




Columbia University
in the City of New York

ANNUAL REPORTS

1902



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Columbia University
in the City of New York

ANNUAL REPORTS
OF THE
PRESIDENT AND TREASURER
TO THE
TRUSTEES

WITH ACCOMPANYING DOCUMENTS

For the Year Ending June 30, 1902

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PRESIDENT'S ANNUAL REPORT

To the Trustees:

In conformity with the provisions of the Statutes, Chapter I, section 2, there is submitted herewith the annual report of the President for the year ending June 30, 1902, upon the condition and needs of the University.

The year under review is marked by the retirement from the presidency of the distinguished man, tenth in the succession from President Samuel Johnson, who for twelve years guided the development of Columbia University at a most critical period in its history. Under the leadership of President Low the hopes and the prophecies that had been cherished and made for a generation were fulfilled. The forces that for twenty years had been stirring in Columbia College and its associated schools, forces to which President Barnard had time and again called attention in eloquent words, found full expression. The College which had served New York so long and so well became the modern, many-sided university of which the old Columbia College is the foundation; this University, carried to a new and fitting home on a site of great beauty and appropriateness, has quietly and naturally taken its place as one of the small group of truly national universities which minister to the whole nation, reflecting, each in its own way, the nation's idealism, its love of knowledge, its zeal in investigation and invention, and its practical skill in applying scientific principles in action. The Trustees, in their resolutions

of October 7, 1901, and the University Council, representing the entire teaching staff, in the minute adopted at a special meeting held October 12, 1901, have given expression to their appreciation of Mr. Low's great services to the University, as well as to their regret at his retirement from office.

Mr. Low's part in the creation of Columbia University and his almost unlimited generosity in supplying its needs, are a part of our academic history which will never be overlooked or forgotten. He carries to his new and difficult post of public service the hearty good wishes of the entire University.

Following Mr. Low's resignation came that of Mr. W. H. H. Beebe, who, as Secretary of the University, had been conspicuously efficient, and whose organization of the work of the Secretary's office had contributed greatly to the ease and effectiveness of the University's administration. Mr. Beebe had fully earned the hearty thanks of Trustees, officers, and students alike for his years of valued and devoted service.

The close of a presidential administration offers an excellent opportunity to summarize the condition

Columbia University of the University. As a result of the changes of the past few years, the term **in 1901**

Columbia University is now used in two distinct senses. Technically, it means the various departments of educational work carried on under the immediate jurisdiction of the Trustees of Columbia College in the City of New York and at their expense; educationally, and as the term is interpreted by the public at large, it includes the work of Barnard College and of Teachers College as well. Because of these two uses of the term Columbia University, some

care is necessary in order to avoid misconception and misunderstanding when statistics of student attendance or of expense are offered either for record or for comparison.

In 1901 the work of Columbia University was carried on upon two sites, Morningside Heights and the site of the College of Physicians and Surgeons on West 59th Street. The area occupied was as follows:

	Square Feet	Acres
At Morningside Heights....	738,787	16.960
At West 59th Street.....	80,768	1.854
Total	819,555	18.814
Site of Teachers College....	323,642	7.429
Site of Barnard College. . . .	37,065	.850
Grand total.	1,180,262	27.093

The teaching staff was constituted as follows:

	Columbia University	Barnard College	Teachers College (Excluding the Horace Mann School)	Total (Excluding Duplicates)
Professors.....	78	14	16	81
Adjunct Professors..	15	5	6	16
Clinical Professors and Lecturers....	17	—	—	17
Instructors.....	69	5	15	81
Tutors.....	35	8	—	35
Demonstrators....	3	—	—	3
Assistant Demonstrators.....	12	—	—	12
Assistants.....	46	8	—	46
Curators.....	3	—	—	3
Lecturers.....	24	7	—	25
Clinical Assistants..	77	—	—	74
	<hr/>	<hr/>	<hr/>	<hr/>
	379	47	37	393
Administrative Officers....	17	4	7	26
Emeritus Officers....	10	—	—	10
	<hr/>	<hr/>	<hr/>	<hr/>
Total.....	406	51	44	429

The Registrar's report for the year ending June 30, 1901, showed that there had been in attendance during the preceding year 4440 students, classified as follows:

Under the University Corporation:	
Undergraduates in Columbia College.....	476
Students of Applied Science.....	566
Students of Law.....	423
Students of Medicine.....	797
Graduate Students of Philosophy, Political Science, and Pure Science.....	433
Students at Summer Session of 1900.....	417
Auditors.....	33
	<hr/>
Total.....	3145
Undergraduates in Barnard College.....	301
Teachers College:	
Regular Students.....	528
Extension Students.....	679
	<hr/>
	1207
	<hr/>
	4653
Less Double Registration.....	213
	<hr/>
Net total.....	4440

Omitting the registration in Barnard College, in Teachers College, in the Summer Session, and the auditors, there were in all 1087 students, or 40.3 per cent. of the remainder, who held an academic degree, and who were, therefore, strictly speaking, graduate students. These graduate students came from no fewer than 192 colleges and scientific schools in the United States and from 25 institutions of similar grade in foreign countries, or 217 in all.

At the Commencement of 1901, 610 degrees were conferred, as follows:

Bachelor of Arts, Columbia College.....	84
Bachelor of Arts, Barnard College.....	50
Bachelor of Laws.....	99
Doctor of Medicine.....	147
Engineer of Mines.....	14
Civil Engineer.....	16
Electrical Engineer.....	19
Mechanical Engineer.....	13
Metallurgical Engineer.....	0
Bachelor of Science.....	27
Master of Arts.....	109
Doctor of Philosophy.....	26
Honorary Degrees.....	6
Total.....	610

The Budget adopted by the Trustees for the year 1901-02 appropriated the sum of \$1,031,797.80, of which amount \$924,921 was for educational and administrative expenses and \$106,876.80 was for interest on the indebtedness of the Corporation. Of the whole amount appropriated, \$856,915 was chargeable to the general income of the Corporation from students' fees, rents, and interest, while the remainder was provided for by the income of trust funds (\$55,316.67), by gifts for designated purposes (\$9,650), by special subscriptions, or by borrowing. The general income available during the year was estimated at \$857,016, of which amount \$391,611 was received from rents, \$459,000 from students' fees, and \$6,405 from miscellaneous sources.

The reports made to the Regents of the University of the State of New York as of June 30, 1901, contained the following information regarding the financial condition of those corporations which make up Columbia University, as the public understands the term:

	Columbia University	Barnard College	Teachers College
Property owned, June 30, 1901:			
1. Occupied for Educa- tional Purposes.	\$9,565,000 00	\$726,700 00	\$1,685,000 00
2. Held for Investment.	13,361,977 24	265,563 34	103,905 69
	<hr/>	<hr/>	<hr/>
Total.	\$22,926,977 24	\$992,263 34	\$1,788,905 69
Outstanding Debt.	\$4,849,240 00	\$61,610 06	\$44,000 00
Annual Budget for 1901-02:			
1. For Education and Administration.	\$924,921 00	\$128,144 06	\$269,149 77
2. For Interest on Debt	106,876 80		3,282 77
	<hr/>	<hr/>	<hr/>
Total.	\$1,031,797 80	\$128,144 06	\$272,432 54
Income for 1900-01:			
From Fees of Students.	\$442,312 71	\$67,517 83	\$130,184 76
From Rents.	397,594 26		
From Interest.	54,611 12	11,240 56	3,996 00
From Miscellaneous Sources.	240,767 81	35,578 70	8,094 82
	<hr/>	<hr/>	<hr/>
Total.	\$1,135,285 90	\$114,337 09	\$142,275 58
Gifts received during the year ending June 30, 1901:			
1. For Immediate Use.	\$ 68,375 00	\$ 2,570 00	\$ 85,700 00
2. For Buildings and Grounds.	139,188 75	1,000 00	131,500 00
3. For Endowment.	113,305 79	100,000 00	
4. For Interest.	33,250 00		
	<hr/>	<hr/>	<hr/>
Total.	\$354,119 54	\$103,570 00	\$217,200 00

Such, in barest statistical outline, was the Columbia University of 1901. Its splendid spirit, its learned and faithful teachers, its earnest and eager students, its loyal body of alumni and friends, its prestige and power of accomplishment and service,—these were its intangible but most real assets.

