

CORNELL UNIVERSITY OFFICIAL PUBLICATION

Volume XII

Number 8

Twenty-Ninth Annual Report by Acting President Smith 1920-21

WITH THE COMPTROLLER'S SUMMARY OF FINANCIAL OPERATIONS, AND
REPORTS OF THE DEANS OF COLLEGES, THE REGISTRAR,
THE LIBRARIAN, AND OTHER OFFICERS

Ithaca, New York
Published by the University
October, 1, 1921

TABLE OF CONTENTS

	PAGES
PRESIDENT'S REPORT.	5-21
The Trustees.	5
The President.	6
The Faculty.	7
Important Changes in the Faculty	8
Students.	10
Tuition Fees.	12
Student Behavior	12
Honor System.	12
Alumni	13
New Status of the Cornellian Council.	14
War Alumni.	15
The College of Engineering.	15
The Heckscher Foundation.	16
Chemistry	18
A New Heating Plant.	18
The Department of Hygiene.	19
General.	20
SUMMARY OF FINANCIAL OPERATIONS	22
APPENDICES	
I Report of the Dean of the University Faculty.	I
II Report of the Dean of the Graduate School.	IV
III Report of the Dean of the College of Arts and Sciences.	XI
IV Report of the Dean of the College of Law.	XIII
V Report of the Dean of the Medical College.	XVI
VI Report of the Secretary of the Ithaca Division of the Medical College.	XXI
VII Report of the Dean of the New York State Veterinary College	XXIII
VIII Report of the Dean of the New York State College of Agriculture.	XXVII
IX Report of the Dean of the College of Architecture.	XLVI
X Report of the Dean of the College of Engineering.	XLVIII
XI Report of the Administrative Board of the Summer Session	LI
XII Report of the Adviser of Women.	LIV
XIII Report of the Registrar.	LVIII
XIV Report of the Librarian.	LXI
XV Publications	LXVII

PRESIDENT'S REPORT

FOR 1920-21

TO THE BOARD OF TRUSTEES:

The Acting President of the University has the honor to submit his report for the year 1920-21.

The year has been a successful one for the University. It is true that the disturbing after-effects of the war were still active, but with diminishing force; so that there has been increasing steadiness and ever greater devotion to sustained work. The earnestness of purpose that has always characterized Cornell seems to have come back nearly to its old-time standard, and there is promise of a future of growing effectiveness.

THE TRUSTEES

The death of Trustee Emmons L. Williams, which occurred on June 24, brought deep regret to all of his large circle of friends, many of whom were associated with him in the work of the University. On July 9, 1921, the following resolution was adopted by the Trustees:

In recording the death, on June 24, 1921, of Emmons Levi Williams, the Trustees hereby express sorrow for great official and personal loss, and gratitude for his distinguished service to the University during his long term as Treasurer and Comptroller.

From 1872, when he was appointed Assistant to the Treasurer, until his retirement in 1919—a period of forty-seven years—his rare financial gifts, his sound judgment, and his unremitting effort were devoted unselfishly to the welfare of Cornell University. Largely through his wisdom and tireless watchfulness the increasing endowment has not only been safely invested, but has yielded an exceptionally high average rate of interest, and thus the power of accomplishing the real work of education was through him maintained and increased.

As Trustee, his service was of high value outside his own field because of his intimate knowledge of the history of the University from the very beginning, and his understanding of men and human relations.

Those who knew Mr. Williams in official relations will always remember his careful, dispassionate consideration of every question, great or small, that concerned Cornell, and his kindly firmness in rendering decisions; and to those who were associated with him socially the memory will endure of his courtesy, his friendliness, his rare good fellowship.

Cornell was most fortunate in winning what money could not buy, Mr. Williams's life-long love and devotion.

THE PRESIDENT

Changes in the Board have occurred as follows: Mr. James H. Edwards after serving as alumni trustee for three terms has retired, and is succeeded as trustee by Mr. Ezra B. Whitman '01 of Baltimore; while Mr. J. C. Westervelt takes his place as chairman of the Committee on Buildings and Grounds and Mr. Sanderson is elected to the vacancy on that Committee.

Mr. Edwards throughout the fifteen years of his trusteeship devoted himself unsparingly to the service of the University; he proposed and carried out several changes that have proved of great advantage, and the University has had the benefit of his broad professional experience, especially during his chairmanship of the Committee on Buildings and Grounds.

Because of his appointment to the chairmanship of the Committee on Buildings and Grounds Mr. Westervelt has resigned from the Councils of the New York State Agricultural and Veterinary Colleges and the vacancies have been filled by the appointment of Mr. George J. Tansey.

Judge Frank H. Hiscock and Messrs. Walter P. Cooke and Ira A. Place have been elected by the Board to succeed themselves, while Mr. Herbert D. Mason has been elected by the alumni for another term, and the Governor of the State has reappointed Dr. Frank H. Miller.

The University Faculty has elected as its representatives on the Board Professor Charles H. Hull and Professors Emeritus Simon H. Gage and Edward L. Nichols to succeed Professor Emeritus J. H. Comstock and Professors D. S. Kimball and W. F. Willcox, retired.

THE PRESIDENT

The most important event of the year was the election by the Board of Trustees at the June meeting of Dr. Livingston Farrand President of the University.

Dr. Farrand will come to Cornell with an extended record of successful accomplishment in the fields of scholarship and administration. He will become the chief executive of an institution which began with radical differences from outworn educational methods, and which has been justified by more than fifty years of effective work; an institution which should face the future with power to meet adequately the increasing and changing intellectual and spiritual needs of the world. His success in this great work seems assured.

THE FACULTY

Dr. James Law, Professor Emeritus of Veterinary Medicine, died on May 10, 1921.

Dr. Law was a member of the original faculty of Cornell University, and was friend as well as associate of Mr. Ezra Cornell and Dr. Andrew D. White. He was the first Director of the New York State Veterinary College, and retired in 1908. As a teacher, as an author in his special field, as an inspirer of men in scientific work and professional ideals, Dr. Law was pre-eminent; he was a high-minded and loyal friend.

Professor Charles E. Bennett, Goldwin Smith Professor of Latin, died May 2, 1921.

Professor Bennett came to Cornell as head of the Latin Department in 1892 and served the University in this position until the time of his death. He was a scholar of great ability and attainment, and a teacher of rare power for inspiration; he added luster to a department already made famous by the work of other distinguished teachers.

Colonel F. A. Barton, Professor of Military Science and Tactics, died on August 5, 1921.

Colonel Barton took the M. E. degree from Cornell in 1891 and entered the Army for his life work. In 1904 he was detailed as Professor of Military Science and Tactics at Cornell and remained until 1908. He was again detailed to the same position in 1917 and, except for absence for a time during the war as District Military Inspector, he remained at Cornell till the time of his death. He therefore took part in the development here of the Military Department from the time when one officer sufficed, to the present when twelve commissioned officers and forty-eight enlisted men are regularly on duty. Into this organization Colonel Barton, with his gift for leadership, his unfailing kindness, and his fine character, was able to infuse something of his own fine spirit.

A cablegram just received (September 13, 1921) announces the death in London of Professor Emeritus Waterman Thomas Hewett.

From 1870 until his retirement in 1910 Professor Hewett was a member of the faculty of Cornell University in the department of Germanic language and literature, and he was head of the department of German from 1902 until 1910. He was therefore associated with the first faculty and, since he returned quite frequently to Ithaca, he witnessed the development of the University to the present time.

Four members of the University Faculty have retired under the terms of the Carnegie Foundation and have been appointed emeritus professors. They are:

Professor George P. Bristol, member of the faculty of Greek since 1888, and head of the department since 1914; also Director of the School of Education 1910-16, and Director of the Summer Session 1906-18.

Dean Eugene E. Haskell, Dean of the College of Civil Engineering and Professor of Experimental Hydraulics since 1906.

Professor James McMahon, member of the faculty of Mathematics since 1884; Professor since 1904.

Doctor Walter L. Williams, member of the faculty of the New York State Veterinary College at Cornell since 1896.

By these retirements the University loses a group of strong men all of whom have served through long periods with faithfulness and distinguished accomplishment

Appreciative resolutions have been prepared in each case and adopted concurrently and recorded by the University Faculty and the Board of Trustees.

IMPORTANT CHANGES IN THE FACULTY

The acceptance by Professor Allyn A. Young of a professorship of economics at Harvard beginning with the academic year 1920-21 was a severe loss to Cornell. As in several other cases important considerations in addition to salary were strong factors in the decision which could not be met.

Professor Hollis E. Dann has resigned to become Director of Music for the State of Pennsylvania. Professor Dann has been connected with Cornell since 1898 and has held a professorship since 1907. His work in music during this period has been of great advantage to the University and the community, and his leaving means distinct loss to both. The attraction of the new position, however, both in salary and scope was too great to be overcome. A carefully chosen committee has under consideration the whole question of the future of music at Cornell.

Last year Professor James A. Winans resigned as head of the department of Public Speaking to accept a similar position at Dartmouth. The University was unfortunate in losing Professor Winans, who had done most acceptable work in the organization and building up of the department and giving it eminent standing.

Fortunately it was possible to secure as Professor Winans's successor Professor A. M. Drummond, who has carried the work forward successfully at the high standard.

Professor O. M. Leland resigned from the department of Astronomy of the College of Civil Engineering to accept the Chairmanship of Engineering at the University of Minnesota, beginning with the academic year 1920-21. His successor is Professor S. L. Boothroyd, who was formerly for six years instructor and assistant professor here, and who is to begin work in the College of Engineering in September 1921. Professor Boothroyd has spent a part of the past year in study in the Lick Observatory on Mount Hamilton, California, and the Lowell Observatory at Flagstaff, Arizona, and therefore will come with exceptional preparation for his work.

Several other resignations have occurred, though the number did not exceed the normal.

Because of the work of the Semi-Centennial Endowment Committee it became possible to make certain increases in salaries for the past year, and the budget for 1921-22 shows further increases; however, this movement to bring Cornell's salary rates to the standard of other institutions of equal rank is as yet incomplete. But for the immediate future the gravest danger of losing strong members of the Faculty through calls at higher salary elsewhere seems to be forestalled.

Several additions have been made to the Faculty for next year.

Professor R. H. Jordan has accepted a professorship in the Department of Education and will undertake work formerly carried on by Professor Bristol in connection with the relations of the University to the secondary schools of the State. Professor Jordan has had exceptional preparation for this very important work.

Professor M. C. Ernsberger, who developed and has been recently in charge of the engineering department of the University of Rochester, has been elected to a professorship in the power division of the College of Engineering; he holds degrees from Rochester and Cornell and was formerly on the staff of Sibley College.

Professor Lyman P. Wilson, B. S. (Knox, 1904), J. D. (Chicago, 1907), is recommended to the Trustees by the Committee on General Administration for a professorship in the Law School. After practicing law for several years and after having been twice elected City Attorney of Galesburg, Ill., he was called to the law faculty of the University of Idaho; and there and in the University of Oklaho-

ma and in George Washington University at Washington, D. C., he has been a teacher of law ever since. He comes to Cornell with very enthusiastic testimonials as to character and ability from those who have known of his work in his several fields. He has been especially successful as a teacher and in his stimulating influence on young men; moreover the writing that he has already done shows great power for clarity and conciseness of expression, and augurs well for future authorship; and it is believed that his coming will add strength to the Law School.

STUDENTS

A serious problem that faces American institutions for higher education is the tendency to undue increase in numbers of students. Five universities are enrolling about 10,000, six are enrolling about 7,000, and seven are enrolling about 5,000. In all of these, and in smaller institutions as well, the tendency is strongly toward increase in numbers. This tendency of course would result from increase in population with a constant proportion of persons fit for university training; but also temporary congestion results because many of college age went to war or into auxiliary work and a portion of them are now entering college a few years late to swell the normally increasing number.

The effect of large increase in numbers with unchanged endowment is to reduce efficiency of teaching; for since in practically all cases tuition fails to pay full cost of instruction, the required additions to the teaching force must be made in the lower grades and therefore by persons of less ability or less experience.

Of course the ideal would be to limit the number to that corresponding to maximum efficiency, selecting the fittest of the applicants. The accomplishing of this result, however, involves great and at present almost insuperable difficulties, since it involves judgment not only of mental and physical ability - which is relatively easy - but also judgment of character - which is extremely difficult. One method of limitation seems feasible, as follows: Fix the number of maximum efficiency; receive applicants with full preparation in the order of application until the limit is reached; stop. This of course is not as simple as might appear; there are many puzzling details; yet it is probable that a working plan could be evolved.

A committee of the University Faculty, authorized by resolution at the meeting on June 9, 1920, considered the question of limitation of number of students and presented a report at the meeting on

April 13 recommending action by the Faculties and Trustees to prevent further increases in enrollment in the colleges now over crowded, and the establishment of proper limits for the future in other colleges. This report was adopted by the Faculty and referred to the Trustees, who considered it with favor at a meeting on April 30, 1921, but postponed action.

It is certain that eventually some means of limitation will be adopted.

This brings up a broader question: How shall the opportunity be afforded to the increasing number of those worthy of higher education? There must be more colleges and universities, and private endowments cannot be relied on to provide them. Funds, as in case of secondary schools, must come from taxation and the foundations must therefore be by federal, state, or municipal endowment. It would seem that Cincinnati and Buffalo have set examples worthy of extended following in their city-supported universities.

The report of the Registrar shows the number of regularly matriculated students through several years to be as follows:

Year	Number	Differences
1908-09	3985	
1909-10	4227	+242
1910-11	4412	+185
1911-12	4596	+184
1912-13	4803	+207
1913-14	5015	+212
1914-15	5345	+330
1915-16	5656	+311
1916-17	5549	-107
1917-18	4082	-1467
1918-19	4597	+515
1919-20	5765	+1168
1920-21	5668	-97

The figures show a steady increase at varying rate - from 1908 through 1916, when the influence of the war appears in decreased enrollment for two years. Then the rate of increase for two years was very high, and this was attributable in part to the influence of the Students' Army Training Corps and the return of war workers and soldiers.

TUITION FEES

During the year of this report there was a diminution of 97; but this is too small a percentage to be significant.

Throughout the whole period there has been increase in rigidity of enforcement of entrance requirements, and rise in scholastic standards, together with several increases in tuition and fees. These influences have restrained what would probably have been an overwhelming influx of students. These, however, are only temporary restraints, and the flood will be due presently unless preventive measures are taken.

With Cornell's present equipment it seems that the total enrollment of regularly matriculated students should not exceed about 6,000 and any tendency to greatly exceed that number should be strenuously opposed by Faculty and Trustees unless funds for additional high-grade teachers and for increase in equipment can be furnished.

TUITION FEES

When the University budget for 1921-22 was forecast, comparison with the estimated income showed that relatively few salary increases could be made without a deficit. A study of tuition in other institutions showed that Cornell's rates were low, and that increase to \$250 would be reasonable under present economic conditions. A report was submitted to the Trustees and the increase was authorized. The budget was modified accordingly and, though the salary standard is still too low, and though it was impossible to make many individual increases that should be made, yet the situation is improved and the tuition increase is justified.

STUDENT BEHAVIOR

In matters that concerned student behavior, especially when the good name of the University was involved, special appeal has been made during the year to the students to undertake to govern themselves; they have been shown that Cornell is their University to use and to guard; and that whatever hurts its reputation hurts them also: that loyalty to the University is not only of advantage to the University, but also by reaction to them as contributing to character building. In several instances the appeal has been very effective, and it seems sure that the method is fundamentally right.

HONOR SYSTEM

The students were deeply stirred during the year concerning standards of student honor in general, and especially concerning

fraud in examinations. On January 12, 1921, a communication was presented to the general faculty originating with the students, asking for the establishment of an honor system, with control of preliminary and final examinations vested in the students. The matter was referred to the faculties of the several colleges for consideration, and reports were favorable. At the meeting of the general faculty on March 9, 1921, a student committee of ten representing the several colleges submitted a proposed Honor System constitution and a report of a test vote in which 91 per cent of students voting (the total vote was 3,852) favored the proposed constitution. The Faculty approved this constitution without a dissenting vote, and the Student Honor System was authorized by the Trustees at a meeting on April 3, 1921.

Thus the system was in force for the final examinations of the second term and its operation seemed successful.

To insure permanent success will require the cultivation in the student body of a spirit of loyalty, an understanding of justice, and a realization of responsibility for the maintenance of the good name of the University. This has been done at the University of Virginia, where an honor system has been successful for nearly eighty years. It can be done at Cornell; but only by hard and persistent effort by successive bands of students devoted to the highest ideals and to the welfare of the University.

ALUMNI

The office of Alumni Representative was created by the Board of Trustees of the University on June 22, 1920, in response to identical resolutions presented by the Associate Alumni, the Association of Class Secretaries, and the Cornellian Council. The Alumni Representative is appointed by the Board of Trustees of the University on the nomination of the presidents of the three alumni organizations, and reports to and is under the direction of a committee of five, composed of one representative of each organization and two Trustees who shall be alumni. This committee has been made up during the year as follows: Messrs. Romeyn Berry, Walter P. Cooke, J. H. Comstock, Ira A. Place, J. DuPratt White. The Alumni Representative is Mr. Foster M. Coffin.

The primary duty of the Alumni Representative is the development of a closer relationship between the University and the ever-increasing body of former students. In many universities the man who is charged with this responsibility is an official, usually the secre-

tary, of the alumni association. In others he is an officer of the institution, with alumni work combined with other duties. At Cornell he is something of both, and this arrangement, it is believed, should produce the most effective results. The Alumni Representative at Cornell is an officer of the University, and holds office at the will of the Board of Trustees; but he is primarily the representative of the alumni, nominated by them and responsible to them.

It is no part of the duty of the Alumni Representative to solicit or collect funds. But in him the alumni all over the world have at the University a representative whose time and attention are devoted solely to their needs, their wishes, and their interests.

During the year, in the office of the Alumni Representative, the alumni records have been checked and corrected, involving addresses of about 15,000 Cornellians. This record is being used in preparing the new Alumni Directory, which will be published in the spring of 1922 and which will be sent on request to former students.

Effort has been made during the year to increase interest in the University among all former students. Twelve new local clubs have been formed, bringing the total number to 79. Many speakers have gone out from "the Hill" to Cornell banquets, and moving pictures and lantern slides that have been made available, have been in frequent demand. A partial measure of the success of this movement is that in 1921, 4,378 votes were cast for Alumni Trustees as against 3,478 in 1920.

A biographical file has been established in the office in which a folder is assigned to every former student, and it is urged that every one send to Mr. Coffin all possible items of biographical interest; photographs taken in undergraduate days or later; press clippings, written statements of experiences, &c. Thus this file may become an invaluable record of the lives and achievements of the sons and daughters of Cornell.

NEW STATUS OF THE CORNELLIAN COUNCIL

The Board of Trustees, at a meeting on June 22, 1920, adopted a resolution as follows:

"Resolved, That the activities of the Semi-Centennial Endowment Committee be merged into the Cornellian Council when and in such manner as that committee and the executive committee of the Cornellian Council may determine."

By this action the Trustees officially vested in the Cornellian Council authority to make appeal for funds for all University purposes.

In the past the Cornellian Council has sought small annual gifts from former students to the Alumni Fund, and this fund has been used for emergencies by the University. In future the Council will not only offer to every Cornellian and to others also opportunity to make modest annual gifts to the Alumni Fund, but will also endeavor to raise funds for permanent endowment and for other larger and urgent needs of the University.

The merger was completed on January 1, 1921, and since then the work of the Endowment Committee has been carried on in the name of the Cornellian Council.

WAR ALUMNI

During the war many Cornell students left the University to join the Army or Navy or to enter civilian occupations related to war activities. Quite a proportion of these students were prevented by circumstances from returning to finish the work for their degrees. It seemed fitting that they should receive from the University recognition of the work done as students, and of their unselfishness in interrupting this work to undertake hard and dangerous service in a great cause. Hence, upon recommendation of the University Faculty, eighty-one certificates of War Alumnus were conferred by the Trustees during the year, conveying all the rights, privileges, and honors of an alumnus of the University.

THE COLLEGE OF ENGINEERING

The work in engineering teaching and research, formerly carried on in the College of Civil Engineering and in Sibley College of Mechanical and Electrical Engineering, is reorganized, and the colleges are combined into The College of Engineering.

The time was peculiarly favorable for this change because the Deans of the two colleges became eligible for retirement together in June 1921.

This change results from the work of a joint committee of five from the Board of Trustees and three from the faculty of each of the engineering colleges. Eminent engineering alumni were called in consultation, and the question of combination was submitted by letter to the entire body of alumni of the Colleges.

The resulting College of Engineering is subdivided, chiefly for purposes of administration, into three Schools: The School of Civil Engineering, The Sibley School of Mechanical Engineering, and

The School of Electrical Engineering.

The Dean of the College is the chief administrative officer, and each School has a Director who is responsible to the Dean.

Since the final decision for the combination was made, committees of the faculties concerned have been at work on a revision of the curriculum and have planned a first-year course that shall be taken in common by students in all three of the Schools. This course was given very successfully in the academic year just past and will lead on to the revised courses for the succeeding three years.

The administration of the new College began in February 1921.

This combination of the Engineering Colleges brings Cornell into line with all other important institutions where technical instruction is given.

During the past few years the housing needs of Engineering have yielded to the more important need of general increase in salaries; but soon there must be recognition of the fact that some of the out-worn buildings must be replaced by others better adapted to modern needs if the standing of the College is to be maintained.

Most desirable of all would be a separate endowment for Engineering, ample for salary increases, and provision for additional equipment and new buildings.

THE HECKSCHER FOUNDATION

A gift of \$500,000 made by Mr. August Heckscher of New York City was announced by President Schurman in his last report. In his letter of gift the donor said in part:

This gift is to constitute a fund to be known as the Heckscher Foundation for the Promotion of Research in Cornell University.

The income of the fund is to be used for the support at Cornell University at Ithaca, New York, of research in any or all branches of knowledge (including the publication of the results thereof).

Since the conditions of fruitful research are best understood by the scholars and scientists engaged therein, I suggest and desire that the Trustees of the University, in appropriating the annual income of this fund, shall have the advice and recommendations of a committee or council in which the professors and instructors engaged in research are liberally represented.

As research in America suffers from the exhaustion of professors by teaching and other duties, it is my desire that professors and instructors possessing the talent and training necessary for research shall, under such conditions and for such periods of time as the University authorities may prescribe, be liberated partially or wholly from those duties and enabled to devote themselves in all the freshness and fullness of their energies to productive investigation and scholarship.

It is not my intention that the foregoing paragraphs state in detail the method of administering the income from the fund. I recognize that times and circumstances

may change so as to make necessary or desirable some modification or extension thereof and it is not my desire to hamper your Board in the proper administration of its trust. What I have there said expresses my general purpose in making the gift.

The wise suggestions of the donor have been carried out and the Heckscher Council consists of:

Two Trustees elected by the Board:

The President of the University *ex officio*;

The Dean of the Graduate School *ex officio*;

Two elected members of the University Faculty representing the "group of letters";

Two elected members of the University Faculty representing the "group of sciences";

Two Emeritus Professors selected by the Heckscher Council.

This Council for the past year consisted of:

Trustees Ira A. Place and H. H. Westinghouse;

Acting President A. W. Smith, chairman;

Dean J. E. Creighton, secretary;

Professors J. Q. Adams and Carl Becker;

Professors Ernest Merritt and W. N. Barnard;

Professors Emeritus J. H. Comstock and E. L. Nichols.

Ten meetings of the Council were held during the year; questions of general policy in the administration of the income of the fund, the limits of the field of research to be covered, and details of administration were discussed and settled.

Thirty-eight grants were made, aggregating nearly \$40,000. The minimum grant was \$100 and the maximum \$3,000, while the average grant was about \$1,000.

Thus a very important series of investigations is under way with very wide range, for the subjects are as follows: English, Spanish, and Icelandic Literatures; English History, Law, Mathematics, Physics, Chemistry, Physical Chemistry, Psychology, Entomology, Zoology, Botany, Human Physiology, X-rays, Electrical Engineering, Experimental Hydraulics, Farm Machinery.

