champlain Industrial Fellowship . . . . .	700.00
Comstock Memorial Book Fund . . . . .	2,340.96
Cornellian Council 1914 Contribution, (Purpose not yet determined) . . . . .	20,000.00
F. E. Dearstyne Women Students Loan Fund . . . . .	2,367.71
Cornell Society of Civil Engineers for Student Loan . . . . .	100.00
A. R. Eastman for Debate Prize in Agriculture . . . . .	100.00
S. H. Gage for Embryology Research . . . . .	50.00
Genesee Fruit Grower's Association for Industrial Fellowship . . . . .	1,375.00
G. W. Graves for State Scholarship Fund . . . . .	400.00
W. G. Hollingworth for Honorarium Veterinary . . . . .	50.00
Wm. Metcalf for A. H. R. Fraser Prize Fund . . . . .	1,000.00
Frank H. Miller for Jane Miller Prize Veterinary . . . . .	50.00
Estate J. T. Morrison for Prize for English poem . . . . .	100.00
Phi Delta Phi for Frank Irvine Lecture Fund . . . . .	70.00
Orleans Fruit Grower's Association for Industrial Fellowship . . . . .	175.00
Raymond Concrete Pile Co., for Industrial Fellowship . . . . .	750.00
Ronald Taylor Company for Risley Hall . . . . .	100.00
Stuart, Chase for Industrial Fellowship . . . . .	1,200.00
H. W. Sibley, acct. \$10,000 gift for Equipment of Sibley College . . . . .	3,000.00
Thos. Tapper for two Scholarships Summer School in Music . . . . .	60.00
Union Sulphur Co., for Industrial Fellowship . . . . .	2,000.00
U. S. Brewer's Association for Industrial Fellowship . . . . .	1,000.00
Mrs. A. D. White for coal for Greenhouse . . . . .	40.00
Dr. A. D. White, receipts on books—for purchase of books . . . . .	301.07
O. H. Payne for Medical College . . . . .	4,350,000.00
	\$4,390,420.74

GENERAL LEDGER BALANCE SHEET, JULY 31, 1914

ASSETS		LIABILITIES	
University Grounds, Buildings and Equipment (See Reserve) .....		Property Reserve (See Contra) .....	\$6,421,587.85
Investments:		Productive Funds Reserve .....	13,973,542.87
Bonds and Stocks .....	\$12,159,764.95	Premium and Discount .....	132,326.76
Bonds and Mortgages .....	1,250,793.02	Current Liabilities:	
Collateral Loans .....	67,045.29	Notes Payable .....	6,500.00
Land Contracts .....	8,319.69	Students Accounts (Net) .....	3,293.21
Real Estate .....	131,098.88	Cornellian Council Loan .....	1,220.00
Total Investments .....		Cornell Central Club .....	8,387.16
Current Assets:		G. S. Hopkins, Treasurer Fellow-ship Fund .....	2,336.69
Cash:		Hasbrouck Estate .....	700.00
On Current Deposit and in Treasurer's Office .....	41,833.71	Sundry Individuals .....	1,621.64
Special Deposits .....	86,941.82	Cascadilla Room Rent Deposits ..	1,457.43
Advance Medical New York ..	22,595.00	Total Current Liabilities .....	\$25,516.13
Working Funds .....	2,425.00	Deferred Liabilities:	
Accounts Receivable .....	3,245.79	Fund Balances:	
Bennett Fund Mortgages .....	700.00	Cornellian Council 1914 Contri- bution .....	20,000.00
Total Current Assets .....		Congressional Industrial Fund ..	50,000.00
Sundry Expenditures and Advances awaiting Dis- position:		Bennett Book Fund .....	559.45
Purchases and Construction .....	281,005.50	Sundry Special Funds .....	40,028.44
State Colleges .....	83,981.48	Unadjusted Summer School Tuition .....	2,370.00
Guiteau Estate .....	6,052.79	Unexpended Income of State Colleges .....	37,679.00
Agricultural Experiment Station ..	986.47	Total Deferred Liabilities .....	\$150,636.89
Cong. Ind. Fd. ....	437.83	Reserves:	
Corson Browning Prize .....	24.84	For Students' Notes (See Contra) ..	\$93,051.97
Total Expenditures and Advances awaiting Disposition .....		For Suspense Account (See Contra) ..	3,433.53
Deferred and Suspended Accounts:		Total Reserves .....	\$96,485.50
Departmental Expenses .....	1,540.40		
Suspense Account (See Reserve) ..	3,433.53		
Student Notes (See Reserve):			
Guiteau Loan Fund Notes .....	49,713.20		
Woman's Loan Fund Notes .....	4,371.80		
Student Loan Fund Notes .....	12,203.67		
Tuition Notes .....	26,763.30		
Total Deferred and Suspended Accounts .....			
Deficit in Income (not including reappropriations of \$32,284.05) .....			
Total .....			
	\$13,617,021.83		
	\$157,741.32		
	372,488.91		
	\$98,025.90		
	133,230.19		
	\$20,800,096.00		
		Total .....	\$20,800,096.00

The Productive Funds of the University with the purpose for which the Fund is intended and the income received during the year are as follows:

	Aug. 1, 1913	Additions during year	Aug. 1, 1914	Income received during year
<b>Agricultural Student Loan Fund:</b>				
Founded by gift of the School of Practical Agriculture and Horticulture at Briercliff, N. Y., to aid students in the Agricultural College who are working their way through and increased by Agricultural students. Established 1908 .....	\$298.01	\$575.00	\$873.01	\$19.80
<b>Alumni Endowment Fund:</b>				
Gift of Alumni to the Endowment Fund of the University. Established 1908 .....	500.00		500.00	25.36
<b>Alumni Fund:</b>				
The Permanent Gift of the Alumni of the University through the Cornellian Council, and by the action of the Board of Trustees added to the permanent endowment of the University, the net income to be used for University purposes. Established 1913 .....	20,000.00		20,000.00	1,014.40
<b>Charles H. Baker Prize Fund:</b>				
Gift of Mr. Charles H. Baker, 1886, to found a public speaking prize for the benefit of the Junior and Senior students in the College of Civil Engineering, but available likewise to those in Mechanic Arts, Architecture and similar avocational courses. Established 1912 .....	2,000.00		2,000.00	120.00
<b>Barnes Library Endowment Fund:</b>				
Gift of Mrs. Harriet Barnes Newberry and A. Victor Barnes in memory of their father, the late Alfred Cutler Barnes. Established 1904 .....	5,000.00		5,000.00	253.60
<b>Mrs. A. S. Barnes Shakespeare Prize Fund:</b>				
Gift of Mrs. A. S. Barnes, the income to be appropriated as a prize to the undergraduate student who shall present the best essay upon the writings of Shakespeare. Established 1887 .....	1,000.00		1,000.00	50.72
<b>Philo Sherman Bennett Fund:</b>				
Gift from the estate of Mr. Bennett, the income to be used for a prize for the best essay discussing the principles of Free Government. Established 1905 .....	400.00		400.00	20.29
<b>George Chapman Caldwell Prize Fund:</b>				
Gift of Mrs. Grace Caldwell Chamberlain and Professor Frank Caldwell, to establish in memory of their father a prize of \$50 a year, to be annually awarded in money and accompanied by a certificate on parchment to a member of the Senior class in the Chemical course for general excellence in chemical work. The award to be made by the staff of the Chemical Department. Established 1913 .....	1,100.00		1,100.00	55.79

	Aug. 1, 1913	Additions during year	Aug. 1, 1914	Income received during year
Class '86 Memorial Prize Fund:				
Gift of Class of 1886, the income to be awarded annually as a prize in Junior Oratory .....	\$1,886.00		\$1,886.00	\$95.62
Class of '89 Endowment Fund:				
A University endowment fund being raised by the class of 1889. Established at its 25th reunion in 1914.....		\$16.00	16.00	
Class '91 Memorial Fund:				
Gift of Class of 1891, the income to be added to the principal until class action. Established 1891.....	707.60	35.88	743.48	35.88
Class '94 Memorial Prize Debate Fund:				
Gift of Class of 1894, as a foundation of a prize in debate .....	1,894.00		1,894.00	96.06
Class '96 Memorial Fund:				
Gift of the Class of 1896, as a nucleus for a fund which shall be used for the establishment of a University Club .....	1,064.42	53.98	1,118.40	53.98
Class '97 Memorial Fund:				
Gift of Class of 1897 for furthering the plan of a University Club.....	1,763.05	88.15	x	88.15
Class '98 Memorial Fund:				
Gift of the Class of 1898, to be added to the fund for the establishment of a University Club .....	461.36	23.42	484.78	23.42
Class of 1908 Fund:				
Established by Class of 1908, to be invested with University funds, the income on \$500 less 5% transferred to University Surplus Fund to be paid over to Class Secretary. When no longer needed by the class the fund is to revert to the University for general University purposes unless the class at some regular meeting designates a particular University purpose for its use. Established 1908 .....	1,718.63	62.16	1,780.79	87.16
Class of 1912 Fund:				
Established by the Class of 1912 to be invested by the University with its funds, the income less 5% transferred to the University Surplus or Insurance Fund to be subject to the call of the life Secretary of the Class. The fund when no longer needed by the class to revert to the University for general University purposes unless the Class at some five year reunion meeting designate a particular University purpose for its use. Established 1912.....	813.38		813.38	41.26

xBy resolution of the Class of 1897 this fund was paid over to the Cornelian Council.

Class of 1913 Fund:				
Established by the Class of 1913 on the same basis as the 1912 fund . . . . .		\$1,450.00	\$1,450.00	\$54.40
Class of 1914 Fund:				
Established by the Class of 1914 on the same basis as the 1912 fund . . . . .		800.00	800.00	
College Land Scrip Fund:				
Consists of the proceeds received by the State of New York from the sale of the Land Scrip apportioned to the State by the U. S. under the Morrill act of 1862 . . . . .	\$688,576.12		688,576.12	34,428.80
John Henry Comstock Memorial Book Fund:				
Raised by students and alumni as a memorial to Prof. Comstock at the time of his retiring from active service and presented by Prof. Comstock to the University as a Fund for the purchase of books for the benefit of the Department of Entomology. Established 1914 . . . . .		2,340.96	2,340.96	
Cornell Endowment Fund:				
Consists of the \$500,000 given by Ezra Cornell, pursuant to his agreement with the State, for the founding of the University, together with the net profits derived from the sale of lands located under the scrip purchased by him under his contract with the State, of August 4, 1866, except those in the next following fund . . . . .	4,930,836.79		4,930,836.79	250,130.07
Cornell Endowment Reserve Fund:				
Established in 1898 by setting aside the Land Contracts and proceeds from future sales of Western Lands, the principal and income originally to be used only for addition to Cornell Endowment Fund, but for recent years by resolution the income is transferred to current income . . . . .	529,202.17	1,648.24	530,850.41	26,841.13
Caroline Corson French Prize Fund:				
Gift of Professor Hiram Corson in memory of his wife, Caroline Rollin Corson, the income to be awarded as a French Prize. Established in 1902 as a Dante Prize and converted into a French Prize 1905 . . . . .	1,281.25		1,281.25	64.96
Hiram Corson Browning Prize Fund:				
Gift of Professor Hiram Corson, the income to be awarded as a Browning Prize. Established 1902 . . . . .	1,051.80		1,051.80	53.40
Cottage Renewal Fund:				
Consists of the surplus income from the Cottages owned by the University, in excess of 5½% of the investment value transferred annually to current income, the fund to be held to renew the cottages or replace the investment therein. Established 1904 . . . . .	18,793.37	3,267.50	22,060.87	953.20

	Aug. 1, 1913	Additions during year	Aug. 1, 1914	Income received during year
Daughters of the Revolution Endowment Fund: Gift of Miss Mary F. Hall, in honor of the New York State Society of the Daughters of the Revolution, the income to be added to the fund during Miss Hall's lifetime and then, provided principal amounts to \$1,000 to be used for the publication of such original studies in American History as are of permanent value, or as a suitable prize or prizes for research of superior attainment in American History. Established 1908 .....	\$ 639.15	\$ 32.42	\$ 671.57	\$ 32.42
Florence Dearstyne Fund: Gift under the will of Miss Florence E. Dearstyne, the income to be used under the direction of the Federation of Cornell Women's Clubs in assisting needy young women students. Established 1914 .....		2,367.71	2,367.71	
Fayerweather Fund: Gift under the will of Daniel B. Fayerweather. Established 1892 .....	323,684.59		323,684.59	16,417.27
Willard Fiske Library Endowment Fund: Gift under the will of Willard Fiske to be used and expended for the uses and purposes of the Library of the University. Established 1906 .....	442,555.00		442,555.00	22,446.38
Willard Fiske Icelandic Book Fund: Gift under the will of Willard Fiske, the income to be used for the purpose of making additions to the Icelandic Collection in the Library of the University. Established 1906 .....	8,000.00		8,000.00	405.68
Willard Fiske Icelandic Salary Fund: Gift under the will of Willard Fiske, the income to be used for the purpose of paying the salary of an Icelandic amanuensis, whose time shall be given to the care of the Icelandic collection and who shall be a native of Iceland, educated, or principally educated in Iceland, and recommended for the said work by the Rector of the Latin School of Reykjavik. Established 1906 .....	30,000.00		30,000.00	1,521.60
Willard Fiske Petrarch Book Fund: Gift under the will of Willard Fiske, the income to be used for the purpose of increasing the Petrarch and Dante collections in the Library of the University. Established 1906 .....	6,000.00		6,000.00	304.32
Willard Fiske Petrarch Salary Fund: Gift under the will of Willard Fiske, the income to be used in paying the salary or part of the salary of a capable amanuensis, a portion of whose				

	time shall be given to the care of the Petrarch and Dante Collections. Established 1906.....	\$12,000.00		\$12,000.00	\$ 608.64
	Willard Fiske Icelandic Publication Fund: Gift under the will of Willard Fiske, the income to be used for the purpose of publishing of an annual volume relating to Iceland and the Icelandic collection in the Library of the University. Established 1906.....	5,000.00		5,000.00	253.60
	R. P. Flower Library Endowment Fund: Established in 1901 by a gift of Mrs. Sarah M. Flower of \$10,000 the income to be used for the purchase and binding of books and periodicals for the Roswell P. Flower Library, founded by Governor Flower for the Veterinary College, by a gift of \$5,000 in 1897. \$1,000 remaining unexpended at the time of his death is added to the endowment.....	11,000.00		11,000.00	557.92
	The Fraser Scholarships Fund: Gift of William Metcalf, Jr., LL.B., 1901, of Pittsburgh, Pa., in memory of Alexander Hugh Ross Fraser for eighteen years librarian of the Law Library, the income to be awarded in two scholarships to seniors in Law, the award to be based on scholarship, financial need and character. Established 1911.....	3,000.00	\$1,000.00	4,000.00	191.66
53	Fuertes Medal Fund: Gift of the late Estevan A. Fuertes, the income to provide two medals to be awarded annually; one to the student graduating who has maintained the highest degree of scholarship during his four years; the other to the graduate, who may write a meritorious paper on some engineering subject. Established 1893.....	1,000.00		1,000.00	50.72
	General Fund: Consists of the endowment of not less than \$100,000 available for the maintenance of Rockefeller Hall; required as a condition precedent to John D. Rockefeller's gift.....	106,000.00		106,000.00	5,376.32
	Goldwin Smith Fund: Gift under the will of Goldwin Smith to be used for promotion especially of liberal studies; language ancient and modern, literature, philosophy, history and political science, for which provision was made in Goldwin Smith Hall. Established 1911. \$175,000 of this fund is set aside, the income to be used for the Goldwin Smith Special or supernormal Salary Fund, Lectureship Fund, Faculty Prize Fund, Reading Room or other appropriate purposes.....	674,789.92	*277.71	674,512.21	34,221.26

\*Reduced by an error in account of executors.

	Aug. 1, 1913	Additions during year	Aug. 1, 1914	Income received during year
Goldwin Smith Hall Reading Room Fund: A portion of the \$4,000 gift of Mr. Goldwin Smith made in 1909 for the Reading Room in Goldwin Smith Hall. Converted in 1914 into a fund, the income to be available for the maintenance of same.....		\$2,700.00	\$2,700.00	
Graduate Prize in Philosophy: The income to be placed at the disposition of the Philosophical Department, and for the present to be awarded to that graduate student who submits the best paper embodying the results of research in the field of Philosophy. Established 1912.....	\$ 571.36		571.36	\$28.97
Guiteau Student Loan Fund: Gifts under the wills of Frederick W. Guiteau and Mrs. Nancy G. Howe (\$94,689.03), the income to be used in advancing and assisting needful, worthy young men in pursuing their studies in the University. Established 1904.....	252,439.90	5,121.23	257,561.13	12,803.80
Guilford Essay Prize Fund: Gift under the will of James B. Guilford to establish a prize the object whereof shall be the promotion of a high standard of excellence in English Prose Composition. Established 1902.....	3,000.00		3,000.00	152.16
Mary F. Hall Scholarship Fund: Gift of Miss Mary F. Hall, the income to be paid to her during her lifetime, and at her death to be used for scholarships. Established 1902..	16,500.00		16,500.00	836.88
Lucy Harris Book Fund: Gift of George W. Harris as a memorial to his wife, Lucy Thurber Harris, the income to be expended each year in the purchase of English poetry of the Victorian Era and of biography and criticism connected therewith. Established 1893.....	1,000.00		1,000.00	50.72
Infirmiry Endowment Fund: Gift of Messrs. Dean and William H. Sage, the income to be used for the maintenance and needs of the Cornell Infirmiry, established by them as a memorial to their father, Henry W. Sage, said Infirmiry being the former residence of Henry W. Sage and valued at \$60,000. Established 1897.....	100,000.00		100,000.00	5,072.00
Frank Irvine Lectures: Founded by the Conkling Chapter of Phi Delta Phi, the income to be used in providing special lectures in the College of Law. Established 1913.....	698.25	70.00	768.25	39.06



Law School Fund:

Gift of Douglas Boardman, the income to be used for a Law Prize.

Established 1887.....	\$ 2,000.00	\$ 2,000.00	\$ 101.44
Henry W. Sage Library Endowment Fund:			
Gift of Henry W. Sage for endowment of Library. Established 1891.....	300,000.00	300,000.00	15,216.00
Susan E. Linn Sage Professorial Fund:			
Gift of Henry W. Sage to endow the chair of Ethics and Philosophy. Established 1885.....	50,000.00	50,000.00	2,536.00
Susan E. Linn Sage School of Philosophy Fund:			
Gift of Henry W. Sage to enlarge the basis of the Susan Linn Sage Founda- tion and establish the Susan Linn Sage School of Philosophy. Estab- lished 1891.....	200,000.00	200,000.00	10,144.00
Loomis Laboratory Fund:			
Consists of the endowment of the Loomis Laboratory turned over to the University by its Trustees at the time the Laboratory was transferred to Cornell. Established 1899.....	118,176.79	118,176.79	5,985.33
Luana L. Messenger Prize Fund:			
Gift of H. J. Messenger in memory of his mother, for an annual prize to the student writing the essay giving evidence of the best research and most fruitful thought in the field of human progress or the evolution of civilization. Established 1902.....	1,000.00	1,000.00	50.72
Edgar J. Meyer Memorial Fellowship Fund:			
Gift of Mr. Eugene Meyer and his wife, Mrs. Harriet Meyer, in memory of their son, the income to be awarded annually as a fellowship in Engineering Research, to any graduate of an accepted school of Mechanical or Electrical Engineering, and not to be held by the same person more than two years. Established 1913.....	10,000.00	10,000.00	507.20
Frank William Padgham Scholarship:			
Gift of Amos Padgham to found a scholarship in Sibley College in memory of his son. Established 1892.....	3,000.00	3,000.00	152.16
Polish Student Loan Fund:			
Gift from Polish students at Cornell to be disbursed to candidates pre- sented by members of the Polish Club of the University. Established 1909.....	128.00	128.00	6.49
John Metcalf Polk Prize Fund:			
Gift of Wm. M. Polk to found a prize in the Cornell Medical College at New York, in memory of his son. Established 1905.....	10,000.00	10,000.00	507.20

	Aug. 1, 1913	Additions during year	Aug. 1, 1914	Income received during year
<b>Professorial Pension Fund:</b> Anonymous gift of \$150,000 to found a pension fund for full professors, excluding professors in the Medical College in New York City, or in State or National Institutions at Ithaca, or elsewhere, together with the income received thereon. Established 1903 .....	\$249,797.03	\$12,668.60	\$262,465.63	\$12,668.60
<b>Professorial Pension Income Fund:</b> Consists of the payments by professors admitted to the benefits of the Pension Fund, with accrued income. ....	31,061.24	4,384.23	35,445.47	1,711.01
<b>Ring Memorial Fund:</b> Gift under the will of Charles A. Ring, the income to be used in the advancement of Horticultural Science. The income is to be added to the principal of fund till it amounts to \$1,000, the original bequest. Established 1913. ....	753.12	37.20	790.32	37.20
<b>Charles H. Roberts Scholarship Fund:</b> Gift of Charles H. Roberts of Oakes, Ulster Co., New York, the income to be used in the payment of five equal annual scholarships in the College of Agriculture, and open to all races of mankind, regardless of color, or political or religious creeds, of good moral character and required qualifications, preference to be given to intelligence and financial inability. Established 1906 .....	30,000.00		30,000.00	1,200.00
<b>Sage College Endowment Fund:</b> Gift of Henry W. Sage. Established 1872 .....	109,300.00		109,300.00	5,543.70
<b>Dean Sage Sermon Fund:</b> Gift of Dean Sage in 1872, as an endowment of Sage Chapel and increased by recent gifts from Mrs. Sage. ....	75,000.00		75,000.00	3,804.00
<b>Frances Sampson Fine Arts Prize:</b> Gift of Professor Martin W. Sampson in memory of his wife, to be awarded in books or artistic reproductions and not in money, to that student in the University who shows the most intelligent appreciation of the graphic arts and architecture. Established 1909 .....	600.00		600.00	30.43
<b>Jacob H. Schiff Endowment Fund:</b> For the promotion of studies in German Culture. Established 1912 ..	100,000.00		100,000.00	5,072.00
<b>Wm. C. Seidel Book Fund:</b> Gift of Mr. and Mrs. Gerritt S. Miller, the income to be used to purchase books for poor young men working their way through the College of Civil Engineering. Established 1905 .....	1,165.16		1,165.16	59.09

Sibley College Endowment Fund:				
	Gift of Hiram Sibley. Established 1884. ....	\$50,000.00	\$50,000.00	\$2,536.00
Judson N. Smith Scholarship Fund:				
	Gift of Mrs. Sarah L. Smith to found a scholarship in the College of Civil Engineering in memory of her son, and to be awarded, under such rules as the University may enact, on the basis of intelligence and financial inability, provided, however, that the student be of good moral character and meet the required qualifications. Interest at the rate of four per cent. upon the fund to be paid to Mrs. Smith during her lifetime, the Scholarship taking effect at her death. ....	3,250.00	3,250.00	164.91
Town of Spencer Scholarship for Young Women Fund:				
	Gift of Miss Mary F. Hall to found a scholarship for young women, of the town of Spencer, N. Y., the income, however, to be paid to her during her lifetime. ....	2,500.00	2,500.00	126.80
State Scholarship Alumni Fund:				
	Being the nucleus of a fund to assist needy students. Established in 1914 by the gift of G. W. Graves, A.B., 1905, M.D., 1908, of the equivalent of the state scholarship held by him. ....		\$ 400.00	400.00 20.29
57	Surplus Fund:			
	Consists of 5% on annual income to cover such losses as may occur through bad investments, fire, or otherwise. Established 1886. Accumulations used for purchase of land and erection of buildings and for several years past returned to current income to help meet annual deficit. ....	116.54	5.90	122.44 5.90
H. K. White Prize Fund:				
	Gift of Horace K. White, the income to be awarded as prizes to meritorious Students in Veterinary Science. ....	500.00	500.00	25.36
Woman's Guild Fund:				
	The gift of women interested in the University, the income to be used to aid needy sick students. Established 1892. ....	6,557.41	6,557.41	332.61
Women Student's Loan Fund:				
	Consists of former Student's Loan Fund, the income to be loaned to needy women students, and increased in 1913 by \$7,000, temporarily assigned to the fund by Ex-President Andrew D. White from funds placed at his disposal by Trustee Andrew Carnegie. ....	18,217.88	406.17	18,624.05 898.92
Woodford Medal Fund:				
	Gift of Stewart L. Woodford for prizes in Oratory. Established 1870. ...	2,500.00	2,500.00	126.80

	Aug. 1, 1913	Additions during year	Aug. 1, 1914	Income received during year
<b>Wurts Loan Fund:</b> Gift of \$2,000 by Alexander Jay Wurts, in memory of his mother, the income to be loaned to students of Sibley College to "help lift the man's burden from the boy's shoulders." Additions by Sibley students. Established 1912.....	\$ 2,267.74		\$ 2,267.74	\$ 115.02
	\$9,586,117.03	\$37,425.84	\$9,623,542.87	\$485,664.01
<b>Medical College Endowment Fund:</b> The gift of Col. O. H. Payne, the income to be applied to the maintenance and operation of the Cornell University Medical College in the City of New York. Established 1913 .....		4,350,000.00	4,350,000.00	145,625.00
	\$9,586,117.03	\$4,387,425.84	\$13,973,542.87	\$ 631,289.01

Respectfully submitted,

E. L. WILLIAMS,  
Treasurer.

## HASKINS & SELLS

CERTIFIED PUBLIC ACCOUNTANTS

30 BROAD STREET  
NEW YORK

LONDON, E. C.  
50 COLEMAN STREET

CHICAGO  
HARRIS TRUST BUILDING  
CLEVELAND  
WILLIAMSON BUILDING

ST. LOUIS  
THIRD NATIONAL BANK BUILDING  
PITTSBURGH  
FARMERS BANK BUILDING

SAN FRANCISCO  
CROCKER BUILDING  
BALTIMORE  
CALVERT BUILDING

CABLE ADDRESS "HASKSELLS"

### CERTIFICATE OF AUDIT

We have made an audit of the books and records of Cornell University in the Treasurer's Office, for the year ended July 31, 1914. We have verified the investment securities and the cash on deposit and in hand; and

*We hereby certify* that, in our opinion, the General Balance Sheet submitted herewith correctly sets forth the financial condition of the University at July 31, 1914, and that the Income and Expense Statements give the result of the operation for the year ended on that date as shown by the Treasurer's books.

(Signed)

HASKINS & SELLS,  
Certified Public Accountants.

NOTE—A complete report of the Treasurer, with appendix containing schedules referred to above and others will be forwarded to Alumni upon receipt of specific request for same, addressed to the Treasurer, Cornell University, Ithaca, N. Y.

## FORMS OF BEQUESTS TO CORNELL UNIVERSITY

## GENERAL BEQUESTS

I hereby give, devise, and bequeath to Cornell University at Ithaca, N. Y.,

the sum of .....  
Dollars.

.....

---

 BEQUEST OR ENDOWMENT OF PROFESSORSHIP

I hereby give, devise, and bequeath to Cornell University, at Ithaca, N. Y.

the sum of .....

.....  
Dollars as an endowment for a professorship in said University, the income from which said sum is to be used each year towards the payment of the salary of a professor of said institution.

.....

---

 BEQUEST FOR SCHOLARSHIP

I hereby give, devise, and bequeath to Cornell University, at Ithaca, N. Y.,

the sum of .....

.....  
Dollars, the income from which sum is to be used each year in the payment of an undergraduate scholarship in said University, to be known as the.....  
..... scholarship.

.....

---

 BEQUEST FOR A PARTICULAR PURPOSE DESIGNATED BY THE TESTATOR

I hereby give, devise, and bequeath to Cornell University at Ithaca, N. Y.,

the sum of .....

Dollars to be used (or the income from which said sum is to be used each year)

for the purpose of.....

..... (insert purpose).



## APPENDIX I

### REPORT OF THE SECRETARY OF THE UNIVERSITY FACULTY

To the President of the University:

SIR: I have the honor to submit the following report upon the work of the University Faculty for the academic year 1913—14.

#### I. THE FACULTY'S LEGISLATION

**ENTRANCE REQUIREMENTS.** On October 15, 1913, the Faculty adopted the following recommendations of the Committee on Relations to Secondary Schools:

1. To accept  $\frac{1}{2}$  or 1 unit in Physical Geography (hitherto not less than one unit was accepted).
2. To add a new item to the list of entrance subjects, namely, No. 19, which shall be designated "any high school subject or subjects not already used,  $\frac{1}{2}$  to 1 unit."

**THANKSGIVING RECESS.** On November 14, 1913, the Faculty received a petition from students of the University asking that University work be suspended on Saturday morning, November 29.

On December 12, the Faculty adopted the following report of the Committee on University Policy, to which the petition had been referred by the Faculty:

"Whereas, the Calendar of the University has been fixed by concurrent action of the Board of Trustees and University Faculty, and

"Whereas, at its last meeting the University Faculty voted 'that the Committee on University Procedure be instructed to consider the whole question of the existence and length of the Thanksgiving Recess and the possible modification of the statute relating thereto, and to report the same to this Faculty; therefore

"Resolved, that in the view of this Committee on University Policy, to which the matter had been referred by the Faculty, it is unwise that any change be made in the Thanksgiving Recess this year."

**UNIVERSITY ASSEMBLY.** On March 25, 1914, a petition from undergraduate students was received by the Faculty, asking that the hour from 12 to 1 o'clock every other Friday be set aside for a general assembly of Faculty and students.

On May 8, 1914, the Committee on University Policy, to which the above petition had been referred for consideration and report, submitted the following recommendations, which were adopted:

1. That meetings of the whole university, to be known as University Assemblies, be held at intervals of approximately a month throughout the college year.
2. That the times of such meetings,—which shall ordinarily occur in the forenoon, be set by the President, and that at the times so set all university exercises be suspended.
3. That the control of such assemblies be placed in the hands of a committee of students, acting with the President of the University; such committee to consist of the president of the Graduate Club (ex-officio) and one other graduate to be chosen by him, three seniors, two juniors, one sophomore, to be appointed by the presidents of their respective classes, and the presidents of these classes ex-officio.

It is assumed that the Assembly hours will be so chosen as to interfere as little as possible with regular university exercises;—and it appears to be practicable, by

having the Assembly come each month at a different hour or on a different day, to avoid interfering with any one class more than once during the year.

The Faculty voted to notify the petitioners that the Faculty's adoption of the foregoing plan is provisional and experimental.

**ENTRANCE REQUIREMENTS IN AGRICULTURE.** The Faculty voted on the recommendation of the College of Agriculture, to modify entrance subject No. 16, which now reads "Agriculture,  $\frac{1}{2}$  to 1 unit" so as to read "No. 16. Agricultural subjects:  $\frac{1}{2}$  to 4 units."

**DATE OF FACULTY MEETINGS.** On April 17, 1914, the Faculty voted to change the date of its regular meeting from the second session Friday in each University month to the second session Wednesday in each University month.

## II. THE FACULTY'S STANDING COMMITTEES.

**I. COMMITTEE ON ADMISSION BY CERTIFICATE** (Professor G. P. Bristol, Chairman).—The following table illustrates the increase of admission by certificate since 1904, together with the record made by the schools using this method of admission for their students and by the students thus admitted.

