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President's Report

by

Livingston Farrand

1921-22

With appendices containing a summary of
financial operations, and reports of
the Deans and other officers

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PRESIDENT'S REPORT

FOR 1921-22

TO THE BOARD OF TRUSTEES OF CORNELL UNIVERSITY:

I have the honor to submit the President's Report for the year 1921-22. It is a satisfaction to record continued and undisturbed progress for the University. All the colleges and schools have operated with smoothness and efficiency.

THE TRUSTEES

The vacancy in the Board of Trustees caused by the death of Mr. E. L. Williams was filled by the election in February of Mr. George F. Baker as a member of the Board. Mr. William Metcalf, Jr., and Mr. S. Wiley Wakeman were, in June, elected Alumni Trustees in succession to Mrs. Harriet T. Moody and Mr. John C. Westervelt whose terms had expired. The service rendered by the retiring Alumni Trustees during two terms has been notable and in the case of Mr. Westervelt, who for two years had served as Chairman of the Committee on Buildings and Grounds, special mention should be made of his invaluable assistance in working out the complex problems connected with the extensive building program now under way at the University.

Mr. T. B. Wilson was reappointed by the Governor of the State to succeed himself and Messrs. J. T. Newman, Mynderse Van Cleef, and Robert H. Treman were elected by the Board to succeed themselves for terms of five years.

The University Faculty, on January 1, 1922, elected Dean James Parker Hall, of the University of Chicago, as a Faculty Representative of the Board to succeed Professor Charles H. Hull whose term had expired.

Important committee changes in the Board include the election of Mr. John L. Senior as a member of the Committee on General Administration, of Mr. Walter P. Cooke as a member of the Finance Committee, and of Mr. H. H. Westinghouse as a member of the Committee on Buildings and Grounds. These elections took place at the October 1921 meeting of the Board.

Mr. J. DuPratt White has been elected Chairman of the Committee on Buildings and Grounds in succession to Mr. Westervelt, retired.

THE FACULTY

THE FACULTY

I deeply regret to report that the University has suffered serious loss through the death of several distinguished members of the Faculty since the last annual report.

Professor Alexander M. Gray, Director of the School of Electrical Engineering, died October 14, 1921. Professor Samuel Peter Orth, Goldwin Smith Professor of Political Science, died at Nice, France, on February 22, 1922. Professor J. S. Shearer, Professor of Physics, died on May 17, 1922. Professor James McMahon, Professor of Mathematics, Emeritus, died on June 1, 1922. All these officers had rendered notable service to the University and it will be long before their places can be filled.

Four members of the University Faculty have retired under the terms of the Carnegie Foundation. After long, distinguished, and devoted service to Cornell, Acting President Albert W. Smith retired in October 1921, carrying with him the admiration and affection of the entire University community. In February 1922 George L. Burr, John Stambaugh Professor of History, laid down his active work, after forty-one years as Instructor and Professor. Not only by his scholarship but by his character and personality his permanent place in the best traditions of Cornell is assured. H. S. Jacoby, Professor of Bridge Engineering, retired in June 1922. A recognized leader in his technical field, Professor Jacoby's stimulation of research has made him a conspicuous figure in the Graduate School. In recognition of their service these three gentlemen have been appointed Professors Emeritus in the University. H. S. Gutsell, Assistant Professor of Freehand Drawing, after thirty-four years of loyal service has also retired under the terms of the Carnegie Foundation. In June 1922 Mrs. A. B. Comstock, Professor of Nature-Study, retired after twenty-five years of teaching at Cornell and was appointed Professor Emeritus. Mrs. Comstock's place in the respect and affection of thousands of Cornellians is deservedly unique. It is sincerely hoped that this group of distinguished figures, intimately identified with the history of Cornell, will long remain to give the University the benefit of their presence and inspiration.

The following members of the Faculty have presented their resignations: H. E. Babcock, Professor of Marketing; E. W. Benjamin, Professor of Poultry Husbandry; L. G. Cole, Professor of Roentgenology; Blanche E. Hazard, Professor of Home Economics;

C. B. Hutchison, Professor of Plant Breeding; O. B. Kent, Professor of Poultry Husbandry; C. T. Stagg, Professor of Law; W. S. Thompson, Professor of Rural Social Organization; Helen B. Young, Professor of Home Economics.

The following appointments and promotions in the Faculty have been made during the past year: Assistant Professor O. F. Curtis, Professor of Botany; Assistant Professor H. M. Fitzpatrick, Professor of Plant Pathology; W. A. Hilton, Acting Professor of Zoology; H. M. Imboden, Professor of Roentgenology; W. T. Longcope, Professor of Clinical Medicine; Assistant Professor L. M. Massey, Professor of Plant Pathology; Colonel J. C. Nicholls, Professor of Military Science and Tactics and Commandant; Assistant Professor E. L. Palmer, Professor of Rural Education; M. E. Pennev, Acting Professor of Education; Assistant Professor E. W. Rettger, Professor of Applied Mechanics; Assistant Professor H. H. Scofield, Professor of Materials; Perserved Smith, Professor of Medieval History; R. S. Stevens, Professor of Law; Assistant Professor P. H. Underwood, Professor of Topographic and Geodetic Engineering; Assistant Professor C. L. Walker, Professor of Sanitary Engineering; P. H. Wessels, Research Professor of Vegetable Gardening; A. E. Zimmermann, Acting Professor of Political Science; G. G. Andrews, Acting Assistant Professor of English History; J. L. Baldrige, Assistant Professor of Design in the College of Architecture; H. C. Cooper, Assistant Professor of Farm Crops; D. L. Gamble, Assistant Professor of Zoology; H. L. Gilman, Assistant Professor in the Veterinary Experiment Station; E. G. Lawson, Assistant Professor of Landscape Architecture; H. M. Morse, Assistant Professor of Mathematics; L. C. Petry, Assistant Professor of Botany; Robert Rettger, Assistant Professor of Geology; Adelaide Spohn, Assistant Professor of Home Economics; R. G. Stillman, Assistant Professor of Clinical Pathology; H. E. Thomas, Assistant Professor of Plant Pathology; Seth Wakeman, Assistant Professor of Education; W. L. G. Williams, Assistant Professor of Mathematics.

The following appointments in the Extension Department in the College of Agriculture have been made: Assistant Professor S. Lucile Brewer, Extension Professor of Home Economics; Assistant Professor A. F. Gustafson, Extension Professor of Soil Technology; Joseph Oskamp, Extension Professor of Pomology; W. T. Crandall, Assistant Extension Professor of Animal Husbandry; H. J. Metzger,

Assistant Extension Professor of Animal Husbandry; L. E. Weaver, Assistant Extension Professor of Poultry Husbandry.

Two officers of the Geneva Experiment Station have been appointed titular members of the Faculty of the College of Agriculture; H. J. Conn, Professor of Soil Technology, and A. C. Dahlberg, Assistant Professor of Dairy Industry.

THE STUDENTS

The official enrollment of students for the year closing June 30, 1922, was 5681. This figure shows practically no variation from that reported for the preceding year, namely, 5668. The problem of adequately caring for this number of young men and women continues one of the most difficult of those with which the University is confronted. The situation at Cornell is in no way unique but exists in practically every collegiate institution of standing in the country. The flood of applicants for admission to the various colleges of the University has resulted in an inevitable tightening of the requirements for entrance, but in spite of this fact the number of those applying in nearly all of the colleges is greater than the facilities of the University can accommodate. This is particularly true in the Colleges of Arts and Sciences and of Engineering. Careful and continuous study is being given to the question of ways and means of limiting the number of admissions to the endowed colleges of Cornell and if the present pressure continues, as it seems likely to do, definite recommendations as to formal limitation of numbers may be made.

As to the general condition of the student body, it is gratifying to report that the year just closed was marked by a sound student morale and by evidence of a sense of responsibility and serious purpose which is most encouraging. This was shown by the progressive development of the system of student self-government under the leadership of the Student Council, by the improvement in most respects of the operation of the honor system and by the promising effort made by the student body to control the liquor problem, which last has proven so baffling in many of our American colleges.

MATERIAL DEVELOPMENT OF THE UNIVERSITY

The year has been marked by almost unprecedented activity in the material growth of the University plant. The magnificent Laboratory of Chemistry, the gift of Mr. George F. Baker, is rapidly rising and will doubtless be ready for occupancy at the opening of the next academic year.

The new heating plant, the plans for which required the most careful study and supervision, has also nearly reached completion and it is hoped will go into operation during the coming winter. Special mention should be made in this connection of the valuable service of Trustees J. C. Westervelt and E. N. Sanderson in the working out of this vital addition to the University resources. The new unit of the men's dormitory system, Boldt Hall, made possible by appropriations from the income received through the Cornellian Council, is also proceeding rapidly and will be ready for occupancy in the autumn of 1923. The Dairy Industry Building, provided through an appropriation by the State Legislature, is nearly completed and will be ready for use next autumn. While affording welcome relief to the crowded conditions of the College of Agriculture and marking a further step in the carrying out of the extensive building plan for that College already authorized by the Legislature, the speedy provision of further accommodation for the College of Agriculture remains one of the pressing problems of the University.

A small pavilion on the shore of Beebe Lake will be completed before winter and will afford much needed facilities for skating and other winter sports at that place.

At the June 1922 meeting of the Board of Trustees there was presented a letter from Mrs. Willard Straight of New York offering a building in memory of her husband, a graduate of the class of 1901, to cost approximately one million dollars and to be used as a center for the social life of the student body of Cornell. This notable gift was gratefully accepted by the Board and the plans of the proposed building are being prepared by Messrs. Delano and Aldrich, Architects, of New York, in consultation with a committee representing the University. It is doubtful if any more useful contribution to the University resources could have been conceived than that presented by Mrs. Straight's generous offer. The need of better provision for the social activities of the students has long been recognized at Cornell but until Mrs. Straight's action no way had appeared of meeting the situation.

One of the most important steps taken during the year was the appointment by the Board of Trustees in April of a Plan Commission to consider the future material development of the University and to make definite recommendations to the Board of Trustees as to ways and means of providing a permanent plan for the development of the campus and the character and location of future buildings to

be placed thereon. Under the chairmanship of Dean Bosworth of the College of Architecture, this Commission is actively working and gives promise of offering for the first time a thoroughly considered plan of future development for the University.

GENERAL

The accompanying reports from the deans of the several colleges present in detail the special conditions and problems of the departments concerned. The brevity of my official connection with Cornell makes it obviously inappropriate that I should offer extensive comment on the general situation. There are, however, certain outstanding facts about which there can be little or no difference of opinion and which I may be permitted to emphasize.

The question of possible restriction in numbers of the student body has already been mentioned. Coincident with this and of equal or even greater importance is the necessity of strengthening the teaching force of the University. The notable personalities of the early Faculty have now necessarily for the most part passed from the field. Successive annual reports show the retirement of eminent figures whose places in many instances have remained unfilled. It is clear that unless vigorous measures are taken a serious situation will develop. The economic competition of business and professional life has for several decades rendered more and more difficult the recruiting and maintaining of the ranks of university teachers of the first quality. No university has been able completely to meet this situation but the steps taken in certain of our sister institutions have served to place Cornell in a position of distinct disadvantage.

Nothing but the loyalty of the Faculty has enabled Cornell to hold her teaching force in the face of competing calls of larger remuneration from other universities.

This situation which had been slowly developing for more than two decades became alarming a few years ago and was fully set forth at the time of the endowment campaign. The splendid response of the alumni in that effort saved the University from disaster and injected new spirit. It did not, however, place Cornell in a position of safety, much less in one of advantage in relation to other universities of equal rank. Additional unrestricted income of not less than two hundred and fifty thousand dollars a year is imperatively needed at the present time to meet existing demands without considering extensions of any type however important.

Increase in permanent endowment is relatively difficult to obtain but its necessity must be kept constantly before the Trustees. Undoubtedly the most important plan to meet this situation is that of the Cornellian Council, which organization has already demonstrated its indispensable value and deserves the earnest support of everyone interested in the welfare of Cornell.

Of the building needs of the University, while there are many which might be enumerated, it may be well to mention specifically those most evident. From the point of view of academic provision, the pressure in the College of Agriculture is possibly most keenly felt. This, however, is a problem for the State and it is hoped that the building program already authorized in general terms will be speedily realized and additional buildings provided by the Legislature which meets during the coming winter.

Almost equally desperate is the situation which has now developed in the College of Engineering. Many of the buildings and laboratories which house that important College are old and inadequate and must be replaced at the earliest possible moment. The position of leadership won and maintained by the College of Engineering cannot be allowed to be lost through lack of simple material facilities for instruction and research. The Plan Commission is giving special attention to this particular problem and it is expected that definite recommendations as to the building requirements of the College of Engineering will be presented to the Board of Trustees at an early date.

One of the distinguished features of Cornell in which the University takes just pride is the Library. The present building is already outgrown and is totally inadequate, both from the point of view of storage for books and of reading room facilities for students. Definite plans for enlargement or for rebuilding should be made without delay.

The College of Arts and Sciences has outgrown the accommodations provided by Goldwin Smith Hall and until relief in other buildings is offered a situation of difficulty will continue.

The encouraging development of the College of Architecture and the recognized demand for further attention to the field of fine arts in general make the provision of a building for those departments a necessity of the near future.

Turning from the demands for teaching and research much remains to be done at Cornell in adequate care of the students. The provision by Mrs. Straight of a center for the social life has served to bring out in sharper definition the lack of adequate gymnasium facilities.

Cornell is now developing, through the efforts of the Athletic Association, athletic fields and equipment which when completed will equal, if not excel, the best in the United States. Plans are underway to develop the playing fields provided by the alumni some years ago and lying to the east of the Drill Hall which will offer natural advantages for outdoor sports of an unrivalled character. The growing and healthy interest in sports and physical exercise, brought about during recent years in spite of practically total absence of gymnasium facilities, is a remarkable achievement. It is to be hoped that the Board of Trustees will cause to be prepared, upon recommendation by the Plan Commission, definite plans for an adequate gymnasium building and that sustained effort to provide this building will be undertaken.

The need of largely increased dormitory provision for the student body is also outstanding. Enough has been built of the residential halls group to demonstrate not only the superb architectural addition made by each successive unit of that group, but the value to the University in the provision of living quarters for the men students at a reasonable cost. Additional housing facilities for women students must also be provided and the Trustees have already authorized the preparation of plans for a complete residential unit for women on the north side of Beebe Lake.

Increased provision for the administrative activities of the University is also pressing but can be partially met, or at least adjusted if relief in the fields enumerated above is obtained.

It is encouraging to note that, while the general requirements of a modern university of the type of Cornell are indefinitely large and will probably always remain so, the building requirements are capable of definition and limit and, in our own case, are not beyond the hope of relatively speedy realization. Such generous provision has already been made in many directions that no unreasonable sum is called for to complete a relatively adequate equipment.

A development to which the Plan Commission is giving especial attention and in which every Cornellian should take interest and pride is that of the University campus. Its unrivalled natural advantages should be realized and this can be done without excessive cost. The development of permanent landscape plans presents a problem of great complexity and difficulty, however, and will require the most careful and expert study.

Within recent years another difficulty has been injected by the increase in the use of automobiles and a new aspect given to the traffic

problem on a campus as large as that of Cornell. Without suggesting a definite solution at this time it is obviously necessary that the Trustees take under consideration the immediate necessity of dealing with the existing menace and nuisance of automobile traffic and parking within the limits of the University grounds.

In closing this brief initial report may I express my thorough appreciation of the friendly, patient cooperation which has been extended to me during the year by Trustees, Faculty, Students, and Alumni. There is no larger opportunity than that which lies before a great American university. Its problems are infinite and their solution seldom obvious. Solution is always possible, however, provided idealism, vitality, and unity of purpose are maintained and these are present in full measure in this University. They are the sure guarantee of the future and the privilege of working for the realization of Cornell's ideals is one which I deeply appreciate.

LIVINGSTON FARRAND.

SUMMARY OF FINANCIAL OPERATIONS

To the Board of Trustees:

I have the honor to submit a summary of the financial operations of Cornell University for the fiscal year 1921-22:

The total income for the year applicable to current expenses and exclusive of the State Colleges was.....	\$3,358,632.06
and the total expenses.....	<u>3,510,856.64</u>
making a deficit of income of.....	\$152,224.58
From this deficit should be deducted the decrease in the amount required to be credited to the income of specially restricted funds.....	\$56,625.89
and the amount of decrease in reappropriations to meet obligations already incurred.....	<u>25,587.82</u>
	<u>82,213.71</u>
This represents an actual deficit for the year of	\$70,010.87
The surplus of current income July 1, 1921 was.....	<u>8,025.37</u>
leaving a deficit July 1, 1922 of.....	\$61,985.50

This deficit was caused by unusual expenses not contemplated at the time the budget for the year was adopted, including emergency repairs in the steam plant, repairs to Barnes Hall and its equipment, alterations in White Hall basement to provide room for the Department of Landscape Architecture, the expenditures incident to the inauguration of President Farrand and the remodeling of the President's house, the printing and distribution of the Alumni Directory, and the installation of electrical equipment given to the College of Engineering.

The expenses of the State Colleges at the University in excess of a certain income available from University and Federal funds are met from appropriations by the State of New York. The expenses of the Veterinary College were \$128,387.53 and those of the College of Agriculture were \$2,055,254.79.

During the year \$61,373.32 was added to the subscriptions to the Semi-Centennial Endowment Fund; \$401,994.13 was collected on account of the principal of subscriptions and \$74,142.39 on account of interest, leaving \$3,585,685.02 of subscriptions outstanding. Of the 8,170 subscriptions to the fund that have been handled through the Treasurer's office, aggregating \$5,567,211.04, there are 738 subscriptions, 9 per cent of the total number, on which no payment or request for extension has been received. These 738 subscriptions amount to \$385,909. or less than 7 per cent of the total amount subscribed.

The number of new buildings now under construction is unusually large, including the George F. Baker Laboratory of Chemistry, the State Dairy Building and Laboratory, the new steam heating plant and distributing system, and Boldt Hall. A new University service bureau, the Bureau of Purchases, was established with Mr. George S. Frank, C. E. 1911, in charge.

Respectfully submitted,

CHAS. D. BOSTWICK,
Comptroller.

Note: The complete reports of the Comptroller and the Treasurer, bearing the certificate of audit of Messrs. Haskins & Sells, certified public accountants, 30 Broadway, New York City, together with the reports of the Superintendent of Buildings and Grounds and the Manager of Purchases, will be forwarded to members of the Faculty and Alumni upon receipt of specific request addressed to the Secretary of Cornell University, Ithaca, N. Y.

APPENDIX I

REPORT OF THE DEAN OF THE UNIVERSITY FACULTY

To the President of the University:

SIR: I have the honor to submit the following report of the University Faculty for the year 1921-22:

During the period from July 1, 1921, to July 1, 1922, the membership of the University Faculty, which includes the members of the instructing staff holding the rank of Professor or Assistant Professor (omitting those members of the Extension Service appointed subsequent to April, 1917), increased from 364 to 374. Of this number, six were professors added to the Medical College. Of the present membership 311 are resident in Ithaca and 63 are professors in the Medical College, resident in New York City.

Since the date of my last report the Faculty has lost five of its most prominent members, all of whom had given to the University long and distinguished service. Professor Waterman Thomas Hewett, at the time of his death in England on September 13, 1921, Emeritus Professor of the German Language and Literature, had been continuously a member of the Faculty since 1870. Professor James McMahon, mathematician, died on June 1, 1922, after 38 years of service in the University as professor and instructor. Professor John Sanford Shearer, distinguished for his assistance to the Government during the war in the organization and conduct of the X-Ray branch of the service, died on May 17, 1922, having been a member of the staff of instruction from the time of his graduation, 1893, until his death. Professor Alexander Gray, Director of the School of Electrical Engineering, died October 14, 1921, after six years of professorial and administrative service in the Electrical Engineering Department of Sibley College. Professor Samuel Peter Orth, Goldwin Smith Professor of Political Science, died on February 26, 1922, at Nice, France, on his way to Egypt in search of health. Colonel Frank Arthur Barton, Commandant and Professor of Military Science and Tactics, beloved as officer and man, died during the University vacation on August 5, 1921.

Professor George Lincoln Burr, the John Stambaugh Professor of History, retired from active service at the close of the first semester. Professor Henry Sylvester Jacoby, Professor of Bridge Engineering, retired at the end of the past year. Both of these scholars, who had for many years been active and influential in determining the policies and legislation of the Faculty, have been appointed Professors Emeritus by the Board of Trustees. Professor Anna Botsford Comstock, Professor of Nature Study and the first woman to receive appointment to the staff of instruction in Cornell University, having been appointed in 1897 Assistant in Nature Studies, retired at the end of the past academic year as Professor Emeritus.

In addition to the changes in the Faculty through death and retirement from active service as above noted, 11 members withdrew from the Faculty, some of them to accept calls elsewhere and 22 members were added to the Faculty resident in Ithaca.

FACULTY REPRESENTATION ON THE BOARD OF TRUSTEES

At the present time the Faculty is represented on the Board by two Professors Emeritus, Professor Gage and Professor Nichols, the third representative being James Parker Hall of the class of '94, Dean of the Law School in the University of Chicago. On December 14, 1921, the Faculty elected Professor Hall to serve as representative on the Board for a period of three years beginning January 1, 1922. Prior to that date the Faculty had elected its representatives exclusively from its own active or retired professors. Regarding the relations of representatives on the Board of Trustees to the Faculty, the Faculty on October 12, 1921, adopted the following Resolution:

"Resolved, that by the election by the University Faculty of Faculty Representatives to the Board of Trustees, this Faculty does not delegate to such Representatives any of its powers or functions, nor shall it be construed as relieving the Board of Trustees of its duty to consult this Faculty, through the medium of the President of the University, in respect to matters of general educational policy affecting the entire University, nor of its duty to consult with the special faculties with respect to the necessities of their colleges or departments before action is taken on such matters by the Board of Trustees; nor shall it be construed as relieving the President of his duty to serve as a medium of communication between this Faculty and the Board of Trustees. The Faculty Representatives so elected shall have the right as men of education and University training to express their independent judgment in all matters considered in their presence in the Board of Trustees and in the Committee on General Administration or in any special committees to which they may be appointed by the Board, or upon any matters concerning which they may be consulted by the Board or any of its committees, but they shall not assume to speak for this Faculty concerning any such matters. They should in every sense be free to fulfill their duties as Trustees without limitations or disability, with the right to vote on the one hand, and without hindrance by instructions by this Faculty to them as individuals on the other. That the spirit and letter of the statutes requiring that this Faculty be consulted before action by the Board in all matters of University interest and that this Faculty may have a more intimate touch with, and a larger voice in, matters of general educational policy, the report of the President on matters pending in the Board shall be made an order of business at each regular meeting of this Faculty."

The establishment of a Joint Council consisting of members of the Board and members of the Faculty, a plan for which received the Faculty's approval on March 10, 1920, awaits the action of the Board. Reference to this subject was made in my report for the academic year 1920-21.

WAR ALUMNI

Applications for the certificate of War Alumnus continue to be received by the Faculty, but in diminishing numbers. During the past year this honor, which conveys all the rights and privileges of an alumnus, was conferred upon twelve ex-service students. The usual basis for the award of the War Alumnus Certificate is two years of residence in the University and one and one-half years of service in the armed forces of the United States or her allies, although minor modifications of these requirements have been made. It is assumed that within

a comparatively short time all of our former service students, who are entitled to this honor, will have submitted their applications and this form of University recognition, incident to the world war, will be complete.

ASSESSMENTS AND FINES

A series of assessments, which are of the nature of fines for various delinquencies has grown up in the legislation of the Faculty and, although this method of curing the evils to which the fines refer has not proved wholly satisfactory either to the Faculty or to students, the Faculty has not discovered a remedy of greater therapeutic value. Absences of students from the University and neglect of various regulations not only produce a certain amount of disorganization in scholastic work, but place a not inconsiderable burden upon the administrative offices. The fines to which reference is here made are fines for reinstatement after a student has been dropped from the rolls of the University, for late registration, for late filing of study card, for examinations to remove "conditions," for absences immediately before or after holiday recesses, and for deferred medical examination. The system of fines tends to expand. Certain of them have only recently been adopted and are still in the experimental stage. This is true of the fine for absence before or after holiday recesses. One hears more objections to this fine than to any other. The Faculty has always opposed imposing scholastic penalties for breaches of discipline. However, on account of the great growth of absences before or after the short recesses, it became necessary to impose some sort of penalty for this increasing disorder. The penalty that appeared to be the most effective and the easiest to administer was a fine. On March 8, 1922, the Faculty, after having submitted this question to the Committee on University Policy for consideration and report, voted to continue the assessment.