It is not difficult when one reflects upon how much has been accomplished in a decade to bring one's self to feel that the most pressing problems that confronted Columbia University have been solved and that the future is without embarrassment or undue difficulty. But in my view the contrary is the case. Our recent growth and development have been, for the most part, along the obvious lines and in ways with which students of university history are familiar. An exception is the admirable principle of federation under the operation of which Barnard College and Teachers College are, so far as the students and the general public are concerned, integral parts of the University, and by which Union Theological Seminary sends a representative to sit in the University Council. This principle of federation is quite distinct from that of affiliation, which is familiar elsewhere, and it is capable of much wider application than it has yet received. I shall hope to return to this topic on a later occasion.

**Present
Problems**

It is just because we have grown so rapidly and, on the whole, so satisfactorily, that we are now face to face with new and difficult problems upon the right solution of which the future of Columbia University must largely depend. These problems

appear to me to be three-fold: financial, administrative, educational.

Columbia University, as now organized and equipped, may be likened to a giant in bonds. Strength, power, zeal for service are all at hand, but the bonds of insufficient funds hold them in on every side. In plainest language, Columbia University in 1902 is without adequate grounds and buildings and without sufficient income to care properly for the work that has already been undertaken, even if not a single extension of the work now in progress be planned. Columbia College, in which 492 undergraduates have been enrolled in 1901-02, is without any building whatever for academic purposes, and the instructors and students are temporarily assigned to most unsuitable and inadequate quarters. The Library building, which for the time being and under the pressure of necessity, has furnished rooms for the Law School, the School of Political Science, and the Department of Philosophy and Education, should be speedily devoted entirely to the use for which it was primarily intended, in order that the Library may serve the University and the public as it can and ought to do. But this is impossible until the Law School is furnished with a building of its own, and until in the completed University Hall, or elsewhere, rooms be found for the School of Political Science and for the Department of Philosophy and Education. The Department of Chemistry is sadly cramped in Havemeyer Hall, and in at least one laboratory three and even four students are assigned to the space intended for but one. A similar condition prevails

in several of the Engineering Departments. University Hall still stands unfinished, and it is estimated that the sum of \$1,000,000 will be needed to complete and furnish it, including the projected academic theatre, dining hall, and administrative offices.

If a beginning were made at once toward the relief of these material needs, it would be quite two years before the new buildings, or any of them, could be made ready for occupancy; and, unless all signs fail, by that time the pressure for additional room will be much greater than it is at present. To supply these buildings alone, the sum of over two and a quarter millions of dollars is necessary:

For a Columbia College Hall.....	\$500,000	
For a corresponding building, to make provision for departments temporarily assigned to the Library, or now in inadequate rooms.....	400,000	
For a Law School Building.....	400,000	
To complete University Hall.....	1,000,000	
	<hr/>	\$2,300,000

Even if this sum were given to the University for the purposes named, we should still be without a chapel, without dormitories, and without an astronomical observatory suitable for teaching purposes. Every one of these buildings is needed, and needed at once, if Columbia University is to offer the facilities that it should to the students who throng to it from every part of the United States. For reasons which I shall state below, the need for dormitories is especially urgent.

Furthermore, it is quite clear that the area of the site now occupied on Morningside Heights will be entirely insufficient for the work of the University in

the very near future. The growth of the past few years has been so unexpectedly great, and the demands made upon our resources are multiplying so rapidly, that it is the part of wisdom to consider how we may acquire possession of additional land adjoining the present site. The land available for our uses is not great in amount, and its value is already high and likely to increase still more in the next few years. Yet, burdened with a heavy debt, as the University now is, the purchase of additional land is out of the question unless funds are given for that purpose. Every urban university is confronted by the problem of acquiring additional real estate at prices many times as great as those paid by the institutions situated in or near small cities, towns, and villages. Yet the problem of Columbia University in this respect is the most difficult of all, for while land in the vicinity of Harvard University can be purchased for about \$18,000 an acre, and in the vicinity of the University of Chicago for about \$50,000 an acre, land adjoining the present site of Columbia University is valued at more than \$200,000 an acre.

But great as is the cost of additional land, the need of Columbia University and its power to use effectively are still greater. Happily these facts and conditions have been seen and appreciated by a group of public-spirited men and women, and since the meeting of the Trustees in June last the property immediately south of the present site, popularly known as South Field, 9.315 acres in extent, bounded by 114th and 116th Streets, Amsterdam Avenue, and Broadway, has been purchased and offered to the

University at its cost to the buyers, plus interest and taxes, provided the University will declare its intention to purchase the property on or before July 1, 1903.

Under date of June 23, 1902, Messrs. James Stillman, James Speyer, and Stuyvesant Fish addressed a formal communication to the Trustees stating that they, together with Messrs. William E. Dodge, Archer M. Huntington, Edwin Gould, Isaac N. Seligman, D. Willis James, H. McK. Twombly, Samuel Thorne, George Foster Peabody, and Mrs. Henry Villard, had entered into a contract to purchase the property named, and that, the purchasers being desirous that Columbia University shall acquire the property, they offered an option to the University to purchase it on or before October 1, 1903,—provided that notice of intention to accept the option be given prior to July 1, 1903,—at cost, plus interest at four per cent., together with all taxes and assessments that may be levied in the interval. On June 28, Mr. Bangs, chairman of the Committee on Finance, wrote to Messrs. Stillman, Speyer, and Fish, acknowledging the receipt of their generous offer, and thanking them and their associates in the name of the University for their interest in its welfare and for their timely assistance. Mr. Bangs added that the Trustees regarded this land as essential to the future development of the University, and that they would endeavor by all means in their power to obtain the funds needed to accept the option within the prescribed time. If this option is accepted, and the welfare of the University demands that it shall be, the cost of the property will be almost exactly \$2,000,000

It is a significant fact, and one full of good omen, that this offer of assistance has come, unsolicited, from leading representatives of the financial interests of the City of New York. It is not too much to say that this is the first time in the history of Columbia that such an incident has occurred, and I interpret it to mean that the representatives of the finance, the commerce, and the industry of New York see the value and the importance of a great university in fullest touch with the life of this modern capital, and that they mean to cherish and to support it.

In addition to needed buildings and grounds, there is the financial problem presented by the existence of a heavy debt contracted in the purchase and development of the site on Morningside Heights. This debt amounts to nearly \$3,000,000, and was incurred for the following purposes:

1. For payment of one-half purchase price of present site, now borrowed on bond and mortgage. . . .		\$1,000,000
2. For cost of Engineering Building, now borrowed on bond and mortgage.	\$300,400	97
3. For cost of University Hall, Power House, and Gymnasium, now borrowed on bond and mortgage.	997,865	61
4. For cost of grading and improving site, and vaults, tunnels, paving adjacent streets and sidewalks, now borrowed on bond and mortgage.	611,833	10
5. For interest on the above items, charged to the cost of the property, now borrowed on bond and mortgage.	85,900	32
	<hr/>	1,996,000
		<hr/>
		\$2,996,000

The net interest charge for these and other minor items of indebtedness was, for the year ending June 30, 1901, \$101,983.82. To meet this interest charge from the present resources of the University would involve a curtailment of educational work absolutely destructive alike to the University's prestige and to its usefulness. For the year ending June 30, 1901, this interest charge was entirely met by generous subscriptions from 45 different persons in amounts ranging from \$75 to over \$23,000. For the year ending June 30, 1902, it appears that less than one-half of the interest charge will be met in this way, the remainder being unprovided for. Subscriptions to the interest fund amounting to \$46,250 have been received up to this date. It is apparent to me that it will not be possible to meet the full annual interest charge of, approximately, \$100,000 by small subscriptions, and I fear that it is equally futile to count upon meeting it from the somewhat increased income that the Upper Estate is expected to yield after 1907, because of the readjustment of rents following the expiry of existing leases. Every dollar of this increased income, and much more besides, will be needed for the support of the educational work of the University. In my judgment, therefore, there is but one policy to pursue in regard to the debt, and that is to make a vigorous and determined effort to pay it off at once through an appeal to the City of New York and the friends of Columbia elsewhere.

In this statement of our immediate material needs, I have not yet mentioned the additional endowment funds that must be had for general University

purposes, for the organization of the projected Faculty of Fine Arts and for the proper development and equipment of the work of the Faculties of Applied Science and of Medicine, especially in the field of research.