No teaching can be continuously effective except where the teacher receives the stimulus which comes from the struggle to extend human knowledge. The stimulus may come from the teacher's own research, or from association with others engaged in the work. It is believed by many that the Heckscher gift marks the beginning of a new era at Cornell. This addition to the work of research possible under former conditions, of a large, continuous group of inves

tigations, together with the relief of productive scholars from the work of teaching for certain periods, must increase the enthusiasm of students and teachers for effort to extend the limits of knowledge, and must increase Cornell's power to accomplish results that were the ideals of the Founders. The University owes a great debt of gratitude to Mr. Heckscher for his ample, wise gift.

CHEMISTRY

The Department of Chemistry has worked under great difficulties since the fire in Morse Hall in February 1916. Even though the building was refitted for temporary use, the space accommodations have been entirely inadequate for the needs of this large and very important division of the University.

In June 1919 it was announced that an anonymous donor had provided for the construction of a building for Chemistry that should be adequate and modern in all its equipment. Since that time the Faculty of Chemistry, the Committee of the Trustees on Buildings and Grounds, and the architects have used every endeavor to insure that the proposed laboratory should fully meet the requirements of this great and developing branch of pure and applied science. There has been delay due to high building costs, but finally, on July 25, ground was broken and the corner-stone will be formally laid on October 20 just after the inauguration of President Farrand.

This building will be one of the best and most complete for its purpose, and it will bring material equipment into correspondence with the quality of work that has been done in Cornell's department of chemistry since the beginning.

Chemistry, both in the work of research and in applications to the arts and manufactures, has a great and growing usefulness in making human life safer and more comfortable, and in contributing to higher æsthetic enjoyment.

The donor of this building for Chemistry at Cornell has placed not only the University but the world under great and lasting obligation.

A NEW HEATING PLANT

The heating system for the University buildings has been a makeshift growth to meet the developing needs of the University. The heating plant, though it had been increased in capacity at intervals, had become inadequate and many buildings have required separate heating installations. The College of Agriculture built its own heating plant. The location of the several plants has required that coal

be hauled by teams and this has been expensive, unsightly, and destructive of certain of the neighborhood roads; moreover, the smoke and fine cinders from the stacks have been a nuisance in many ways.

The development of the proposed building scheme for the State Colleges of Agriculture and Veterinary Medicine will necessitate greatly increased heating capacity; moreover, in this development, the present agricultural heating plant must yield to other buildings, and hence it became necessary to provide heat for all the State buildings on the campus, including the Drill Hall. The State authorities proposed that the University provide heating capacity and sell heat to the State for its buildings. This proposal, together with need for heat in the new Chemistry Building, led to the consideration of the question of a centralized heating plant for the entire University. It was found that locating such a plant near the railroad at East Ithaca, where coal could be delivered directly from cars to the plant, would result in economies that would justify the required investment, and with the approval of State authorities, the Trustees, on the recommendation of the Committee on Buildings and Grounds, authorized the construction at an expenditure limit of \$700,000. Plans are already—September 1, 1921—under way and the plant should be in service within two years. Another advantage of this plan is that a steam-turbine generator-set of proper capacity can be installed at the heating station and, in the heating season, electric energy for lights and power can be furnished to supplement the water-power source at about the same cost as the hydro-electric current. This low cost of electric power is due to the fact that the exhaust steam from the steam turbine can be discharged into the heating system with utilization of the heat carried. This steam-developed electrical energy would also serve as a relay for emergencies, though at higher cost, during the non-heating season.

It would also render unnecessary the expensive development proposed for increased and unfailing water power from Fall Creek by means of impounding reservoirs for equalized flow and a changed location of the power station with increased hydraulic head, and in addition would have the advantage of centralized control of lights and power.

THE DEPARTMENT OF HYGIENE

During the war the Federal Government established "The United States Interdepartmental Social Hygiene Board." There was at the disposal of this Board an "Educational Research and Development

Fund" for the establishment of departments of hygiene in State training schools for teachers. Cornell was a successful applicant for an appropriation from this fund and for the year 1919-20 received \$32,565 and, according to the conditions of the grant, added to the fund for the purposes specified, \$21,385. In the year 1920-21 the government appropriation was \$37,065 to which the University added \$25,035.

A department of hygiene was established which amplified and made more effective the work that had previously been given in the department of physical education. A course of lectures in hygiene was given, required of all students in the under classes, and a physical examination and a confidential consultation were required of each student each term.

The required lectures were very unpopular at first; but with complete understanding of the objects of the course, antagonism lessened and now has disappeared almost entirely.

The effect of the more frequent physical examinations and the confidential consultations has been most salutary; for the result has been to establish intimate and friendly relations of students with competent physicians (men or women) with a resulting powerful influence on the mental, moral, and physical welfare of the students.

Moreover, this education in hygiene, and especially in social hygiene, will enable these young men and women, who are sure to become leaders in their communities, to extend the influence of the work with important far-reaching results.

The Federal Legislature did not see fit to make appropriation for continuance of this work for next year; but a portion of last year's fund remained unexpended and from this Cornell will receive enough to carry on the work. It is believed, too, that having started and made effective this most important development, the Trustees will never allow it to be given up.

GENERAL

There was a time when Cornell was spoken of often and unjustly as a great technical school. The reasons for this were: (1) An unprecedented development in the teaching of engineering in response to a corresponding industrial development of the whole country. (2) An overshadowing of the departments of arts and pure science by older institutions with long established reputations.

Very early in its history Cornell gained high reputation in Engineering because the work was organized and carried on by a notable

group of very able men, and because there were no stronger competing schools of engineering.

In the humanities and in pure science the early faculties at Cornell were made up of men pre-eminent in their fields; yet growth was slow and recognition came grudgingly, because of the prestige of the older colleges.

About eighteen years ago the rapid growth in Engineering slowed to a normal, and the pioneer work in the colleges changed to a slow and orderly development. Meanwhile the College of Arts and Sciences, which had moved slowly from its distinguished origin, gained in rate and has moved steadily, until today it stands an equal among the best.

Synchronously with these later changes in Arts and Sciences and in Engineering there occurred a rapid growth in the department of Agriculture similar to the earlier one in Engineering; this high rate of growth has now diminished and the future seems to promise a period of steady normal growth with opportunity for careful internal organization.

The University is to be congratulated that now every one of its Colleges has passed the pioneer stage and rests upon a well-earned reputation; that the University itself consists of a central College of Arts and Sciences about which are grouped the professional colleges, with the Graduate School serving all in advanced study and research.

The tendency of present thought on education seems to be toward the conviction that all professional training should rest on a broad foundation of humanitarian training; that all who are to follow life work requiring the exercise of the higher powers of mind or character should complete a course leading to the A.B. or B.S. degree before undertaking specialized professional work.

Already the Medical School requires for entrance at least the equivalent of three years, while the Law School requires two years, of successful work toward a bachelor's degree.

Is it too much to hope that eventually all professional colleges at Cornell will demand as a minimum for entrance a bachelor's degree from the College of Arts and Sciences or from some other college of equal standing?

In conclusion the Acting President wishes to express his high appreciation of the forbearance, loyal support, and kindly consideration that have been accorded him by all with whom he has been associated in his effort—in spite of inexperience—to carry the work of a most important office.

ALBERT W. SMITH

SUMMARY OF FINANCIAL OPERATIONS

To the Board of Trustees:

I have the honor to submit this summary of the financial operations of Cornell University for the fiscal year 1920-21.

The total income for the year applicable to current expenses and exclusive of the State Colleges was	\$2,679,004.50
and the total expenses ..	<u>2,657,095.54</u>

leaving an excess of income of ...	\$21,908.96
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From this sum should be deducted the amount required to be credited to the income of specially restricted Funds.	66,024.94
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Less the amount of decrease in reappropriations to meet obligations already incurred	<u>27,703.45</u>	<u>38,321.49</u>
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This represents an actual deficit for the year of	16,412.53
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The surplus of current income July 1, 1920 was	<u>24,437.90</u>
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Leaving a surplus July 1, 1921.	8,025.37
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The expenses of the State Colleges at the University in excess of certain income available from University and Federal funds are met by appropriations by the State of New York. The expenses of the Veterinary College were \$134,670.35 and of the College of Agriculture \$1,985,623.70.

The Productive Endowment of the University increased \$1,187,044.69. \$500,000 of this amount was the gift of Mr. August Heckscher to establish a foundation for research. Most of the remainder was from payments on Semi-Centennial Endowment subscriptions. The average rate of interest received was 5.363 per cent.

Of the \$6,412,775.72 of subscriptions received through the Semi-Centennial Endowment Committee, \$2,472,309.89 have to date been paid leaving a balance of \$3,940,465.83 to be collected. The prompt payment of this balance would greatly aid the University in its regular work and in its effort to establish a salary scale equal to that of other universities of similar rank. Through the Cornellian Council the alumni contributed \$78,639.57 to the needs of the University.

Respectfully submitted.

CHARLES D. BOSTWICK, Comptroller.

NOTE: The complete reports of the Comptroller, the Treasurer, and the Superintendent of Buildings and Grounds, bearing the certificate of audit of Messrs. Haskins & Sells, Certified Public Accountants, 30 Broad Street, New York City, will be forwarded to members of the Faculty and Alumni upon receipt of specific request addressed to the Secretary, Cornell University, Ithaca, N. Y.

APPENDIX I

REPORT OF THE DEAN OF THE UNIVERSITY FACULTY

To the Acting President of the University:

SIR: I have the honor to submit the following report of the University Faculty for the year 1920-21.

In June 1921 the Faculty had 364 members, 57 of whom were professors in the Medical College and resident in New York City. Dr. James Law, a member of the Faculty since 1868 and emeritus professor since 1918, died on May 10, 1921. Professor Charles Edwin Bennett, Professor of Latin since 1892, died on May 2, 1921, while in active service. At the close of the year, Professor George Prentiss Bristol, Professor Eugene Elwin Haskell, Professor James McMahon, and Professor Walter Long Williams retired from active duty and were appointed emeritus professors.

WAR ALUMNI

During the period covered by this report eighty-one students, on recommendation of the University Faculty, received from the Trustees the certificate of War Alumnus, conveying all of the rights and privileges of an alumnus of the University. Of these honors fifty-four were conferred on February 9 and twenty-seven at the fifty-third Commencement on June 22. Ordinarily the recipients of the War Alumnus certificates are students who are unable or indisposed to continue their studies for a degree, although in exceptional cases after the receipt of the certificate, they have completed the requirements for the baccalaureate. The University has continued consistently its generous policy, adopted at the outset of the war, of recognizing and rewarding the patriotic service of its students.

UNIVERSITY MUSIC

Professor Hollis Dann, Professor of Music since 1907, accepted an invitation to be Director of Music for the State of Pennsylvania, and withdrew from the Faculty at the beginning of the second term of 1920-21. One of Professor Dann's outstanding services to the University was his inauguration of a regular series of concerts running throughout the year. The series has frequently concluded with a Music Festival in the spring, presenting a choral program on an extensive scale. These University concerts have had an incalculable value for the general musical education of the University community and should be recognized as a permanent part of the University's life. During recent years these concerts have been held under the auspices of the University Faculty, which, at the suggestion of President Schurman and interested members of the Board of Trustees, has established a Committee on Music as one of its Standing Committees. Probably no activity within the University so completely unifies

student sentiment as the various athletic events. Among the disciplines of scholastic and spiritual value, music is the subject which most nearly parallels athletics in the universality of the interest which it awakens. It is the universal language. I am not referring here so much to the special scholastic training in music in departmental classes as to the functions of the Sage Chapel Choir, the organ recitals and the University concerts in Bailey Hall, which are channels of education for the University public. During 1920-21 concerts were given as follows:

On November 20, by Salvi, harpist, and Zanelli, barytone.

On January 14, by the Flonzaley Quartet.

On January 24, by Rachmaninoff.

On February 14, by the Cleveland Symphony Orchestra, and Marguerite Namara, soprano.

On March 18, by Jan Kubelik, violinist.

On March 31, by Rosa Ponselle, soprano.

Concerts for 1921-22 have been arranged as follows:

On November 1, by Florence Easton, soprano.

On December 15, by the Boston Symphony Orchestra.

On January 13, by the Flonzaley Quartet.

On February 27, by Josef Hofmann, pianist.

On March 17, by Pablo Casals, violoncellist, and Marguerite D'Alvarez, contralto.

On account of the ready availability of the art of music for the entertainment and instruction of large numbers of persons and on account of its easy intelligibility as compared with the other fine arts, the University authorities should give their cordial assistance in enlarging the influence and elevating the standards of musical education in the University.

HYGIENE AND PREVENTIVE MEDICINE

Two years ago there was arranged under the direction of the University Faculty, a course of instruction in Hygiene and Preventive Medicine. The work consists of one lecture a week followed by examinations, covering the general subject of individual and group hygiene, and is required of all freshmen and sophomores in the University. The registration in this course was as follows:

<i>First Term</i>		<i>Second Term</i>	
Men	1750	Men	1521
Women	554	Women	537
	<hr/>		<hr/>
	2304		2058

PROBATION AND PAROLE

During recent years there has been sporadic criticism of the method of disciplining students for deficiencies in scholarship and conduct, known as "parole" and "probation". The fact that students to whom one or the other of these forms of discipline is applied are ineligible to participate in athletics or to be

members of student organizations, has made the system a subject of more or less urgent and persistent attacks. Pressure has been put upon the college committees and University administrative officials to relieve this or that prominent student from the inconvenience and disability incurred by unsatisfactory scholarship or conduct. The University Faculty referred the whole question to two of its standing committees, the Committee on University Policy and the Committee on Student Affairs, for consideration and report. These committees in joint session discussed the subject and submitted the following recommendations to the Faculty which were adopted without dissenting vote:

I. That complete uniformity of rules and practice among the colleges of the University in the treatment of students deficient in scholarship is undesirable, because of the varying conditions;

II. That *probation* should be retained because it is the normal way of dealing with students who have not done satisfactory work and who yet may deserve another trial, and because it has been for more than twenty years a satisfactory means of dealing with such students;

III. That the University Faculty's limitation of the membership of student organizations to students in good standing is a proper limitation, and, therefore, Rule I, c, of the Rules Governing Student Organizations should stand (i. e., a student who is on "probation" [deficiency in scholarship] or "parole" [deficiency in conduct] shall not "represent the University on any student organization, or individually, either at home or abroad").

HONOR SYSTEM

On the petition of a majority of the undergraduates, the Faculty approved a plan, formulated by the students for the conduct of examinations and designated an "Honor System." The approval of the Faculty was without dissenting vote. The change from the method of Faculty proctors to student control is an important one and will be attentively and sympathetically observed. The new plan has been in operation for so brief a period (since May 2, 1921) that any present estimate would have little value.

HECKSCHER FOUNDATION FOR RESEARCH

One could hardly name a University endowment in recent years that promises to be more fruitful in results than the Heckscher Foundation for Research, established by August Heckscher in 1919. The income, under the plan adopted by the Trustees on October 2, 1920, is to be used exclusively for the promotion of research and the publication of the results of research. The Council, organized for the administration of the Foundation, consists of ten members, four of whom are elected by the University Faculty, two from each of the two groups known as the Group of Sciences and the Group of Letters. The Council, as now constituted, consists of the following membership:

The President, ex officio, Chairman.....	Albert W. Smith
The Dean of the Graduate School.....	J. E. Creighton

Trustees elected by the Board	Ira A. Place
	H. H. Westinghouse
Elected by the Faculty. . (1 year)	J. Q. Adams
" " " " . (2 years)	Ernest Merritt
" " " " . (3 years)	W. N. Barnard
" " " " . (4 years)	Carl Becker
Emeritus Professors selected by the foregoing	
members of the Council (1 year)	J. H. Comstock
(1 year) ..	Edward L. Nichols

FACULTY REPRESENTATION ON THE BOARD OF TRUSTEES

Every year since the adoption (1916) of the plan of Faculty Representation on the Board of Trustees, the system has been the subject of discussion in the Faculty's sessions. The view that the present plan of representation needs modification and supplementation has gained ground. One mode of supplementation has already been approved by the Faculty and was referred to in my last report, namely, the establishment of a Joint Council of Trustees and Faculty, for mutual orientation and without legislative functions. There is now before the Faculty, as a special order of its next regular session (October 12), a committee report on the whole subject of the relation of the Faculty Representatives on the Board of Trustees to the Faculty.

Respectfully submitted,

W. A. HAMMOND,
Dean of the University Faculty.

APPENDIX II

REPORT OF THE DEAN OF THE GRADUATE SCHOOL

To the Acting-President of the University:

Sir: I have the honor to present the following Report of the Graduate School for the university year 1920-21.

During the year 1920-21 the registration in the Graduate School was 438 for the regular year and 164 in summer, as against 408 in the regular year and 171 in summer for the year 1919-20. Of the total of 602, 486 were men and 116 women. The total number of advanced degrees conferred was 128. A table given on page IX shows the number of persons to whom each of the degrees under the jurisdiction of the Faculty of the Graduate School was respectively granted.

From these figures it is clear that even from a quantitative point of view the work carried on by the Graduate School is not an insignificant part of the activities of the University. The figures, however, do not represent the true measure of its importance. The work of the Graduate School is in many respects the best standard of the vitality and efficiency of the University as a whole. To strengthen its influence is to strengthen the University at the centre, and to create a stimulus quickly felt throughout all its members.

When the number of undergraduates in the different colleges of the University increases rapidly, as has recently been the case, the resources of the University and the time and strength of its teachers are likely to be consumed in elementary teaching. The work of investigation and scholarship at such a time seems less urgent and is likely to suffer.

In some overcrowded departments an insufficient amount of time and attention is devoted to graduate students and inadequate provision is made for their instruction. In other cases graduate instruction is carried on by men who devote to it extra hours over and above a heavy schedule of undergraduate teaching. With a desire to call attention to these conditions and in the hope of contributing to remedy them, the Faculty of the Graduate School at its meeting of February 25, 1921, adopted the following resolution and had it sent to each College and Department of the University:

"The Faculty of the Graduate School wishes to call the attention of the various heads of colleges and departments and of teachers in the University to the desirability of making adequate provision for the instruction and training of graduate students. In the opinion of the Faculty, special courses or seminars should be regularly conducted in all fields chosen as a major or minor subject by a candidate for a degree; the direction of research should be regarded as a regular part of the duty of a member of a Special Committee in charge of the work of a candidate for an advanced degree; and time should be assigned to this work on the same basis as to other teaching and to administration."

There is another aspect of the work of the Graduate School to which I wish to direct attention. During the year 1920-21, 55% of the students registered in the Graduate School also held appointments as members of the Instructing Staff of the University with the rank of instructors or assistants. By devoting a longer period of time to graduate study these students are thus able in large part to maintain themselves while qualifying for an advanced degree.

It is true that there is nothing new in this procedure. Instructors and assistants both in this University and elsewhere have in the past frequently continued their studies in the Graduate School as candidates for advanced degrees. But of late years the great demand for teachers of undergraduates and the problem that has confronted graduate students of meeting increased living expenses have made this practice much more general than formerly. As a result, for a majority of our graduate students, the period of graduate study has become a period of apprenticeship in which a considerable portion of their time is devoted to elementary teaching and to rendering assistance to professors in carrying on laboratories or in reading examination papers.

It is perhaps not desirable or possible at the present time to abandon or even materially to modify the existing system. But the present drift in this direction should be recognized and its dangers guarded against so far as possible. From the point of view of the undergraduate colleges it is doubtless undesirable to meet the demand for additional teachers by the appointment of inexperienced instructors or assistants. But with the rapid expansion of the undergraduate body during the past few years, there has seemed to be no alternative. And it seems fair to point out that a considerable portion of the men appointed to teaching positions from the Graduate School have had experience as teachers in other institutions,

and also that the graduate studies which they are pursuing aid rather than hinder their efficiency as members of the Instructing Staff. On the other hand it is important to recognize that it is the opportunities which the Graduate School affords that render it possible to carry on the work of many of the undergraduate departments without a much greater expenditure for salaries. For example, in the Department of Physics there were this year twenty-six instructors on half salary, who were also graduate students and candidates for an advanced degree. For the sake of the opportunity to continue their studies, these men refused positions offering at least twice the salary they received from the University, and some had declined positions with three or four times the salary they were receiving. I know that the same conditions obtain in many other departments. Under the present circumstances, then, the financial as well as the educational advantages which the University enjoys through being able to draw upon the Graduate School for many of its younger teachers are very important, and should not be lost sight of in estimating the services which it performs for the University.

For the graduate student himself the experience and opportunities for closer association with older teachers which an appointment as an instructor or an assistant affords are often of great value. The benefit which he derives, however, is decidedly greater when he is attached to a department in which there is much activity in research, and where the interest of its members is not exhausted by the routine of undergraduate classes. Nevertheless, even under the most favorable circumstances, it seems undesirable that a graduate student should go on teaching during the whole period of his candidacy for the doctorate. For at least one year, and if possible for even a longer time, he should be absolutely free to devote himself unreservedly to his studies, and to develop within himself the interests and habits of mind that are the mark of the true scholar and investigator.

It was to afford such opportunities to students of superior ability that Fellowships and Graduate Scholarships were established in the University. But, as was pointed out in my last report, the stipends from these appointments are now no longer adequate to maintain a student during his year of study. As a consequence, the best students are often obliged to decline appointments as Fellows, and to seek positions as instructors or assistants in order that they may have a living income. Under these circumstances, the Fellowships may either remain unfilled, or may be awarded to persons who are not so well qualified to fill them. Recognizing the difficulties of the existing situation, the Board of Trustees has, during the present year, passed the following legislation in regard to the stipends of Fellowships and Graduate Scholarships:

"Resolved to adopt the recommendation of the Council of the Graduate School—to which was referred by vote of the Board of Trustees at the meeting on May 1, 1920, the recommendation of the Faculty of the Graduate School to the effect that the stipends at present attaching to Fellowships and Scholarships should be doubled—that, as a temporary arrangement, the Board authorize each of the departments to which scholarships and fellowships are assigned to use, with the approval of the Faculty, the funds at its disposal for the payment of these stipends during the year 1921-22 in any of the following ways:

(1) to fill all fellowships and scholarships at the stipends now established; (2) to combine the stipends of two or more scholarships or fellow-

ships in order to increase the stipend of a single scholarship or fellowship; (3) to leave the scholarships and fellowships, or any of them, unfilled during the year 1921-22 in order to reserve such unused funds for increasing the stipends of such scholarships and fellowships as may be filled during the year 1922-23."

As is indicated in the resolution itself, this legislation was intended merely as a temporary measure. Advantage has already been taken of its provision by several departments in the appointment of Fellows and Graduate Scholars for the year 1921-22. In one case, three fellowships have been combined and the total income awarded to a single individual; while in other departments less radical adjustments have been found necessary. Although the legislation adopted by the Trustees has this year been of advantage, it is not desirable that it should be regarded as a permanent settlement of the question of Fellowships. The original recommendation of the Faculty of the Graduate School was that the stipends of all fellowships and graduate scholarships should be doubled. This would involve an additional expenditure on the part of the University of \$13,000 each year, and at present no funds for this purpose are available.

Whether it is ultimately thought desirable to adopt the Faculty's recommendation, I believe that it is especially important at the present time to maintain in the University a considerable number of well-endowed Fellowships which will attract men of superior ability and scholarly devotion. But it is essential that these positions be regarded as posts of honor, and that there be appointed to them only students of outstanding ability. These men, being entirely free from teaching or other routine duties, will become leaders who set the standard of achievement in the Graduate School and in the University. Without such a stimulus there is danger that the present system of apprenticeship in graduate work may tend towards routine and that there may be a failure to recognize distinction and to demand work of the highest quality. It is to be hoped that both the Faculty and the Council of the Graduate School will continue to study the question as to how the best results may be obtained through the use of Fellowships, and that funds may be soon forthcoming to put these positions on a proper basis.