	1904	1905	1906	1907	1908	1909	1910	1911	1912	1913
Schools using certificate privilege . . . . .	154	175	171	223	262	264	265	274	296	301
Students using certificate privilege . . . . .	311	376	327	459	510	586	528	565	607	623
Schools—no mark below a pass . . . . .	72	82	107	102	77*	107*	133*	111*	125*	113*
Students—no mark below a pass . . . . .	0	235	190	252	248*	293*	325*	291*	347*	334*

In order to make a closer inspection of the records made by representatives of schools who have sent students by certificate, a sub-committee was appointed in advance of the regular meeting of the Committee for review of the year's records. This sub-committee went over the entire number of schools and recommended for consideration by the full committee 45 schools, the records of which seemed to call for discussion or action.

At the meeting of the Committee 11 schools were removed from the list, and 24 were notified that the records made by their representatives are not satisfactory, and that unless future students coming from them should do better work their certificates would not be considered.

It is the judgment of the chairman of the Committee that this system of admission by certificate works unsatisfactorily in the case of most private schools, and that both the schools, their students and the University would gain much should it be discontinued. The pressure to grant a certificate to a boy who has not been a first class scholar is very heavy, and this pressure is applied at the point where it can be least resisted. The intense rivalry in a business way between schools makes the certifying privilege a financial asset, but at the same time tends to undermine the standard of scholarship. Some of the best private schools have abandoned it altogether and the testimony of their principals is uniform that their schools have been greatly benefited.

The examinations of the College Entrance Examination Board are now given in so many different places that it is only here and there that any hardship is in-

\*These years include marks in Military Drill and in Gymnasium not previously recorded.



volved in compelling a student to take these examinations. In this State, too, the examinations of the State Department are given twice a year. These are open to students in private schools, and there can be little reason why an earnest student should not in one of these ways meet college entrance requirements.

There are schools here and there in the country so remotely situated that it would be a real hardship for one of their students to make the long journey necessary to take a college entrance examination. In the case of such schools the use of the certificate method is reasonable and proper.

The Committee finds that the chief objection against the system is the feeling of a certain divided responsibility for a student during the first half year or more of his college course. The Committee, however, feeling that it is the wish of the University that none but the strongest students should be recommended by certificate has rigidly judged all candidates on their scholastic record. If this method of admission is regarded, as apparently it is by some school principals, as a convenient way of passing into college their weaker students, the Faculty at Cornell certainly gives no countenance to such a view.

2. ENTRANCE EXAMINATION BOARD (Professor G. P. Bristol, Chairman)—In October, 1912, a special committee was appointed by the University Faculty to consider all questions relating to the entrance examinations and to report to the Faculty.

This Committee met October 29, 1912, and its report was adopted by the University Faculty, which on November 8, 1912, voted:

"There shall be an Entrance Examination Board. This shall consist of eight members, to be appointed by the President of the University, in four groups of two each, which groups shall serve for one, two, three, and four years respectively. The President shall appoint each year two members to fill the vacancies caused by the expiration of terms of service. This Board shall have entire charge of all matters pertaining to entrance examinations."

The Board was established as recommended, and its first duty was to provide for entrance examinations in the middle of the academic year. Such examinations were arranged in 1913 and held in close connection with the regular examinations for the half year. The scheme has worked well. As elementary work is given in regular courses in a number of departments, the examinations held at the end of such courses have served as entrance examinations, thus avoiding expense for printing separate papers, for proctoring, etc.

The same arrangement was continued for February, 1914, and with equally satisfactory results. There is no question of the desirability of holding entrance examinations in the middle of the year. Public high schools in all of our larger cities graduate students in January and in June. Many of these students who wish to enter college in the middle of the year will, if not given an opportunity at the time, become engaged in other ways, and before the following September will abandon their plans for a college course. Many students entering in the middle of the year are able by attending two summer sessions to graduate in June of the third year following their admission. This represents a substantial saving in time of their university preparation for life work.

The work of the Entrance Examination Board has been most efficient in taking charge of the entrance examinations in September. Through its chairman the Board secured copy for the various examination papers in different departments

prior to Commencement, and was in this way able to have the printing done in plenty of time to furnish papers for the examinations in New York as well as in Ithaca.

3. COMMITTEE ON RELATIONS TO SECONDARY SCHOOLS (Professor G. P. Bristol, Chairman)—The most important work of the Committee during the year was the recommendation adopted by the Faculty that to the eighteen subjects which may now be offered for admission to the University a new number (19) be added to cover  $\frac{1}{2}$  or 1 unit, not more, of credit for any high school subject or subjects not already used. The reasons for this recommendation were as follows:

Experience in schools, abundantly evidenced by correspondence in the Registrar's office here, shows that in many cases a substantial hardship is experienced by students with a sound preparation because they are not able to use, in fulfillment of the total fifteen units required for admission, work of unquestioned seriousness and worth in subjects not recognized for admission. Many students are not able at the outset of their high school course to fix their eyes on entrance to college. Such students finding later in their high school days that a college course is possible for them are at graduation handicapped. The Faculty has, therefore, added to the list of subjects hitherto permitted, the provision that one point of the fifteen required for admission may consist of any high school subject. This means of course a subject recognized in the regular curriculum, studied in the regular way, and proved by school examination or other regular test. In taking this step in addition to those of the last five years we believe that we have gone a long way to meet the various requests made by representative school men, and at the same time to relieve some of the disadvantages and difficulties in adjustment of schedule so generally complained of by high school men at the present time.

This action, together with a letter of explanation, was sent to all the schools from which the University has recently received students, and to nearly all prominent high schools in the country.

The Committee further recommended that in Physical Geography a candidate may offer either  $\frac{1}{2}$  unit or 1 unit of credit.

The Faculty of Agriculture recently adopted a resolution increasing to a possible maximum of four units the amount of entrance work in agricultural subjects, and the University Faculty referred the matter to the Committee for consideration and report. The Committee reported favorably to the proposed action, which was approved by the Faculty. It appeared to the Committee that this step was logical and that the restriction limiting the total amount of credit possible for admission in vocational subjects to four units would prevent a disproportionate amount of preparation in a single field. The University must face the fact that the essential character of many high schools throughout New York State is changing. This is especially true of the high schools in villages. It is certainly reasonable and proper that the College of Agriculture should keep in the closest possible touch with these schools. Their work is largely still in an experimental stage. The same was true not many years ago of much of the science work in high schools, though this work is today universally recognized and approved. The work in Agriculture in high schools of the type referred to is genuine, thorough, and good.

4. EXCUSES FROM PHYSICAL TRAINING AND MILITARY SCIENCE (Professor W. A. Hammond, Chairman)—The statistics of registration in the Department of

Physical Training and Military Science are given below. The experience of the Committee during the past year has shown some difficulties in enforcing the Faculty's requirement of Physical Training. Swimming forms a part of these requirements, and while, in the opinion of the Committee, this is a desirable part of a student's educational assets, the accommodations are wholly inadequate. To a lesser degree, the same thing may be said of the general inadequacy of the Gymnasium. The accommodations are not adequate for the training of the 1397 students registered and taking work under the Faculty's requirements. In addition to these registered students, there are large numbers who use the Gymnasium voluntarily. The latter class would no doubt be increased, if there were more space and better facilities. Registered students frequently recite as grounds for the neglect of the Faculty's requirement the congested condition of the Gymnasium in general, and particularly the unsatisfactory character of the swimming pool. In former years the Faculty insisted less rigorously on the fulfillment of the statute than at present. One senior in the class of 1914 graduated with a considerable delinquency in Physical Training, and this was permitted only upon the Faculty's vote. Otherwise every member of the graduating class had substantially satisfied the Faculty's rule.

a) Department of Physical Training for Men:	
Number taking work in the Department, 1913-14.....	1397
Excused on account of illness.....	14
Excused on account of labor.....	11
Withdrawn for athletics, etc.....	56

Total excused..... 81

Subject to the requirements of Gymnasium.....1478

b) Department of Military Science:	
Men taking Drill classified as follows:	
Seniors in the Department.....	15
Juniors.....	29
Sophomores.....	50
Freshmen.....	784

Total men in the corps.....	878
Excused, for athletics.....	78
for physical disability.....	48
for labor.....	151
as aliens.....	22
as Quakers.....	2
for previous military training.....	16

Total excused..... 317

Total registered in the Department during the year.....1195

5. COMMITTEE ON UNIVERSITY UNDERGRADUATE SCHOLARSHIPS (Professor W. A. Hammond, Chairman)—In September, 1913, one hundred and twenty-one students took the competitive examination for University Undergraduate Scholarships. The rule requires competitors to take examinations in three subjects. Thirty-four competitors failed to do this, and these are accordingly eliminated from the following statistics. Of the remaining eighty-seven competitors the number taking examinations in the various subjects was as follows:

Greek	Latin	Advanced Mathematics	French	German	Elementary Mathematics
5	32	52	26	45	17

In the examinations of September, 1912, three students took examinations in Greek, in 1913 five took the same subject. The subject which attracted most competitors was advanced Mathematics, due presumably to the prominence of technical education in the University.

In the opinion of the Committee the history of the Undergraduate Scholarships in recent years has amply justified their establishment by the Trustees. The Committee believes that the honor, as well as the financial assistance of these stipends, has done much to promote a high type of scholarship. This is particularly important in a community where great stress is laid on athletic and social honors, to the neglect of the real purposes of the University. During the year the Committee cancelled four scholarships, on the ground that the holders had not maintained a record sufficiently high to merit scholarship honors. Of the remaining 32 scholars, the representatives of the Class of 1916 (17 scholars) made an average scholarship record of 87.17%, and of the Class of 1917 (15 scholars) an average record of 87.77%. The highest average made by any scholar was 93.25%.

6. COMMITTEE ON STUDENT AFFAIRS (Professor D. S. Kimball, Chairman)—The following report for the year 1913-14 falls into two divisions, namely, the administration of discipline, and the regulation of student organizations.

*Discipline for Misconduct*—The general conduct of students during the past year has been as exemplary as could be expected, when one takes into account the fact that the Committee exercised disciplinary jurisdiction this year over more than five thousand young men. The Committee's records show that the general moral tone of the student community constantly improves. This improvement in moral type should normally be reflected in the better discharge of scholastic as well as social duties.

The Proctor and the Student Conference Committee have fully justified their place in our disciplinary organization. The former has been of great aid not only as a counselor to students, but has also rendered valuable service in settling minor disputes, many of which, if not promptly adjusted, would have led to serious annoyance. The work of the Student Conference Committee has been of a high order; the interest and wisdom of its members have been no less gratifying than the fairness which has characterized its decisions.

*Discipline for Fraud in Academic Work*—A comparatively small number of cases of fraud in academic work have been reported to the Committee, the total to date being 12. Most of these were minor cases reported under the provisions of the Committee's Rules of Jurisdiction and Procedure. It would seem that these provisions have been wise, for they have enabled the instructing force to care for small infractions expeditiously and intelligently, whereas previously they were allowed to pass unnoticed because of the amount of time and trouble involved in their prosecution.

This report must not be construed as intimating that there is any more or any less fraud practiced than formerly, since the committee can judge only by the number of cases presented, its duties being to discipline offenders and not to prevent fraud, which is a function of the several Faculties.

*Student Organizations*—Student organizations are many and varied. Some are useful and necessary, a few are harmful and should be suppressed. It is not fair, however, to blame the few activities that are most prominent for all the low scholarship of the student body. In estimating the effect of these activities the entire group should be considered. It is possible to do this, however, only for those activities which represent the University abroad, and others whose membership also comes under the eligibility rules. There are two criteria by which the effect of these activities may be judged, namely, the number of days of leaves of absence granted to their members, and the average scholarship standing of those participating therein. The following table gives the leaves of absence granted by the Committee on Student Affairs to the several activities during the year 1913-14, compared with those of the preceding year.

Activity	YEAR 1912-13			YEAR 1913-14		
	No. of men	Total no. days	Average	No. of men	Total no. days	Average
Association football . . . . .	15	8½	.6	0	0	0
Baseball . . . . .	45	109½	2.2	55	60½	1.5
Basketball . . . . .	14	46½	3.1	39	59	1.2
Crew . . . . .	13	23	1.8	24	60	2.5
Debate . . . . .	14	27	2.0	24	23	.9
Fencing . . . . .	6	23½	3.9	18	31	1.7
Football . . . . .	66	131½	2.0	93	127½	1.4
Fraternities . . . . .	71	154	2.0	83	161	1.9
Golf . . . . .	9	23	2.5	14	14	1.0
Hockey . . . . .	20	44	2.2	49	19	.39
Lacrosse . . . . .	17	25	1.5	62	30	.48
Musical Clubs . . . . .	115	112	1.0	123	142½	1.1
Swimming . . . . .	8	0	.0	20	20	1.0
Tennis . . . . .	7	16½	2.0	7	17½	2.5
Track . . . . .	83	178	2.1	171	193½	1.1
Wrestling . . . . .	11	126	2.4	30	44	1.4
C. U. C. A . . . . .	13	14	1.0	67	94	1.4
Miscellaneous . . . . .	28	49	1.8	58	44½	.76
Totals . . . . .	555	1111	34.1	937	1141	22.23

The average number of days leave of absence for the activities listed is, therefore, 1.23, as against 2 in 1912-13 and 2.2 days in 1911-12. Attention is called to the fact that this is far below the limit set by the University Faculty, which allows any freshman two days leave of absence in each term and other students seven days in each term for such purposes. The maximum athletic schedule seldom exceeds five days leave of absence, and the committee is constantly exerting pressure to reduce the time limit of all schedules. It should also be noted that the Committee on Student Affairs recommends these leaves of absence only after making sure, as far as it can, that the player concerned is fully eligible, and any Dean or any Faculty may decline to accept and honor this recommendation for an individual, as is deemed desirable.

The Committee has felt that further reduction of the total number of athletic contests and of the number of out-of-town engagements is highly desirable, and it has been working with this end in view. It is only fair to add that many members of the Athletic Association share this opinion, particularly so far as many of the minor sports are concerned. It is an open question whether some of these sports are of sufficient importance to justify their existence as inter-collegiate activities.

In fact, the entire question of the relative value of intercollege and intercollegiate contests is an interesting and important one. It is clear that intercollege sports afford exercise to more men than do the intercollegiate sports, and are naturally free from any undesirable features of the latter. It is problematic, however, how far intercollege sports will succeed without the stimulus of intercollegiate contests. Intercollege contests have a decentralizing influence, arising from class or college rivalry, which may be serious. Intercollegiate contests offer a common ground on which all the students of all colleges in the University may gather, and they possess a wonderful centralizing influence that would be missed should they be discontinued entirely. On the other hand, this end could no doubt be effected by fewer contests than we now have, with a resulting financial and scholastic gain.

The following list gives the number of men who were engaged in each activity during the last term in which activity was in operation, with their average academic standing for the same time.

Activity	No. of men	Aver. Grade
Association football	27	71.50
Baseball	25	69.47
Basketball	55	70.10
Crew (Varsity)	19	75.30
Football	39	69.26
Fraternities	1497	70.7
Glee Club	56	70.5
Hockey	32	69.50
Mandolin Club	87	73.7
Masque	42	75.0
Sun	23	69.8
Swimming	11	75.30
Track	31	71.89
Widow	19	73.2
Wrestling	13	74.30

It will be noted that the average grade of those engaged in these activities is in general as high or higher than that of the fraternities, which is 70.7%, the average of the non-fraternity men whose records were investigated being 74.2%. It would seem, therefore, that the direct effect of these competitions on scholarship is not so harmful as is generally supposed. No one intimately acquainted with these activities will contend that the scholarship of the participants is what it should be, but no doubt the rigid enforcement of time limits and probation rules and a growing tendency on the part of coaches and other athletic directors to look more carefully after the academic standing of all competitors has done much to raise the academic standard of all of the activities that are regulated more or less by faculty legislation.

No doubt it is also true that the many competitions open to students, which require little or no sanction from anyone, are in many cases more harmful to scholarship than those that come before the Committee on Student Affairs in an official manner. This is true also for the greater group of social and other activities. Participation in these activities does not require leaves of absence from University duties, and hence they are not so noticeable, but they often absorb more of the participant's time and involve more men than do athletic competitions. Furthermore, the lazy student and the professional loafer who will not enter the more strenuous competition, find congenial surroundings in the social and other less strenuous organizations, to their detriment and to his own.

It is difficult to estimate the effect that organizations of this class have upon scholarship, since they are more intangible and less stable than the more definitely organized bodies. They do, however, constitute a menace to scholarship that should be carefully noted. This particular problem has become so acute in some of the large universities of the middle-west as to be made the subject of special investigation with a view of enforcing a much closer supervision over the entire social organization. It is to be hoped that such steps will not be found necessary here. The student body at Cornell has always risen to the occasion in times past, and will no doubt recognize the importance of the problem. The full control of this problem is not, however, in the hands of the Committee on Student Affairs; fraternities, faculty and alumni should join in doing all they can to check all such harmful influences. The Committee on Student Affairs has appointed a sub-committee to investigate and report fully on these matters, hoping that it may make this problem a little clearer.

Respectfully submitted,

WM. A. HAMMOND,

Secretary of the University Faculty.

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## APPENDIX II

### REPORT OF THE DEAN OF THE FACULTY OF THE GRADUATE SCHOOL

To the President of the University:

**SIR:** I have the honor to submit herewith my report as Dean of the Faculty of the Graduate School for the year 1913-14.

During the present year the number of graduate students has increased in almost exactly the same proportion as the total registration, so that the ratio of graduate students to the total remains the same as last year, namely 8.76 per cent. As has been pointed out in a previous report this ratio has steadily increased since the year 1904-05, at which time it was only 6.3 per cent.

We have every reason to be gratified with the steady growth of the Graduate School which these figures indicate. But it must not be forgotten that graduate work still forms a much smaller proportion of the work of the University than it did twenty years ago. During the eight years preceding the year 1900 the proportion of graduate students was at no time as small as at present; if the relative number of graduate students were the same now as in 1893-94, the registration in the Graduate School would be 660 instead of 439.

Registration in the Graduate School has also failed to keep pace with the increase of the teaching staff. The number of professors and assistant professors (in Ithaca) is now three times as great as in 1893-94; the total number on the teaching staff in Ithaca is four times as great; but the number of graduate students is considerably less than double that of twenty years ago. It is true that the year 1893-94 was an exceptional one: although if the comparison were based on averages for the five years from 1891-1896, the result would not be widely different. It is true also that the standards for admission to graduate work are higher now than at that time. But even when these facts are con-

sidered we cannot escape the conclusion that graduate teaching is now a less prominent part of the work of the University than it was in the period preceding the year 1900. In view of the increasing need of advanced training in all lines of professional work, and in view of the fact that the facilities for such training are to be found only in the larger universities, it seems to me that this ought not to be true.

I have spent some time in studying the statistics of attendance in the reports of the registrar, in the attempt to discover the influence which the growth of the different undergraduate colleges has had upon the development of graduate work. Although the results of such a study are of interest, it would be misleading to discuss them further here; for in my opinion the number of graduate students is of very slight significance in forming an estimate of the success of a Graduate School. Of far greater importance is the question of the ability and activity of the members of its Faculty as investigators and productive scholars. To quote from the Report of the first General Committee of the Graduate School,\* "a university which contributes its share to the advancement of knowledge through the efforts of its Faculty, and whose undergraduates receive through association with their teachers such inspiration as will make them independent and progressive thinkers, may fairly be said to possess a strong and successful Graduate School, even if it has only a few graduate students."

When success is judged by this criterion it is scarcely possible to base one's estimate of the situation on any statistical study, and opinions are likely to differ greatly. Personally, I cannot agree with the pessimistic view of the present conditions which has frequently been expressed. In my opinion the productive work of our present Faculty is not inferior to that done in former years; in many cases it is vastly superior. It does seem to me to be a fact, however, that activity in productive work has increased much less rapidly than has the membership of our Faculty.

As has been pointed out by the Dean of the College of Arts and Sciences our graduate work is largely a by-product. The general feeling seems to be that our large undergraduate classes *must* be taught; if any time and energy are left, this *may* be devoted to graduate teaching or to research. Except for certain professorships in the College of Agriculture there are practically no members of our Faculty whose work is officially recognized as lying solely, or even chiefly, in the Graduate School. The Faculty has expressed itself as opposed to such differentiation of work as would result in making the Faculty of the Graduate School consist largely of those whose whole time is devoted to advanced teaching and research—and I quite agree with this view. But something is certainly needed to develop the feeling that the work of the productive scholar forms part of our university duties, and is not less important than good teaching. A great deal has undoubtedly been accomplished through the organization of the Graduate School, both in systematizing the administration of graduate work, and in securing more general recognition of its importance. But something more is needed. In my opinion, the problem of finding some means of increasing the yield of the University's "by-product" of scholarly work is one whose solution calls for most careful consideration by both the Faculty and the Board of Trustees.

\*Included in the report of the Dean of the Graduate School. See Appendix III of the President's Report for 1909-10.



## FELLOWSHIPS AND SCHOLARSHIPS

At the meeting of the Faculty held June 16, 1913, the dean called attention to the fact that a committee of the Board of Trustees had under consideration the question of discontinuing such fellowships and graduate scholarships as were provided for out of the general university funds, and that members of the Faculty were invited to attend an open meeting of this committee. The Faculty voted to request a committee consisting of the dean and Professors Burr and Hull to represent the Faculty at the meeting; and it was further voted "that this committee be instructed to request the committee of the Board of Trustees not to take definite action until the Faculty should have had an opportunity to discuss the question at issue."

During the fall of 1913, the question was discussed at some length by the General Committee, and it was again brought before the Faculty on October 31, 1913, at which time the Faculty adopted the following resolution:

"In the opinion of the Faculty of the Graduate School the discontinuance of fellowships and graduate scholarships, and especially the diversion of the funds now available for this purpose to uses not connected with graduate work, would be a serious blow not only to the Graduate School but to the University as a whole."

At the same meeting the committee which had previously been appointed to represent the Faculty was enlarged and was "instructed to formulate and to present to the Board of Trustees a full statement of the attitude of the Faculty on this question."

Before a statement in accordance with these instructions had been prepared, it was learned that the committee of the Board of Trustees had reported its opinion that no change in the appropriations for fellowships and scholarships was advisable at this time. Since there seemed to be no need of further action the Faculty committee has not continued its consideration of the question. In preparation for the statement which we had expected to present to the Board of Trustees a considerable amount of information in regard to former fellows, and in regard to fellowships and scholarships in other universities, had, however, already been collected; and this proved to be so interesting that the inquiry has been continued. It will perhaps not be out of place to give a summary of the results in this report.

It is usually felt, I believe, that the chief object of fellowships and scholarships is to make it possible for students of unusual promise to continue graduate work, in the hope that men of exceptional ability may thus be found who will be encouraged to devote themselves to lines of scholarly or professional work in which both extended training and natural ability are especially needed. In recent years the opinion has sometimes been expressed that there are too many fellowships—that by means of them we have made it too easy for men of mediocre ability to begin a university or professional career, so that the effect, especially on the teaching profession, is just the opposite of what was intended. In discussing the question at a recent meeting of the Association of American Universities, President Lowell presented this point of view both briefly and forcibly by suggesting that the best way to ensure active competition was to choose a diamond as a prize and then to surround it with a barbed wire fence. The correctness of the principle involved can scarcely be denied. But so far

as the teaching profession is concerned I am inclined to believe that the erection of the barbed wire fence may safely be postponed until the diamonds are larger and more numerous.

As compared with the number of fellowships and scholarships at other universities the number of such appointments at Cornell is small, the total number at present being forty (twenty-four fellowships and sixteen scholarships). Our fellows and scholars therefore form less than ten per cent of the total number of graduate students. The number of such appointments is greater than at Cornell in seven institutions, while the ratio of the number of fellows and scholars to the total graduate enrollment is greater at thirteen universities. The average for these thirteen is thirty-one per cent; in other words, practically one-third of all the graduate students hold appointments either as fellows or scholars.

Since fellowship stipends differ widely—ranging in different institutions from \$120 to \$1200—a better comparison with other universities can be made by considering the total amounts appropriated for fellowships and scholarships. I find that the sum devoted to fellowships and scholarships is greater than at Cornell in seven universities, the average annual appropriation for these seven being \$29,000, as compared with \$16,500 at Cornell. This comparison takes no account of the large number of "tuition scholarships" which are available in many universities, but which are unknown here.

Of more importance than the foregoing comparison between the number of fellowships here and elsewhere is the question whether our appointments really accomplish the result sought. Do our fellows and scholars become so interested in their subject as to continue in the work for which their graduate work prepared them? To what extent do they "make good"? Have we reason to believe that our fellowships really do attract students of unusual ability?

To obtain answers to these questions a card list of fellows and scholars has been prepared which includes the names of all who have held such positions since fellowships were first established here in 1884; and an effort has been made to obtain at least a brief outline of the subsequent career of each appointee. While the work is not yet finished, the records have been completed for a majority of the subjects in which fellowships are awarded, and are nearly complete for the others.

One indication of the success of a former fellow, and almost the only one which makes possible a numerical statement of the results contained in the list above referred to, is furnished by the fact that his name occurs in "Who's Who in America". With business men this criterion of success would probably not be of great value; but it possesses considerable significance in the case of professional men and teachers. I find that of the three hundred ten graduate students who held fellowships during the twenty years from 1884 to 1904\*, eighty-five, or twenty-seven per cent, are mentioned in "Who's Who". Of the four hundred forty-seven who received advanced degrees during the same period, but who did not hold fellowship appointments, only sixty-nine, or fifteen per cent, are

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\*The fellows who were appointed during the years 1904 to 1914 have not been included, since it is hardly to be expected that their names would be mentioned in "Who's Who" within ten years of graduation. That time is a factor is shown by the fact that for the five year period from 1899 to 1904 only 17 per cent of the fellows are mentioned in "Who's Who"; for the period between 1894 and 1899, 29 per cent; and for the two earlier five year periods 37 per cent and 38 per cent respectively. The percentages vary more irregularly for the non-fellows, but on the whole show a similar dependence upon time.

mentioned in "Who's Who". On account of the labor which would have been involved if all graduate students had been considered the comparison does not include non-fellows who failed to complete their work for a degree, and for this reason the showing made by the non-fellows is probably much better than it would otherwise have been. Even as they stand, the results give convincing evidence that our fellowships really do attract students of unusual ability.

The information thus far obtained is also convincing in showing that in the great majority of cases our fellows continue in the work for which they were trained. Consider, for example, the record of our fellows and scholars in Entomology. Of the fifteen who have held such appointments, including the most recent appointees, one is an instructor in Entomology, three are in the government service or in experiment stations, one is curator of a large museum, one is the state entomologist of New Jersey, another is entomologist of the Transvaal; and seven are university professors, in five cases the heads of their departments.

The record is scarcely less striking in the case of Mathematics. Thirty-two former fellows and scholars are now living, and concerning one of these no information has as yet been obtained. Three of the women who have held such appointments have since married and have presumably discontinued special work in Mathematics. But the remaining twenty-eight have all continued in the work for which they were trained. Five of the more recent appointees are university instructors; one is in the Coast and Geodetic Survey as a well known expert in the theory of tides; another is a hydraulic engineer in the government service; while twenty-one hold positions as professors or assistant professors of mathematics in universities, and for the most part have done creditable work, and in several cases distinguished work, as investigators.

In the case of Philosophy the returns are not yet complete. But it is interesting to note that of our former fellows and scholars for whom information is thus far available, three are college presidents, several are ministers, about a dozen are instructors, and forty-six are professors in colleges and universities.

In many other subjects the list is so nearly complete that the end is in sight, and in these subjects also there is every indication that our fellowship appointments have in the great majority of cases accomplished their purpose.

It is interesting to note, in conclusion, that thirty-four of our former fellows are now on the instructing staff of Cornell University, sixteen of them being full professors.

#### THE PUBLICATION OF DOCTORAL THESES

For a number of years we have required that theses for the Doctor's degree should be printed and that fifty copies be placed at the disposal of the University Library. The printed copies so deposited are in large part used for exchange with other universities in this country and abroad, and in this way the Library obtains a collection of doctoral dissertations which has proved very useful.

In some lines of work ample facilities exist for publishing a thesis as an article in a scientific periodical, or as one of a series of monographs, and since reprints of theses published in this way are accepted, students working in these subjects are able to meet the printing requirement with only slight expense. In other

subjects, however, no such fortunate situation exists, and those taking the Doctor's degree in these lines of work find it necessary to publish at their own expense. In order that this additional burden should not necessarily come at the close of a period of graduate study which has probably already involved considerable sacrifice, the faculty has provided for conferring the degrees before the required printed copies of the thesis were presented, with the understanding that these should be furnished later, and that in the meantime the diploma for the degree should be withheld.

The results of this plan have not been altogether satisfactory. The fact that there existed a moral obligation to publish the thesis and to furnish the required printed copies has been frequently overlooked. Many of those upon whom the Doctor's degree has been conferred have been content to do without the diploma for the degree rather than go to the trouble and expense of publishing their theses, and in consequence only about 60 per cent of our Doctor's theses have been published.

At the meeting of the Faculty held on October 31, 1913, it was proposed that some change be made in the method of enforcing the requirements, so as to secure more prompt and more certain publication; and after discussion in the Faculty, the whole question was referred to the General Committee for consideration. A report from the Committee recommending certain changes in the rule was presented on January 23, 1914, and after amendments, which changed the form rather than the substance of the recommendations, the following statement of the requirements was adopted by the Faculty:

"Each candidate for the Doctor's degree shall be required to deposit one hundred printed copies of his thesis with the dean for the purposes of the University Library. In exceptional cases this requirement may be met by depositing with the dean for the purposes of the University Library a bound typewritten copy of the thesis and one hundred printed copies of such a summary or such portion of the thesis as may be recommended by the chairman of the special committee and approved by the General Committee.

"When all other requirements for the doctorate have been fulfilled, the degree may be conferred before the printed copies of the thesis have been received by the dean, provided that the candidate present to the dean, along with the bound typewritten copy of the thesis, a signed statement that publication will take place within a definite period, which period shall not exceed two years; and provided further that he deposit with the treasurer of the University, at least one week before the date when the degree is to be conferred, the sum of seventy-five dollars. The treasurer is authorized to accept in his discretion as a guarantee a regularly executed bond instead of the deposit of money. The deposit will be returned if the prescribed printed copies of the thesis are furnished within the stated time. But, in case the printed copies are not deposited within such time, the University reserves the right to use the deposit to defray the expense of printing the thesis or such portion of it as the Faculty may direct."

In requiring that the thesis for the Doctor's degree be printed, and that a certain number of copies be provided for the purposes of the Library, our policy is the same as that of all the strong graduate schools with the single exception of the Graduate School of Arts and Sciences at Harvard, where the printing of the thesis is not required. The chief change from our former rule is in the statement of the conditions under which the degree may be conferred before the required printed copies of the thesis have been deposited. Here, too, the modified rule is in harmony with the practice of the great majority of strong graduate schools. The effect of the new rule will be that instead of barely

sixty per cent of our Doctor's theses being printed and made available for the purposes of the Library, *all* Doctor's theses will hereafter be printed, and without undue delay.