THE STANDING COMMITTEES OF THE FACULTY

The legislation and general policies of the Faculty are carried out largely by its standing committees, which perform not only this executive function, but to them are constantly referred questions regarding which the Faculty desires a preliminary study. There are now twelve such committees charged with the following subjects: Admission to the University by School Certificates, Student Affairs, Undergraduate Scholarships, University Policy, Relations to Secondary Schools, Physical Training and Military Science, Entrance Examinations, Official Publications, Hygiene and Sanitation, University Musical Concerts, and University Prizes. Of these committees, the Committee on Student Affairs has perhaps the most onerous duties. During the past year, however, student discipline has not presented any unusually serious problems. There is a general opinion in the Faculty that there are too many social activities among undergraduates,—dances and various forms of social entertainments. These social excesses, while they are difficult to regulate, have been under constant scrutiny. It is quite clear that the University needs a more rigorous control of these constantly expanding activities. There were fewer cases of discipline on account of intoxication than usual and unquestionably there is a great decrease in the use of alcoholic liquors amongst undergraduates. During the past year seven stu-

dents were removed from the University, eighteen were placed on parole, and fifty-five were disciplined in minor ways. While this number taken by itself appears considerable, it is, of course, a very small percentage of our undergraduate population. Spring Day, which was marred in 1921 by excesses, was restored to the calendar by the Faculty in 1922 after much discussion, and no disorders were reported. The observation of the Committee on Student Affairs justifies the opinion that standards of honor and decorum among Cornell undergraduates are, on the whole, healthy and sound.

ARMISTICE DAY

By action of the Faculty, Armistice Day, Friday, November 11th, was observed by the suspension of University work from 12:00 to 1:00 o'clock and by the devotion of the midday to a memorial convocation, at which the President of the University was the speaker. The celebration of Armistice Day, by some form of memorial exercises, should become a fixture in the University calendar.

DEGREES IN THE COLLEGE OF ARCHITECTURE

On February 15, 1922, the University Faculty approved uniform entrance requirements leading to the Degrees of Bachelor of Architecture (B.Arch.), Bachelor of Fine Arts (B.F.A.) and Bachelor of Landscape Architecture, (B.L.A.), formulated by the Faculty of the College of Architecture. The Faculty further endorsed the changes above noted in the designation of degrees administered by the College of Architecture.

GYMNASIUM

The requirements of Military Drill, Physical Training, and the general course in Hygiene, applicable to the Freshman and Sophomore classes in the University, are administered by the Standing Committees on "Excuses from Physical Training and Drill" and "Hygiene and Preventive Medicine." Delinquencies in these subjects are negligible, and it is particularly gratifying to report a high degree of efficiency in the management of the Cornell unit of the Reserve Officers' Training Corps, under the direction of the Commandant, Colonel J. C. Nicholls. The Committee, however, has had numerous complaints regarding the inadequacies of the gymnasium. There is no doubt that the University population has quite outgrown its facilities for indoor Physical Training, particularly during the winter months. One feature of the requirements in Physical Training is that every student before the end of his sophomore year shall have learned to swim. It is not only difficult to enforce this requirement, but it is even doubtful whether it ought to be enforced in view of the inadequacies of the swimming pool. This part of the gymnasium is entirely obsolete. Your attention is, therefore, especially called to the urgent need of a new gymnasium, or of increased facilities for indoor Physical Training and the care of the health of students during the winter months.

Respectfully submitted,

WILLIAM A. HAMMOND,

Dean of the University Faculty.

APPENDIX II

REPORT OF THE DEAN OF THE GRADUATE SCHOOL

To the President of the University:

SIR: I have the honor to present the Report of the Graduate School for the year 1921-22.

At Cornell University, graduate studies were until the year 1909 under the control of the University Faculty; but in that year the Board of Trustees gave new recognition to the importance of this phase of the work of the University by establishing the Graduate School as a separate Faculty and entrusting to it responsibility for all matters connected with graduate studies and the conferring of advanced degrees. At that time the number of graduate students was 309. For 1921-22 the enrollment has been 534 during the academic year and 219 in summer, a total of 753. The following table shows the registration of graduate students for the past five years:

STATISTICS OF ATTENDANCE 1921-22

	1921-22	1920-21	1919-20	1918-19	1917-18
Number of students registered during the academic year	534	438	408	305	279
Number of students registered during the Summer of 1921					
1. Summer Session	88	79	95	35	33
2. Third Term	76	65	67	42	68
3. Personal Direction	55	20	9	13	22
Total in Summer	(219)	(164)	(171)	(90)	(123)
Total	753	602	579	395	402

The comparatively small enrollment during the years 1917-18 and 1918-19 was the result of conditions due to the war. For the past two years, however, the total registration has been greater than at any previous time, and the year 1921-22 shows an increase of 151 over the preceding year. A marked increase in the numbers of students entering upon graduate study is not however peculiar to Cornell, but seems to be shown by all or nearly all the larger American universities. It may, I think, be taken to reflect a public demand for men and women with more advanced training than that supplied by the ordinary four years of undergraduate study. This demand is finding expression in various fields. In the larger high schools of this State, for example, teachers are sought who have had at least one year of graduate study, while in several of the states of the West such graduate study is now being made a positive requirement of all teachers in public high schools. For an appointment to a permanent position in colleges and universities the degree of Doctor of Philosophy, or equivalent training through graduate study, is more and more becoming an essential in all Faculties. Moreover, from a multitude of other fields—from commerce and the industries, from governmental bureaus, from various arts and professions—there is an increasing demand upon the universities for men of ability and learning trained in methods of independent investigation.

It is to the graduate schools, then, that the public is primarily looking at the present time for its trained leaders in the various fields and enterprises of life. It is of the utmost importance that this fact should be clearly recognized and given due weight in the future development of the University. It cannot be said that graduate studies have yet been given the place they deserve in the University. Although in certain divisions and departments generous provision has been made for the training of graduate students, it remains true that on the whole the chief interest and center of consideration has been the demands of undergraduate instruction. In some important divisions of the University, notably in the departments connected with the College of Engineering, little provision has so far been made for the instruction of graduates, although an increasing number of students is demanding such training, and though this is a field where the need of advanced scientific training is becoming more and more evident.

I believe that the greatest need of the present time is the appointment of a number of men who are leaders in scholarship and research to positions where they may devote a large share of their time to inspiring and guiding students in independent scholarship and investigation. At present graduate work suffers from the fact that in many departments there are no persons specially charged with this work or with adequate leisure to provide for it. As a consequence, it is carried on more or less incidentally, oftentimes through a special effort and at odd moments, by various members of the staff. The advantages that arise from making explicit provision for the instruction of graduate students and for research are apparent from the results obtained in certain departments within the College of Agriculture. It is highly desirable that a similar recognition of the importance of research in certain fundamental departments in the College of Engineering should be not longer delayed, and that provision should be made at once for the instruction and guidance of graduate students in these fields. The retirement of Professor H. S. Jacoby, who has perhaps been the strongest support of graduate studies in this division of the University, and whose reputation has for years attracted graduate students of engineering to Cornell, makes such a step as I have recommended all the more necessary.

The Graduate School has also suffered heavily of late by the death and retirement of several very eminent teachers and investigators connected with the College of Arts and Sciences. I wish to call attention to these losses and to emphasize the importance in filling these chairs of giving due emphasis to the need of men who will carry on graduate study and research in the University. At the present time, when there has recently been such a large accession in the numbers of graduate students, and when the time and strength of the majority of the existing staff are largely taxed by the demands of elementary instruction, there is more than ever need of able men specially charged with maintaining and developing the spirit of inquiry and the interests of the higher studies in the University.

Since the founding of universities, students have been proverbially poor, and at the present day the difficulty of finding means of support is perhaps felt more keenly by graduate students than by any other class. Among Cornell undergraduates there seems to be a considerable number who are at least adequately supplied with money. Whatever explanation may be given of the fact, it is noticeable that there are few wealthy or well-do-to students who devote them-

selves to studies beyond the undergraduate years. Nor as a rule do parents of moderate means seem ready to lend support to their sons and daughters to enable them to continue their studies in the Graduate School, though they may be ready to do so to enable them to obtain professional training, as in law or medicine. By far the greater number of graduate students depend wholly or largely for their support upon their own exertions, and many of them undergo serious hardships in the pursuit of knowledge. Although Cornell University has as yet no loan funds for the aid of graduate students, it has recognized the essential character of the work that they are carrying on and the financial difficulties to which they are subject by generous concessions in regard to tuition and by the establishment of Fellowships and Graduate Scholarships for students of special promise and attainments. Without these aids it would be impossible for many of our graduate students to continue their studies. But what has made possible the large recent increase in the number of graduate students here and elsewhere is the increased demand for additional teachers for the hosts of undergraduates who have poured into the universities of late years. It has become possible for a large number of graduate students to support themselves and still to find some time for their own studies by obtaining positions as instructors or assistants in the University. During the academic year 1921-22, 265 graduate students—or almost exactly one-half of the total of 534—held appointments on the instructing staff of the University, 163 being instructors and 102 assistants. In several of my previous Reports to the President I have discussed the advantages and drawbacks, both from the point of view of the students' training and from that of the University as a whole, of this system of apprenticeship to the career of a scholar. From the point of view of the University the main danger lies in the comparatively easy entrance to a University career that such a position may afford to a man who has not the proper qualifications. It is unfortunate that at present these positions are often preferred to appointments to Fellowships because of the higher stipends that they yield, though the opportunities of the Fellowship from the point of view of study are much superior. It is however to be hoped that it may soon be found possible to increase the emoluments of our Fellowships and to make them positions of greater honor and distinction that will each year attract a number of men of unusual ability and attainments. Such men would benefit the Graduate School in a number of ways. The most immediate and important advantage of the presence of such men undoubtedly comes from their influence upon other students and upon the members of the Faculty. Students of superior ability inspire and stimulate others with whom they are associated, but they also are indispensable in aiding to maintain and develop the standards of graduate study and in preventing them from falling to the level of the routine performance of formal requirements.

I wish to call attention to the large number of students who pursue graduate studies at Cornell during the summer. In addition to those formally registered in the Graduate School, a considerable number spend the whole or a part of the summer in study at the University. Every summer also brings a number of scholars from other institutions who are attracted by the opportunities that are found here for study and investigation. The presence of these scholars is in many ways an advantage to the University, both because of what they bring

and because of the friendly relations which are thus established with other institutions.

During the year 1921-22 there were granted by the University 161 advanced degrees, as compared with 128 during the preceding year. The degree of Doctor of Philosophy was conferred upon forty-seven persons.

The Faculty of the Graduate School held six meetings during the year, and there were nine meetings of the General Committee of the Graduate School, which is the only standing committee of this Faculty. This Committee during 1921-22 was composed of the following members: Professors Becker, Browne, Emerson, Harris, Hurwitz, Knudson, Merritt, Northup, Ogden, Richtmyer, with the Dean as chairman.

Respectfully submitted,

J. E. CREIGHTON,

Dean of the Graduate School.

CLASSIFICATION OF GRADUATE STUDENTS

Graduate students receiving advanced degrees, classified according to the degree received:

	1921-22	1920-21	1919-20	1918-19	1917-18
Doctors of Philosophy.....	47	44	45	28	36
Masters of Arts.....	36	34	19	23	20
Masters of Science.....	32	21	13	5	4
Masters of Science in Agriculture.....	14	9	11	4	15
Masters in Landscape Design.....	3	2	2	2	1
Masters in Forestry.....	6	6	3	0	4
Masters of Architecture.....	3	1	0	1	3
Masters of Civil Engineering.....	14	7	12	5	1
Masters of Mechanical Engineering.....	1	4	3	2	0
Masters of Electrical Engineering.....	5	...	...	...	...
	161	128	108	70	84

Classified according to the degree for which they are candidates:

	Academic year	Sum- mer
Honorary Fellows.....	3	0
Doctors of Philosophy.....	240	75
Masters of Arts.....	91	58
Masters of Science.....	83	48
Masters of Science in Agriculture.....	24	21
Masters in Forestry.....	5	4
Masters in Landscape Design.....	8	2
Masters of Architecture.....	3	0
Masters of Civil Engineering.....	25	0
Masters of Mechanical Engineering.....	12	2
Masters of Electrical Engineering.....	8	0
Non-candidates.....	35	9
Total.....	534	219

Classified according to the group in which the major subject falls:

	1921-22	1920-21	1919-20	1918-19	1917-18
Group A, Languages and Literatures...	60	48	37	24	35
Group B, History, Philosophy, Educa- tion and Political Science.....	102	40	49	37	35

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Group C, Physical Sciences.....	113	77	67	52	40
Group D, Biological Sciences.....	171	191	216	150	149
Group E, Engineering, Architecture....	85	42	31	34	17
Unclassified.....	0	40	7	6	7
Honorary Fellows.....	3	1	2	1	0

Among the students registered in the Graduate School during the year 1921-22, there were graduates of 161 institutions, distributed as follows:

Acadia University.....	1	Illinois, University of.....	8
Alabama, University of.....	1	Indiana State Normal School....	1
Alfred University.....	2	Indiana University.....	2
Amherst College.....	1	Iowa, State University of.....	6
Berea College.....	1	John B. Stetson University.....	1
Bluffton College.....	1	Johns Hopkins University.....	2
Boston University.....	1	Kansas State Agricultural College	1
Bowdoin College.....	3	Kansas, University of.....	2
Brazil Espanola Superior Agricola	2	Kentucky, State University of..	4
Brown University.....	1	Kirkville Normal School.....	1
Bucknell University.....	1	Kyushu Imperial University.....	1
California, University of.....	7	Lawrence College.....	1
Canton Christian College.....	1	Laval, University of.....	1
Cape of Good Hope, University of	1	Liège, University of.....	1
Cape Town, University of.....	1	Louvain, University of.....	1
Carleton College.....	1	Maine, University of.....	1
Central Missouri Teachers College	1	Maryland, University of.....	1
City of New York, College of....	1	Massachusetts Agricultural College	3
Clark University.....	2	McGill University.....	3
Clemson Agricultural College....	11	Michigan Agricultural College....	4
Colby College.....	1	Michigan State Normal School..	1
Colgate University.....	6	Michigan, University of.....	1
Colorado University.....	1	Middlebury College.....	1
Columbia University.....	3	Minnesota, University of.....	3
Connecticut Agricultural College	1	Mississippi A. and M. College...	3
Cornell University.....	236	Mississippi College.....	1
Czecho-Slovakia Tech. University	1	Mississippi College for Women...	1
Dartmouth College.....	4	Mississippi, University of.....	5
Davidson College.....	1	Missouri, University of.....	5
Denver, University of.....	2	Montana, State University of...	1
Dutch Commercial School.....	1	Montreal, University of.....	1
Elmira College.....	2	Mt. Allison University.....	1
Emporia College.....	1	Mt. Holyoke College.....	5
Florida, University of.....	1	Nanking, University of.....	1
Franklin and Marshall College...	1	Nebraska, University of.....	2
Furman University.....	3	New Hampshire State College...	2
Geneva College.....	1	New Mexico A. and M. College..	1
Georgia School of Technology...	1	New York State Teachers College	1
Georgia, University of.....	3	New York University.....	1
George Washington University..	1	New Zealand University.....	1
Goucher College.....	1	North Carolina Negro Agr. and Tech	1
Govt. Institute of Technology...	16	North Carolina State College....	1
Gray University College, Shanghai	1	North Carolina, University of...	6
Grove City College.....	1	North Dakota, University of....	1
Hamilton College.....	1	Oberlin College.....	7
Hampden-Sidney College.....	2	Occidental College.....	1
Haverford College.....	2	Ohio State University.....	7
Hobart College.....	2	Ohio Wesleyan University.....	1
Hong Kong, University of.....	1	Oklahoma A. and M. College....	1
Howard University.....	3	Oklahoma State University.....	1
Hunter College.....	1	Oklahoma, University of.....	2
Huron College.....	2	Ontario Agricultural College.....	1

Oregon Agricultural College.....	1	Tennessee, University of.....	1
Oregon, University of.....	1	Texas A. and M. College.....	1
Oxford University.....	1	Tokio Normal College.....	1
Pei-Yang University.....	2	Toronto, University of.....	2
Peking Government University..	2	Trinity College.....	1
Pennsylvania State College.....	9	Tufts College.....	1
Pennsylvania, University of.....	2	Utah Agricultural College.....	1
Philadelphia Divinity School....	1	Vassar College.....	8
Philadelphia, University of.....	4	Vermont, University of.....	1
Pittsburgh, University of.....	1	Wabash College.....	4
Pomona College.....	2	Wake Forest College.....	1
Princeton University.....	2	Washington and Jefferson College	1
Purdue University.....	4	Wellesley College.....	4
Queen's University.....	1	Wesleyan University.....	3
Randolph-Macon College.....	1	Western Reserve University.....	1
Richmond College.....	1	Western University.....	2
Royal High Agricultural College	2	West Virginia University.....	5
Rutgers College.....	4	William Smith College.....	1
Smith College.....	3	Wisconsin, University of.....	4
Soo Chow University.....	1	Wofford College.....	4
Sophie Newcomb College.....	1	Wooster College.....	1
South East Agricultural College..	1	Waseda College.....	1
Southern California College.....	1	Washington State College.....	1
Southern California, University of	1	Washington University.....	4
St. Lawrence University.....	1	Waynesburg College.....	1
Stanford University.....	1	William and Mary College.....	1
Swarthmore College.....	1	Yale University.....	2
Syracuse University.....	2	Zurich, University of.....	1
Tangshan Engineering College... 2			

APPENDIX III

REPORT OF THE SECRETARY OF THE COLLEGE OF ARTS AND SCIENCES

To the President of the University:

SIR: I have the honor to submit to you the following Report of the College of Arts and Sciences for the academic year 1921-22.

During the past year the Faculty has given its attention to a number of important problems. Upon the recommendation of the Committee on Educational Policy the requirements for the degree of Bachelor of Arts were modified so as to broaden the field of knowledge covered by graduates of the College, and to strengthen the work of the first two years in the College. This Committee and the Advisory Board for Underclassmen have for some time had under consideration measures looking toward a more thorough and more co-ordinate course of study in this College.

At its May meeting the Faculty voted to adopt as one of the requirements for graduation the completion of certain prescribed studies. Prior to graduation each student entering the College subsequent to June of this year must complete six hours in each of the following groups:

1. English and Public Speaking.
2. Foreign Languages.
3. History.
4. Chemistry, Mathematics, and Physics.

5. Anatomy, Biology, Botany, Entomology, Geology, Histology and Embryology, Physiology and Biochemistry, and Zoology.
6. Philosophy and Psychology, including Educational Psychology.
7. Economics and Government.

Of these, the first two groups and at least eighteen of the required number of hours in the remaining five groups must be completed by the end of the sophomore year. The remaining twelve hours may be completed at any time prior to graduation.

The purpose of these requirements is to make sure that a graduate of the College has made at least an acquaintance with the principal fields of learning. To this extent it is a movement away from the elective system; but the total requirement of forty-two hours, in the one hundred and twenty hours required for graduation, is so moderate that a wide field of election is still maintained. And it is to be noted that each group in itself offers a considerable range of selection. This new arrangement is to become effective at the close of the present academic year in the cases of students entering the College subsequent to that time; but those students who had entered the College prior to that time must satisfy the requirements for graduation in force at the time of their entrance.

In line with the policy of the College requiring its students to maintain a satisfactory scholastic standard of work the Faculty voted at its March meeting that a candidate for graduation must, during his last term of residence, meet a minimum standard of work. The rules governing continuance in the College were also amended in such a way as to render them clearer and more definite. They have been formulated as follows, and have been so published in the 1922-23 Announcement of the College:

A student failing in any given term to pass twelve hours may not continue his work in the College except under such conditions and at such time as the Faculty may designate.

A student failing in the last term of his senior year to pass twelve hours—or, if in a summer session, four hours—may not be recommended for his degree except under such conditions and at such time as the Faculty may designate.

A student's general record may be so unsatisfactory that the Faculty will refuse him permission to continue in the College even though he has passed twelve hours in the preceding term.

During the year the Faculty recommended to the President and the Board of Trustees for appointment to seats in the Faculty of the College of Arts and Sciences Professors Karl McKay Wiegand, Richard Schramm, Lester Wayland Sharp, Arthur Johnson Eames, Lewis Knudson, and Otis Freeman Curtis of the Department of Botany of the College of Agriculture, Assistant Professor Peter Walter Claassen of the Department of Biology of the College of Agriculture, and Professor Samuel Latimer Boothroyd of the Department of Astronomy of the College of Engineering, as these men are conducting courses which are considered as the work of a college of arts and sciences. Those recommendations have been approved by the Board of Trustees and the courses given by those men will appear in our announcement of courses.

The Committee on Educational Policy has had for some time under consideration the question of upperclass requirements for the degree of Bachelor of Arts, and, although the Committee was unable to present a concrete recommendation to the Faculty this year, it is very likely that, in the near future, the Committee will be

prepared to offer a recommendation with regard to this subject. It has been the aim of the Committee to devise some plan whereby the work of the junior and senior years can be made more meaningful. At present it is possible in many of the departments for students pursuing their major work in those departments to select courses having little or no correlation one to the other. Such a grouping of courses does not commend itself to any co-ordination of the work of the underclass years and that of the upperclass years. It is the endeavor of the Committee to devise a plan comprehensive enough to meet the needs of students in the various departments of the College and yet uniform enough to require every student before graduation to possess an organized knowledge of the work of his major field. The solution rests, to a great extent, with the individual departments; if each department would develop a sequence of courses for the upperclass students majoring in that department which would make it impossible for a student to complete his upperclass work until he had really devoted himself to advanced work in that field, there would be no further problem.

In the past there has been considerable interest manifested in the distribution of grades given by various departments and by instructors. The Committee on Educational Policy prepared a report on the grading in this College during the academic year 1920-21 and submitted that report to the members of the instructing staff without comment. The Committee did, however, express the hope that each member of the staff would take into consideration the degree to which his marks conformed to the averages furnished. It is the intention of the Committee to prepare similar reports for this academic year and for subsequent academic years and to submit them to the Faculty when prepared. In submitting that report the Committee went on record as not favoring the adoption of any scheme of arbitrary distribution of grades, but it did venture to express the belief that many of the extreme differences in grading would disappear as the result of the information contained in these reports.

Early in the year representatives of each of the three standing committees in this College met with three representatives of the College of Law for the discussion of several matters which involved the relations between this College and the College of Law, particularly with respect to those students in this College who had expressed an intention of studying law. One of the matters raised by the Dean of the College of Law was with respect to the treatment to be accorded to students entering with advanced standing with the intention of entering the College of Law after one year in this College. In the discussion of this question emphasis was laid upon the undesirability, if not the impossibility, of having in this College students who were not meeting the graduation requirements of this College, particularly the underclass requirements. The fact that such students had expressed an intention to enter the College of Law after two years, or, in the cases of advanced standing after one year, did not appear to warrant any deviation from the ordinary requirements affecting underclassmen in this College. To permit such a deviation would be to incur a considerable responsibility, since a student might at the end of two years prefer to go on to the degree A.B. and he would then find himself hopelessly blocked by his failure to meet the requirements of the first two years. This general principle is one which has been repeatedly confirmed by the Faculty and by its standing committees whenever the question has been raised.

A second matter discussed at that conference was brought before our Faculty when the Committee on Educational Policy, after giving careful attention to the rules governing the registration of a senior in this College and in another College of the University, recommended to the Faculty that, in view of the release of such student from ten of the twenty hours required in an upperclass group, the student so registered should be required to complete the entire first year of work in that College before being recommended for the degree of Bachelor of Arts. In adopting the resolution recommended by the Committee on Educational Policy the Faculty re-affirmed the practice which has existed for several years.

If for any reason a student registered both in this College and in another College of Cornell University should decide to give up his work in the other College, and to proceed to the degree of Bachelor of Arts alone, such a change would require the approval of the Committee on Academic Records; and in the event that such approval should be granted, he would be required to proceed to the degree of Bachelor of Arts under the rules of the College, i. e., he would be required to complete his upperclass group in this College but the work done in the other College would be credited toward graduation in so far as it could be credited under the rules of this College.

In 1917 the Faculty established the degree of Bachelor of Arts with Honors as an incentive to gifted students to pursue advanced studies, such as may be of peculiar interest to them, within a given department in a more intensive and independent way than is possible in the ordinary classes. The requirements for graduation with honors have been developed by the Committee on Educational Policy and the various departments have taken an active interest in the scheme, encouraging their better students to take work leading to honors for the sake of the intellectual stimulus connected with it and the growing sense of mental development which it gives. At Commencement held this June nineteen students of high standing satisfied the special requirements and attained this honor. It is encouraging to note that the privileges and benefits of this scheme are becoming more popular both with the students and with the departments, and it is hoped that scholarship and a desire for personal guidance and inspiration will be promoted through this medium.