The greatest disaster that could happen to the Graduate School would be that it should come to substitute organization and the fulfillment of routine requirements for genuine devotion to learning and scholarly distinction. It must be its function to promote and maintain in the University the spirit of inquiry and of thoroughness. This spirit can only be kept alive through contagion, and it is therefore of the highest importance that this should be kept in mind when appointments are made to the Instructing Staff. When the Graduate School was first organized, the Faculty placed on record its opinion that "recommendations for appointment and promotion should be contingent upon the possession of ability and activity in scholarly work and investigation, and not merely upon success in teaching."

Respectfully submitted,

J. E. CREIGHTON,

Dean of the Graduate School.

Statistics of Attendance

In the Graduate School, during the academic year 1920-21, there were registered 438 students, in addition to 164 during the summer of 1919.

	1920-21	1919-20	1918-19	1917-18	1916-17
Number of students registered during academic year	438	408	305	279	467
Number of students registered during Summer of 1920					
1. Summer Session	79	95	35	33	55
2. Third Term	65	67	42	68	128
3. Personal Direction	20	9	13	22	30
Total in Summer	164	171	90	123	213
Total	602	579	395	402	680

Classified according to the degrees for which they were candidates:

	Academic year	Summer
Doctors of Philosophy	205	46
Masters of Arts	70	75
Masters of Science	58	13
Masters of Science in Agriculture	20	20
Masters of Mechanical Engineering	11	0
Masters of Civil Engineering	13	0
Masters of Architecture	2	0
Masters in Forestry	8	3
Masters in Landscape Design	2	0
Not candidates for a degree	49	7
Total	438	164

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

	1920-21	1919-20	1918-19	1917-18	1916-17
Group A, Languages and Literatures	48	37	24	35	39
Group B, History, Philosophy, and Political Science	40	49	37	35	61
Group C, Physical Sciences	77	67	52	40	77
Group D, Biological Sciences	191	216	150	149	259
Group E, Engineering, Architecture	42	31	34	17	26
Unclassified	40	7	6	7	5

Classification of advanced degrees conferred:

	1920-21	1919-20	1918-19	1917-18	1916-17
Masters of Arts.....	34	19	23	20	33
Masters of Science.....	21	13	5	4	1
Masters of Science in Agriculture..	9	11	4	15	16
Masters in Landscape Design.....	2	2	2	1	2
Masters in Forestry.....	6	3	0	4	0
Masters of Architecture.....	1	0	1	3	2
Masters of Civil Engineering.....	7	12	5	1	4
Masters of Mechanical Engineering.	4	3	2	0	4
Doctors of Philosophy.....	44	45	28	36	43
Total	128	108	70	84	105

Among the students registered in the Graduate School during the year 1920-21 there were graduates of 144 institutions, distributed as follows:

Alfred University.....	3	Howard University	1
Allegheny College	1	Hunter College.	1
Bethany College	1	Huron College	3
Bluffton College.	1	Indiana State Normal School...	1
Bowdoin College	1	Iowa State A. and M. College...	1
Brazil College of Agriculture...	1	Iowa State College	11
Bucknell University	2	John B. Stetson University.....	1
Central Missouri State Teachers College.....	1	Kirkville Normal School.....	1
Clark University	4	Laval University	1
Clemson Agricultural College ...	2	Lawrence College.	1
Colby College.....	1	Lenox College.....	2
Colgate University.....	1	Liege University.	1
College of City of N. Y.....	2	McGill University ..	2
Colorado Agricultural College...	1	Maryland State College	2
Columbia College, S. C.....	1	Massachusetts Agricultural College.....	5
Columbia University.....	2	Massachusetts Institute of Technology	1
Connecticut Agricultural College	1	Meredith College	1
Cornell University.	191	Michigan Agricultural College...	1
Dartmouth College.....	3	Mississippi A. and M. College.	2
Davidson College.....	1	Mt. Holyoke College.....	4
Dutch School of Commerce	1	Muhlenburg College	1
Franklin and Marshall College ..	1	New Hampshire College of A. and M. Arts	2
George Washington University..	1	New Mexico A. and M. College	1
Georgia School of Technology...	1	New York University	1
Government Institute of Technology, China	9	New Zealand University	1
Grenoble University	1	Nogakushi Tohoku Imperial University.....	1
Grinnell College	1	North Carolina Negro Agricultural and Technical College.....	1
Grove City College	1		
Hamilton College.....	1		
Hobart College.....	1		

North Carolina State College . . .	2	University of Edinburgh	1
Northwestern University	1	University of Illinois	3
Oberlin College	4	University of Indiana	3
Ohio State University	3	University of Kansas	2
Ohio Wesleyan University	1	University of Kentucky	2
Oklahoma A. and M. College . . .	1	University of Maine	1
Oklahoma University	2	University of Maryland	2
Ontario Agricultural College . . .	2	University of Michigan	2
Oregon State Agricultural College	1	University of Minnesota	5
Peiyang University	4	University of Missouri	1
Peking Government University . .	7	University of Montana	2
Pelotos College, Brazil	1	University of Nanking	1
Pennsylvania State College	3	University of Nebraska	2
Pomona College	3	University of North Carolina . . .	2
Princeton University	1	University of Ohio	1
Purdue University	1	University of Oklahoma	1
Queen's University	1	University of Oregon	2
Radcliffe College	1	University of Pennsylvania	1
Randolph Macon Women's Col- lege	3	University of Philippines	4
Rhode Island State College	1	University of Pittsburgh	1
Richmond College	1	University of Rochester	2
Rio Grande do Sul, Brazil	1	University of Texas	1
Roanoke College	1	University of Toronto	2
Royal Agricultural College of Copenhagen	1	University of Virginia	2
Royal Frederick University	1	University of Washington	2
Royal High Agricultural College, Jugo-Slavia	1	University of Wisconsin	1
Rutgers College	1	Utah Agricultural College	1
Smith College	1	Vassar College	5
Soochow University	1	Virginia Polytechnic Institute . . .	1
Sophie Newcomb College	1	Wabash College	3
Sydney University, Australia . . .	1	Washington and Jefferson College	1
Tangshan Engineering College . .	2	Washington State College	2
Texas A. and M. College	1	Wasoda University	2
Tientsin Naval College	1	Wellesley College	2
Trinity College	1	Wesleyan University	1
Tulane University	1	Western Reserve University	1
Union College	2	Western University, Canada	2
University of California	1	Westminster College	1
University of Cape of Good Hope	1	West Virginia University	4
University of Chicago	1	Whitman College	1
University of Colorado	1	William and Mary College	1
University of Denver	1	William Smith College	1
		Wofford College	2
		Wooster University	1
		Yale University	3

APPENDIX III

REPORT OF THE DEAN OF THE COLLEGE OF ARTS AND SCIENCES

To the Acting President of the University:

SIR: I have the honor to submit to you the following report for the year 1920-21.

As is well known, the war years and those immediately following them brought a host of new problems to nearly all the American universities. At the beginning of this period many of our teachers entered the service of their country, and those who remained at home gladly assumed whatever additional tasks had to be performed. Since the close of the war, owing to the scarcity of well-trained and experienced men of junior rank and the small salaries paid by us to such teachers, some of our larger departments have often found it difficult to maintain their former high standards in the crowded elementary classes. The situation has been slightly relieved by the establishment of a higher salary-scale; but unless the conditions change, the increase will not be sufficient to enable us to compete with institutions of our own rank in obtaining the services of promising young men. Indeed, salaries have for years been so small in the American colleges that promising young men have not been attracted in large numbers to the life of the scholar. This is a matter of great concern to our College, which has almost doubled its enrollment in little over a decade; and it is to be hoped that measures will be taken that may make it possible for us to give the kind of instruction to our students in the lower classes to which they are entitled. In case the College continues in its growth, this problem will become even more serious than it is now: either our income will have to be constantly increased or the number of our students limited.

In this connection it may be added that the American universities have had to deal, within the last few years, with a somewhat "demoralized" element in the student body,—an element not easily assimilable,—for the successful treatment of which it has not been easy to discover the right remedy. Although our own University does not seem to have received into its membership as large a proportion of this post-war group as some other institutions, we did have a sufficient number to give us a problem,—a problem in the solution of which, it must be confessed, we were not always helped by the tendency of the uninitiated to criticise the Faculties.

In spite of all discouragements, however, which these abnormal times brought with them, it can be said that our College passed through an unusual period of stress with remarkable success. It kept its organization intact, not only during the war days, but during the more critical time following the war; it maintained its standards of scholarship, firm in the faith that honest work is good for the soul; and it is prepared to go on serving the country as an educational establishment of high quality. It is not only the largest College on the Campus in respect to numbers, but it need not fear comparison with any of its sisters in regard to its

achievements. Through the devoted and able service of its Faculty it has made for itself an honorable name among institutions and students all over the land; it has won a position in the academic world which it will continue to hold so long as it receives the moral and material support of the President and the Board of Trustees which it deserves, and without which it cannot hope to maintain the standing which its Faculty has gained for it.

During the past year the Faculty has given its attention to a number of important questions. Upon the recommendation of the Committee on Educational Policy, the requirements for the degree of Bachelor of Arts with Honors were revised, and it was voted to adopt the report of the Committee dealing with the subject, and to publish it in the Announcement in order that the plan may be kept before the student-body. We are hopeful that gifted students may avail themselves of the opportunity, now offered to them, to pursue such studies as may be of particular interest to them, under the personal guidance and inspiration of members of the Faculty. Upon recommendation of the three standing Committees of the Faculty, the Committee on Educational Policy, the Committee on Academic Records, and the Advisory Board for Underclassmen, the Faculty voted to abolish the rule, adopted in 1913, according to which no student could receive credit, in residence or in hours, for any term in which he had failed to pass at least twelve hours of work. In connection with this action the Faculty also voted that no student may register for more than eighteen hours in any term except by permission of the Dean; and that a student who has passed less than a total of fifteen hours of work with a grade of "C" or better in any given academic year shall not be permitted to elect more than fifteen hours in either term of the subsequent year. The purpose of these regulations is to promote scholarship: the student will receive greater intellectual benefit by doing well a limited number of hours than by doing superficial work in many subjects, to which his own experience shows that he cannot do justice. This rule may also help, in a measure, to prevent the over crowding of classes, for it is plain that the more courses each student takes, the greater will be the burden of teaching imposed upon our staff. And it is much more difficult to teach a class of poor students, who are carrying too many hours, than a class of good students.

The Advisory Board for Underclassmen, which was established two years ago, has continued in its efforts to improve the methods of advising freshmen and sophomores in the choice of their studies, and of keeping in touch with underclassmen who may need counsel and help, throughout the term. The Board has made healthy progress in dealing with what is for every university an important problem, and it is learning by practical experience how to solve it. The students of the lower classes are receiving intelligent guidance in planning their work, and are encouraged to confer with their advisers and with the Chairman of the Board whenever they desire assistance. I believe that the Committee's faithful service will result in great good, and that we shall soon find marked improvement in the quality of the work of the upper classes.

The Committee on Educational Policy has been engaged, for a number of years, in studying the question of upperclass requirements for the degree of Bachelor of Arts, and will, no doubt, soon be ready to offer some recommendations with regard to this subject. I hope that a plan may be devised which will enable and require every candidate for this degree to devote a fair proportion of his

time to a somewhat more intensive study of a particular field of work than is now required of him, or perhaps even possible in all departments. This is a matter which the different departments have been asked to take up. Some of them already offer a series of related courses leading to progressive specialization; perhaps others may succeed in mapping out similar lines of study. At present a student may, if he chooses, roam over the whole domain of learning without lingering long in any one spot. There is a joy in wandering and advantage in it; and there is no thought of restricting any one's freedom to get a general education. And yet, a person who has only a superficial acquaintance with many fields and no intimate knowledge of any single one of them has missed his opportunity in a university. "To understand something thoroughly and to do it excellently, that is the thing," says Goethe.

In laying down the office of Dean which has been held by me during the last six years, I wish to express my grateful appreciation of the generous support which the Faculty has always extended to me in the performance of my duties. It has been an honor and a privilege to be associated with men so loyally devoted to the ideals of scholarship and so ready to sacrifice their personal interests for the good of the cause. Education is a matter of the spirit, and so long as this high-minded spirit quickens the heart of the College, it will remain a tower of strength in the community and in the land.

Respectfully submitted,

FRANK THILLY,

Dean of the College of Arts and Sciences.

APPENDIX IV

REPORT OF THE DEAN OF THE COLLEGE OF LAW

To the Acting President of the University:

SIR: I beg to submit my seventh and final Annual Report upon the work of the College of Law.

The registration in the College of Law for 1920-21 was as follows:

Third Year	44
Second Year	49
First Year	25
Special	1
<hr/>	
Total Law Students	119
Seniors in Arts and Sciences taking all law work of the first year	9
Students from other Colleges in the University electing some courses in the College of Law	18
<hr/>	
Total receiving instruction in the College of Law	146

Of the 119 law students 40% were from outside of New York State.

In the fall of 1919 our new entrance requirements of at least two years of general college work went into effect. In that year eleven new students registered in the first-year class, under the advanced requirements. In the fall of 1920 there were sixteen who thus qualified for admission. The entrants in 1921 under the increased requirements should show a more marked increase for the reason that some of those students who entered the College of Arts and Sciences in the fall of 1919 for the specific purpose of acquiring the two years of Arts work as a preliminary to law study will transfer from the College of Arts and Sciences to the College of Law.

In this State there are nearly 3,000 students studying law in Law Schools which require no more than a high school course for admission; but the leaders of the legal profession are demanding a foundation of some liberal culture for professional study. In 1918 the American Bar Association resolved that "It approves the action taken by many of the Law Schools in requiring two years of a college course as a condition of admission to their courses of study, and the Association expresses the conviction that this should be the minimum requirement recognized by Law Schools of the first class" As Chief Justice Taft wrote to the Cornell Convention at Cleveland in May of this year: "Specialization ought not to begin until one has a broad, general education in the humanities * * * I think experience has shown that generally those men who have the broad education are apt to become the leaders in special fields they subsequently enter." The general tendency in University Law Schools is towards the extension of the requirement of pre-legal studies of a liberal character and a few of such Law Schools are requiring that the candidate for admission must present an A. B. degree; or, by some Schools, that he must have credit for at least three years of liberal studies. Perhaps it is not too soon to hope that this College may contemplate the requirement of three years of liberal studies for admission.

The total number of volumes in the Law Library is now 54,201. The accessions during the past year were 1,004 volumes, of which 170 were donations. There are now several hundred volumes which need attention from the binder, but these repairs are being delayed so far as possible because of the great increase in the expense of binding. The cost of law books is still increasing. All new contracts for State Reports are above the price of last year. As stated in my Report of last year the Law Library has now reached the point where a re-classification and shelf lists are necessary and it is my earnest hope that by next year it will be possible to provide a permanent Assistant in the Library.

Professor Stagg took his sabbatical leave of absence in December, 1920, when he accepted the office of Legal Adviser to the Governor of the State. His absence will, however, extend beyond the sabbatical leave and continue during the whole of the academic year, 1921-22. His temporary withdrawal necessitated some readjustments of courses and Mr. Riley Heath, of the Ithaca Bar, was engaged for the remainder of the year to give the course on Public Officers and Municipal Corporations. Mr. Heath, who is a graduate of the College and a successful practitioner, was completely satisfactory and it is proper to recognize his spirit of accommodation in assuming the work upon brief notice. Mr. R. S. Stevens, who has been a member of our teaching staff for the past two years, has consented to remain another year and will give, besides courses in Substantive Law, the

work in New York Practice heretofore given by Professor Stagg. Professor Burdick will be absent on sabbatic leave during the second term of 1921-22.

Professor Lyman P. Wilson has been appointed Professor of Law to assume his duties in September of this year. Professor Wilson, who is thirty-eight years old and a native of Iowa, graduated from Knox College in 1904 with the degree of B. S. and received the degree of J. D. from the University of Chicago in 1907. After graduation from Law School he practiced about four years at Galesburg, Illinois, where he was serving his second term as City Attorney when he was appointed to the Law Faculty of the University of Idaho. He taught law there until 1914 when he was called to a professorship of law at the University of Oklahoma where he remained until 1920. He then became a member of the Law Faculty at George Washington University in Washington, D. C. Professor Wilson comes to us with a most excellent reputation as a teacher and writer, and with every indication of being an accomplished and forceful acquisition to our staff.

For some time I have desired to be relieved of the administrative duties necessarily involved in the Deanship of the College, and the occasion being opportune I resigned the office on June 22 of this year in order to devote my energies exclusively to teaching in the College. During the seven years of my tenure as Acting Dean and Dean it has been a great satisfaction to co-operate with the other members of our vigorous and progressive Law Faculty in the accomplishment of various desired projects. Entrance requirements have been increased; the *Cornell Law Quarterly* has been established; a Practice Court has been created; and salaries have been increased to an extent that will prevent, for the present at least, any deterioration in the quality of the instruction given in the College through the loss of properly qualified teachers.

The members of the Faculty unanimously approved the appointment of Professor George Gleason Bogert to succeed to the Deanship of the College and he has been appointed to the office by the Trustees. Dean Bogert, who is thirty-seven years old, is a graduate of Cornell from the College of Arts and Sciences (A. B. 1906) and the College of Law (LL. B. 1908). He practiced law from 1908 to 1911 when he entered the Law Faculty as Acting Assistant Professor. From 1912 to 1916 he was Assistant Professor; and in 1916 he was appointed full professor. He was absent in military service from May, 1917, to June, 1919. Commissioned as Captain in August, 1917, at the First Officers' Training Camp, he was Regimental Adjutant of the 308th Field Artillery from September to November of that year. He became Major and Assistant Division Judge Advocate in November, 1917, and served with the 78th Division Overseas from June, 1918, to May, 1919. From September, 1918, until his honorable discharge from service he was Division Judge Advocate. In February, 1919, he was promoted to be Lieutenant-Colonel and was cited in General Orders for efficient service. In 1920 Dean Bogert was appointed by the Governor of New York to be one of the three members from this State in the Association called the "Conference of Commissioners on Uniform State Laws." Prior to his appointment he had been requested by the Conference to draft the New Uniform Conditional Sales' Law which has since been enacted in various States. He has, moreover, been otherwise active in the field of legal literature and is the author of text-books on the Law of Trusts and on the Law of Sales in New York and

is the Revising Editor of Huffcut's *Business Law*. His contributions to legal periodicals have been various and excellent and to him more than to any other one person is due the establishment and success of the *Cornell Law Quarterly*. As teacher, writer, and executive he has won success, and the College of Law is to be congratulated upon his appointment to the Deanship, while so many years of active, progressive, and intelligent effort are still before him.

In conclusion I wish to thank my colleagues of the Law Faculty for loyal and helpful support of the Dean during the past seven years which have not been free from some serious trials and readjustments. I want also to express my appreciation to those Trustees of the University whose special professional interest in the College has helped us to keep our pedagogical efforts in touch with the profession generally. And, finally, of our Alumni who have pride in the College and show in so many ways their devotion to its aims,—indeed without the consciousness of whose support we could do relatively little,—I bespeak their continued interest in the one obvious means by which they can pay a debt due to their profession.

Respectfully submitted,

EDWIN H. WOODRUFF,

Dean of the College of Law.

APPENDIX V

REPORT OF THE DEAN OF THE MEDICAL COLLEGE

To the Acting President of the University:

SIR: I have the honor to submit the following report of the Medical College for the academic year 1920-21.

For the first time since 1915 the Faculty feels that the work of the College has been normal in its accomplishments both in teaching and investigation. It was very evident last year that neither students nor teachers had regained their poise; but with the opening of the College last September the customary atmosphere of serious determination returned and all concerned have co-operated to make the results highly satisfactory.

I regret to report that another member of the original Faculty of the College has tendered his resignation which has been accepted by the Board of Trustees to become effective July 1, 1921. Dr. James Clifton Edgar, Professor of Obstetrics, one of the most distinguished teachers in his specialty, having most faithfully served the College for twenty-two years desired to be relieved from his duties last fall, but loyally consented to continue until provision could be made to carry on his work. Professor Edgar will be missed by his associates in the Faculty, and I take pleasure in recommending that he be appointed Professor of Obstetrics, Emeritus, that his counsel may continue to be available to the College. Acting in accordance with the organization now generally adopted, the Faculty recommends that the Departments of Obstetrics and Gynecology be merged and placed in charge of Professor Ward, now the head of the Department of Gynecology.

I regret also to record the death of Dr. James Belden Gere on November 18, 1920. Dr. Gere had been connected with the Department of Pathology for ten years, first as an assistant and later as Instructor in Neuropathology. By faithful endeavor he had become an efficient teacher and had developed as well a real capacity for research. The department was by his death deprived of the fruits of a long period of preparation of a teacher of high quality, while the Faculty has lost a loyal friend.

As this was the first year in which the number of new students was limited, the results of our selection of those whom we considered best qualified to avail themselves of our resources have been viewed with great interest. I am pleased to report that it is the unanimous opinion of those of the Faculty engaged in instructing first-year students that the class is far superior in every respect to any previous one. These students have practically set their own pace, with the result that the few obviously weaker ones soon came to realize their own deficiencies and have voluntarily withdrawn, so that, whereas in previous years about one-third of the entering class has been dropped at the end of the first year, it is anticipated that very few or none will fail this year. Our selections were based upon a careful study of the applicant's entire educational career, personal letters from two or more of his teachers in college, and, when practicable, a personal interview. Whether we shall be so fortunate in our selections in the future is doubtful, but the Faculty feels that the trial has been successful, and the method will be continued.

During the past few years the conviction has gradually arisen that while our students are graduated in possession of a number of facts which, after a hospital internship, qualify them for the practice of medicine, we have failed to instill a desire to search further for the fundamental concepts upon which the science of medicine is founded. It is generally admitted that the first function of a medical college is to train practitioners of medicine; but only in recent years has it become recognized that the training of investigators and teachers is essential for the maintenance of teaching faculties and progress in the science of medicine. The Faculty believes that Cornell has achieved reasonable success in the former field, but it doubts if we have accomplished as much as we ought in the latter. In studying the question it has naturally subjected the curriculum to criticism and the Curriculum Committee has analyzed the schedules of other medical colleges as well as our own. This shows that as the science of medicine has expanded and knowledge has increased, hours have been gradually added to the curriculum, until now it is doubtful if a student can digest the enormous number of facts which are placed before him; much less will he have time to reflect upon them or remain receptive to such stimuli to work along original lines of thought as may be given to him by his teachers. It is believed that a large majority of the students who now come to us are capable of benefiting by opportunities for independent study, and to a certain extent, along lines of their own choice. It therefore becomes evident that it is our duty to make provision for such students, for otherwise we may become a college "where pebbles are polished and diamonds are dimmed." As the first step in this direction the Faculty proposes to reduce the scheduled hours by about twenty per cent, but it realizes that little or nothing will be gained by this unless the methods and spirit of the instruction are changed to approach the atmosphere of a graduate school. The

success of such a type of instruction will depend to no small degree upon the Faculty. Considerable time will be required to work out the details, but during the next year I hope to be able to present for your consideration a curriculum based upon these ideas.

It gives me satisfaction to report that a generous benefactor, who desires for the present to be unnamed, has established a loan fund to be made available for students entering upon the third year of the course. The fund is so provided that it will gradually increase in amount and form the nucleus for a sum which may eventually aid several students each year, though at present only one can receive its benefits. The award is to be made upon the basis of the applicant's financial status and his promise for usefulness as determined by a committee of teachers concerned with the first two years of the course. As few of our students are financially independent and many are self-supporting, this opportunity will be welcome.

It must be regarded as most unfortunate for the College that the alumni have not been organized in such a manner that they could be brought into close relation with its affairs and their advice and support received. Several years ago such a movement was well under way, but it was interrupted by the war. The effort has been resumed, and on May 16 an Alumni Day brought many back to attend demonstrations in the College and hospital, a luncheon at the College, and a banquet in the evening. Your presence at these functions, together with Dr. Schurman, was highly appreciated, and the reunion accomplished a great deal in effecting harmonious relations between the alumni of the Medical College and the University.