This legislation appears to me to be of great importance. Most obvious is the benefit which will result from the possibility of increasing our list of exchanges. But in my opinion, the great significance of the Faculty's decision to rigorously enforce the rule lies in the fact that in taking such action we recognize the thesis as one of the most important of the requirements for the degree. The Faculty has already given expression to its feeling that "the purpose of the Graduate School is to provide the student with the method and discipline of original research, to the ultimate end that he may contribute to the advancement of knowledge." It now says that one of the final tests of the candidate for the Doctor's degree shall be the completion of a thesis which *does* contain a contribution to knowledge, and a contribution of such value as to justify the Faculty in insisting on its publication. The thesis is thus to be regarded as the student's first venture in productive work, to be followed as years go on—in case our efforts have been successful—by many other contributions to knowledge. While it appears to me that the enforcement of the rule will not work serious hardship, it is nevertheless true that in some lines of work the situation will still be less satisfactory than we might desire; for if the subject is one in which the facilities for publication are inadequate, so that the thesis must be issued as a separate pamphlet, it is not likely to reach so large a body of readers as it deserves. If our theses are to be real contributions to knowledge they should be made readily accessible to others working in the same field, and our system of exchanges with other universities accomplishes this end only in slight degree. It could be accomplished, and with great benefit to the Graduate School, if we were in a position to include such theses among the University Publications. The experience of several other universities shows that when once established such a plan would not involve serious expense and might be self-supporting. But with the certainty of a considerable deficit for the first few years it is probably not practicable for us to undertake such a plan at present.

I believe that a great deal could be accomplished, however, by the adoption of the plan in modified form. In connection with the work of the editor of the Official Publications, and in order to handle the university printing in general, there has been developed in the office of the Secretary an organization which is practically that of a small publishing house. Would it not be proper to give our graduate students the benefit of this organization? In other words, would it not be possible, in the case of theses which do not find a more suitable channel of publication elsewhere, for the University to act as publisher? The expense to the student would certainly not be greater than it would be if he were to handle the printing himself; and in most cases there would be a considerable saving. On the other hand, the plan would add very little to the work of the Secretary's office, for the number of cases in which theses are separately printed is not great.

Aside from the reduction in expense, the plan has the further advantage that the theses would not merely be printed, but would be published; for the University would naturally retain a certain number of copies of each thesis and would be in a position to supply these at a moderate price to such libraries or individuals as might desire them. The plan might later be extended so as to provide

also for the publication of monographs by members of the faculty. The list of such theses and other publications, issued annually and widely distributed, would soon grow to respectable proportions. If theses published in periodicals were also included in the list, and if an arrangement should be made by which reprints could be furnished of these theses also, the benefits of the proposed plan would be still more marked.

#### THE NOMINATION OF A DEAN

Actuated by the feeling that the work of the dean's office was too seriously interfering with my other university duties, I presented my resignation as dean soon after the beginning of the present academic year, and the resignation was accepted by the Board of Trustees to take effect at Commencement. At the meeting of the faculty held on January 23, 1914, the following communication was received from the Board of Trustees:

"On recommendation of the President, the Faculty of the Graduate School is requested to recommend a Dean of the Graduate School for a term of three years, to succeed Dean Merritt, resigned."

The faculty then voted "that the General Committee be requested to present to the faculty a nomination or nominations for the office of Dean."

Three meetings of the General Committee were devoted to the question thus referred to it, all members of the Committee being present except Professors Browne and Willcox, both of whom were on leave of absence. The Committee discussed at some length the question whether one nomination or several should be presented to the faculty. The argument in favor of presenting more than one name was, briefly, that it would give the faculty greater opportunity for choice and would prevent any feeling that the Committee was in reality exercising the power of selection which belonged to the faculty. Against this plan it was urged that if two names were presented the election would have the appearance of a personal contest, and that for this reason the nominees might be unwilling to have their names presented. The question was practically decided in the present instance, without the need of agreement on the general principle, by the replies received to a circular letter sent out by the Committee to all members of the faculty asking for suggestions. It had been expected that such varied suggestions would be made that the replies would be of little assistance. But as a matter of fact the suggestions served to focus the consideration of the Committee with surprising definiteness upon two possible nominees, namely, Professor J. E. Creighton and Professor W. F. Willcox. Feeling that the Graduate School would be fortunate if the services of either of these gentlemen could be secured, the Committee voted unanimously to present both names to the faculty. Upon informing the two nominees of the Committee's action the dean found, however, that Professor Willcox had undertaken work of such nature that it would seriously interfere with his duties as Dean, if elected, and that he felt unable, therefore, to accept nomination. The Committee thereupon voted, again unanimously, to present the name of Professor Creighton as the only nomination.

At the meeting of the faculty held on March 27, 1914, the Dean, therefore, reported that "the General Committee, acting under instructions adopted at the last meeting of the faculty, had voted to nominate for the office of Dean for a term of three years the Professor of Logic and Metaphysics, Professor Creighton."

Other nominations having been called for, and none having been made, it was moved that the nomination of Professor Creighton be confirmed, and this motion was carried by a unanimous vote. The nomination of the faculty having been communicated to the Board of Trustees, Professor Creighton was elected Dean of the Faculty of the Graduate School for a term of three years beginning at Commencement, 1914.

While the faculty has not given expression in any formal way to its opinion on the plan now used for the first time in the selection of its dean, my impression is that the plan has received almost universal approval. Personally, I am a firm believer in the correctness of the principles involved in the two essential features of the new plan, namely, nomination by the faculty, and election for a definite term.

The work of the Graduate School is to a large extent individual and personal, and its character is chiefly determined by the ability and personality of the individual members of the faculty. These most essential factors in the success of a Graduate School cannot be greatly influenced by legislation, or by its administrative officers, however these may be selected. But we may hope through faculty organization to facilitate the interchange of views regarding graduate work, and to obtain the benefits of coöperation or "team work"; and this result will be best accomplished, in my opinion, by the adoption of a democratic form of organization. We already have the democratic principle in force in the case of the General Committee, whose members are elected either by the faculty at large or by certain groups of the faculty, and the plan has given such excellent results that its success when applied to the selection of the dean can scarcely be doubted.

In my opinion the strongest argument in favor of election for a short term is based upon the belief that we shall succeed in this way in obtaining the services of men who would otherwise not be available. Since the Graduate School stands for productive scholarly work by both students and faculty, and not merely for advanced teaching, it is of the greatest importance that the dean himself should be an investigator. But the administrative work of the office makes such demands on the dean's time and energy that the acceptance of the position by one whose chief interest is in research involves a serious sacrifice; if the appointment were a permanent one many of the men whom we should most like to see in the dean's office would probably be unwilling to serve.

The new plan has the further advantage that it will bring into the dean's office representatives of widely different points of view regarding graduate work. The interests represented in the Graduate School are so many and so varied that it is hardly possible for any one man to approach all of its problems without bias. In the long run, the policy of the School is likely to be broader, and is more certain to be just to all the interests concerned, under the new plan.

The foregoing discussion of the advantages of the new plan would be misleading if I neglected to mention an inherent danger in the plan, which may easily lead to its failure. I refer to the possibility of incompetence, or of too frequent change, in the clerical force of the dean's office. If each new dean is compelled to undertake the detailed direction of the routine work of the office, great waste of time is certain to result. Even with a permanent dean this method would be highly uneconomical. The clerk or secretary of the Graduate

School should be a permanent officer, competent to handle independently the routine business of the office; possessing, in other words, the characteristics of a successful private secretary rather than those of the usual stenographer. While this plan of administrative organization, which is common in other Graduate Schools, would involve an increase in salary cost, it would in my opinion effect a real and important economy.

In conclusion, I wish to take this opportunity of referring with the most sincere appreciation to the effective way in which all members of the Graduate School have cooperated in the organization of the Graduate School and in the effort to strengthen graduate work. It is a source of much personal satisfaction to me to have had the opportunity of participating in this work; while the cordial and friendly feeling that has prevailed throughout the Faculty has made the duties of the dean's office at all times a source of pleasure.

Respectfully submitted,

ERNEST MERRITT,

Dean of the Faculty of the Graduate School.

#### STATISTICS OF ATTENDANCE

During the year 1913-14, including the summer of 1913, 439 graduate students were registered in the Graduate School. The following tables show the registration for 1913-14 as compared with that of previous years:

	1913-14	1912-13	1911-12	1910-11	1909-10
Regular session (Ithaca).....	381	376	349	349	288
Medical College (New York).....	5	3	2	—	—
Summer session only.....	34	30	24	16	16
Summer work (not in S. S.).....	19	12	8	5	—
In absentia (no longer permitted).....	—	—	—	2	5
Total.....	439	421	383	372	309

Arranged according to the degrees for which they were candidates:

	1913-14	1912-13	1911-12	1910-11	1909-10
Doctor of Philosophy.....	203	170	170	166	157
Master of Arts.....	94	101	86	92	72
Master of Science in Agriculture.....	49	47	43	32	24
Master in Landscape Design.....	3	5	—	—	—
Master in Forestry.....	6	1	—	—	—
Master of Mechanical Engineering.....	17	18	20	33	21
Master of Civil Engineering.....	6	12	16	11	8
Master of Architecture.....	4	4	2	1	1
Non-candidates.....	57	63	46	37	26
Total.....	439	421	383	372	309

Arranged according to the groups in which the major subject lay:

	1913-14	1912-13	1911-12	1910-11	1909-10
GROUP A, Languages and Literatures.....	47	41	38	40	31
GROUP B, History, Philosophy and Political Science.....	48	49	56	47	48
GROUP C, Physical Sciences.....	83	91	87	97	89
GROUP D, Biological Sciences.....	175	141	118	104	77
GROUP E, Engineering, Architecture.....	29	36	38	45	33
Non-candidates.....	57	63	46	37	26
In absentia (no longer permitted).....	—	—	—	2	5
Total.....	439	421	383	372	309



During the year 1913-14, the following degrees were conferred as compared with those conferred in previous years:

	1913-14	1912-13	1911-12	1910-11	1909-10
Doctor of Philosophy.....	47	35	36	34	35
Master of Arts.....	28	25	23	14	16
Master of Science in Agriculture.....	17	13	16	10	14
Master in Forestry.....	1	1	—	—	—
Master in Landscape Design.....	3	2	—	—	—
Master of Mechanical Engineering.....	7	4	8	5	2
Master of Civil Engineering.....	4	2	7	3	2
Master of Architecture.....	1	1	2	—	—
Total.....	108	83	92	66	69

Among the students registered in the Graduate School during the year 1913-14 there were graduates from 126 different institutions distributed as follows:

Adelphi College.....	3	University of Minnesota.....	3
Alfred University.....	2	University of Missouri.....	3
Bates College.....	2	Mt. Allison University.....	1
Bethel College.....	1	Mt. Holyoke College.....	6
Boston University.....	1	Muhlenberg College.....	1
Brigham Young University.....	1	Muskingum College.....	1
Brown University.....	3	National Normal University.....	1
Bryn Mawr College.....	3	University of Nebraska.....	8
Buchtel College.....	1	New Hampshire College.....	4
University of California.....	3	New Mexico A. & M. College.....	1
Cape Girardeau College.....	1	North Carolina A. & M. College... 4	
Central Wesleyan College.....	1	North Dakota Agricultural College 1	
University of Chicago.....	1	Norwich University.....	1
Clark College.....	2	Oberlin College.....	10
Coimbra University.....	1	Ohio University.....	9
Colgate University.....	3	Ohio Northern University.....	1
College City of New York.....	1	Ohio State University.....	6
Colorado College.....	1	University of Oklahoma.....	1
Columbia University.....	5	Oklahoma A. & M. College.....	1
Cornell University.....	204	Ontario Agricultural College.....	3
Dalhousie University.....	1	Ottawa University.....	1
Dartmouth College.....	3	Oxford University (England).....	2
Defiance College.....	1	University of Pennsylvania.....	2
Denison University.....	2	Pennsylvania College.....	1
Doane College.....	1	Pennsylvania State College.....	4
Drake University.....	1	Pomona College.....	1
Edinburgh University.....	2	Princeton University.....	2
Fairmount College.....	1	Purdue University.....	1
Ft. Worth Polytechnic Institute... 1		Queen's University.....	2
Franklin and Marshall College... 2		University of Rochester.....	5
University of Georgia.....	1	Royal Military College.....	1
Glasgow University.....	1	Smith College.....	3
Goucher College.....	1	South East Agr. College (England) 1	
Greenville & Tusculum College... 1		St. Lawrence University.....	1
Grinnell College.....	1	Stanford University.....	4
Hamilton College.....	2	Syracuse University.....	4
Harvard University.....	4	Teachers College.....	3
Haverford College.....	1	University of Tennessee.....	3
Hillsdale College.....	1	Texas A. & M. College.....	3
Hobart College.....	4	Tokyo Imperial University.....	1
University of Idaho.....	1	University of Toronto.....	1
University of Illinois.....	5	Trinity College.....	1
University of Indiana.....	5	Tulane University.....	1

State University of Iowa.....	2	Union University.....	1
University of Kansas.....	2	Utah Agricultural College.....	3
Kansas State Agricultural College	2	Vienna Polytechnic Institute.....	1
University of Kentucky.....	1	Wabash College.....	16
Keuka College.....	1	Wake Forest College.....	2
Lake Forest College.....	1	Washburn College.....	1
Lehigh University.....	2	Washington State University.....	1
Lisbon Institute of Hygiene.....	1	Washington College.....	1
McCormick Theological Seminary	1	Washington and Jefferson College	1
University of Maine.....	1	Wellesley College.....	7
Marietta College.....	1	Wesleyan University.....	6
Massachusetts Agr. College.....	3	West of Scotland Agr. College.....	1
Mass. Institute of Technology.....	2	University of West Virginia.....	4
Mercer University.....	1	Western College for Women.....	3
Meredith College.....	1	Western Reserve University.....	1
Miami University.....	1	Westminster College.....	1
University of Michigan.....	4	William Jewell College.....	1
Michigan Agricultural College.....	1	University of Wisconsin.....	2
Middlebury College.....	1	University of Wooster.....	1
Milligan College.....	1	Yale University.....	6

## APPENDIX III

### REPORT OF THE DEAN OF THE FACULTY OF ARTS AND SCIENCES

To the President of the University:

SIR: As Dean of the College of Arts and Sciences I have the honor to make the following report for the year 1913-14:

The registration for the year was 1132, as compared with 1112 during 1912-13. Of these 938 were enrolled as candidates for the degree of A.B.; 181 for B.Chem., and 13 as special students. The number of women registered in the College was 236.

The establishment of the new degree (B.Chem.) for students of Chemistry who have completed the special four year course prescribed for their benefit has had some interesting results and has raised some interesting questions. The candidates for this degree have formed a clearly marked group with their own organizations and interests. The degree in Chemistry is somewhat more closely related to that in Arts than are the degrees of the technical colleges and it is sometimes possible, especially by attendance at one or more summer sessions, to complete the requirements for both degrees within four years.

Whether under such circumstances the two degrees might be conferred simultaneously was considered at some length by the Committee on Educational Policy. It was decided by the Faculty that the rule applying to other undergraduate degrees should hold and that at least a year must intervene between the reception of A. B. and B.Chem. by any candidate.

Chemistry is one of several instances in which subjects taught in some department of the College have become of great economical importance and the method of development in the past has seemed to depend on expediency or convenience rather than on any fixed policy. Electrical Engineering, for example, began in the Department of Physics, and for many years after its organization

as a distinct course and its transfer to Sibley College, the electrical work of the course, applied as well as theoretical, remained in the hands of that department. Entomology, similarly, was transferred to the College of Agriculture when the profession of economic entomologist had grown to importance and demanded an extended special course of training; but in this case, the entire department of invertebrate zoology was taken over. The device of joint membership in both faculties opens all the courses of some members of the enlarged teaching force to Arts students, while courses equally desirable offered by members of the same department, who happen to be enrolled in the Faculty of Agriculture only, are excluded. Physiology, which had existed in a semi-latent state within the Arts College for a generation, sprang into its present vigorous and effective existence only after its transfer to the College of Medicine. In this case also the scheme of dual membership has been employed to open to students in Arts and Sciences the courses in this great fundamental science. At its meeting on May 1st, 1914, the Faculty took steps to include the allied subject of anatomy by requesting the Board of Trustees to give a seat in the Arts Faculty to the Professor of Human Anatomy.

The rapidity with which the great organized industries are beginning to seize upon and utilize the latest advances of pure science, even when these are seemingly most abstruse, is such that we may look forward to further inroads upon the activities of the Arts College. The great fundamental subjects are the starting point for all these new professions. There would probably be as great an immediate response to an announcement of systematic instruction with adequate equipment in radio-telegraphy or in radiology (the modern application of X rays, etc.) or in aviation, which has been retarded at great cost of life and effort by the failure of the universities to attack the underlying problems, as was the case when our course in electrical engineering was first organized. That seemed at the time, to all but a few enthusiasts, to be a narrow and questionable field. The question is then, whether the development and permanent maintenance of these and other possible vocational courses is to take place within the College, as is already done in Chemistry; in which case the College will ultimately have under its jurisdiction a group of semi-technical schools, or whether the Arts College is to continue to be a mother of colleges, launching its offspring as rapidly as possible upon independent careers and retaining to itself only those branches of knowledge for which no non-academic use has been found. As between these two ways the decision depends upon what we think the College should be.

To develop and maintain semi-independent vocational schools within, throwing open as electives to all Arts students, in so far as they were qualified for them, the numerous special courses which would necessarily result, would greatly broaden the scope and modify the atmosphere of the College. The method of separating from the parent body one activity after another as they assume vocational importance and an organized demand is made for their development on the technical side is likely to amount to dismemberment. Chemistry, to take the case nearest at hand, would then be taught in a college of its own and Arts students would have to go outside their own College for instruction in that science as they now do in Entomology, Physiology, and Astronomy.

Nor would this condition of affairs necessarily be confined to the natural sciences. If a teachers' college were established, we should lose our department of education and should the demand for business courses result in a college of commerce, it would be likely to have as its nucleus our department of economics.

The mere question of form of organization might seem of little moment, since by the system of over-lapping faculty memberships the various branches could be kept in some relation to each other, but the ultimate effect both upon the Arts College and the segregated special fields would be profound. It is doubtless a good thing for Arts students to work elbow to elbow with technical students in departments alive to the importance of the applied and industrial aspects of their subjects, but it is even more important for technical students to learn their sciences in departments alive to the theoretical aspects and to come into daily contact with students and professors interested primarily in pure science.

#### SOME OTHER FUNDAMENTAL PROBLEMS OF THE COLLEGE

This is a time of wide-spread discontent with American college education as a whole and criticism is undoubtedly directed against the academic rather than the technical side. We are told that students cannot write English, and are for the most part without appreciation of literature; that they are unable at graduation to read French or German or Latin; that they are unable to apply their mathematics even to the simplest problems. These and many other equally discouraging statements are true of some students; that they are by no means true of all is known to those who are really cognizant of existing conditions. Nevertheless, members of our Faculties here and elsewhere are far from being content and are seeking for remedies. It is felt that too large a proportion of the student body fails to take college work seriously; that there is too generally a lack of interest and a dearth of scholastic ambition. On every hand methods of compelling endeavor and of penalizing neglect are being proposed and tried.

A recent critic characterized our college education as ". . . a system which does not carry its own appeal and must be enforced by examinations, grades, degrees, compulsory attendance and the like . . ."

We may rightfully repudiate such a description of our work just in so far as we know that it does carry its own appeal and the very large number of students in our classrooms and laboratories who are ambitious, spontaneously interested, and eager for larger opportunities than we are able to afford them, justifies us in great measure. But is it not true that all our undergraduate courses are thus artificially enforced and that only in so far as they fail to appeal is such enforcement necessary?

The characterization quoted above, even if we find ourselves in position to refute it, is worthy of serious consideration because it suggests in direct and simple form a really fundamental problem of the college. The problem is that of improving the attitude of the student body towards college work and creating a real interest in the intellectual life.

Given good teaching of the sort that will make as strong and general appeal to the student mind as possible;—then in the absence of all artificial enforcements, the student body would divide itself by natural processes into the fit and unfit. The fit would be those whose minds react to the normal stimulus of the subjects presented; the unfit, those who fail to respond.

The only excuse for the application of artificial stimuli such as compulsory attendance, the use of numerical grades, and so forth is the belief that the class of the unfit will thereby be reduced. Whether there is any such good result is open to question. Certainly what evidence we have is to the contrary. It has been found by actual count, extending over a sufficient period and taken without the knowledge of the class, that the average attendance in a large freshman course where it has been pointed out once for all that regularity was an important factor of success but that no notice would be taken of absences, was a trifle better than in a similar course equally attractive in subject matter and fully as well presented which was taken by the same class of students and in which absences were penalized.

It is also well known that the percentage of failures in a given subject from year to year is very nearly the same and is nearly independent of the ease or difficulty of the tests applied. The number of students dropped for poor scholarship is also nearly constant from year to year.\*

Scholarship averages of selected large groups, such as fraternities and independents show surprisingly small variations from year to year and this is the more significant in this connection when we consider that many of the fraternities are endeavoring to improve their standings by various coercive devices. If such methods are ever to be effective, one would expect to obtain results under these conditions where they are self-applied and yet we find† the average grade of members of the fraternities to be 70.0 in 1911-12 and 70.7 in 1913-14. During the same period non-fraternity averages rose from 73.9 to 74.2. The inference is that our machinery for enforcing scholarship is futile in that it fails to affect materially the performance of those who are near the boundary between failure and success. For others the machinery is unnecessary if not detrimental. As one studies the matter, the conviction grows that we have to do with a natural distribution of ability within the student body which is fairly constant and cannot be appreciably modified in these ways.

Whether, in spite of their futility for the purpose of raising the average standard of undergraduate performance, any of the artificial devices of compulsion in vogue in our American colleges have uses that warrant their continuance is a question about which there is much difference of opinion. The undergraduate degree itself is held by some to be at best a necessary evil of our system. Regular examinations, in the opinion of one writer, involve "the leveling down of thought and spirit." So long as we continue to graduate all, except the few who, in spite of our efforts, make complete shipwreck, it will be difficult to write examination papers that will command the respect and test the ability of the best members of the class. It is not intended here even to suggest that we should cease testing the attainments of college students, but that we should depart as widely as possible from the conditions noted by recent investigators who found that certain examinations in the German schools produced a change of metabolism as profound as that due to a severe illness. Suicide of students as the result of failure or through dread of failure in examinations is doubtless much less frequent in America than in Germany, but nervous breakdowns and even mental derangements are by no means unknown. Deplorable results of

\*See Report of the Dean of the College of Arts and Sciences for 1912-13, Appendix III, p. 11.

†See *Alumni News*, April 16, 1914.

this sort may be inevitable and they may perhaps be so infrequent that we might ignore them but for the fact that they are symptoms of a disease that affects a considerable portion of the undergraduate body.

The remedy, in so far as there is a remedy, is to be found in an environment as free as possible from compulsion, petty exaction, and artificial enforcements of all kinds. If it be true that the undergraduate body as a whole will work only under compulsion and will do no more than is exacted of it, then the case is indeed hopeless and we may expect from our labors only the results of which a compulsory system is capable. Work for its own sake flourishes only in a free atmosphere. Inspiration and enthusiasm do not most abound under a rigid and exacting régime.

The spirit of indifference—sometimes of antagonism, so far as it exists in our student body, is largely a bad tradition from the schools. It cannot be cured by a further application of the methods that have produced it. That the student mind will respond favorably to the influences of a really free environment in the university I am convinced; but with freedom must come incentive and the greatest incentive will be found in the existence throughout the institution of the spirit of research. Research is commonly regarded as belonging to the Graduate School but it is of vital import to the college also. For purely pedagogical reasons, if for no others, every teacher in the college should be an investigator. Nothing will appeal to the imagination and develop enthusiasm like the realization on the part of the student that discoveries are still to be made and that he is in touch with them through the work of the men under whom he is studying.

In our College of Arts and Sciences, the opportunities for research are unusual. The University Library, with its great special collections, offers rare material in several different fields; in several of the sciences our laboratories will compare favorably with the best to be found elsewhere.

This equipment has greatly increased within ten years, and it would be interesting to compare the intellectual output at the beginning and end of the decade just elapsed. Intellectual activity cannot be expressed in numerical terms, but the librarian's report of the publications by the faculty is perhaps not altogether without significance. Omitting book reviews, popular articles and the like, it appears that in the year, 1902-03, 49 members of the Arts faculty (out of a total of 100), published 105 papers which might be regarded as serious contributions. In 1912-13, 71 members published 175 such papers. The faculty meantime had increased to 134. It would appear therefore that a slightly larger proportion of the faculty are publishing than was the case ten years earlier and that the average productivity had also somewhat increased.

Faculty action during the year has, on the whole, tended towards somewhat freer and more flexible relations. Sick excuses have been abolished. The numerical marking system is to be abandoned in favor of one recognizing only four groups above the passing mark. The desire of a considerable body of students to arrange combinations of studies suited to their individual needs has been greatly furthered by the action modifying the requirements for the A.B. degree. Although an average of at least fifteen hours a term is necessary to qualify for the degree, twelve hours of Arts work in each term will suffice hereafter to fulfill the residence requirement, a provision which offers great opportunity

to ambitious students having definite plans that cannot be carried out under the present requirements of any of our colleges. It may indeed be found that the scheme will make unnecessary any further consideration of the new course proposed last year to meet such cases.

Respectfully submitted,  
EDWARD L. NICHOLS,  
Dean of the Faculty of Arts and Sciences

## APPENDIX IV

### REPORT OF THE DIRECTOR OF THE COLLEGE OF LAW

To the President of the University:

SIR: I have the honor to submit herewith the report of the College of Law for the year 1913-14.

All courses have been conducted substantially as announced. Assistant Professor Williams, who was appointed to conduct the courses in Quasi Contract, Insurance, Carriers and Domestic Relations, was taken ill just before Christmas and compelled to relinquish the work. Professor Woodruff then resumed the courses in Quasi Contract and Carriers and conducted them the remainder of the year. Assistant Professor Stagg assumed and completed the course in Insurance and in the second term conducted the course in Domestic Relations.

The Trustees have granted to Professor Drew and to the Dean leaves of absence for the year 1914-15. Professor Woodruff has been appointed acting Dean and Director for that year. Assistant Professor Stagg has been promoted to a full professorship and made secretary of the Faculty.

Charles Kellogg Burdick has been appointed professor of law. Professor Burdick is the son of Professor Francis M. Burdick, one of the members of the original Faculty of this College and now professor of law at Columbia University. He received the A.B. degree from Princeton in 1904, and the LL.B. degree from Columbia in 1908. After practicing about a year in New York City, he was appointed professor of law at Tulane University, filling that chair three years. In 1912, he was appointed professor of law in the University of Missouri, a position he resigns to accept the appointment at Cornell. He has also taught during two summer sessions at Columbia. He is the author of a number of valuable legal monographs.

DeWitte B. Wyckoff has been appointed acting assistant professor of law for the year 1914-15. Mr. Wyckoff received the LL.B. degree from Cornell in 1910. For about a year and a half he practiced law in the office of Mr. Henry W. Jessup, of New York City. The remainder of the time since his graduation he has spent in legal writing and editorial work for the American Law Book Co., being engaged chiefly in the completion of the *Cyclopedia of Law and Procedure*, and in the preparation of the *New York Annotated Digest*. During his senior year in the College he held the Boardman Law Scholarship.

The following table shows the registration in the College for the past fifteen years.

Year	Seniors	Juniors	4-Year 2	4-Year 1	3-Year 1	Specials	Total
1899-1900 . . . . .	52	61	—	—	61	4	178
1900-1901 . . . . .	45	52	—	—	78	7	182
1901-1902 . . . . .	34	71	—	—	86	7	198
1902-1903 . . . . .	48	77	—	—	95	5	225
1903-1904 . . . . .	53	76	—	—	109	3	241
1904-1905 . . . . .	58	80	—	—	86	4	228
1905-1906 . . . . .	65	69	—	—	85	4	221
1906-1907 . . . . .	51	70	—	—	89	1	211
1907-1908 . . . . .	48	68	—	—	85	5	206
1908-1909 . . . . .	48	58	15	29	71	6	227
1909-1910 . . . . .	49	56	22	54	70	10	261
1910-1911 . . . . .	48	69	28	61	68	6	280
1911-1912 . . . . .	65	80	47	102	25	12	331
1912-1913 . . . . .	74	52	75	65	22	10	298
1913-1914 . . . . .	48	75	51	71	19	6	270

Last year attention was called to a marked decrease in the number of new students and comment was made on the group of causes combining to lessen attendance. It will be seen that this year the number of new students has slightly increased. It appears probable, therefore, that excepting the increase in tuition effective in September, 1914, the causes referred to have spent their force and that in the absence of new disturbing elements a gradual increase might now be expected were it not for the increased rate of tuition. The effect of this can at present be only the subject of conjecture. The total attendance this year is considerably less than last year. It will be seen that the decrease is due to the difference in numbers of the senior classes last year and this. The class of 1914 is the first class that entered under the four year requirement. It was not augmented in its second year by any considerable number of three year students, and is therefore much smaller than the classes preceding and following it.

In addition to the students in the College of Law, 23 students from the College of Arts and Sciences have been pursuing law courses. Of these 15 took all the first year subjects. Of the regular law students 95 are from outside the state of New York. Last year there were 97; in 1911-12, 117; in 1910-11, 97; in 1909-10, 93; in 1908-09, 74; in 1907-08, 63; in 1906-07, 62; and in 1905-06, 57. The proportion is somewhat larger than last year. Fully one-half of the first year class reside without the state.

During the year eight students were dropped for failure in work, two were graduated in February, five were compelled to leave because of illness, and twelve withdrew for other reasons. The reason,—sometimes frankly disclosed and other times not,—for some of the withdrawals was the well-founded belief on the part of the student that he would be unable successfully to complete the work.

Eleven students hold academic degrees; of these three are in the first year class.

Increased appropriations granted by the Trustees render it possible to resume the courses in Admiralty and in Patent Law, discontinued two years ago, and also to establish lecture courses in Mining Law, Irrigation and Federal Jurisdiction, as recommended by the Dean in his last report. Provision has also been made for special lectures in addition to those provided by the gift of the Conkling Chapter of Phi Delta Phi mentioned in the report of last year. The Dean regards



the restoration of the lecture courses heretofore given and the installation of the new courses with much pleasure and with confidence that this supplementing of the regular curriculum will be of value to the students and commend the curriculum to the profession as one of unusual completeness.

With the change in the personnel of the Faculty, certain changes in the regular courses have been announced for the coming year. The tendency to transact business by means of corporations rather than by partnerships has greatly diminished the practical importance of the law of Partnership. Henceforth only two hours per week for a half year will be devoted to the subject. This affords an opportunity to offer a separate course on the law of Damages, which will be given by Professor Bogert. Heretofore the subject has been treated incidentally in connection with the various branches of substantive law and procedure. It is also planned to offer a few elective courses to be given by members of the regular Faculty. By this means the scope of instruction will be considerably extended and will compare very favorably with that of any other school.

The report of the librarian is herewith submitted. The small appropriation available during the past year has necessarily curtailed purchases. At the same time the librarian is to be highly commended for the wisdom with which the appropriation has been used. The generous appropriation made for the coming year will enable him not only to make current purchases but also to supply volumes which should have been bought during the past two years but could not be bought with the funds at his disposal. The best law school libraries are endeavoring to obtain and maintain collections in Roman and modern European law. In these subjects our library is deficient. The constantly increasing expense of maintaining a complete library of English law renders it improbable that in the near future university funds will be available for a library of foreign law. It is not, however, impossible that this purpose may appeal to the generosity of some friend of the College.