At its April meeting in 1921 the Faculty voted, on recommendation of the Committee on Educational Policy, that the requirements of eight terms of residence for the degree of Bachelor of Chemistry should be abandoned. At that same meeting the Committee on Educational Policy had recommended the abandonment of the eight term residence requirement for the degree of Bachelor of Arts, but the question was deferred. At the end of this year the Committee on Educational Policy raised the question again and the Faculty again deferred the matter, but it will be acted upon at the first meeting of the new year, the recommendation having been made the special order of business for that meeting.

The Committee on Educational Policy has also had under advisement a number of other very vital problems concerning the educational policy of the College. Although none of them has been developed to the extent that would justify its reference to the Faculty, it is expected that in the near future that Committee will be prepared to present to the Faculty recommendations on all these matters.

The Advisory Board for Underclassmen, which was established three years ago, has continued in its efforts to improve the scholastic work of our underclassmen. The Board was created in accordance with the following recommendations which were adopted in principle by the Faculty at its June meeting in 1919.

1. That there be created an Advisory Board for Underclassmen to consist of nine members to be appointed by the President.

The purpose of this Board is to study the needs and difficulties of underclassmen in respect to their college work, to counsel and to advise them in respect to their choice of studies and their obligations as college students, and to render such assistance in the prosecution of their work as may be possible.

2. That for the carrying out of this purpose the Board be empowered to establish and administer an advisory system for Freshmen and Sophomores.

As incidents of this system it is understood that the Board will select such additional advisers as may be necessary and will require of the student a plan in his choice of studies.

3. That the Board be given power to administer the cases of Freshmen and Sophomores now administered by the Committee on Academic Records.

4. That the Board be instructed to present to the Faculty from time to time such recommendations as it may think likely to promote the welfare of the underclassmen.

Under a capable administration the Board has made healthy progress in the execution of its functions, and the effects of its work are very evident in the higher quality of scholastic work performed by those students who, as underclassmen, have enjoyed the benefits of its advice and counsel. In administering its work the Board has developed within the College an admirable system of underclass advisers among those Faculty members who have taken an active interest in the improvement of the work of the underclassmen.

In order to ensure the desired ultimate success of the expressed purpose of the Board, to wit, to serve as an advisory system for the underclassmen, there is need for some arrangement which will provide a permanent policy governing the work of the Board. Under the terms of its creation the members of the Board, including the chairman, are elected for a period of three years and are not eligible for re-election. The Board has, of necessity, been forced to proceed slowly in developing a method of dealing with the vital problems of our underclassmen. At the end of this year the chairman and two members of the Board will retire. It will be necessary not merely to replace three members but also to appoint a chairman who must assume the responsibilities and the burdens which have been so ably administered by the retiring chairman.

In the opinion of the writer there is need, if not in the University at large, at least in this College, for some person who can and will devote his full time to the development of the sort of advisory system of which the present underclass advisory system serves as a very admirable beginning, although by nature of its limitations, statutory and temporal, merely a beginning. Such a person should possess the breadth of vision, the human qualities, and the high academic ideals which bespeak not a paternalistic type of adviser, but rather a friendly counselor who could and would devote his efforts to the problems of the students as a whole and of each individual student. There are a considerable number of students, particularly in this College, although I know of instances in other colleges at Cornell, who have been unable, for one reason or another, to form any

definite intention on entering college, or even after a year or more in college, as to the eventual course of study they wish to follow or the eventual goal they desire to attain. There should be some person to whom these students could address their inquiries and from whom they could obtain the inspiration and advice they require.

In bringing this report to a close I wish to make a formal expression of my personal appreciation of the whole-hearted co-operation of the several members of the three standing committees of the College. Without the generous support and cordial assistance rendered by those men the administration of the College could not have been conducted as harmoniously and as successfully as it was. It is with particular gratitude and appreciation that I mention the unselfish efforts and loyal support rendered by Professor Bretz, who as Chairman of the Committee on Educational Policy, as Chairman of the Advisory Board for Underclassmen, and as a member of the Committee on Academic Records, and in innumerable small ways, sacrificed personal interests in his service to the College and to the administration.

Respectfully submitted,
ARCHIE M. PALMER, Secretary.

APPENDIX IV

REPORT OF THE DEAN OF THE COLLEGE OF LAW

To the President of the University:

SIR: I have the honor to submit the following Report regarding the College of Law for the year 1921-22:

The registration was as follows:

Third Year	44
Second Year	22
First Year	28
Special	3
Total	97
Seniors in Arts and Sciences taking all law work of the first year	10
Students from other Colleges in the University electing some courses in the College of Law	13
Total receiving instruction in the College of Law	120

Of the 97 law students, 36 per cent reside outside of the State of New York.

The requirement for admission to the College of Law was increased in 1919 from one to two years of college work. This new requirement has thus been in effect three years. The number of first-year students entering in each of these three years under the new requirements has been as follows: 1919, 11; 1920, 16; 1921, 28. It seems probable that this gradual increase will be continued until 150 or 200 students are again enrolled in the College as law students.

The large number of law schools in this section of the country admitting students at the end of a high school course, and the extraordinary opportunities for self-support in the large cities will probably prevent attendance in the College of Law from becoming much greater than 200 at any time in the immediate future.

It is a well-known fact that a very large percentage of law students work in offices and otherwise support themselves, while studying law in the late afternoon or evening. This is not possible at Cornell, both because of the absence of afternoon and evening instruction and because of limited facilities for self-support.

A noticeable tendency toward increase in entrance requirements in law schools exists. Two schools in this State have recently announced an elevation of standards for admission, and many others elsewhere are considering such a step or have already announced that, at a given date in the future, such action will be taken. These changes will probably have some effect upon the attendance at Cornell.

The Faculty is unanimously of the opinion that a school of from 150 to 200 students is the desideratum. Such numbers insure a reasonable amount of competition among students, without rendering the sections so large as to prevent frequent contact between teacher and student and strong influence by the Faculty upon mind and character.

On June 22, 1921, Edwin Hamlin Woodruff, for seven years Dean of the College, submitted his resignation, to take effect July 1, 1921, in order that he might devote himself exclusively to teaching within the College. It was with regret that we saw Professor Woodruff leave the position for which his wide circle of friends among Cornellians, his sound judgment, sympathetic understanding of students, and his large experience in educational affairs, so thoroughly qualified him. It is an especial satisfaction to know that he will remain in the college, where students may have the benefit of his inspiring instruction, and the Faculty the advantage of his wise counsel.

Professor Charles Tracey Stagg, since December, 1920, on leave of absence for the purpose of acting as legal adviser to Governor Miller, has resigned from the Faculty in order to devote himself to an important position in the State government. Professor Stagg had been a teacher in the College since 1908, and since 1914 had been Secretary of the College. He brought to his work an extended experience in practice, an extremely orderly and logical mind, and highly intelligent and conscientious effort. As a teacher and administrative officer his services were extremely valuable. His departure is much regretted.

To fill the vacancy left by the resignation of Professor Stagg, the Trustees have appointed Robert Sproule Stevens. Mr. Stevens received his A.B. degree from Harvard College in 1910, and his LL.B. degree from the Harvard Law School in 1913. After about four years of general practice in Buffalo, New York, and two years' service in the Army, Mr. Stevens came to this college in September, 1919, as a temporary member of the Faculty. He has proved himself a thorough scholar and a sound, conscientious, and inspiring teacher. His addition to the Faculty is a source of satisfaction to all its members.

In order to provide for the secretarial and administrative work previously cared for by Professor Stagg, the Trustees have appointed as Secretary of the College and Lecturer in Law, Horace Eugene Whiteside, A.B., University of Chicago, 1912; LL.B., Cornell University, 1922. Mr. Whiteside has had a number of years' experience as a teacher of the classics and of mathematics. He served as an officer in the Army for two years. Besides assuming the position of secretary, Mr. Whiteside will give the courses in Personal Property, Negotiable Paper, and Wills.

Professor C. K. Burdick has been absent on leave during the second term, engaged in study and travel in Europe.

The addition of Mr. Whiteside to the Faculty and the introduction, to a limited extent, of the practice of giving some courses in alternate years, has enabled the Faculty to enrich the curriculum by the addition to it of the following subjects: Taxation, Restraints on Business and Industry, International Law, Municipal Corporations, Administrative Law and Public Officers, Damages, and Bankruptcy.

In place of the course formerly called "Brief Making," a course in "Problems" has been added, in which it is hoped to develop familiarity with the library, analysis of law and facts, and skill in the logical presentation of arguments. The course in advanced Real Property has also been expanded so as to include more work upon Future Interests and the law of Titles to Real Estate. The courses in Procedure have also been arranged so that the important subject of Federal Procedure will be treated.

The net result of these additions to the course and expansions of existing subjects is that 119 hours of work will be offered in the future, instead of the 90 hours available in the past.

The device of giving courses to two classes in alternate years is temporary only. It can be used only when the numbers are small, as at present. When the attendance is restored to normal, classes under this system will be so large as seriously to handicap instruction.

It is obvious that the introduction of 29 hours of new work into the curriculum involves the application, to a limited extent, of the elective system. The policy of the College has heretofore been that of a fixed curriculum, with no opportunity for choice of subjects. The present Faculty, however, feels that the advantages of opportunities for specialization and of the added elasticity of the curriculum for administrative purposes are such that a limited application of the elective idea is warranted. About two-thirds of the work of the College remains required work, including all of the first-year work. None of the trunk or fundamental courses are made elective.

Practical experience has shown that the objects of present-day law students are various. Some students have in mind definite positions for which they wish to prepare; as for example, real estate work, administration in manufacturing, or corporation law practice. It is believed to be desirable to allow these men to disregard some subjects of remote value and devote themselves more intensively to the fields in which they expect to work.

In the past administrative difficulties have been met when students desired to obtain advanced standing here, or when students failed in one of the required courses. The elasticity given by the limited electives hereafter allowed will permit of adjustment in cases of students entering from other schools, and of substitutions in cases of failure in some subjects.

It is hoped that work in Jurisprudence and Legal History may soon be available at Cornell, either in the College of Law or by co-operation with the College of Arts and Sciences. Such subjects as the History of the Common Law, Roman Law, Modern Civil Law, Jurisprudence, and Comparative Law, should be offered.

If this work could be added to the curriculum of the University, it would seem possible and appropriate to institute a graduate degree in law at Cornell, which

could be obtained by attendance for a fourth year. The 29 hours of new law courses, the work in Jurisprudence and the History of Law, and a problem in research would afford material for graduate instruction.

The establishment of a summer session in law at Cornell is again strongly recommended. The physical location is extraordinarily good. Inquiries received from time to time indicate that numerous students from other institutions would be glad to come here during the summer for law work. The summer school would reinforce and build up the College generally. It would be good economy to use the library and building eleven months a year. By means of the summer school students in law could complete their courses in two and one-third calendar years, if they desired to devote themselves intensively to their work. The experience at other summer schools shows that summer law schools are eventually wholly self-supporting, or nearly so.

The law library has been increased by the addition of 1012 volumes, of which 160 volumes were gifts. The principal needs of the law library are additional shelving, reclassification, and the preparation of shelf lists. The addition of new shelves involves changes in the building and important problems regarding the strength of the floors. I suggest that this question, together with proposed changes in the building for the purpose of adding a locker room and smoking room, be considered by the appropriate University authorities, in order that action may be taken as soon as it is practicable. The work of reclassification and the preparation of shelf lists will have to be delayed until the University funds will permit the employment of an assistant librarian. It is physically impossible for the present Librarian to perform this work in connection with his other duties.

No lockers are provided for the students in the building at present. This entails considerable inconvenience to them in carrying their heavy books back and forth, and also deters them, in some cases, from bringing their casebooks to classes. It would be highly desirable, if possible, to install small lockers in the building. These could be paid for gradually by making an appropriate charge to students. This locker room could also be utilized as a smoking room. At present, the students are obliged to utilize the very small corridor for this purpose or go out of doors.

In November, 1921, the Trustees finally accepted the gift of the residential hall on The Knoll, at Ithaca, the donors being the Delta Chi Realty Company. This house accommodates from 25 to 30 students. The purpose of the gift was to provide a residential hall for students of proved ability in law and in related subjects in Arts and Sciences. The administration of this plan was entrusted to a Council of five members, composed of J. Du Pratt White, Esq., of New York City, representing the Trustees; John J. Kuhn, Esq., of New York City, representing the Delta Chi Alumni; Mr. George F. Rogalsky, Treasurer of the University, representing the administrative officers of the University; Professor W. L. Westermann, representing the College of Arts and Sciences, and Dean Bogert of the College of Law. This Council had several meetings at which an attempt was made to devise a plan for the operation of the hall during the college year 1922-23. However, no agreement could be reached. A majority of the members of the Council reported this fact to the President on or about May 2, 1922, and stated that, in its opinion, it was impracticable to begin the operation of the plan in September, 1922.

The year 1921-22 has been a notable one in legal education, due to the taking of several important steps which will tend to elevate the standards of legal education. At its meeting September 1, 1921, the American Bar Association went on record as favoring a requirement of two years of college work and three years in a law school of all applicants for admission to the bar. In December, 1921, the Association of American Law Schools fixed as the standard for admission to its membership, two years of college work. In February, 1922, a conference of state and local bar association delegates met in Washington, D. C., and took action which had as its object putting into effect the standards recommended by the American Bar Association as law in the various states. While the work of bringing these new standards into actual operation will necessarily be slow, it is believed that in a comparatively short time, some practical steps will be taken to improve the education and the moral and ethical qualities of the incoming members of the bar.

Respectfully submitted,
GEORGE G. BOGERT,
Dean of the College of Law.

APPENDIX V

REPORT OF THE DEAN OF THE MEDICAL COLLEGE

To the President of the University:

SIR: I have the honor to submit the following report of the Medical College for the year 1921-22.

The work of the last year has been characterized by a spirit of determination and enthusiasm on the part of all, Faculty, students, and alumni, which has generally resulted in satisfactory accomplishments. Although no radical changes have been made in policy or methods the internal organization has been improved, better co-ordination has been developed, and extensions of the field of activity have been accomplished.

There have been few important changes in the Faculty. Professor Schloss resigned as head of the department of Pediatrics in June, 1921, to accept a similar post at the Harvard Medical School. His leaving has been a great loss to the College and the position has not been filled. Dr. Schroeder has acted as head of the department to the satisfaction of all concerned and will continue in his present capacity for another year. Professor Cole, for ten years Professor of Roentgenology, resigned last fall and Dr. Harry M. Imboden has been appointed to the chair. Professor Imboden through long training and investigation brings a rich experience which will undoubtedly strengthen the Faculty.

In co-operation with the Medical Department of the United States Army a unit of the Reserve Officers' Training Corps was organized early in the College year. Lieutenant Colonel William H. Brooks was assigned by the War Department and was appointed Professor of Military Science and Tactics by Cornell University. Colonel Brooks succeeded in interesting some 24 students in the course, which was voluntary, and had begun his instruction when illness com-

pelled him to retire. He was succeeded by Major John M. Hewitt who has been a welcome addition to the Faculty and has stimulated greatly the interest in his department. Believing that some knowledge of medico-military hygiene and sanitation is desirable for all physicians the Faculty at its May meeting voted to incorporate the first year of the basic course as outlined by the War Department into the curriculum.

The effect of limiting the number of students and thereby exercising the selection of the applicants continues to be reflected by the higher standard of work accomplished by the classes admitted under this provision. There is no doubt that the average ability and previous training of these students is superior to any heretofore admitted. They are capable of benefiting by a graduate-school type of instruction and our methods of teaching are in consequence undergoing revision. The number of conditioned and dropped students is less than before, thus reducing waste of equipment and effort, which is an important item now that medical education is so costly and the demand for it so great. No wholly satisfactory method of selecting applicants has been evolved and we must continue to depend upon the judgment of the administration officers in choosing wisely. At first regarded as experiment there now can be no doubt concerning the wisdom of limiting the number of students to our working capacity and then selecting the best available candidates.

Several recent developments have helped to improve the spirit of the student body and made the study of medicine a more pleasant undertaking. A great aid has been a cafeteria and club room for medical students opened by the Y. M. C. A., in co-operation with the Faculties of the medical schools of New York University and Cornell University. Because of the change of the character of the neighborhood in which these Colleges are located it has become increasingly difficult to secure sanitary lodgings and obtain good food at reasonable prices. Proper housing for our students and staff remains a most serious problem. The cafeteria supplies a great need in serving lunches and providing a meeting place for students. The building which was owned by the Y. M. C. A., and at first used for the cafeteria burned down in the winter and the College has since given the use of part of the old building on twenty-sixth street for the purpose.

Various social activities have been encouraged with the view of bringing the students and staff of instruction into closer relation. Several members of the Faculty have entertained the students in their homes and a "Get-Together" of the Faculty and students, which has become an annual holiday, together with meetings of various clubs have all served to promote co-operation and render the instruction more effective. A plan has been adopted whereby physical examinations will be annually made of all students and better care provided for them when ill. The Faculty is also considering a plan for student advisers so that each student may have some instructor to whom he may go for aid and advice and who in turn will be charged with some responsibility for the student's welfare. Every movement which tends to weld the interests of the Faculty and the students results in better trained men and women for the medical profession.

In accordance with the policy of securing wider participation of the Faculty in the affairs of the College, Professor Ewing after five years of faithful service declined re-election to the Council and Professor Elser was elected to fill the

vacancy. It is felt that rotation of service by the Faculty members on the Council will bring the needs of all departments before the Council in the most effective manner.

During the past two years efforts to stimulate interest and participation in the affairs of the College by the alumni have been renewed. An Alumni Day on May 5, 1922, brought an increased number back to attend the clinics in the hospitals, a luncheon at the College, and a banquet in the evening. Your presence at the banquet, together with Mr. Place, was highly appreciated, and the reunion was helpful in bringing the alumni in closer touch with the College. I hope the alumni will soon develop a permanent organization that their advice and aid may become more effective.

Perhaps the most important development of the year has been a reorganization of the College Dispensary on the basis of a Pay Clinic. The decision to do this was reached only after thorough consideration of the numerous factors concerned and upon the advice and with the support of those who have given most study to the complexities of the dispensary situation. The Cornell Clinic is, so far as I know, the only one operating all of the usual departments, as well as several special divisions, upon the principle of charging definite moderate fees to people of limited means and in turn remunerating the professional staff for its services. The proposition has brought forth many problems relating to the public health and the relation between the public and the medical profession, some difficult to solve, and it must be regarded as an experiment.

The movement is the outcome of a survey of the dispensary situation in New York City made by the Public Health Committee of the New York Academy of Medicine. The Committee concluded that there is a large number of persons (estimated at 2,000,000) ordinarily self-supporting who when illness overtakes them, are unable to secure competent medical service at a price within their means, particularly when extensive laboratory and diagnostic consultations become necessary. These people prefer to pay something but generally speaking have no alternative between private physicians and the so-called free dispensaries. If they avail themselves of the services of the former they become impoverished or dependent upon the charity of the doctor; if they go to the free dispensary they become pauperized, for which few have any relish.

Few dispensaries render as effective service in terms of modern medicine as do the hospitals. They have been relegated to an inferior place in the medical world, the equipment is meagre, laboratory facilities are inadequate or entirely lacking, and the medical staffs are undermanned often with incompetent doctors. Through lack of facilities, equipment, and clerical aid, together with overcrowding, they have ceased, in many instances, to give good service or to educate physicians. Indeed the dispensary physician's work has often become deadening drudgery without stimulating or educational offsets, with the result that the dispensaries encounter increasing difficulties in recruiting competent staffs. It now appears that the dispensary has greater possibilities for reaching effective public service than the hospitals and it is probable they will gradually come to assume a dominant position in maintaining the health of the community.

As a result of its study the Public Health Committee recommended compensation for physicians and the development of a number of pay clinics in which every facility for the practice of modern medicine should be provided. It is

evident also that there must continue to be many free dispensaries adequately supported to render an equally high type of service.

The Cornell Dispensary was designed to provide teaching material for the instruction of our students, but gradually despite an annual deficit of over \$21,000 steadily increasing, it failed to provide adequate material properly studied for teaching purposes. It also failed to render the best service to the patients. Therefore, when the Dispensary Development Committee of the United Hospital Fund proposed to guarantee the deficit in excess of the amount previously borne by Cornell to establish an experimental Pay Clinic the proposition demanded careful consideration.

The results have thus far exceeded expectations. From the opening day (November 1, 1921) to the present time more patients have applied than could be cared for, the attendance for June, 1922, averaging 471 daily. Adequate equipment has been supplied to all departments, the staff, now receiving remuneration, has been admirably recruited and, most important for the College, the teaching material has never been so large and varied, nor has it ever been so thoroughly studied. The operation shows a deficit of about \$3,000 monthly, which is being gradually reduced. One of the most satisfactory results is the increasing co-operation on the part of the physicians in the community. Some 595 doctors have referred 848 patients for consultation and study. It has become clear that the Clinic can render a valuable service to the public and medical profession without doing injury to any competent physician. I submit herewith a copy of the "Modern Hospital" for June, 1922, which contains a study of the first six months of operation of the Pay Clinic.

An affiliation has been effected with the John E. Berwind Maternity Clinic which promises important results in a field of teaching which is generally unsatisfactory. The Clinic is admirably equipped to give obstetrical care in patients' homes, provides pre-natal care, follows the mother for six weeks and the child for one year after delivery. The medical direction of the Clinic has been placed under the control of Cornell, and the staff, including the resident and house officers, are appointed only on nomination of Cornell. Living quarters are provided for students also and we propose, beginning next year, to send sections of seniors to the Clinic where they will reside for periods of two weeks during which time they will be under the supervision and instruction of our Faculty exclusively. I am confident that the public and Cornell University in particular will soon recognize a debt of gratitude to the generous benefactor who is thus promoting the welfare of women and medical education in a way which promises to become highly effective.

The Curriculum Committee appointed last year has continued to study our own and other courses of instruction and has arrived at certain conclusions but the details were not sufficiently completed to make formal presentation to the Faculty this year. Many innovations are being tried in the medical schools and I believe we shall lose little if anything by proceeding slowly in this direction.

The growing importance of instruction in sanitation and public health demands more curriculum hours which were this year filled by Dr. Haven Emerson, who, in co-operation with Professor Torrey, gave a series of lectures which amplified the course previously given. The College was fortunate in securing such

an eminent authority in the field and I desire to record the appreciation of the Faculty for Dr. Emerson's services.

The Senior Class was this year privileged to participate in a development which may well be extended. The College of Physicians and Surgeons of Columbia University organized a symposium on tuberculosis under the direction of Dr. James Alexander Miller which occupied three days. The College secured the services of several of the foremost authorities on the subject to give demonstrations. The privilege of participation was generously extended to our seniors and they were excused from other work for that period. This method of instruction by presenting extended symposia on important subjects was introduced at Cornell by Dr. W. Gilman Thompson, then Professor of Medicine, some ten years ago and was generally considered extremely valuable. The Columbia symposium was admirable in every detail and the College is deeply indebted to the Dean and Faculty of the College of Physicians and Surgeons. It is hoped that the idea may be extended and developed with benefit to both institutions. Columbia will probably repeat the symposium on tuberculosis next year, and Cornell proposes to organize one on cancer to which an invitation will be extended to the Seniors in the College of Physicians and Surgeons. These proposals indicate a very significant change in the relations between medical schools by which medical education will greatly benefit, and Cornell University Medical College gladly co-operates with the College of Physicians and Surgeons.

I am gratified to report that the relations existing between the College and the various hospitals with which we are associated continue to be cordial and mutually beneficial. The governing bodies and officers of the New York, Bellevue, Nursery and Child's and Woman's Hospitals afford hearty co-operation invariably, and our clinical facilities are all that can be desired as long as the College continues to be physically separated from the hospitals. In previous reports I have referred to the one vital defect in our organization, the lack of intimate physical and educational relations with one or more hospitals, without which the College can never function with the highest efficiency.

The ideal arrangement would be for the College to serve as an educational center about which a large general hospital and several special hospitals would be grouped, all upon a common site and with a common purpose. The acquisition of sufficient land and the removal of the various institutions will require large sums of money, which can be secured, I believe, when all concerned come to realize that the aims of the medical colleges and the hospitals are really identical and can best be achieved by co-ordinated effort. The College stands ready to participate to the extent of its resources and in the broadest manner.