The Committee on Educational Policy which was organized last year has held monthly meetings. It has been very active in considering a number of problems relating to the welfare of the College and has been of great service in making well-considered recommendations to the President, the Faculty, and the Dean. I consider the formation of this Committee the most important step toward better organization of the College which has been made in recent years; and because of the interest and spirit with which every member has entered into the work brought before it I believe its usefulness and influence will increase.

The library, which has not been satisfactorily maintained heretofore and has therefore been inadequately used by the staff of instruction and by students, has greatly increased in activity and become more useful through a gift which has enabled us to employ a very competent librarian and to purchase a considerable number of valuable accessions. The Library Committee, of which Professor DuBois is Chairman, has been very efficient and the library promises to become, as it should be, the heart of the College.

The importance of correlation between the Ithaca and New York Divisions of the College has from the first been appreciated, and to promote it the President and the Secretary of the Ithaca Faculty have always attended the meetings of the New York Faculty; also from time to time representatives of the New York Division have gone to Ithaca to attend conferences or deliver lectures, always with pleasure to them personally and with advantage to the College. As a result of your interest in the matter, provision has been made for more numerous visits which will make for a better understanding of the problems of

both divisions on the part of each of the Faculties, and I believe the College will greatly benefit thereby.

The annual reports of the several departments, which are on file in the office of the College, show that they are generally in a very satisfactory condition. The chief defect in the scientific departments is the inadequate number of assistants. As the hospitals with which we co-operate are brought into closer relation with the College, an increasing amount of work is thrown upon these departments, and as the teaching must of necessity be done, the demands from the clinic encroach upon the time which should be devoted to investigation. The only way to meet these very proper and highly desirable demands is to increase the personnel, and I believe this should be done and as soon as the necessary funds can be secured. It is also important to reduce the routine duties of the heads of the departments to a minimum. We secure the most eminent scientists to fill the positions and then place upon them such a burden of executive detail that they are left with no energy to pursue the work for which they are particularly fitted. Again, overmanning the staff is the only apparent remedy. It is my opinion that several departments, particularly Pathology, Bacteriology, and Chemistry, must be supplied with high grade assistant professors if they are to maintain the efficiency and productivity for which they have been notable.

The clinical departments have been gradually strengthened and most of them may now be considered as fulfilling the requirements demanded of them. They are, however, all working under difficulties which should not exist in a medical college of the first class judged by the standards of today. I again refer to the one outstanding deficiency of the College which prevents it from assuming its proper place in the forefront of American schools of medicine,—the lack of intimate physical and educational relations with a large modern hospital. It has become clear that the aims and interests of hospitals are identical with those of the medical colleges. Neither can properly fulfill its functions,—prevention and relief of the physical and mental ailments of mankind,—without co-operation with the other; yet they generally continue more or less isolated and thereby fail to completely achieve their aims. The time must soon come when the hospitals will appreciate this as clearly as do the universities now. Our present relations with the New York, Bellevue, Nursery and Child's, and Memorial Hospitals are as satisfactory as can be expected without the ideal arrangement for which we are striving; yet our opportunities are somewhat limited, and accomplishment is restricted. While this is felt most keenly by the clinical departments, it is reflected throughout the laboratories as well.

Some seven years ago, the trustees of Bellevue Hospital adopted the policy of assigning the professional work of four divisions into which the hospital is divided to several medical colleges, Cornell being one of them, with the result that its efficiency has advanced to a point which appeared improbable previous to that time. The success which has been achieved has been possible only through the sympathetic co-operation of the Director of Laboratories, Dr. Symmers, who has invariably placed the large resources at his command in close relation with the clinics and has personally given instruction to the staff and students with a freedom enjoyed in few hospitals.

The medical clinic of the Second Division of Bellevue Hospital, established in 1919 and made possible by affiliation with the Russell Sage Institute of Pathology, to which I desire to record grateful appreciation, has developed most satisfactorily. Being manned chiefly by whole-time workers and its location being in a municipal hospital, it has excited great interest throughout the educational world. The results appear to justify the high expectations with which it was organized.

The New York Hospital has, as heretofore, accorded every facility to the Departments of Medicine and Surgery, and has co-operated in establishing a clinic for hypersensitiveness under the Department of Bacteriology. The Nursery and Child's Hospital continues to extend its opportunities to the Department of Pediatrics and has enabled Professor Schloss to build up one of the best children's clinics in the country. The College takes great satisfaction in its close affiliation with the Memorial Hospital, and is grateful to the Board of Managers for the manner in which they approach the problems of mutual interest to the College and the Hospital. The plan of affiliation between them may well serve as a model for similar undertakings.

The problem of proper housing for our students has gradually become very serious, and during the past two years has been acute. It is now almost impossible to find hygienic surroundings within a reasonable distance from the College at a price which can be met by the students. This is also true in large measure for the staff of instruction. The high cost of living turns many desirable students away from New York and the College loses a number because they are unable to secure suitable quarters nearby. The students and the staff are widely scattered, and most of them are obliged to travel a great distance daily. The only solution of the difficulty is to provide a dormitory in the immediate vicinity of the College, and I regard this as the second most important and pressing problem with which we are faced.

The supply of teachers in the fundamental sciences with a degree in medicine has never been sufficient to fill the existing positions and today the need is greater than ever before. Very few graduates enter these branches for a career, largely, I believe, because they are diverted to clinical medicine during their hospital internships, or by the necessity of making a living at once. I think that a number of our best students would return to the laboratories if a modest living could be provided, and I believe that the establishment of fellowships for such a purpose would aid in solving the difficulty which is serious for the future of medical education.

The needs of the College may be summarized as follows:

A close affiliation with a large hospital, both institutions to be on a common site and form a nucleus about which other hospitals and institutes would gather; a dormitory for students and instructors adjacent to the College; additional assistant professors in several laboratory departments; fellowships for recent graduates. Large sums of money will be required to provide for these necessities; but the record of the College is such, and the benefits which flow from it are so great that one cannot doubt that adequate support will be forthcoming.

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 Acting President of the University:

SIR: I have the honor to submit this brief report of the work of the Ithaca Division of the Cornell University Medical College for the year 1920-21.

The reports from the various departments show that there has been a continuation of that steady and gradual improvement which has been characteristic of recent years.

FACULTY

There have been few changes in the personnel of the Faculty during the past year and as heretofore there has been the most cordial spirit of co-operation between both departments and individuals. It has been like one big family working for a common end.

The most important addition to the Faculty this year was James W. Papez, Assistant Professor of Anatomy and Neurology. He comes to Cornell from Emory University, Atlanta, Georgia, where he was Professor and Director of the Department. He graduated from the University of Minnesota with the degree of A. B. in 1908, and with the degree of M.D. in 1911. He has published a number of important papers in Anatomy, especially in Neurology.

There have been seven new assistants appointed, one in Physiology, one in Biochemistry, two in Histology and Embryology, and three in Anatomy. All of them have been most satisfactory.

I wish again to commend the loyalty and devotion of all the members of the staff of instruction. Their time and energy has been given without stint to the work of instruction and to research.

STUDENTS

The number of students in the Medical College at Ithaca has been less than in any year since 1916-17. This was due to the limitation in numbers imposed by the Faculty and Trustees. Although the number at Ithaca was restricted to 30, and this number was selected from the considerably larger number applying, only 28 students began the work in September. The two who withdrew notified the College of their decision so late, that all the others who had been refused earlier had made other plans. To meet this difficulty it would be desirable to require that students, upon being accepted, should deposit at once with the Treasurer of the University a part of the year's tuition; this to be forfeited should the student withdraw and his place not be filled.

Of the 28 students registered in the first-year class in the Medical College at Ithaca this year, 17 were men and 11 women; 5 entered from outside colleges, and 23 from the College of Arts and Sciences of Cornell University. Of the 17 men, 1 is a college graduate, and 15 are seniors in the College of Arts and Sciences, Cornell University, and 1 is a senior in the University of Hawaii. Of the 11 women, 2 are graduates and 8 are seniors in the College of Arts and Sciences, Cornell University, and one is from Barnard College. The general character of the work of the students has been excellent.

In addition to medical students each department in the Medical College, as heretofore, has given instruction to a considerable number of students from other colleges in the University.

CHANGES IN THE CURRICULUM

There have been this year some additions and readjustments in the curriculum which had been practically unchanged for some time. The time left vacant by requiring organic chemistry for admission has been filled by extending the course in Biochemistry so as to include those special aspects of organic and physical chemistry that are necessary to an understanding of modern medical problems. This additional work was taken care of by the appointment of but one new assistant in this department.

The work in the Histology and Embryology of the nervous system has been combined with the work in Anatomy of the nervous system, under the direction of Assistant Professor Papez, and the course has been given in the anatomical laboratory. This rearrangement will effect some saving of time which should be added to the time now allotted to the work in Histology and Embryology.

THE MEDICAL LIBRARY

The permanence and growth of the Medical Library has now been assured by the Charles Edward Van Cleef Memorial Fund. To Mr. Mynderse Van Cleef, the donor of this \$10,000 endowment fund, the Medical Faculty are very grateful. It was his original gift of the library of his brother, Dr. Charles Edward Van Cleef, Cornell B. S. '71, which formed the nucleus of the medical library.

Upon the recommendation of the Faculty and the approval of the Trustees, the library will hereafter be known as the Charles Edward Van Cleef Memorial Library.

The present reading room will serve, as in the past, as the main study library for students, and will contain such reference books and literature as are needed by them.

The east half of the large room on the southwest corner of the first floor, used by Professor Gage as his private research laboratory, will, at his request, be partitioned off to serve as a research library. It will be properly furnished with lights, cases, and study tables, and will be used also as the main storage room for the books.

The extensive sets of periodicals and society proceedings, dealing with the subjects taught in Stimson Hall but belonging to the University Library, will, as in the past remain in the University Library, and only such volumes as are needed for immediate use will be transferred to the research library.

The Trustees have provided the necessary funds for the changes mentioned above, and also for a part-time library attendant to carry out the routine work under the direction of Professor B. F. Kingsbury who has been designated as the librarian in charge.

RESEARCH

Nearly every member of the instructing staff of the Medical College has been actively engaged in research, and a number of important investigations have been published during the year. In each department also there are from 8 to 12 graduate students taking their major or minor work as candidates for the A. M. or Ph. D. degree. These students also are beginning research under the direction of the professors in the College. Although this kind of instruction demands much of a teacher's time, it is one of the most important functions that he has to perform.

NEEDS

The many needs of the college have not materially changed since my last report. Some of these should have special emphasis. An assistant professorship in Histology and Embryology and another in Physiology is urgently needed to relieve the heads of these departments, who are much overburdened with a multiplicity of duties. Another special need of the Department of Physiology is a small farm, readily accessible, with adequate buildings for experimental animals. This would enable the department to undertake important investigations now impossible.

Copies of the reports of each of the separate departments will give in greater detail the work and needs of the college.

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 Acting President of the University:

SIR: I have the honor to submit herewith the report of the New York State Veterinary College for the academic year 1920-21.

The College has functioned as heretofore along the lines prescribed in its charter. The work has been performed successfully although there are no outstanding accomplishments that overshadow in importance those of previous years. There

have been but few changes in the problems for research, in the Faculty, or in the curriculum. The Honor System has been tentatively accepted.

The total registration of undergraduates is 85, distributed by classes as follows: freshmen, 14; sophomores, 34; juniors, 16; seniors, 16; practitioner's course, 1. There were also 4 graduate students. In readjusting the entrance requirements and instruction in veterinary colleges, to meet the growing demands of the profession, especially in dealing with food-producing animals, there has resulted a marked decrease in the number of students. This condition is general throughout the country but the colleges located in the large cities have suffered most. The more significant influences that have tended temporarily to discourage young men from taking up veterinary medicine are the prevalence of the automobile and the transfer of the major portion of veterinary service from the cities to the country. However, we are receiving more inquiries from prospective students this year than we did last. This indicates that the situation relative to the needs for veterinarians in the country, is being recognized which, if true, will insure for the future the number of students required to meet the demands.

The Veterinary College gives instruction in several of its courses to students registered in other colleges of the University. With the exception of a special three-hour course on health and disease of domesticated animals, which is provided for the students in the College of Agriculture, such instruction is given in the regular courses. However, the number taking the lecture course in physiology the first term has increased to the point where it has been deemed wise to repeat it in the second term. The number of non-veterinary students that are taking work in this College, together with the subjects, are as follows: bacteriology, 29; special course on health and disease, 91; haematology, 5; horse-shoeing, 11; various courses in pathology, 16; physiology, 98. This gives a total of 250 students not registered in the College to whom instruction is given. The veterinary students receive the instruction, called for in their curriculum, in animal husbandry, botany, chemistry, embryology, histology, and zoology in the respective departments in other colleges of the University.

Our small registration enables the teachers to give more individual attention to students than would be possible with larger numbers. The major part of the instruction in all of the departments is given by experienced men. This is possible because of the fixed curriculum and the few elective courses. There are a number of subjects that it would be desirable to include but there is neither time in the regular schedule for undergraduates to take them nor funds sufficient to supply competent teachers for the work. The curriculum is being adjusted to meet, as far as possible, the growing and exacting demands upon our graduates. However, it is necessary to recognize the limitation of subjects a student can take with profit and also the danger attending special courses that are not presided over by experienced teachers. The rapid accumulation of new knowledge of animal diseases suggests the desirability, which may soon become a necessity, of adding a year of prescribed collegiate work as a prerequisite. It is felt, however, that this requirement cannot be made until the readjustments in the profession are more definitely settled.

I am justified in placing special emphasis on the high quality of the practical instruction that is being given. The ambulatory, surgical, and small animal

clinics furnish all the material that can be utilized advantageously for teaching purposes. In addition to the usual clinical work, the students have much experience in the use of anti-hog-cholera serum, serum and virus, and in the administration of tuberculin. Last year there were 4,413 animals treated in the various clinics. They exhibited practically all the diseases with which animals suffer in this latitude.

The Act of Congress, approved June 4, 1920, authorizes the formation of Veterinary Units of the Reserve Officers, Training Corps in veterinary colleges connected with institutions operated under the law for Land Grant Colleges. Such a unit has been established here. It enables the students in their junior and senior years to enter the Veterinary Corps Training Unit and receive "commutation of subsistence" equal to that of soldiers. At present this amounts approximately to sixteen dollars a month which each student in the upper classes can receive from the Federal Government. Students who enter this unit are eligible, upon graduation, to a commission in the veterinary section of the Officers, Reserve Corps. By an arrangement with the veterinary officer in charge, the work given in the College is accepted as a substitute for the special veterinary instruction called for in the regulations. By this arrangement, the juniors and seniors are obliged to give from one to three hours only of actual time each week to military instruction in order to receive the benefits of the unit.

The assistance rendered veterinary practitioners, livestock owners, and the Commissioner of Agriculture and his workers in diagnoses and the preparation of certain diagnostic and prophylactic biological products has continued as heretofore. Last year there were received for examination and diagnosis a total of 1,090 specimens. Of these, 122 were for rabies of which 48 were positive. There were made and distributed to veterinarians in the state 16,651 doses of anthrax vaccine; 2,148 doses of mallein; 155,696 mls of tuberculin; 701,204 mls of anti-hog-cholera serum; and 15,298 mls of hog-cholera virus for the simultaneous treatment against hog cholera.

Special investigations have been carried out in connection with the broad subject of infectious abortion and sterility in cattle; scours and pneumonia in calves; immunity against abortion; pneumonia in swine; the diagnosis and treatment of the diseases of the digestive tract in cattle; the etiology and nature of an unidentified disease among cattle; malignant tumors in cattle; the total non-protein nitrogen, urea, uric acid, creatinine, and sugar in the blood to determine standards for comparison with pathological changes; and chylomicrons in the blood associated with the digestion of fat. As these researches are completed, the results will be published in the annual report to the Legislature. The report to the Legislature for 1919-20 was issued in March. It is a volume of 238 pages containing the results of 15 researches in connection with animal diseases in addition to the records of the clinics and post mortems.

The Legislature of 1920 provided two positions for research, one in connection with the diseases of sheep and the other with those of poultry and rabbits. The appropriations, however, were small and it was necessary to begin the work with instructors. It was decided that the investigations on the diseases of sheep should be placed under the supervision of the professor of medicine and Dr. H. A. Hoffman, a graduate of the Veterinary Department of the Kansas State Agricultural College, was engaged for this work. In March, after com-

pleting a careful survey of the diseases of sheep in this state, and making a report on the same, he resigned. The Legislature failed to make an appropriation to continue these investigations. The studies on the diseases of poultry were placed under the supervision of the professor in charge of small animal diseases, and Dr. J. W. Fuller, a graduate of this College, was employed. Dr. Fuller has made a somewhat careful survey of the diseases of poultry in this state and is taking up definite problems in connection with them. This position was retained and the work will continue.

Dr. Walter Long Williams will retire at the close of this academic year. Dr. Williams was a member of the original Faculty of this College. He was appointed in 1896 Professor of Surgery and Obstetrics. His outstanding contributions to veterinary surgery are two operations, one for "poll evil" and the other for "roaring." These have been adopted by veterinary surgeons not only in this country but also in Europe. His book on Surgical and Obstetrical Operations, which is a guide for practical instruction, has had a wide influence in the development of these subjects. He has published a text book on Obstetrics that is recognized as authoritative throughout the English speaking world. Since 1914, Dr. Williams has been engaged in the investigation of the diseases among breeding animals. His researches have given a new interpretation to the phenomena of these maladies. The procedure he has formulated for their prevention is proving to be efficient. As he leaves the University, there is coming from the press a volume of over 800 pages, well illustrated with colored plates and text figures, on the Diseases of the Genital Organs of Domestic Animals. This is the first book of the kind in the English language. His contributions to the veterinary profession have been original, helpful to the practitioner, and indirectly valuable to live-stock owners. His service has been of far-reaching benefit to the veterinary profession.

The annual two-day conference for veterinarians of the State was held on the 20th and 21st of January. For this conference we were able to secure addresses on important practical subjects from Dr. John R. Mohler, Chief of the Bureau of Animal Industry, Washington, D. C.; Dr. Theobald Smith, Rockefeller Institute for Medical Research, Princeton, N. J.; Mr. Wayne Dinsmore, Secretary of the Horse Association of America, Chicago, Ill.; Dr. Carl W. Gay, professor of animal husbandry at the Ohio State University, Columbus, Ohio; and Dr. Augustus S. Downing of the Education Department, Albany, N. Y. A full and helpful program was carried out. The attendance was large, fully 20 per cent of the practitioners being present. There were several visitors from other states. The papers presented will be published in the April issue of the *Cornell Veterinarian*, a copy of which will be sent to every practitioner in the State. At the conference, a portrait of Professor Simon Henry Gage, Professor of Histology and Embryology in the original Faculty of the College, was presented to the University by its alumni. The large attendance and the interest manifested at the conference is an assurance that it is appreciated by the practitioners. Further, it indirectly renders valuable assistance to the animal owners.

The Legislature of 1921 reappropriated the \$30,000 that was granted in 1919 toward the construction of the south wing of James Law Hall. It failed, however, to make further appropriations for this much-needed structure. As it was a year for retrenchment, the appropriation for maintenance for 1921-22

totaled \$105,860 which is a reduction of 3.5 per cent under that for the present year.

The Faculty has co-operated fully in the efforts to carry out the purposes of the College.

Respectfully submitted,

V. A. MOORE,

Dean of the Veterinary College.

APPENDIX VIII

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

To the Acting President of the University:

Sir: I have the honor to submit herewith a report of the work of the New York State College of Agriculture for the academic year 1920-21.

ENROLLMENT OF STUDENTS

The registration figures for the College show little change from those of last year. The effect of the war remains evident in the abnormally small enrollment in the junior class, which entered in the fall of 1918. The numbers in the present freshman and sophomore classes are also somewhat below the pre-war level, indicating that other causes, important among which are the farm labor situation and the farmers' present economic plight, are operating to limit attendance.

The large freshman class of last year contained a considerable number of students whose entrance had been delayed by reason of the war. The same is no doubt true of the winter courses.

Regular undergraduate students: 1920-21		1919-20	
Freshmen.....	351	414	
Sophomores.....	319	247	
Juniors.....	232	253	
Seniors.....	240	302	1,216
Special students.....	75		89
Winter-course students:			
Agriculture (General).....	156	231	
Dairy Industry.....	43	55	
Poultry Husbandry.....	37	48	
Fruit Growing.....	24	22	
Home Economics.....	39	21	
Flower Growing.....	10	10	
Vegetable Gardening.....	13	9	
Game Farming.....	4	—	396
Graduate students.....	215		229
Summer school students.....	530		530*
	2,288		2,460

*Note.—The same figures appear for the summer sessions of the two years, since that session is now counted as part of the following rather than of the preceding academic year, as was done in the tabulation published in last year's report. The enrollment in the Summer School of 1921 (numbering, as this report is being written, the unexpected total of 924) will appear as belonging to the fiscal year of 1921-22).

NEW YORK STATE BANKERS' ASSOCIATION SCHOLARSHIPS

For many years, the New York State Bankers' Association, chiefly through its Secretary, Mr. E. J. Gallien, and its Committee on Agriculture, has co-operated most helpfully with the College in promoting the junior project, or boys' and girls' club work. During the past year, the Association gave further substantial evidence of its desire to encourage farm boys and girls to improve their agricultural practice by offering five scholarships, each in the amount of \$250, to cover railroad transportation and maintenance of five boys and girls who would do the best junior project work under rules laid down by the College of Agriculture, the scholarships to be available for the short winter courses given in the year 1921-22. These scholarships were donated by the present President of the State Association, Mr. S. G. H. Turner, President of the Second National Bank of Elmira, and the following four former presidents of the State Association: Walter H. Bennett, Vice-President of the American Exchange National Bank of New York City, Henry C. Brewster, Chairman of the Board of the Traders' National Bank of Rochester, Lewis E. Pierson, Chairman of the Board of the Irving National Bank of New York City, and Robert H. Treman, President of the Tompkins County National Bank of Ithaca. Grateful acknowledgment is due these persons for their gifts to such a worthy purpose.

CHANGES IN THE STAFF

The year covered by this report witnessed the loss from the staff of the following valued teachers, who left to accept attractive posts elsewhere: E. G. Montgomery, Professor of Farm Crops and Head of Department; K. C. Livermore, Professor of Farm Management; E. O. Fippin, Extension Professor of Soil Technology; R. W. Rees, Extension Professor of Pomology; Lulu Graves, Professor of Home Economics; H. E. Thomas, Extension Assistant Professor of Plant Pathology; M. D. Butler, Extension Assistant Professor of Vegetable Gardening; David Lumsden, Assistant Professor of Floriculture; Bonnie E. Scholes, Extension Assistant Professor of Home Economics.

The following appointments have been made, effective during the past fiscal year: Dr. C. E. Ladd, formerly Director of the New York State School of Agriculture at Alfred University, Professor of Farm Management; H. E. Babcock, Ph.B., formerly State Leader of County Agricultural Agents, Professor of Marketing; Dr. Doak B. Carrick, formerly of the Bureau of Markets, United States Department of Agriculture, Professor of Pomology; Gilbert W. Peck, M.S., formerly Agricultural Agent in Ontario County, Extension Assistant Professor of Pomology; Arno H. Nehrling, formerly head of the Department of Floriculture at the Massachusetts Agricultural College, Assistant Professor of Floriculture.

On October 1, 1920, Professor A. J. Heinicke was promoted to the headship of the Department of Pomology.

At the Commencement meeting of the Board of Trustees, Dr. L. H. Bailey, the able and distinguished Director of this College for many years, who had retired in 1913, was elected Professor Emeritus. At the same time Dr. W. H. Jordan, who for twenty-five years had directed the New York Agricultural Experiment Station at Geneva with conspicuous success and who held appointment to the staff of this College by reason of the affiliation of the State College and the State

Experiment Station, was elected Professor of Animal Nutrition, Emeritus.