In conclusion the writer wishes to express his gratitude and that of the Faculty to the President of the University and to the Trustees for their cordial response to requests for aid in maintaining and improving the facilities of the College and so cooperating with the Faculty in their efforts to advance standards.

Respectfully submitted,

FRANK IRVINE,  
Director of the College of Law.

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## APPENDIX V

### REPORT OF THE DIRECTOR OF THE MEDICAL COLLEGE

To the President of the University:

SIR: I beg leave to make the following report upon the Medical School.

In its development our first care was the laboratory. Here and at Ithaca these have been brought up to a line from which we, entering the field of Applied Sciences, can bring our laboratories to closer touch with our bedside work. This has already been done in several instances in a tentative manner, but we lacked

a definite plan acceptable to all the departments of the School. After exhaustive consideration last spring, at the hands of the faculty, such a plan was devised, embodied in a set of resolutions, adopted, and approved by you. In brief, it was directed that the departments of Medicine and Surgery, in close connection with the departments of Anatomy, Chemistry, Physiology, Pharmacology, and Pathology, should organize and put in practice, as a part of our regular schedule, courses of undergraduate instruction which point out more definitely and systematically the clinical uses of these fundamentals in clinical problems.

The difficulties assumed to exist in the practical application of these sciences to clinical problems, are placed in the hands jointly of the heads of the several departments named, who acting in concert, have selected demonstrators, mutually acceptable, who will begin this teaching with the coming session.

The departments of Pharmacology and Physiology represented in the work of Prof. Coleman and Dr. Dubois, have done a great deal in demonstrating the value and practicability of such a course in these two subjects. The department of Anatomy has the outline of its obligations in this direction, in the course of Applied Anatomy given by Prof. Haynes and the demonstrations upon the live subject in force as a part of the regular instruction in Anatomy. The course on the Chemistry of Pathology given by Prof. Benedict holds a similar place in his department, but the sub-department of Clinical Pathology which has reached so prominent a place in our undergraduate system of instruction, is an index of the position into which we wish to fit concise yet full courses, covering only the bedside uses of our relatively pure sciences. No doubt all of this matter is presented to the student at some period of the course, but of necessity so detached from the points of practical contact, as to be with many, absent at the moment when the minds are best placed to make practical use of the knowledge in question. A great deal of the latent antagonism between the laboratory and clinical departments of study is due less to lack of effort to detach in concrete form the facts tending to elucidate clinical problems, than to the absence of a properly arranged plan, which would fit into the schedule at the right place and bring the facts and the student in contact at the crucial point, the bedside. The prime good to be expected of this plan is the bringing into our educational scheme the routine application of the facts of the laboratory to the problems of every bedside, not the exceptional bedside.

In view of the fullness of our schedule, this means the elimination from the students' recognized work anything like research. These courses must be confined, as far as possible, to the presentation of established facts which directly bear upon clinical problems present. The instructors fitted for such teaching being of necessity trained researchers, will be tempted to mix research with these courses, but this should be avoided in the interest of the general undergraduate schedule, yet an outlet may be afforded the exceptional student by allowing some extension of these studies into research, leading perhaps to the title on graduation "Medical Research Student" but with the understanding that the title depends as much upon the standing at graduation as upon the work done in the field of research.

I have to report the consummation of an agreement between the Board of Trustees of the General Memorial Hospital and the University by which your Medical Department takes over the Medical and Surgical administration of that institution.

Prof. Ewing who is directly responsible for the proper carrying out of the research involved, reports that the profound interest felt by many of our staff in the problems of cancer has been greatly stimulated by this affiliation. As has already been reported it was brought about through the influence and generosity of Dr. James Douglas. This hospital of 100 beds being organized and conducted in the interests of cancer research and nearly all branches of medical science believed to bear on the cancer problem being now represented therein, it may be confidently predicted that the care of the sick, the education of physicians, and the search for new facts in this entire field will be greatly facilitated.

Reference to the reports of the heads of our several departments will show that we are well equipped to meet any demands whether for undergraduate or post graduate instruction. When one contemplates the distressing state of affairs in Europe now unfolding, the necessity this country is under to be ready to meet the demands of advanced workers in our own professional field is accentuated. We are doubly fortunate that in material, equipment, skilled instructors, and directors of research we are prepared, if called upon in this emergency to supply what cannot be reached elsewhere. In this connection I refer you to the accompanying list which covers most of the laboratory and clinical research work carried on in the school during the past year:

**ANATOMY.** Prof. Stockard and his staff present the subjoined list: experiments to determine the influence of electrical and other stimulants on cell division and growth; growth and reaction of tissues *in vitro*. Growth processes in wound healing. Factors involved in cell division, and influence of poisons on protoplasm. Continuing his work on influence of secretions of internal glands on growth and differential development. Further researches on influence of alcohol, ether and similar substances on production of structural defects and degenerations in mammals. Origin and development of the blood and vessels in embryos experimentally caused to develop without a circulation.

**PHYSIOLOGY.** Prof. Lusk adds to his own researches those of Profs. Murlin and Wiggers.

Prof. Murlin continues his search into the relation of the internal function of the pancreas to other adjacent organs, and the energy metabolism in children. The latter he has carried on in conjunction with Dr. Bailey and Dr. Hoobler.

Prof. Wiggers continues his work in developing the utility of Franks' Optical recording apparatus, until finally by means of devices of his own invention pulse tracings and heart sounds have been accurately taken from patients in the second medical division of Bellevue Hospital and compared with the results of animal experimentation.

Reference is made to Prof. Lusk's report for further details of this work as well as his report upon results obtained through the work of the Russell Sage Institute of Pathology administered by him in our wards at Bellevue Hospital. He reports that he has had made analytical studies of nutritive value of food portions sold over the counter in a chain of popular restaurants, a study of considerable practical importance.

**CHEMISTRY.** Determination of amino nitrogen in urine; determination of sugar in small quantities of blood; further studies in creatine and creatinine metabolism; studies of changes in the blood and urine during certain diseases of children; studies to determine amount of salvarsan present in blood and spinal

fluid of cases under treatment of this drug; studies upon the effect of complete deprivation of carbohydrates upon the growth of malignant tumors.

**PHARMACOLOGY.** Reference is made to Vol. III Cornell University Medical Bulletin for various publications covering recent work. In addition the department reports studies upon rate of absorption of various drugs.

**APPLIED PHARMACOLOGY.** Diet problems in typhoid fever carried on in connection with Prof. Lusk through use of calorimeter of Sage Institute. Reported at last meeting of American Medical Association. Valuable findings made in joint work with Department of Experimental Pathology touching action of a certain bacillus, (*B. Acidophilus*) in treatment of certain intestinal ailments.

**THERAPEUTICS.** Satisfactory research done here investigating oedemas in nephritis and in cardiac decompensation. Also studies as to the causes of rheumatism and other forms of arthritis.

**PATHOLOGY.** This report covers the research carried on not only in pure Pathology, but in experimental as well. Also in Bacteriology and Experimental Therapeutics, the last covering the work done in connection with cancer research at the General Memorial Hospital. I refer you to the last issue of the University Medical Bulletin, Department of Pathology.,

The Department of Surgery reports very satisfactory results especially through the affiliation with the New York Hospital. Prof. Gibson's clinics at this institution are notable in the large variety of material presented, and the systematic use he makes of it. Improvement in the clinical clerkship work at Bellevue Hospital is also noted. In each one of the clinical departments of the school, instructors charged with recitations have of late needed closer supervision by the heads of these departments. That of surgery has met this by providing rules which will ensure that the classes will be carried directly through their exercises with the paramount view of giving the student a general knowledge of many things, rather than a close detailed knowledge of a few, the latter being reserved for the lectures, clinics, sections, and clinical clerk exercises.

The Department of Medicine has been expanded to take over the entire course already described, as organized in conjunction with the laboratories, for the purpose of teaching systematically as a part of our undergraduate courses the clinical uses of the applicable facts from all the laboratories. It thus enriches its curriculum through the assimilation of courses in clinical Chemistry, Physiology, Pathology, and Pharmacology. To accommodate this extension, the following places have been created: an Assistant Professor of Medicine and Instructorships covering each of the subjects named. Each of these teachers gives all his time primarily to teaching (as has already been stated) the accepted clinical facts of the subject they represent. As this takes but a few hours of the total they will give, the remainder will be devoted to research in their particular fields. In this way we intend not only to enrich our curriculum, but form an organized body from our younger workers whose special business along with other duties will be to gather and test all new laboratory findings claiming to be available in the bedside investigation and treatment of injuries and diseases. In conjunction with other laboratories and hospitals a clearing house of some authority might thus in time be built up.

The prominence now given occupational diseases, and injuries, owing chiefly to the activities of boards of health and the demands of employers' liability

insurance, has been met by Prof. Thompson not only in his valuable work of 700 pages just published, covering occupational diseases but by studies upon the ailments in question he has instituted at the college dispensary. He is also co-operating in our dispensary and laboratories with the Public Health Department of the United States Government in the investigations our Government is carrying on in this city (intensive investigation of the garment industry.)

All the special departments make gratifying reports of progress. But I call attention especially, however, to the need for an extension of our facilities for treating diseases of the nervous system. The inter-relation of this department and that of Psychology is becoming more pronounced as they have to broaden their fields of operations. In conclusion, I submit a statement of the number of students we had in attendance this past year, and make the gratifying report that several of our women graduates have been appointed as members of the interne staff at Bellevue Hospital.

Respectfully submitted,  
W. M. POLK,  
Director of the Medical College.

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## APPENDIX VI

### REPORT OF THE SECRETARY OF THE ITHACA DIVISION OF THE MEDICAL COLLEGE

To the President of the University:

SIR: I have the honor to submit this report of the Ithaca Division of the Medical College for the academic year 1913-1914. This completes the sixteenth year since the Medical College was established. The work has progressed normally and without marked change in the curriculum. All departments have been actively engaged in research but the attitude of the instructors toward their teaching has not been thereby so warped that it has been considered a secondary matter and a nuisance, as often happens, but on the other hand the research has given added enthusiasm to the teachers and has been a source of inspiration to the students.

There have been few changes in the faculty this year. The most important was the resignation in the middle of the year of Dr. Badertscher of the Department of Histology and Embryology. To take care of this work, Assistant Kingery was promoted to an instructorship and an additional assistant appointed for the Arts and Veterinary work. To care for the increased number of students in the Department of Physiology, Assistant Livingston was promoted to an instructorship and an additional assistant appointed. A new assistant was also appointed in the Department of Anatomy. I have now to report a very serious loss to the Medical College in the resignation of Assistant Professor Andrew Hunter who leaves this June to accept an important research position at a much higher salary. He is to have charge of the Biochemical side of the investigation of Pellagra which the United States Government is making in the recently established hospital at Spartanburg, South Carolina. He will have three trained chemists to assist him and the position offers unusual opportunities to a person of Dr. Hunter's training and abilities. In his six years with us, Dr. Hunter has proved himself

an admirable instructor and a brilliant researcher. The instructor in this department, Mr. Maurice H. Givens, has also resigned to act as an assistant to Dr. Hunter in his new work. The positions in Biochemistry have not yet been filled but it is hoped that recommendations may soon be made.

In this, the sixth year with the requirements of three or more years of college work for admission to the Medical College, the number of students registered has increased to fourteen. This is the largest number in any year except 1910-1911. Six of the students were college graduates and eight seniors in the College of Arts and Sciences; three were women, two graduates and one a senior; and of the eleven men, four were graduates and seven seniors. The quality of the work done by the students has been unusually good this year.

In my report last year I pointed out the close relations between the Medical College and some of the other colleges of the University, particularly the College of Arts and Sciences, and the large number of students in other colleges receiving instruction from the Faculty of the Medical College. I must now report that the number has still further increased in each department of the college, but particularly in Physiology where during the past year there were 570 registrations in both terms and the actual number of students receiving instruction was 486. Without minimizing in any way the importance of any of the other courses, I wish to call your attention particularly to the elementary course in human Physiology. This is a course exactly suited to the needs of all average students who do not intend to study medicine and it gives them an elementary knowledge of the structure and function of their bodies such as every one should have. It should aid them greatly in maintaining their health and thus add materially to their efficiency. I wish that every student in the University could take this course and should like to see it obligatory.

In the department of Anatomy the work has been normal and not markedly changed from last year. There have been in addition to the medical students and one student in the College of Arts and Sciences, eleven graduate students doing work in the department this year. The teaching work for the staff has been heavy but in spite of this much research is in progress. The greatest needs of the department are additions to the staff, particularly an assistant professor and a technician devoting his whole time to the work in Anatomy. The College of Arts and Sciences and the Trustees have made the Professor of Anatomy in the Medical College a professor also in the College of Arts and Sciences and, in the future, work suitable for general students will be given. There should be a course in anatomical methods for premedical and biological students and a course in elementary Human Anatomy for those preparing to teach Physiology.

In the Department of Histology and Embryology teaching work has been normal with a considerable increase in the number of students over last year. There were ten graduate students taking work in the Department and much valuable research work has been completed or is now under way by members of the staff and by graduate students.

I have already called attention to the great increase in the number of students in the Department of Physiology. Owing to the distribution of the elementary course for Arts students over both the first and second terms and to the division of the class in the second term into three sections, the lecture room has been large enough to accommodate the class. In the laboratory course, however, every

place was filled and many who desired to take the work had to be turned away. It is hoped that by next year through the manufacture of new apparatus by the mechanic and the purchase outside of several recording drums to considerably increase the facilities of the laboratory. Instructor Livingston has resigned to accept a position in the Hygienic Laboratory of the Department of Agriculture and this position has been filled by the promotion of Assistant Rasmussen. A number of papers have been published from the department and a considerable amount of research is now under way. In addition to this a small volume of outlines of human physiology intended for the elementary course students has been prepared by Dr. Simpson and the laboratory directions for both medical students and arts students have been printed on the department press. A Solomonsen string galvanometer has at last been delivered and is in the process of being installed in a room in the basement at the west end of Stimson Hall. This is a most valuable addition to the resources of the laboratory. The rooms for experimental animals on the Veterinary College grounds have been a decided help in preventing overcrowding of the animal house at Stimson Hall. It is hoped in the near future that it may be possible to erect a specially designed house for animals at some point within easy distance of the campus and yet sufficiently far away from dwellings so that the animals may not be a nuisance. A properly equipped surgery for animals is also greatly needed.

More students have been taking the work in Biochemistry than ever before. It is clear that there is an increasing demand among various classes of students for instruction in Biochemistry and the demand for such instruction is liable to grow considerably in the near future. The Veterinary College proposes to make Biochemistry an elective subject in its curriculum and the Department of Home Economics is to require the subject for all those who take its four year curriculum and they have requested that a suitable course especially designed for these students combining lectures and laboratory work shall be provided for the coming fall. It is probable that there will be between 40 and 50 students taking this course and as the laboratory accommodates but 30 it will be necessary to provide additional space or to duplicate the course.

One of the greatest functions of the better medical schools in addition to training physicians for the practice of medicine is to train others who shall devote themselves to teaching and research. It has become increasingly difficult every year to secure properly trained assistants and instructors in the medical schools of this country. There are a number of first class positions as heads of departments which are now vacant and many good positions in the medical colleges have in the last few years been filled by men without medical training. The large gifts in recent years made specifically for medical research purposes imposes an additional burden on the first class medical schools, for in order to carry out the intent of the gifts the research institutes must be manned by capable, well trained investigators and it is only the best medical schools, such as ours, that can prepare men to undertake these investigations. The medical schools are still further handicapped for in order to give this kind of instruction it is necessary that professors and instructors shall be men of unusual ability and thoroughly trained and the opportunities in the practice of medicine for such men are so great that it is difficult to induce them to devote themselves to teaching careers with the salaries which are at present paid. This means that future endowments

for medical teaching must be secured in order that adequate salaries may be offered to attract men of the best ability to teaching and research positions in the medical schools and further that there must be well paid fellowships and assistantships so that the younger men may spend some years in training in order to be prepared for the better independent positions.

I am glad to report that the Faculty of our College have always realized that the first object of a medical school is the training of physicians and that the greatest number of our students will become practitioners of medicine. But while caring for this important class of students, the faculty have never lost sight of the equally important, though smaller, group of students particularly endowed by nature and with research instincts. The research work in progress in the various departments has been an especial stimulus to students of this class. But during the regular medical course there is little opportunity to give special training to this group of students so provision must be made for such instruction after graduation in medicine. The Ithaca division of the Medical College, through appointments as assistants, has furnished such training to a small number of men who are now occupying responsible positions in teaching and research in other institutions. The Medical College here is particularly well equipped and the staff of the school is well fitted to give such training. Moreover, the environment of Ithaca and the close association with other departments of the University is especially advantageous for this kind of work. In order, however, to carry out the plans of the faculty in this respect, it will be necessary to have additional funds in order to reestablish the second year and to create additional assistant professorships, instructorships, and fellowships. The great need in medical research is for men adequately trained by the University and in the fundamental sciences which are represented in the first two years of a medical school and the Ithaca Division of the school presents unusual opportunities for such training.

Respectfully submitted,

ABRAM T. KERR,

Secretary of the Ithaca Division of the Medical College.

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## APPENDIX VII

### REPORT OF THE DIRECTOR OF THE NEW YORK STATE VETERINARY COLLEGE

To the President of the University:

SIR: I have the honor to submit herewith the report of the New York State Veterinary College for the academic year 1913-14.

The work for the present year has been along the regular lines of teaching and research. The results have been quite as satisfactory as those of any previous year and in some respects more so. The new hospital and clinic buildings for large and small animals were opened with appropriate exercises Nov. 15, 1913. The addresses delivered on that occasion, with illustrations of the buildings, were published in Volume IV, No. 19, of the Official Publications of the University. These buildings are very satisfactory and when equipped will afford excellent facilities for teaching veterinary clinical medicine.



There were few changes from last year in the personnel of the teaching staff. It is deemed wise to retain as far as possible assistants and instructors who are satisfactory teachers. Although this plan slightly increases the amount required for salaries, the results are so much better that we believe the method is justified. In order to maintain a high teaching efficiency and at the same time keep within the limits of our appropriation, few courses of instruction not required in our curriculum are offered. It is possible, however, for students who are properly prepared and who wish to do advanced work to receive such instruction in the various departments. It is hoped that eventually a number of advanced courses may be provided.

The faculty consists of a total of twenty-two persons, of whom seven are full professors, three assistant professors, five instructors, three assistants, one horse-shoer, one superintendent of the Veterinary Experiment Station and two student assistants. In addition to this, other departments in the University give instruction to our students in Animal Husbandry, Chemistry, Histology and Embryology and one course in Parasites. In the future this college will give all of the instruction in parasites. In return for this, the Veterinary College is giving instruction to a large number of University men in Physiology and a smaller number in Pathology and Bacteriology.

The necessary work in connection with the college office, care of buildings, experimental animals, care of animals, the different hospitals and work at the Veterinary Experiment Station requires the services of fourteen persons.

In addition to the regular instruction, special lectures have been given at the college during the year by Dr. W. B. Switzer of Oswego, Dr. Theobald Smith of Harvard University, Dr. John W. Adams of the University of Pennsylvania, Mr. George L. Flanders of the State Department of Agriculture, Mr. J. C. Buckley of Detroit, Mich., Dr. H. S. Beebe of Albion, N. Y., Dr. W. G. Hollingworth of Utica and Dr. G. T. Stone of Binghamton.

The completion of the farriery and its partial equipment have made it possible for the first time in the history of the college to give practical instruction in horse-shoeing. In addition to this, two short courses for practical horseshoers were given. There has been much interest manifested throughout the state and country in this work. Those who have taken the course are enthusiastic over it.

The new buildings have made it possible to give much better instruction in clinical medicine. The hospital facilities for both large and small animals are excellent, and as a result the clinics have increased materially. The increased growth of the clinics during the past six years is indicated in the appended table:

NUMBER OF CASES TREATED IN THE DIFFERENT CLINICS BY YEARS FROM 1907-8  
TO 1912-13 INCLUSIVE

Year	Consulting and medical	Surgical	Small animal	Ambulatory	Total
1907-08	175	48	103	—	—
1908-09	303	138	327	351	1,119
1909-10	332	141	274	695	1,442
1910-11	370	195	324	1,287	2,176
1911-12	215	246	351	937	1,749
1912-13	376	254	318	962	1,910

A feature of the clinics worthy of special mention is the constantly increasing number of cattle, hogs, and sheep that are being treated.

The ambulatory clinic has proven to be a valuable addition to the teaching of practical medicine and surgery. As a large part of the work for the veterinarian is in the control and treatment of the diseases of food producing animals, we are fortunate in having facilities for our senior students to study and treat the diseases of such animals under the supervision of able teachers.

In January a two day conference for practicing veterinarians was held. More than fifteen per cent of the practitioners of the state were present. This effort on the part of the college to assist the veterinary profession seems to be fully appreciated. In addition to this, the college has given much assistance to the practitioners in making laboratory examinations for diagnoses. A summary of these examinations shows that for the year 1912 and 1913 there were 76 examinations for anthrax; 1173 for glanders; 81 for poultry diseases; 285 for rabies; 68 for tuberculosis; 39 for tumors; and 136 miscellaneous. There were made and sent out in the state during the same time 11,680 doses of anthrax vaccine; 7,867 doses of anti-hog-cholera serum; 3,678 doses of mallein; and 61,372 doses of tuberculin. The demand for diagnoses and diagnostic, prophylactic and specific therapeutic agents is steadily increasing.

The assistance rendered by the prompt diagnosis of infectious diseases of animals that require the facilities of a laboratory is of great aid not only to the veterinary practitioners and the owners of the animals in question, but also to the live stock interests of the state, as it enables the authorities to apply methods of control before the diseases have caused serious loss. As the quantity of this work is steadily increasing, it is reasonable to assume that it is appreciated and that it is accomplishing its purpose.

The research work has been largely a continuation of that begun in the past. The investigations on sterility and infectious abortion in cattle, hog cholera, tuberculosis and anthrax are promising. The detection of spreaders among tuberculin reacting cattle that fail to show physical evidence of disease promises much of practical value to the cattle owners. Important researches on the means by which hog cholera is spread are well under way. A study of the bacterial flora of the intestines of calves suffering from white scours and other researches on important subjects are in progress.

The annual report of this college to the legislature for 1912-13 contains the results of the work on bob veal, infectious abortion, the differentiation of glanders nodules from those caused by parasites, hog cholera serum and a study of an outbreak of "cerebro-spinal meningitis" (encephalitis) in horses in Kansas and Nebraska in 1912. The last named is of much significance to the equine industry of this state. In addition to these special articles embodying the results of investigations carried out by the different departments, the annual report contains details relative to the various clinics and other work of the college. A copy of this report is sent to every licensed practitioner of veterinary medicine in the State.

#### NEEDS OF THE COLLEGE

The needs of the college are measured by the demands of the live stock interests of the state for the ascertaining of new facts concerning the nature, prevention and treatment of animal diseases and the requirements for the proper teaching and training of men to practice veterinary medicine. These guiding factors are variable. New diseases among animals are appearing from time to time. The

discoveries in the basic sciences are constantly placing new interpretations upon theories supposed to be established and phenomena heretofore thought to be understood. The live stock industry, which yields about two-fifths of the agricultural produce of the state, suffers heavy losses from disease that it is the function of this college to minimize. This can be done only by ascertaining the necessary facts through research and by properly training students for the practice of veterinary medicine. It is the practitioner who comes in close touch with the animal owner who must apply the methods for prevention as well as administer treatment to the sick and injured.

In order to make progress, it is necessary for the college to have, in addition to its regular staff of teachers and research men, facilities for teaching and funds available for use in such special directions as the conditions require. It is not possible to anticipate the appearance of unexpected diseases or the particular line of investigation most needed or the cost of such work. The losses due to disorders among breeding animals call for a specialist to work on those subjects and facilities for their proper emphasis in teaching. There is need of a department for the study of poisonous plants including fungi and to give instruction on forage plants.

In my report for 1912-13, I called attention to the need which is becoming a necessity for more room for museum, office, library, lecture room and laboratory for bacteriology, pathology and diagnosis work. The buildings needed are the south wing to the James Law Hall and a laboratory building. It is hoped that an appropriation for at least one of these can be secured at the next session of the legislature.

It is recommended that the trustees ask the legislature for the following appropriations for the year 1915-16:

Maintenance .....	\$70,000
Equipment of new buildings .....	7,500
For south wing to main building .....	75,000

The faculty has entered into the work of the college with enthusiasm and co-operation. The purpose uppermost in mind is the fulfillment of the obligation of the college to the state.

Respectfully submitted,

V. A. MOORE,

Director of the New York State Veterinary College.

## APPENDIX VIII

### REPORT OF THE DIRECTOR OF THE NEW YORK STATE COLLEGE OF AGRICULTURE

To the President of the University:

SIR: In his report of last year, Acting President Crane recorded the resignation of Dr. L. H. Bailey as Director of the New York State College of Agriculture and the appointment of W. A. Stocking, jr., as Acting Director for the year 1913-14, the appointment to take effect August 1.

Obviously it is not the function of one filling a temporary position to attempt to lay new plans or to inaugurate new policies, but rather to devote his attention

to the carrying out of plans and policies already established. Therefore, the Acting Director has not attempted to establish new policies for the College of Agriculture, but has devoted his energies to assisting the various departments of the College to carry out the work already planned by Director Bailey. My report, therefore, will be a statement of the activities of the College during the present year without attempting to formulate new policies for the future.

#### EDUCATIONAL POLICY

The rapid increase in the number of students in the College of Agriculture during the last few years has made it difficult for the teaching staff to provide adequate facilities for the instruction of the student body. Agriculture is one of the newer fields of knowledge and some time will yet be required to place our body of knowledge in good pedagogical form. During the present year the increase in the number of students has continued, but nevertheless the Faculty has been able to devote much careful study to the organization of its courses of instruction and the standardization of its work. For many years to come the work of the College will necessarily undergo gradual modification and improvement, and the lines of work that have been established during the rapid expansion of the College will be more definitely defined and settled. In a new field of collegiate education in which much pioneer work must be done, time and patience are required for the standardization of the instruction.

Under the law establishing the College of Agriculture as a state institution, the College is required to devote part of its energies to extension work away from the College. Formerly much of the extension work was done by members of the teaching staff. Believing that the highest standards of instruction will be best maintained when the instructing staff applies its energies mainly to the business of teaching without interruption, the faculty has now fully indorsed the administrative policy adopted a few years ago, and already in good measure worked out, of having a special corps of persons for extension work so that it will be unnecessary for a member of the teaching staff to do non-resident extension work during the term in which he gives instruction to college classes; and the persons who are engaged in extension work will not, in general, be called upon for any duties other than those pertaining to the extension service.

Much consideration has been given in the last three or four years to the residence requirements for graduation. It has been possible for meritorious students to complete the requirements for graduation in seven terms and such graduation has been allowed. The Faculty feels, however, that time as well as subject matter is an important element in education and that eight terms of undergraduate work are essential, and it has adopted the policy of rigidly requiring eight terms of residence for graduation except in cases of students who, having completed their work in seven terms, wish to register in the graduate school. Such registration may be allowed only with the approval of two members of the candidate's graduate committee and on the filing with the Secretary of the College of Agriculture of an acceptable schedule of work for the term. In such case the student shall not receive his bachelor's degree until the satisfactory completion of the eighth term of work has been reported by the Dean of the Graduate School to the Secretary of the College.

In his report last year Director Bailey noted the establishment of a third term in the College of Agriculture, to be equal in length to each of the present terms.

This third term has now been established and will extend this year from June 8 (immediately following the close of instruction in the second term) until September 23 (closing just before the beginning of instruction in the fall term). This gives a term substantially equivalent in length to each of the present University semesters. The offering of courses in this third term is optional with departments. It is not expected that all departments will offer work during this term. The departments most vitally interested in summer work are those having to do with the plant industries, including botany, plant breeding, plant pathology, pomology, soil technology, floriculture, vegetable gardening, entomology, biology, and poultry husbandry. It is expected that the major part of the work given during the summer term will be offered by this group of departments. The summer term is established primarily for advanced and postgraduate study, and applicants are not eligible for admission until they have fully satisfied the fundamental work required in the freshman and sophomore years of our regular four year course. In view of the fact that the introduction of a new term affects the organization of the entire college year, it has been possible this summer to offer only a limited number of courses. After the present year, when the readjustments will have been made, it is expected that courses will be given by other departments in addition to those above mentioned. A sufficient number of courses are offered for the present summer, however, so that students have considerable choice in arranging their schedules. The policy has been established that all required courses and those which are prerequisite to the fundamental work in other departments shall be given in either the fall or the spring term, or both, even though they may be repeated in the summer term. This provision will guard against any obligatory attendance in the summer term on the part of undergraduates.

#### LIST OF COURSES, THIRD TERM, JUNE 8 TO SEPTEMBER 23, 1914

**Botany:** Taxonomy of the Higher Plants; Research in Histology, General Botany, and Taxonomic Botany; Seminary; Advanced Plant Physiology; Advanced Plant Physiology, Laboratory Course; General Seminary in Plant Physiology; Research in General Physiology.

**Dairy Industry:** Milk Composition and Tests; Advanced Testing.

**Entomology, Biology, and Nature Study:** General Entomology; Elementary Morphology of Insects; Elementary Systematic Entomology; Morphology and Classification of the Arachnida; Morphology and Development of Insects; Histology of Insects; Research in Morphology of Insects; Relations of Insects to Disease; General Limnology; Research in Limnology; Seminary.

**Floriculture:** Commercial Floriculture; Greenhouse and Garden Practice; Garden Flowers; Amateur Floriculture; Investigation in Floriculture; Seminary.

**Plant Breeding:** Plant Breeding; Advanced Plant Breeding; Research.

**Plant Pathology:** Plant Pathology; Mycology; Research.

**Pomology:** Elementary Pomology; Elementary Pomology, Laboratory Course; Research in Pomology.

**Poultry Husbandry:** Feeding and Care; Incubator Practice; Brooder Practice; Farm Poultry; Seminary; Research.

**Rural Engineering:** Farm Mechanics; Farm Engineering; Farm Structures.

**Soil Technology:** Principles of Soil Management.

**Vegetable Gardening:** Systematic Vegetable Crops; Practice; Undergraduate Research.

## ENTRANCE AGRICULTURE

In the year 1910 instruction in agriculture was introduced into the high schools of New York State as a regular four year course under the supervision of the State Education Department. This instruction is now well organized in a considerable number of high schools, and applicants who have completed the four year high school course in agriculture are now applying for admission to the State College of Agriculture. The College has followed the development of the high school instruction in agriculture carefully, anticipating the time when it would be desirable for the College to fully recognize the agriculture for admission. On May 6, 1914, the Faculty of Agriculture transmitted the following recommendation to the University Faculty:

"The Faculty of Agriculture recommends to the University Faculty that entrance subject No. 16, which now reads 'Agriculture,  $\frac{1}{2}$  or 1 unit,' be altered to read 'No. 16. Agricultural subjects,  $\frac{1}{2}$  to 4 units'; and that a footnote be added that not to exceed four units will be allowed in vocational subjects."

This recommendation was received and approved by the University Faculty on May 8, 1914.