In this connection I desire to call your attention to the inadequacy of the present College building. Erected in 1898 it was then large enough to meet all requirements but it was foreseen that in time additional space might be necessary and was built in such a manner that added stories may be erected with minimal cost. Today all the laboratories and the library require more space. There is little room for storage purposes and the Clinic is crowded. Also, it would be far better to have the departments which now occupy the Loomis Laboratory under the same roof with the other departments. It appears, therefore, that

the time has come when the College must decide if it is to remain in the same location and if so prepare to add additional stories to the present building.

One other important need to which I have referred in previous reports, is the necessity for providing assistant professors in several of the laboratory departments. Without such assistants the heads are burdened with executive detail and teaching which seriously interferes with scientific development. Additional funds will be required to remedy the situation.

I desire to record the appreciation of the College for the continued support of our Medical Clinic in Bellevue Hospital by the Russell Sage Foundation; also for the gifts from several generous donors which have enabled the College to continue its work without retrenchments and to strengthen several departments.

In closing this report I wish to express the appreciation of the Faculty and students for the inspiration and encouragement which they have received from the President of the University and to assure him it has enabled them to complete the work of the past year and to look forward to the coming year with renewed vigor and enthusiasm.

Respectfully submitted,
WALTER L. NILES,
Dean of the Medical College.

APPENDIX VI

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

To the President of the University:

Sir: As Secretary of the Ithaca Division of the Medical College, I have the honor to present my twentieth annual report covering the college year 1921-22.

The work in all divisions of the College has been satisfactory. There have been no marked changes in Faculty, policy, or curriculum, and only such readjustments and improvements as occur yearly and are the mark of normal and healthy progress.

FACULTY

The Professor of Anatomy has, as last year, devoted part of his time to the direction of the Department of Hygiene and supervision of the health program carried on for all students in the University. The Assistant Professor of Biochemistry, Professor Sumner, has been absent on leave and has spent the year in Belgium in research work as the holder of a Fellowship from that country. The changes in the staff of instruction have been confined to the assistants, of whom five are new this year. The difficulty of securing properly qualified assistants for the positions in the Medical College is no less than it has been for some years. The finding of first-class men who are willing to devote themselves, even for a short period, to teaching and research in the fundamental medical branches

is one of our most serious problems. The Cornell University Medical College has done its full share in finding and training men of this character but the demand for teachers has been so great that they are soon called away, and often while their training is very incomplete. To retain such men for a longer period is very desirable, but can only be accomplished by making more of the assistantships, instructorships; and more of the instructorships, assistant professorships. Co-operation has again been the watchword of the year, everyone with his shoulder to the wheel and working overtime at both teaching and research.

STUDENTS

There were 29 students in the first-year class in medicine. Of these, 22 were seniors in the College of Arts and Sciences of Cornell, 16 men and 6 women. There was one man who was a senior in the University of Hawaii. The other six students were graduates: two women A.B. from Vassar College, and four men from Cornell University, three A.B. and one B.S. The number of students from other colleges receiving instruction in the Medical College is noted under the report of each department.

ANATOMY

It was impossible to find a properly trained assistant for one of the vacancies in the department and the work in the Arts technique course was therefore not as closely supervised as it should have been. The course in Neurology is being steadily improved by the addition of new material, especially serial sections of brain stems. It is hoped that within the next year the remainder of the Wilder collection of brains will be transferred to the department.

For several years there has been a gradual decrease in the amount of dissecting material that has been received. This has necessitated our calling upon our reserve until this has been nearly exhausted. There is no question but that in the State of New York the number of unclaimed dead that should be available for medical colleges far exceeds the demand. It is necessary therefore that we should find new sources for securing the material that should come to us.

In addition to the laboratory course for thirty-five Arts students preparing for medicine, a new course in Art Anatomy was given this year for the first time. This was to meet the demand of the fine Arts students in the College of Architecture.

HISTOLOGY AND EMBRYOLOGY

Professor Kingsbury reports that instruction has been consistently and faithfully carried out in all courses. Including the medical students, there were 260 registrations in courses by 158 individuals. The increase in number over last year is in part due to the registration of the Veterinary students for an extra course, Embryology.

Several pieces of research are under way by Dr. Kingsbury and the other members of the staff. Four important papers have been published by members of the department during the year in the *American Journal of Anatomy* and the *Anatomical Record*.

PHYSIOLOGY

In addition to the medical and graduate students receiving instruction, approximately six hundred students (mostly freshmen and sophomores) from the colleges of Arts and Sciences and Agriculture have taken courses in elementary Physiology and Biochemistry. I have previously commented on the great importance of these courses.

Dr. Simpson points out that the correction of examination papers for such a large number of students alone, to say nothing of the lectures and recitations given, throws a great deal of routine work upon the head of the department as well as on the instructors and assistants.

Research has been carried on by every member of the staff; several papers have been read before learned societies and subsequently published as abstracts in various scientific journals.

Another large Brodie Kymograph and other apparatus has been constructed in the department workshop.

The most notable event of the year is the purchase of about nine acres of land at the northwest corner of Cayuga Heights for the establishment of an experimental station for the department of Physiology. This is the consummation of a long felt need repeatedly urged. The location of the Medical College with the University close to the country will make it possible with this farm to carry out many important investigations that could not be undertaken elsewhere. The land is being properly fenced. Animal houses, a sheep maze, and a barn are being constructed. A well for water has also been driven. To transport animals back and forth from the laboratory, a light motor truck is to be secured. In order that a caretaker shall be always accessible, it is expected that next year an attendant's residence will be constructed on the lot.

To carry on some of the research work in connection with the experimental farm, a grant of \$1000 has been made from the Heckscher Research Foundation. A large animal calorimeter is to be procured and room for this must be provided.

BIOCHEMISTRY

In the absence on leave of Assistant Professor Sumner, head of the sub-department of Biochemistry, the work in this department has been under the immediate direction of Dr. Aaron Bodansky, instructor in Biochemistry, assisted by Miss V. A. Graham, instructor, and Mr. J. L. Benham, assistant. The work for the year was somewhat rearranged so that but two didactic hours were given in the first term and the two additional hours, formerly given in the first term, were transferred to the second term. This has seemed to be a satisfactory arrangement as the work has progressed favorably under this schedule.

THE MEDICAL LIBRARY

The plans outlined in my last report for the rearrangement of Stimson Hall for the accommodation of the Charles Edward Van Cleef Memorial Library have been carried out. The room prepared for a research library has been most admirably fitted up. Through the special efforts of Emeritus Professor S. H. Gage,

a special system of lighting has been installed whereby the room as a whole is lighted by the semi-indirect system and each table has a separate lamp fitted with a special daylight glass reflector. We believe that the library, though small, is one of the best of its kind in the country.

NEEDS

The many needs of the college have been stated in preceding reports for some years. It has been a great satisfaction to all of us, that each year one or another of the most urgent of these has been taken care of. The most urgent needs at present are assistant professorships in Histology and Embryology, and in Physiology. Our experience in the past leads us to have faith in the future.

Respectfully submitted,

ABRAM T. KERR,

Secretary of the Ithaca Division of the Medical College.

APPENDIX VII

REPORT OF THE DEAN OF THE NEW YORK STATE VETERINARY COLLEGE

To the President of the University:

Sir: I have the privilege of submitting herewith the report of the New York State Veterinary College for the academic year 1921-22.

Progress has been made in the improvement of the instruction that is being given and in the researches that are under way. There have been but few changes in the Faculty and these have been largely in the line of promotion. Dr. W. A. Hagan was on leave for the year to study at the Rockefeller Institute for Medical Research at Princeton, N. J. He will return this fall. In his absence Dr. C. M. Carpenter was acting professor of bacteriology and parasitology. For the last few years, there has been a decline in the number of students registered in the veterinary colleges of the country. The influences enumerated in our last report, that seem to have been largely responsible for this condition, are becoming less operative. Further, the veterinary profession is undergoing a very rapid evolution. Its artisans are passing from "tinkers" of animals suffering from disease and injury to constructive leaders in live stock sanitation. The veterinarian is no longer the occasional adviser of breeders but he is becoming the counselor whose advice is most sought and most heeded. This change in the purpose of the profession calls for continuous readjustment in the curriculum and methods of teaching.

There were registered 79 undergraduate veterinary students distributed by classes as follows: freshmen, 17; sophomores, 18; juniors, 28; seniors, 16. There were 5 graduate students. In addition, the college has given instruction to other students in the University as follows: physiology, 56; bacteriology, 27; parasitology, 1; pathology, 7; horseshoeing, 11. In the first term 58 students were registered in a special three-hour course that was given for the students

in the College of Agriculture. Although the number of veterinary students is small, it is not out of proportion to the attendance in other veterinary colleges. There was a total of but 711 veterinary students registered in the 13 veterinary colleges of the United States.

The teaching of the applied subjects of obstetrics, medicine, and surgery has been enhanced by large clinics. That the College is well supplied with material for teaching these practical subjects is shown from the number of cases treated. In the ambulatory clinic, there were 3400 cases; in the consulting and surgical clinic, there were 1053; and in the small animal clinic, 1000 cases. They include practically all the diseases of the lower animals encountered in this latitude. The relatively small number of students made it possible for each to have exceptionally valuable practical experience. The teaching of obstetrics has been improved by placing it in the department of medicine and ambulatory clinic where there is an abundance of material for practical instruction.

A condition that presents serious difficulties to those adjusting veterinary education is the inability, from the nature of the work, for practitioners to specialize as in human medicine. The veterinarian must go very largely to his patients and there are not sufficient cases of a single disease in a restricted community to permit of specialization. The College, therefore, must furnish instruction adequate for all of the so-called specialites and include it in the regular curriculum. This does not give elasticity to the instruction. The time is not far distant when it will be necessary either to increase the length of the course or require one or more years of college work in chemistry, botany, and animal husbandry as a prerequisite.

The work of diagnosis and the preparation of certain biologics has continued as heretofore. This is of much assistance to the practitioners and live stock owners of the state. The number of specimens examined and the diagnosis reported during the fiscal year ending June 30 are as follows: For anthrax, 35; for infectious abortion (including agglutination tests), 98; for hemorrhagic septicemia, 59; for mastitis (bovine), 142; for tuberculosis, 82; and miscellaneous, 573. There were made and distributed in the state 114,092 mls of subcutaneous tuberculin; 509 mls of intradermal tuberculin; and 3,746 discs of tuberculin for ophthalmic application; 6,590 mls of septicemia hemorrhagica bacterin; 475,817 mls of anti-hog cholera serum; and 12,993 mls of hog cholera virus for the simultaneous method for immunizing against hog cholera. The special inquiry into the diseases of poultry that was begun in 1920 has been continued. This year there were 490 diseased fowls examined for diagnosis; 16,320 fowls vaccinated for chicken-pox; and an investigation into the nature of the diseases of fowls on 24 poultry farms. The traveling expenses and the cost of the vaccine were provided by the poultry owners. It will require considerably more time and experimental work to ascertain the efficiency of chicken-pox vaccine.

As a direct outcome of the diagnosis work for practitioners, preventive measures are applied promptly and the spread of communicable diseases checked. This is illustrated by the great reduction in the amount of hog cholera, especially in the garbage-fed herds. The number of cases of anthrax and rabies not only have been reduced but these diseases are now under substantial control.

The annual conference for veterinarians was held January 12 and 13. The attendance was large and the interest in the program was unusually keen. There

were excellent technical papers on timely topics by members of the Faculty and valuable addresses were made on important subjects by Professor R. Adams Dutcher, Pennsylvania State College, Dr. M. C. Hall of the U. S. Bureau of Animal Industry, Washington, D. C., Mr. R. C. Shannon, College of Agriculture, and Professor H. H. Wing, Department of Animal Husbandry, Cornell University. There was a thorough discussion of the methods for the eradication of bovine tuberculosis. The Pennsylvania plan was discussed by Dr. S. E. Bruner, Harrisburg, Pa.; the Government plan was presented by Dr. H. B. Leonard of the Federal Bureau of Animal Industry; the New York State plan for its control was discussed by Berne A. Pyrke, Commissioner of Farms and Markets; the place of the private practitioner in the control of bovine tuberculosis was set forth by Dr. W. E. Frink, Batavia, N. Y.; and area eradication of tuberculosis and the cattle breeders' point of view by Professor H. E. Babcock, chairman of the New York State Agricultural Conference Board. The plan of eradication proposed by the New York State Veterinary Medical Society was presented ably by Dr. D. H. Udall. This discussion was very helpful to an understanding of the situation. Dean David S. White of the College of Veterinary Medicine, Ohio State University, gave an address on the causes of recent decline of interest in veterinary practice. The papers were published in the April number of the *Cornell Veterinarian* and a copy sent to each veterinarian in the State. There were several visitors from other states. At this conference, the alumni of the College presented to the University a portrait of Dr. Walter Long Williams who retired in June, 1921. This was accepted for the University by President Farrand. The large attendance and the interest taken in the program is indicative of the value of these conferences to practitioners and live stock owners.

The research work that is being carried on and that is advanced sufficiently for publication will appear in the report of the College to the Legislature. It pertains to the etiology and control of several diseases. Special attention has been given to the study of abortion and sterility in cattle; metritis; mastitis; swine plague and its control; immunization of young pigs against hog cholera; poultry diseases and their prevention; meningitis, especially in calves; the elements of the blood in different species of animals; the problems of gastric digestion in domesticated animals; and galactomicrons in milk. Co-operative studies are being made with the department of animal husbandry in the College of Agriculture on the effect of certain kinds of food. The changes produced in swine fed on a diet composed largely of cotton-seed meal will appear in the forthcoming report of the college. Members of the Faculty have published several important articles on technical professional subjects and also guides for instruction. The annual report for 1920-21 was issued in February. It is a volume of 257 pages containing the results of 18 important studies and researches in connection with animal diseases. This work has received high commendation in the veterinary journals of the country.

The Legislature of 1922 made an appropriation of \$70,000, making a total of \$100,000 for the construction of the south wing to James Law Hall. The plans for the wing have been made by the State Architect and approved by the building committee of the trustees and it is expected that construction will be started this fall. The Legislature made an appropriation of \$110,960 for the maintenance of

the College for the fiscal year 1922-23. This is an increase of \$5,100 over that for the previous year.

There has been full co-operation on the part of the Faculty in the effort to carry out the purposes of the College as set forth in the statutes.

Respectfully submitted.

V. A. MOORE,
Dean of the New York State Veterinary College.

APPENDIX VIII

REPORT OF THE DEAN OF THE NEW YORK STATE COLLEGE OF AGRICULTURE

To the President of the University :

Sir: I have the honor to submit herewith a report of the New York State College of Agriculture and of the Cornell University Agricultural Experiment Station for the academic year 1921-22.

ENROLLMENT OF STUDENTS

The most significant changes in the enrollment of students are as follows: an increase of 33 in the freshman class, a slight increase in the winter courses despite the fact that the winter course in home economics, which last year enrolled 39, had to be withdrawn because of lack of staff to give the instruction, an increase from 215 to 250 in the number of postgraduates enrolled, and a gain of exactly 400 in the summer school. Omitting enrollments in the third term, the figures for which are not yet available, 2604 persons were registered in the College in its various courses during the twelve-months period.

	1921-22	1920-21	
Freshmen.....	384	351	
Sophomores.....	249	319	
Juniors.....	269	232	
Seniors.....	<u>207</u>	<u>240</u>	
		1,109	1,142
Special students.....		72	75
Winter-course students			
Agriculture (General).....	171	156	
Dairy Industry.....	51	43	
Poultry Husbandry.....	41	37	
Fruit Growing.....	32	24	
Home Economics.....	.....	39	
Flower Growing.....	28	10	
Vegetable Gardening.....	<u>6</u>	<u>13</u>	
		329	322
Graduate students.....		250	215
Summer-school students.....		<u>930</u>	<u>530</u>
		2,690	2,284
Less number counted twice.....		<u>86</u>	
		2,604	

THE ENACTMENTS OF THE LEGISLATURE

The State's program of retrenchment in public expenditures continued in full force during the last legislative session, and therefore the urgent needs of the College for relief and expansion at a number of points have had to wait. The greatest hardship has resulted from failure of the Legislature to authorize additional buildings, as contemplated by the legislative act with reference thereto in 1920. The seriousness of this delay is difficult to describe. It has been urged so strongly for many years, that words are lacking to emphasize more positively the necessity for large, immediate relief. Comparatively, New York has now for many years been going backward in its provision of facilities for its College of Agriculture. The requirements in agricultural education and research, and the demands on the College, have grown enormously in the past decade, but the building facilities, with the exception of a dairy building, have remained practically unchanged. It is not possible for the College to do its necessary work properly in buildings which were inadequate more than a decade ago. The handicap imposed by the State's withholding appropriations for buildings and facilities is excessive. Early relief can come only from immediate and generous provision for the full carrying-out of the building program presented to the Legislature in 1920.

In appropriations for the operation of the College for the next fiscal year, slight gain was made over the current year. The chief advantage—and a notable one—came in the form in which appropriations were made, allowing somewhat greater freedom in adjustment of salaries of teachers and certain other classes of employees. Abandonment of the older rigidly segregated appropriation act in favor of one allowing some discretion to the administrative officers of the State's departments and agencies, affords great relief at a vital point in effective administration.

The Legislature of 1922 appropriated \$183,000 for the equipment of the new dairy industry building, which is now in process of erection and is to be ready for occupancy in the fall; and \$15,000 for equipment for a fruit cold-storage building, authorized in 1920. These two substantial grants are gratefully acknowledged. The new dairy building, with its equipment, promises to be worthy of this leading dairy State. It will make possible the inauguration of instruction in many new lines of dairy manufacture which have become important during the recent years but for the teaching of which the College has not hitherto been equipped. The contract price for the building, covering construction, heating, and sanitary and electrical work, was \$397,021. Construction has gone forward steadily since the contract was let last summer. The corner stone was laid by the President of the University on March 3, 1922.

Two special acts of the Legislature are of much importance to the College. By Chapter 406 of the Laws of 1922, provision is made for the acquisition by the University, as agent for the State in the administration of the New York State College of Agriculture, of land and equipment on Long Island for the investigation of the problems of vegetable production, particularly those having to do with the fertility of the soil under intensive cultivation. The vegetable growers have many acute problems, which have steadily increased in difficulty and many of which must be worked out on the soil and in the region of intensive vegetable production. The act carries \$10,000 for the purchase of land, \$16,200 for the construction of a greenhouse, a headhouse, and a laboratory, and other funds for

maintenance and the engagement of a vegetable research specialist. The total funds coming to the College under the act amount to \$38,000. The bill provides also salaries and maintenance for an entomologist and a plant pathologist to be under the supervision of the New York Experiment Station at Geneva. The establishment of this special service to the vegetable industry, which is of large proportions in New York, is a marked addition to the facilities for work in this field, which heretofore have been very limited.

By Chapter 282 of the Laws of 1922, amending the county law in relation to raising money in counties to improve agricultural conditions, the administration of the county agricultural and home demonstration agent system and of the State's co-operation in the maintenance of county farm and home bureaus is placed wholly in the hands of Cornell University, as agent for the State in the administration of the New York State College of Agriculture. Hitherto the administration under the law has been jointly by the Dean of the College of Agriculture and the State Commissioner of Farms and Markets. The central administrative office has always been maintained at the College. The county agent work is entirely educational in character, and this change in law is made in the interest of sound state policy in separating educational and regulatory activities. The act takes effect on July 1, 1923. It will involve the transference of approximately \$63,000 to the State College of Agriculture from appropriations made for this work to the State Department of Farms and Markets. The generous yielding of his responsibility in the administration of the work by the Commissioner of Farms and Markets is highly commendable. The administration in New York will hereafter conform to the established system in all other States of the Union in the conduct of co-operative extension work under the Lever Act.

BUILDING ACCESSIONS

Aside from the new building for the Department of Dairy Industry, to which reference has been made, attention is called to certain small structures advanced during the year.

In the early spring, work was begun on the cold-storage building in the orchards, to cost, with its equipment, \$32,000. Hitherto the College has been without facilities for the storage of the fruit from its large orchard, and with no means of undertaking important studies on problems of fruit storage. This building will therefore fill a long-felt need.

Bids have been opened for an insectary and an adjacent glass laboratory for the investigation of the economic relation of insects, costing together about \$21,000. Since the razing of the old insectary for the erection of the new hall of chemistry, the investigations have been greatly disturbed. It is now anticipated that we shall soon have a building well suited to the requirements in this field of large service to farmers and to science.

During the year a carpenter shop, costing approximately \$3000, has been erected, and work is now advancing rapidly on a field shed for the investigations in plant breeding, to cost about \$13,500.

Small structures, such as the foregoing, provide advantage to the field work of the College, particularly to the research, out of all proportion to their cost.

Many comparable structures for other departments using land are greatly needed and should be provided as funds can be obtained.

CHANGES IN THE STAFF AND IN ORGANIZATION

During the year the following resignations from the staff occurred: J. R. Bechtel, Extension Assistant Professor of Vegetable Gardening; Dr. M. D. Leonard, Extension Assistant Professor of Entomology; Dr. H. W. Dye, Assistant Professor of Plant Pathology; and Dr. C. B. Hutchison, Professor of Plant Breeding. The first three entered the commercial field, and Dr. Hutchison resigned to accept appointment as Director and Professor of Plant Breeding of the Northern Branch of the University of California at Davis. They were all valued workers, whose loss is felt.

The College is highly fortunate in the new appointments to the staff made during the year: Joseph Oskamp, B.S. in Agr., was appointed Extension Professor of Pomology, effective on September 1. On October 1, Godfrey Richard Hoerner, M.S., assumed the duties of Extension Assistant Professor of Plant Pathology. For the spring term, the addition of Miss Helen Goodspeed, B.S., as Acting Assistant Professor of Rural Education, and Miss Alma Binzel, B.S., as Acting Assistant Professor of Home Economics, have made available to students and to the people of the State the services of teachers of strength and accomplishment.

The Trustees have approved the appointments of the following persons, who will take up their duties at the opening of the next college year: Dr. H. E. Thomas, Assistant Professor of Plant Pathology, now holding a similar appointment at the Pennsylvania State College; W. T. Crandall, M.S., Extension Assistant Professor of Animal Husbandry, at present on the staff of the Kansas State Agricultural College; Miss Adelaide Spohn, Assistant Professor of Home Economics. Miss Spohn, who has held responsible appointments in teaching and research, is now completing requirements for the doctor's degree at Columbia University. She will be the first person appointed to the staff of the School of Home Economics to do research work exclusively.

The Legislature of 1922 provided a position of extension veterinarian to do educational work in livestock sanitation and the control and prevention of animal diseases. The appointee is to be a member of the staff of the College of Agriculture but is to be closely associated with the College of Veterinary Medicine, the responsible authority in subject matter in this field. D. J. H. Metzgar, a graduate of the New York State Veterinary College at Cornell University, has been appointed to this position.

Dr. L. M. Massey, who during the year has efficiently acted as head of the Department of Plant Pathology in the absence of Professor Whetzel on leave, has been appointed head of the department, effective with the new fiscal year, to succeed Professor Whetzel, who is relieved permanently of the administrative responsibility at his own urgent request. Professor Whetzel has been in charge of the Department of Plant Pathology since its organization in the College, and he has brought the department to a place of high recognition among plant workers everywhere. His tireless energy and unbounded enthusiasm and confidence have been an inspiration to great numbers of students, graduate and undergraduate, and many of the best-known teachers and investigators in the field have taken

advanced study in his laboratories. His leadership has been stimulating and effective, and his accomplishments, both personal and directive, in the fields of research, teaching, and extension, have been large. He has well earned the right to be relieved of the burdens of administration, which he has for years desired, in order to spend his time in undisturbed professional work.

Approval has been given by the Trustees to effect, for the academic year 1922-23, an exchange professorship with Pomona College, Claremont, California. Dr. J. G. Needham, Professor of Entomology and Limnology, is to exchange with Dr. William A. Hilton, Professor of Zoology in Pomona College. While Dr. Hilton will offer instruction in biology and limnology, his coming will enable the College to strengthen its work in his special field, the nervous system in insects.

At the request of the National Research Council, Dr. J. R. Schramm, Professor of Botany, has been granted leave of absence from February, 1922, to July, 1923, to undertake special work for the Council at Washington and to further the development and firm establishment of the scientific journal *Botanical Abstracts*, with which he has been intimately associated from its beginning. During 1922-23 his courses will be carried by Associate Professor L. C. Petry, of Syracuse University, who has accepted temporary appointment.

The transference of responsibility for professional instruction in landscape architecture to the College of Architecture, described in the report of this College for 1920-21, is to be fully effective at the close of the present academic year. The College of Agriculture, while favoring this adjustment to better educational organization, nevertheless suffers the loss of a department of instruction which has attained large professional success and high recognition among the schools of landscape architecture. Its professional graduates have already made an enviable reputation and demonstrated the excellent quality of the teaching. The interest of the College of Agriculture in the successful future of this important and attractive professional field will remain unabated.