Dr. R. W. Thatcher, successor to Dr. Jordan as Director of the New York Agricultural Experiment Station, was elected Professor of Plant Chemistry in this College.

CHANGES IN INTERNAL ORGANIZATION

A number of important changes in the internal organization of the College should be recorded.

On September 25, 1920, on the proposal of the Dean, the Agricultural College Council recommended to the Trustees the transfer to the College of Agriculture of the instruction in botany now being given in the College of Arts and Sciences, and the transfer to the College of Arts and Sciences, Department of Chemistry, of the work in agricultural chemistry now being given in the College of Agriculture. At the same time the Dean called attention to the fact that the State Architect, in preparing plans for the development of the College of Agriculture, was providing space for the Department of Zoology, pursuant to the action of the Trustees of January 15, 1915.

On November 12, 1920, on the proposal of the Dean, the Agricultural College Council recommended to the Trustees that there be transferred from the College of Agriculture to the College of Architecture the design and construction phases of landscape art as now existing in the former College, the College of Agriculture to retain responsibility for instruction in the selection, care, and use of plant materials in landscape design and in country planning, and for extension teaching in landscape art, that is, in the development of extension service for the improvement of country life by means of better planning of rural communities and of both public and private properties within them. In order to retain the necessary unity in the professional landscape work, it was agreed between the Deans of the two Colleges that it is desirable that the head of the landscape instruction, or his successor, in the College of Architecture, should retain his seat in the Faculty of Agriculture, and that the person in charge of plant materials in landscape design in the College of Agriculture should be given a seat in the Faculty of Architecture.

The foregoing proposals were made in the interest of better educational organization, in order to bring together within the University departments of instruction working in common subject-matter fields. The proposals were approved by the Board of Trustees, the details as to time and manner of transfer being referred to the President with power.

On April 29, 1921, the Dean recommended to the Council that the Department of Farm Crops be discontinued as a separate department; that the crop-improvement and variety-testing work be transferred to the Department of Plant Breeding, already engaged in such work, and that the crop-production aspects be transferred to the Department of Soil Technology; that the latter department, because of its broadened functions, be renamed the Department of Agronomy and continued under the headship of Dr. T. L. Lyon. Experience had shown that, in the organization of the College, the field allotted to farm crops was so restricted as to adversely affect the development of the subject and the freedom of the teachers and investigators. The new arrangement effected is not entirely free from arbi-

trary allotment of services; collegiate departments seldom are. Under the existing departmentalization of the College, and the stage of development of the several subjects affected, the changes seemed to offer the largest promise of substantial gains and at the same time to meet the demands of logical organization.

Incident to these changes, it was further recommended that the Department of Vegetable Gardening, which at the outbreak of the World War had suffered almost complete loss of its staff and for administrative convenience had been temporarily joined to the Department of Farm Crops, be re-established as a separate department. Professor H. C. Thompson was named head of the re-established department.

All of these changes were approved by the Council and confirmed by the Board of Trustees.

During the past year, the Trustees amended the statutes of the University so as to provide that the Dean of the New York State Veterinary College should be made a member of the Agricultural College Council, and the Dean of the New York State College of Agriculture be made a member of the Veterinary College Council. This association will undoubtedly prove beneficial to both Colleges, not alone because they have common problems as State institutions, but quite as much because they are both concerned with the live-stock industries of the State. It should also help to assure in future the continuance of the cordial relations which have existed between the two Colleges.

THE BUILDING PROGRAM

Progress on the building development of the College, authorized by the Legislature of 1920, has been chiefly in four directions:

(1) On November 11, 1920, the State Architect presented to a joint meeting of the Agricultural College Council and the Committee on Buildings and Grounds of the Board of Trustees of Cornell University, studies, plans, and outlines showing the character and scope of the contemplated additions to the College of Agriculture in respect both to classroom and to farm buildings, based on a detailed statement of the needs of the College filed with the Legislature of 1920. These comprehensive studies were approved by the joint conference, and were confirmed by the Trustees on the day following.

In addition to a detailed verbal explanation of the plans, the State Architect presented the following statement:

STATE OF NEW YORK
DEPARTMENT OF ARCHITECTURE
ALBANY

November 11, 1920

REPORT REGARDING GENERAL STATUS AND GROUP PLANS
FOR AGRICULTURAL SCHOOLS, CORNELL UNIVERSITY

The general or group plan submitted herewith, presents the final results of the co-operative study between the State Architect and the Committee on Buildings and Grounds of the Board of Trustees, the Dean of the Agricultural School and members of the Faculty, and the Consulting Architect.

It is confidently believed that it represents practically the first attempt to develop a complete, comprehensive group plan of all the activities involved in Agricultural Education. It has been developed with a deep consciousness of the supreme importance to the American people of providing an institution broad, comprehensive, and complete in all its parts for education in this noble and fundamental calling. It has been visualized as a recognition on the part of the people of the State of New York that, if this Nation is to survive, Agriculture must be and continue as one of the most honorable, lucrative and inspiring of vocations, requiring the best of educational equipment, the most complete technical knowledge and practical experience. As a mold in which citizenship of high ideals must be cast, it has been my effort in this group of buildings to present something worthy of the calling of agriculture, a calling which from ancient times has been the foundation on which the prosperity and civic standing of all nations has been based and which has been intimately interwoven into the lives of the people, forming in fact, an essential part of their religion as expressed in human terms.

The plan submitted to Governor Smith and the Legislature on which the present appropriation was based, has been developed with these ideals constantly in mind. The inspection trip of the big agricultural colleges of the Middle West at Urbana, Ill., Madison, Wis., St. Paul, Minn., Ames, Iowa, Lincoln, Neb., Lansing, Mich., etc., has confirmed the wisdom of the general design and composition of the group, emphasizing the soundness of the principle of planning in the great quadrangle. The generally scattered disposition of buildings in most of the institutions results in no outstanding or definite impression. At Lincoln alone is there any definite attempt at grouping, but not on any such comprehensive and coherent scale as in our group for the New York State College of Agriculture.

The combining of the remodeled Roberts and Stone Halls and Dairy Buildings with the Home Economics and Caldwell Hall and the new buildings for Plant Industry and Biology, Library, Museum and Assembly Hall, to form this great Agricultural quadrangle has been worked out in detail and with some modifications of the original plan. The plan for these buildings, as herewith submitted, represents the results of the inspection trip.

The building for Rural Economics and Farm Management has been developed in accordance with the requirements of this most important department, and has been located as originally planned, forming with Forestry and the new Poultry building a subsidiary group with its own forecourt.

The Agricultural Engineering building, located upon the site of the old power plant, has been developed along lines determined by the character of the topography of this site and also as the result of conclusions drawn from the inspection trip above referred to. This particular building must in its mass accuse the industrial type of buildings necessary in this class of work. The building consists of two parts, a head house of classroom and office type, basement and three stories high, and a one-story, industrial type shop building to provide for all the laboratory work connected with tractors, gas engines, blacksmith, and other work of a purely shop character. As located, the head house is reached from the main campus level at the grade of the third floor, and there are also grade entrances at the first floor level from the present road to the power house and entrances at the ground level for the shops and basement of the head house. A road will be brought from the farm buildings direct to the shops by joining to the existing

roads, so that tractors and heavy machines will be kept off of the main roads of the campus. Thus the noise, dirt, and objectionable features of this highly important department will be removed from the main buildings and yet be readily accessible. An entrance from the state highway will be developed.

The Dairy building, located as in the original plan, has been developed along quite different lines from the primary part. As a result of the inspection trip and seeing many commercial plants, the Dairy building has been designed with a head house, basement and three stories high for class rooms, laboratories, lecture room, etc.; and the entire student and manufacturing work of the dairy industry will be put in a one-story type of industrial light and airy construction, employing the most modern, scientific, and sanitary equipment and materials.

1. Plant Industry — Pathology
2. Biology — Botany
3. Museum and Library
4. Agronomy — (Caldwell)
5. Home Economics
6. Rural Economics and Farm Management
7. Home Economics
8. Roberts Hall — Administration
9. Stone Hall — Old Dairy Building
10. Agricultural Engineering
11. Dairy
12. Forestry
13. Poultry
14. Farm operations, barns, etc.

(Signed)

Respectfully submitted,
LEWIS F. PILCHER

The following actions of the Committee on Buildings and Grounds and of the Board of Trustees of Cornell University were taken on the recommendation of the State Architect, and in compliance with the provisions of the Appropriation Act that the plans "be approved by the Trustees of said University, by or before December 1, 1920."

"WHEREAS, As the result of a survey made of the needs of the College of Agriculture of Cornell University by L. F. Pilcher, State Architect, under the direction of the Governor of the State of New York and the Legislature of the State of New York, a report was made that a scheme of development should be carried out that would show the complete extension requiring the expenditure of approximately six million dollars; and

"WHEREAS, In accordance with a group plan, prepared by the architect in consultation with the various Faculties and officials of the University, the immediate betterment requirements of the Agricultural College were demonstrated, and upon these drawings the approximate estimate of cost of three million dollars was made by the State Architect; and

"WHEREAS, An appropriation of \$500,000.00 was recommended to meet the probable costs of the betterment projects up to and including the first of July, 1921; and

"**WHEREAS**, In order that the interests of the State might be conserved and the probable economy of the best construction market be taken advantage of, it was legislated that the general studies and group plans showing the scope of the project, should be completed and presented for the approval of the Trustees of Cornell University previous to December 1, 1920; and

"**WHEREAS**, As the result of the intensive study of the requirements of the Agricultural College, made with the various Faculties and experts of the College and with the members of the Committee on Buildings and Grounds; and

"**WHEREAS**, Further, in accordance with the comprehensive check and advice of the Consulting Architect, Mr. Albert L. Brockway of Syracuse, N. Y., the plans presented to the Trustees for their information and action on Thursday, November 11, 1920, having been approved by the Committee on Buildings and Grounds in the following resolution,

"**WHEREAS**, Having received from the State Architect, Lewis F. Pilcher, the general studies and group plans showing the scope of the project developed by him with the advice of the Consulting Architect, Mr. Albert L. Brockway, of Syracuse, N. Y., to further the development of the State College of Agriculture at Cornell University, it is

"**Resolved**, That these plans, as presented, be and hereby are approved, and it is further

"**Resolved**, That the plans as hereby approved, be and hereby are recommended to the Trustees of Cornell University for their approval."

"*Now Therefore Be It Resolved*: That these plans be and hereby are approved in accordance with the requirements of Chapter 165 of the Laws of 1920, and the State Architect is hereby directed to further develop such portions of these plans for contract during the winter, as the Committee on Buildings and Grounds of Cornell University shall determine upon."

(2) The State Architect has studied at length the requirements of departments and the most logical and advantageous association of departments and lines of work. On the basis of detailed information gathered in person at the College, and from data submitted by departments, the Architect has completed a large perspective, in color, showing the arrangement and proposed design of all of the main buildings required, except the additions to Home Economics. The accomplishment of this design sets the whole program substantially forward, showing, as it does, just what is required, how the parts are to be related, and how the necessary buildings can most suitably be grouped on the land area available. The design reveals, on the part of the State Architect, a clear understanding of the requirements of the work, and of the spirit and purpose, of the College. It is an excellent achievement.

(3) As soon as the block plan for the enlarged development of the College began to take shape, it became evident that the contemplated new dairy building should be put forward for construction first, as the new construction in the main quadrangle would necessitate the removal of the manufacturing wing of the old building. By the close of the fiscal year, the detailed plans for the new dairy building were approaching completion, with every expectation that bids could be called for by the middle of July.

New York has long held the foremost place in the Union as a dairy state, both in milk production and in milk manufacture and consumption. The need for

adequate facilities for instruction at the State College of Agriculture is therefore apparent. The new building is designed to meet modern requirements, and to permit laboratory instruction in some of the newer processes which are now of large importance in the State but which could not be housed in the old structure. When completed, the new building will relieve a very pressing need in the institution, as the old building is both inadequate and dilapidated.

(4) The problem of heating the buildings, particularly those to be erected, has received special attention during the year and has been carried to a satisfactory conclusion. The existing heating plant is located adjacent to the classroom buildings, and the soot from the stack is a constant annoyance. Furthermore, the location involves hauling the coal nearly a mile from the railroad siding, much of the time across the college campus. The site of the heating plant is imperatively needed for the new building for rural engineering. It is thought, also, that some of the construction in the building can be incorporated into the rural engineering building. The decision of the Trustees, therefore, after extended consideration of the matter in consultation with the State Architect, to erect a central heating plant for the entire University, including the State Colleges, and to sell heat by meter to the State Colleges, was a decision as wise as it was welcome. It will make for substantial economies both in construction and in operation.

On May 11, 1921, the Secretary of the Board of Trustees addressed a communication to the State Architect, finally reviewing the actions of the Trustees in the matter. This was acknowledged and approved by the State Architect. Copies of this correspondence are included in the President's report as a matter of record and in order that the Legislature and the executive officers of the State may have the complete statement.

The necessity for carrying out the enlarged building development without interruption cannot be urged too strongly. The College is in the utmost need of relief in all of its departments. It is now more than eleven years since a plan embodying most of the structures now contemplated was first presented to the Legislature, and the conditions have grown steadily worse.

LAND FOR A BIOLOGICAL FIELD STATION

Cornell University enjoys exceptional advantages for studies in natural history. The past year has brought noteworthy additions to the facilities of the institution for biological science. On the recommendation of the Dean, the Trustees purchased some twenty acres of swamp and marsh land adjacent to the southeast end of Cayuga Lake for a biological field station for the College of Agriculture. No more convenient or suitable site could have been found.

Shortly thereafter, Professor Jeremiah W. Jenks, of New York, formerly of Cornell University, gave to the University, for the purposes of the field station, a concrete, three-compartment boathouse and a lot on the lake shore, near the other property. This will be most useful in connection with studies on the biology and resources of Cayuga Lake.

In the late winter, Mr. Jared T. Newman, a trustee of the University, who by other generous acts has promoted the biological activities, presented to the University, as an adjunct to the biological station, an area of several acres of rocky woodland on the hillside directly across the lake road from the field station

tract. Being entirely different in character and in fauna and flora from the swamp tract, the area makes a valuable addition. It will probably be retained mainly as a wild life preserve, although a permanent stream on it will be available for water cultural uses.

These acquisitions lay the foundation for a biological field station of exceptional value in connection with the University. When the building needs of the College were placed before the Legislature in 1920, there was included an item for a field station building. When this is provided, the areas will be intensively used. It is an attractive prospect for students of biology.

ADDITIONS TO THE BOTANICAL COLLECTIONS

The botanical staff is sparing no efforts to add to its already large collections. During the year, more than 16,500 sheets were added to the herbarium. The most notable acquisition is the entire moss, hepatic, and lichen herbarium of Dr. J. K. Small, curator of the Museum of the New York Botanical Gardens. This collection is particularly rich in sets from various specialists both at home and abroad, and it places at once the moss herbarium of the College on a research basis.

The herbarium of Mr. Stewart Burnham (about 60,000 specimens) has been deposited with the College for its use.

During the coming summer, a party under the leadership of the head of the Department of Botany will undertake an automobile collecting tour to the Pacific coast, travelling at their own expense, and making collections for the department herbarium.

STATE RETRENCHMENT AND THE COLLEGE OF AGRICULTURE

The demand for retrenchment in the appropriation and expenditure of public money by State and Nation, springs out of an insistent need that the public business shall be economically done, and that the State shall not maintain services which have outlived their usefulness or which should more properly be undertaken by private endeavor. The process of retrenchment is likely to be accompanied by some curtailments which are unwise and which are opposed to sound public economy. Spending is sometimes wise economy, and the State must be farsighted for its people. In the end, however, if wisdom is exercised, the gains are likely to exceed the real losses by a substantial margin, and the public business to be bettered. The problem is one of wise selection, based on full knowledge; and it is difficult.

In common with most State activities, the College of Agriculture suffered reduction in its operating funds by the economy program of the last Legislature. Reductions were made in personnel, and in appropriations for equipment and supplies, printing, travel, repairs, communication, farmers' institutes, and Indian extension. The appropriation for the experimental game farm was wholly discontinued. While all of these have involved restriction of the work of the institution, and have not as yet been offset by corresponding decreases in the cost of operation so that the limitation is keenly felt, particularly the inadequate funds for printing, I desire here to call special attention to only one item, the loss of which merits special reconsideration in the interest of wise economy. I refer to the item for the maintenance of the experimental game farm.

THE EXPERIMENTAL GAME FARM

Chapter 747 of the Laws of 1917 appropriated \$15,000 "to provide for the acquisition of land for a game farm in Tompkins County for the conduct of practical experiments in and the giving of instruction on the breeding of game." The Act called on the Trustees of Cornell University to organize and administer the farm as a part of the New York State College of Agriculture. The Trustees and officers of Cornell University undertook this charge in the confident expectation that the State desired to enter seriously upon a program of investigation and education for the highest permanent utilization of its wild life resources. The act was originated and its passage accomplished by persons and organizations interested in the preservation and the increase of the wild life of the State. Sportsmen, nature lovers, and others interested in the production of game as a farm enterprise, joined in urging the establishment of this experimental farm.

The object. New York State maintains three game farms for the propagation of game, mostly pheasants, for restocking purposes. It established the game farm in connection with the State College of Agriculture, not to duplicate the work of any of these farms, but to do what none of them does or is equipped to do—study the whole problem of game production and preservation from a scientific standpoint; make investigations and researches into the problems of more rapid increase under conditions of control, the development of superior strains, and the breeding and rearing, and hence the preservation to mankind, of fast disappearing species; and, through courses of instruction, prepare young persons for the business of rearing game for economic profit, as a valuable addition to the food supply or for liberation for the benefit of sportsmen, or prepare them for employment as managers of game preserves, for which there has long existed a demand for trained men.

What has been done by the experimental farm. The Act of 1917 carried an appropriation for the purchase of land for the farm. Time was required to locate a suitable area containing the necessary acreage, wood cover, flowing stream, and general suitability for the purpose, convenient to the College. When an available tract of the right character was found, considerable difficulty was experienced in obtaining a clear title. It was May, 1918, before the purchase was finally consummated and the land available for occupancy.

The Legislature of 1918 appropriated \$10,615 for the purpose of engaging the necessary staff to organize the farm and make a beginning on the work, and to provide such facilities as would be immediately necessary. The College limited its askings rigidly, believing it was wise to begin slowly and gain experience, and anticipating the gradual and sustained growth of the enterprise as the work normally developed. The appropriation for the last fiscal year, 1920-21, was, therefore, for the entire enterprise, but \$14,686.

The plan laid out by the College was to begin with the game birds, and as soon as this work was well established to direct attention to other game animals, particularly fur-bearing animals. The stock assembled consisted of ring-neck, silver, golden, Amherst, Mongolian, and versicolor pheasants; mallard, pintail, and teal ducks; wood-duck; Canada goose; California quail; bobwhite; and ruffed grouse. For hatching purposes, a considerable number of domestic fowls were obtained.

After the Legislature of 1918 had made an appropriation for operating expenses, it was inevitable that time should be consumed in getting together the persons required to inaugurate the work, and in building equipment, making duck ponds, repairing buildings on the farm, and the like. It was therefore not until 1919 that real experimental work could be undertaken. In the meanwhile, a broad plan of investigation had, however, been developed.

The investigations actually undertaken included studies on food problems under conditions of control, development of selected and pedigreed strains, breeding to increase egg production, methods of handling eggs for incubation, methods of artificial incubation so as to increase output, and the like. Pheasants had long been raised under control. Studies were made of more economical and larger-scale production. The ruffed grouse is the finest, native game bird, and it is rapidly disappearing. No successful means has yet been developed for its artificial propagation. Two years of work had been done with this bird on the problems of artificial feeding, breeding, and rearing. A group of investigations had to do with determining the feasibility of rearing various species of waterfowl for liberation to restock the marshes of the State, which have long since become depleted. There are thousands of acres of marsh land in the State suitable for the rearing of wild ducks, on which at present no waterfowl are raised. With a rapidly diminishing supply of raw fur, fur-farming is bound to become an important specialized farm industry. It cannot be successfully entered upon until much progress has been made by investigation as to how to breed and rear desirable species under conditions of control.

Since the establishment of courses in game farming by the State College of Agriculture, more than one hundred students have taken some of the work, and a not inconsiderable number have specialized to fit themselves as game farmers or game keepers.

The State's investment. Including purchase of the farm, the State had an investment of more than \$30,000 in the land, equipment, facilities, and supplies. In addition, considerable stock was given to the farm by members of the American Game Protective and Propagation Association. There is also the investment of operating expenses for three years, totaling a greater amount and represented by accumulated experience and progress in the investigations and the organization of the enterprise.

What the failure to appropriate means. As a result of the failure of the Legislature to make a further appropriation, the work was brought to a close on June 30. The staff was dismissed, the stock was shipped to the other game farms by courtesy of the Conservation Commission, the pedigreed strains will be lost, the experiments are dissipated, and the State's entire investment and accumulated experience has come substantially to naught. It was beyond the range of possibility that results of immediate practical value could be obtained in so difficult an enterprise in two and one-half years. The value of the enterprise cannot be judged by results in so brief a time but by the wisdom of the planning. It is useless to undertake such difficult investigative work unless it is to be long continued. On the strength of the State's request that the University undertake this work, courses of instruction were announced, and students were invited who enrolled with the expectation of fitting themselves for game farming as a life work. Their instruction must be discontinued. During the spring of 1921,

with no special advertising, 118 requests were received from prospective students for 1921-22. They have had to be turned away. Is it fair to the students, to the University, or to the State's wild-life interests, that this should be done?

In passing it should be noted that the Legislature of 1920 appointed by joint resolution a special committee to consider and define the State's program for the protection and development of forestry and wild life. This committee, whose report appears as part of the report of the State Conservation Commission for the year 1920, discusses the wild-life problem at length, and specifically recommends to the Legislature the continuance and enlargement of the experimental game work being done by the State at the State College of Agriculture. Despite the recommendation of its own specially created committee, the Legislature failed to maintain even the existing organization for the work.

The State must seek to place its protective and promotional activities on a scientific basis. This is the shortest cut to sound economy. New York, in common with the other States, has spent, and is destined to continue to spend, vast sums in the aggregate for the preservation of its native wild bird and animal life. Nature has given man its richest material possessions. Not only must these gifts not be lost through neglect, but they must increasingly be utilized for man's economic and social well-being. Fundamental to sound, speedy, and economical progress in this important field is adequate provision for research and education. The experimental game farm should be restored.

RELATIONS WITH THE STATE EXPERIMENT STATION

In the annual report of last year, a statement was made of the affiliation with the New York Agricultural Experiment Station at Geneva. The benefits of the affiliation have already been felt, and additional steps have been taken during the year to make the affiliation helpful and effective. Members of the Station Staff have been in frequent conference with members of the College Staff working in cognate fields. They have taken part in the seminars with advanced students. They have advised helpfully with graduate students, and in other ways have lent valuable aid to the College. Members of the College Staff and some of the advanced students have had occasion to avail themselves of the privilege of using facilities of the State Station. The College has also availed itself of the invitation to secure much of the laboratory material for the course in fruit varieties from the Geneva Station, where the supplies are exceptionally rich.

On the other hand, the Faculty of the Graduate School at Cornell University has altered some of its regulations so as to make it possible for young men in the employ of the State Station, engaged in research under the supervision of affiliated members of the Station Staff, to register for advanced degrees in the University more advantageously than students who may desire to do part of their graduate work away from Ithaca elsewhere. There is a ruling of the Graduate Faculty, rigidly adhered to, that a student who finds facilities for research in some laboratory away from the University, may, on the recommendation of his committee, be granted permission to receive residence credit during one year for work done in such a laboratory, provided, however, that he shall receive no compensation from the owners of the laboratory, and that he shall have been in residence at the University for at least two terms prior to the granting of the privilege. The

Faculty waived the first of these provisos in the interest of the employed assistants at the New York Experiment Station. They may now draw their salaries from that institution while receiving residence credit here, but, like assistants in the University, may receive only three-fourths residence credit. With respect to the second provision, it has also been waived in the specific instances of two assistants at Geneva who had had a year of postgraduate study at another university, but had no residence at Cornell prior to their applications to be allowed credit for work to be undertaken at once at Geneva. While this second provision is still operative, these actions of the Graduate Faculty indicate that it will be enforced only in the interest of sound graduate work. Members of the Geneva staff who are also members of the Faculty of the State College of Agriculture may serve on the committees of graduate students for either major or minor subjects. However, in order that the Dean of the Graduate School may keep in close touch with graduate students, it has been provided that a member of the Faculty resident in Ithaca must also be on the committee for each subject and directly responsible to the Graduate School for the student's work in that subject. Under this arrangement, considerable direction of the graduate student's work can be given by an affiliated staff member located at Geneva.