This action will fully meet the requirements of the high schools in which four year courses in agriculture have been introduced. At the same time it is a logical educational step for the University to take. The Faculty of the College fully recognizes the danger in encouraging over-much high school preparation in vocational subjects for admission to a college course which of itself is strongly vocational, but it has safeguarded itself by the provision that not to exceed four units in all vocational subjects shall be allowed for admission. Under the entrance requirements which were in force prior to the action of the University Faculty of May 8, it was already possible for applicants to offer three units in vocational subjects for admission to the University.

## FELLOWSHIP IN AGRICULTURE

For many years the only graduate fellowship open to students who were taking their postgraduate work in the College of Agriculture was the one assigned to the Departments of Agriculture, Horticulture, and Veterinary Medicine, and shared jointly by the Colleges of Agriculture and Veterinary Medicine. By the action of the Board of Trustees on June 17, 1913, however, this fellowship was divided and three hundred dollars of the available funds was appropriated to the College of Agriculture and two hundred dollars to the College of Veterinary Medicine. The Agricultural College Council subsequently recommended that there be continuously appropriated from the funds of the College of Agriculture two hundred dollars a year for the graduate fellowship, so as to make available a fellowship in agriculture of an annual value of five hundred dollars. This fellowship was, therefore, available for award for the first time in the spring of the current academic year.

## STUDENT REGISTRATION

The registration of students in the College of Agriculture for the year 1913-14 (including the summer school and the winter courses) is as follows:

Graduates .....			151
Regulars:			
Freshmen .....	451		
Sophomores .....	362		
Juniors .....	301		
Seniors .....	208	1322	
Specials .....			131
Total full year students .....			1604
Winter Courses:			
Agriculture (General) .....	277		
Dairy Industry .....	106		
Home Economics .....	56		
Fruit Growing .....	49		
Poultry Husbandry .....	44		
Floriculture .....	13		
Vegetable Gardening .....	10	555	
Summer School (1914) .....		384*	
Total .....			2543
During the year degrees have been conferred as follows:			
Baccalaureate .....	207		
Masters .....	21		
Doctors .....	12		
			240

\*Incomplete.

The increase in student registration this year over last year is 221.

It is of interest to note that the percentage increase in enrollment of undergraduates for the year is 15.8, while the percentage increase in students paying tuition is 93.8. This would appear to indicate that the rapid growth in students in the College of Agriculture during the past few years has not been strongly affected by the fact that tuition is not required of residents of New York State.

#### TEN YEARS AS A STATE COLLEGE

It was on May 12, 1904, that Governor Odell approved an act appropriating \$250,000 for the erection of buildings for a College of Agriculture at Cornell University and establishing the College as a state institution. The present year completes the first decade in the history of the College as a state institution. This decade represents also the period of service by Professor Liberty Hyde Bailey as Director of the College of Agriculture, he having been elected to that position by the Board of Trustees in the spring of 1903. A brief statement of the development that has taken place during this period is of interest.

In 1904 the only class building devoted exclusively to the purpose of the College of Agriculture was the old Dairy Building, now comprising a part of the north wing of Goldwin Smith Hall. In addition to this, the College occupied quarters in the north end of Morrill Hall and at the old forcing houses. The buildings of the College of Agriculture at that time were valued at about \$60,000. At the present time the value of the buildings belonging to the College is approximately one and one quarter millions of dollars. At the beginning of this ten-year period twenty-five courses of instruction were offered in agriculture. There were six full professors, one assistant professor, and two instructors. During the year 1913-14 there

have been two hundred and twenty-four courses of instruction offered in the College, and the Faculty has consisted of forty-six full professors, twenty-six assistant professors, and fifty-seven instructors. In the first year of the decade the student enrollment was two hundred and ninety-six; this year it is twenty-five hundred and twenty-six. It is interesting to note the fact that at the beginning of this period approximately one half of the total student body were special students, while at the end of this period less than one tenth are specials. This enormous growth in student body, faculty, and material equipment, is abundant evidence of the remarkable leadership of Director Bailey. The esteem in which Director Bailey is held by his colleagues is indicated by the following communication presented to him on his retirement from the Directorship:

"ITHACA, N. Y., July 31, 1913.

"Professor L. H. Bailey,

"Director of the New York State College of Agriculture.

"Dear Friend and Colleague:

"We come as representatives of the Faculty of Agriculture to express the regrets of this Faculty that you are about to retire from the position of Director of this College.

"The Faculty would have come in a body to bring this message, for every member of it shares these regrets, but it was felt that a less formal procedure would be more acceptable to you. Still we could not let this day pass without expressing to you our feelings.

"The present successful condition of this College is due to the combined efforts of many earnest men and women devoted to the cause of agricultural education; but every one of these workers realizes that the opportunity for doing this work in so successful a way is due more largely to your efforts than to any other cause.

"The confidence which the people of the State have in you is the chief cause of the magnificent material support that has been given the College.

"Your breadth of view in organizing and administering the College has enabled your colleagues to work in a much more efficient manner than would have been possible under less wise leadership.

"You have laid the foundation of a broad College of Agriculture and have built on this foundation an institution that stands forth as an ideal of what a College of Agriculture should be.

"The practical phases of agricultural education are well cared for. Instruction in the sciences upon which intelligent agricultural practice must be based is provided. Opportunity for original investigation is offered, and the means of publishing the information obtained is well systematized.

"Not only are the needs of the students that come to the College provided for; but through the extension department and the cooperation of members of the staff with that department, any tiller of the soil in need of help can obtain the best available information.

"This is the kind of institution that you have organized and brought to a high degree of efficiency.

"We wish that it were possible for us to continue to work under your wise leadership. But we are sure that your influence will remain with us; that we shall continue to try to realize the ideals that you have established. The momentum obtained is so great that the institution is bound to continue its work along the lines laid out by you.

"We know that your work here has not been an easy task, that there has been much to trouble and perplex you. But the head of a college never had a more loyal and devoted following in his Faculty than you have had.

"And while you are to leave us for the sake of a freer life, do not think we are jealous of what takes you away from us. Although we are borne down by the sense of our loss and the loss to the College, every heart rejoices that you are to have just what you have longed for during these years when you have been fettered by administrative work.



"We shall hope that you will keep us close to you as friends though we may no longer be colleagues, and that, through our sympathy with your ideals, we may proudly share your future work."

The Faculty of the College of Agriculture has presented to the University a portrait of Director Bailey painted by Henry Salem Hubbell. This portrait has been accepted by the University and is hung in the entrance to Bailey Hall.

#### COLLEGE STAFF

During the year the following professors have been added to the staff of the College of Agriculture:

Professor Edward Albert White, B. S., formerly head of the Department of Floriculture and Landscape Art at the Massachusetts State College of Agriculture, was elected Professor of Floriculture and head of our department on July 26, 1913. He took up the duties of his new position at the beginning of the academic year.

Professor Maurice Chase Burritt, B. S. in Agr., Extension Professor and State Director of Farm Bureaus. Professor Burritt began his work on January 1, 1914, taking the place of Lloyd S. Tenny, resigned. Professor Burritt is a graduate of our College of Agriculture and for some time preceding his appointment had been editor of the Tribune Farmer.

Professor George Alan Works, B. Ph., M. S. in Agr., formerly Associate Professor of Agricultural Education at the University of Minnesota, was appointed Professor of Rural Education on May 2, 1914. Professor Works received his training at the University of Wisconsin, and has had several years experience as teacher and principal in high schools and three years as superintendent of schools. Professor Works will take up his duties here as head of our Department of Rural Education on July 1.

Professor Rollins Adams Emerson, Ph. D., was appointed on June 15, 1914, Professor of Plant Breeding and head of our department in place of Doctor Webber, who resigned a year ago. Professor Emerson was graduated from the University of Nebraska in 1897, was horticulturist in the United States Office of Experiment Stations in 1897 and 1898, and was appointed Assistant Professor of Horticulture at the University of Nebraska in April, 1899, later being promoted to a full professorship. Professor Emerson has given special attention to work in plant breeding and has done special work in this subject at Harvard.

Ralph Sheldon Hosmer, B. A. S., M. F., was appointed Professor of Forestry in charge of the department on June 15, 1914. He will take the place of Professor Mulford, resigned. Professor Hosmer received his training at Bussey Institution and Lawrence Scientific School at Harvard. He then spent some time in the Government Forestry Service, and since 1903 has been superintendent of forestry in the Territory of Hawaii. He received the degree of Master of Forestry from the Yale Forest School in 1902. He will take up his new duties with the beginning of the next academic year.

Sabbatic leaves of absence have been granted to Professors Lyon, Whetzel, Cavanaugh, and Warren for a whole or part of the present academic year.

Early in the year Professor Walter Mulford, head of our Department of Forestry, tendered his resignation, which was accepted by the Trustees at their meeting on May 2. Professor Mulford has been exceptionally successful in his work here and his departure means a distinct loss to the College and to the forestry work in New York State.

With the close of the current academic year, Professor John Henry Comstock retired from active service and was appointed Professor Emeritus at the June meeting of the Board of Trustees.

For over forty years Professor Comstock has given active and loyal service to Cornell University. Beginning as an undergraduate assistant in charge of a special course in entomology, he has developed a department of world-wide reputation. It is impossible to measure the influence of his work. Beginning at a time when the science of entomology was almost unknown in this country, he has established standards of education in the applied phases of the subject, insisting always that a broad training in the pure science must precede and underlie the practical applications. The result has been that his students have been among the foremost leaders in the development of all branches of entomology. More than a hundred of them have been teachers or have held important positions in national and state departments of entomology in this and foreign countries.

Professor Comstock's own research in both the pure and the applied science has been fundamental and has won international recognition.

Fortunately we are not to lose his influence and his counsel, for, as Professor Emeritus, he is to retain his private room in the Department of Entomology and will there bring to completion some of the important researches and textbooks that he has under way.

#### COLLEGE BUILDINGS

By action of the Board of Trustees on recommendation of the Faculty of Agriculture, the main administration building has been named Roberts Hall, in recognition of the long and faithful service rendered by Professor I. P. Roberts as Director of the College.

The new auditorium has similarly been named Bailey Hall, in honor of Director Bailey.

During the year considerable progress has been made in the erection of buildings in accordance with the ten-year plan for the development of the College of Agriculture which was approved by the Board of Trustees in 1910. The new auditorium (now named Bailey Hall) was practically completed and occupied during Farmers' Week in February, 1914. The College of Agriculture has had no assembly hall of sufficient size for general gatherings of students and Faculty. Bailey Hall will be of much value for this purpose as well as for frequent meetings of farmers and for general University purposes.

The new Forestry Building is now practically completed and has been occupied since May by the Department of Forestry. The building was informally opened on May 15 and 16.

The new Animal Husbandry Building and the Stock Judging Pavilion, situated at the east of the playground, are nearing completion and will be occupied during the summer.

The new Agronomy Building is progressing rapidly and will be ready for occupancy this fall.

Headquarters for the Department of Landscape Art have been provided by the removal and remodeling of the old central poultry building, which is now located at the northeast corner of the agricultural quadrangle. While this is an inexpensive building somewhat temporary in its nature, it serves as very comfortable and satisfactory quarters for the department for the present time.

For several years the increase in registration has been so rapid that it has been impossible to provide buildings for proper instruction. The registrations to date for next year indicate that the increase will continue. It is essential that we secure more buildings as quickly as possible. The ten-year plan for the development of the College of Agriculture, which was approved by the Board of Trustees in 1910, and accepted by the Legislature, should be worked out as rapidly as possible. The building most needed at the present time is for some of the plant industry departments. Several departments are now housed in quarters entirely inadequate and not at all suited for the types of work they are trying to do. For some years to come one of the most important problems for the College of Agriculture will be to provide adequate accommodations for instruction.

## EXTENSION WORK

The extension work of the College continues to increase in volume and importance in the articulation of the work at Ithaca with the agricultural industries of the State. The College now has a distinct staff of approximately twenty persons whose time is devoted almost entirely to extension work. During the winter these persons conduct extension schools of one week in length throughout the State, and during the remainder of the year carry such lines of extension work as they may be called on to do in response to requests from farmers and their organizations in the State. The extension enterprises of the College include all educational efforts at the homes and on the premises of the farmers. The following are some of the special means employed for this work: special lecturers, educational exhibits at county and state fairs, cooperative experiments on individual farms, demonstrations, visits to farms, traveling schools (including farm trains), extension schools, farmers' week at Ithaca, personal inspection of farms by members of staff, employment bureau for employers and employees, and correspondence.

A record of the one week extension schools held during the present year follows:

## EXTENSION SCHOOLS FROM DECEMBER 1, 1913, TO MAY 16, 1914

Town	County	Date	Registration		
			Agri- culture	Home Eco- nomics	Total
Ellington	Chautauqua	Dec. 1-6	24	16	40
Stamford	Delaware	Dec. 1-6	42	26	68
La Grangeville	Dutchess	Dec. 8-13	40	24	64
Gouverneur	St. Lawrence	Dec. 8-13	44	—	44
Horseheads	Chemung	Dec. 8-13	32	21	53
Dresserville	Cayuga	Dec. 15-20	41	—	41
Sherwood	Cayuga	Dec. 15-20	41	37	78
Hannibal	Oswego	Dec. 29-Jan. 2	32	16	48
Watkins	Schuyler	Dec. 29-Jan. 2	38	34	72
Johnstown	Fulton	Jan. 5-10	32	—	32
Greigsville	Livingston	Jan. 5-10	51	22	73
Arcade	Wyoming	Jan. 12-16	—	35	35
East Bloomfield	Ontario	Jan. 12-17	54	23	77
Warsaw	Wyoming	Jan. 12-17	38	—	38
Lowville	Lewis	Jan. 19-23	—	45	45
Moore's Junction	Clinton	Jan. 19-24	40	28	68
Holley	Orleans	Jan. 19-24	47	—	47
Jacksonville	Tompkins	Jan. 19-24	40	—	40
Pike	Wyoming	Jan. 26-31	46	—	46
Ovid	Seneca	Jan. 26-31	37	44	81
Kinderhook	Columbia	Jan. 26-31	27	44	71

TOWN	County	Date	Registration		Total	
			Agri- culture	Home Eco- nomics		
Burke	Franklin	Feb. 2-7	56	28	84	
Lockport	Niagara	Feb. 2-7	78	36	114	
Ithaca	Tompkins	Feb. 9-13	—	44	44	
Union Springs	Cayuga	Feb. 16-21	21	17	38	
Adams	Jefferson	Feb. 16-21	24	41	65	
Meridian	Cayuga	Feb. 23-28	51	—	51	
East Hampton	Suffolk	Feb. 23-28	59	—	59	
Lake Placid	Essex	Feb. 23-27	—	26	26	
Mt. Vision	Otsego	Mar. 2-7	40	—	40	
Almond	Allegany	Mar. 2-6	—	41	41	
Liberty	Sullivan	Mar. 9-13	—	20	20	
Dryden	Tompkins	Mar. 9-14	31	—	31	
Monticello	Sullivan	Mar. 9-14	40	—	40	
Worcester	Otsego	Mar. 16-20	—	26	26	
Riverhead	Suffolk	Mar. 23-27	—	46	46	
Brookhaven	Suffolk	Mar. 23-27	—	27	27	
Hamburg	Erie	Mar. 23-28	57	—	57	
Watertown	Jefferson	Mar. 30-Apr. 3	—	46	46	
Hall	Ontario	Apr. 6-10	—	47	47	
Ticonderoga	Essex	Apr. 13-18	10	—	10	
Elbridge	Onondaga	Apr. 20-24	—	37	37	
Little Falls	Herkimer	Apr. 27-May 2	—	25	25	
Manlius	Onondaga	May 4-9	—	25	25	
Port Jervis	Orange	May 12-16	—	43	43	
Total 61 schools		31 counties	61 weeks	1213	990	2203
30 Agriculture						
31 Home Economics			Average attendance	40.43	31.93	

*Farm bureaus*—Under Professor Burritt's administration as State Director of Farm Bureaus, the farm bureau movement has gone forward rapidly and the following twenty-five counties now have definite farm bureau organizations and have employed county agents: Allegany, Broome, Cattaraugus, Cayuga, Chautauqua, Chemung, Clinton, Cortland, Delaware, Dutchess, Erie, Franklin, Herkimer, Jefferson, Monroe, Montgomery, Niagara, Oneida, Onondaga, Oswego, Otsego, St. Lawrence, Tompkins, Ulster, and Wyoming. Other counties are in process of organization.

The farm bureau work in New York State is carried on cooperatively between the State College of Agriculture, the State Department of Agriculture, and the United States Department of Agriculture, and the state leader has his headquarters at the College of Agriculture.

*Cooperative work with other institutions*—One new important phase of extension work has been started during the year. It is cooperative work between the College of Agriculture and other educational institutions in the State, whereby persons located at other institutions are enabled to conduct extension work in their particular locality under the general direction of our Department of Extension Teaching. Such arrangements have already been made at the request of President Rhees, of the University of Rochester, and President Davis and Director Wright, of Alfred University.

#### THE EDITORIAL WORK

During the year 1913-14, a volume of one hundred and forty-eight pages, entitled "The Buildings, Lands, and Activities of the New York State College of

Agriculture at Cornell University," was published. It is the successor to a small pamphlet published in 1909 entitled "A Guide to the New York State College of Agriculture at Cornell University." In the present volume the attempt is made to describe succinctly the more general aspects of the buildings, lands, and activities of the College and to provide at once a book which students may carry with them as they go over the farms, which will direct the constantly increasing number of visitors in their inspection of the college domain and will answer many of their questions, and which will provide a means of relief in answering certain types of correspondence. The volume is particularly valuable in helping to unify the many phases of the work of the College.

During the year there has also been inaugurated a series of "Farm Bureau Circulars," the purpose of which is to make available complete and specific information concerning the history and present status of agriculture in the various counties of New York State. In addition to giving a brief history of agriculture in a county, each circular will include a description of the local climate, soil, and topography, a statement of population, general business conditions, market facilities, and types of farming practiced, and tables showing total production and unit yields. It will also point out desirable systems of farm management, suggest changes that should be made, and call attention to many other important matters on which success in farming depends locally. A part of each circular will be devoted to an account of the local farm bureau, its organization, and its ability to help in developing the agriculture of the county. The circulars will be prepared by the several county farm bureau agents under the general direction of the State Director of Farm Bureaus. Three of these circulars have already appeared and a fourth is in preparation.

Following is a summary statement of the editorial business of the College from October 1, 1913, to May 30, 1914. The total number of separate publications issued, not including discussion papers that accompany the Reading-Course Lessons, is fifty-three; the number of printed pages, thirty-three hundred and twelve; the number of printed copies issued, two million two hundred and twenty-seven thousand, eight hundred.

## SUMMARY OF PUBLICATIONS

	Number issued	Number of pages printed	Number of copies
Bulletins .....	11	528	187,300
Circulars .....	3	28	41,000
Reading-Course Lessons for the Farm .....	9	228	380,000
(with discussion papers) .....		36	
Reading-Course Lessons for the Farm Home .....	8	212	370,000
(with discussion papers) .....		16	
Rural School Leaflets .....	4	144	620,000
Annual Report .....	1	1850	2,000
Farm Bureau Circulars .....	2	24	11,000
Announcers .....	9	36	588,000
Announcements .....	2	37	3,500
Miscellaneous .....	4	173	25,000
Total .....	53	3312	2,227,800

Respectfully submitted,

W. A. STOCKING, JR.

Acting Director of the  
New York State College of Agriculture.

## APPENDIX IX

## REPORT OF THE DIRECTOR OF THE COLLEGE OF ARCHITECTURE

To the President:

SIR: I have the honor to submit my report for the academic year 1913-14.

On account of the very large outgoing class in 1913 a slight decrease in enrollment for this year was expected. On the contrary, there was a slight increase and the total registration of undergraduates reached the highest point in the history of the college, with 149 students. The graduating class in 1914 is numerically small and this naturally argues a considerable increase in the total enrollment in 1914-15 unless the entering class should be smaller than any class of the past five or six years.

This again brings up the ever recurrent question of room—a question becoming more acute each year. Rooms in the basement of Franklin Hall made available this year for the classes in Descriptive Geometry and Mechanics have added greatly to the efficiency of instruction in these subjects, but this has not in any way relieved congestion in the large drafting rooms used mainly by the Department of Design. Eight years ago we estimated the limit of capacity in these rooms at 115 to 120 students. This year, with the graduate students and approximately a dozen students in Landscape Design taking Architecture, we have had to provide place in these rooms for 166 students. In other words, each student now has his working space cut down to two-thirds of the reasonable minimum. This is a more serious matter than might at first appear, because the limited space makes it impossible for the student to render large problems and this directly and seriously affects the whole upper class scheme of instruction, particularly in the Senior year. I see no possible remedy for this difficulty in our present quarters, and I wish to urge upon you the necessity, and the urgent necessity, of giving immediate and particular attention to the need of the College for a new building, or at least much enlarged quarters, at once. The University has had other problems pressing hard for solution, problems apparently more urgent than ours has been, but other needs are indeed great if they are greater than ours are at this time.

The year's program has been a full one as usual, and the results in general have been highly satisfactory. A year ago, under the inspiration of some of the younger members of the faculty, a summer competition was inaugurated for the undergraduates. Prizes were offered for the best exhibition of individual work in photography, sketching (in any medium), and measured drawings. The exhibition of this work held at the opening of the University in September was a most successful affair and was just the kind of thing needed to put the final touch of enthusiasm into the beginning of the year's work.

Three other exhibitions of special interest were held during the year. First, the final drawings of the Interscholastic Competition in Architecture, submitted by the departments of architecture at the Carnegie Institute of Technology,

the University of Illinois, Harvard University, McGill University, the University of Pennsylvania, Syracuse University, and Cornell. Second, a selection of drawings from the best work submitted in the student competitions conducted by the Society of Beaux-Arts Architects during the season of 1912-13. Third, an exhibition of etchings and drawings by J. André Smith, C. U. '02 and '04. During the year the College has sent out some of our own student drawings to exhibitions in New York and Chicago, and, by special request, to the University of Minnesota and the University of Illinois.

Two years ago, upon the request of a number of students and with the approval of the Faculty, summer courses in elementary design were given in the rooms of the College by Mr. Kellogg, then instructor in Architecture. A year ago this work was offered, amplified to include advanced design, under the direction of Professor Bossange of the Department of Design; and the work is again offered this year under the direction of Professor Mauxion head of the Department. Because of the amount of work required to secure university credit in the design courses it has seemed advisable, since the first summer, to make this special summer session cover a period of eight rather than six weeks. This has been accomplished very satisfactorily by opening on the Monday following Commencement, two weeks in advance of the regular University Summer School, and closing on the same date as the regular Summer School. In the first year of this experiment, under Mr. Kellogg, there were six students registered; in the second, under Professor Bossange, there were eleven; and as this report is being written the third session is just opening, under Professor Mauxion, with a registration of fourteen students.

Although these summer courses have never been given formal announcement of any kind there seems to be a real demand for the work, and I believe the time has come for us seriously to consider whether it should not be formally organized as a part of the regular University Summer School. With our equipment, the attractiveness of Ithaca as a place of summer residence, and with a little judicious advertising I believe the Summer School in Architecture could be made self-sustaining and very well worth while. To carry such a school successfully the eight week period should be retained as at present; and if it is necessary to make the work self-supporting the courses might be limited in the beginning to work in the Department of Design as now, thus requiring but one instructor; but Free-hand Drawing and the History of Architecture are, in addition to their technical bearing, subjects of so much popular interest that we should look forward to the introduction of both of these subjects at an early date. Such a summer school properly managed, would, it seems to me, meet a real need and at the same time should attract attention to and strengthen the College of Architecture in its regular work.

There has been considerable discussion and some experimenting in the University with five year courses in Engineering and Architecture. When the five year courses were formally adopted as a regular part of the scheme of instruction in the Engineering Colleges, with the one year registration in the College of Arts and Sciences, the College of Architecture did not enter into the arrangement because it was felt here that the proposed plan offered no advantages over our practice of registering such students in the College for the full five year period, to say nothing of the disadvantages of the proposed plan as briefly discussed in

my annual reports of 1907-08 and 1908-09. In view of the fact that the Colleges of Engineering have abandoned the one year registration in Arts and are now following the same scheme as that originally adopted and still continued in the College of Architecture, our position seems to have been justified. If, however, the five year courses are to be taken seriously that which we are doing at present should be regarded merely as a step in a much larger scheme.

If this additional year of study means anything at all in educational progress it must contemplate the gradual elimination of the present four year courses and the substitution for them of the five year courses. Our present plan of announcement is to give the four year courses in detail and to state that students who fail to meet the specific requirements for admission to these courses but who, nevertheless, have fifteen units of entrance, including a minimum of specified subjects, may be admitted to five year courses which are essentially nothing more than the four year technical courses with additional work in the sciences and the humanities. If it seems desirable to bring the five year courses to the front, I believe that we should formulate these courses with the simplified entrance, gradually give them increased importance in our announcements, then at the proper time reverse the present order by announcing the five year courses as the regular courses and provide that those students who offer the major mathematics and such other subjects as may be determined may complete the course for the degree in four years. Perhaps we are not yet ready to adopt this plan, but it seems to me one that might lead very easily and very logically to the desired end.

Respectfully submitted,  
CLARENCE A. MARTIN,  
Director of the College of Architecture.

## APPENDIX X

### REPORT OF THE DIRECTOR OF THE COLLEGE OF CIVIL ENGINEERING

To the President of the University:

SIR: I have the honor to submit the following report for the College of Civil Engineering for the year 1913-14.

The registration for the year as shown by the class roll-calls, has been as follows:

	First Term	Second Term
Graduates . . . . .	8	9
Seniors . . . . .	120	114
Juniors . . . . .	127	120
Sophomores . . . . .	101	95
Freshmen . . . . .	127	122
Special . . . . .	1	2
Total . . . . .	484	462

This list includes twelve graduates in the undergraduate courses; five of these entered the junior, and seven the senior class.



Instruction has also been given to students from other Colleges as follows:

	First Term	Second Term
Graduates .....	8	9
Arts .....	5	8
Architecture .....	5	3
Agriculture .....	43	33
Sibley .....	8	53
Total.....	69	106

The number of new students was 150, of which 130 entered the freshman, 14 the sophomore, 1 the junior and 3 the senior class. This is 9 more than the previous year. The total registration was 484 for the first term, which is 4 less than for the corresponding period last year, while the registration for the second term is 467 or 9 less than a year ago.

The finances of the college have not been such as to permit of any material increase in equipment during the year. In my last annual report I gave a list of the more important additions that should be made to our Materials Testing Laboratory. That list is still applicable and more might be added to it. The work of this laboratory is growing in its usefulness in instruction to students, and also in the amount of commercial testing work done, which is both a help to students and to the surrounding community.

The demands upon the Hydraulic Laboratory have been heavy throughout the year. The space available for experimental and research work is so limited that we are unable to undertake but a small fraction of the work that the college should be doing. Much of the usefulness of the canal is lost by its not being housed. The severity of our winters puts it out of commission from the first of December to the first of April, four months, or nearly half of the school year. This is greatly to be regretted in these days when the field of hydraulics is attracting such wide attention. In my annual report for 1911-12, I gave these figures. "It was recently reported to President Taft, by the United States Commissioner of Corporations, that it is possible to develop over 30,000,000 horse power from the water supply in this country." A conservative estimate of the rental value of this would be \$10.00 per horse power, or an income of \$300,000,000 per year. It is no wonder that the field of hydraulics is attracting wide attention. Research work in this field, which in a large degree is comparatively new, promises much in the way of results.

It is of the utmost importance that both our Materials Testing Laboratory and our Hydraulic Laboratory be given every possible aid. New engineering problems are rapidly coming before us, the solution of which must be worked out in laboratories like these.

The work of the several departments of the College has made good progress under their respective heads. Every effort has been put forth to keep the teaching in each department abreast of the times. It is important that these departments receive every possible aid for their further development and extension. Nothing could help them more than the enlargement of Lincoln Hall. We live in hopes that this may be accomplished at no distant date.

In addition to what has been mentioned above, there are at least two lines of our work that call for special consideration. These are Highway Engineering and Sanitary Engineering. The development in both of these fields is very

marked indeed. Practically every state in the Union is adopting such legislation that makes of them matters of more than passing moment. The day is here when we must extend our work in these fields sufficiently to meet all the demands of progress. I am sure that our Faculty will have some recommendations to make upon these matters, as well as upon others the coming year.

Last year I took occasion to compile some statistics of the graduates of this college and as they indicate clearly that it is just what it stands for, namely, a college of civil engineering, I give them.

They include all living graduates up to and including June, 1912.

President of a Republic.....	1
Presidents of Companies, or Corporations.....	26
Chief Engineers.....	40
Consulting Engineers.....	64
Contractors.....	34
Practicing Engineering.....	953
Teaching Engineering.....	69
Business men.....	82
Lawyers.....	14
Farmers.....	11
Ministers.....	5
Doctors.....	3
Dentist.....	1
Total.....	1303

If we count the chief engineers, consulting engineers, contractors and those practicing, then 83.7 per cent are following in the line of their education. If we add to the above those teaching engineering, then 89 per cent of our graduates are following their chosen profession.

Respectfully submitted,

E. E. HASKELL,

Director of the College of Civil Engineering.

## APPENDIX XI

### REPORT OF THE DIRECTOR OF THE SIBLEY COLLEGE OF MECHANICAL ENGINEERING.

To the President of the University:

SIR: I have the honor to submit, as a report, consideration of some questions involving the welfare of Sibley College that have been chiefly suggested by the work of the past year.

The most vitally important matter to Sibley College today is the development and fostering of scientific research applied to engineering problems, with objects as follows:

(a) That the College may add its share to the data of engineering, and thus be—aside from the work of teaching—a source of helpfulness to the profession.

(b) That the College may thus gain dignified publicity and maintain and improve its standing among like institutions.

(c) That the carrying on of this work may react as an inspiration on the teaching of engineering to undergraduates.

## FELLOWSHIPS

For several years and especially this year it has been apparent that our fellowships in Sibley College have not attracted strong men who are well prepared for important research work in engineering. The reason is not far to seek. The fellowship pays about \$500 for the year, of which \$150 is returned for tuition; this leaves \$350 which is inadequate to pay the reasonable living expenses of a student in Ithaca for the University year. Hence no man can accept a Cornell fellowship unless he has a private income. It is certainly "a far cry" from this to the original intent of fellowships, and it is certain that our fellowships are not accomplishing the object for which they were established. It would seem that the tuition of fellows should be remitted so that the holder's expenses might be provided during a year of concentrated work on engineering research, or else that the fellowships should be abolished and the money made effective elsewhere.

## INDUSTRIAL FELLOWSHIPS

About the middle of the past year there was established in Sibley College an industrial fellowship for the scientific investigation of the cement used in making commercial concrete. This fellowship is financed by the Raymond Concrete Pile Company of New York City. An adequate salary is paid to the holder of the fellowship, he is supplied with all needed apparatus and materials and controls the entire services of a mechanic for the construction of special machines. The University puts its equipment and energies at the disposal of the fellow in any way that does not interfere with the regular work of instruction. A fundamental scientific investigation is thus under way in the hands of an experienced man, and very valuable additions to engineering knowledge are sure to result.

It is hoped that other fellowships of this kind may be established in the future.

## RESEARCH ON FATIGUE OF METALS

One of the most important questions concerning materials of engineering is "What is the effect of repeated stress-cycles in machine parts and structures?" The attempt to answer this question has taken the best energies of several noted scientific experimenters in Germany and England since about 1859 but the answer is not yet full and satisfactory. It is a question of prime importance since it bears on the endurance or failure of machines and structures and therefore on safety of human life and of property.