At its meeting in April last, the Board of Trustees approved of the amalgamation of those phases of landscape art remaining in the College of Agriculture, and having to do primarily with plant materials and country planning, with the instruction in floriculture, in a reorganized Department of Floriculture and Ornamental Horticulture, under the headship of Professor E. A. White.

Coincident with these readjustments, the Department of Botany in the College of Arts and Sciences is to be discontinued at the close of the present academic year, the valuable library and collections being assigned to the Department of Botany in the College of Agriculture. Professor W. W. Rowlee, Professor of Botany and head of the department to be discontinued, becomes Professor of Dendrology in the Department of Forestry, bringing to that post the ripe results of his years of study in this field.

As the first step in the consummation of the projected amalgamation of zoology and entomology in the College of Agriculture, Dr. A. H. Wright, Assistant Professor of Zoology, has been appointed to the staff in Agriculture, effective on July 1, 1922.

CHARLES HOWARD ROYCE

Following an accident at his home, near Ithaca, Extension Professor Charles H. Royce, for six years identified with the extension service of the College, died

on August 5, 1921. Professor Royce was graduated from the College of Agriculture of Cornell University in 1891. He entered upon graduate study at the University of Wisconsin, receiving in 1892 the master's degree. For more than twenty years he successfully managed large farms and estates. He brought to his work as an extension teacher a broad and intimate knowledge of farm problems and operations, based on good technical education, and it made him an effective teacher of farmers. Self-reliant, frank, loyal, ever ready and hard-working, he achieved a high place among farmers and colleagues. We feel his loss greatly.

ROBERTS AND BAILEY

The two men who are chiefly responsible for the organization and building of the College of Agriculture and whose names will forever stand out in its history, are former Directors Roberts and Bailey, now Professors Emeritus. In answer to many inquiries, a word concerning their work since retirement from the College may be given.

Professor Roberts retired from the directorship in 1903, after thirty years of devoted service as a pioneer in agricultural education. On his retirement he went at once to his three children in California. He settled first in Palo Alto, where he built a home. Shortly afterward, Mrs. Roberts became almost blind and Professor Roberts devoted the greater part of his time for the ten years before her death to making her comfortable. He occasionally lectured at the farm school at Davis and at the school at San Luis Obispo, and was frequently a guest of honor at farmers' meetings throughout the State.

In 1914, at the urgent request of his children, he began to write his autobiography, which was published in 1916, under the title *The Autobiography of a Farm Boy*, by the J. B. Lyon Company at Albany, New York, as a state historical document. This delightfully readable book reviews the early history of the agricultural development of the State, as Professor Roberts' forebears had settled at East Varick, on the west bank of Cayuga Lake, in 1812, when this was virgin country, and he remembered much that his grandfather had described to him. The book covers also the development of the teaching of agriculture at Cornell University from 1869 to 1903, and reviews the evolution of agricultural teaching in the United States.

Since 1915 Professor Roberts has divided his time among the households of his children. Owing to rapidly failing eyesight he has not been able to finish an investigation of the cost of wheat production for which he had gathered a considerable amount of material from farmers of many States. In his eighty-ninth year he is still remarkably able-bodied and spends every morning in the garden. Although not able to read for himself, he retains his interest in the large national problems of agriculture. His devotion to agriculture has been even as his length of years, long and honorable.

Dr. Bailey, since his retirement in 1913, has occupied himself with writing, editing, and travel, and particularly with scientific work in systematic botany. The books of his own authorship published during this period are *York State Rural Problems* (volumes 1 and 2), *The Holy Earth*, *Wind and Weather*, *Universal Service*, *What is Democracy*, *School-Book of Farming*, and *The Apple Tree*. The last-named is the initial volume of *The Open Country* series of books. Two

volumes of *Rus* (a rural *Who's Who*) have been compiled. Four of Dr. Bailey's older books have been rewritten, and the six-volume set of the *Standard Cyclopedia of Horticulture* has been put through. During this period also, omitting numerous reprints and new editions, Dr. Bailey has edited and carried through the press forty-six books by other authors in his several series, and seven additional books are now in process.

Dr. Bailey's scientific work has been concerned with the building-up of his herbarium (now numbering about 55,000 sheets and rapidly growing), together with studies, travels, and observations of vegetation in parts of Europe, China, Japan, New Zealand, northern South America, the Caribbean Islands, and elsewhere. In order to make his scientific studies available, he has issued the first number of his privately published *Gentes Herbarium*, devoted to his collections in China. Manuscript for the second number has been prepared.

Dr. Bailey's versatility and breadth of interest, his tireless energy, his resourcefulness, and his capacity for constructive achievement, which distinguished his work as Director of the College of Agriculture, have remained undimmed and unabated. His contributions to American agriculture are notable.

SABBATIC LEAVES OF ABSENCE

The privilege of sabbatic leaves of absence for purposes of professional and technical improvement is one of the most valuable emoluments of university teaching, when properly utilized. The College has at all times sought to encourage the investment of such leaves in ways that would advance the individual in his chosen field and hence promote the highest aims of the institution. During the past year, Professor G. W. Cavanaugh has spent his leave partly in research in the laboratories at Ithaca, and partly in a trip to the Tropics. Professor R. W. Curtis has prosecuted his studies of plant materials at the Arnold Arboretum. Professor R. S. Hosmer has devoted his leave to visits to the forests, and study of the forest work in progress under government auspices and otherwise, in England, Scotland, Norway, Sweden, Denmark, Germany, Switzerland, and France. Professor G. P. Scoville has used his leave for advanced study at Harvard University. During the early part of his sabbatic leave, Dr. G. F. Warren prepared bulletins for the College and for the United States Department of Agriculture. The major part of his leave, however, has been given to a study of agricultural and marketing conditions in various European countries as a representative of the United States Department of Agriculture, and in preparing for the Department recommendations for future studies. Professor H. H. Whetzel has been associated with the Department of Agriculture of the Bermuda Islands in organizing and developing a plant-disease-control service and in establishing a plant-disease survey and research. He has thus had opportunity to investigate several hitherto unreported diseases and to make a representative collection of the fungi of the islands, which he has added to the college collection. Professor E. A. White spent the major part of his leave in making a survey of the flower- and ornamental-plant-producing industries in England, France, Holland, and Belgium. Several weeks were devoted to study at the Royal Botanic Gardens at Kew, England. Dr. K. M. Wiegand organized and conducted during his leave a 7000-mile automobile collecting trip across the continent, as a result of

which 3000 plant specimens have been added to the collections of the Department of Botany. On his return from the West, he devoted the remainder of his leave to study at the Gray Herbarium, Harvard University. Leaves of absence thus utilized profit both the University and the State and justify the privilege.

DEPARTMENTAL NOTES

All the usual lines of departmental work have gone steadily forward. Among some of the new undertakings of the past year may be mentioned the following:

Effective February 1, 1922, the Department of Agricultural Chemistry arranged with the Merrill-Soule Company, of Syracuse, for the inauguration of an investigation of the vitamine qualities of milk. The company has deposited with the University \$4000 to cover the expenses of the investigation for one year. The study is to be made under the supervision of the head of the department, and its results are expected to be of wide interest.

In the Department of Agricultural Economics and Farm Management, the addition of courses in marketing, prices, and transportation has proved valuable. The department is devoting its energies as fully as possible to the investigation of economic problems of agriculture as a basis for teaching and extension service. Co-operative investigational projects with the United States Department of Agriculture are being inaugurated. A beginning has been made in studying the whole problem of handling some important New York State farm products. With the violent adjustments in price levels now taking place, new problems in the interrelations of agriculture and business affairs have come up for attention.

The Department of Agronomy has made a beginning on the chemical and mechanical analyses of certain important soil types, supplemental to the soil survey of the State. We are yet without knowledge whether the chemical composition and fertilizer needs of a particular soil type are fairly constant and characteristic for widely separated areas of any type. For the work now on hand, samples of soil types have been taken at fourteen carefully selected points in the State. In addition, concrete receptacles to hold large samples (four tons each) are under construction at the College, and it is expected that four such samples will be brought to the College this summer for test of fertilizer requirements under similar conditions. These two types of analysis and study are to be supplemented by more extensive experiments in the management of a few of the more important soil types, these experiments to be made in regions where the altitude and the meteorological conditions are representative of the regions where the type is most largely found. Such investigations should yield results of large practical value to farmers.

The Department of Botany has continued its efforts to build up its plant collections. Aside from additions from within the State, the following accessions have been made: by Dr. Wiegand, collections in western United States, 3000 specimens; by Mrs. Wiegand, collections in Arizona and southern California, 1600 specimens; by A. H. Wright, collections in Georgia, 500 specimens.

In the Department of Entomology, Biology, and Limnology, the work at the fish experiment station goes steadily forward. At present, special attention is given to the raising of bullheads, bluegill sunfishes, and other fishes important for the farm fish pond, and to the development of methods of feeding and control that may be of far-reaching economic value.

The total number of students who received instruction in the School of Home Economics during the year was 495, of whom 252 were in the four-year course and 192 were in the summer school. Owing to lack of staff, the School was compelled to omit its winter course again last year, but by special arrangement it offered a much briefer course for twelve Indian girls from the reservations in the State. Five students were registered for graduate study.

For many months there has been under consideration a plan for extending the work in institutional management offered by the College. Work in this field has for some years been developing in the School of Home Economics, whose graduates are making successful careers as managers of cafeterias, hospitals, and similar institutions, as well as in the capacity of homemakers and in other vocations. Hotel organizations of the country, and other institutional groups, have urged an enlargement of this phase of the work, their interest growing out of the need for highly trained managers in their institutions. The American Hotel Association has offered to share in the expense of instituting certain new courses, and plans for a definite curriculum are under consideration. If a specialized course in institutional management is offered, it will be organized so as to include the regular requirements for the college degree, but will involve the addition of some new, specialized work. A large field of training in the management of public and private institutions appears to be opening.

During the year, approximately 6000 volumes have been added to the college library. A special effort has been made to obtain the more important foreign works in the fields of the College which have come on the market since the war. The library is now so overcrowded that books are piled on the floor in inaccessible places. The demands on the library have steadily increased. It is impossible to keep a record of all the use made of the library, owing to the fact that most of the books are on the open shelves. The records show, however, that during the year 32,811 volumes have been given out for reading-room use from the reserve shelves alone, and 5667 volumes for home use, an increase of fifty per cent in total use in one year.

An unexpectedly large interest has developed in the extension, by the Department of Meteorology, of special weather forecasts to the farmers of the State during the harvest season, and to fruit growers during the spraying season. Last season twelve county agricultural agents received the harvest forecasts daily from June 15 to September 1, for distribution by telephone to the farmers in their respective counties. Requests have been received for similar services for the current season from twenty-nine counties. While negotiations have been undertaken with the United States Weather Bureau at Washington for an enlargement of the services, lack of funds will prevent its adequate development for the time being.

The continued gross inadequacy and unsuitability of the quarters of the Department of Plant Pathology in the basement of the auditorium constantly used for large student and public gatherings, has again made it necessary for this department to debar from its classes some students seeking instruction in this field of outstanding importance to those who are planning to farm. In addition, it was necessary to crowd twenty-three students in an advanced course into a laboratory with adequate space and equipment for but sixteen students. With the poor natural lighting, and especially the poor ventilation of the basement in

which the department is housed, the overcrowding of laboratories exposes teachers and students to conditions seriously inimical to health. There can be no relief from this condition, which has now existed for many years, until the new plant industry building is provided.

For several years the Department of Poultry Husbandry has studied the use of artificial light in the control of egg production, and has made notable contribution to the knowledge and practice of poultry-house illumination. The experiments suggest that the chief factors in the control of production are the maintenance of the normal body weight and the normal temperature by a proper combination of methods of feeding and the proper amount of exercise, both of which are secured by the right use of artificial light in equalizing the length of the night and the day in connection with the careful segregation of birds according to their physical condition and laying ability. During the past year, more than 1000 determinations of the intensity of light on the floor in poultry buildings have been made in co-operation with the Department of Rural Engineering. The purpose has been to determine the factors governing the proper distribution of light, in relation to size of lamp, type of reflector, height from the floor, and method of placement. These experiments have made it possible to secure greater economy and efficiency in the installation of electric lights in poultry houses.

After four years of experience with the certification of poultry by the College as an educational demonstration, there has now been organized, to take over this certification, the New York State Co-operative Poultry Certification Association, Inc. This organization, which is composed exclusively of poultrymen whose fowls are certified each year, has assumed responsibility for administering the certification and financing the certification of breeding birds, and it plans to conduct soon for its members a number of substations for co-operative trap-nesting pedigree breeding, and progeny testing and hatching. Last year the College certified 24,389 birds on 280 farms in 49 counties.

In September, 1921, Professor J. E. Rice, head of the Department of Poultry Husbandry, was sent as an American delegate to the World's Poultry Congress held at The Hague. He carried with him a carefully developed educational exhibit portraying the poultry husbandry of America. Twenty-six countries were represented at the Congress, which was made an official function by the Government of Holland. Following the Congress, Professor Rice had opportunity to study the development of poultry husbandry in Holland, Belgium, Switzerland, France, and England.

The Department of Rural Education has continued its very important contribution to the survey of the rural schools of the State being made by the Committee of Twenty-One, of which Professor G. A. Works is chairman. The training of teachers in service, in co-operation with the State Education Department, has been extended and strengthened.

The Department of Rural Engineering has given attention to radio-communication in its relation to extension service to farmers. Much value is expected to result from this remarkable development in this connection. This department also shared largely in the investigation of problems of poultry-house illumination described above.

A STUDY OF COLLEGE AIMS

The land-grant colleges, partly because of their operation under the same or similar governmental supervision, present a great deal of similarity in their organization and their activities. There is, nevertheless, the greatest need that the aims of their instruction be clarified as regards both range and method. Indeed, it is far more desirable that these institutions should see clearly what each should try to accomplish, than that all should be doing the same things in the same ways.

In our own case, there are constant demands for extensions to the range of instruction. Within the past year the needs of nurserymen, of turf-making experts, of institutional managers, and of other specialized groups, for higher training, have been repeatedly urged upon the College. These special lines are in large measure already served by the fundamental scientific studies and by many of the applied courses now in operation, and but little addition needs to be made for their special requirements.

More difficult than deciding upon the range and grade of professions for which training is to be offered, is the problem of making truly effective the training even for the vocations nearest the center of our interest. Are we really fitting our students adequately for the next stage of their experience? Do we ourselves know as well as can be known what the demands of life upon our students are to be? We need to determine, with greater precision, what constitutes the best training for farming and for the lines allied to it served by the College.

With these and related questions in mind, under authorization of the Faculty a committee has been appointed to make a thorough inquiry into the aims and organization of the College of Agriculture. By a study of state and federal legislation and regulation, of university organization, of practice in other institutions, and particularly of the experience of our former students, an attempt will be made to formulate the objectives of the college course. Further, the professions falling within the field determined upon must be analyzed with a view to determining what real preparation for them involves. Finally, the curriculum and the subject matter taught can be restudied in the light of the facts thus revealed. This is a study that will probably take more than a year for completion; in a sense, it should never be considered finished. The knowledge to be gained from it, however, is fundamental to wise curriculum building and the most efficient educational organization.

AN ORIENTATION COURSE FOR FRESHMEN

Two measures have been approved by the Faculty with the purpose of aiding students in deciding how to shape their college programs. During the first term of the present year there was offered a course of lectures explaining the various lines of specialization within the College. This course was under the supervision of the Vice-Dean of Resident Instruction. No credit was given, and attendance was voluntary. This experience seemed to warrant the decision to place the course as a required subject in the freshman year. Its scope will be increased so as to acquaint the student with the history of the University and the College and with the wide range of activities centering here. An attempt will be made to give the

new students the essential facts regarding the various interests within the University that may claim their attention. The main purpose to be served is to acquaint students with the diversity of specializations in agricultural study and vocation that are open to them, the opportunities and training requirements of several types of farming, and related services.

Somewhat similar in purpose is the publication of a small pamphlet for new students, less formal than the college announcement, giving information regarding agricultural vocations and professional curricula.

THE INTERNATIONAL AGRICULTURAL SOCIETY

An interesting development in the student body during the year has been the formation of an international agricultural society. Besides American citizens of foreign birth, there are 58 foreign students taking work in agriculture, about half of them registered as graduate students. The impulse for the organization of these students was their own conviction that merely to complete the college curriculum gave them an inadequate understanding of American agriculture. The routine of farm practice, the home and community life in rural districts, the economic and political relations of farmers, the organizations for solving farm problems—all of these, while they are part of the native farm boy's background, are unknown to the foreign student, and there are special difficulties in the way of giving these students experience on American farms. The society now formed aims to remedy these defects by giving attention to these phases of American agriculture, in discussion and by trips for observation. The members of the society are hopeful, also, of keeping in helpful contact with one another as they go back to their own countries. Officers of the Faculty are co-operating with the society.

PROGRESS IN RESEARCH

To adequately review the progress in research during the year involves such lengthy discussion that the reader is referred to the annual report of the College and Station printed separately by the State, where this record will be found.

The ability of the College to serve the public, to maintain strong courses of instruction, to sustain the teachings in the fields of extension, and to meet the ever-increasing demands of farmers and farm women for aid in their technical problems of daily practice, is immediately dependent on the opportunity and capacity of the College for research, both pure and applied. Charged by the State "to improve the agricultural methods of the State; to develop the agricultural resources of the State in the production of crops of all kinds, in the rearing and breeding of live-stock, in the manufacture of dairy and other products, in determining better methods of handling and marketing such products, and in other ways; and to increase intelligence and elevate the standards of living in the rural districts," the College is empowered to disseminate "agricultural knowledge throughout the State by means of experiments and demonstrations on farms and gardens, investigations of the economic and social status of agriculture, and in other ways," and "to make researches in the physical, chemical, biological and other problems of agriculture, and the application of such investigations to the

agriculture of New York." Furthermore, by Federal Statute (Hatch Act of 1887, Adams Act of 1906), the College is charged with the conduct of "original researches or experiments bearing directly on the agricultural industry," broadly defined in the terms of the acts. The full working-out of these legal obligations and authorizations has been the sustained purpose of the College, and excellent progress has been made within the limitations of funds provided by the State and Federal Governments for the purpose. Every department of the institution is now engaged in some researches or experiments or investigations on problems, fundamental or applied, in its field. It is the policy so to organize the threefold service of the College in teaching, research, and extension, as to liberate the time of properly qualified members of the staff for the work of investigation. As the dependence of the services of the institution in all its ranges on the output of research becomes increasingly clear, the provision of adequate opportunity and facilities for the conduct of investigations becomes increasingly urgent. The whole development of this phase of the work of the College has been set forward substantially by the close and sympathetic relations of the Vice-Director of Research, whose post was created by the Legislature in 1920.

EXTENSION SERVICE

During the year the emphasis in extension work, on the part of both county agents and extension specialists, has been on the development of community programs of work in the respective localities. For years much attention has necessarily been given to building up the county and local organizations for efficient co-operation with farmers themselves. It has been a large task to establish the means of local co-operation. While this must always have attention, the time has arrived when thought can be more fully diverted from the machinery of extension work, or the means to the end, to the end itself, or what it is intended to accomplish in a given community in the way of specific gains in farming and homemaking.

Effort has been made to encourage farmers, and particularly the local committeemen, to more largely make their own programs. Even though such programs may not always be so wise or so complete as specialists and county agents might make them, it is essential that they express real local needs, and this can best be done when they are largely made by the people themselves. Experience has shown that a program thus made is generally the best that the farmers themselves will carry forward at the time.

Some progress has been made during the year in the wider employment of all the means, or methods, of extension teaching to promote specific objectives. The three general forms of extension teaching are:

- (1) Writing material for persons to read, including letters, bulletins, reading series and references, correspondence courses, new articles for the press, mimeographed outlines, and the like.
- (2) Speaking to people through lectures at community meetings, institutes, picnics, and other special occasions, schools, and conferences, personal farm visits or inspections, and office calls.
- (3) Pointing out to people, by example, the results of methods and practices, including field and barn demonstrations, field tests, local leadership, extension schools such as gas-engine and shop schools, fairs, and inspections, and in other special ways.

Some of these methods are more useful in one field of endeavor than in others. Most of them can be used effectively with all subjects, and their more general employment in forwarding each project and sub-project has been stressed.

One of the newer methods of teaching developed by the School of Home Economics, namely, the effective training of local leaders or teachers, is worthy of special mention. The method has been applied specifically in clothing and nutrition extension work. County leaders are first selected, who may be either county home demonstration agents or persons in the counties especially selected because of their qualifications for such leadership. These county leaders are brought together in regional schools, where they are given instruction, by the specialists of the College, both in the subject matter and in the methods of conducting the work. With the help of the specialists, the county leaders then conduct training schools in their respective counties, where local community project leaders in clothing and nutrition are assembled and given similar training. On the completion of the training-school course, the community project leaders are ready to conduct community meetings and demonstrations on clothing and nutrition problems. The material which they teach is largely limited to that given them by the specialists. While the method is new and experience with it is limited, it promises well in the development of local initiative and trained leadership in the localities, a prime purpose of all extension work.

Previous records have been broken in the extension schools, both in the number of schools held and in attendance. As this is one of the more advanced forms of extension teaching and requires systematic attendance and training of farmers in classes covering from three to five days, its fuller development is most encouraging. During the year there have been 67 schools held about the State, with 2468 persons enrolled.

Advance has been made during the year, also, in clarifying the relationships among farmers' organizations with which the College co-operates. This is highly important in safeguarding the educational aims of these agencies and of the College of Agriculture. The farm and home bureau state federations, created primarily for purposes of co-operation in extension service, are recognizing ever more clearly that their chief functions are to correlate and support the educational programs and activities of their constituent county associations, and that their support of commercial, social, legislative, and other activities of farmer groups is a secondary, although useful, function. It is recognized that this secondary function is best exercised in co-operation with other organizations specifically created to serve these specialized commercial and other purposes. The existence of a strong State Conference Board of Farm Organizations, and the recent establishment of a promising State Council of Co-operative Associations, provide machinery for the commercial and legislative activities, through which the State Federation of Farm and Home Bureau Associations can function without losing their primary educational purposes. The State Federation of Home Bureau Associations is similarly co-operating with state bodies and agencies concerned with the larger social problems of home and community.

The county farm bureau organizations have made steady progress, retaining their total membership even with a greatly increased fee, and holding their appropriations from county boards of supervisors in a year of retrenchment. The larger membership fees and local appropriations have substantially increased the

county budgets for co-operative extension service and enabled the carrying-out of more complete programs of work. The county home bureau organizations have shown particularly vigorous growth in membership and activity. They now number more than 26,000 women co-operators, with paid fees. Substantial increases in county appropriations for women's work have been obtained in several counties, attesting the value attached to the work by the people. As the College functions in close co-operation with these organizations, the gains have enlarged its own extension services.

The junior extension work with girls and boys has had a healthy growth. It is better understood, is more thoroughly established where full-time agents are employed, and is growing in value, significance, and popularity.

In this your first year as the administrative head of Cornell University, President Farrand, I desire to express my high appreciation of your warm and cordial support of the work of the New York State College of Agriculture, and your able and stimulating counsel and labor in promoting its service to students and to the people of the State.

Respectfully submitted,

A. R. MANN,

Dean and Director, New York State College of
Agriculture and Cornell University Agricultural
Experiment Station.

APPENDIX IX

REPORT OF THE DEAN OF THE COLLEGE OF ARCHITECTURE

To the President of the University:

SIR: I have the honor to submit herewith the report of the work of the Faculty of Architecture for the academic year 1921-22.

During the past year the Board of Trustees authorized the transfer of the Design staff of the Department of Landscape Art from the College of Agriculture to the College of Architecture, the time and details of this transfer being left to the discretion of the President. Acting President Smith set this date as of July 1st, 1922. With this transfer has come the administration of the courses intended to prepare the student for the practice of landscape architecture. Architecture and landscape architecture are two professions whose fields of operation overlap. The training necessary for these two is in many particulars identical and in general runs along parallel lines. Landscape architecture in this country is a comparatively new profession and the problem of the establishment of a proper curriculum for the training of those entering this profession is one for which there is comparatively little precedent. The two professions as professions have not worked together with any great degree of harmony and the academic training for the two has for the most part been kept distinct. This Faculty, however, in attempting to solve the problem of the proper curriculum for the landscape architect has definitely attempted to co-ordinate and amalgamate the work of the architect and the landscape architect to as great a degree as possible. This has

been the most important of the educational problems of the past year and has been one that has necessitated a very complete study and to a certain extent reorganization of all the curricula heretofore established in the College.