The affiliation should prove increasingly intimate and helpful as time goes on. The agriculture of the State needs for its best development the largest service of both institutions.

THE PROGRESS IN RESEARCH

In view of the fact that a great number of lines of important research are under way, on which substantial progress has been made during the year, and that an adequate statement of progress would exceed the limits of space here available, reference is made to the more extended report of the College to the State and Federal Governments, separately published.

In this connection, however, I desire to call attention to a matter of general interest in university circles, namely, the acceptance of funds for the establishment of graduate fellowships in research, from industrial corporations, farmers' organizations, and the like.

SO-CALLED INDUSTRIAL FELLOWSHIPS

The College of Agriculture has now, for many years, accepted grants of money from farmers' organizations and from industries serving agriculture, for the investigation by graduate students, as an important phase of their graduate work, of problems in farming or in the industry in which the donors are particularly interested. In all, more than fifty industrial fellowships, as they are called, have been received by the College. Their acceptance has been on the basis of a careful memorandum of agreement with the donors, approved in each case by the University Attorney. While the experience of the College has been wholly satisfactory and no objectionable features have developed, it seemed wise to the Agricultural College Council to request the Dean to appoint a committee from the staff to consider the questions involved from the standpoint of the University, and to report whether it seemed desirable to make any changes in the existing practice, in order to protect the name and the primary interests of the University. The report of this committee, made to the Council on April 29, 1921, is reprinted herewith:

April 21, 1921

"The committee which was asked to study the problems of industrial fellowships reports its conclusion that within the field to which they are naturally restricted these fellowships constitute a valuable means of increasing the amount of research work that can be undertaken and that therefore the College should by no means refuse this form of co-operation or restrict its application without well-defined reasons. We indicate what seem to us to be the limitations in the applicability of these grants and mention some attendant dangers which should be kept in mind. We agree that such dangers as may be inherent in the plan have not become apparent in the experience of the College covering a period of several years during which more than fifty of these grants have been administered.

"The most obvious danger to which industrial fellowships might be considered subject is that the investigator may be under pressure to go into phases of his problem or to do a type of work which may not be most essential from the educational point of view. As showing how completely the Graduate Faculty has safeguarded this the resolutions adopted by that Faculty on April 22, 1920, are here included:

"1. Appointments to Industrial Fellowships should be made by the Faculty of the Graduate School on the recommendation of the group of teachers concerned, in the same way as appointments are made to other fellowships. Whenever possible, these fellowships should be thrown open to competition.

"2. If the holder of an Industrial Fellowship is a candidate for an advanced degree, the terms and the conditions under which the Fellowship is given should be submitted for approval to the General Committee of the Graduate School.

"3. It is undesirable that the stipend attached to these Fellowships should be greater than is sufficient to support a student during the term of his appointment, and it should never be considered as of the nature of a salary for services rendered to the individuals or firms who have endowed the Fellowship.

"4. In all decisions regarding the acceptance of Industrial Fellowships, the educational advantage of the students concerned should be the chief consideration. No investigations should be undertaken under the name of graduate work whose interest is primarily commercial and which do not have a direct relation to fundamental scientific principles.

"5. No arrangement should be entered into with any individual or firm in regard to the endowment of a Fellowship by the terms of which it is stipulated that there shall be delay in the publication of results, or any conditions imposed that are not consistent with the requirements in regard to theses that have been accepted for the degree of Doctor of Philosophy.

"6. Voted, that nothing in the resolutions above stated is to be construed as in opposition to the acceptance by the University of

grants by an industry for the investigation of technical problems of that industry; but that such a grant shall not be classed as endowment of a fellowship or fall under the jurisdiction of the Graduate School, unless the investigation is being carried on by a student registered in the Graduate School and may be used by him in partial fulfillment of the requirements for an advanced degree.

"A second danger lies in the fact that industrial fellowships may be urged upon the College partly from a desire on the part of the donors to secure an advertising advantage from an investigation conducted by the College. This danger has not been realized in our experience; on the contrary, industrial concerns have shown a willingness to give all reasonable guarantees of good faith in this respect. The memorandum of understanding under which a fellowship is administered can obviate possible difficulty by explicitly indicating how the results of the investigation are to be published.

"There is further some apprehension that the acceptance of grants for industrial fellowships may arouse distrust among farmers of the disinterested purposes and freedom from bias of college officials in investigations carried on for industrial concerns. This point of view is reflected in the statement by the dean of a middle-western agricultural college to the effect that he would not think of accepting money from the Chicago packers for an economic study of the beef industry while he would take all they would give for a study of tuberculosis in cattle. This consideration is of such weight as to suggest caution in entering upon arrangements likely to precipitate criticism, but it does not, in the opinion of this committee, justify the College in abandoning the position that it stands ready to help solve problems in the field of agriculture irrespective of the groups by which such problems are presented. There is, of course, every reason to weigh the relative urgency of the problems whose solution is suggested, but progress in the knowledge of agriculture rather than fear of criticism should determine our decisions in these matters.

"Finally, it may be suggested that there is danger in creating the impression that the College must promptly give its attention to a problem of interest to any group which offers to furnish the funds needed for the investigation. The agriculture of the State will probably profit most by the investigations of the College if each department or group of investigators will determine upon rather broad fundamental lines of research and in so far as practicable focus most of their study upon these lines until somewhat definite results are obtained. Nothing is better calculated to interrupt work of this sort than to have to respond to the demands of every group that urges its special interest whether or not it constitutes a real emergency.

"It may be observed that the field in which industrial fellowships will properly develop has certain natural limitations. Obviously such fellowships will not be available for an attack upon the broader fundamental problems which have no immediate, well-defined,

practical bearing. In some fields of agricultural research the more obvious problems have been studied and the unsolved problems are so remotely related to practice that they do not interest the farmer even though their solution is essential to further improvement in practice. Even among those problems which do have an immediate, practical bearing there is a great range in the dependability of the results likely to be obtained. In some investigations it is reasonable to expect that the findings will be precise, clean-cut, and reliable. In others the nature of the controlling factors may be such that the results will necessarily be undependable under the varying conditions of practice. It would seem to be the part of wisdom to accept grants only for investigations whose results promise to be relatively clear and dependable.

"From still another point of view it may be urged that the use of industrial fellowships will be progressively restricted. It seems likely that in the long run more will be accomplished for agriculture if the funds available from private sources are used to employ trained investigators, men who have completed their graduate work. The salaries to be paid would need to be greater but the returns would likewise be greater. This is the method followed in industrial laboratories and it would seem a desirable development in agriculture as well.

"Having stated the dangers inherent in industrial fellowships and the limitations of their applicability, the committee is nevertheless of the opinion that the policy now in force should be continued. We regard the safeguards against the dangers as adequate and we recognize that where applicable these scholarships not only greatly increase the amount of research that can be accomplished but they yield to the student the advantage that accrues from work upon problems of vital interest in the situations where they actually arise."

THE EXTENSION ACTIVITIES

The outstanding features of the extension work of the College during the fiscal year ended June 30, 1921, have been the continuation of sound teaching on the various phases of agricultural production, increased attention to the economics of agriculture and to the standardization, handling, and marketing co-operatively of the products of the farm, the inauguration of extension projects in the social phases of country life, the celebration of the tenth anniversary of the inauguration of farm bureaus in the North and West, increased emphasis on the analysis and the systematic programming of farm bureau work, expansion of the home bureau work, and the growth of extension school work.

The following tabular statement gives the number of meetings of various kinds, exclusive of schools, held from July 1, 1920, to June 30, 1921, together with the attendance:

	<i>Number of meetings</i>	<i>Attendance</i>
Demonstration meetings	996	52,941
Lectures by specialists	1,402	111,026
Conferences and conventions	1,080	18,630
Inspections	4,611	
Farm and home institutes	247	21,791
	<hr/>	<hr/>
Total	8,336	204,388

On the whole, attendance and interest at meetings during the past year have been entirely satisfactory, the average attendance being somewhat larger than last year. It should be borne in mind that "man-days in the field" is exclusive of time spent in travel to and from headquarters; in other words, it is the net days of constructive work in the field. The total number of personal contacts made, including schools, institutes, demonstrations, inspections, and the like, but exclusive of Farmers' Week and Field Days at the College or persons reached at fair exhibits, was 226,528.

EXTENSION SCHOOLS IN AGRICULTURE

The total number of extension schools held in the winter of 1920-21 equals the highest previous record, that of the winter of 1915-16, while the total enrollment, 1919, is exceeded only by that of 1915-16, which was 1970.

FARMERS' WEEK

The Fourteenth Annual Farmers' Week, held February 14 to 19, inclusive, was the largest in attendance since Farmers' Week was started, in 1908. The total registration this year was 4116, indicating an attendance probably approximating 4800. The largest previous registration was 3763, in 1919. The registration this year represented 58 counties in New York State, and 23 other States and Canada.

FARMERS' FIELD DAYS

Farmers' Field Days, held for the first time last year, were repeated this year on June 23, 24, and 25. Although the attendance was not so large as last year, the interest was excellent. The attendance was conservatively estimated at 400 on Thursday, 1000 on Friday, and 600 on Saturday, a total of 2000.

STATE FAIR

As usual, the contribution of the College to the State Fair at Syracuse was large and varied, and touched nearly every important department of the fair.

COUNTY FAIRS

In an effort to aid local fair associations to improve the quality of their exhibits, to rid them of undesirable features, and to add to their educational value, the College has had a committee at work on suggestions along these lines, with particular attention to the revision of premium lists. The recommendations of this

committee have already been incorporated, in part at least, in many of the new premium lists.

EXTENSION WORK WITH INDIANS

Chapter 662 of the Laws of 1920 authorized the Extension Service of the College to enlarge its fields of activities so as to include 6500 Iroquois Indians residing on the 87,000 acres embraced within the Indian reservations of the State. Great progress has been made in this work. It is fully reported in the annual report of the College made to the State.

PUBLICATIONS

The principal advancement in the field of publications during the year was the taking over of the farm study courses, or correspondence courses, which have been enabled to offer a stronger appeal, largely because of the Faculty's authorization of a certificate for the completion of advanced courses. With the experience gained during the past year, the correspondence courses promise to develop rapidly during succeeding years. However, they will be held back during the next year because of the curtailment of appropriations for agricultural bulletins.

Since their reorganization on July 1, 1920, the home study courses have been clearly divided into two classes; the Cornell farm study courses proper, which consist of a consecutive series of bulletin lessons sent one at a time to students, as answers to questions on previous ones are returned; and the advanced study courses, or correspondence courses proper, in which mimeographed lessons and laboratory outlines are based on a textbook which the student purchases. Papers in the advanced study courses are marked by members of the staffs of the subject-matter departments, and a final examination is a part of each course.

In the distribution of publications, there were sent from the mailing room during the past fiscal year 1,487,468 pieces of matter, and a considerable proportion of this was in response to definite requests. An average of more than a thousand bulletins a day were sent in response to specific queries for information.

The college mailing list now contains 130,244 names, classified except for the home economics bulletins.

During the year the College issued 33 new publications, with 1707 pages, besides the regular monthly periodicals edited and published in the Office of Publication—the *Extension Service News* for extension workers in all parts of the State, and the *Service Sheet* for country publishers.

FARM BUREAUS

In March, 1921, the farm bureau movement completed the ten-year mark of service in New York State. As the farm bureau movement has progressed, farmers have accepted a greater degree of responsibility and each year have been paying a larger percentage of the costs. The membership is now in a transitional stage. In 1920 the farm bureau membership stood at 55,776, and on June 30, 1921, at 47,207. This slight decrease is due to two factors; first, the economic condition in which farmers find themselves has reflected itself on the membership; and secondly, the fees have been materially raised in many of the counties.

During the calendar year 1920, the farm and home bureau associations, including 55 farm departments and 26 home departments, obtained, in round numbers,

\$536,000 as funds from local sources. In addition to this amount, they received a total of \$45,750 from the New York State Department of Farms and Markets and \$52,203 from the College Federal Smith-Lever funds, which makes a grand total of nearly \$634,000 available for the work.

A much fuller statement of the extension activities will be found in the report which the College makes annually to the State and Federal Governments.

NEEDS AND RECOMMENDATIONS

(1) The most imperative need of the College is that the building development, for which the College has now waited nearly twelve years since the requests were first filed with the Legislature, shall be put forward to completion without interruption. The College is most inadequately housed for the work which is required of it and which it is capable of doing. The service of the existing staff is seriously limited by the lack of proper working conditions.

(2) There is most urgent need that larger funds shall be provided for printing the bulletins needed in the extension service and embodying the results of research carried on by the College.

(3) It is recommended that the State reconsider its action withdrawing support for the Experimental Game Farm. The conservation of wild life of the State should be placed on a scientific basis.

(4) While the staff of the College is in the main provided, there is vital need that certain additional members shall be authorized by the Legislature. Demands are made on the College in both teaching and extension, which it is impossible to meet with the present staff, and there is urgent need for assistance in a number of lines of investigation. These positions have been set forth in the appropriation requests.

(5) The funds for equipment and supplies have never been sufficient for the needs of the work. Much worn-out and out-of-date equipment, wholly unsuited for teaching the advances made in agriculture, has still to be used; and much of the work of the staff is lowered in efficiency by the necessity of using improper facilities, and by actual inability to purchase apparatus and materials needed for class and laboratory work.

(6) The College should be enabled to make a more practical use of the soil survey, on which it has been long engaged. To do so requires (1) that analyses be made of the soil types from different regions in the State to ascertain whether the composition of a given type is fairly constant, wherever found, and that an inventory be made of the potential fertility of the soils of the State; (2) that tests be made of the fertilizer needs of soil types from different regions to determine whether there are characteristic requirements for each type; (3) that tests of systems of soil management be made on a few important soil types by means of outlying experiment fields located on those types. Such studies are fundamental to the permanent maintenance of our most important asset, the fertility of the soil. The College has the scientific staff for conducting this work, but needs technical assistance, field labor, materials, and funds for the acquisition and operation of the necessary outlying fields. Additional operating funds would extend the accomplishments of the present scientific staff.

(7) The Summer School in the College of Agriculture has grown steadily and rapidly. It is designed chiefly to aid teachers, supervisors, and others engaged

in the field of rural education. The present small State appropriation is not sufficient to meet the growth in the school and also to pay proper salaries. The salary scale for the Summer School in Agriculture is considerably below that paid in the general University Summer Session, and is also less than that paid by other institutions for similar work. It is therefore becoming increasingly difficult to obtain the services of the necessary teachers to maintain the courses. The appropriation for this work should be largely increased.

In submitting this report, I desire to acknowledge the substantial aid in its preparation given by Dr. W. H. Chandler, Vice-Director of Research, Professor D. J. Crosby, Acting Vice-Director of Extension, and Dr. Cornelius Betten, Vice-Dean of Resident Teaching, as well as of heads of departments and other members of the Faculty.

Respectfully submitted,
A. R. MANN,
Dean of the New York State College of Agriculture.

APPENDIX IX

REPORT OF THE DEAN OF THE COLLEGE OF ARCHITECTURE

To the Acting President of the University:

Sir: I have the honor to submit herewith the annual report of the College of Architecture for the year 1920-21.

The academic year 1919-20 was marked by the adoption by the Faculty of this College of certain very definite educational policies. It has been the present year of 1920-21 which has seen their full inauguration. These policies are the answers which this Faculty puts forth as an attempted solution of the vexed question of the technical versus the liberal education.

The technical schools are asked to thoroughly prepare their students for the practical work of their profession within a period of four years and at the same time are asked that their graduates should have that cultural foundation which is essential to the successful practitioner. The technical professions are becoming increasingly complex, becoming in fact integrated into very distinct specialties.

This development has been followed in some of the schools by a corresponding dividing and sub-dividing of the curriculum, in most cases resulting in the virtual elimination of all studies not directly contributory to the specialty which the school or department professes to teach. Some of the schools are requiring one or more years of general collegiate work as a prerequisite before entering upon a professional course as a means of counteracting the otherwise normal tendency of the course becoming exclusively technical.

The Faculty of the College of Architecture in the first place has taken the stand that the students are not immediately upon graduation fitted to begin the active independent practice of their profession and it does not attempt to train them for this end. The curriculum adopted by it does not have that object in view.

This College is known as the College of Architecture and for many years probably architecture will hold the place of first importance in its work. But this Faculty

looks upon architecture as only one of the many phases of the art of building.

Instead of attempting to make its work more minutely special, it, in its new curriculum, has attempted to make it more general and less special.

The Board of Trustees at the request of the Faculty authorized last year the establishment of courses leading to the degree of Bachelor of Fine Arts. These courses were but logical developments in line with the policy which re-organized the general curriculum.

In all the courses the number of free elective hours has been materially increased and the number of required hours in general non-technical subjects has been more than doubled. The requiring of this kind of work, thought of too often by the student as a task to be gotten through with before entering upon a professional study, was felt to be open to serious criticism and educationally to be faulty in plan. Education professional or otherwise cannot be cut up into neatly labeled slices. In the present curriculum these non-technical, sometimes called cultural courses, run through all years of the course. They take their place as being of equal importance with and of complementary value to the professional studies.

These changes were made possible only by cutting down the amount of time devoted to technical subjects and the ruthless elimination of courses which were only applications of principles studied in preceding courses. It is too early to say how successfully these changes are working out but as yet nothing has developed which has caused any misgivings or questioning as to the wisdom of the fundamental principle behind them all. The future would rather seem to point to an extension of what has been begun. This means the increasing of the amount of work required for a degree and inevitably the lengthening of the time in which that work would normally be taken.

The so-called five-year course has been in existence a good many years and has been increasingly stressed. When the four-year course will be abandoned is a matter for the future to decide for there is such a thing as progress becoming speeding.

The course leading to the degree of Bachelor of Fine Arts has been laid out as a series of courses or subjects the satisfactory completion of which will entitle the candidate to graduation. The arbitrary division of this work into years has not been scheduled except as a suggested guide. And in the work of many of the courses it is the qualitative side rather than the quantitative that is stressed. The same principle is being applied as generally as possible in the administration of the courses leading to the degrees in architecture and as yet the Faculty of this College sees no reason for any misgivings as to results.

Respectfully submitted,

F. H. BOSWORTH,

Dean of the College of Architecture.

APPENDIX X

REPORT OF THE DEAN OF THE COLLEGE OF ENGINEERING

To the Acting President of the University:

Sir: I have the honor to present the first annual report on the work of the combined College of Engineering, and in so doing I have deemed it desirable to record the principal events leading up to the organization of the new college.

On November 9, 1918, the Board of Trustees appointed a committee to report upon the development and reorganization of engineering education at Cornell University to consist of five members of the Board and the conference committee of the Faculties of Civil and Mechanical Engineering. This joint committee after considerable investigation and discussion came to the conclusion that it would be wise to consider the consolidation of all engineering education at the University into one college, as has been done everywhere else in this country. Acting upon this suggestion, the Trustee Committee on May 31, 1919, after considerable consultation with alumni and Faculty members, recommended that all engineering education in the University be consolidated into one college, effective for freshmen in September, 1920, and for all other students in 1921. The Board formally adopted the recommendation and instructed the committee to report at a later date upon the details of such a consolidation.

On January 8, 1921, the Trustee Committee reported on further details of the consolidation, the most important recommendations being as follows:

(1) "The name of the combined engineering college shall be the College of Engineering. It shall consist of three principal divisions, namely, The School of Civil Engineering; The Sibley School of Mechanical Engineering; The School of Electrical Engineering.

(2) The chief administrative officer of the combined college shall be known as the Dean of the College of Engineering. The Dean shall be assisted in his duties by three Directors, namely, the Director of the School of Civil Engineering, the Director of the Sibley School of Mechanical Engineering, and the Director of the School of Electrical Engineering."

Other portions of the recommendation defined the duties of the executive officers, fixed the time at which the new Engineering Faculty should begin to function as Feb. 1, 1921, and made provision for the granting of appropriate degrees. The degree of Civil Engineer will be granted by the School of Civil Engineering, the degree of Mechanical Engineer by the Sibley School of Mechanical Engineering and the degree of Electrical Engineer by the School of Electrical Engineering. The Board of Trustees formally adopted these recommendations, thus establishing the main features of the new college.

On the retirement of Deans Smith and Haskell in February, 1921, from the deanships of Mechanical and Civil Engineering respectively, the undersigned assumed the duties of Dean of the College of Engineering, Professor Barnes assumed the Directorship of the School of Civil Engineering, Professor Died-

erichs the Directorship of the Sibley School of Mechanical Engineering, and Professor Gray the Directorship of the School of Electrical Engineering, all three of these Directors having been formally elected to these positions by action of the Board of Trustees.

Realizing that the consolidation was a matter of grave importance the Trustee committee called into conference a representative committee of the alumni of the old engineering colleges and this committee proved to be of great help in deciding many difficult points. In order also that the principal educational features of the new organization should be outlined quickly and well, a joint committee of the old engineering Faculties was formed and this committee with the aid and advice of the alumni committee developed an educational outline sufficiently comprehensive to start the new organization. The main features of this outline are a common course of instruction for all freshmen, the differentiation of students in Civil Engineering at the beginning of the second year and a differentiation of students in Electrical Engineering at the beginning of the third year, in all cases specialization being deferred until the last year as at present. This outline fixed the principal features of the new curriculum in all three schools and the Faculties of these three schools immediately proceeded to make such changes in their several courses of instruction as would make them conform to the general scheme. This work has all been completed and an announcement of the courses offered by the new college is now in press.

There still remained undetermined the relations of the three schools to each other and to the College as a whole in such matters as educational standards, methods of procedure in assigning students to classes, advising them as to their work, disciplinary procedure, and the general care of student life in the College. At the opening of the present term the new combined Faculty was called together for the first time, the President of the University presiding, and one of the first legislative acts of this body was the authorization of a joint committee of the three schools to consider and report on these matters. The report of this committee was received at a later meeting of the Faculty of Engineering and adopted unanimously, thus disposing of the last difficult problem connected with the consolidation. One issue of a new consolidated hand-book for the guidance of students has already been distributed and the issue for next year will contain a single code of procedure for all students in all matters affecting their relations to the Faculty. The details of these internal relations are somewhat extended, and are omitted for lack of space. It may be noted, however, that educational authority and care of all students follow, generally, the faculty organization, freshmen being in charge of a joint committee from the three schools, other students coming automatically under the care of the particular Faculty under which their major studies are taken. This brings the educational care of all students into the hands of those who are directly superintending their studies, divides the heavy burden, and brings the student and Faculty closer together than would be the case if this work were consolidated under a committee or small group of the Faculty of Engineering. At the same time provision has been made, as already stated, to keep this work harmonized in all the groups.

While these new relations were being established, the work of instruction in the three schools has proceeded without interruption in the usual effective manner.

The total registration of students in the College was 1604, the largest enrollment in the history of engineering at Cornell University.

Of these, 390 were in the School of Civil Engineering, this number including the first year men who have signified their intention of studying civil engineering. This is an increase of 14 over the corresponding registration in Civil Engineering last year. An interesting and encouraging feature of the work of this school is a large increase in the number of graduate students, 18 such students being registered during the year. The total number of degrees conferred by the School during the past year was 72.

Last year the Faculty of Civil Engineering lost one of its strongest teachers by the election of Professor Leland to the Deanship of the College of Engineering at the University of Minnesota. His place has been happily filled by the return of Professor Boothroyd who will assume his duties next September.