Among the general University purposes for which new funds are desired, is the payment of better and more adequate salaries to the members of the teaching staff. While the cost of living in New York has steadily grown greater and the demands upon university teachers have multiplied, and while salaries at several other universities have been increased, those paid at Columbia have either stood still or suffered diminution. Men in middle life who have devoted years to the successful pursuit of investigation and to teaching in their chosen fields, are giving skilled service to the University for smaller compensation than is often paid to an experienced clerk. It is true that the scholar and teacher consciously foregoes the hope of large financial return for his labor and life-work, but nevertheless he should be able to live in comfort and to care for his family as befits his station in life. This cannot be done in New York on the salaries paid to a large number of the officers of instruction in Columbia University. Of 106 Professors and Adjunct Professors in 1901-02, only 49—less than one-half—received salaries of \$4000 or more. In not a few cases men in all respects worthy of promotion are kept in the post of tutor or instructor—with maximum salaries of \$1500 and \$2000 respectively—because no money is at hand with which to pay any higher compensation. As many as 126 teachers are now in the service of Colum-

bia University on salaries of \$1000, or less. Every one of these has had a college education, and the vast majority have spent two or more years in residence at an American or foreign university as well, fitting themselves for their university career. In my judgment, the sum of \$50,000 a year, if added to the present expenditure for salaries, would enable the Trustees to do no more than offer moderate compensation to junior officers of instruction and to those of the Professors and Adjunct Professors whose salaries should be increased at the first opportunity.

To sum up this review of the financial needs of the University: The sum of \$10,000,000 is urgently needed by Columbia University, and in my judgment steps should be taken without delay to formulate a definite plan under which the public may be advised of this fact and the reasons for it, and appealed to for this large sum of money in the hope that it may be had in the not distant future. As already indicated, this \$10,000,000, when given, should be used as follows:

1. To pay the existing debt.....	\$3,000,000
2. To accept the option to purchase the property immediately south of the present site on Morningside Heights, before July 1, 1903...	2,000,000
3. To build and equip a College Hall.....	500,000
4. To complete and equip University Hall.....	1,000,000
5. To build and equip a Law School Building....	400,000
6. To build and equip a building to give accommodations to departments now overcrowded or temporarily assigned to the Library.....	400,000
7. For general University purposes, including provision for the most pressing needs of the Schools of Applied Science and of Medicine..	2,700,000
	<hr/>
	\$10,000,00

Large as this sum is, every dollar of it can be wisely, economically, and effectively used at once, for the purposes named. Nor does it by any means measure the extent of the University's need. I hope that in the near future we shall command the funds necessary to care fully for the work in Applied Science and in Medicine in the most efficient manner and to make proper provision for a Faculty of Fine Arts. The other buildings which have been mentioned—a chapel, dormitories, and an astronomical observatory—would be a still further charge. At present rates of interest, a capital sum of not less than \$5,000,000, over and above the \$10,000,000 named, would be needed in order to complete the University's equipment and to provide for its maintenance.

The mere mention of these enormous sums serves to indicate in some degree both the importance and the vast magnitude of the work of a great university in a great city. The impression that Columbia University is abundantly endowed and, in fact, has all the money it wants, has been almost universally accepted in this community and in the country for two generations, and has done untold harm. How this impression originated, I do not know; but it is just the reverse of the fact. Any ordinary business with assets of \$21,312,554.61 (the value of the property of Columbia University as reported to the Regents on June 30 last) and an indebtedness of only \$3,000,000 might well be regarded as highly prosperous; but a university's condition cannot be estimated in this manner. To pay the indebtedness out of the present assets would mean the stopping of some part of the educational work now

in progress, and that, as every one knows, would be a fatal blow at the University's reputation and effectiveness. For this reason, the extinction of the debt must come, I think, through the generous assistance of those whose privilege it is to be able and willing to endow higher education in the United States.

The burden of our present debt may best be appreciated by a few comparisons. It is three-fifths as great as the whole of the productive funds of Yale University in 1900, and more than one-half as great as the value of the productive funds of the University of Chicago in the same year. It is three times as great as the value of the grounds, buildings, and scientific apparatus of Amherst College. It is greater than the total annual income (exclusive of benefactions) in 1900 of Harvard, Yale, Princeton, and Chicago universities combined.

In my judgment, nothing is to be gained, and much may be lost, by failing to face the facts, and to ask the public to consider both the heavy burden of our debt and the great cost of the work which Columbia University has undertaken to do, and which it will and must do for the city and the nation. One result of the policy of expansion entered upon during the administration of President Low was to secure the confidence and support of the Alumni, and of the citizens of New York generally, to an extent previously unknown. Of the \$8,082,978 added to the resources of the University during the twelve years of President Low's administration, \$1,259,000 came through the consolidation of the College of Physicians and Surgeons, and the remainder was contributed by various benefactors, nearly \$2,000,000

of the amount being given by President Low himself and by other members of the governing board. There is every reason to believe, therefore, that the Alumni, the citizens of New York, and the friends of Columbia throughout the country will come to her support now, if the need, however large, is stated in plain and unmistakable terms in order that it may be fully understood and appreciated.

In almost every case the university administration of to-day is merely an expansion of the methods and the machinery characteristic of the administrative ministration of the small colleges of yesterday out of which the universities have grown. Administrative work has been done by teachers in active service, and either as deans or as members of important committees they have divided their time between their books and laboratories and their classes on the one hand and their office duties on the other. More than one great teacher and investigator has been spoiled by this division of interest, and much administrative work has been very indifferently done by scholarly men to whom it was a necessary and an irksome task. Another troublesome and time-consuming duty is that of carrying on the very considerable volume of correspondence which finds its way to the desk of the head of a university department. Not only students and other teachers, but the general public, pour in letters of inquiry and request to the more widely known professors, to all of which courtesy requires that answer be made. While it may be true that some of this correspondence is personal in character, yet it is

equally true that the larger portion of it would disappear were the person to whom it is addressed no longer a university officer. It is in the University's interest that as little as possible of this administrative drudgery and clerical work be devolved upon the teaching force. It is important that the office of the Secretary of the University be equipped to dispose promptly of as much of the correspondence as possible, including that addressed primarily to the members of the teaching staff. The important faculty committees should be furnished with clerical assistance, so that the labor of the teachers serving upon the committees may be reduced to a minimum. Nor is there any good reason why the minutes of faculty meetings should be kept by a member of the faculty itself. The Secretary of the University or a member of his staff should be charged with such service. Finally, and much more important, the larger administrative posts should be held by men whose duties are largely, perhaps wholly, administrative and who either are, or may become, experts in that portion of the work of the University which is entrusted to their direct oversight and care. We should look forward to the time when the several deans will be in effect presidents of their respective schools or faculties, and as such relieve the President absolutely from any direct contact with matters of detail. It is clear that Columbia University has already reached the point where the time and the thought of the President must be given wholly to the study and consideration of large questions of policy and to the relations of the University to the community. This does not mean that the President

will not be informed as completely as before of what is being done, and how, in every department or school, but it means that he will know it through the reports of the dean immediately in charge. It might well be the part of wisdom for the President to give his attention one year to questions relating wholly to the teaching of medicine and surgery, another to questions relating wholly to instruction in applied science, another to questions relating wholly to the course of study leading to the degree of Bachelor of Arts, and so on; but he could not do this if burdened with the immediate care of the detail of the entire university administration. I think that the office of Dean will, and should, tend to become more and more important and to stand in increasingly close relations to the policy and the votes of the Trustees. What additional changes this relationship may involve, time alone can tell.

The wisest tendency in administrative development is, I am sure, to relieve teachers and investigators from every unnecessary demand upon their time and strength. The faculties must, of course, be legislative bodies and exercise legislative control over matters of educational policy falling within their several jurisdictions; but their members need not be called upon to serve as executive officers and clerks as well.