For some years past there has been in existence a five-year course leading to the degree of Bachelor of Architecture. This Faculty has felt that it was only a matter of time when the so-called four-year courses should be abandoned but has hesitated to take a step so at variance with all the traditions of collegiate life in this country. The occasion, however, of the transfer of the landscape architectural student from a state college with free tuition to one of the endowed colleges, the necessity of making changes in the architectural and fine arts courses due to this amalgamation of the curriculum of the architect with that of the landscape architect, together with the fact that at the present time the enrollment of the College is below average with every indication of a rather rapid increase, were all elements that made this particular time seem the most propitious for such a radical step as would be the changing from a four to a five-year course. There has been, I believe, no question in the minds of the Faculty as to the educational desirability and advantages of making this change. Its hesitation, however, was due to the question as to what the effect would be upon the enrollment, cost of education, and advisability from the point of view of being contrary to what the public has come to expect the college education to amount to as a matter of time.

In February of this year, however, there was transmitted to the University Faculty and the Board of Trustees a transcript of the action of the Faculty of the College of Architecture establishing a uniform entrance requirement for all courses given in the College, together with proposed curricula laid out upon a normal five-year basis, which has received the approval of the University Faculty and that of the Board of Trustees. It is interesting to note that these proposed curricula, except in the case of the landscape student, have not perceptibly increased the technical subjects required for the degree but have very considerably stressed the so-called cultural subjects.

Many of the professional schools of this country require pre-academic training. The experiment undertaken by this College of combining the so-called academic work with the professional work which are interwoven throughout the five-year course, is, I believe, a new one. The experience of the last three or four years during which time more cultural work has been put in the old four-year course in the form of electives, has been the basis for the belief that this was the more satisfactory way of accomplishing what some of the schools have attempted to accomplish by the requirement of pre-academic work before undertaking the technical professional work. For the most part these elective cultural subjects have been taken in the latter part of the course at a time when the student seemed better prepared to reap the benefits of such courses and at a time when he did not look upon them as mere tasks to be gotten through with before undertaking the, to him, more interesting professional work. The next few years will tell how correct this opinion is and whether the College of Architecture at Cornell by being the first of the architectural colleges to go upon a five-year basis is undertaking a questionable experiment or is on the right road to success.

During the past three years the work of the College has been differentiated to the extent of the establishment of a course leading to the degree of Bachelor of Fine Arts and now a course leading to the degree of Bachelor

of Landscape Architecture, in addition to the old courses for the architect. The expansion or differentiation of the work of the College, I believe, has gone as far as it should for some time to come and the problem facing this Faculty for the next few years will be largely that of co-ordination in order to make all its work cohesive and to eliminate the danger of what might be called eccentricity in a college as small as this one.

It seems quite fitting that this point in the growth of the College should have been reached upon its fiftieth birthday, and that now having attained its physical maturity its problem should be largely that of the development of those functions rather than the inauguration of new work.

Respectfully submitted,

F. H. BOSWORTH, JR.,

Dean of the College of Architecture.

APPENDIX X

REPORT OF THE DEAN OF THE COLLEGE OF ENGINEERING

To the President of the University:

SIR: I have the honor to submit herewith a report upon the work of the College of Engineering for the year 1921-22.

In the report submitted last year a brief account was given of the measures taken to consolidate all engineering work in the University into a single college and the general outlines of the organization that have been built up to accomplish this purpose were described. This plan of organization has been found to be very satisfactory and no changes of consequence have been made or are contemplated in this plan. Further changes of importance will come only as a result of experience or because of changes in policies that cannot now be foreseen. During the past year the Engineering Faculty and its several constituent groups have been engaged in completing such changes in curriculum as were found necessary and in making minor adjustments between the several schools looking to smoother operation and greater efficiency. This has all been conducted in a fine spirit of harmony and apparently the form of organization adopted will prove to be very satisfactory. It is a source of great satisfaction to report that all of these changes have been effected without interrupting in any way the work of any one of the constituent groups, a fact that speaks highly for the patience and forbearance of all of the large number of Faculty members who have been concerned in this work of reorganization.

The most important work of the Engineering Faculty for the year has been in connection with the entrance requirements. While no changes have been made in these requirements they have been rigidly enforced and in future no students will be admitted to the College that do not present the full requirements. It has been the custom to admit students with one condition in a non-essential requirement, provided they presented fifteen entrance units. This change resulted in decreasing the entering class somewhat, a result which is not to be deplored in view of the present crowded conditions in the College. Further study was made

also of psychological examinations, each entering student being required to take such a test with a view of determining, if possible, what logical use may be made of these tests; and it is proposed to study more carefully the sources from which our students are drawn and their preparation and background with a view to developing better methods of selecting prospective students and of offering more accurate advice to those seeking admission.

The Faculty of the School of Civil Engineering has made all adjustments in curriculum incident to the rearrangement and has had on the whole a very successful year. There has been a slight decrease in the number of students in this school due to the continued industrial depression which has affected civil and mining engineering very greatly. The usual amount of instruction has been given to students in other colleges and it is expected that the new courses in astronomy offered by Professor Boothroyd will attract many more such students. In this respect it should be noted that it is expected that the new observatory will be in operation in the near future. A number of changes and improvements in and about the observatory are badly needed and these needs have been submitted in detail elsewhere. When the new telescope is fully mounted and equipped the observatory will provide facilities for instruction in this field which should be of great value to students in all colleges of the University. It is hoped, therefore, that these improvements can be made in the near future.

A considerable amount of research has been accomplished during the year in this School through the assistance of the Heckscher Foundation and it is expected that the work done under the Foundation by Professor Schoder, the results of which are now being worked up by him and Professor Dawson, will soon be in form for publication.

It is with great regret that I report the retirement of Professor Jacoby under the rules of the Carnegie Foundation. The University thereby loses one of its most valuable members and most gifted teachers. His reputation as a scholar, teacher, and writer is world-wide, and for years has attracted advanced students from all over this country and from many foreign lands. His loss will be keenly felt personally, and professionally and it will be exceedingly difficult to fill the vacancy his retirement creates. Professor Urquhart, who has long been associated with Professor Jacoby, has been made Acting Head of the Department of Bridge Engineering.

No notably large gifts have been received by the School during the year but Director Barnes reports a number of minor gifts. Mrs. Sarah L. Kuichling donated a number of stopwatches, and several gifts of funds were received which are to be applied to the completion of the telescope for the new observatory.

In common with all departments of the College, this School is badly in need of better housing. The present building is entirely inadequate and should be replaced as soon as possible with a new one properly equipped for this important branch of education.

I would again call attention to the inadequacy of the teaching staff in the Sibley School of Mechanical Engineering because of the large number of instructors as compared to the number of assistant professors and professors. In the School of Civil Engineering there are 11 professors, 9 assistant professors, and 10 instructors. This constitutes an efficient faculty and insures good instruction. In the Sibley School of Mechanical Engineering there are 12 professors, 10 assist-

ant professors and 41 instructors, the latter group being out of all proportion as compared to the number of professors and assistant professors. If the number of students in the School is to remain as large as at present, additional professorships and assistant professorships must be provided in the near future, if the high quality of instruction necessary to keep this School in the foremost rank is to be maintained. There are certain forms of educational work that can be conducted very efficiently by young and inexperienced men, but this is not true of professional work where experience and professional knowledge are essential for best results.

Considerable progress has been made in the School in building up research work. The Leather Belting Exchange Foundation renewed its research foundation of \$4000 for the current year and this work has been in constant operation. It is gratifying to report that the Exchange has already published the results of several investigations giving Cornell University due credit for its share in the work. Under the auspices of the Heckscher Fund investigations have been made of the effect of heat treatment on certain special steels and on the filtration of air through doors and windows. Other research work conducted by candidates for advanced degrees involved investigations of low-head hydraulic turbines and heat treatment of certain forms of manganese steel.

The Department of Commerical Testing and Research has had a very busy year. Investigations and tests have been conducted for about twenty-five industrial organizations. These investigations covered a very wide range of activities and included steam and gas engines, belting, steels, alloys, wire, coal, lubricants, springs, propellers, and many other similar items.

Director Diederichs reports the gift of a much-needed condenser by Messrs. Schutte and Koerting and several minor gifts of apparatus.

The School of Electrical Engineering has been much handicapped this year because of the loss of Professor Gray. The School has been administered through an administrative committee consisting of Professors Karapetoff, Pertsch, Ballard, and Chamberlain with Professor Pertsch as executive secretary. Because of their untiring and efficient efforts the work of the school has been kept at its usual high level and considerable progress has been made in revising the curriculum and fitting it into the new organization. The writer desires to express his personal thanks for the great aid they have been to him in conducting the work of the School. The Faculty of this School also needs strengthening by the addition of professors and assistant professors. At present this Faculty consists of 2 professors, 3 assistant professors, and 19 instructors. What has been said concerning the Faculty of Mechanical Engineering applies with equal strength to this group.

A considerable amount of research work has been done in this school during the year, mostly under the general guidance of Professor Karapetoff. Part of this work was performed by graduate students and was concerned with advanced electrical and magnetic problems. Through grants from the Heckscher Foundation Professor Karapetoff has completed several mechanical devices for solving complex problems in electrical design. The publication of these studies has brought forth many laudatory comments from the electrical engineering fraternity.

This department has received a number of valuable gifts during the year in the form of laboratory apparatus. These gifts will all be duly acknowledged publicly when the installation has been fully accomplished. A valuable and much-ap-

preciated gift was received from the McGraw Hill Book Company. This company purchased the private technical library of the late Professor Gray and presented it to the School of Electrical Engineering as a nucleus of a departmental library which is much needed. The great need of this School is a properly equipped laboratory building.

The general needs of the College have been presented a number of times in preceding reports. In recent years the writer has had an opportunity to inspect practically all of the engineering colleges in this country and the one thing that has most impressed him is the superior equipment possessed by many of these institutions. Of course, equipment is not the most important part of any institution of learning, but good equipment is a great aid towards good instruction in both pure and applied science. The equipment of the College must be modernized if Cornell is to stay in the foremost rank. The appointment of a committee of the Board of Trustees to report on a comprehensive building plan is a step in the right direction. With such a plan it appears as though the College of Engineering should be able to enlist the support that its honorable record has entitled it to expect.

Respectfully submitted,

DEXTER S. KIMBALL,

Dean of the College of Engineering.

APPENDIX XI

REPORT OF THE ADMINISTRATIVE BOARD OF THE SUMMER SESSION

To the President of the University:

SIR: On behalf of the Administrative Board of the Summer Session I beg leave to submit the following report of the 1921 Session.

I. Attendance 1921:

In the Summer Session	1870	
In the Summer School of Agriculture	924	2794
Double Registration		237
Net Registration		2557
Third Term Graduate Students		107
Third Term Agriculture Students		75
Total Summer Students		2739

Analysis:

Graduate Students registered in the Summer Session and Summer School of Agriculture	103
Total Men	1101- 43%
Total Women	1456- 57%
Men in the Summer Session	885- 47%
Women in the Summer Session	985- 53%
Men in the Summer School of Agriculture	292- 32%

Women in the Summer School of Agriculture.....	632- 68%
Students enrolled in the Department of Music.....	452
Students enrolled in other Departments of the Summer Session.....	1418
Geographical Distribution:	
New York.....	1479
Pennsylvania.....	309
New Jersey.....	136
Ohio.....	105
D. C.....	64
Massachusetts.....	57
Maryland.....	40
Connecticut.....	34
Virginia.....	32
Indiana.....	31
Ten or more from each of 12 other states.....	212
Less than 10 from each of 23 other states.....	115
Foreign Countries and Territories.....	125
	<hr/>
	2739

In the Summer Session there was an increase of 274 students above the 1920 registration figures. Of this increase 82 were students of the Music Department and 192 were regular students. The Music students constituted about one-fourth of the total number registered in the Summer Session and their increase over the corresponding group of last year was about 30 per cent. But it will be seen that the growth of the Summer Session apart from the Music students has been substantial.

Despite the failure to continue the Music Department as it has been conducted in the past, I think it reasonably safe to anticipate for 1922 an enrollment of 1500 students in the Summer Session. In view of the marked increase in the Summer School of Agriculture from 525 students in 1920 to 884 in 1921, it is not improbable that the total registration for 1922 will equal that of 1921 despite the abandonment of the Music courses.

II. Financial Statement:

The Treasurer of the University reports that the gross income of the Summer Session was \$77,639.18 from which is deducted the amount due to the State Colleges of \$11,439.27 leaving a balance of \$66,199.91. Against the \$51,800 appropriated by the Trustees for the 1921 session our records indicate the following expenditures:

Salaries—Instruction.....	\$41,725.00
Salaries—Administration.....	2,050.00
General Maintenance.....	8,722.05
	<hr/>
	\$52,497.05
Appropriation.....	51,800.00
	<hr/>
Deficit.....	\$ 697.05
In round numbers the Income being	\$66,000.00
Expenditures.....	52,500.00
	<hr/>
Balance.....	\$13,500.00

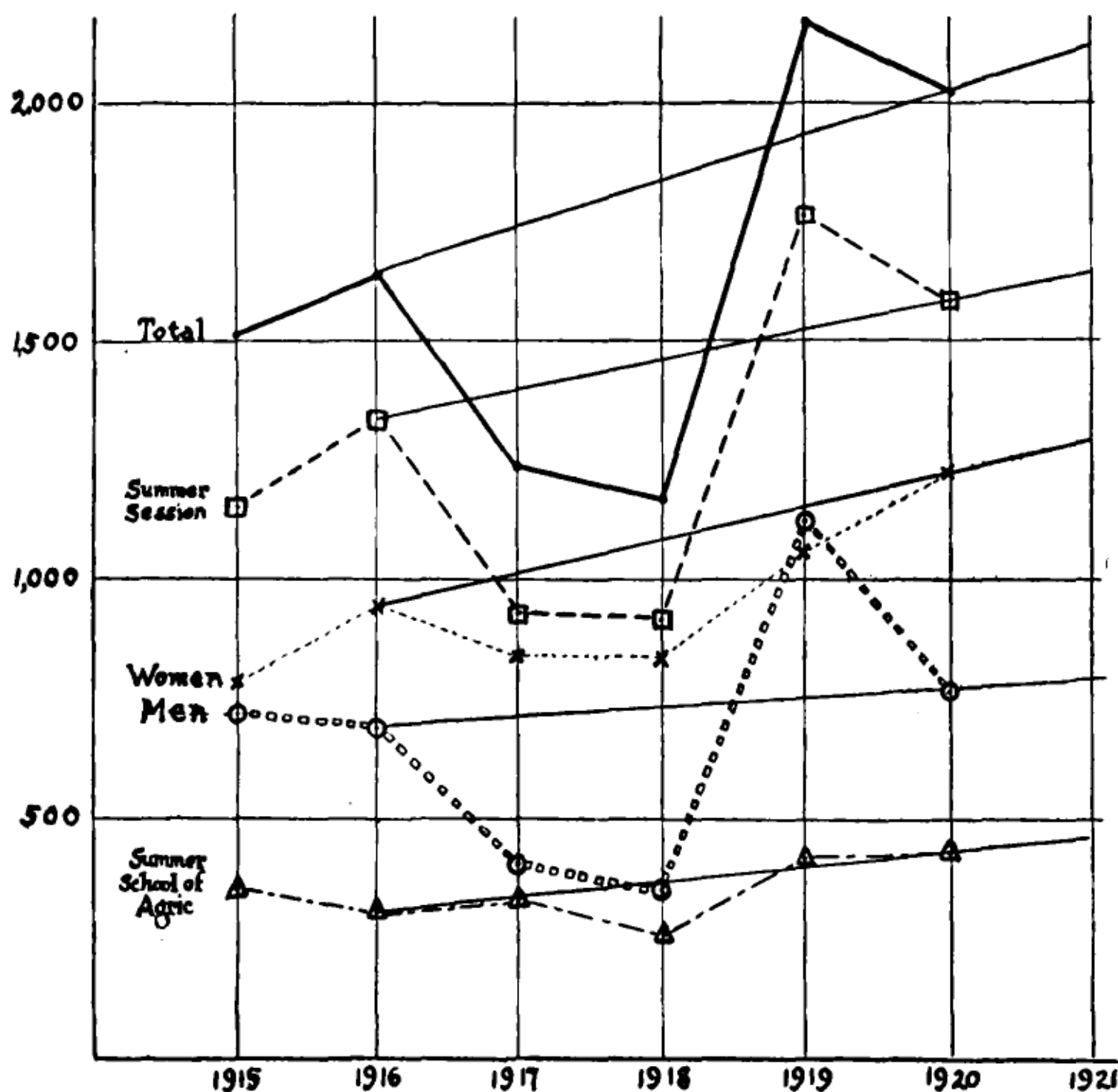
Analysis with reference to the expenditures and receipts for the Music Department and for the remainder of the Summer Session:

SUMMER SESSION

LI

	MUSIC	OTHER DEPARTMENTS
Salaries.....	\$ 6,625.00	\$35,100.00
Administration.....	100.00	1,950.00
Maintenance.....	5,554.46	3,167.59
	<u>\$12,279.46</u>	<u>\$40,217.59</u>
	(1/4 net total)	(3/4 net total)
Receipts.....	\$16,500.00	\$49,500.00
Approximate expense.....	<u>12,250.00</u>	<u>40,250.00</u>
Balance.....	\$4,250.00	\$9,250.00

The trend of the registration is also shown in the accompanying graph.



The above figures indicate that the earning capacity of the Music Department was only slightly greater than that of the remainder of the Summer Session; they also give reassurance that the Summer Session will continue to be self-supporting now that the Music Department has been withdrawn.

Respectfully submitted,
R. M. OGDEN,
Chairman of the Summer Session.

REPORT OF THE DEAN OF WOMEN

SIR: I have the honor to submit the following report for the year 1921-22.

The registration of women for the year 1921-22 as shown by colleges was as follows:

Arts.....	667
Agriculture.....	386
Graduate School.....	64
Law.....	7
Mechanical Engineering.....	4
Architecture.....	19
Veterinary.....	2
Civil Engineering.....	3
Electrical Engineering.....	1
Medicine (Ithaca).....	8
Medicine (New York).....	42
<hr/>	
Total.....	1203
Duplicates.....	6
Total for year.....	1197
Increase of 27 over 1920-21.	
Total registration in Ithaca 1153.	

The total attendance of women for the year, excluding duplicates, was 1197, an increase of 29 over the preceding year. The total registration in Ithaca was 1161 (includes 6 duplicates). The subjoined table shows the attendance of women students during the past five years and also the distribution among Colleges.

[illegible]

REPORT OF THE DEAN OF WOMEN

LIII

DISTRIBUTION BY COLLEGES OF WOMEN STUDENTS DURING LAST FIVE YEARS

Year	Arts	Agr.	Grad.	Law	C.E.	M.E.	E.E.	Arch.	Med.	Vet.	Total	Dup.	Net
1917-18..	434	310	53	14	1	4	—	8	42	—	866	20	846
1918-19..	493	291	65	11	1	6	—	10	50	—	927	14	913
1919-20..	621	373	67	11	5	7	—	14	57	—	1155	19	1136
1920-21..	650	392	65	10	5	7	—	11	41	—	1181	13	1168
1921-22..	667	386	64	7	3	4	1	19	50	2	1201	6	1197

HOUSING

There have been no marked changes in the housing conditions for the women during the past year. The provision that undergraduate women desiring to enter the University must make formal application for admission before September 1, except in special cases, continued in force and made it possible to secure accommodations for all women with satisfactory entrance requirements. While all of the women were provided with places, the questions which have arisen during the year in connection with the housing have served to strengthen the feeling that many of the problems that concern the relation of the women toward their University life cannot be solved until some more satisfactory conditions of living can be provided.

The new ruling that "all prospective undergraduate students intending to register in the University for the first term of the academic year shall be required to apply for admission not later than August 1 of the year" makes it unnecessary to continue for the coming year the special regulations concerning the early application for women.

In February of this year, Miss Grace Seely, Warden of Sage College, who has been suffering from the effects of a serious automobile accident in the preceding year, was given two months leave of absence, and Mrs. Pauline Heyl Nichols of Dunkirk, New York, was made Acting Warden during her absence.

REGISTRATION BY RESIDENCE 1921-22

	First Term	Per cent	Second Term	Per cent
Sage-Sill-Craig-Tyler.....	245	20.46	238	19.88
Prudence Risley-Wait and Risley Cottage.	224	18.71	219	18.30
Total in Residential Halls.....	469	39.17	457	38.18
At Home.....	97	8.10	106	8.86
Working for Room & Board.....	21	1.76	35	2.92
Approved Houses.....	197	16.46	179	14.95
Special Arrangement.....	109	9.11	53	4.43
Sorority Houses.....	218	18.21	229	19.13
N. Y. Medical.....	42	3.51	40	3.34
Total not in Halls or University Houses	684	57.15	642	53.63
Total for Semester.....	1153	96.32	1099	91.81
Withdrew 2d Semester.....			98	8.19
Entered 2d Semester.....	44	3.68		
	1197	100.00	1197	100.00

SELF-SUPPORTING STUDENTS

A large number of young women have, during the past year, been partially or entirely self-supporting.

**CLASSIFICATION OF WOMEN STUDENTS WHO HAVE DONE REMUNERATIVE WORK
DURING THE YEAR 1921-22**

a. Stenographic and clerical.....	48
b. Waiting on Table in Dormitories.....	80
c. Waiting on Table in Sorority Houses.....	17
d. Working in Cafeterias.....	8
e. Stewardesses and House Managers.....	12
f. Instructors.....	16
g. Chaperons.....	6
h. Telephone and Elevator Service.....	26
i. Working for Room and Board in Private Families.....	38
j. Working in Laundry.....	6
k. Housework or care of children by the hour.....	93
Total.....	350

SELF-GOVERNMENT ASSOCIATION

The year has been one of more than usual activity for "The Self-Government Association of the Women of Cornell University" and the work it has done has been essentially constructive and forward-looking in character. One of the outstanding features of the Self-Government Association organization which is proving increasingly helpful in developing the life of the young women and unifying their interests, is the Self-Government Association Council, which, in addition to having in its membership the President of the Association and the three Vice-Presidents, includes the Presidents of the four classes, the Presidents of practically all women's organizations, the women's Editor of "The Sun," and the chairmen of the standing committees of the Association.

This Council represents practically all of the extra-curricular activities of the women, co-ordinates the activities, and helps to maintain general standards of conduct and helpful traditions.

In May the annual meeting of the Middle Western Intercollegiate Association for Women's Self-Government, with which the women of Cornell have affiliated themselves because of similarity of problems, met here. Forty-two delegates were present, representing twenty-eight colleges and universities.

VOCATIONAL WORK

A student committee of the Self-Government Association, consisting of five representatives of the three upper classes, has co-operated during the past year with the Office of the Dean of Women in carrying on the work in Vocational Guidance. This Committee has arranged for lectures on vocational subjects and has distributed to seniors vocational record cards.

It has been the hope, for more than three years, to develop a plan by which the interest and assistance of our alumnae could be secured for the guidance of the women in the Senior Class along vocational lines. This year a step forward was taken in this plan when a printed questionnaire was sent out to 3600 alumnae and former students, asking them for information concerning their own training and experience in their particular lines of work; the training they would recommend to those entering the field now; and their attitude toward helping, with advice and suggestions, any seniors wishing to enter their field of work.

TABLE SHOWING THE NUMBER OF STUDENTS IN EACH COURSE SINCE THE OPENING OF THE UNIVERSITY IN 1868

[illegible]

*Includes those registered merely "Optional"; e. g. "Optional Agr.", "Sp. Agr.", etc., are counted in the course to which they belong. The classification of "Optionals" was always vague, and this accounts for the sudden fluctuations in that course which appear in the Catalogue.
†Also counted in courses. The table for 1916-17 includes the 1916 Summer Session and 1916 Summer School in Agriculture. Thereafter the year is from June 31 to July 1.

FIRST DEGREES

ADVANCED DEGREES

*The Certificate of War Alumnus is conferred by the Trustees, on the recommendation of the Faculty, in recognition of patriotic service; it conveys all the rights and privileges of an Alumnus of the University. The degrees conferred in September and February are counted with those conferred in the following June.