Recently Professor Upton has made a careful and exhaustive study of this problem; he has reviewed the field of work of all previous experimenters, has tested all their conclusions; has adopted new and fundamental methods for experimentation, and has designed a special machine which has been for some time in successful operation in the Mechanical Laboratory and which is on the market as a commercial machine. This machine gives an autographic record of both stress and deformation throughout the life of the test piece, from start to rupture; no other machine has done this. This investigation under Professor Upton's direction is to be carried on and provision is made for it out of the appropriation of Sibley College. No more important piece of work has ever been undertaken in the laboratories of Sibley College, and there is promise of very important results.

During [the year about forty investigations or systematic tests have been under way with which students or Faculty of the College have been connected. A printed detailed list of this work accompanies this report.

During the year the portion of Mr. Hiram W. Sibley's generous gift of \$10,000 that became available, was spent on new apparatus for the Electrical Laboratory, and the efficiency of the work had been greatly increased.

#### COMMERCIAL ENGINEERING

I wish to call attention again to the need of a course—leading to a degree—to train men for commercial work related to engineering. As indicated in last year's report, the work for such a course is all given now in the University. A student could take the first three years of the Mechanical Engineering Course, and then spend the fourth year on courses related to commerce in the College of Arts and Sciences and thus obtain preparation for this increasingly important division of modern business. But no degree could now be granted for this course.

To establish this course and make it effective it is only necessary to authorize the granting of a degree, say B.S., for a four years course of high-grade university work in a new grouping.

#### DEPARTMENT LIBRARY

For many years it has been felt that engineering students should learn to use a library to better effect, and to further this end it was recommended this year through you to the Trustees that a man familiar with modern library methods be put in charge of the department library of the College. This was granted, and the appointment has been made. The appointee is familiar with four modern languages and can thus help in making available untranslated engineering literature for students and faculty. It is believed that this change will have increasing effect for efficiency of the work of the College.

Respectfully submitted,

ALBERT W. SMITH,

Director of the Sibley College of Mechanical Engineering.

## APPENDIX XII

### REPORT OF THE DIRECTOR OF THE SCHOOL OF EDUCATION

To the President of the University:

SIR: I beg to submit the following report for the School of Education during the academic year 1913-14:

The total registration in the courses given in the Department of Education during the year was 243. Individual students numbered 160,—79 men and 81 women. Fourteen, 11 men and 3 women, were students in the Graduate School.

A special class in the History of Education was conducted by Professor DeGarmo during the second half year for students in the College of Agriculture who are planning to teach upon graduation. This is a beginning of training

in Education for students in the College of Agriculture which will be further developed by the new professor of Rural Education just appointed for next year. The present plan provides for giving students in that College three courses in the College of Arts and Sciences preparatory to their special educational work in the College of Agriculture. They will take Elementary Psychology and Educational Psychology in their Sophomore year, and the introductory course in the Principles of Education in the first term of their junior year. They will then be free to elect work in Rural Education during the remainder of their course. We hope in this way to enable graduates of the College of Agriculture to meet the requirements of the New York State Department for a college graduate certificate. There is a steady call for graduates of the College of Agriculture as teachers. At present the only kind of a teacher's certificate which they can secure is a limited special certificate, and it happens not infrequently that a graduate of the College who has so chosen his elective work as to prepare himself thoroughly in one or more branches of science is unable to secure a teacher's certificate covering these subjects.

The close of the Summer Session of 1914 brings to an end the work in the University of Professor Charles DeGarmo, after a service of sixteen years in Cornell. Under his leadership and direction the Department has grown steadily in the nature and scope of its work. Its students year by year have gone into places of influence in the educational field. With one accord they have testified to the deep influence on their lives of association with him. By the steady and quiet influence of his own high personal character, no less than by his unselfish labors as a teacher and constant industry as a writer, Dr. DeGarmo has added strength not only to his department but to the college of which it is a part.

Professor Whipple has maintained the high efficiency of the Educational Laboratory in its regular work, and has also extended its usefulness outside the University in several ways. He has conducted a series of tests at the George Junior Republic and has also examined a number of children from the public schools of Ithaca. Overtures have been made toward establishing a permanent relation between the Educational Laboratory and the Ithaca school system. Such a relation could not fail to be of great service both to the students of education and to the pupils of the schools. Throughout the country cities have found it profitable to provide for such systematic examination and testing of school children, in most cases by the appointment of a specialist at considerable expense. It seems likely that Ithaca will soon avail itself of the unusual facilities afforded by the presence of the University equipment.

During the year Mr. D. Kennedy-Fraser, Carnegie Fellow in Education of the University of Edinburgh, has been assistant in the Educational Laboratory, where he has rendered valuable service. With Mr. E. J. Anderson, student in the Graduate School, he has carried on a series of mental tests with a view to establishing certain standards of performance for school children of specified classes and more particularly for students in the high school. Fortunately the University will continue to have the benefit of Mr. Fraser's marked ability and broad and thorough training.

During the year the Faculty of Arts and Sciences voted "that a student who has completed at the end of the first term of his senior year the hours necessary for graduation may upon the recommendation of the head of a department, and

of the director of the School of Education, be allowed to do practice teaching for the remainder of his senior year in an approved high school, and may have the time thus spent counted toward the residence required for his degree."

In New York City provision has been made recently for "teachers in training." An applicant for appointment as teacher in training must have a college degree and must be recommended by the college authorities. These teachers are placed in high schools, work under the direction of the head of the department, by whom all their work is supervised day by day. They are paid a small salary.

In these two ways opportunity is provided for some of our students to gain experience in teaching by performing actual teaching service under expert supervision. But the number thus provided for cannot be large. The problem of providing some practice teaching under adequate supervision for the majority of prospective teachers is still unsolved.

The educational authorities of most states prescribe now professional preparation as a condition of license to teach in any public school. New York State allows the graduates of the College of Arts and Sciences a temporary two year certificate on the basis of the A.B. degree. Before such teacher can continue work for a third year examinations in fundamental subjects in education must be passed unless such subjects have been taken in the college course.

The State Board of Education of New Jersey grants no teacher's certificate without adequate proof of study of the fundamental problems of education. New Jersey has adopted the most stringent rules of any state in the east.

In Pennsylvania the school code provides that a college graduate shall have completed not less than 200 hours work in pedagogical subjects as a condition for a teacher's license.

I have quoted the legislation of these states because in them the majority of our students for the present at least begin their work. It is a distinct disadvantage to the prospective teacher not to have made professional preparation during his college course. In some cases it is a positive bar to employment. School authorities are recognizing the necessity of specific pedagogical training for teachers. They seek eagerly college trained men and women but desire strongly professional training even where they do not insist upon.

I regret the necessity of repeating from former reports the need of additional appropriations for our work. Hardly a department in the University is so handicapped as Education.

Respectfully submitted,

G. P. BRISTOL,

Director of the School of Education.

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## APPENDIX XIII

### REPORT OF THE DIRECTOR OF THE SUMMER SESSION

To the President of the University:

SIR: I beg to submit my ninth annual report as Director of the Summer Session, July 6 to August 14, 1914.

## TEACHING STAFF

One hundred forty-five persons gave instruction, of whom 117 are members of the regular teaching force of the University and 28 were invited from other institutions. I name only new members of the staff from outside Cornell: A. R. Brubacher, Superintendent of Schools, Schenectady; Frank Carney, Professor of Geology, Denison University; A. Kendall Getman, Cortland Normal School; David Spence Hill, Director of Educational Research, New Orleans; W. H. Hoerrner, Colgate University; Helen B. Hoover, West Technical High School, Cleveland; Arthur E. Johnstone, Teacher of Music, New York City; Ethel Roberts, Teachers' Training College, London, England; G. J. Raynor, Commercial High School, Brooklyn; B. T. Scales, Penn. Charter School, Philadelphia; Sheila Sutherland, Teachers' Training College, London, England; H. H. Vaughan, University of Pennsylvania.

I can but repeat previous statements that all of the staff have worked loyally and earnestly for the success of the session. Without exception the testimony of students in attendance proves that success has been reached.

## \*STATISTICS OF ATTENDANCE

	1909	1910	1911	1912	1913	1914
Teaching staff.....	79	99	101	105	100	145
Number of students.....	889	987	1029	1053	1098	1436
Cornell students of previous year.....	375	387	404	405	411	510
Former Cornell students.....	116	130	139	195	193	292
Graduates of Cornell University.....	22	37	28	34	57	60
Graduates of other colleges.....	141	145	185	172	222	203
Non-graduates from other colleges.....	62	136	129	137	144	210
New York State.....	372	428	424	467	469	721
Outside New York State.....	517	559	605	586	629	715

## NUMBER AND CLASSIFICATION OF TEACHERS IN ATTENDANCE

	1909	1910	1911	1912	1913	1914
Whole number.....	331	377	400	437	598	602
Teaching in Colleges.....	40	26	41	30	42	38
Normal schools.....	15	15	13	10	21	13
High Schools.....	129	160	161	166	186	166
Elementary Schools.....	131	134	100	135	236	255
Private Schools.....	11	3	6	15	23	11
Superintendence and Supervision.....	21	39	79	81	90	97

The states from which ten or more teachers attended are: New York, 272; Pennsylvania, 134; New Jersey, 39; Massachusetts, 26; Maryland, 14; Connecticut, 13; Indiana, 13; Ohio, 12; Virginia, 10.

## THE SUMMER SESSION AND THE SCHOOLS

Each year makes it clearer that the University's most direct, and perhaps most important, service to primary and secondary schools is given in the Summer Session. A comparison of the announcements for the various colleges of the University during the winter with that of the Summer Session shows in the latter a much greater proportion of work planned with reference to teachers.

\*The statistics given for 1914 include and classify teaching staff and attendance in Agriculture as well as in the other departments of the University. Students in the College of Agriculture have not been included in previous years.

The arrangement and program of the summer session clearly points the way to be followed as far as possible during the winter. It is only in the Summer Session that the work in "Education" finds adequate expression. The training of teachers, for the great field of secondary education in particular, is one of the first duties of the University. In accordance with the direction of the Board of Trustees when the Summer Session was established I have as director kept the purpose there indicated steadily in view. It is not the primary object of the Summer Session to develop university departments. It is not, on the other hand, its purpose to duplicate departments. All work in "Education" is strong in direct proportion to its close touch with the various departments of instruction in the University. But where, as in Cornell at present, departments are unable to provide distinctive instruction for teachers, actual or prospective, such instruction must in some way be supplied. This supplementing of our regular work by specially chosen teachers from the field of secondary education has proved very successful, and to it the session owes not a little of its success.

#### GENERAL COMMENT

The statistics of our attendance, and no less the statements of the teaching staff, show a very satisfactory improvement in the character of the students. We have this year a smaller number of students who failed in their work during the previous year. At the same time we have enrolled more undergraduates seeking to get ahead in their course, or to enlarge by attendance in the summer the range of their studies. This change in the character of students in attendance has been specially marked in the Department of Mathematics, where the most advanced courses have been better attended than ever before.

The advantage of thorough organization, of a definite and complete program of instruction, as well as of competent teachers, is very evident in the continued success of the Department of Music. Here a specific course of training for supervisors of Music is continued through four summers. More than two hundred students have registered in it this year. Twenty students who had completed this four year course returned this year for additional work. Closely connected with the work in Music has been that in Physical Training by the Misses Sutherland and Roberts of the Teachers' Training College, London, England. The underlying principle in their work has been that of rhythmic movement which shall at the same time give the best physical exercise. These ladies have been untiring in their labor and have held evening classes in order to accommodate the students wishing to enroll in them. At the end of the session a most successful demonstration of work with two classes of children of different ages and with classes of adults was given. Bailey Hall was filled with an interested and pleased company.

Following up the plan of a special table for advanced students in the Department of German we have been able through the interest and efforts of Professor Davidson and Miss Elizabeth Undritz to maintain a Deutsches Haus, where eleven teachers of German have lived during the session, using German as the language of the house, and also a special table in Prudence Risley Hall. The direct advantages of this arrangement, supplementing the class work of the department, can hardly be over-stated. Without exception the members of this family are enthusiastic in their praise of the entire plan.



Mention should be made of the highly efficient work done in new lines by Dr. H. H. Vaughan of the University of Pennsylvania, who gave third year work in Spanish, and also a special training course for teachers of the subject. Mr. G. J. Raynor of the Commercial High School, Brooklyn, conducted with marked efficiency two courses for the training of teachers in and for commercial high schools. In these classes, given this year for the first time, the numbers have not been large. Their success, however, is undoubted and the work ought to be continued.

With this session the teaching work of Professor Charles DeGarmo is brought to a close. He has been one of the mainstays of the Summer Session since he came to Cornell and was its first director. His teaching in the class room, his kindly counsel and advice outside, his constant interest in Education and all engaged in it, have been an inspiration and a help to hundreds of our students. All of them will join with his associates in the Summer Session to wish him many years of good health and useful activity.

For the general interests of the session we have as in past years had a number of evening lectures. The President of the University opened the course by a lecture on the Balkan Wars, attended by an audience which crowded Sibley Dome. This lecture, to a degree hardly anticipated at the time it was given, proved the best possible introduction to a knowledge of the remote causes of the larger war which began a month later. The second lecture on the latter was given early in August by Professor Sill, who reviewed in a scholarly way the causes of the great war. We are indebted to Professors S. H. Gage, V. A. Moore, and Nathaniel Schmidt for able addresses on topics in their own fields of study.

Other lectures have been given by members of the staff at various times, and we have had as usual the bi-weekly recitals by Mr. Quarles on the Sage Chapel organ. The annual concert by the chorus of the Department of Music was pleasing and afforded also an opportunity to hear the new organ in Bailey Hall. Excursions both for study and for recreation have gone on as usual. The comfort and convenience of the women students has been materially improved by the opening of Prudence Risley Hall. The tendency to excess of social dissipation noted last year has been lacking the present summer.

It is my earnest conviction that the Summer Session, with its present proposed work, and its organization essentially unchanged, has a distinct place in the University. A full "term" or "quarter" could not replace it, desirable as such additional term may be. The fixed dates of the public school year in this state, and some others, makes it impossible for teachers to begin work before July 4 and impracticable for them to continue longer than six weeks. For this large body the University must continue to provide means of preparation for work and of improved scholarship.

Respectfully submitted,

GEORGE P. BRISTOL,  
Director of the Summer Session.

## APPENDIX XIV

## REPORT OF THE ADVISER OF WOMEN

To the President of the University:

SIR: I have the honor to submit my fifth annual report as Adviser of Women.

The attendance of women students continues to increase steadily. The total registration for the year was 534, an increase of 68 over that of last year. The subjoined table shows the increase in attendance during the last five years, as well as the distribution of the women students among the various colleges.

Year	Grad.	Arts	Law	Med.	V.M.	Ag.	Arch.	Total	Dup.	Net total
1909-10	52	274	1	25	1	57	5	415	18	397
1910-11	64	262	1	27		90	4	448	20	428
1911-12	70	244	1	21		121	2	459	12	447
1912-13	60	233	3	17		169	3	485	19	466
1913-14	56	244	2	25		213	4	544	10	534

Of the 534 women registered in the University, 21 were in the medical college in New York City, leaving a total of 512 registered in Ithaca during the year. This is exclusive of the summer session and of the winter course in agriculture.

## RESIDENCE

Of the total number registered during the year, not all are, of course, in residence at any one time. Two weeks after the opening of the semester, there were registered each semester at the office of the Adviser of Women 479 students, distributed according to residence as follows:

FIRST TERM			
Sage College	157		
Sage College Cottage	19		
Prudence Risley Hall	114		
Total in dormitories			290
At home	91		
With relatives	21		
Working in private families	57		
Living out by permission	20		
Total outside		189	
		479	479
SECOND TERM			
Sage College	135		
Sage College Cottage	20		
Prudence Risley Hall	141		
Total in dormitories			296
At home	84		
With relatives	21		
Working in private families	43		
Living out by permission	35		
Total outside		183	
		479	479

With the opening of Prudence Risley Hall in September, the University revived an old rule requiring women students to reside in the dormitories, unless permission to live elsewhere should be given by the Committee on Residential Halls. This permission could be obtained only on petition and was given only to graduate students or others of mature years, to those whose limited financial resources made it necessary, or to those whose health demanded greater quiet than is obtainable in a large dormitory. About seventy-five such permissions were given in all. The rule has worked admirably and its enforcement should be continued under the same restrictions. The student desiring such permission must obtain her petition blank from the Adviser of Women, who thus has opportunity to go into all the circumstances of the case and to give advice and assistance wherever it seems necessary or likely to be helpful. This has already led to a satisfactory solution of a number of personal problems that might not otherwise have come to my notice.

#### DORMITORIES

The direct responsibility for the care of the students living in the dormitories, and the supervision and direction of their social life has rested upon the Wardens, whose duties throughout the year have been faithfully, efficiently, and loyally discharged.

The uncertainty as to the completion of the rooms in Prudence Risley Hall in time for the opening of college, and the equal uncertainty as to the number of places that would be needed for the accommodation of students this year, made it seem inadvisable to give up Sage College Cottage until after the opening of the University. Upon the completion of the rooms in Prudence Risley Hall, however, and again at the beginning of the second semester, the Committee on Residential Halls, fearful of the fire risk in Sage Cottage, requested the students resident there to move into one of the other dormitories. On each occasion, however, they demurred so strongly that they were allowed to remain and the Cottage has remained in use throughout the year.

At the opening of the University in September, Prudence Risley Hall was still far from completion. Only the dormitory rooms were habitable at all and not all the furniture had arrived even for them. In spite, however, of the inconvenience and discomfort inevitable under the circumstances, the spirit of the girls was excellent. They treated the experience as an adventure—a sort of "camping out"—and made light of their discomforts until the cold weather set in, when they began to grow somewhat impatient. Fortunately the weather remained propitious until almost Christmas time, and with the opening of college after the holidays it was possible at last to begin serving meals in the building. The work of finishing and decoration has gone forward slowly all year as opportunity offered but will not be completed until just before the opening of the University this fall.

The beauty and convenience of this building have not only brought added pleasure and comfort to the personal lives of the girls; they have also stimulated, if they have not caused, certain very desirable developments in the community life. The attractive recreation room, with its small but excellently arranged stage, has given new ambition to the dramatic club, which is steadily improving the quality of its work; and the fraternities have this spring held their dancing parties in this

beautiful hall, instead of down town, as heretofore. The supplementary dining room, with its possibility of complete privacy, has proved large enough on occasion for holding class suppers and club banquets of various sorts and promises to become popular for such purposes. The possibility of thus centering the social life of our women students in one of our own college buildings, and that building one which is peculiarly their own, has numerous and obvious advantages.

It has been decided for the present at least to distribute the students between these two buildings on a class basis, putting sister classes together—the seniors and the sophomores in Prudence Risley Hall, and the juniors and freshmen in Sage College. A uniform price is to be charged for residence, covering room, board and laundry.

The manifest advantages of the new building have made more patent than ever some of the shortcomings inevitable in a building so old as Sage College. I was convinced that most of these defects were not irremediable, however, and the Committee on Residential Halls, having been similarly persuaded, has recommended to the Board of Trustees and has been authorized to make this summer certain changes in the first floor rooms of the building, which will, I am certain, add greatly to its attractiveness and comfort. Additional outside fire escapes have also been ordered for the north and south ends of the building, to be added this summer; and studies have been made for extensive improvements in the bath rooms, the execution of which will, however, have to be postponed to another year. When these changes have all been completed, Sage College, although it is one of the oldest women's dormitories in the country, will be in very excellent condition,—safe, sanitary, and attractive.

The management of the dormitories and dining rooms continues to be very satisfactory. Remarkably few criticisms of food or service have been brought to me. With the adoption of a new system of payments—a single charge for residence for the year,—and the organization of the service for a new building, there was ample opportunity for misunderstandings, friction and failure to reach high standards of service. None of these things happened and the business management is to be congratulated that this year of "beginnings" has passed so harmoniously and successfully.

#### SOCIAL LIFE

The social life of the students has been sufficiently full and varied. With the opening of the new dormitory, it was decided that the annual reception to the Faculty and the Board of Trustees should be held in alternate years in each building, and that it should be given this year in Prudence Risley Hall. It was accordingly held on the evening of February 13, the Wardens of the two dormitories and the women of the two upper classes acting as hostesses. The entertainment consisted of a musicale given in the great dining hall, followed by a reception in the main hall. The recreation room on the other side of the building was thrown open for dancing. The building proved to be admirably adapted to larger social purposes of this sort.

The pressure of social activities upon considerable numbers of our women students is very great. As I pointed out some time ago in an article in the Alumni News, the women of Cornell, unlike those of most co-educational colleges, have organized their social and other non-academic activities to a very large extent separately from those of the men. They have here practically the "life" of the sep-

arate woman's college, and this in itself makes heavy demands upon them. They have in addition, however, and of late in rapidly increasing measure, to meet the usual social demands of the co-educational college. The old traditional opposition to co-education seems to be rapidly breaking down; but this growing cordiality between the men and the women students, desirable as it may be from many points of view, brings also its problems. Last year the Student Government Association felt it necessary in the interest of health and scholarship to place definite restrictions upon the amount of social diversion that its members might indulge in, and in the revision of its rules this spring it carried these restrictions still further.

In its efforts to control the social life of its members, the Women's Student Government Association here at Cornell finds itself very much handicapped by the almost entire lack of any sort of social control over the men students. In most of the other great co-educational universities, so far as I know them, the institution itself recognizes an equal responsibility for the control of the social life of both its men and its women students. Through a Social Committee, composed sometimes of faculty members only, sometimes of both faculty and students, most of these institutions fix the times, places, number, and closing hours for the social functions for the year and no others may be held without special permission from the committee.

In the absence of any such general control, the Women's Student Government Association is to be congratulated upon the high standards it has set and maintained. Five years ago I found among the printed rules of the Association one requiring women students to be in from parties and dances at 1:30, but I found also that the rule was quite as often broken as kept. Today the infringement of this rule is regarded as a very serious matter demanding rigorous penalization, and it is practically never broken except through accident of some sort. Beginning next fall a new rule will become effective, requiring that all parties and dances at which university women are hostesses—all social affairs, that is, that are under their control—shall close promptly at twelve o'clock. In other words, and this is the argument which the revision committee of the Association used in urging the adoption of the rule, while they recognize their powerlessness to control the general social life of the university, they wish in such portion of that life as is within their control to set such standards as seem to them reasonable and wholesome and in keeping with the character of this community as a body of young persons gathered primarily for the pursuit of intellectual purposes.

#### STUDENT GOVERNMENT.

The work of the Student Government Association continues to grow more effective. The plan of holding monthly mass meetings, inaugurated at the close of last year, has been adhered to this year and has given an invaluable opportunity for the discussion of matters of common concern and for the creation of an effective public opinion. In November the Association sent two representatives as usual to the Conference of the Intercollegiate Association of Student Government Organizations held this year at Swarthmore College. While these meetings are not without value to us, our representatives report each year that many of the problems most pressing in our Association receive little or no discussion at this conference by reason of the fact that very few of the institutions represented are co-educational.

tional. Our Association has therefore opened correspondence with the Middle Western Intercollegiate Association for Women's Self Government with a view to determining whether we might not more fittingly find a place in that conference.

#### HEALTH AND SAFETY

Health conditions among the women have been excellent throughout the year. There was reported to my office a total of 87 admissions to the Infirmary, 12 of these being second admissions, leaving thus 75 persons admitted as against 123 last year. The great majority of these admissions were for very slight illnesses that could have been entirely avoided by a rational hygiene. The only contagious disease was measles, of which there were eight cases. There were six operations for appendicitis, all entirely successful.

I note with regret the resignation of Dr. Parker as medical examiner and adviser for the women. Her work has been eminently satisfactory, and her influence in creating among the students a wholesome attitude of mind on health questions and a greater appreciation of the value of health as a condition of efficiency has been excellent.

Fire drills have been conducted in Sage College and Sage Cottage as heretofore. At a meeting of the girls following the great fire at Wellesley College, the efficiency of the Wellesley fire drill was pointed out and a renewed appeal made to them to realize their individual responsibility in this matter. As noted above, additional fire escapes have been ordered for the north and south ends of Sage College. The drill is now being entirely reorganized and the new plan will be tried out and perfected immediately on the opening of the University in the fall.

A greater effort than usual was made this year to protect the women students from the dangers of the lake. A new rule was formulated requiring not only that the student should have filed a permit from parent or guardian, but also that she should each time, before going on the lake, notify the Warden or the Adviser of Women, giving her full information as to the nature of the craft to be used, the expected time of return, etc. Shortly after the opening of the University, I took the further precaution also of sending a letter to the parents or guardians of all non-resident women students, enclosing a reprint of certain extracts from an article in the *Era* by Mr. Courtney on the dangers of the lake, and saying that we felt that parents should, before issuing permits, be fully informed as to the conditions. The letter brought many replies, all of them expressing gratitude for the precautions taken.

The work of vocational advising has gone on as before. This work has apparently become known outside the University and I have received inquiries about it from a number of institutions, among them institutions so widely separated as the universities of Texas, Minnesota, and Chicago. My efforts in this field were ably supplemented this year by a visit from Miss Mary Snow, in charge of the research work of the Intercollegiate Bureau of Occupations in New York. The girls found her lecture delightfully amusing as well as inspiring and helpful, and the personal conferences, which many of them had with her later, proved both enjoyable and profitable.

Respectfully submitted,

GERTRUDE S. MARTIN,  
University Adviser of Women.

## APPENDIX XV

## REPORT OF THE REGISTRAR

To the President of the University:

SIR: I have the honor to submit herewith my eighteenth annual report as Registrar of the University. The report covers the academic year 1913-14, including the Summer Session of 1914.

	THE YEAR				Total
	Days in Session	Sun- days	Holi- days	Vaca- tion	
First term, Sept. 22-Feb. 4	103	15	3	..	121
First term, vacation, Feb. 5, 6	..	..	..	2	2
Christmas vacation, Dec. 21-Jan. 4	..	..	..	15	15
Second term, Feb. 7-June 17	105	18	1	..	124
Easter vacation, April 2-April 8	..	..	..	7	7
Summer vacation, June 18-July 5	..	..	..	18	18
Summer Session, July 6-Aug. 14	35	5	..	..	40
Summer vacation, Aug. 15-Sept. 20	..	..	..	37	37

In addition to the 243 days in session given above, the University Library was open every day in the year except holidays and there was no time during the year when college activities entirely ceased. The shops and some of the laboratories were also open during nearly all the vacation period for special work.

## STUDENTS

The table given on page lxvi, which shows the attendance for 1913-14, gives the number of students who have received instruction this year, including those in the 1914 Summer Session, in the 1914 Summer School in Agriculture, in the 1914 Summer Graduate work, in the 1913-14 Winter Courses in Agriculture, and in the Third Term in Agriculture, but excluding duplicates, as 6,496 an increase over last year's attendance of 181.

The accompanying table shows the attendance in each course since the opening of the University in 1868. Previous to 1897 optional and special students were separately tabulated, but now these are distributed as far as possible among the groups to which they belong.

The attendance for the year is the largest in the history of the University and the increase in the number of regular students this year is 212. Special attention is called to the fact that the above table includes short winter and summer course students only as separately tabulated.

## MATRICULATES

The following table shows that 2261 students have registered during the present year for the first time. The table also shows the method of admission.

## ATTENDANCE FOR THE YEAR 1913-1914

DEPT. & COLL. DEGREES CLASSIFICATION	GRADUATE A.M., Ph.D., M.M.E., Etc.			ARTS & SCIENCES A.B., B.Chem.			LAW LL.B.			MEDICINE M.D.			AGRICULTURE B.S.			VETERINARY D.V.M.		
	Men	Women	Total	Men	Women	Total	Men	Women	Total	Men	Women	Total	Men	Women	Total	Men	Women	Total
Graduates	327	50	383	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
Class of 1914	...	...	...	170	45	215	46	...	46	16	5	21	185	25	210	43	...	43
Class of 1915	...	...	...	220	61	281	80	1	81	16	3	19	250	47	303	37	...	37
Class of 1916	...	...	...	248	65	313	66	...	66	28	3	31	312	52	364	49	...	49
Class of 1917	...	...	...	288	62	350	71	1	72	32	4	36	355	56	411	2	...	2
Class of 1918	...	...	...	17	4	21	...	...	...	...	...	...	34	7	41	...	...	...
Specials	...	...	...	7	7	14	...	6	6	24	10	34	105	28	133	...	...	...
Totals	327	50	383	950	244	1194	269	2	271	116	25	141	1247	215	1462	131	...	131
Duplicates	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
Net total	327	50	383	950	244	1194	269	2	271	116	25	141	1247	215	1462	131	...	131
Third Term Agr.	...	...	...	...	...	...	...	...	...	...	...	...	39	2	41	...	...	...
Short Winter Agr.	...	...	...	...	...	...	...	...	...	...	...	...	461	94	555	...	...	...
Summer	53	22	75	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
Totals	380	78	458	950	244	1194	269	2	271	116	25	141	1747	311	2058	131	...	131
Duplicates	49	20	69	...	...	...	...	...	...	...	...	...	41	4	45	...	...	...
Net Totals	331	58	389	950	244	1194	269	2	271	116	25	141	1706	307	2013	131	...	131
DEPT. & COLL. DEGREES CLASSIFICATION	ARCHITECTURE B.ARCH.			CIVIL ENG. C.E.			MECH. ENG. M.E.			SUMMER SESSION			SUMMER SCHOOL IN AGR.			TOTAL		
Graduates	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
Class of 1914	15	1	16	121	...	121	211	...	211	...	...	...	...	...	...	...	...	...
Class of 1915	36	...	36	131	...	131	186	...	186	...	...	...	...	...	...	...	...	...
Class of 1916	35	...	35	100	...	100	236	...	236	...	...	...	...	...	...	...	...	...
Class of 1917	38	2	40	130	...	130	243	...	243	...	...	...	...	...	...	...	...	...
Class of 1918	4	...	4	3	...	3	16	...	16	...	...	...	...	...	...	...	...	...
Specials	17	1	18	2	...	2	10	...	10	...	...	...	...	...	...	...	...	...
Totals	145	4	149	487	...	487	902	...	902	...	...	...	...	...	...	...	...	...
Duplicates	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
Net Total	145	4	149	487	...	487	902	...	902	...	...	...	...	...	...	...	...	...
Third Term Agr.	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	39	2	41
Short Winter Agr.	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	461	94	555
Summer	...	...	...	...	...	...	...	...	...	603	523	1126*	179	209	388*	835	754	1589
Totals	145	4	149	487	...	487	902	...	902	603	523	1126*	179	209	388*	5816	1384	7200†
Duplicates	...	...	...	...	...	...	...	...	...	395	23	388	96	28	124	587	117	704
Net Totals	145	4	149	487	...	487	902	...	902	238	500	738	83	181	264	5229	1267	6496††

\*Includes 78 registered in both Summer Session and Summer School of Agriculture.

†Deducting 105 duplicates of regular session.

††Deducting 105 duplicates of regular session and 78 registered in Summer Session and Summer Agriculture.



Students entering for the first time in the Summer Session and in the Summer School in Agriculture are not considered as matriculants, but for convenience are listed in this table.