The University Council, established early in the administration of President Low, has been distinctly successful. It has been found competent to express the judgment of the teaching body as a whole upon new or disputed questions, and its legislative work has been constructive in high degree. More re-

cently, however, the Council has developed one element of weakness which diminishes the interest and the importance of its meetings. It has come to be too largely occupied in ratifying, *pro forma*, acts of one or more of the Faculties of Philosophy, Political Science, and Pure Science relating to candidates for higher degrees. Confirmatory resolutions and matters of mere routine, which do not touch upon any general university interest, have taken the time that might more profitably be given to the careful and prolonged consideration of questions of university policy. It may prove to be possible to devise a plan which, without effecting any radical changes, will tend to make the University Council more truly a deliberative body, charged with the initiative in important matters of university legislation, and at the same time set it free from much of the detail work which now occupies its attention.

There are occasions, too, when the calling together of the entire body of Professors would be of great advantage, and the Council might perhaps consider in what way such provision could best be made, and for what purposes such a plenary meeting should be called.

Any separation between financial and educational control in university administration would be as unwise as it is impracticable; but Columbia University has been fortunate, and in line with the best thought on the subject, in placing the initiative in all matters of education in the hands of the faculties or the University Council. We have been unusually successful in adjusting the administration and oversight of the University to modern conditions, and

almost every policy now urged by students of educational administration is already in operation here.

Not a few matters of importance have been definitely settled at Columbia during the past twenty years, and settled, I believe, in almost every case, with wisdom and in accordance with sound principle. For example, it is settled policy at Columbia (1) that the requirements for admission to the Freshman class of Columbia College shall not be raised beyond the point where they can be met by the student who has had a normal secondary school course of four years; (2) that these requirements, and those for admission to the Schools of Applied Science, the College of Physicians and Surgeons, Barnard College, and Teachers College as well, shall be stated in terms of the definitions formulated by the representative organizations of teachers of the several subjects, and administered, in co-operation with other colleges and with secondary schools, through the College Entrance Examination Board; (3) that a just balance shall be maintained between prescribed and elective studies in the undergraduate course, the student being in every case guided or supervised in his selection of subjects; (4) that Columbia College shall offer but a single degree, that of bachelor of arts, and that that degree shall represent the elements of a liberal education as it is conceived and defined by the Faculty of Columbia College; (5) that the several technical and professional schools shall rest upon a college course (though not necessarily one four years in length) as a foundation, either at once—as in the case of the

School of Law—or as soon as practicable—as in the case of the Schools of Applied Science and of Medicine; and (6) that all possible means shall be taken to shorten the time in which a college degree and a professional or technical degree may be taken, by co-operation between the Faculty of Columbia College and the Faculties of Law, Medicine, Applied Science, and Teachers College.

Significant as these matters are, and seriously as they affect the relation of Columbia University to the public welfare, there are still others which claim attention and which yield to none in importance. Of these I may mention at this time five: The maintenance of educational efficiency; the promotion of research; the better organization of the teaching of the natural sciences; the development of the social side of academic life through the provision of dormitory accommodations for students; and the length of the College course and the relation of that course to the rest of the work of the University.

To secure and maintain educational efficiency is the most serious and ever-present aim of every institution of learning. Educational efficiency rarely happens; it is made by careful plan and unremitting supervision. It is unattainable when poor teaching is permitted, particularly of elementary classes, and when standards are lowered for personal, social, or athletic reasons, or in order to secure a larger attendance of students. A low educational tone in a college or university rapidly communicates itself to the student body, with disastrous results.

It may justly be said of Columbia University, I

think, that it aims to enforce its standards strictly, and that it consciously makes no concession whatever to the desire for mere numbers. While the University has grown enormously in recent years it has done so in spite of the fact that almost every year some step, administrative or legislative, has been taken to raise the standards of admission and graduation in the several Schools. We are more concerned about the quality of the work done than about a rapid increase in the number of students, and we wish to do thoroughly well that which has been already begun before branching out into new undertakings that further tax our resources and divide our energies.

I find myself in hearty agreement with the recently expressed opinion of President Jordan of Stanford University that "in the long run, the greatest university will be the one that devotes the most care to its undergraduates," and for that reason I believe that too much care and attention cannot be given to the students in Columbia College. The student who comes to Columbia College must be thoroughly well taught from the very beginning of the Freshman year; and the reading of lectures or the hearing of prepared recitations is not teaching. It is primarily the duty of the head of each department, and after him the duty of the Dean and of the President, to make sure that the undergraduate teaching is really good and helpful. To make this possible, only tried and experienced teachers should be put in charge of class-room work, and only those should be appointed to teach who add to scholarship, however great, the gifts of sympathy and teaching skill.

In the professional and technical schools of the country the highest educational efficiency is constantly jeopardized by the habit of laying undue emphasis upon devices and matters of method to the neglect of fundamental principles which underlie any given technique or application of scientific theory. Devices and methods change with startling rapidity,—in medicine and in electrical engineering, for example,—and the student who has mastered only devices finds himself helpless under new conditions. On the other hand, the student who has carried away from his period of university residence a thorough grasp of the fundamental principles upon which the practice of his profession depends, will adapt himself easily to new methods and devices, and will, indeed, invent them. In common with other universities, we at Columbia need to guard this point carefully in our professional and technical instruction.

The best teacher is a constant student, and the constant student sooner or later tends to become an investigator. The terms investigation and original research have been so parodied and abused of late, that their real significance is not understood and valued as it should be. Yet these terms stand for the idea which differentiates the university from the college. We shall not reach an ideal condition until every department in the University, without exception, regards itself as charged with the duty of investigating as well as with that of teaching. Among its advanced students there should always be a group of those who are being trained in the methods by which real investigation

Promotion
of
Research

is alone possible; the spirit of investigation and the pursuit of new truth should pervade every university department from top to bottom.

Since 1880, Columbia University has laid increasing emphasis upon research and training for research, and in the interval very much has been accomplished. We are not yet able, however, to give to the men most competent to carry on prolonged researches the leisure or the opportunity to prosecute them to the best advantage. It is to be hoped that the trustees of the Carnegie Institution will see the wisdom and the economy of supplementing the facilities for research already offered by the American universities, and so strengthen much that is already being done and well done.

Despite the fact that large sums of money are spent annually by Columbia University upon the departments giving instruction in the natural sciences, and although the best possible material provision has been made for those departments, the instruction in these subjects at Columbia has never been systematically organized. The instruction in the natural sciences grew up, for the most part, outside of Columbia College, chiefly in connection with the original School of Mines. It filtered back, so to speak, into the College when the elective system was introduced and as that system developed. The School of Pure Science was organized in 1892 as a graduate school, out of the departments of natural and exact science as they then existed in the School of Mines and in Columbia College.

Perhaps one reason for the delay in the syste-

matic organization of instruction in the natural sciences is to be found in the fact that much educational experimenting was necessary before the material was at hand with which to form a judgment as to how this instruction could be best organized. The older subjects of study—Greek, Latin, mathematics—have long had what may be called a fixed educational form, which was in use in schools and colleges the world over. The newer subjects—English, history, the modern European languages, the natural sciences—have had to feel their way toward such a form, and even now complete agreement as to what that form should be has not been reached. But with us at Columbia the proper organization of our great opportunities for study in the field of natural science is of pressing importance and cannot be delayed. We have several different types of student to provide for, and we owe it to ourselves and to them to make the best possible provision for them speedily.

With a view to securing an expert opinion as to what is best to do, I have asked Professors James McK. Cattell, of the chair of psychology, Robert S. Woodward, of the chair of mechanics and mathematical physics, and Edmund B. Wilson, of the chair of zoölogy, to act as a special committee to prepare a report upon the organization of instruction in the natural and exact sciences at Columbia University. Their very suggestive response to this request, made under date of May 29, 1902, is printed as Appendix 4 to this Report (pp. 89-99). I shall seek an early opportunity to bring the suggestions of this committee formally to the attention of the Committee

on Education and to that of the faculties concerned. These suggestions will serve as an admirable point of departure for the consideration of the matter to which they relate.

To provide, particularly for undergraduate students, those influences and advantages which attach to student residence in college buildings means the erection of dormitories. The living together of college students is that characteristic of college education which marks it off most sharply from secondary instruction. Students in college are, or ought to be, figuratively at least, away from home and members of a community of their own. College life and college spirit are real things as well as most effective educational instrumentalities. It is living together, not attending classes or listening to lectures together, which develops that strong attachment to Alma Mater, its ideals and its interests, which counts for so much both in the life of the individual student and in that of the University. Columbia University is sadly in need of dormitories, not only that the students may be comfortably, economically, and—so to speak—academically housed, but also in order that they may have the full benefits of college and university residence. The fear that students would not remain in New York or would not come to New York for a college education is no longer entertained. The facts have dispelled it. It is found that healthful surroundings and conditions, proper physical exercise, and freedom from undue interruption may be had on Morningside Heights as well as, or better than, in towns and villages a hundred miles away.