ATTENDANCE FOR THE YEAR 1921-22

Dept. & Coll. Degrees Classification	Graduate A.M., Ph.D., M.M.E., Etc.			Arts & Sciences A.B., B. Chem.			Law L.L. B.			Medicine M. D.			Agriculture B. S.			Veterinary D. V. M.			Architecture B. Arch.			Engineering C. E., M. E.			Summer Sess. 1921			Summer School in Agr. 1921			Total			
	Men	Women	Total	Men	Women	Total	Men	Women	Total	Men	Women	Total	Men	Women	Total	Men	Women	Total	Men	Women	Total	Men	Women	Total	Men	Women	Total	Men	Women	Total				
Graduates	505	113	618																															
Class of 1926				34	16	50							13	5	18	2	1	3	16	6	22	80		80						505	113	618		
Class of 1925				331	174	505	1		1	19	5	24	219	107	326	14	1	15	24	3	27	418		418						145	28	173		
Class of 1924				304	175	479	25	1	26	39	6	45	165	89	254	15		15	17	4	21	400	1	401						1026	290	1316		
Class of 1923				241	160	401	22	2	24	48	11	59	182	104	286	31		31	24	3	27	380	1	381						965	276	1241		
Class of 1922				239	144	383	41	2	43	56	13	69	154	55	209	16		16	15	2	17	336	5	341						928	281	1209		
Specials				10	8	18	3		3	36	6	42	38	30	68				3	1	4	13		13							857	221	1078	
Totals	505	113	618	1159	677	1836	92	5	97	193	41	239	771	390	1161	78	2	80	99	19	118	1627	7	1634						103	45	148		
Duplicates																															4529	1254	5783	
Net Totals	505	113	618	1159	677	1836	92	5	97	198	41	239	771	390	1161	78	2	80	99	19	118	1627	7	1634						90	12	102		
Third Term to July 1, 1922	80	7	87																												4439	1242	5681	
Summer 1922 to July 1, 1922 (Per. Dir.)	29	1	30										31	7	38																111	14	125	
Summer 1921 after July 1, Grad. (Per. Dir.)	17	1	18																												29	1	30	
Third Term (1921) after July 1	2		2																												17	1	18	
Winter Agr.																															2	0	2	
Summer (1921)													289	37	326																289	37	326	
Totals	633	122	755	1159	677	1836	92	5	97	198	41	239	1091	434	1525	78	2	80	99	19	118	1627	7	1634	901	1003	1904*	261	647	908*	1162	1650	2812	
Duplicates	188	28	216																													6049†	2945	8994†
Net Totals	445	94	539	1159	677	1836	92	5	97	198	41	239	1091	434	1525	78	2	80	99	19	118	1627	7	1634	441	56	497	25	30	55	704	310	1014	
																										460	947	1407	236	617	853	5345‡	2635	7980‡

*Includes 246 (50 Men, 196 Women) registered in both Summer Session and Summer School of Agriculture.

†Excludes 102 duplicates of Regular Session.

‡Excludes 102 duplicates of Regular Session and 246 registered in Summer Session and Summer School of Agriculture.

The response to this questionnaire has been gratifying, though not as yet sufficiently complete to make statistics based upon it of great value. Over a thousand alumnae replied to the letters and the offers of help were so cordial and generous that it has been a great encouragement to go on with the plans that have been formulated. Already the senior women who have filled out the senior record cards and been interviewed in this office have been referred to alumnae who were, on account of their training and experience, able to advise them. Much interesting and helpful information has been received by these students. As a by-product of the questions, information has been received which forms the beginning of an alumnae vocational record which should be valuable and interesting.

Respectfully submitted,
 GEORGIA L. WHITE,
 Dean of Women.

APPENDIX XIII

REPORT OF THE REGISTRAR

To the President of the University:

Sir: I have the honor to submit herewith my twenty-sixth annual report as Registrar of the University. The report covers the academic year 1921-22 including the Summer Session of 1921.

THE YEAR

	Days in Session	Sun- days	Holi- days	Vaca- tion	Total
First term, Sept. 21—Feb. 8	107	19	1	..	127
Christmas vacation, Dec 22—Jan. 5 . . . . .	..	..	..	14	14
First term, vacation, Feb. 9 . . . . .	..	..	..	1	1
Second term, Feb. 10—June 21	101	18	1	5	125
Spring vacation, Apr. 6—Apr. 12 . . . . .	..	..	..	7	7
Summer vacation, June 21—July 1 . . . . .	..	..	..	9	9
Summer Session, July 2—Aug. 12	36	6	..	..	42
Summer vacation, Aug. 13—Sept. 21 . . . . .	..	..	..	39	39

STUDENTS

The accompanying table which shows the attendance for 1921-22, gives the number of students who have received instruction this year, including those in the 1921 Summer Session, in the 1921 Summer School in Agriculture, in the 1921 Third Term Graduate work, in the 1921-22 Winter Courses in Agriculture, and the 1922 Third Term in Agriculture and Graduate School, but excluding duplicates, as 7980.

The accompanying table shows the attendance in each course since the opening of the University in 1869.

MATRICULATES

The following table shows that 3081 students have registered during the present year for the first time. The table also shows the method of admission. Students entering for the first time in the Summer Session and in the Summer School in Agriculture are not considered as matriculates, but for convenience are listed in this table.

Graduates.....	208	Coll. Ent. Board Exams.....	22
Advanced standing.....	309	Medical (N. Y. City).....	59
Regents' credentials.....	527	Summer Session (1921).....	880
School certificates.....	600	Summer School in Agr. (1921)	414
By examination.....	8	3d Term Agr. to July 1, 1922	2
As special students.....	35	3d Term Graduate to July 1, 1922	17
Total.....			3081

The small number entering by some of the methods mentioned above 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 thirty-five 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

*No data prior to 1896-97.

REPORT OF THE REGISTRAR

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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
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	2	134
1901-02	38	..	..	..	6	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

Year	Arts	Agri.	Arch.	Engineering	Law	Vet.	Med.	No. of Cases
1912-13	57	76	8	83	7	1	..	232
1913-14	58	76	5	78	7	..	..	224
1914-15	70	87	5	93	7	1	6	269
1915-16	85	94	7	75	9	4	8	282
1916-17	76	84	9	73	9	2	10	263
1917-18	64	45	3	50	12	2	4	180
1918-19	87	52	3	79	11	6	6	244
1919-20	126	102	8	146	9	2	8	401
1920-21	75	68	13	134	5	5	3	303
1921-22	95	62	6	100	13	2	1	279

Of the 279 admitted in 1921-22, 118 registered as freshmen, 89 as sophomores, 45 as juniors, 18 as seniors, and 9 as special students.

During the last thirty-five years there have been admitted from 550 other institutions of collegiate rank 6204 students. The distribution in general 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:

	'06-7	'07-8	'08-9	'09-10	'10-11	'11-12	'12-13	'13-14	'14-15	'15-16	'16-17	'17-18	'18-19	'19-20	'20-21	'21-22
Certificate.....	324	465	578	574	524	517	601	587	647	683	605	524	648	636	646	600
Regents.....	185	244	287	329	311	420	404	476	494	520	544	476	649	575	543	527
Examination ...	18	41	12	14	8	12	11	6	9	28	9	7	4	12	7	8
Coll.Ent.Exam.Bd.	37	33	23	27	14	18	13	14	27	7	13	20	22	31	23	22
N. Y. C. Ex.....	29	9	5	..	..	..	..	..	..	..	..	..	..	..	..	..
Total	584	792	905	944	857	967	1029	1083	1177	1238	1171	1027	1323	1254	1219	1157

The inserted table gives the number admitted to graduation. 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 XIV

REPORT OF THE LIBRARIAN

To the President of the University:

SIR: I beg leave to submit herewith my annual report of the condition and needs of the University Library, together with the work done so far as records indicate, during the year ending June 30, 1922.

During the past year, more than ever before, we have been conscious of the limitations of the present library building. The addition of another floor this year in the south book stack has relieved the congestion of books for the time being, but as all the available space in the stacks is now fitted with book shelves and the increased capacity will all be utilized during the next two or three years, some plans for storage beyond this time must soon be under consideration.

The steady increase in the use made of the library with the growth of the University naturally calls for more space for the users of the library, which space has at times proven inadequate during the past few years, and finally the need for more space for library workers is pressing. The catalogue room, never very generous in size, has become crowded to an uncomfortable degree and working rooms for the library staff is one of the pressing needs, particularly since additional cataloguers must soon be added to the staff. Additional seminary rooms are also needed for special research work that can be done only in the library, as the book stacks are chiefly for storage until the books are needed for work. More working space of this character is needed.

The usual course of two hours a week in applied bibliography and book making has been given by the librarian.

ACCESSIONS DIVISION

The accumulated materials held up during the war period have continued to come on in large quantities. The German university dissertations and other publications received through the International Exchange have reached us in large numbers, increasing the work of binding and cataloguing materially.

The large reserve book fund that had accumulated during the past few years has been generously granted, as it was felt that this was an opportune time to secure many things fundamental for all research problems. In this way many new sets of periodicals, both scientific and literary, have been added and others completed.

Special attention has been given during the year to getting rotograph and photostat copies of manuscripts, and rare printed books, for work being done in

English literature and English history. A special provision made at the close of last year for the purchase of original papyri enabled the library to secure a large collection of this material for the use of Professor Westermann during the year, and the supplementary grant made late this year, which was increased by a gift of \$500 from Mr. Henry J. Patten, will enable the library to add materially to its resources in this field.

During the year, there have been added to the library a total of 20,722 volumes, of which some 2220 were volumes of periodicals and society publications and nearly 2000 were German dissertations. Some of the added sets carry with them current subscriptions which involves a larger fund for periodicals than heretofore, and for this reason, additional funds will be needed for periodicals unless some already carried on the list can be eliminated.

Aside from the large additions of periodical sets, the more important of which are listed below, there have been few notable additions. In the field of the French Revolution and the Napoleonic period some 400 volumes have been added.

BOOKS, BOUND PAMPHLETS, MAPS, MSS., ETC.

General library, exclusive of the following	461,103	
Anthon Collection, purchased 1868	6,770	
Bopp Collection, purchased 1868	2,014	
Sparks Collection, purchased 1872	5,717	
White Hist. Library, gift 1891	23,177	
Zarncke Collection, gift 1893	13,000	
British Patents, gift 1868	3,108	
	<hr/>	514,889
Fiske Dante Collection, gift 1893	8,587	
Fiske Petrarch Collection, gift 1905	4,096	
Fiske Icelandic Collection, gift 1905	16,126	
Wason Collection, gift 1918	8,808	
Emil Kuichling Collection, gift 1919	2,097	
Volumes of C. U. theses (Deposited)	6,860	
Philological Sem. Collection	1,080	
Philosophical Sem. Collection	837	
German Sem. Collection	769	
French Sem. Collection	28	
Latin Sem. Collection	423	
Amer. Hist. Sem. Collection	612	
	<hr/>	50,323
Maps in the library	1,031	
C. U. plans deposited in the library	197	
U. S. Coast Survey charts	960	
U. S. Geol. Survey Topographical Sheets	2,304	
U. S. Geol. Survey atlases	210	
British Geol. Survey maps	600	
	<hr/>	5,302
Manuscripts	712	712
General Law Library, gifts and purchases	42,751	
Moak Law Library, gift 1893	12,500	
Flower Vet. Library, gift	5,946	
Barnes Reference Library, gift	2,551	
Goldwin Smith Hall Library	2,549	
Van Cleef Memorial Library	1,543	
Evans Mathematical Library	420	
Comstock Memorial Collection	678	
Architectural College Library	1,243	

Economic Laboratory Collection	340	
Entomological Collection	2,403	
Prudence Risley Hall Collection	694	
	<hr/>	73,618
N. Y. State Agr. College Library	24,907	
N. Y. State Forestry Library	1,181	
N. Y. State Plant Pathology Collection	420	
	<hr/>	26,508
Total Books, maps, mss., etc.		<hr/> 671,352

IMPORTANT PUBLICATIONS OF LEARNED SOCIETIES AND PERIODICALS ADDED TO THE
LIBRARY DURING THE YEAR 1921-22

Irish booklover, 1910-21.
 Italy Geological Survey, 24 vols.
 Midland naturalist, 16 vols.
 Annales de Bretagne, 26 vols.
 Mathematische Zeitschrift, 10 vols.
 Archaeologia Scotica, 5 vols.
 Naturforschender Verein in Brünn. Verhandlungen, 57 vols.
 Liverpool Marine Biology Committee. Memoirs, 24 vols.
 Revue bryologique, 41 vols.
 Reale Istituto d'Incoraggiamento di Napoli. Atti, 1811-1920.
 Oesterreichische botanische Zeitschrift, 69 vols.
 Carlsberg Laboratoriet. Meddelelser, 14 vols.
 Fauna und Flora des Golfes von Neapel. 34 vols.
 Westminster gazette, 1893-1908.
 Verein für Naturkunde zu Presburg. Verhandlungen. 1856-1912.
 Egypt Geological Survey. Publications, 20 vols.
 Somersetshire Archaeological and Natural History Society. Proceedings. 65 vols.
 Wiltshire archaeological and natural history magazine. 40 vols.
 Natural History Society of Glasgow. Transactions. 24 vols.
 Paris. Muséum d'histoire naturelle. Nouvelles Archives, 1865-1914.
 Bishop Museum. Publications, 14 vols.
 American Leacher Chemists' Association. Journal, 13 vols.
 Deutsche Dendrologische Gesellschaft. Mittheilungen 1892-1919.
 Naturforschende Gesellschaft zu Danzig. Versuche und Abhandlungen 1747-1920.
 Schweizerische Gesellschaft für Volkskunde. Shriften 15 vols.
 Neue Freie Presse (Wien) July 1914-Oct., 1919.
 Faraday Society. Transactions. 1901-21.
 Egypt. Service des Antiquités. Annales, 20 vols.
 Olde Ulster. 10 vols.
 Accademia Pontificia dei Nuovi Lincei. Memorie. 32 vols.
 Naturaleza. 10 vols.
 Natuurkundig Tijdschrift. 80 vols.
 South London Entomological and Natural History Society. Proceedings. 1886-1920.
 Philobiblion Society Miscellanies, 15 vols.
 Die Zukunft, vols. 17-69.
 Physikalische Zeitschrift. 21 vols.
 Rivista di psicologia. 16 vols.
 Société des Antiquaires de France. Memoirs, 1807-1915.
 Senckenbergische Naturforschende Gesellschaft. Abhandlungen 48 vols.
 Nassauischer Verein für Naturkunde. Jahrbücher. 69 vols.
 K. Zoologisches Museum zu Dresden. Abhandlungen. 15 vols.
 Société de physique de Genève. Memoirs, 39 vols.
 Rovartani lapok, 21 vols.

Jonson, Ben. Works, 1640.

Alabaster, Wm. Roxana, 1632.

Drayton, Michael. *Muses Elizium*, 1630.

Poems, 1613.

Richard, Achille. *Tentamen Florae Abyssinicae*, 1817.

Lismore Papers, 1886-88.

Reichenbach, H. G. L. *Iconographia botanica exotica*, 1827-30.

Donne, John. Poems, 1669.

Hooker, W. J. Icones Plantarum. 26 vols.

Willmott, E. A. Genus *Rosa*, 1914.

Castelnau, Francis, comte de. *Expedition dans les parties centrales de l'Amerique*, 1852-57.

O'Grady, S. H. Silva Gadelica, 1892.

Wiegand, Theodor. Baalbek, 1921.

Huygens, Christiaan. *Oeuvres complètes*, 1888-1916.

48 volumes on "Whist" were the gift of W. H. Smith.

46 volumes of vocal scores of Bach and Palestrina were presented by H. W. Gray Co.

40 volumes of Insurance reports were given by Jas. S. Elston, C. U. '11.

The work of the Periodical division is allied to the Accessions in so far as record of receipts are made, and to the Readers division in so far as use is made of the materials. The following statement shows the record of this division:

By subscription	1177
By gift and exchange	955
Number of periodicals bound	3125
Bound volumes on open shelves	3012
Current periodicals kept on open shelves	750

SPECIAL COLLECTIONS

The special collections in the library having separate curators are the White Historical Library, the Icelandic collection, and the Dante and Petrarch collection. The White Library, while it has had the supervision of Professor Burr during the year, has been under the immediate care of an acting curator who has made the inventory of this group of books. The accessions to this collection purchased from the general University fund, from the Sage Endowment and from the Warfare of Science fund are all merged in the general accessions and no separate record is kept. The Fiske Italian collections have made the usual additions provided for by the donor's generosity. In the field of Dante literature, the year has been an unusual one. The Sex-centenary of the death of Dante brought

forth many unusual publications. Among the most important was the facsimile of the Codex Landiano, the oldest manuscript of the Divine Comedy written in 1336, and the Codex Trivulziano written in 1337. The most noteworthy of the scholarly productions is known as the Florentine edition of the works of Dante, which is the first complete edition of the works published in Florence since that of Lombardi, 1830-41.

The supplement to the Dante catalogue which includes additions made to the collection from 1898 to 1920, has been printed and distributed to owners of the original catalogue. It makes a quarto volume of 152 pages and forms a fitting close to the work of Miss Mary Fowler, the former curator of this collection.

The Icelandic collection has kept pace with the new publications in this field and has added practically everything of importance during the year.

CATALOGUE DIVISION

The work of the Catalogue division was late in getting into full working order. A new supervisor, Miss Emma Runner, was brought from the Library of Congress, but the position of junior cataloger was not filled until September. The work had fallen into arrears due to the increased accessions and the shortage of help so that the task of catching up with the work was great. The extra grant made for this work has enabled the Catalogue force to greatly reduce the accumulation and while the work is not wholly up to date, the arrears are not such as to interfere with the use of the books, especially as the division is prepared to advance any books for special work when the need is known.

A great mass of German dissertations which came on after the close of the war have been catalogued and made available for use.

The work of indexing and cataloguing the Wason books has been advanced during the year to such an extent that the end is near. Besides making entries for the main catalogue, entries have also been made for copy for printing this catalogue when the collection reaches such a proportion that scholars will be attracted to come to the library and use the books.

The following record shows the number of titles, both written and printed, added to the catalogue during the year:

Number of written cards added	11,269
Number of printed cards added	10,739

The Library of Congress catalogue which is deposited in our library has been kept up to date by the addition of 29,191 cards. In addition to these cards, our library has received the special series of cards known as the Ca cards, not usually included in the depository set, which gives us many additional titles of periodicals, society publications, etc., that are very useful in the bibliographical work. All these cards have not as yet been filed.

The printed cards issued by Harvard College Library for such books as are not in the Library of Congress have been received as fast as printed and now this bibliography of Harvard College Library comes down to the word Helbig.

The work of preparing the bibliographical list of publications of University officers appended to the President's report has been done as usual by the catalogue division.

READERS DIVISION

Notwithstanding the increase of the department library collections, the use of the general library is growing so rapidly that at times the main reading room is crowded. The additional space for users of newspapers and periodicals in the periodical room that was provided a few years ago relieves this congestion to some extent, but we have again reached the point when congestion is apparent.

The Library has been open for users during the year 308 days, from 8 a. m. to 10:30 p. m. except on vacation days when the hours are from 9:00 a.m. to 5:00 p.m. Most libraries in the United States close at 10:00, and many do not open until 8:30 or 9:00, which shows that Cornell has longer hours of opening than any other library.

The number of registered borrowers during the year was 1867, including 132 library borrowers, 690 officers and 1022 students. The recorded use made of the library during the year is as follows:

Reading room	119,792
Seminary room	3,958
Laboratories and departments	6,248
Home use	41,897
Foreign loans	248
Borrowed from other libraries	132

STACKS DIVISION

The inventory of the books, including those deposited out of the library building, has continued through the year and in addition to this, a special inventory of the President White collection of Arundel prints and photographs deposited in various University buildings has been made and the items identified, labelled, and listed. There are still some old prints belonging to this collection that have not been identified.

The addition of the new volumes in the book stacks has necessitated the shifting of practically all the books in the south stack to relieve the congestion, making a considerable additional labor during the year. The books on art, architecture, etc., are now all on the top floor of the south stack occupying the new book shelves and so arranged that they may be used with a greater degree of ease and comfort than before. The books in the west stack have also been shifted to a large extent leaving the new floor at the top of this stack for the Wason Chinese collection, which makes an attractive housing for these books.

The supervisor of the stacks division in making this rearrangement estimates that while the congested places are all relieved, the present rate of growth will consume the added space within two or three years from the present time.

DEPARTMENT LIBRARIES

The relation between the main library and the department collections remains still in an unsatisfactory condition, and in my opinion cannot be otherwise until the so-called librarians in charge of these collections are appointed and work under the supervision of the general library. Fairly satisfactory reports have been made by all these libraries except the Veterinary College and the Ithaca Division of the

Medical College, but more constant supervision and more frequent inventories than can be given by department stenographers is necessary to insure the best service from these books. It is more important that only working collections of books be kept out of the general library in the departments, and that the books not frequently used should be returned to the general collection. This involves constant oversight, but it is the only solution to the problem of the relation between the department libraries and the general University library.

Volumes deposited in department libraries:

Agriculture	1,788
Architecture	2,448
Chemistry	5,607
Civil Engineering	5,717
Entomology	4,173
Sibley College	2,809
Prudence Risley	835
Hart Memorial Library	2,298
Veterinary College	2,549
Goldwin Smith Hall	2,467
Van Cleef Memorial Library	968

Respectfully submitted,
WILLARD AUSTEN,
Librarian.

APPENDIX XV

PUBLICATIONS, 1921-22

The University Library is gathering a collection of the publications of all Cornellians. These are kept on the shelves in alphabetic order by University classes. Every Cornellian is asked to send to the Library a copy of each publication that he cares to have in such a collection.

Cornell University. Official publications. v. 13. 1921-22.

Cornell University. Adviser of Women. Report, 1920-21. *Cornell University. Official publications. v. 12, No. 18, Appendix XII. 1921.*

Cornell University. Agricultural Experiment Station. Bulletin. 404-409. 1921. Ithaca, N. Y.

— Memoir. No. 40-52. 1921. Ithaca, N. Y.

— Thirty-fourth annual report of the New York State College of Agriculture at Cornell University and of the Agricultural Experiment Station established under the direction of Cornell University, Ithaca, N. Y., 1921. Utica. State Hospitals Press, 1922. 97 p.

Cornell University. College of Architecture. Report of the Dean, 1920-1921. *Cornell University. Official publications. v. 12, No. 18, Appendix IX. 1921.*

Cornell University. College of Arts and Sciences. Report of the Dean. 1920-1921. *Cornell University. Official publications. v. 12, No. 18. Appendix III. 1921.*

Cornell University. College of Engineering. Report of the Dean, 1920-1921. *Cornell University. Official publications. v. 12, No. 18. Appendix X. 1921.*

Cornell University. College of Law. Report of the Dean, 1920-1921. *Cornell University. Official publications. v. 12, No. 18. Appendix IV. 1921.*

Cornell University. Graduate School. Report of the Dean, 1920-1921. *Cornell University. Official publications. v. 12, No. 18. Appendix II. 1921.*

- Cornell University.** Library. Report of the Librarian, 1920-1921. *Cornell University. Official publications.* v. 12, No. 18. Appendix XIV. 1921.
- Publications, 1920-1921 (by Cornell University and its officers.) *Same Appendix XV.* 1921.
- Cornell University.** Medical College. Report of the Dean, 1920-1921. *Cornell University. Official publications.* v. 12, No. 18. Appendix V. 1921.
- Cornell University.** Medical College, Ithaca Division. Report of the Secretary, 1920-1921. *Cornell University. Official publications.* v. 12, No. 18, Appendix VI. 1921.
- Cornell University.** Registrar. Report, 1920-1921. *Cornell University. Official publications.* v. 12, No. 18, Appendix XIII. 1921.
- Cornell University.** Summer Session. Report of the Administrative Board, 1921. *Cornell University. Official publications.* v. 12, No. 18. Appendix XI. 1921.
- Cornell University.** University Faculty. Report of the Dean, 1920-1921. *Cornell University. Official publications.* v. 12, No. 18. Appendix I. 1921.
- New York State College of Agriculture.** Thirty-fourth annual report of the New York State College of Agriculture at Cornell University and of the Agricultural Experiment Station established under the direction of Cornell University, Ithaca, N. Y., 1921. Utica, State Hospitals Press, 1922. 97 p.
- New York State Veterinary College.** Report for the year 1920-21. Albany, N. Y., J. B. Lyon Co., 1922. 257 p.
- Cornell alumni news.** v. 12. Ithaca, N. Y. 1921-22.
- Cornell civil engineer;** monthly publication of the Association of Civil Engineers at Cornell University. v. 30. October, 1921—June, 1922. Ithaca, N. Y.
- Cornell countryman.** v. 19. October, 1921—June, 1922.
- Cornell daily sun.** Ithaca, N. Y. 1921-22.
- Cornell era.** v. 54. Ithaca, N. Y. 1921-22.
- Cornell extension bulletin.** No. 44-48. Ithaca, N. Y. 1921-22.
- Cornell junior extension bulletin.** No. 9. Ithaca N. Y. 1921.
- Cornell law quarterly;** published by the faculty and students of the Cornell University College of Law. v. 7. November, 1921—May, 1922. Ithaca, N. Y.
- Cornell reading course for the farm;** D. J. Crosby, supervisor. No. 158-161. Ithaca, N. Y. 1921.
- Cornell reading course for the home;** Martha Van Rensselaer, supervisor. No. 137-139. Ithaca, N. Y. 1921.
- Cornell rural school leaflet;** edited by E. L. Palmer. v. 15. September, 1921—March, 1922. Ithaca, N. Y.
- Cornell University medical bulletin.** v. 11. New York. 1921-22.
- Cornell veterinarian.** v. 11-12. Jan. 1921—April, 1922.
- Cornellian.** v. 54. Ithaca, N. Y. 1922.
- Cornellian Council quarterly.** v. 7. Ithaca, N. Y. 1921-22.
- Islandica;** an annual relating to Iceland and the Fiske Icelandic collection in Cornell University Library. v. 14. By Halldor Hermannsson. Issued by Cornell University Library, Ithaca, N. Y. 1922.
- Journal of physical chemistry;** editor, W. D. Bancroft. v. 25. 1921. Ithaca, N. Y.
- Philosophical review;** edited by J. E. Creighton. v. 30. 1921. New York, Longman, Green and Co.
- Sibley journal of engineering;** published by the students of Sibley College. v. 35. 1921. Ithaca, N. Y.
- Widow.** v. 30. Ithaca, N. Y. 1921-22.
- Cornell forester,** published annually by the Cornell Foresters, Cornell University. v. 1, No. 2. 1922.
- Adams, J. Q.** A Norman origin for Shakespeare. *Sewanee review*, v. 29:386. 1921.
- *Review:* Shakespeare as he is played; a review of G. C. Odell's Shakespeare from Betterton to Irving. *Yale review*, v. 11: 644. 1922.