Graduates .....	98	Coll. Ent. Board Exams.....	14
Advanced standing .....	224	Medical (N. Y. City).....	48
Regents' credentials .....	476	Medical (Ithaca) .....	..
School certificates .....	587	Veterinary students .....	39
By examination .....	6	Summer session (1914) .....	489
As special students .....	82	Summer School in Agr. (1914) .....	179
		Summer Graduate work 1914.....	19
Total.....			<u>2261</u>

The small number entering by some of the above methods is due to the fact that two or more methods have been combined in a single case, the student, however, being listed in the group to which the major portion of his entrance belongs.

#### ADMISSION FROM OTHER COLLEGES AND UNIVERSITIES

The Registrar has charge of all credentials presented by applicants coming from other institutions. This system has given uniformity of action on similar certificates when the applicants enter different colleges at this University.

In the following lists should be included properly a number of cases of special students, who coming from other colleges, would have been eligible for admission to advanced standing. Such students, however, preferred to be admitted as specials. Some later changed to a regular course but are not included in these tables.

The number of students admitted to advanced standing as candidates for the first degree during the past twenty-eight years, is, as nearly as may be ascertained, as follows. The former courses in Chemistry, Pharmacy, Medical Preparatory, and Optional have been omitted from the table but the numbers have been retained in the totals:

Year	Arts	Phil.	Let.	Sci.	Agri.	Arch.	Civil Eng.	Mech. Eng.	For- estry	Law*	Vet.	Med.	No. of Cases
1886-87	2	8	1	4	1	4	6	18	..	..	..	..	50
1887-88	6	4	1	1	..	..	11	10	..	..	..	..	37
1888-89	5	..	6	6	1	2	12	21	..	..	..	..	58
1889-90	4	5	6	3	2	1	2	25	..	..	..	..	50
1890-91	8	8	2	4	1	..	14	28	..	..	..	..	65
1891-92	7	9	2	5	2	2	10	52	..	..	..	..	89
1892-93	6	6	1	8	..	6	11	44	..	..	..	..	87
1893-94	5	6	5	8	..	6	6	56	..	..	..	..	94
1894-95	4	2	3	3	2	3	6	44	..	..	..	..	71
1895-96	5	11	4	7	3	3	9	33	..	..	..	..	85
1896-97	10	4	2	4	3	3	11	42	..	12	5	..	100
1897-98	11	6	..	7	9	2	15	41	..	15	1	..	108

\*No data prior to 1896-7.

Year	Arts	Phil.	Let.	Sci.	Agri.	Arch.	Civil Eng.	Mech. Eng.	For-estry	Law*	Vet.	Med.	No. of Cases
1898-99	27	6	1	7	5	3	16	56	2	6	3	2	134
1899-00	28	..	..	1	5	3	25	64	1	7	4	..	138
1900-01	37	..	..	..	4	6	6	64	3	10	2	..	134
1901-02	38	..	..	..	9	2	29	92	5	7	..	2	184
1902-03	33	..	..	..	8	2	24	105	9	12	1	..	194
1903-04	31	..	..	..	9	5	39	112	..	9	1	1	207
1904-05	29	..	..	..	9	5	44	101	..	3	..	..	191
1905-06	39	..	..	..	14	8	36	89	..	1	..	..	187
1906-07	40	..	..	..	19	5	55	86	..	15	..	..	220
1907-08	43	..	..	..	22	10	60	79	..	11	..	..	225
1908-09	37	..	..	..	21	10	53	71	..	5	1	5	203
1909-10	47	..	..	..	41	7	30	88	..	9	..	..	222
1910-11	41	..	..	..	44	8	44	47	..	11	..	..	195
1911-12	36	..	..	..	52	6	38	57	..	7	4	..	200
1912-13	57	..	..	..	76	8	39	44	..	7	1	..	232
1913-14	58	..	..	..	76	5	31	47	..	7	..	..	224

\*No data prior to 1896-97.

Of the 224 admitted in 1913-14, 79 registered as freshmen, 84 as sophomores, 38 as juniors, and 23 as seniors.

During the last twenty-eight years there have been admitted from over 500 other institutions of collegiate rank, 3,984 students. The distribution of these students can be seen by reference to the table on page xciii of the Report for the year 1907-08.

ADMISSION ON SCHOOL CERTIFICATE, REGENTS' CREDENTIALS, AND EXAMINATIONS

The Registrar has charge of the credentials of those entering by school certificate, by Regents' credentials, and by examinations, including the examinations conducted by the College Entrance Examination Board.

During the last sixteen years the number of applicants admitted by school certificate, by Regents' credentials, and by examinations, has been as follows:

	198-9	199-00	190-1	191-2	192-3	193-4	194-5	195-6	196-7	197-8	198-9	199-10	1910-11	1911-12	1912-13	1913-14
Certificate	199	275	296	357	308	315	317	380	324	465	578	574	524	517	601	587
Regents	154	164	198	212	219	220	238	233	185	244	287	329	311	420	404	476
Examination	22	24	26	39	19	18	27	18	18	41	12	14	8	12	11	6
Coll. Ent. Exam. Bd.	..	..	..	9	11	20	27	29	37	33	23	27	14	18	13	14
N. Y. C. Ex.	..	..	..	..	..	..	..	29	9	5	..	..	..	..	..	..
Total	375	463	520	617	557	573	609	658	584	792	905	944	857	967	1029	1083

The Regents' credentials mentioned above do not include medical and veterinary students certificates.

The discrepancy in numbers in the freshman class compared with those given in the Catalogue, is due to students being there listed as freshmen because of some shortage when otherwise they belong to a higher class. In 1912-13 and thereafter, students are registered with the class with which they intend to graduate. The tables now give a clearer statement of the distribution by classes.

The small number credited to entrance by examination would become much larger if those taking a few examinations to make up a shortage in another group were included. It is not unusual to have a student enter partly by certificate, partly by examination, and partly by College Board examination. The combining of school with Regents' credentials, however, is not a common method of admission and is employed only in very exceptional cases.



## AGE AT GRADUATION

The following table shows the age in years and months of students at graduation for the ten year classes 1870-1910. It also shows the age separately for men and women. The Masters' degrees are listed in one group and the Doctors' in another. The age at graduation of the youngest member of the graduating class and also that of the oldest member are given as well as the median age.

	Arts		Law		Medicine		Veterinary		Agriculture		Arch.	CivilEng.	Mech.	Eng.	Masters		Doctors	
	Men	Women	Men	Women	Men	Women	Men	Women	Men	Women	Men	Men	Men	Men	Women	Men	Women	
Class of 1870:																		
Minimum.....	20- 4																	26- 0
Median.....	21-11																	26- 0
Maximum.....	28- 5																	26- 0
Class of 1880:																		
Minimum.....	18-11	19- 8																22- 9
Median.....	22- 3	22- 2							20- 6		19- 6	21- 0	23- 0	20- 3				22- 9
Maximum.....	32- 8	24- 6							21- 0		21- 5	22- 8	25- 1	20- 3				22- 9
Class of 1890:																		
Minimum.....	19- 9	20-11	20- 1															22- 9
Median.....	22- 4	23- 0	22- 6						20- 1		20- 7	19- 2	20- 2	20- 7	23- 5	28-10		
Maximum.....	32- 6	27- 1	36- 2						23- 2		23- 9	22-11	23- 1	24- 1	26-10	29- 6		
Class of 1900:																		
Minimum.....	20- 0	20- 6	19- 6			21- 3	23- 6	22- 6										
Median.....	22-10	22-11	22- 5			24- 5	26- 9	25- 1	22- 7		21- 2	20-11	19- 9	22- 0	21-11	24- 0	30- 8	
Maximum.....	36- 3	33- 8	34- 4			38- 4	38- 2	34- 9	23-10		23- 0	23-10	22-10	24- 9	36- 6	30-10	31- 3	
Class of 1905:																		
Minimum.....	19-11	20- 6	20- 9	22- 1	20- 9	21-10	20-11											
Median.....	22- 6	22-10	23- 5	22- 1	23- 6	29-10	25- 5		22- 7		21- 2	20- 5	20- 4	21- 4	23-11	23- 5	37- 5	
Maximum.....	33-10	52- 5	29- 3	22- 1	38-10	38- 4	33- 0		23-10	27- 6	24- 4	24- 1	23- 3	25- 1	29- 3	31- 2	37- 5	
Class of 1910:																		
Minimum.....	20- 1	20- 8	20-10	22- 6	21- 3	27- 6	21- 0	24- 8										
Median.....	22- 5	22- 6	22-10	22- 6	23- 9	30- 8	23- 7	24- 8	20- 9	21-10	22- 3	19- 9	20- 2	21- 7	29- 8	23- 0	26- 5	
Maximum.....	34- 7	45- 2	26- 9	22- 6	33- 9	39-11	47- 0	24- 8	23-10	27- 6	30- 0	33- 8	32- 6	36- 1	32- 5	40- 4	37- 5	
									24- 0	23- 0	23- 0	23- 5	22-11	26- 1	29- 8	28-10	29- 6	
									34-10	24- 2	36- 4	31-11	32- 7	32- 4	29- 8	38- 7	36- 1	

It should be noted that the number entering entirely by our examinations is small. Entrance examinations are held at Ithaca at the beginning of the second term and as students may graduate at midyear a considerable number are enabled to enter at that time and save a half year. Students who complete the requirement for their degrees may graduate at the end of the first term, at the end of the summer vacation, or in June at the end of the academic year. Thirty-four received degrees in September, 1912, fifty-five in September, 1913, eighty-five in February, 1913 and seventy-one in February, 1914. The preparatory schools are now better acquainted with our entrance requirements. Certain Regents' credentials admit to the Colleges of Arts and Sciences, of Agriculture, and of Law, and to the four and one-half and five year courses in Architecture, Civil Engineering and Mechanical Engineering and under certain conditions relieve the students from taking entrance examinations. The results of Regents examinations for single subjects are accepted if the grade be at least 60%. The failure of students to pass the entrance examinations before completing the high school course influences others to complete their course in school and enter the University by certificate.

#### PETITIONS AND REGISTRATION

The usual form of petition has been continued by the several faculties. Where the petition relates to routine matters and a mere change of registration of studies, a much simpler method has been adopted for changes in registration, and the strict enforcement of registration rules has made a marked improvement in the students' records.

The registration of old students takes place after the matriculation of new students. This allows new students a day to arrange their work before instruction begins. Old students are not required to be at the University until the day preceding the one on which instruction begins. The system of consulting new students in September in groups alphabetically arranged, and of sending out by mail permits and blanks for registration, has solved the problem of overcrowding at registration and gives each student abundant time to get started aright. Permits and blank forms for registration for old students are also mailed during the summer to all who apply for them. The congestion at the registration rooms in September is much relieved.

#### DEGREES

The inserted table gives the number admitted to graduation at the 1914 Commencement as well as those of former years. 15,625 degrees have been conferred, but there are some duplicates between the first and second degrees. One degree (M.D.) was conferred in 1899, but in 1907 was revoked because the candidate declined to accept it. One degree (D.V.M.) was conferred in June, 1905, but owing to a technicality was withdrawn and conferred again June, 1906, while another degree (D. V.M.) was conferred in 1907 but dated as June, 1906. The two degrees (M.D.) listed as February, 1912, were conferred after June, 1911, and before February, 1912, at the dates when the candidates became of proper age. Care has been taken to discriminate between closely allied degrees, but such have been grouped so as to show at a glance the number in each department.

Respectfully submitted,

DAVID F. HOY,  
Registrar.

## APPENDIX XVI

ANNUAL REPORT OF THE BOARD OF DIRECTORS OF THE  
ASSOCIATE ALUMNI, 1913-1914

An awakened interest in the University has shown itself among Cornellians during the past year. From many quarters have come evidences of intensified loyalty and, in one way or another, manifestations of desires to aid. The Board of Directors have endeavored to make available the organization of the Associate Alumni for specific and useful work.

Committees were designated consisting in each case of a director as chairman who chose as his committee associate four members of the Associate Alumni other than officers or directors, and to each committee there was assigned for their consideration, one of the duties specifically enumerated in Section 9 of the By-Laws, and instructions were given to report their findings and recommendations to the Board.

Certain of these duties require attention regularly each year, and to that extent are somewhat routine, but nevertheless important. They were faithfully and promptly attended to. Mr. Tatum's committee prepared and through the secretary presented at the annual meeting held in Ithaca, June 13, 1914, its report of the business transacted during the year preceding. Mr. Warner's committee co-operated with and rendered valuable assistance to the Faculty Committee in the arrangement of the Commencement and Alumni Reunion programmes. Mr. Adler's committee had in charge arrangements for the annual meeting and ascertained from local clubs and associations through their secretaries, points of information desired from our alumni trustees. They communicated such points to our alumni trustees and as a result comprehensive reports were presented to the annual meeting of the Association by Mr. Willard Beahan and Mr. Ira A. Place, and were listened to and received by the members present with marked attention. The Committee on Elections under the able and experienced direction of Professor Crandall with Director White among the members performed the arduous duty of canvassing the vote for alumni trustees and reported in detail thereon to the annual meeting. Mrs. Coville's committee audited the accounts of the treasurer and found, as reported by the treasurer, that the expenditures for the year amounted to \$299, being one dollar less than the amount provided for in the budget prepared in the spring of 1913. The treasurer's report shows the property of the Associate Alumni and the other matters required by law to be shown by the directors of membership corporations, except the names and places of residence of the persons admitted to membership during the past year. Such persons are the graduates and matriculates of the class of 1913, and their names and addresses are on file in the office of the Secretary of the University. Copies of the treasurer's report may be had from the secretary.

Mr. Edwards' committee has arranged for transmitting information concerning the University and information concerning the work of the Associate Alumni.

As a result, four bulletins were prepared, three of them by the secretary of the Associate Alumni, and transcribed and issued through the office of the Secretary of the University.

Bulletin No. 1 consisted of a complete list of Cornell Alumni organizations, together with the names and addresses of the secretaries.

Bulletin No. 2 was formulated by Mr. Irish's committee on extension of local clubs and associations. It contained requests for information which would assist the committee to establish new clubs and local associations in localities not now represented, for suggestions from clubs of subjects of sufficient importance to warrant discussion at a forum, and offers to aid in more effectively organizing existing clubs by supplying model forms of constitutions and by-laws.

Bulletin No. 3 was issued in printed form and contained President Schurman's address on "What Her Alumni Can Do For Cornell," a report of the Committee on Associate Alumni of the Cornell Club of Western Pennsylvania, and the minutes of the meeting of the directors, with the delegates from local clubs and associations at Pittsburg on March 14, 1914.

Bulletin No. 4 contains Certificate of Incorporation of the Associate Alumni of Cornell University; Statute authorizing the election of Alumni Trustees; By-Laws of Associate Alumni; amendments to the By-laws proposed for adoption at the annual meeting, June 13, 1914; Regulations for independent nominations of officers of the Associate Alumni and report of the nominating committee of the Associate Alumni.

Under the head of affairs which require organized effort or participation by the Alumni three committees considered matters pertaining to the Cornellian Council, Alumni Field, and Association of Class Secretaries, whose chairmen were respectively directors Hooker, Atkinson and Houghton. Mr. Atkinson's committee found Alumni Field matters to be so thoroughly taken care of by the General Field Committee that no special work appeared to be required from his committee. At the same time the committee deemed it important to organize so that there might be a medium through which to co-operate and assist in behalf of the Alumni in whatever opportunity should offer. Conferences were held during the year by these committees acting through their chairmen with President Place of the Cornellian Council and President de Forest of the Association of Class Secretaries. President Lewis attended by invitation the mid-winter meetings of both of these bodies. Chairman Houghton and the members of his committee by invitation attended the meeting of the Association of Class Secretaries. Ways and means for co-ordinating alumni effort in behalf of the University were carefully considered, as a result of which the by-laws of the Associate Alumni, and of the Cornellian Council and the Association of Class Secretaries have been amended by vote of members assembled in regular meetings so as to include, in the case of the former, the presidents of the Cornellian Council and the Association of Class Secretaries as ex-officio directors, and in the case of the two later, the president of the Associate Alumni.

Mr. Irish's committee for establishing an Alumni Bureau for the promotion of the interests of the members included a sub-committee for the promotion of local clubs and associations, and one upon the establishment of an employment bureau. Mr. Irish acted as chairman of the former, and Mr. Thorp was chairman of the latter. The members of the sub-committee on clubs were so located

geographically that each took charge of a different section. The committee prepared Bulletin No. 2 before mentioned.

Forty clubs and associations were communicated with by the committee. Seventeen replied with suggestions, requests for assistance in perfecting their organizations, and suggestions for extensions in adjacent territories, although some replies were to the effect that new organizations were not needed in their adjacent territory.

The committee reports that:

"Results, however, have been very satisfactory, in that the clubs and associations have been informed of the Associate Alumni activities under way, have been stimulated to interest and to the exercise of their duties and privileges as clubs under the by-laws and have paved the way for energetic co-operation in the future. As a result, in part, of Bulletin No. 2, twenty-seven local associations and clubs qualified to send delegates to the annual meeting, these twenty-seven clubs being entitled to fifty delegates, who can cast 500 votes."

It is hoped that as a result of the work of this committee, local clubs and associations will keep the secretary informed of names and addresses of new officers promptly upon their election. Many addresses as last reported by the clubs and associations were found to be obsolete, with the result that communications were delivered only after several efforts on the part of the committee, except for which the work of promoting the extension of local clubs and associations would be farther advanced.

The committee reports that suggestions for constructive work were received from only two of the clubs in reply to the committee's requests for subjects of sufficient importance for consideration at a forum, and for subjects properly within the sphere of Cornell alumni interest upon which the club desired information or expression of opinion, and the committee is of the opinion that this fact "points clearly to the necessity for some systematic and frequent means of passing information (as to the University's activities, aspirations and needs) to the alumni as individuals and clubs."

This committee recommends further,

"that the work of this committee should be continuous from year to year, with the immediate future devoted to the organization of new associations in localities where the alumni are not now affiliated."

Mr. Thorp's committee upon establishment of an alumni employment bureau found,

"that work along the line of finding employment for students and alumni has been carried on at Ithaca by various agencies. The Secretary of the University, the School of Education, and each professional school, acting through a committee have worked among separate groups of graduates, and the University Christian Association has looked after student employment."

The committee believes

"that efficiency would be promoted if there were established some one central agency which would look after the interests of all alumni, . . . (and) that if such an agency were established those who are now looking after the interests of the various groups of alumni would find it greatly to their advantage to assist and make use of it."

The committee recommends as follows:

"1. That the Trustees of the University be requested to establish in the office of the Secretary of the University, a department to be known as the Bureau of Appointments, or by some similar name, the function of which shall be to find positions for students and alumni making applications therefor.

"2. That if such bureau is established notice be sent by the secretary to all



students and alumni by a circular letter informing them of the existence of such a bureau, accompanied by a blank application to be filled and returned in case a position is desired, and also requesting those alumni who are employers to notify the bureau from time to time of any positions they desire filled.

"3. That all local clubs and associations be likewise notified by the Secretary of the existence and purpose of the bureau and requested to organize local committees on alumni employment to co-operate with the central bureau.

"4. That the methods adopted by other institutions which are doing efficient work be studied and adapted as far as practicable to our needs.

"5. That the Board of Directors of this Association co-operate with and assist the Secretary of the University in establishing and carrying on such a bureau."

Mr. Walter's committee to arrange for the conduct of forums and gatherings of the Alumni reports that no request was made during the year for a Forum; that no Forum as strictly defined in the By-Laws has been held during the past year, that the March meeting of the Board was made an open meeting, which was attended by accredited delegates from seventeen local clubs and associations, by President Schurman, and by members of the Faculty, and that much of value to the University and to the Alumni was there considered, that letters were sent to the secretaries of all local clubs and associations urging attendance by qualified delegates at the annual meeting in Ithaca on June 13, 1914; that requests were sent out for information concerning present customs among local clubs to enable the committee to pass along helpful ideas for local meetings; that the committee has conducted correspondence and has sent a circular letter to the secretaries of clubs concerning an "All Cornell Night," that many favorable replies were received, that the committee has tentative plans in hand for such a night next year and they recommend that this custom be established.

Mr. Alexander reported for his committee for representation of the alumni at functions and ceremonies that he found difficulty in forming a committee that would properly attend to bringing about proper representation of the President of the University, Board of Trustees, the Faculty and the Alumni, at meetings, and that inasmuch as his term was about to expire it seemed that he should not impose upon his successor any committee. He recommended a publicity bureau working in co-operation with all.

Mr. Porter's committee reviewed the matter of preparation of lists of members and their addresses and found this work being taken care of by the Secretary of the University in a manner deserving of the highest commendation. An official list has been prepared and brought as near down to date as is possible and is being made into an addressograph list. Local associations may now obtain from this list names of recent graduates who have settled in their neighborhoods, and class secretaries will find it of great value from which to correct their class lists. Alumni can be of great help in keeping this list accurate by promptly informing the Secretary of the University of changes of permanent addresses as they occur. The committee has under consideration the possible publication of the list annually at a moderate charge per copy.

A committee under the direction of Mr. Irish to examine into and report upon the practicability of the acquisition or control of the Alumni News by the Associate Alumni has been in communication with the owners to ascertain their attitude towards a possible transfer of control, and finds that the owners are agreeable to the spirit of the project, provided a plan of transfer can be developed which will work to the good of the news as a publication, to the good of the

alumni as individuals and as an organization, and through them to the good of the University. The committee reports that at least two alumni stand ready to participate in an underwriting, for a period of years, of a practicable project. The committee requests a continuance with the privilege of reporting finally at a later meeting.

At the meeting at Pittsburgh in March, President Schurman who attended the meeting on the invitation of the President of the Associate Alumni to point out ways in which the alumni can be of benefit to the University, gave valuable suggestions, as follows:

- (a) Cornell must depend more and more upon its old students and alumni.
- (b) Bringing the alumni together and keeping them correctly informed of the University.
- (c) Helping the University by helping its young graduates to get located.
- (d) Properly organized and co-ordinated meetings of alumni and former students in the several centers, so as to enable University representatives to visit Cornellians systematically throughout the entire country.
- (e) Sectional forums for the crystalizing of Cornelian sentiment upon subjects of interest as they arise.

For the attainment of these objects the Board of Directors has been working and feel that they have made substantial progress.

Financial aid to the University from alumni is the object of the Cornelian Council and the Board has cooperated and endeavored to encourage alumni and members to respond more generally to the Council's appeals. Bringing the alumni together and maintaining their loyalty and enthusiasm will be the result of systematic carrying on of the work in their several fields by the committees before mentioned, and satisfactory results will probably be most noticeable from the extension of local clubs and associations, the regular dissemination of correct information concerning the University, and meetings of Cornelian with University representatives. The directors stand ready to help in this direction by attending functions of clubs and associations and imparting such information as they may have and which those present may wish to know. It is hoped that the committee on forums and gatherings of the alumni may bring about a better arrangement and co-ordination of meetings in the different centers throughout the country.

Other matters that have come informally before the Board and which it is hoped may receive all the attention due them are:

Encouragement and selection of the best students for attendance in the University, rather than the greatest number.

Matters concerning selection of candidates for alumni trustees and their relations with the Associate Alumni.

The directors have done no more than to see that a canvassing board is duly selected each year and make suggestions of topics, as is hereinbefore reported, for consideration by the trustees in their annual reports. The provisions for the election of alumni trustees are statutory and the rules relating thereto are matters for the Board of Trustees of the University. It may be that the alumni at some time will wish to present matters relating to this subject, in which event general or sectional forums can be arranged for the direct expression of opinion thereon.

In closing, the board extends thanks to all those who in person or by representatives, took part in the meetings in Cleveland and in Pittsburgh on the 13th and 14th days of March. The open discussion at both meetings brought to light many evidences of great interest in the University and activity among the members in her behalf and much of the method which the board has been able to put into active work, was there suggested. As a direct result of those meetings there were formulated the amendments of the By-Laws now before the Associate Alumni for consideration, the committee to consider the practicability of acquiring the Alumni News was authorized and the service of the office of the Secretary of the University has been extended so as to afford a great help to the Associate Alumni.

Dated, Ithaca, N. Y., June 13, 1914.

ROGER LEWIS,  
President.  
W. W. ROWLEE,  
Secretary.

## APPENDIX XVII

### REPORT OF THE SECRETARY OF THE UNIVERSITY

To the President of the University:

**SIR:** I have the honor to submit the first report of the Secretary of the University.

In an office as recently established as that of the Secretary, it might be well to give a brief resume of the scope of the office at the present time and a statement of its purposes.

The office is in reality divided into three parts—one part issuing the Official Publications of the University and taking care of all kinds of miscellaneous University printing, the second part dealing with the purely secretarial work of the University, and the third part concerned primarily with Alumni interests and organizations. In addition to these primary duties we endeavor to keep in close touch with the undergraduates and with student organizations.

During the past year we have printed and distributed approximately 150,000 copies of the various University Official Publications, including nineteen separate announcements. This is including the 26,000 copies of the President's Report which are distributed annually to every former student. In addition to the University announcements we have issued special publications dealing with lectures and formal dedications. A considerable saving in the cost of stationery and miscellaneous printing has been achieved during the past year by having it concentrated in this office. It seems evident that a great deal more can be done in the future if the plan, which has been approved by the Faculty, of having all the small office supplies and printing secured through one central office can be put into effect.

The secretarial duties are numerous and are increasing rapidly. The office directs the engraving and distribution of diplomas for the graduating classes. We have charge of the Cornell University State Scholarships and also the new University State Scholarships. The daily Infirmary report is received and distributed through the office and all correspondence in connection with parents, guardians and friends of sick students is handled by the Secretary. We make arrangements

for the entertainment of the University lecturers and guests of the Institution. The Secretary of the University serves as secretary of the Student Loan Fund and holds personal interviews with all students making request for loans. He also serves as secretary of the Entrance Examination Board under the direction of Professor Bristol, and is secretary of the Commencement Committee.

We publish and distribute the Cornell University Weekly Calendar and assist as much as possible in the circularization of news for the Cornell Daily Sun and the Ithaca daily papers. During the past year we have made an attempt to send weekly news letters to out of town newspapers. This work has been purely experimental and is questionable whether it will prove a success. To my mind, newspaper publicity is a thing which cannot be secured by merely sending news items to various newspapers. A demand must be created for Cornell news. Our location is such that things which are of interest to us are not of general interest to people in other parts of the country.

In addition to the above, all correspondence of a general nature relative to the University is referred to the office from other administrative offices in the University.

We come closely in touch with the students through the medium of the Freshman Advisory Committee, which gains its support from this office.

The third part of our work is in connection with the Alumni of the University. We maintain complete and up-to-date alphabetical, geographical, and class lists of the Alumni and former students of the University. A great deal of time and care is given to the work of keeping these lists as accurate as possible. At the present time it is the official list. A great many of the Alumni associations and organizations have made use of the list during the past year in order that they might secure the names of all the Cornellians living in their districts. We have furnished the Class Secretaries of nine classes with complete class lists and have a standing offer with all class secretaries to furnish them with a similar list. The Cornellian Council uses our alphabetical list in making corrections of addresses. We have recently installed an Addressograph system which will be completed in the course of another two months and which will enable us to be of much greater service to Alumni organizations and to the individual alumnus than has been possible in the past.

The office is deeply concerned with all Alumni problems and suggestions and has endeavored to assist the Alumni in every way possible. It has tried to cooperate with the various Alumni clubs and associations and to identify its interests with those of the Class Secretaries Association, the Cornellian Council, and of the Associate Alumni.

A Bureau of Information for Alumni was established in the office through the action of the Associate Alumni at its June meeting. It was further recommended that an appointment office be established here for the purpose of securing positions for seniors and alumni. This matter is under consideration at the present time.

During the short time of its existence the office has grown very rapidly, and if it be accorded the support which it has received in the past will continue to advance at the same rapid pace. There can be no doubt that the work which it is undertaking for the Alumni will become one of its most important duties. The Alumni are beginning to learn of its many uses and are creating a demand for its services which can mean nothing except a constant enlargement and expansion.

It is the first organized effort on the part of the University to be of practical service to the Alumni as a whole.

In closing my report it is fitting that the work which the former secretary, Mr. W. J. Dugan, has done in building up the office should be properly recognized.

Respectfully submitted

H. WALLACE PETERS,  
Secretary.

## APPENDIX XVIII

### REPORT OF THE CHAIRMAN OF THE INFIRMARY COMMITTEE

To the President of the University:

DEAR SIR: The efficiency of the Infirmary has been maintained throughout the year under the careful superintendency of Miss Harriet A. Sutherland. There was some increase in the number of students cared for, the total being 1114 as compared with 1053 last year. No serious epidemics were prevalent although there were 102 cases of German measles and some mumps. The following

Infirmary statistics for the year are of interest.

Number of patients, men .....	974	
women .....	140	
		1114
Total number of day's service.....		7869
Average days per patient.....		7.06
Average total cost per day per patient.....		\$2.65
Average daily service.....		29.3
Maximum days' service Mch. 6 and 7.....		61
Medical cases.....		810
Surgical cases.....		304
Operations.....		103
Discharged, cured.....		1079
improved.....		22
not improved.....		3
not treated.....		9
died.....		1

The work of the Medical Advisers has increased in both amount and efficiency. With the hearty cooperation of Professor Young and Miss Canfield in the Departments of Physical Culture the work has been of undoubted benefit to the health of the student body. Dr. Esther E. Parker, the Medical Adviser for Women, has found the requirements of the work greater than justice to her private practice permits and has declined a reappointment for another year. Dr. Parker has rendered splendid service in the position and we regret to have her leave. The committee has secured as her successor Dr. Edith Matzke, who will devote her whole time to the work for which she seems particularly fitted by similar duties at Leland Stanford, Jr. University. A series of lectures was given during the winter by Professor Young and Drs. Munford and Parker with the purpose of impressing upon the students the importance of maintaining the health. The scope of the lectures will be enlarged during the coming year.

Respectfully submitted,

CHAS. D. BOSTWICK,  
Chairman of the Infirmary Committee.

## APPENDIX XIX

## LIBRARIAN'S REPORT 1913-1914

To the President of the University:

SIR: I have the honor to submit herewith my annual report on the University Library for the year ending June 30, 1914.

The following table shows the additions made to the more or less independent collections composing the University Library and the present extent of each:

	Volumes Added in 1913-14	Present extent in	
		Volumes	Pamphlets
General Library.....	12,789	374,808	65,000
Law Library.....	1,025	45,822	
Flower Veterinary Library.....	307	4,446	
Barnes Reference Library.....	58	2,061	
Goldwin Smith Hall Library.....	236	2,176	
Stimson Hall Medical Library.....	23	1,332	
Agricultural College Library.....	1,492	7,690	
Forestry Library.....	17	1,182	
Totals.....	15,947	439,517	65,000

The President White Library, the Fiske special collections, and the eight seminary collections are not separately enumerated in the table, they being included in the statistics for the general library. Of the additions to the general library (numbering 12,789 volumes) 5044 volumes were gifts. Of the accessions to the other collections named in the table, the gifts number 163 volumes for the Law Library, 17 volumes for the Flower Library, 12 volumes for the Stimson Hall Library, and 58 volumes for the Agricultural College Library.