Country life and the conditions of life in a rural college may be better for some students ; city life and the conditions of residence in an urban college may be better for others. Neither is absolutely the better, and both are excellent. But to make the comparison, or the contrast, at all fair, the city college must offer the advantages and attractions of dormitory life. I wish that we might speedily have dormitories erected for us on the South Field which we hope soon to own, and that they might, when built, enclose a campus for Columbia College about which will centre the memories and the affections of generations of grateful students. It should always be borne in mind that a dormitory is the one type of building used by a university from which an income may be derived. A gift of \$400,000, for example, if used for the building of dormitories, would provide, in perpetuity, an annual income of between \$18,000 and \$20,000 for the University.

I have pointed out that it is held to be settled policy at Columbia University that the several technical and professional schools shall rest upon a college course of liberal study as a foundation (although not necessarily upon a course four years in length), either at once or as soon as practicable. The School of Law has already been placed upon the basis of a graduate school, to take effect July 1, 1903. On December 20, 1898, the University Council recommended that the College of Physicians and Surgeons be made a graduate school as soon as such a step is financially practicable. The Schools of Applied Science have constantly in mind a similar step, and much

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consideration has been given by the Faculty to the best way of bringing about the change without undue sacrifice. This policy, however, does not pass unchallenged. It has recently been criticised and opposed in a cogent and noteworthy argument by President Hadley of Yale University in his annual report for the year 1901-02, on the grounds (1) that it tends to make the professions exclusive in a bad sense, (2) that it leads to a remodeling of the college course to meet the needs of intending professional students, which remodeling is at least a doubtful experiment, and (3) that it establishes an unfortunate distinction between the universities which require a bachelor's degree as a condition of admission to the professional schools and those which make no such requirement. This policy is also criticised and opposed by many intelligent persons, trusted leaders of public opinion, not university teachers or administrators, who are impressed by the fact that the whole tendency of our modern educational system is to prolong unduly the period of preparation or studentship, with the result that an increasing number of young men are held back from active and independent participation in the practical work of life until they are nearly, or quite, thirty years of age. In the face of such objections as these it is obvious that we at Columbia must consider carefully the probable social and educational effects of the policy upon which we have entered.

The questions raised in the discussion of this policy are to be decided, it seems to me, from the standpoint of the duty of the University to the pub-

lic and to its own educational ideals. Two interests are immediately at stake: the standards of professional study in a university, and the place of the American college in the higher education of the twentieth century. I doubt whether the two interests can be separated in any adequate consideration of the subject.

President Eliot of Harvard University impressively set forth the responsibilities and the opportunities of the learned professions in his address at the Installation ceremonies on April 19 last, when he said:

“It is plain that the future prosperity and progress of modern communities is hereafter going to depend much more than ever before on the large groups of highly trained men which constitute what are called the professions. The social and industrial powers, and the moral influences which strengthen and uplift modern society are no longer in the hands of legislatures, or political parties, or public men. All these political agencies are becoming secondary and subordinate influences. They neither originate nor lead; they sometimes regulate and set bounds, and often impede. The real incentives and motive powers which impel society forward and upward spring from those bodies of well-trained, alert, and progressive men known as the professions. They give effect to the discoveries or imaginings of genius. All the large businesses and new enterprises depend for their success on the advice and co-operation of the professions.”

With such an ideal as this held up before the student of law, of medicine, of divinity, of teaching, of architecture, or of applied science, what standard of excellence shall the university require of him when he enters upon his professional studies? Three answers seem to be possible: The university may require (1) the completion of a normal secondary school course of four years, and so put admission to the professional and technical schools on a plane with admission to college, or (2) the completion of the present college course of four years, or (3) the completion of a shortened college course.

When weighing the advantages and disadvantages of these several lines of action, it should be borne in mind that a uniform policy on the part of all universities in dealing with this question is not necessary and may not be desirable. We are directly concerned with the question so far as it concerns the duty and the interest of Columbia; but the universities having different social and educational needs to meet, and somewhat different ideals to labor for, may be wise in reaching a conclusion quite different from that which most commends itself to us. This consideration seems to me to meet the third of President Hadley's objections already referred to. Furthermore, the universities do not control admission to the practice of the professions, and it is not in their power, as it is certainly not their wish, to shut out from his chosen profession any competent person whatever his training or wherever it has been had. If the standards of professional study required by the universities are higher than the minimum fixed by law, no one will attend a university

for professional study unless its standards appeal to him and unless he hopes to find ultimate gain by conforming to them at some expense of both time and money. On the other hand, if the universities make the minimum standards fixed by law their own,—and only by so doing can they avoid discriminating against some one,—then they seem to me to have abdicated their functions as leaders in American intellectual life. The result would quickly be seen, I am sure, in the falling off of popular favor and support. These facts appear to meet the first of President Hadley's objections. His second objection involves a discussion of the significance of the college course, a subject which I shall consider in its proper place.

Columbia University cannot be satisfied with a requirement of only secondary school graduation for admission to the professional and technical schools for several reasons:

1. Such students at 17 or 18 years of age (or, as should be the case, at 16 or 16½ years) are too immature to carry on a severe course of professional study with profit.

2. When such students predominate, or form a large proportion of the total number attending any given professional school, the teaching deteriorates and the instruction tends to become either superficial or unduly long drawn out and wasteful of time.

3. Other institutions in various parts of the country afford the fullest opportunity for students who are compelled to remain satisfied with the shortest possible preparation for the practice of a profession, and Columbia would not be justified in using its

funds merely to add to a provision which is already ample. Columbia offers the most generous assistance to students who are able and willing to meet its standards and who need help in order to carry on their studies, but is not willing to lower those standards at the cost of social and educational effectiveness.

4. Secondary school graduates, however well taught, are necessarily without the more advanced discipline in the study of the liberal arts and sciences and without that wider outlook on the world of nature and of man which it is the aim of the college to give. It is our hope and wish that those who hold professional or technical degrees from Columbia University will be not only soundly trained in their chosen professions, but liberally educated men as well. No stress is laid upon the college degree as a mere title, but it is held to stand, in the vast majority of cases, for greater maturity of mind and broader scholarship.

5. For Columbia University to admit students to the professional and technical schools upon the same terms as those by which admission to the College is gained, would be to throw the weight of our influence against college education in general and against Columbia College in particular. After a few years, no student who looked forward to a professional career would seek admission to Columbia College, or to any other, except those who had ample time and money to spare.

On the other hand, while I hold a secondary school education to be too low a standard for admission to professional study at Columbia University, person-

ally I am of opinion that to insist upon graduation from the usual four-years' college course is too high a standard (measured in terms of time) to insist upon, and an unsatisfactory one as well. My view of the matter is concurred in by the Dean of Columbia College, by the Dean of the Faculty of Law, and by the Dean of Teachers College, as will be seen by reference to their annual reports, which accompany this document and are a part of it.

My objections to making graduation from a four-years' college course a prerequisite for professional study at Columbia University are mainly two:

1. I share the view, already alluded to, that the whole tendency of our present educational system is to postpone unduly the period of self-support, and I feel certain that public opinion will not long sustain a scheme of formal training which in its completeness includes a kindergarten course of two or three years, an elementary school course of eight years, a secondary school course of four years, a college course of four years, and a professional or technical school course of three or four years, followed by a period of apprenticeship on small wages or on no wages at all.