Professor Boothroyd will offer courses in astronomy which will be a much needed addition to the curriculum of the University. One of the most pressing needs of the College is the completion of the Fuertes Observatory so that his services may be fully realized. Steps should be taken at once to secure the necessary funds to complete the building and mount the apparatus still unmounted.

The Heckscher Research Fund has already been of assistance in engineering research in the College. Professor Schoder has for a number of years been trying to complete certain important work in hydraulics, started long ago by himself and the late Professor K. B. Turner. He has now been granted a sabbatic leave for part of next year under the provision of this fund with the expectation of completing this work.

The School of Civil Engineering has received a gift of an overshot water-wheel from the Fitz Wheel Company. This wheel, which is twelve feet in diameter and three feet face is now being set up at the hydraulic laboratory where it will be available for experimental purposes. The Kuichling Library of Sanitary and Hydraulic Engineering, which was presented to the School by Mrs. Sarah L. Kuichling last year, has been catalogued and put into use during the year. Other important equipment has been added to the laboratories.

In the Sibley School of Mechanical Engineering great difficulty has been experienced in providing adequate equipment and instructing staff for the large number of students. The funds available are entirely inadequate for this purpose and the continued necessity of giving advanced instruction with young and inexperienced instructors will surely react to the detriment of the work of the school. The retirement of Dean Smith and the resignation of Professor Matthews presented a difficult problem which has been solved by the return of Professor Ernsberger, who has resigned as head of the Department of Engineering at Rochester University to take up the instruction in Thermodynamics given formerly by Dean Smith and Professor Matthews. The School is to be greatly congratulated on securing this experienced and efficient teacher.

Despite these difficulties, a considerable amount of research has been accomplished. The Leather Belting Exchange last summer established a foundation of \$4000 to pay for an extensive series of tests upon leather belting and moved its elaborate belt-testing dynamometer to the Sibley laboratories. Some interesting results have been obtained already and many important tests are projected. Much commercial testing and research has also been conducted, this work covering experimental tests on steam engines, belts, railway rails, wire, coal, and various metals.

The changing of the department of electrical engineering into the new School of Electrical Engineering presents many new problems and new possibilities of which it is too soon to make any very definite statements. There is no reason whatsoever why with proper care and fostering this School should not attain a reputation as great as that now enjoyed by the School of Civil Engineering and the Sibley School of Mechanical Engineering.

In addition to the regular work of instruction, considerable research has been conducted in this School. Under a grant from the Heckscher fund Professor Karapetoff has been enabled to extend his investigations of mechanical models for solving problems in electrical design. Investigations were also made on the theory of induction motors, on transient phenomena in transmission lines, and on the strength of ironclad electromagnets.

The formation of the new College of Engineering has made comparison of this consolidated group with similar institutions elsewhere very clear. If the new institution fulfills its expectations many needs that have long existed must be satisfied in the near future. Lack of space forbids even an outline of these needs. It is the expectation, however, to make a careful study of the needs of the entire group, including buildings, Faculty, equipment, and financial support, in order to report to all interested just what must be done to keep engineering at Cornell in the foremost rank.

Respectfully submitted,

DEXTER S. KIMBALL,

Dean of the College of Engineering.

APPENDIX XI

REPORT OF THE ADMINISTRATIVE BOARD OF THE SUMMER SESSION

To the Acting President of the University:

Sir: As the Administrative Board of the Summer Session, we have the honor to submit the following report of the twenty-ninth Summer Session, July 3 to August 13, 1920.

The organization of the Summer Session, as approved and authorized by the Trustees for 1919, was continued during 1920. The Summer School of Agriculture was likewise continued, the two offices working in unison and announcing the courses in the same publication.

The teachers, including the Summer School of Agriculture, numbered 167. Of these 40, 17 in the Department of Music, were not members of the regular University staff. The enrollment of students is given for convenience in tabular form.

Summer Session	1596
Summer School of Agriculture.....	525
	<hr/>
	2121
Double registration deducted.....	114
Net Total.	2007
 Graduate School not in Summer Session	78
Third term in College of Agriculture.	39
	<hr/>
Total summer registration.	2124
 In Summer Session and Graduate School.	68
Teachers registered in Summer Session	780
 Men in Summer Session.	672=42.1%
Women in Summer Session.	924=57.9%
Men in Summer School of Agriculture.	115=21.9%
Women in Summer School of Agriculture.....	410=78.09%

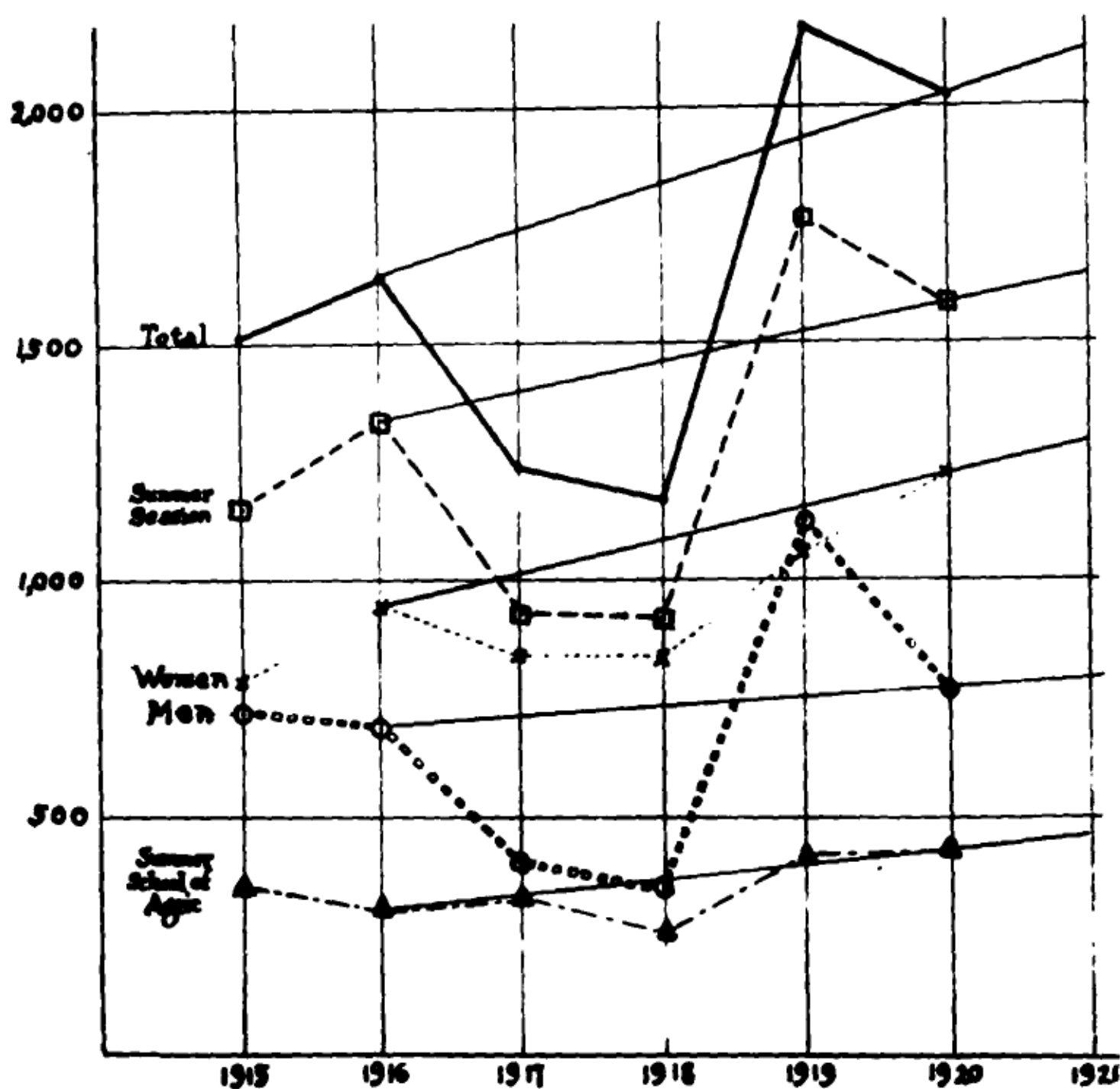
Geographical Distribution

New York.	1023
Pennsylvania.	277
New Jersey	129
Ohio.	65
Massachusetts.	51
More than 10 from each of 14 other states.....	288
Less than 10 from each of 21 other states..	90
Foreign countries.....	84
	<hr/>
	2007

The total summer registration of 2124 falls below that of 1919, 2549, by 425. In 1919, however, there were, in addition to the Summer Session, special summer terms in all of the colleges except that of Veterinary Medicine, and many students were registered both in a college and in the Summer Session. If, therefore, a comparison of the enrollment in the regular Summer Session with that of previous years is not to be misleading, we must turn to the figures for the years before 1919. Such figures for the past six years are brought together in the following table. It should be clearly understood that the third column shows the number of separate persons in attendance; that double registrations are counted in the first column as of the Summer Session proper, since persons so registered all pay tuition for the courses taken in the Summer Session; and that the figures for 1919 include students registered in a summer term and taking courses also in the Summer Session.

Year	Summer Session	Summer School of Agriculture	Total	Men	Women
1915	1142	367	1509	712	797
1916	1328	303	1631	691	940
1917	919	320	1239	401	838
1918	913	273	1186	349	837
1919	1773	408	2181	1110	1071
1920	1596	411	2007	787	1220

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



From these figures, viewed in connection with the increasing registration in the regular session of this and other universities and in connection with the larger enrollment in summer sessions elsewhere, we feel justified in expecting a still larger attendance next year. The relatively large number of men in the Summer Session proper, a little more than forty-two per cent, is likewise indicative of

growth. Although definite statistics are not available, it appears that matriculated students, both at Cornell and at other institutions, are more and more taking advantage of the opportunities offered by the Summer Session. It may be noted also that students from within and from without the State of New York are apparently equal in numbers.

Of these indications of probable increase and of the needs to which they point, no less than of the needs of the teachers who are attracted to the Summer Session, the Administrative Board is taking account in its preparation for 1921. The Board also hopes, with the co-operation of the Faculty and of the Graduate School, to make ample provision for advanced study. From the outset, indeed, the Board's policy has been to encourage graduate work during the summer; and in this effort it is gratifying to find many professors willing to direct the work of graduate students in addition to their regular summer courses, some professors thus gratuitously conducting seminars. Other professors not on the Summer Session staff but resident in Ithaca during July and August have similarly supervised graduate study and research without compensation. Such unselfish labor and loyalty deserve the thanks of the University.

Throughout the Session, services were held on Sunday in Sage Chapel by preachers invited by the President on the Dean Sage Foundation. As in the past, Monday evenings were reserved for public addresses by non-resident lecturers. There were, besides, the usual departmental lectures, demonstrations, and conferences, musical recitals and concerts, and excursions conducted by the Department of Geography and open to all students. Of these varied exercises a record is preserved in the University Calendar issued weekly from July 3 to August 7.

Respectfully submitted,
 Administrative Board of the Summer Session,
 R. M. OGDEN, Chairman,
 B. S. MONROE, Secretary.

APPENDIX XII

REPORT OF THE ADVISER OF WOMEN

To the Acting President of the University:

Sir: I have the honor to submit the following report for the year 1920-21.

REGISTRATION

The registration of women for the year 1920-21 as shown by Colleges was as follows:

Arts.....	650
Agriculture.....	392
Graduate School.....	65
Law.....	10
Mechanical Engineering..	7
Civil Engineering.....	5
Architecture.....	11
Medicine (Ithaca).....	11
Medicine (New York).....	30
Total.....	1181
Duplicates.....	13
Total for year.....	1168

REPORT OF THE ADVISER OF WOMEN

LV

The total attendance of women for the year, excluding duplicates, was 1168, an increase of 32 over the preceding year. The total registration in Ithaca was 1138. The subjoined table shows the attendance of women students during the past five years and also the distribution among Colleges.

Year	Arts	Agr.	Grad.	Law	C.E.	M.E.	Arch.	Med.	Total	Dupl.	Net
1916-17	386	299	66	10	—	2	7	32	802	15	787
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

REGISTRATION OF WOMEN FOR THE YEAR 1920-21 AS SHOWN BY COLLEGES AND CLASSES

Class	Arts	Agr.	Med.	M.E.	C.E.	Arch.	Law	Grad.	Total
1921	109	71	—	2	1	1	3	—	187
1922	151	57	—	3	2	3	3	—	219
1923	169	116	—	2	1	1	2	—	291
1924	202	105	11	—	1	5	2	—	326
1925	9	15	—	—	—	1	—	—	25
Spec.	10	28	—	—	—	—	—	—	38
Grad.	—	—	—	—	—	—	—	65	65
Med. (New York).	—	—	30	—	—	—	—	—	30
Total	650	392	41	7	5	11	10	65	1181
Dupl.	—	—	9	—	—	—	—	4	13
Total registration									1168

HOUSING

REGISTRATION OF WOMEN FOR THE YEAR 1920-21 AS SHOWN BY RESIDENCE

	First Semester	Per cent	Second Semester	Per cent
Sage-Sill-Craig-Tyler	241	20.63	223	19.09
Prudence Risley-Risley Cottage-Wait.	217	18.58	211	18.07
Total in Halls and University Houses	458	39.21	434	37.16
At Home	102	8.73	101	8.64
Working for Room and Board	33	2.83	34	2.91
Approved Houses	198	16.95	183	15.66
Special Arrangement	101	8.64	106	9.08
Sorority Houses	177	15.16	178	15.24
New York City (Med.)	30	2.57	30	2.57
Total not in Halls or University Houses	641	54.88	632	54.10

Total for Semester	1099	94.09	1066	91.26
Withdrew Second Semester	—	—	102	8.74
Entered Second Semester	69	5.91	—	—
	1168	100.00	1168	100.00

The action of the Board of Trustees of May 1, 1920, limiting the number of women to be admitted to the University for the year 1920-21 to those who could be housed in a reasonably satisfactory manner and providing for an increase in the University facilities for housing the women, has proved so helpful in caring for those who could not be accommodated in the Residential Halls, that the regulations in regard to admission are to be continued for the year 1921-22.

Some of the results of the action have been:

1. Through the cordial co-operation of the Colleges in which women are registered, in carrying out the provision that, "only those undergraduate women be admitted to the University who make formal application and deposit with the Treasurer of the University the sum of ten dollars on or before September the 1st, except in cases where special permission may be granted to a student by the College in which she wishes to register, should the College, after consultation with the Adviser of Women, find that suitable accommodations are available," an influx, at the time of the opening of the University, of a large number of entering students who had made no arrangements in advance for rooms, was avoided.

At the same time, the early registration of women made it possible to secure an adequate number of Approved Houses and it was, therefore, not necessary to refuse admission to any freshmen who met the entrance requirements of the University because there were no places for them,—even those freshmen who found it necessary to ask for special permission to register after September 1.

2. The number of women accommodated in University Houses was increased by 111. This number was distributed as follows:

Two stories added to the wing of Prudence Risley containing the dining hall, (occupied for the second semester)	34
Tyler House, 7 South Avenue.	28
Craig House, 3 East Avenue.	18
Wait House, 332 Wait Avenue.	20
Risley Cottage (used this year for undergraduates).	11
	111

3. The opening, by the University, of a dining room in the west end of Cascadilla Hall for the use of the young women, has made it possible to organize a group of Approved Houses known as the "Cascadilla Group," with a life of its own comparable in a small way with the life in a residential hall.

Miss Elizabeth Neely, Cornell 1919, Instructor in the Department of Physical Education, has been in charge of this group, which has as its nucleus four houses on Highland Place and Williams Street, but includes five other houses in much of its group life. Miss Neely has lived at 125 Highland Place and has had oversight of the two rooms in this house which have served as a group center.

The Federation of Cornell Women's Clubs has shown its interest in the group by meeting the expense for the use of the central rooms. Through the co-operation of the Self Government Association of the Women of Cornell University, upper-

class members of the Association have given up rooms in the Residential Halls to live in the outside houses and serve as House Advisers, in order that there might be, in each of the houses, girls familiar with the life of the University and able to be of service to the entering women.

Although the experiment of grouping privately owned and managed houses around a central dining hall and central social rooms has been tried for too short a period to warrant conclusions being drawn as yet, the plan will be continued for another year and gives promise of helping to solve the problem of adjusting new students to the University life and of familiarizing them with University ideals and standards more rapidly than is possible where the women live in isolated houses,—until such time as all of the women can be housed in Residential Halls or smaller University Houses.

SELF-SUPPORTING STUDENTS

During the past year an increasingly large number of young women have been, at least partially, self-supporting.

CLASSIFICATION OF WOMEN STUDENTS WHO HAVE DONE REMUNERATIVE WORK DURING THE YEAR 1920-21

Stenographic and clerical work	28
Waiting on table in dormitories	63
Waiting on table in sorority houses	5
Working in cafeterias	6
Stewardesses	4
Instructors	17
Chaperons	4
Telephone or elevator service	14
Working for room and board in private families	37
Working in laundry	3
Companions to blind students	3
House work or care of children, by the hour	72
Total	256
Duplicates	16
	<hr/>
	240

Efforts to define anew the relationships of the young women to all phases of the University life and to reorganize, where necessary, to meet new conditions, have characterized the activities of the women and the women's organizations during the year. The results of these efforts are already showing clearly and will, I believe, become more definite and more helpful.

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

APPENDIX XIII

REPORT OF THE REGISTRAR

To the Acting President of the University:

SIR: I have the honor to submit herewith my twenty-fifth annual report as Registrar of the University. The report covers the academic year 1920-21 including the Summer Session of 1920.

THE YEAR

	Days in Session	Sun- days	Holi- days	Vaca- tion	Total
First term, Sept. 27—Feb. 9	104	17	1	..	122
Christmas vacation, Dec. 22—Jan. 5 .....	..	..	..	14	14
First term, vacation, Feb. 10 .....	..	..	..	1	1
Second term, Feb. 11—June 22	106	18	1	..	125
Spring vacation, Apr. 6—Apr. 13 .....	..	..	..	7	7
Summer vacation, June 23—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 1920-21, gives the number of students who have received instruction this year, including those in the 1920 Summer Session, in the 1920 Summer School in Agriculture, in the 1920 Third Term Graduate work, in the 1920-21 Winter Courses in Agriculture, and the 1921 Third Term in Agriculture and Graduate School, but excluding duplicates, as 7520.

The accompanying table shows the attendance in each course since the opening of the University in 1868.

MATRICULATES

The following table shows that 2811 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	116	Coll. Ent. Board Exams.....	23
Advanced standing.....	303	Medical (N. Y. City).....	72
Regents' credentials.	543	Summer Session (1920)	768
School certificates.	646	Summer School in Agr.(1920) ..	260
By examination.....	7	3d Term Agr. to July 1, 1921....	6
As special students.....	51	3d Term Graduate to July 1, 1921	16
Total.....			2811

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

	68-69	69-70	70-71	71-72	72-73	73-74	74-75	75-76	76-77	77-78	78-79	79-80	80-81	81-82	82-83	83-84	84-85	85-86	86-87	87-88	88-89	89-90	90-91	91-92	92-93	93-94	94-95	95-96	96-97	97-98	98-99	99-00	00-01	01-02	02-03	03-04	04-05	05-06	06-07	07-08	08-09	09-10	10-11	11-12	12-13	13-14	14-15	15-16	16-17	17-18	18-19	19-20	20-21																				
Graduate School				2	6	11	61	13	23	30	21	9	14	22	36	21	33	35	41	52	69	70	84	133	170	240	185	145	161	166	190	174	205	189	201	197	211	232	239	249	310	309	372	383	382	383	394	482	468	278	286	407	440																				
Optional Arts and Sciences	81	159	164	146	138	133	61	145	55	62	46	43	30	23	18	59	76	80	133	157	151	110	88	53	46	77	75	624	631	680	755	831	795	734	684	705	748	820	902	970	1017	1031	1112	1194	1294	1424	1483	1262	1470	1812	1845																						
Arts	40	45	41	36	34	27	36	43	33	46	60	69	52	40	33	26	30	33	54	77	98	129	143	171	174	165	152	166	200	27																																											
Letters																																																																									
Literature					28	31	26	48	51	36	37	26	25	23	14	7	11	10																																																							
Philosophy	28	44	37	25			12	17	29	9	23	22	22	17	11	14	23	28	58	67	58	57	77	104	111	121	137	155	157																																												
History and Political Science																																																																									
Mathematics										2	3	4	3	1	1	1	1	1																																																							
Science and Letters	143	206	228	206	56	122	145	201	147	139	152	130	110	107	109	116	106	122																																																							
Science																																																																									
Natural History	14	10	10	14	15	6	16	17	29	20	15	16	9	7	9	14	12	14																																																							
Chemistry	10	4	8	13	10	10	18	16	12	9	6	2	6	8	8	5	12	11	9	9	23	19	28																																																		
Medical Preparatory																																																																									
Agriculture	30	24	20	13	15	7	18	17	29	42	41	35	26	17	15	13	20	23	38	45	58	49	52	41	48	45	45	51	68	84	85	88	99	92	114	142	189	230	278	348	415	539	761	967	1263	1462	1670	1704	1565	1068	901	1283	1204																				
Mechanical Engineering																																																																									
Mechanic Arts	27	12	24	15	24	38	58	56	54	44	33	29	33	31	34	37	63	69	116	141	168	176	217	254	303	250	221	209	245	467	501	571	661	792	891	964	1060	1096	1081	1127	1162	1186	1073	1020	956	902	927	942	955	690	1077	1210	1309																				
Electrical Engineering																																																																									
Industrial Art																																																																									

*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.

†Summer Session of 1892.

††Registration to July 1, 1916.

†Registration after July 1, 1916 and to July 1, 1917.

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. One hundred and ten of these died in service.**

ATTENDANCE FOR THE YEAR 1920-21

DEPT. & COLL. DEGREES CLASSIFICATION	GRADUATE A.M., Ph.D., M.M.E., Etc.			ARTS AND SCIENCES A.B., B.Chem.			LAW LL.B.			MEDICINE M.D.			AGRICULTURE B.S.			VETERINARY D. V. M.			ARCHITECTURE B. ARCH.			CIVIL ENG. C. E.			MECH. ENG. M. E.			SUMMER SESS. 1920			SUMMER SCHOOL IN AGR. 1920			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	Men	Women	Total						
Graduates	371	69	440	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	371	69	440	
Class of 1925	...	...	...	32	13	45	...	...	...	...	...	...	22	12	34	1	...	1	9	1	10	23	1	24	147	...	147	...	...	...	...	...	234	27	261	
Class of 1924	...	...	...	366	205	571	1	...	1	57	15	72	199	105	304	11	...	11	19	6	25	81	...	81	314	1	315	...	...	...	...	...	...	1048	332	1380
Class of 1923	...	...	...	278	166	444	17	2	19	54	13	67	203	118	321	33	...	33	24	2	26	84	1	85	365	1	366	...	...	...	...	...	...	1058	303	1361
Class of 1922	...	...	...	263	145	408	50	3	53	37	6	43	162	61	223	17	...	17	13	4	17	95	2	97	279	3	282	...	...	...	...	...	...	916	224	1140
Class of 1921	...	...	...	253	108	361	42	3	45	40	6	46	186	67	253	19	...	19	31	2	33	88	1	89	180	2	182	...	...	...	...	...	...	839	189	1028
Specials	...	...	...	11	5	16	1	...	1	50	1	51	42	27	69	...	...	...	6	...	6	1	...	1	17	...	17	...	...	...	...	...	...	128	33	161
Totals	371	69	440	1203	642	1845	111	8	119	238	41	279	814	390	1204	81	...	81	102	15	117	372	5	377	1302	7	1309	...	...	...	...	...	...	4594	1177	5771
Duplicates	83	20	103		
Net Totals	371	69	440	1203	642	1845	111	8	119	238	41	279	814	390	1204	81	...	81	102	15	117	372	5	377	1302	7	1309	...	...	...	...	...	...	4511	1157	5668
Third Term, to July 1, 1921	68	7	75	...	...	...	...	...	...	...	...	...	61	11	72	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	129	18	147
Summer 1921 to July 1, 1921 (Per Dir.)	36	3	39	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	36	3	39
Sum. 1920 after July 1, Grad. (Per. Dir.)	5	3	8	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	5	3	8
Third Term, (1920) after July 1	40	47	87	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	40	47	87
Winter Agr.	267	59	326	267	59	326		
Summer (1920)		
Totals	520	129	649	1203	642	1845	111	8	119	238	41	279	1142	460	1602	81	...	81	102	15	117	372	5	377	1302	7	1309	703	888	1591*	117	415	532*	820	1303	2123			
Duplicates	129	60	189	63	12	75		
Net Totals	391	69	460	1203	642	1845	111	8	119	238	41	279	1079	448	1527	81	...	81	102	15	117	372	5	377	1302	7	1309	414	52	466	13	21	34	619	145	764			
																																					5169	2351	7520†

*Includes 114 (20 men, 94 women) registered in both Summer Session and Summer School in Agriculture.