The largest and most important gift of the year came from Professor J. M. Hart, for many years a constant benefactor, who has now given to the Library his whole working collection, numbering several thousand volumes, especially rich in English and Celtic philology, thus adding greatly to our resources in these fields of study. Dr. W. E. Griffis this year added to his former gifts a valuable collection of some 200 volumes, chiefly relating to Japan and China. Among other noteworthy gifts the following deserve separate mention: from the University of Chile, the first 11 volumes of the new edition of the *Obras completas de D. Barros Arana*, the Chilean historian, to be followed by some 20 more volumes; from the American Unitarian Association, the centenary edition of Theodore Parker's Works in 15 volumes; from J. G. Johnson of Philadelphia, the privately printed and richly illustrated catalogue of his collection of paintings and art objects, in three volumes; from W. A. White of Brooklyn, the privately printed Handlist of Early English books in his collection; from E. LeB. Gardner, '75, one of the few existing copies of Metcalfe and Eddy's elaborate

Report on the value of the properties and waterworks controlled by the New Jersey General Security Company; from E. T. Turner, '83, Strahan's Mr. Vanderbilt's House and collections in four volumes; from H. R. Ickelheimer, '88, a complete set of Venturi's *Storia dell'Arte Italiana*; from the Earl of Crawford, his *Handlist of Proclamations, 1714-1910*; from Stuyvesant Fish, a full size photographic reproduction of the Map of West Point by Major Villefranche. The gifts of Ex-President White are mentioned in detail in the report of the Librarian of the President White Library. Many valuable contributions have been received from Professor W. T. Hewett, J. L. Moffat, '73, E. Gillette, '73, C. W. Wason, '76, T. Stanton, '76, H. P. deForest, '84, L. Coville, '86, H. H. Norris, '96, A. G. Ingalls, '13. To yourself and many members of the University staff the Library, as heretofore, is greatly indebted for frequent gifts. From the United States Government and from many state and municipal governments the usual supply of federal, state, and municipal documents has been received, and the British, Canadian, and Australian Patent Offices continue to send regularly to the Library their valuable publications. These and the other gifts of the year have been individually acknowledged, and a list of all the donors is submitted as an appendix to this report.

In addition to the income from the Sage Book Fund, one-third of the free income from the Fiske fund was, this year as last, made available for the purchase of books and periodicals, and for binding. Among the more important purchases of the year are the following: Amyot's *Oeuvres de Plutarque*; Boccaccio's *Genealogia Deorum*, 1487, Fiametta, 1524, 1586, and 1594, *Le Decameron*, Paris, 1670; *The Life of Takla Hâymânôt*; Ben Jonson's Works, 1756; Sibbald's *Chronicle of Scottish Poetry*, 1802; Wise's *Bibliography of Borrow*; the collected works of Ambrose Bierce; Briquet's *Les Filigranes*; *Les Manuscrits de L. da Vinci*; *Livre de fontaines de Rouen*; *L'oeuvre de Gaspard André*; Monograph of the work of C. A. Platt; *Viollet-le-Duc's Dictionnaire du Mobilier français*; *Gallia Christiana*; *Ughelli's Italia Sacra*; *Les Registres des Papes du XIIIe Siècle*; *Le Neve's Fasti Anglicanæ*; the *Registrum Roffense and Costumale Roffense*; the *Worcester Episcopal Registers*; *Sharpe's Calendar of Letterbooks of the City of London*; the *Charters of the Borough of Colchester*; the *Records of the Borough of Nottingham*; the *Records of the City of Norwich*; complete sets of the publications of the Henry Bradshaw Society, the Sussex Record Society, the North Riding Record Society, the Yorkshire Archæological Society; *Documentos inéditos o muy raros para la historia de Mexico*, 36 volumes; *Cassin's Birds of California*; *Aves Hawaienses*; Bloch and Schneider's *Systema Ichthyologia*, 1801; *Collections Zoologiques du Baron Selys-Longchamps*; *Fürbringer's Untersuchungen zur Morphologie der Vögel*; *Gray's Catalogue of Shield Reptiles*, 1858; *Holbrook's Ichthyology of South Carolina*; the *Actuarial Society's Medico-Actuarial Investigation*; complete sets of the *Archiv für Protistenkunde*, *Bulletin de la Société Anatomique de Paris (1826-1913)*, *Finnisch-Ugrische Forschungen*, *Jahrbuch der Astronomie und Geophysik*, *Mittheilungen der deutschen orient. Gesellschaft*, *Revue des Études Rabelaisiennes*, *Strand Magazine*, and the publications of the *Istituto Veneto*, *Reale Istituto Lombardo*, and *Marine Biological Association*. During the year the following sets have been completed; *Archiv für slavische Philologie*, *Historical Collections of the Essex Institute*, *Flora Brasiliensis*, *Le Naturaliste Canadien*, *Zeitschrift des allgemeinen deutschen*

Sprachvereins, Zeitschrift für angewandte Psychologie, American Kennel Club Studbook.

Dr. A. C. White reports that the regular accessions of the year, both to the general University Library and to the Library of the State College of Agriculture and its various departments, have been promptly classified and entered on the shelf-lists. A beginning has been made in the arrangement of the rich collection given by Professor J. M. Hart in the fields of English, Germanic and Celtic philology. It is hoped that the entire collection may be made ready for use before the close of the calendar year.

In the catalogue department there have been several changes. Miss Jennie Thornburg, '93, the Head Cataloguer, who had been a member of the staff for 19 years, in January, on account of ill-health, requested and was granted a leave of absence for three months, and later handed in her resignation. In April Miss O. R. Ayres, the senior member of the cataloguing staff, was appointed Cataloguer in charge of the department and Miss E. R. Speed, '11, who had served on part time for several years in the department, was appointed cataloguer. Notwithstanding the interruptions due to these changes, the work has been carried on diligently and satisfactorily. Miss Ayres reports that the number of volumes, pamphlets, and maps catalogued for the general card catalogue during the year was 15,419; for these 16,980 cards were written and 4,683 printed cards were obtained from the Library of Congress, making a total of 21,663 cards added to the catalogue as against 18,979 last year.

Miss Fowler, the Curator of the Dante and Petrarch collections, reports that, after caring for the regular accessions, her time has been fully occupied with the revision, and preparation for the press, of Mr. Fiske's card catalogue of the Petrarch Collection. Arrangements for the publication of the catalogue have just been completed with the Clarendon Press, Oxford, and the manuscript copy for Part I, containing the works of Petrarch, is now on its way to the printers.

Mr. Hermannsson, the Curator of the Icelandic Collection, at present on leave of absence, partly with the purpose of adding to the Runic division of the collection, deserves much credit for his work upon the "Catalogue of the Icelandic Collection bequeathed by Willard Fiske," which was issued from the Plimpton Press in February, forming a handsome quarto volume of about 760 pages. Following substantially the plan Mr. Fiske seems to have had in mind, it is a catalogue by authors and titles in one alphabetical order, followed by a very full subject index, also arranged in alphabetical order of main headings. The catalogue, as printed, is based upon the manuscript card catalogue by authors and titles, which was prepared under the direction of Mr. Fiske, revised and brought down to date by Mr. Hermannsson, by whom the subject index, contemplated by Mr. Fiske, but upon which no work had been done, has been entirely prepared. The catalogue includes the whole of this great collection of over ten thousand volumes, with the exception of the books, some five hundred in number, relating to the Runic literature. The Runic literature, though forming a part of the Icelandic collection, is of so distinct a character that it was decided it would be much more useful if made the subject of a special catalogue. Volume seven of "Islandica", issued in June of this year, was also prepared by Mr. Hermannsson. The title of this volume is "The Story of Griselda in Iceland," and in it are published for the first time several Icelandic versions of this famous story, edited in part from manuscript copies in the collection.



Professor Burr, the Librarian of the President White Historical Library, makes the following report:

"During the year 1913-14 the President White Library has profited, as hitherto, not only by its stated income, but by the continued generosity of Ex-President White. The sales of his "Warfare of Science" brought us, in 1913, \$324.50. Many books have come to us from the private shelves of Mr. White. The collection of an Austrian jurist on the history of witchcraft (a rich collection, but far less rich than our own) has possibly gone to another bidder; but our own has made notable accessions. From England, through the generous agency of Professor Wallace Notestein, who called our attention to the treasure and made for us, at the cost of Mr. White, the purchase, came a remarkable volume of sixteenth-century chap-books, including one else unknown on the witch persecution under Matthew Hopkins. From Germany have come manuscript witch-trials of exceptional interest. On witchcraft in America, as to which the preparation for the press of a volume of narratives has stimulated my own interest, we have added one manuscript and sundry photographic facsimiles. And these are but the most spectacular of our acquisitions.

"The studies of Professor Lunt have in like manner fruited in the enrichment of our shelves on the history of papal finance, and for Professor Catterall have been made many purchases on the history of the French Revolution.

"If some of the works of art long lent by Mr. White for the adornment of the library have been transferred by him to the beautifying of the new Prudence Risley Hall, he has endowed the library in return with pictures and historical memorials, framed at his own expense."

Mr. W. H. Austen, Assistant Librarian in charge of the reference and loan departments of the general library, in submitting the statistics of the recorded use of the books reports as follows:

"The increasing number of users of the library inevitably causes more cases in which books are out of the library when wanted. The only important cases of this kind are those where the borrowers are University officers. The cases where student borrowers have out books needed for work by others, are largely due to failure of instructors to reserve such books, and these are easily adjusted. The provisions made in the library rules limiting the number of books in the hands of any one borrower, putting a time limit on periodical literature, and on books lying outside the borrower's field of work, are adequate as yet, to prevent an undue number of cases of interferences. But these rules should be more uniformly enforced. Few borrowers ever exceed the limit of the number of volumes or fail to return all books once a year. More do keep out bound volumes of periodicals beyond the time allowed. Two or three borrowers habitually violate these three important rules governing the use of books and some effective measures should be taken to enforce them. Unless all borrowers are required to comply with these regulations the whole system, as now applied effectively to keep in the library much material that would otherwise remain out unused, should be abandoned and these rules become inoperative."

During the year the Library has been open 308 days, and the following table shows the recorded use made of the books, representing, probably, about one-third of the actual use:

REFERENCE AND DEPARTMENT USE		
	1912-13	1913-14
Volumes used in reading room . . . . .	86,187	98,346
Volumes sent to seminary rooms . . . . .	3,882	3,744
Volumes sent to departments . . . . .	5,644	5,336
HOME USE		
Volumes from general library . . . . .	24,998	28,033
Volumes from open shelf circulating library . . . . .	5,657	5,582
Lent to other libraries . . . . .	196	204
Total recorded use . . . . .	126,574	141,245

The registered users of the general library are as follows: University officers 507, students 658, special borrowers two. During the year we have borrowed from other libraries 225 volumes, and have lent to 74 libraries 204 volumes. The number of students who have registered and have taken books for home use from the open shelf circulating collection was 868, and the number of officers 293. The number of readers who took advantage of the open shelf facilities and used books in the room, without taking them out for home use, was 5,085. During the year 21 volumes were temporarily recalled from this collection for class use in the general library.

In July the erection of the two story stack of steel shelving, by the Art Metal Construction Company of Jamestown, was so far completed that at the end of July the moving of the books into the new stacks began. In regard to this Mr. W. W. Ellis the Curator of the shelves reports as follows:

"This moving was a thorough one, comprising every book in the library stacks. As planned last year, in view of the extreme height of the shelves from the floor and their remoteness from the delivery desk, we put into the Jamestown stacks books little used such as the duplicates and patents, and document collections, the former on the lower, the latter on the upper floor, so far as space allowed. This gave us an opportunity to relieve the congestion in the west stack by dropping the books one floor or part of a floor. Some books were brought also from the White Library to relieve the crowded condition there. Similarly in the south stack, a part of the books on medicine and the general scientific periodicals were put into that part of the crypt from which the patents and documents were taken, and the other books in the south stack were dropped part of a floor to the place whence the others were taken. After this was done small adjustments of books and shelves had to be made, personally, all over the library, time for which could not be spared while the janitors and workmen were assisting in the book-moving. Consequently only one inventory has been completed this year, with the following results: 301 volumes were found on the wrong shelves as against 292 last year and 274 the year before. More than this number were found misplaced numerically, though on the right shelf. The number of books missing from the stacks this year is 523. All new books have been inspected as heretofore for errors in book-plates, call-numbers, etc., and volumes intended for seminary and department libraries removed before being sent to the stacks."

In the first term of the year Mr. Austen gave his regular two-hour introductory course in bibliography, and in the second term a one-hour course of laboratory work covering the subjects of the first term course. In the second term the two-hour course in general bibliography was given by the Librarian. The annual record of publications by the University and its officers has been prepared by Miss Speed and the list of donors by Miss Leland, and these will follow this report.

Respectfully submitted,

GEO. WM. HARRIS,  
Librarian.

## APPENDIX XX

## PUBLICATIONS, 1913-14

## Under the Auspices of the University

- Official publications of Cornell University. Vol. iv. no. B (2), no. 13-19; vol. v. no. A-C, no. 1-13. Ithaca, 1913-14. 24 nos. 8°. Illus.
- Contents:—iv. B(2). Directory Cornell University, 1st term, 1913-1914.
- iv. 13. College of Agriculture announcement, 1913-14.
- iv. 14. College of Agriculture announcement of winter courses, 1913-14.
- iv. 15. Announcement of the Department of Forestry, 1913-14.
- iv. 16. Catalogue number, 1912-13.
- iv. 17. President's report, 1912-13.
- iv. 18. Prize competitions, 1913.
- iv. 19. Proceedings at the opening of the hospital for large and small animals at the New York State Veterinary College, Nov. 15, 1913.
- v. A. Summer session, Cornell University, geography and geology: excursions, special illustrated lectures, detailed statement of courses, 1914.
- v. B. Directory Cornell University, 2d term, 1913-14.
- v. C. Cascadilla Hall.
- v. 1. Samples of entrance and scholarship examination papers, 1913.
- v. 2. Announcement of the Sibley College of Mechanical Engineering and the Mechanic Arts, 1914-15.
- v. 3. Announcement of the Graduate School, 1914-15.
- v. 4. General circular of information, 1914-15.
- v. 5. Announcement of the College of Civil Engineering, 1914-15.
- v. 6. Announcement of courses for the training of teachers and supervisors of music in the 23d summer session, July 4 to Aug. 14, 1914.
- v. 7. Announcement of the 23d summer session, July 6-Aug. 14, 1914.
- v. 8. Announcement of the New York State Veterinary College, 1914-15.
- v. 9. New York State College of Agriculture: announcement of the summer term, 1914.
- v. 10. Announcement of the College of Arts and Sciences, 1914-15.
- v. 11. Announcement of the College of Architecture, 1914-15.
- v. 12. New York State College of Agriculture announcement, 1914-15.
- v. 13. New York State College of Agriculture announcement of winter courses, 1914-15.
- Announcer of the College of Agriculture, published by the New York State College of Agriculture at Cornell University. Vol. ii. no. 10-12. Vol. iii. no. 1-9. July, 1913-June, 1914. Ithaca. 12 nos. 8°.
- Bulletin of the Cornell University Agricultural Experiment Station. No. 334-347. July, 1913-June, 1914. Ithaca. 14 nos. 8°. Illus.
- Circular of the Cornell University Agricultural Experiment Station. No. 21-23. Jan., 1914-June, 1914. Ithaca. 3 nos. 8°.
- The Cornell civil engineer. Vol. xxii. Oct., 1913-June, 1914. Ithaca. 8°. pp. 488. Illus.
- The Cornell countryman. Vol. xi. Oct., 1913-June, 1914. Ithaca. 8°. pp. 328. Illus.
- The Cornell reading-courses. Vol. ii. no. 41-48; iii. no. 49-66. June, 1913-June, 1914. Ithaca. 26 nos. 8°. Illus.
- Cornell rural school leaflet; A. G. McCloskey, editor. Vol. vii. no. 1-5. Sept., 1913-April, 1914. Ithaca. 5 nos. 8°. Illus.
- Cornell University Agricultura Experiment Station. Memoir. no. 1-2. July, 1913-Aug., 1913. Ithaca. 2 nos. 8°.
- Cornell University Department of Music: 9th annual music festival, April 30-May 2, 1914. Ithaca, 1914. 8°. pp. 52. Illus.

Cornell University Medical bulletin. Vol. ii. no. 4. iii. no. 1-4. New York, 1913-1914. 5 nos. 8°. Illus.

Contents:—ii. 4. Announcement of the Medical College, New York and Ithaca, 1913.

iii. 1. Studies from the Department of Physiology. II.

iii. 2. Studies from the Department of Surgery including urology, gynecology and ophthalmology.

iii. 3. Studies from the Department of Pharmacology.

iii. 4. Announcement of the Medical College, New York and Ithaca, 1914.

Cornell University weekly calendar. Vol. vi. no. 1-35. Sept. 22, 1913-June 6, 1914. Ithaca. 35 nos. f°. Broadside.

The Cornell veterinarian. Vol. iii. no. 2-iv. no. 1. Jan.-April, 1914. Ithaca. 2 nos. 8°. Illus.

Islandica: an annual relating to Iceland and the Fiske Icelandic Collection in Cornell University Library, edited by G. W. Harris. Vol. vii. Ithaca, 1914. 8°. pp. (6) + xviii. + 48.

Contents:—vii. The story of Griselda in Iceland, by H. Hermannsson.

Journal of physical chemistry; editor, W. D. Bancroft. Vol. xvii. no. 7-xviii. no. 6. Oct., 1913-June, 1914. Ithaca, 1914. 9 nos. 8°. Illus.

Issued monthly except in July, August and September.

The philosophical review, edited by J. E. Creighton with the coöperation of J. Seth. Vol. xxii. no. 4-xxiii. no. 3. July, 1913-May, 1914. 2m. New York. 6 nos. 8°.

Publications of Cornell University Medical College: Studies from the Department of Anatomy. Vol. iv. New York, 1913-14. 8°. pp. var. Illus.

Report of the New York State Veterinary College for the year 1912-13; transmitted to the Legislature Jan. 28, 1914. Albany, 1914. 8°. pp. 206.

Sibley journal of engineering, vol. xxviii. Oct., 1913-June, 1914. Ithaca. 8°. pp. iv. + 379. Illus.

Twenty-sixth annual report of the New York State College of Agriculture at Cornell University and the Agricultural Experiment Station established under the direction of Cornell University, Ithaca, N. Y., 1913; transmitted to the Legislature, Jan. 15, 1914. Albany, 1914. 8°. pp. 143.

#### By Officers

In the present list are included the titles of books, pamphlets, and contributions to periodicals, transactions, etc., published by officers and fellows of the University during the period extending from July 1, 1913, to June 30, 1914, with some titles omitted in previous lists.

**Adams, J. Q., jr.** The authorship of A warning for fair women. (Pub. of the Mod. Lang. Assoc. of America, xxviii (1913), 594.)

— Some notes on Henry Glaphorne's Wit in a constable. (Jour. of Eng. and Germ. Philol., xiii (1914), 299.)

— Two notes on Hamlet. (Mod. Lang. Notes, xxix (1914), 1.)

— William Heminge and Shakespeare. (Mod. Philol., xii (1914), 51.)

— [Review of] The Elizabethan playhouse and other studies, by W. J. Lawrence. (Jour. of Eng. and Germ. Philol., xiii (1914), 356.)

— associate editor. Materialien zur Kunde des älteren englischen Dramas, 1913-1914.

**Albee, E.** [Reviews of] Immanuel Kants Werke. Bd. iii.: Kritik der reinen Vernunft, herausgegeben von A. Görland. Bd. iv.: Schriften von 1783-1788, herausgegeben von A. Buchenau und E. Cassirer. (Philos. Rev., xxiii (1914), 222.) The value and destiny of the individual, by B. Bosanquet. (Same, xxii (1913), 653.)

**Alexander, C. P.** The neotropical tipulidae in the Hungarian National Museum (diptera). (Entomol. News, xxiv (1913), 404, 439; xxv (1914), 205.)

— A new geratomyia from the Philippine Islands. (Insecutor Inscitiae Menstruus, i (1913), 137.)

— New or little-known neotropical hexatomini. (Psyche, xxi (1914), 33.)

— Report on a collection of craneflies (tipulidae, dipt.) from the Colombian

Andes, taken by Mr. John Thomas Lloyd. (Jour. of the N. Y. Entomol. Soc., xxi (1913), 193.)

— Report on a collection of Japanese crane-flies (tipulidae), with a key to the species of ptychoptera. (Canadian Entomologist, xlv (1913), 197, 285, 313; xlv (1914), 157.)

— The tipulidae in Brunetti's "Fauna of British India; diptera nematocera." (Insector Inscitiae Menstruus, i (1913), 118.)

— and J. T. Lloyd. The biology of the North American crane-flies (tipulidae, diptera). I. The genus *eriocera* Macquart. (Jour. of Entomol. and Zool., vi (1914), 12.)

Allen, A. A. Cory's least bittern at Ithaca, N. Y. (Auk, xxx (1913), 559.)

— An opportunity interrupted. (Bird Lore, xv (1913), 296.)

— The red-winged blackbird: a study in the ecology of a cat-tail marsh. (Abstract of the Proc. of the Linnaean Soc. of N. Y., no. 24-25 (1914), 43.)

— The sandpiper. (Cornell Rural School Leaflet, vii (1914), 286.)

— and A. D. Du Bois. April killdeers. (Country Life in America, xxv. no. 6 (1914), 41.)

— See also Wright, A. H., and A. A. Allen.

Anderson, R. P. Ein Modification der hempelschen Gaspipetten. (Zeitschrift für angewandte Chemie, xxvii (1914), 23.)

— Modified Hempel pipettes. (Jour. of Industrial and Engineering Chem., vi (1914), 237.)

— A stopcock clamp for high pressures. (Cornell Chemist, iv (1914), 4.)

— Ein tragbarer Pettersons-Palmqvist Apparat. (Zeitschrift für Hygiene und Infektionskrankheiten, lxxiii (1913), 549.)

— [Review of] Technical gas and fuel analysis, by A. H. White. (Science, xxxviii (1913), 745.)

— See also Dennis, L. M., and R. P. Anderson.

Andrews, A. L. Ibsen's Peer Gynt and Goethe's Faust. (Jour. of Eng. and Germ. Philol., xiii (1914), 238.)

— Notes on North American Sphagnum V. (Bryologist, xvi (1913), 59, 74.)

— Old Norse notes IV-VI. (Mod. Lang. Notes, xxix (1914), 133.)

— Sphagnales: sphagnaceae. (North Amer. Flora, xv (1913), 1.)

— Studies in the Fornaldarsögur Nordrlanda. II. The Hverfarar saga § 1. (Mod. Philol., xi (1914), 363.)

Austin, B. E. See Nye, C., and B. E. Austin.

Bailey, H. C. The clinical significance of the urine in pregnancy. (Amer. Jour. of Obstetrics, lxxviii (1913), 263.)

— Contribution to the technic of perforation. (Same, lxxix (1914), 465.)

— See also Murlin, J. R., and H. C. Bailey.

Bancroft, W. D. The electrochemistry of light, x. (Jour. of Physical Chem., xvii (1913), 596.)

— Osmotic pressure and moist air. (Same, xviii (1914), 67.)

— The theory of dyeing. I, II, III. (Same, xviii (1914), 1, 118, 385.)

— [Papers from the laboratory of W. D. Bancroft, published in the Jour. of Physical Chem.] Absorption by filter paper by M. A. Gordon, xviii (1914), 337.; Action of calcium chloride on roads by F. R. Newman, xvii (1913), 703;

Action of persulphates on acetates by M. A. Gordon, xviii (1914), 55; The approximate melting-points of some commercial alloys by A. B. Norton and H. W. Gillett, xviii (1914), 70; Chromic oxide jellies by E. H. Bunce and L. S. Finch, xvii (1913), 769; Color photography of luminescence by J. M. Lohr, xvii (1913), 675;

Cupric oxide jellies by L. S. Finch, xviii (1914), 26; Effect of light on decomposition voltage by A. Leighton, xvii (1913), 695. (Also in Trans. of the Amer. Electro-chem. Soc., xxiv (1913), 331.); Experiments in dyeing by A. W. Davison, xvii (1913), 737; Experiments on emulsions by F. R. Newman, xviii (1914), 34;

Experiments on white lead by R. S. Owens, xviii (1914), 461; The filtration of barium sulphate by J. L. Osborne, xvii (1913), 629; Flame reactions, I-II, by W. D. Bancroft and H. B. Weiser, xviii (1914), 213, 281; Luminescence by E. F. Farnau, xvii (1913), 637; Mercuric oxide jellies by E. H. Bunce, xviii (1914), 269.

Also about fifty signed book reviews in the Journal of Physical Chemistry and two in Science.

- editor. *Journal of Physical Chemistry*, 1913-1914.
- Barker, E. E.** Eugenics movement. (*Dietetic and Hygienic Gazette*, xxix (1913), 119.)
- Glacial pot-holes at Crown Point, New York. (*Jour. of Geology*, xxi (1913), 459.)
- Barrows, C. C.** Clinic at Bellevue Hospital, Cornell division, before the New York Obstetrical Society, April 7, 1913; discussion of cases. (*N. Y. Jour. of Obstetrics*, (1913), 543.)
- Remarks on the uterine fibroids with special reference to their relation to tumors of the thyroid gland. (*Amer. Jour. of Obstetrics and Diseases of Women and Children*, lxix (1914), 33.)
- The surgical treatment of prolapse of the uterus. (*N. Y. State Jour. of Med.*, xiii (1913), 32.)
- Bauer, J.** Cornell spirit and the student convocation hour. (*Cornell Era*, xlvi (1914), 607.)
- Goodwill: its nature, value, and treatment in the accounts. (*Accountant*, Dec. 6, 1913.)
- The Minnesota rate cases: the problem of federal versus state railway-rate control. (*Polit. Science Quarterly*, xxix (1914), 57.)
- Which way are you headed? (*Mod. Methods*, Aug., 1913.)
- [Reviews of] Engineering valuation of public utilities and factories, by H. A. Foster. (*Amer. Econ. Rev.*, iii (1913), 926.); Regulation, valuation, and depreciation of public utilities, by S. S. Wyer. (Same, iii (1913), 926.)
- Also in each number of the *Amer. Econ. Rev.* abstracts of the principal accounting articles published in the technical journals.
- Beal, A. C.** Classification of garden varieties of the sweet pea: sweet pea studies IV. (*Bull. of the Cornell University Agr. Exp. Sta.*, no. 342 (1914), 213.)
- Research and investigation in floriculture. (*Florists' Exchange*, xxxvii (1914), 374.)
- Teaching floriculture: report of the Committee on Floricultural Courses. (*Proc. of the Soc. for Hort. Science*, (1913), 58.)
- Bedell, F.** Condenser current method for the determination of alternating wave form. (*Electrical World*, lxii (1913), 378.)
- Notes on some integrating methods in alternating current testing. (*Physical Rev.*, 2d ser. ii (1913), 404.)
- The use of the synchronous commutator in alternating current measurements. (*Jour. of Franklin Institute*, clxxvi (1913), 385.)
- [Review of] Alternating currents and alternating current machinery, by D. C. and J. P. Jackson. (*Science*, xxxix (1914), 106.)
- managing editor. *The Physical Review*, 1913-1914.
- Beebe, S. P.** See **Rahe, J. M.**, and others.
- Benedict, S. R.** A modified Hempel gas pipette. (*Biochem. Bull.*, iii (1913), 1.)
- A note on the determination of ammonia in urine. (Same, iii (1913), 41.)
- and **R. C. Lewis.** The influence of induced diabetes on malignant tumors. (*Proc. of the Soc. for Exp. Biol. and Med.*, xi (1914), 134.)
- A method for the estimation of sugar in small quantities of blood. (Same, xi (1913), 57.)
- and **J. R. Murlin.** A note on the determination of amino-acid nitrogen in urine. (*Jour. of Biol. Chem.*, xvi (1913), 385.)
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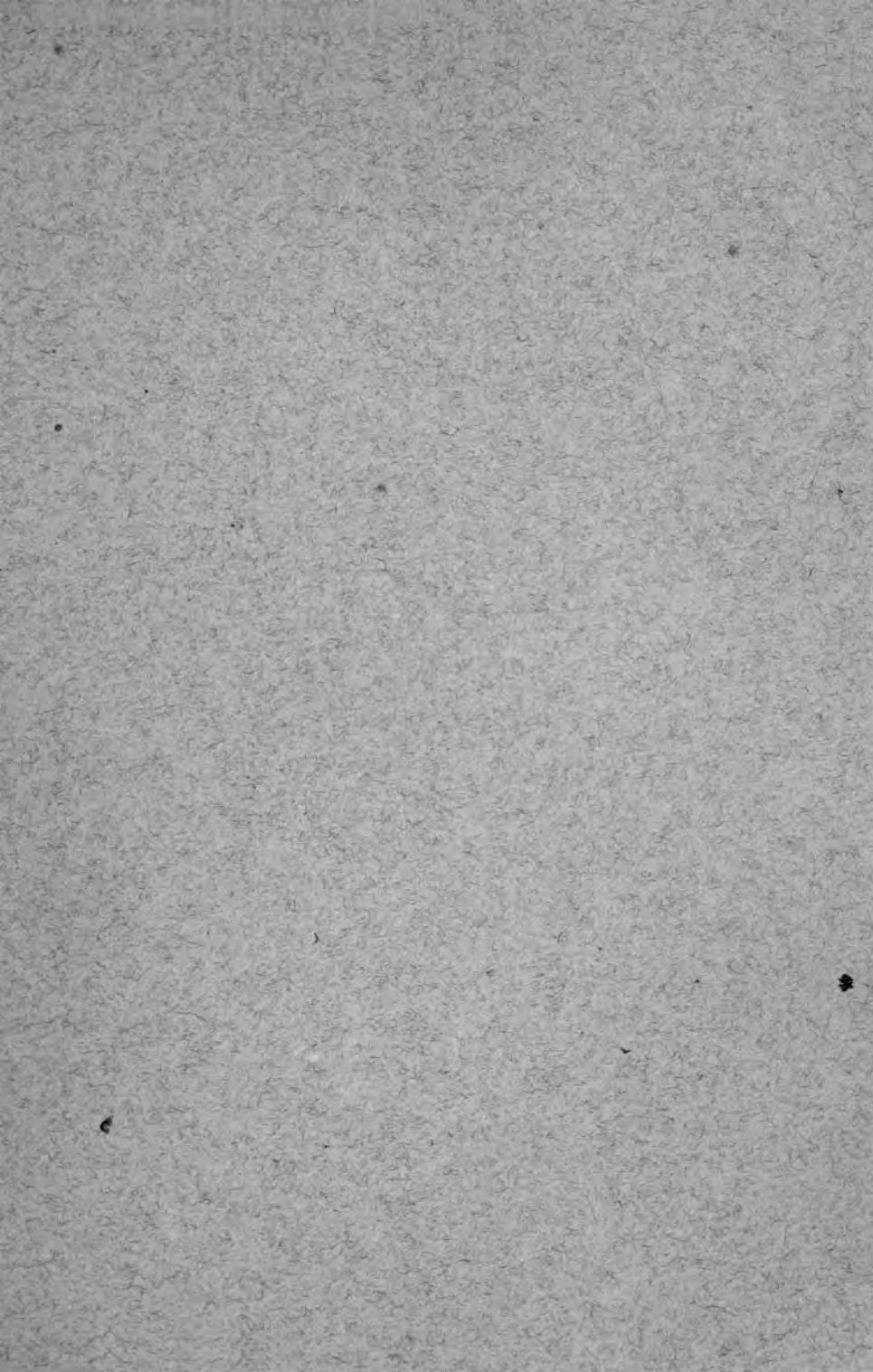
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