- Joint editor. Cornell studies in English. 1921-22.
- Adams, R. M. Corn growing for boys and girls. *Cornell junior extension bulletin*, 8. 1920.
- Home garden. *Delineator*. Feb., March, June, 1921.
- Home storage of vegetables. *Cornell countryman*, v. 19:47. 1921.
- Potato growing for boys and girls. *Cornell junior extension bulletin*, 6. 1920.
- Rude rural rhymes. Syndicated weekly since Oct. 1921 to about 180 weekly papers in the United States and Canada.
- Vitamines in verse. *Cornell countryman*, v. 19:189. 1922.
- Albee, Ernest. Reviews: Bergson, Henri. Mind-energy: lectures and essays. *Philosophical review*, v. 30:636. 1921; Burthogge, Richard. The philosophical writings of Richard Burthogge, edited by M. W. Landes. *Same*, v. 31:304. 1922; James, William. Essays and reviews. *Same*, v. 306:34. 1921.
- Albert, C. D. Efficiency of screws. *Sibley journal of engineering*, v. 36:2. 1922.
- Alexander, H. L. Bronchial asthma and allied conditions, clinical and immunological observations, by N. P. Larsen, Royce Paddock, and H. L. Alexander. *Journal of immunology*, v. 7:81. 1922.
- Allen, A. A. Banding bats. *Journal of mammalogy*, v. 2:53. 1921.
- The bird as a flying machine. *Bird lore*, v. 23:48. 1921.
- Bird plays for the school. *Same*, v. 24:110. 1922.
- Concealing coloration of birds. *Same*, v. 23:320. 1921.
- The coloration of birds. *Same*, v. 23:260. 1921.
- The courtship of birds. *Same*, v. 24:167. 1922.
- The eggs of birds. *Same*, v. 22:239. 1920.
- How birds change their plumage. *Same*, v. 22:302. 1920.
- The implements of birds. *Same*, v. 23:103. 1921.
- The new year with the birds. *Same*, v. 24:55. 1922.
- The relation of birds to agriculture. *Cornell countryman*, v. 18:502, 1921.
- The return of the birds. *Same*, v. 19:187, 1922.
- Summer bird study. *Bird lore*, v. 23:154, 1921.
- A summer with a hummer. *Scribner's magazine*, v. 69:693, 1921.
- The value of birds. *New York University. Bulletin*. April 1922.
- Winter birds' nests. *Bird lore*, v. 22:367, 1920.
- The yellow warbler's tale. *Same*, v. 23:216, 1921.
- Associate editor. *Bird lore*. 1920-22.
- Anderson, R. J. Acerin. The globulin of the maple seed (*acer saccharinum*) by R. J. Anderson and W. L. Kulp. *Journal of biological chemistry*, v. 48:23, 1921.
- Analysis and composition of corn pollen. Preliminary report, by R. J. Anderson and W. L. Kulp. *Same*, v. 50:433, 1922.
- A study of the metabolism and respiratory exchange in poultry during vitamin starvation and polyneuritis by R. J. Anderson and W. L. Kulp. *Same*, v. 52:69, 1922.
- Andrews, A. L. Further bryophytes from North Carolina (and Tennessee) *Bryologist*, v. 24:49, 1921.
- Ibsen's *Fruen fra havet* and Molbech's *Klintekongens brud*. *Society for the Advancement of Scandinavian Study. Publications*, v. 6:176, 1921.
- John Macoun. *Bryologist*, v. 24:39, 1921.
- Notes on North American sphagnum. IX. The group *cuspidata* Lindberg. *Same*, v. 24:81, 1922.
- Atwood, M. V. The country weekly's future. *The Quill*, v. 9: No. 4:8, 17. 1921.
- Austen, Willard. Report of the librarian. *Cornell University. Official publications*, v. 12, No. 18. Appendix No. XIV, 1921.
- Bailey, Harold. Cranial and intracranial birth injuries. *American journal of obstetrics and gynecology*, v. 1: No. 1, 1920.
- Experimental studies following oophorectomy. *Same*, v. 2: No. 1, 1921.
- Report of a case of hemimelus or so-called congenital amputation. *Same*, v. 3: No. 1, 1922.

- The use of radium in cancer of the female generative organs, by Harold Bailey, in collaboration with Edith Quimby. *Same*, v. 3: No. 2, 1922.
- Vulval and vaginal cancer treated by filtered and unfiltered radium emanation, by Harold Bailey and Halsey J. Bagg. *Same*, v. 2: No. 6, 1921.
- Bakwin, Harry.** The significance of hydremia in the secretion of urine. *American journal of physiology*, v. 60:343, 1922.
- Bancroft, W. D.** Contact catalysis. *Engineers' Society of Western Pennsylvania. Proceedings*, v. 37:375, 1921.
- The field for chemists. *Journal of industrial and engineering chemistry*, v. 14:156, 1922.
- First report of the Committee on Contact Catalysis. *Same*, v. 14:326, 444, 545, 636, 1922.
- Mordants. I-II. *Journal of physical chemistry*, v. 26:447, 501, 1922.
- Also about fifty signed book reviews, mostly in the *Journal of physical chemistry*.
- Papers from the laboratory of W. D. Bancroft: Bull, A. W. Alizarin-iron lakes, by A. W. Bull and J. R. Adams. *Journal of physical chemistry*, v. 25: 660, 1922.
- Paddon, W. W. The effect of light on fibres dyed with a mixture of chrysaniline and fuchsine. *Same*, v. 26:288, 1922.
- Paddon, W. W. Dyeing of deaminated wool. *Same*, v. 26:384, 1922.
- Barrus, M. F.** Bean anthracnose. *Cornell University Agricultural Experiment Station. Memoir* 42:97, 1921.
- Inspection of potatoes in New York State. *Rural New Yorker*, v. 80:1270, 1296, 1921.
- Baxter, H. E.** Descriptive geometry, by George Young, jr., and H. E. Baxter. New York, Macmillan Co., 1921, 310 p.
- Becker, Carl.** A letter from Danton to Marie Antoinette. *American historical review*, v. 27:24, 1921.
- Lord Bryce and modern democracy. *Political science quarterly*, v. 36:663 1921.
- Mr. Wells and the new history. *American historical review*, v. 26:641, 1921.
- *Reviews*: History as the intellectual adventure of mankind, a review of Benedetto Croce's "History, its theory and practice," and J. H. Robinson's "The mind in the making." *New republic*, v. 30:174, 1922; Kaiser vs. Bismarck. *Nation* v. 112:747, 1921; Richet, Charles. Allgemeine Kulturgeschichte. *American historical review*, v. 27:90, 1921; Smith, Preserved. The age of the Reformation. *New republic*, v. 27:359, 1921; Vivid history for children, a review of H. W. van Loon's "The history of mankind." *New York evening post. Literary review*. Nov. 12, 1921. p. 165.
- Bedell, Frederick.** The airplane, a practical discussion of the principles of airplane flight. Rev. ed. New York, Van Nostrand Co., 1921. 257 p.
- *Managing editor.* Physical review. 1921-1922.
- Beekman, Fenwick.** One year's experience with a regimental infirmary, by Fenwick Beekman and Samuel Bradbury. *Military surgeon*, v. 48:43, 1921.
- Behre, Jeanette A.** Studies in creatine and creatinine metabolism. IV. On the question of the occurrence of creatinine and creatine in blood, by J. A. Behre and S. R. Benedict. *Journal of biological chemistry*, v. 52:11, 1922.
- Behrends, F. G.** Harness repairing. *Cornell reading course for the farm. Lesson* 160, 1921.
- Benedict, S. R.** The ammonia content of the blood and its bearing on the mechanism of acid neutralization in the animal organism, by T. P. Nash, jr., and S. R. Benedict. *Journal of biological chemistry*, v. 48:463, 1921.
- The determination of uric acid in blood. *Same*, v. 51:187, 1922.
- Distribution of uric acid in the blood, by R. C. Theis and S. R. Benedict. *Journal of laboratory and clinical medicine*, v. 6:261, 1921.
- A method for the determination of blood volume, by Elizabeth Francke and S. R. Benedict. *Same*, v. 6:182, 1921.
- A method for the determination of sugar in normal urine. *Journal of biological chemistry*, v. 48:51, 1921.

- Note on the ammonia content of blood, by T. P. Nash, jr., and S. R. Benedict. *Same*, v. 51:183, 1922.
- Studies in creatine and creatinine metabolism, IV. On the question of the occurrence of creatinine and creatine in blood, by J. A. Behre and S. R. Benedict. *Same*, v. 52:11, 1922.
- Benner, J. W.** Bacterium suisepiticum as a factor in pneumonia of swine, by R. R. Birch and J. W. Benner. *New York State Veterinary College. Report. 1920-1921. p 143. 1922.*
- Bidwell, C. C.** Outlines of physics. Ithaca, N. Y., Comstock Publishing Co., 1922. 194 p.
- Resistance and thermo-electric power of metallic germanium. *Physical review*, v. 19:447, 1922.
- Binzel, Alma L.** Making the most of our children. Ten articles in the *Woman's world*, 1921-1922.
- A square deal for the parent. *Cornell countryman*, v. 19:239, 1922.
- A wise parent makes a well-trained child. *Compton's pictured encyclopedia*, v. 2, 1922.
- Birch, R. R.** Bacterium suisepiticum as a factor in pneumonia of swine, by R. R. Birch and J. W. Benner. *New York State Veterinary College. Report, 1920-1921: p 143, 1922.*
- Bishop, M. G.** Molière (a poem) *New York evening post. Literary review*, June 4, 1922.
- Two poems. *Poetry*, v. p. 19:314, 1922.
- Bizzell, J. A.** Lysimeter experiments—II. Records for tanks 13 to 16 during the years 1913 to 1917 inclusive, by T. L. Lyon and J. A. Bizzell. *Cornell University Agricultural Experiment Station. Memoir 41, 1921.*
- Black, E. M.** The effects of adrenal feeding upon the iodine contents of the thyroid gland, by E. M. Black, Marjorie Hupper, and John Rogers. *American journal of physiology*, v. 59:222, 1922.
- Blackmore, Beulah.** Watch your step in the dining-room, by Flora Rose and Beulah Blackmore. *Delineator*, June 1922, p. 46.
- Blodgett, F. M.** Abstracts: Additions of formalin to maintain the concentration uniform with direct steam heat in the hot formaldehyde treatment of potatoes, by F. M. Blodgett and F. R. Perry. *Phytopathology*, v. 12:39, 1922; The relation of time and temperature to the killing of potatoes and potato mosaic virus, by F. M. Blodgett. *Same*, v. 12:40, 1922; Testing seed potatoes for mosaic and leafroll—II, by F. M. Blodgett, Karl Fernow, and F. R. Perry. *Same*, v. 12:40, 1922.
- Bogert, G. G.** Reviews: Sullivan, J. D. Selected cases on real property. *Cornell law quarterly*, v. 7:187, 1921; Waite, J. B. The law of sales. *Same*, v. 7:290, 1921.
- Editor. *Cornell law quarterly. 1921-22.*
- Bosworth, F. H.** Report of the Dean of the College of Architecture. *Cornell University. Official publications*, v. 12, No. 18. Appendix No. IX, 1921.
- Boyle, J. E.** The law of supply and demand and the wheat market. A booklet, 1921.
- Price determination and cooperative marketing. *Cornell countryman*, v. 19:106, 1922.
- You and your retailer. *Delineator*, v. 99, No. 3:36, 1921.
- Boys, Jessie A.** When the cream sours. *Delineator*, July, 1922.
- Bradbury, Samuel.** Diseases of the lymphatic vessels. *Nelson loose-leaf medicine*, v. 4:621, 1921.
- One year's experience with a regimental infirmary, by Fenwick Beekman and Samuel Bradbury. *Military surgeon*, v. 48:43, 1921.
- Bradley, J. C.** Plumarius, an aberrant genus of hymenoptera. *Washington Academy of Sciences. Journal*, v. 11:214, 1921.
- Some features of the hymenopterous fauna of South America. *Société Scientifique du Chili. Actes*, v. 30:51, 1920.
- Brenner, E. C.** Perforated ulcers of the duodenum; a report of fifteen consecutive cases. *Surgery, gynecology and obstetrics*, v. 34:370, 1922.

- Briggs, T. R.** Emulsions with finely divided solids. *Journal of industrial and engineering chemistry*, v. 13:1008, 1921.
- Broughton, L. N.** Model paragraphs. New York, Harcourt, Brace and Co., 1921. 64 p.
- Review: Elton, Oliver. A survey of English literature, 1780-1880. *Modern language notes*, v. 37:110, 1922.
- Buckman, H. O.** Nature and properties of soils, by T. L. Lyon and H. O. Buckman. New York, Macmillan, 1922. 588 p.
- Bull, A. W.** Alizarin-iron lakes, by A. W. Bull and J. R. Adams. *Journal of physical chemistry*, v. 25:660, 1922.
- Burkholder, W. H.** The anthracnose disease of the raspberry and related plants. *Cornell University Agricultural Experiment Station. Bulletin* 395. 1917.
- The bacterial blight of the bean: a systemic disease. *Phytopathology*, v. 11:61, 1921.
- The dry root-rot of the bean. *Cornell University Agricultural Experiment Station. Memoir* 26, 1919.
- The effect of two soil temperatures on the yield and water relations of healthy and diseased bean plants. *Ecology*, v. 1:113, 1920.
- The production of an anthracnose-resistant white marrow bean. *Phytopathology*, v. 8:353, 1918.
- Some results of the New York State bean investigation by W. H. Burkholder, I. M. Hawley, and E. W. Lindstrom. *New York State Fruit Growers' Association. Proceedings*, v. 17:120, 1918.
- Abstracts: Bean diseases in New York State in 1916. *Phytopathology*, v. 7:61, 1917; The perfect stage of the fungus of raspberry Anthracnose. *Same*, v. 4:407, 1914; Some root diseases of the bean. *Same*, v. 6:104, 1916.
- Burlage, S. R.** Blood pressures and heart rate, in girls, during adolescence. A preliminary study of 1,700 cases. *Society for Experimental Biology and Medicine. Proceedings*, v. 19:247, 1922.
- A study of the regeneration of the autonomic fibers in the vagus nerve of the sheep. *American Journal of physiology*, v. 60:350, 1922.
- Burnham, S. H.** Lichens of the Lake George region. *Bryologist*, v. 25:1, 34, 1921.
- Burr, G. L.** Reviews: Pastor, Ludwig, Freiherr von. Geschichte der Päpste seit dem Ausgang des Mittelalters. *American historical review*, v. 27:112, 1921; Poole, Reginald Lane. Illustrations of the history of medieval thought and learning. *Same*, v. 27:142, 1921.
- Burritt, M. C.** Does it pay to grow wheat? *American agriculturist*. Sept. 17, 1921.
- Empire State farm organizations set fine example in co-operation for all others. *Dairymen's League news*, v. 6: No. 8:2, 1922.
- Farm bureaus' fine support speeds great work of commercial cooperatives. *Same*, v. 6, No. 14:2, 1922.
- Relation of the farmer and the farm bureau to the country newspaper. *The county agent and the farm bureau*, v. 10, No. 3:5, 1922.
- Bussell, F. P.** Production of new strains of corn for New York, by C. H. Myers, H. H. Love, and F. P. Bussell. *Cornell University Agricultural Experiment Station. Bulletin* 408, 1922.
- Butterworth, J. E.** School buildings and grounds in rural New York. Philadelphia, Wm. Fells & Co., 1922. 125 p.
- Some contributions of the New York rural school survey. *Journal of rural education*, v. 1:385, 1922.
- Carpenter, C. M.** Experimental production of mastitis in cattle with streptococci and other bacteria. *Journal of infectious diseases*, v. 31:1, 1922.
- Cecil, R. L.** Observations on the metabolism of arthritis, by R. L. Cecil, D. P. Barr, and E. F. DuBois. *Archives of internal medicine*, v. 29:583, 1922.
- Studies on pneumococcus immunity, I. Active immunization of monkeys against pneumococcus Type I; pneumonia with pneumococcus Type I vaccine, by R. L. Cecil, and G. I. Steffen. *Journal of experimental medicine*, v. 34: 245, 1921.

- Temperature regulation after the intravenous injection of proteose and typhoid vaccine, by D. P. Barr, R. L. Cecil, and E. F. DuBois. *Archives of internal medicine*, v. 29:608, 1922.
- Chambers, Robert.** Apparatus for micro-manipulation and micro-injection. *Society for Experimental biology and Medicine. Proceedings*, v. 19:85, 1921.
- The effect of experimentally induced changes in consistency on protoplasmic movement. *Same*, v. 19:87, 1921.
- The formation of the aster in artificial parthenogenesis. *Journal of general physiology*, v. 4:33, 1921.
- Microdissection studies. III. Some problems in the maturation and fertilization of the echinoderm egg. *Biological bulletin*, v. 41:318, 1921.
- A simple apparatus for micro-manipulation under the highest magnifications of the microscope. *Science*, v. 54:411, 1921.
- A simple micro-injection apparatus made of steel. *Same*, v. 54:552, 1921.
- Studies on the organization of the starfish egg. *Journal of general physiology*, v. 4:41, 1921.
- Chamot, E. M.** Elementary chemical microscopy. 2d ed. New York, J. Wiley & Sons, 1921. xv, 479p.
- Chandler, W. H.** The trend of research in pomology. *American Society for Horticultural Science. Proceedings*, v. 18:233, 1922.
- Coca, A. F.** Reaction of the rat to diphtheria toxin with observations on the technic of the Roemer method of testing diphtheria toxin and antitoxin, by A. F. Coca, E. F. Russell, and W. H. Baughman. *Journal of immunology*, v. 6:387, 1921.
- Studies in specific hypersensitiveness. V. The preparation of fluid extracts and solutions for use in the diagnosis and treatment of the allergies, etc. *Same*, v. 7:163, 1922; VII. The age incidence of serum disease and of dermatitis venenata, etc. *Same*, v. 7:193, 1922; VIII. On the relative susceptibility of the American Indian race and the white race to the allergies and to serum disease, by A. F. Coca, O. Deibert, and E. F. Menzer. *Same*, v. 7:201, 1922.
- Collison, R. C.** Composition of some soils from the Chautauqua County grape belt. *New York State Agricultural Experiment Station. Technical bulletin*, No. 85, 1921.
- Conner, L. A.** Diseases of the veins. *Nelson's loose-leaf medicine*, v. 4:609, 1921.
- On the value to the community of organized effort to control heart diseases. *College of Physicians, Philadelphia. Transactions*, 1921.
- Syphilis. *Oxford medicine*, v. 5:657, 1921.
- Cooke, R. A.** Allergic coryza. *Tice's practice of medicine*, v. 5:481, 1920.
- Allergy in drug idiosyncrasy. *American Medical Association. Journal*, v. 73:759, 1919.
- Bronchial asthma. *Tice's practice of medicine*, v. 5:493, 1920.
- Cutaneous reactions in human hypersensitiveness. *New York Pathological Society. Proceedings*, v. 21:8, 1921.
- Hay fever and asthma. *New York medical journal*, v. 107:577, 1918.
- Human sensitization, by R. A. Cooke and Albert Vanderveer, jr. *Journal of immunology*, v. 1:201, 1916.
- Hay fever, the nature of the process and of the mechanism of the alleviating effect of specific treatment, by R. A. Cooke, E. P. Flood, and A. F. Coca. *Journal of immunology*, v. 2, No. 2, 1916.
- A note on Shaffer's method for the determination of B-oxybutyric acid, by R. A. Cooke and E. E. Gorslin. *Journal of biological chemistry*, v. 10:291, 1911.
- Principles of therapy in human hypersensitiveness. *College of Physicians of Philadelphia. Transactions*, 1920.
- Protein sensitization in the human with special reference to bronchial asthma and hay fever. *Medical clinics of North America*, v. 1, No. 3, 1917.
- Studies in specific hypersensitiveness. III. On constitutional reactions: the dangers of diagnostic cutaneous test and therapeutic injection of allergens. *Journal of immunology*, v. 7:119, 1922.

- Studies in specific hypersensitiveness. IV. New etiologic factors in bronchial asthma. *Same*, v. 7:147, 1922.
- Studies in specific hypersensitiveness. IX. On the phenomenon of hyposensitization (the clinically lessened sensitiveness of allergy). *Same*, v. 7:219, 1922.
- The treatment of hay fever by active immunization. *Laryngoscope*, v. 25:108, 1915.
- Cooke, R. B.** *Translator*: Platen-Hallermünde, August. Miscellaneous sonnets. Ithaca, N. Y., Andrus and Church, 1921. 22p.
- *Same*. Sonnets to literary personages. Ithaca, N. Y., Andrus and Church, 1922. 12p.
- Cooper, Lane.** Two views of education, with other papers chiefly on the study of literature. New Haven, Yale University Press, 1922. 321p.
- Translations of Aristotle's Poetics. *Classical weekly*, v. 15:95, 1922.
- A university press at Cornell. *Cornell alumni news*, v. 24:146, 1921.
- Crane, T. F.** Address at the semi-centennial of the College of Architecture. *Cornell University. Semi-centennial of the College of Architecture*, October 21, 1921.
- The mountain of Nida, a postscript. *Romanic review*, v. 12:80, 1921.
- The sources of Boccaccio's novella of Mitridanes and Natan. *Romanic review*, v. 12:193, 1921.
- The Wason Chinese library at Cornell University. *Christian China*, v. 7:207, 1921.
- *Review*: Charbonnel, J. R. La pensée italienne au XVIe siècle et le courant libertin. *American historical review*, v. 26:504, 1921.
- Creighton, J. E.** The form of philosophical intelligibility. *Journal of philosophy*, v. 19:253, 1922.
- Reason and feeling. *Philosophical review*, v. 30:465, 1921.
- Report of the dean of the Graduate School for 1920-21. *Cornell University. Official publications*, v. 12, No. 18. Appendix II, 1921.
- University and alumnus. *Cornell alumni news*, v. 24:222, 1922.
- *Reviews*: Baillie, J. B. Studies in human nature. *Philosophical review*, v. 30:624, 1921; Haldane, Viscount. The reign of relativity. *Same*, v. 31:288, 1922; Oeuvres de Maine de Biran, publiées par Pierre Tisserand. Tom. 1. *Same*, v. 30:315, 1921; Royce, J. Lectures on modern idealism. *Same*, v. 30:309, 1921; Taylor, H. O. Thought and expression in the sixteenth century, v. 30:527, 1921; Webb, C. C. J. Philosophy and the Christian religion, v. 30:317, 1921.
- Curtiss, L. F.** The effect of temperature on the change of resistance of bismuth films in a magnetic field. *Physical review*, v. 18:255, 1921.
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