2. Four years is, in my opinion, too long a time to devote to the college course as now constituted, especially for students who are to remain in university residence as technical or professional students. President Patton of Princeton University voiced the sentiments of many of the most experienced observers of educational tendencies when he said that: "In some way that delightful period of comradeship,

amusement, desultory reading, and choice of incongruous courses of what we are pleased to call study, which is characteristic of so many undergraduates, must be shortened in order that more time may be given to the strenuous life of professional equipment." For quite twenty years President Eliot has advocated this view and in arguments which have seemed to me unanswerable, under the conditions existing at Harvard, has urged that the degree of bachelor of arts be given by Harvard College after three years of residence.* At Columbia, and elsewhere, the practice of counting a year of professional study as a substitute for the fourth or Senior year of the college course has in effect established a three-years' college course for intending professional and technical students. The degree has been withheld until a year of professional study has been completed, in deference to tradition rather than from sound educational principle. In this way new conditions have been met without the appearance of shortening the college course. While the policy hitherto pursued in this regard was justified as a beginning toward a readjustment of the relations between the college and the professional and technical schools, it is hardly to be upheld as a final solution of the problems presented. From my point of view it is open to criticism in that it (1) shortens the college course without appearing to do so, (2) divides the

* After this report was in type it was announced that hereafter the degree of A.B. will be conferred by Harvard College upon students who complete the requirements for the degree in three years at once and without an additional year's delay, as heretofore. Somewhat similar announcements have also been made by the University of Pennsylvania and by Brown University.

interest of the student in a way that is satisfactory neither to the college nor to the faculties of the professional schools, and (3) fails to give the full support to a college course of purely liberal study which is so much to be desired.

There remains a third line of action, namely, that of basing admission to the professional and technical schools of the University upon a shortened course in Columbia College or its equivalent elsewhere. This I believe to be the wisest plan for Columbia University to adopt, as well as the one whose general adoption would result in the greatest public advantage.

One consideration of vital importance appears to have been overlooked in the numerous discussions of this whole matter, and that is the fact that **Length of the College Course** there is no valid reason why the college course should be of one uniform length for all classes of students. The unnecessary assumption of the contrary view has greatly complicated the entire question, both in the public and in the academic mind. It must be remembered that for the intending student of law, medicine, or applied science who goes to college, three or four additional years of university residence and study are in prospect after the bachelor's degree has been obtained: For the college student who looks forward to a business career, on the other hand, academic residence closes with graduation from college. For the latter class, therefore, the college course may well be longer than for the former. While two, or three, years of purely college life and study may be ample for the man who proposes to remain in the university as a professional or as a technical student, three, or even four,

years may be desirable for him who at college graduation leaves the university, its atmosphere, its opportunities, and its influence, forever.

It must be remembered, too, that the four-years' college course is merely a matter of convention, and that there are many exceptions to the rule. The Harvard College course was at one time but three years in length, and the collegiate course at the Johns Hopkins University has been three years in length from its establishment. The normal period of residence for an undergraduate at both the English and the Scottish universities is three years. President Wayland of Brown University, who was in so many ways a true prophet of educational advance, devised a plan for a normal three-years' college course over half a century ago. The question is not so much one of the time spent upon a college course as it is one of the quality of the work done and the soundness of the mental and moral training given. The peculiar service which the college exists to perform may be done in one case in two years, in another in three, in another in four, and in still another not at all.

Since 1860 the changes in American educational conditions have been revolutionary, and as one result the content of the A.B. degree has been wholly altered and that degree has been elevated, at Columbia College at least, to a point almost exactly two years in advance of that at which it then was. In other words, despite the fact that college admission requirements have been raised and much of the instruction once given in college is now given in the secondary schools, particularly the public high

schools, the bachelor's degree has been held steadily at a point four years distant from college entrance, with the result that the average age of college students at graduation has greatly increased. Since 1880 the average age of the students entering Columbia College has increased exactly one year, and while no adequate statistics for 1860 are available, it appears to be true that the average age of admission in 1880 was one full year higher than in 1860. The Registrar has made a careful examination of the official records, and reports that in Columbia College we are demanding two years more of time and work for the degree of bachelor of arts than was required in 1860, and one year more of time and work than was required in 1880. President Hyde of Bowdoin College has recently said that "Nearly all the distinguished alumni of Bowdoin College graduated at about the present average age of entrance, and were well launched on their professional careers at about the age at which our students now graduate." He cited the cases of Jacob Abbott and William Pitt Fessenden, who were graduated before they were seventeen; Longfellow, who was graduated at eighteen; Franklin Pierce, John A. Andrew, Fordyce Barker, and Egbert Smyth at nineteen; and William P. Frye and Melville W. Fuller at twenty. Instances might readily be multiplied from the records of the American colleges. The recent statistics compiled by Dean Wright of the Academical Department of Yale University, which show the average age of graduation of the members of the class of 1863 at Yale to have been 22 years, 10 months, and 17 days and that of the members of the class of 1902 to have been 22 years, 10 months,

and 20 days, point to what appears to be a striking exception, not yet explained, to the general rule.

So long as there were no graduate schools, and therefore no genuine universities, in the United States, and when the bachelor's degree was the highest academic distinction to be gained in residence, it was sound academic and public policy to make the requirements for the degree of bachelor of arts as high as possible. It was the only mark of scholarship that the colleges could give. As a result, the average age at graduation increased. Now, however, conditions have entirely changed. Nearly, or quite, one-half of the work formerly done in college for the degree of bachelor of arts is now done in the rapidly increasing number of secondary schools, particularly public high schools, and no small part of it is required for admission to college. This does not appear if the comparison be restricted to admission requirements in Greek, Latin, and mathematics; but it is clearly evident when the present admission requirements in English, history, the modern European languages, and the natural sciences are taken into account. The standard of scholarship in this country is no longer set by the undergraduate courses in the colleges or by the time devoted to them, but by the post-graduate instruction in the universities and by the requirements demanded for the degree of doctor of philosophy.

These being the undisputed facts, it would appear to be wise, and possible, to treat the length of the college course and the requirements, both in time and in accomplishment, for the degree of bachelor of

arts from the standpoint of present-day needs and the largest social service.

In my opinion it is already too late to meet the situation by shortening the college course for all students to three years, although such action would be a decided step forward so far as the interests of intending professional and technical students are concerned. When President Eliot first proposed a three-years' course for Harvard College, the suggestion was, I think, a wise one. But in the interval conditions have changed again. If we at Columbia should be willing to go no farther than to reduce the length of the college course from four years to three, we should (1) find it impracticable both on financial and on educational grounds to require that course as prerequisite for admission to the Schools of Applied Science, and, possibly, to the School of Medicine, and (2) we should be unable to resist the pressure for further reconstruction and re-arrangement that would be upon us before our work was completed and in operation. My own belief is that Columbia University will perform the greatest public service if it establishes two courses in Columbia College, one of two years and one of four years,—the former to be included in the latter,—and if it requires the satisfactory completion of the shorter course, or its equivalent elsewhere, for admission to the professional and technical schools of the University. By taking this step we should retain the College with its two years of liberal studies as an integral element in our system, shorten by two years the combined periods of secondary school, college, and professional school instruction, and yet

enforce a standard of admission to our professional schools which, both in quantity and in quality, is on a plane as high as the Columbia degree of bachelor of arts of 1860, which was recognized as conforming to a very useful standard of excellence. At the same time we should retain the four-years' course with all its manifest advantages and opportunities for those who look forward to a scholarly career, and for as many of those who intend to enter upon some active business after graduation as can be induced to follow it.

Under such a plan we should have in Columbia College four different classes of students: (1) those who were taking the shorter course of two years in preparation for a technical and professional course, and who would therefore look forward to a total university residence of five or six years; (2) those who were taking the shorter course of two years but without any thought of subsequent professional or technical study; (3) those who felt able to give the time necessary to take the longer course of four years before entering a professional or technical school; and (4) those who, as now, take the four-years' college course without any intention of technical or professional study. The second class of students would be a new and highly desirable class, and would be, for the most part, made up of earnest young men seeking a wider and more thorough scholarly training than the secondary school can offer, but unable to devote four years to that end. The third class of students would be able, by a proper selection of studies in the later years of their college course, either to enter a professional school with advanced standing or to anticipate some of the pre-

liminary professional studies and to devote the time so gained to more intensive professional work. Undoubtedly many students who now take a four-years' undergraduate course with no professional or technical end in view would take the shorter course, and that only, but on the other hand numbers of students would come to college for a course of two years who when obliged to choose between a four-years' course and none at all are compelled to give up college altogether. The final result of the changes would certainly be to increase the total number of students taking a college course of one length or another.

The Dean of Columbia College is of the opinion that such a shortened course of two years as is contemplated by this suggestion could readily be made to include all of the studies now prescribed at Columbia for candidates for the degree of bachelor of arts. This shortened course would, therefore, take on something of the definitiveness and purpose which in many cases the rapid developments of recent years have removed from undergraduate study; for it goes without saying that no effort would be spared to make such a two-years' course as valuable as possible, both for intellectual training and for the development of character. The student would be a gainer, not a loser, by the change.