†Excludes 103 duplicates of regular session.

‡Excludes 103 duplicates of regular session and 114 registered in Summer Session and Summer School in Agriculture.

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

*No data prior to 1896-97.

Year	Arts	Phil.	Let.	Sci.	Agri.	Arch.	Civil Eng.	Mech. Eng.	For- estry	Law	Vet.	Med.	No. of Cases
1912-13	57	..	..	..	76	8	39	44	..	7	1	..	232
1913-14	58	..	..	..	76	5	31	47	..	7	..	..	224
1914-15	70	..	..	..	87	5	42	51	..	7	1	6	269
1915-16	85	..	..	..	94	7	22	53	..	9	4	8	282
1916-17	76	..	..	..	84	9	19	54	..	9	2	10	263
1917-18	64	..	..	..	45	3	19	31	..	12	2	4	180
1918-19	87	..	..	..	52	3	24	55	..	11	6	6	244
1919-20	126	..	..	..	102	8	47	99	..	9	2	8	401
1920-21	75	..	..	..	68	13	43	91	..	5	5	3	30

Of the 303 admitted in 1920-21, 134 registered as freshmen, 99 as sophomores, 49 as juniors, and 21 as seniors.

During the last thirty-five years there have been admitted from 500 other institutions of collegiate rank, 5,926 students. The distribution of these students can be seen by reference to the table on page xciii of the Report for the year 1907-08.

ADMISSION ON SCHOOL CERTIFICATE, REGENTS' CREDENTIALS, AND EXAMINATIONS

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

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

	'05-06	'06-07	'07-08	'08-09	'09-10	'10-11	'11-12	'12-13	'13-14	'14-15	'15-16	'16-17	'17-18	'18-19	'19-20	'20-21
Certificate	380	324	465	578	574	524	517	601	587	647	683	605	524	648	636	646
Regents	233	185	244	287	329	311	420	404	476	494	520	544	476	649	575	543
Examination	18	18	41	12	14	8	12	11	6	9	28	9	7	4	12	7
Coll. Ent. Exam. Bd.	29	37	33	23	27	14	18	13	14	27	7	13	20	22	31	23
N. Y. C. Ex	..	29	9	5	..	..	..	..	..	..	..	..	..	..	..	..
Total	658	584	792	905	944	857	967	1029	1083	1177	1238	1171	1027	1323	1254	1219

DEGREES

The inserted table gives the number admitted to graduation. Since June 1911, degrees have been conferred in September, in February, and in June. These have been listed in a single column for each academic year but for any particular year see report for that year. One degree (M. D.) was conferred in 1899, but in 1907 was revoked because the candidate declined to accept it. One degree (D. V. M.) was conferred in June, 1905, but owing to a technicality was withdrawn and conferred again in June, 1906, while another degree (D. V. M.) was conferred in 1907 but dated as June, 1906. The two degrees (M. D.) listed as February, 1912, were conferred after June, 1911, and before February, 1912, at the dates when the candidates became of proper age. On account of war conditions 17 degrees were conferred on May 1, 1917, and one as of June, 1916. In September, 1917, one A. B. degree and eleven B. S. degrees were conferred as of June 27, 1917. In

January, 1918, three M. E. degrees were conferred as of June 27, 1917, and one M. E. as of September 26, 1917. In October, 1918, one degree in Arts, one degree in Chemistry, and three degrees in Mechanical Engineering were conferred as of May 22, 1918; one in Mechanical Engineering was conferred as of September 26, 1917, one in Civil Engineering was conferred as of October 11, 1916. One in Arts was conferred in September, 1920, as of June 23, 1920; one Master of Science degree was conferred February 9, 1921, as of September 30, 1920; and one Doctor of Philosophy degree was conferred February 9, 1921, as of September 30, 1920. 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 Acting President of the University:

Sir: I beg leave to submit my annual report of the conditions and needs of the University Library together with the work done, so far as records indicate, during the year ending June 30, 1921.

The year has been a busy one for all those connected with the Library, both in the matter of additions made to the Library and in the use made of the books.

The unfilled orders of the past few years which have been pouring in and the exceptional opportunity to buy materials long needed have operated to greatly increase the accessions.

The addition of one floor to the west stack together with additional wall presses in various parts of the stacks has enabled us to relieve the congested conditions on the adjacent floors which greatly facilitates the use of books shelved on these floors. The addition of another floor in the south stack, already provided for, will likewise relieve the situation in that division of the book stacks.

With the additional housing provided and under construction, the capacity of the present building will be reached within the next two or three years at the normal rate of growth. Anticipating this time, an addition to the building will need to be under consideration before this period expires.

When a large library is once built up, the most important consideration is shifted from acquisition to facilities for using. While it is still important to make all necessary additions, it becomes more important that the materials already acquired should be made available for use in the most efficient ways. To this end, an increase in the force of library workers is a constant necessity, not alone for the preparation of materials for use, but for keeping in order and properly recording all materials that are being used, that every reader's needs may be promptly met.

The Library loses this year from its force of workers Mrs. Minerva Stubbs Beach, who has had supervision of the Periodical Division for some years and who

willingly remained during the trying period of the war although desiring to be released earlier. Miss Lillian Leland has been transferred from the Catalogue Division to the position left vacant by Mrs. Beach. Miss Emma Runner, a graduate of Cornell, who was trained in the University Library and who has been in the Library of Congress for some years, returns the coming year to become supervisor of the catalogue work. Miss Runner's long experience in Washington and her familiarity with the Library of Congress system of classification and cataloguing are fitting, because we are gradually adopting this system for classifying University Library books.

Although our Library still ranks fourth in size among the University Libraries of the United States, we are still far below the other large libraries in the matter of the number of library workers and the annual budget for operating expenses of the Library, but with the increased growth of the Library we are bound to provide more assistance.

BOOKS, BOUND PAMPHLETS, MAPS, MSS. ETC.

General library, exclusive of the following:.....	446881	
Anthon Collection, purchased 1868.....	6770	
Bopp Collection, purchased 1868.....	2014	
Sparks Collection, purchased 1872.....	5717	
White Hist. Library, gift 1891.....	23177	
Zarncke Collection, gift 1893.....	13000	
British Patents, gift 1868.....	3108	
		500,667
Fiske Dante Collection, gift 1893.....	8370	
Fiske Petrarch Collection, gift 1905.....	4086	
Fiske Icelandic Collection, gift 1905.....	15730	
Wason Collection, gift 1918.....	9658	
Emil Kuichling Collection, gift 1919.....	2059	
Volumes of C. U. theses (Deposited)...	6762	
Philological Sem. Collection.....	1078	
Philosophical Sem. Collection.....	819	
German Sem. Collection.....	769	
French Sem. Collection.....	28	
Latin Sem. Collection.....	434	
Amer. Hist. Sem. Collection.....	603	
		50,432
Maps in the library.....	1000	
C. U. plans deposited in the library.....	197	
U. S. Coast Survey charts.....	960	
U. S. Geol. Survey Topographical sheets.....	2304	
U. S. Geol. Survey atlases.....	210	
British Geol. Survey maps.....	600	
		5,271
Manuscripts.....	683	
		683

General Law library, gifts and purchases.	41781
Moak Law library, gift 1893.	12500
Flower Vet. Library, gift.	5925
Barnes Reference Library, gift.	2528
Goldwin Smith Hall Library.	2492
Van Cleef Memorial Library.	1511
Evans Mathematical Library.	418
Comstock Memorial Collection.	625
Architectural College Library.	1243
Economic Laboratory Collection.	342
Entomological Collection.	2403
Prudence Risley Hall Collection.	694
	<hr/>
	73,462
N. Y. State Agr. College Library.	19190
N. Y. State Forestry Library.	1181
N. Y. State Plant Pathology Collection.	420
	<hr/>
	24,571
	<hr/>
Total Books, Maps, Mss., etc.	655,086

ACCESSIONS DIVISION

The Library has taken advantage of the unusual opportunity offered, and acquired a large number of sets of scientific and literary periodicals and society publications; thus broadening the foundations for research work for all time, as such materials are never superseded by later publications, as is often the case with monographic literature.

Some German periodical publications issued during the war period are still incomplete, owing to conditions as previously stated. The present plan is to reprint such as can no longer be had, providing the publishers will give their permission which, in some cases, has been withheld. The whole matter is in the hands of the committee of the American Library Association which is acting for a large part of the American libraries.

The general Library has added during the year 13,828 volumes some of which have not as yet been catalogued and therefore do not show in the work of the Catalogue Division.

The largest additions have been made in the fields of English history, some 900 volumes, and travels and scientific expeditions about 250 volumes. Notable additions have also been made in early botanical works. Among the more important additions might be mentioned:

Wallich, *Plantae Asiaticae rariores*. 1830-32.

Dodoens, *Stirpium historia*. 1616.

Hooker, *Exotic flora*. 1823-27.

Lobelius, *Plantarum seu stirpium historia*. 1576.

Andrews, *Coloured engravings of heaths*. 1802-9.

Roxburgh, *Plants of the coast of Coromandel*. 1795-1819.

Sowerby, *English botany*. 1863-72.

- Lambert, Description of genus Pinus. 1828-37.
 Lawson, Pinetum Britannicum. 1884.
 Pierre, Flore forestière de la Cochinchine. 1881-99.
 Wight, Illustrations of Indian botany. 1840-50.
 Laws against witches. 1645.
 Corpus scriptorum christianorum orientalium. 38 vols.
 Shirley, The example. 1637.
 Daniel, Whole work in poetrie. 1623.

Aside from the current periodicals and government documents we have added to the library 1830 volumes of periodicals and publications of learned societies. A partial list is as follows:

- Miscellanea di storia italiana, 1862-1910.
 Amsterdam Academy. Verhandlingen, 1853-1917.
 Société d'histoire naturelle d'Autun. Bulletin 1888-1911.
 Paris. Muséum d'histoire naturelle. Bulletin 1895-1918.
 Bibliothèque de l'École des Hautes Études. Section de science naturelle 1869-90.
 Belgique horticole, 1851-85.
 Revue de l'histoire des colonies françaises, 1913-19.
 Archivio storico per le Province Napoletane, 1876-1919.
 Malacological Society of London. Proceedings, 1893-1919.
 Reliquary, 1860-1909
 Königliche Gesellschaft der Wissenschaft, Göttingen, Abhandlungen, 1896-1920.
 Bibliographie der fremdsprachigen Zeitschriftenliteratur, 1911-1919.
 Irish Naturalist, 1892-1914.
 Archaeologia Aeliana, 1822-1919.
 Société nationale des sciences naturelles de Cherbourg. Mémoires, 1852-1912.
 Torino. Musei de zoologia et anatomia. Bolletino, 1886-1918.
 Société des Sciences Naturelles de l'Ouest de la France. Bulletin, 1891-1919.
 Milano. Museo Civico di Scienze Naturale. Atti, 1859-1921.
 Deutsche Orient-Gesellschaft. Wissenschaftliche Veröffentlichungen. 1900-20.
 Muséum d'Histoire Naturelle de Lyon. Archives, 1876-1920.
 Bolletino di archeologia cristiana, 1863-94.
 Revue d'entomologie, 1882-1907.
 Essex Archaeological society. Transactions, 1858-1915.
 Societas scientiarum Fennica Acta. 1842-1920.
 Revue d'histoire de l'église de France, 1910-20.

Special mention should be made of a handsomely bound edition of Theodore Roosevelt's works and works about him which was given by E. H. Hooker, '94.

PERIODICAL DIVISION

The library has received currently during the year 2,285 periodicals of which 1,077 were by exchange or gift. The irregularity of many of the foreign periodicals has disturbed the usual order of receipts and consequently the records are necessarily incomplete. The volumes of periodicals as far as completed are bound for

permanent preservation. The lack of facilities for binding these volumes in Ithaca has necessitated sending many to Syracuse for binding. Most large libraries now are equipped with binding facilities within the building and when the matter of enlarging our library building is taken up, facilities for binding in our library should be considered.

Periodicals bound	3256
Periodicals kept on open shelves	2864
Periodicals kept in Reading Room	734

CATALOGUE DIVISION

The books as received have been classified and catalogued as fast as the workers could handle them, but at times the work has fallen behind owing to illness and an insufficient working force. All the Wason periodicals have been classified by the Library of Congress system and the special collection of books given for Risley Hall by President and Mrs. White has been shelved and entered.

Number of written cards added to the general catalogue	13,478
Number of printed cards added to the general catalogue	6,101
Number of cards added to the L. C. catalogue	30,461
Number of additional cards made for the Wason catalogue	1,282

The annual list of publications by University Officers, as appended to the President's report, has been prepared by the Catalogue Division.

SPECIAL COLLECTIONS

The White Historical library has been in charge during the year of the acting curator, J. A. C. F. Auer, who has made a complete inventory of the books in the White library while on duty during the hours of opening. Professor Burr's withdrawal does not mean that the library loses his counsel and aid in all matters that concern this library. There is still one part of the White catalogue that is to be done, dealing with Witchcraft, and we are expecting that Professor Burr will find time a little later to finish this work, already well under way.

The Icelandic Collection has added some 208 volumes to the collection, and the Curator has issued the thirteenth number of Islandica in accordance with the terms of Mr. Fiske's gift to this collection.

The illness of Miss Mary Fowler left the Dante and Petrarch Collections without a custodian during the past year. However, she was able to return for some work on the supplement to the Dante catalogue which is now in press and it is expected that it will be completed by the 600th anniversary of Dante's death, Sept. 14, 1921.

DEPARTMENT LIBRARIES

The record of books in department libraries has to do with such books only as are the property of the general library deposited there, and does not include such books as may be the exclusive property of the department.

A marked difference is to be noted in the number of such books charged against the Agricultural College library, which is accounted for by the transfer from the

general library to the College library of a large number of bound experiment station reports, etc. that were jointly owned by the two libraries. These are now counted in the State College Library inventory.

Volumes deposited in Department Libraries:

Architecture.....	2,300
Chemistry.....	5,346
Civil Engineering.....	5,632
Entomology.....	4,139
Sibley College.....	2,719
Prudence Risley.....	694
Hart Memorial library.....	2,251
Flower Veterinary library.....	5,925
Goldwin Smith Hall library.....	2,492
Van Cleef Memorial library.....	1,511

STACKS DIVISION

The routine work of this division has been disturbed by the addition of the new floor and wall presses, which necessitated the moving of a large number of books not alone in the west stack where the addition was made, but also in the White Library where the conditions were so congested that many books had to be removed to other stacks.

The Wason collection, so far as classified and catalogued, has been placed on the top floor of the west stack and eventually the whole collection, including the manuscripts and hand-painted volumes, will be brought together there.

The annual inventory of library books deposited in laboratories and department libraries has been made and the missing items recorded for replacement.

READERS DIVISION

The library has been open to users during the year 309 days, and during the period of instruction has remained open six days in the week until 10:30.

The number of registered borrowers during the period was 1,804, which takes no account of those using the library without registration.

The recorded use of the library is as follows:

Reading room.....	133,389
Seminary rooms.....	3,247
Departments and laboratories.....	6,649
Home use.....	39,278
Foreign loans.....	253
Borrowed from other libraries.....	103

The recorded use as shown by the above is the largest thus far reported. The increased use of books in the reading room indicates the need for greater accommodation for readers. Although the space for readers has been enlarged by the transfer of the periodicals to the lower floor, and the creation of the reference room, there is beginning to be pressure for more room. Plans for additions to the building may well take this need into consideration.

Respectfully submitted,

WILLARD AUSTEN,
Librarian.

APPENDIX XV

PUBLICATIONS, 1920-21

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. 12. 1920-21.

Cornell University. Agricultural Experiment Station. Bulletin. 403. Jan. 1921. Ithaca, N. Y.

— Memoir. No. 31-39. May, 1920—March, 1921. Ithaca, N. Y.

— Thirty-third 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., 1920. Albany, J. B. Lyon Co., 1921. 83p.

Cornell University. Library. Report of the Librarian. 1919-20. *Cornell University. Official publications. v. 11, No. 19. Appendix XV. 1920.*

Publications, 1919-20, [by Cornell University and its officers] *Same, —Appendix XVI. 1920.*

Cornell University. Medical College. Studies from the Department of Anatomy. v. 8. New York. 1920-21.

New York State College of Agriculture. Thirty-third 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., 1920. Albany, N. Y., J. B. Lyon Co., 1921. 83p.

New York State Veterinary College. Report for the year 1919-20. Albany, N. Y., J. B. Lyon Co., 1921. 238p.

Cornell alumni news. v. 23. Ithaca, N. Y. 1920-21.

Cornell chemist; published by the Board, under the supervision of the Department of Chemistry at Cornell University. v. 10. November 1920-June 1921. Ithaca, N. Y.

Cornell civil engineer; monthly publication of the Association of Civil Engineers at Cornell University. v. 29. October, 1920-June, 1921. Ithaca, N. Y.

Cornell countryman. v. 18. October, 1920-June, 1921. Ithaca, N. Y.

Cornell daily sun. Ithaca, N. Y. 1920-21.

Cornell era. v. 53. Ithaca, N. Y. 1920-21.

Cornell extension bulletin. No. 39-43. April, 1920-January, 1921. Ithaca, N. Y.

Cornell junior extension bulletin. No. 6-8. April, 1920-June, 1920. Ithaca, N. Y.

Cornell law quarterly; published by the faculty and students of the Cornell University College of Law. v. 6. November, 1920-May, 1921. Ithaca, N. Y.

Cornell reading course for the farm; D. J. Crosby, supervisor. No. 150-157. October, 1919-May, 1920. Ithaca, N. Y.

Cornell reading course for the home; Martha Van Rensselaer, supervisor. No. 133-136. April, 1920-September, 1920. Ithaca, N. Y.

Cornell rural school leaflet; edited by E. L. Palmer. v. 14. September, 1920-March, 1921. Ithaca, N. Y.

Cornell University medical bulletin. v. 10. New York. 1920-21.

Cornell veterinarian; D. H. Udall, editor; E. M. Pickens and C. E. Hayden, acting editors. v. 10-11. January, 1920-April, 1921. Ithaca, N. Y.

Cornellian. v. 53. Ithaca, N. Y. 1921.

Cornellian Council quarterly. v. 6. Ithaca, N. Y. 1920-21.

- Icelandica**; an annual relating to Iceland and the Fiske Icelandic collection in Cornell University Library. v. 13. By Halldor Hermannsson. Issued by Cornell University Library, Ithaca, N. Y. 1920.
- Journal of physical chemistry**; editor, W. D. Bancroft. v. 24. January, 1920–December, 1920. Ithaca, N. Y.
- Philosophical review**; edited by J. E. Creighton, with the co-operation of James Seth. v. 29. January, 1920–November, 1920. New York, Longman, Green and Co.
- Sibley journal of engineering**; published by the students of Sibley College. v. 34. January, 1920–December, 1920. Ithaca, N. Y.
- Trailblazer**. v. 1. Ithaca, N. Y. 1920–21.
- Widow**. v. 29. Ithaca, N. Y. 1920–21.

Publications by Officers

In the present list are included the titles of books, pamphlets, and contributions to periodicals, transactions, etc., published by officers and fellows of the University during the period extending from July 1, 1920, to June 30, 1921, with some titles omitted in previous lists.

- Adams, J. Q.** Shakespearean playhouses; a history of English theatres from the beginnings to the Restoration. London, Constable Co., 1920. 16, 473p English ed.
- *Review*. Greenwood, Sir George. Shakespeare's law. *Cornell law quarterly*. v. 6:357. 1921.
- *Joint editor*. Cornell studies in English. 1920–21.
- Adelmann, H. B.** An extreme case of spina bifida with dorsal hernia in a calf. *Anatomical record*. v. 19:29. 1920.
- Albee, Ernest.** *Review*. Waddington, M. M. The development of British thought from 1820 to 1890, with special reference to German influences. *Philosophical review*. v. 30:112. 1921.
- Andrews, A. L.** Further influences upon Ibsen's Peer Gynt, IV. Schack's Phantasterne. *Journal of English and Germanic philology*. v. 19:278. 1920.
- N. Ingebright Hogen. *The Bryologist*. v. 23:79. 1920.
- Studies in the Fornaldarsögur Nordlanda. II. The Hervararsaga. 2. The bearing of version U upon the poetic portions. *Modern philology*. v. 18:93. 1920.
- *Tortula caroliniana*. New species. *The Bryologist*. v. 23:72. 1920.
- *Review*. Some war bryology. *Same*. v. 24:8. 1921.
- Atwood, M. V.** The country newspaper; its place and its problems. *Cornell countryman*. v. 18:9. 1920.
- The country weekly in New York State. *Cornell reading course for the farm*. No. 155. 1920.
- Growing interest in the rural theater. *State service*. v. 4:710. 1920.
- The kermis, dictionaries, and farmers' week folk. *Cornell era*. v. 53: No. 11. 1921.
- Teaching type how to till. *Cornell countryman*. v. 18:249. 1921.
- Austen, Willard.** Report of the Librarian, 1919–20. *Cornell University. Official publications*. v. 11, No. 19. Appendix XV. 1920.
- Bancroft, W. D.** Applied colloid chemistry. New York, McGraw-Hill Book Co., 1921. 345p.
- Annual report of the Chairman of the Division of Chemistry and Chemical Technology of the National Research Council. *Journal of industrial and engineering chemistry*. v. 12:911. 1920.
- Applied colloid chemistry. *Chemical and metallurgical engineering*. v. 23:456. 1920.
- Chemical warfare service. *Cornell chemist*. v. 10:5. 1921.
- Colloid chemistry and electrochemistry. *American Electrochemical Society. Transactions*. v. 37:55. 1920.

- Contact catalysis. *Same.* v. 37:21. 1921.
- Fog and smoke. *Scientific American monthly.* v. 2:74. 1920.
- Peptization and precipitation. *Third report on colloid chemistry by British Association for Advancement of Science.* 1919.
- Research problems in colloid chemistry. *Journal of industrial and engineering chemistry* v. 13:83, 153, 260, 346. 1921. Also in *Reprint and circular series of the National Research Council.* No. 13. 1921.
- Some problems in contact catalysis. *American Electrochemical Society. Transactions.* v. 36:139. 1919.
- Also over sixty signed book reviews in the *Journal of physical chemistry*, *Journal of the American Chemical Society*, and *Journal of industrial and engineering chemistry*.
- Articles from the laboratory of W. D. Bancroft: Harding, W. G. Experiments on wood cellulose. *Journal of physical chemistry.* v. 25:201. 1921. Laubengayer, A. W. The apparent irreversibility of the calomel electrode. *Same.* v. 25:332. 1921. Sargent, G. J. Electrolytic chromium. *American Electrochemical Society. Transactions.* v. 37:479. 1920.
- Beal, A. C. China asters. *Cornell reading course for the farm.* No. 152. 1920.
- Growing sweet peas. *Same.* No. 151. 1920.
- The peony, a flower for the farmer. *Same.* No. 154. 1920.
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