If Columbia College should offer two courses in the liberal arts and sciences, one of two years and one of four years in length, the second including the first, the question would at once arise as to what degrees or other marks of academic recognition would be conferred upon students who had satisfactorily completed them.

The Degrees of
Bachelor
of Arts and
of Master of
Arts

Two answers appear to be possible. First, we may withhold the bachelor's degree until the completion of the longer course, and grant some new designation to those who satisfactorily complete the shorter course. This has been done at the University of Chicago, where graduates of the junior college course of two years are made Associates in Arts. Or we may degrade—as it is called—the bachelor's degree from the artificial position in which the developments of the last forty years have placed it, and confer it upon the graduates of the shorter course of two years, and give the degree of master of arts for the longer course of four years. The latter alternative would be my own preference. Such a plan would bring the degree of bachelor of arts two years earlier than now and would place it substantially on a par with the bachelor's degree in France, the *Zug-niss der Reife* in Germany, and the ordinary degree in course as conferred by the English and the Scottish universities. It would also be substantially on a par with the Columbia College degree of 1860.

In this connection it must be remembered that it is not the A.B. degree of to-day which is so much extolled and so highly esteemed as the mark of a liberal education gained by hard study and severe discipline, but that of one and two generations ago. The A.B. degree of to-day is a very uncertain quantity, and time alone will show whether it means much or little.

The degree of master of arts is an entirely appropriate reward for the completion of a college course, under the new conditions proposed, four years in length. This degree has been put to many varied

uses and has no generally accepted significance. In Scotland it is given in place of the degree of bachelor of arts at the close of three very short years of undergraduate study. In England it signifies that the holder is a bachelor of arts, that he has lived for a certain minimum number of terms after obtaining the bachelor's degree, and that he has paid certain fees. In Germany it is usually included in the degree of doctor of philosophy. In the United States the degree is more often than not a purely honorary designation; although in recent years the stronger universities have guarded it strictly and now grant it for a minimum period of graduate study for one year in residence. At the meeting of the Association of American Universities in February last there was a very interesting discussion on the subject of this degree, and the divergence of policy in regard to it was made plainly evident. As an intermediate degree between those of bachelor of arts and doctor of philosophy, that of master of arts has been and is very useful at Columbia. It marks the close of a period of serious resident graduate study, and is an appropriate reward for the work of those university students who have neither the inclination nor the peculiar abilities and temperament to fit themselves for successful examination for the degree of doctor of philosophy. At the same time it must be admitted that the rapid development of the elective system and the widely different standards of the scores of colleges from which our graduate students come, have almost wiped out the distinction between the Senior year in Columbia College and the first year of graduate study. To the best of my knowledge

and belief, the fixing of the degree of master of arts at the close of a four-years' undergraduate course would involve no real alteration in the standard required on the part of those coming to Columbia from other institutions. For students of Columbia College it would bring the degree within reach after four years of residence instead of five.

In the case of candidates for the degree of doctor of philosophy, the completion of the longer college course, or its equivalent elsewhere, would of course be required, and also the same minimum period of post-graduate resident study as now. There would be no alteration in the time necessary or the standard now set for that degree, which as conferred at Columbia is recognized as conforming to the highest and best standards.

With the courses in applied science and in medicine fixed at four years, to base them upon a two-years' college course would be to elevate them to a proper university standard and to ensure the best possible class of students. The Law School and the professional courses in Teachers College could easily be put upon the same basis.

Reflection and a careful study of the facts will make it apparent that these suggestions are less radical than seems to be the case on first sight. They at least offer a solution to a generally recognized problem, one which has often been pointed to but toward the solution of which little progress has been made. I shall seek an early opportunity of bringing them before the University Council and the several Faculties for full consideration and discussion.

Should Columbia University adopt such a policy

as has been outlined, and should the same or a similar policy commend itself to the governing bodies of any other American universities whose problems are similar to ours, a development already in progress throughout the country would be hastened. As the public high schools multiply and strengthen they will tend more and more to give the instruction now offered in the first year, or first two years, of the college course. In so far, they will become local colleges, but without the characteristic or the attractiveness of student residence. Furthermore, the time would sooner come when colleges, excellent in ideals and rich in teaching power but without the resources necessary to carry on a four-years' course of instruction satisfactorily, will raise the requirements for admission to a proper point and then concentrate all their strength upon a thoroughly sound course of two years leading to the bachelor's degree. More depends upon the strict enforcement of proper standards of admission to college than is generally believed; that is at present the weakest point in college administration. The general standard of college education in the United States would be strengthened more if the weaker colleges would fix and rigidly enforce proper entrance requirements and concentrate all their money and energies upon two years of thorough college work than if they continue to spread a college course over four years with admission secured on nominal terms or on none at all.

**The Future
of the
American
College**

The policy outlined would, I think, largely increase the number of students seeking a college education, and many who might enter one of the

stronger colleges for the two-years' course would remain for four years. The loss of income due to the dropping out of students after two years of residence would be more than made good very soon by the large increase in college attendance.

As the system of higher education in the United States has developed it has become apparent that we have substituted three institutions—secondary school, college, and university—for the two—secondary school and university—which exist in France and Germany. The work done in the United States by the best colleges is done in France and Germany one-half by the secondary school and one-half by the university. The training given in Europe differs in many ways from that given here, but from an administrative point of view the comparison just made is substantially correct. The college, as we have it, is peculiar to our own national system of education, and is perhaps its strongest, as it certainly is its most characteristic, feature. It breaks the sharp transition which is so noticeable in Europe between the close surveillance and prescribed order of the secondary school and the absolute freedom of the university. Its course of liberal study comes just at the time in the student's life to do him most good, to open and inform his intelligence and to refine and strengthen his character. Its student life, social opportunities, and athletic sports are all additional elements of usefulness and of strength. It has endeared itself to three or four generations of the flower of our American youth and it is more useful to-day than at any earlier time.

For all of these reasons I am anxious to have it

preserved as part of our educational system and so adjusted to the social and educational conditions which surround us that a college training may be an essential part of the higher education of an American whether he is destined to a professional career or to a business occupation. It seems to me clear that if the college is not so adjusted it will, despite its recent rapid growth, lose its prestige and place of honor in our American life, and that it may eventually disappear entirely, to the great damage of our whole educational system.

The academic and administrative work of the year has progressed satisfactorily. The very elaborate Report of the Registrar of the University, **The Year 1901-02** which is attached to this Report and made a part of it, gives in fullest possible detail information regarding the number and composition of the large body of students, 5134, enrolled in the University. Of this total, the enrolment in Columbia College and in the schools under the immediate jurisdiction of the Trustees was 3481. In Barnard College the enrolment was 339 and in Teachers College 1534. There were 220 duplicates, or double registrations.

The reports of the several Deans, of the Director of the Summer Session, of the Librarian, and of the Director of the Gymnasium are also made a part of this Report, and the attention of the Trustees is earnestly invited to the information which they contain and to their several suggestions and recommendations.

The gifts and bequests received during the year 1901-02 are named in detail in Appendix **Gifts and Bequests** 4 (p. 100) to this Report. They may be summarized as follows:

	Columbia University	Barnard College	Teachers College	Total
To Establish Trust Funds.....	\$274,533 44	\$397,050 00	\$ 2,500 00	\$ 674,083 44
For Buildings and Grounds.....	20,351 63		169,309 42	189,661 05
For Current Interest.	93,983 82	3,000 00		96,983 82
For Immediate Use.	32,577 71	3,240 00	86,035 00	121,852 71
Total.....	\$421,446 60	\$403,290 00	\$257,844 42	\$1,082,581 02

The most important legislative act of the year was the amendment of the Statutes, on June 2, 1902, setting off the Department of Architecture and the Department of Music from the jurisdiction of the Faculties of Applied Science and of Philosophy, respectively, in order that these departments may serve as the nucleus for an adequate and creditable university School of Fine Arts in the future. This significant step puts into effect a recommendation made many years since by President Barnard and renewed from time to time by President Low, that the fine arts should be more fully developed and separately organized at Columbia University. Until funds are provided by those to whom this side of university training makes a particularly strong appeal, little more is possible than has just been done. But even so much serves to demonstrate to the University itself and to the public that we recognize the importance of the fine arts in education and in life and that we are ready and anxious to develop a School of Fine Arts which shall be in all respects worthy of Columbia and of New York. Through co-operation with the Trustees of the Metropolitan Museum of Art, so that their

increasingly valuable and important collections may become fully available for the purpose of illustrating university instruction in the fine arts, much might be quickly accomplished if only we could command the means to provide a suitable building for a School of Fine Arts and to endow professorships of the history and criticism of art, of painting, and of sculpture. Professors Ware, Hamlin, and Sherman of the Department of Architecture, and Professor MacDowell of the Department of Music have entered most heartily into the plan and their aid and suggestions have added much to its practical value.

As was pointed out to the Trustees by the Committee on Education in their report on this subject made on May 5 last, it is no part of our plan for a university School of Fine Arts that it shall give that practical instruction in the arts which in the Middle Ages was known as their "art, mystery, and manual occupation." This indispensable training would not be given by the University itself, but it would come more or less under university supervision, and would be recognized when adequately given in ateliers, conservatories, and private or incorporated schools. The University would give the historical, philosophical, and theoretical instruction, while other teachers and organizations would provide the practical training and apprenticeship which is a necessary part of all art education.

Such a School of Fine Arts as is in contemplation would serve a most useful purpose in keeping steadily before the students and the community the fact that some knowledge of art and some appreciation of it is an indispensable part of any real culture, and that

without this knowledge and appreciation there can be no adequate comprehension of some of the most significant periods in the history of civilization. Of the five great aspects of civilization which have appeared in history,—the scientific, the literary, the institutional, the religious, and the æsthetic,—Columbia University makes full provision for three only. Admirable and praiseworthy as are the religious influences at work throughout the University, they must lack much until they may centre about a university chapel, adequately endowed for its proper work. Excellent, also, as are the beginnings which have been made in the study and teaching of the fine arts and of archæology, they must remain only beginnings until a School of Fine Arts is organized to represent and to develop them properly.

Upon the election of the Professor of Philosophy and Education to the Presidency of the University

**Reorgani-
zation of
Depart-
ments** it was referred to the Committee on Education to consider what changes, if any, should be made in the organization of that department and what permanent provision should be made for it. After careful consideration the Committee on Education recommended a plan, which was adopted by the Trustees on March 3, by which Education was erected into a separate and independent department, such department to consist of Teachers College acting through its representatives upon the Faculty of Philosophy; by which Anthropology was set off from Psychology, with which it had been associated since its establishment in the University, and made a separate and independent department with Professor Franz Boas

as its head; and by which Philosophy and Psychology were joined in a new department of that name with Professor Cattell as its administrative head. The vacant professorship of philosophy was filled by the election of Frederick J. E. Woodbridge, A.M., Professor of Philosophy in the University of Minnesota, a graduate of Amherst College in the class of 1889, a scholar and teacher of experience and high promise.

The details of this reorganization are of more than mere administrative interest. They mark the new and growing importance which is attached to Anthropology as a subject of investigation and instruction; the fact that while Psychology has taken on, in many ways, the form of a natural science, its dependence upon Philosophy and its relation to it are as close as ever; and the development of Education to a point where it can stand alone and without the special support of Philosophy, on which it depends. Every attempt to develop Education as a university subject apart from Philosophy has resulted in making it merely a more or less formal and futile discussion of school-room methods or an attempt to formulate a very doubtful body of educational doctrine. At Columbia, Education, from the very first instruction given in the subject, in 1886, has been held in close touch with the history and criticism of philosophy. As a result, it is now upon a sound philosophical foundation and no longer needs to have that fact emphasized in matters of organization and administration. It is a pleasure to think that a project so dear to the heart of President Barnard, and so fully and ably set forth in his

annual reports for 1881 and 1882, has been carried out with a fulness of detail and a completeness of equipment which even his prophetic vision could hardly have foreseen.

The Department of Chinese, the endowment of which was announced in President Low's report for 1901, has been made the subject of careful study during the year. The fund for its support now amounts to \$213,000. Generous as this sum is, it seems wise to treat it as only the beginning of an endowment which, recruited from various sources, will one day be sufficient to warrant us in undertaking the scientific study of the culture and history of all the peoples of Eastern Asia, including those of the Malay Archipelago, now of such special interest to the people of the United States. The problems presented have been considered at length and in their several aspects. Professor Herbert Allen Giles, of the Department of Chinese at the University of Cambridge, accepted the invitation of the Trustees to deliver a series of lectures on China and the Chinese, upon the Dean Lung Foundation, and to act as their adviser in the formulation of plans for the permanent organization of the Department of Chinese at Columbia University. The lectures of Professor Giles were of exceptional interest, and, in response to many requests, have been published in book form by the Columbia University Press.

It appears from the results of an inquiry conducted by Professor Boas, confirmed by Professor Giles, that in Europe the study of the peoples of Eastern Asia is carried on from three distinct points

of view. These are (1) the philological and literary, which is mainly represented in the universities; (2) the ethnographic and anthropologic, which is chiefly represented in the museums; and (3) the practical, which is chiefly represented in the separate schools for instruction in the Oriental languages. As a general rule, these three classes of institutions—the universities, the museums, and the separate schools—work independently of one another, with a consequent waste of money and of energy and a loss of possible effectiveness. These we wish to avoid; and it is confidently believed that through co-operation with the Trustees of the American Museum of Natural History, who have already begun the gathering of a collection of material illustrating Eastern Asiatic culture, we can avoid them.

The first Dean Lung Professor of Chinese is Friedrich Hirth, member of the Royal Bavarian Academy of Sciences at Munich, who begins his duties at once. The career and the qualifications of Professor Hirth were made known to the Trustees in a report submitted by the Committee on Education on May 5 last. Professor Hirth's pre-eminence as a student and investigator of the life, history, and activities of the Chinese, his many contributions to the literature of the subject, and his long residence in China, are assurances that this new and important department will begin its work under the best possible auspices. Professor Hirth's courses for the coming year will include (1) the study of Chinese characters, for beginners; (2) the study of Chinese texts concerning the history and geography of Central Asia and the development of Chinese art, for advanced

students; (3) the history of the Chinese Empire, for general students; and (4) a seminar for research. Provision has also been made for an Assistant in the department, who will give instruction in the Mandarin dialect.

During the year a portion of the income of the Dean Lung fund has been devoted to the purchase of books on Chinese and other matter illustrative of the subject-matter of Professor Hirth's lectures. The collection of over 6000 volumes, the gift of the Chinese Government, is described by the Librarian in his report (see p. 254).

On March 3 the Trustees received an important communication from Messrs. R. Fulton Cutting, W. Professor-ship of Social and Political Ethics H. Baldwin, Jr., Isaac N. Seligman, Alfred T. White, George Haven Putnam, Robert W. De Forest, Charles Stewart Smith, Carl Schurz, and the Right Reverend Henry C. Potter, proposing to found a chair of Social and Political Ethics in the University by the gift of a sum sufficient to pay the salary of the professor for a term of three years from July 1, 1902, with the expectation that a permanent endowment fund would be provided later. The Trustees gratefully accepted the offer and on June 2 appointed Felix Adler, Ph.D., of New York, a graduate of Columbia College in the class of 1870, to be Professor of Social and Political Ethics.

Professor Adler will enter upon active service in February, 1903, and will so arrange his work that the heavier portion of his teaching will fall in the second half-year, leaving himself free to carry on during the first half of each academic year his studies

and his practical work in connection with those ethical movements in the community that are making for social and political reform. It is the belief of the founders of the chair, and of Professor Adler himself, that because of this personal contact with the ethical movements of our time, the instruction given by the incumbent of the chair will be more vital and practical and less purely academic than would otherwise be the case.

The generous action of the founders of this chair, and the prompt co-operation by the Trustees, are added evidence that the best citizenship of New York holds that any lasting and uplifting movement in civil society and our political life must rest, in last analysis, upon sound ethical and political principles which are recognized as such by the community at large. It is natural and appropriate that the universities, and Columbia University in particular, should be looked to to formulate and enunciate such principles and to hold them steadily before the students and the public.

On February 3 the Finance Committee recommended and the Trustees adopted a resolution designating the professorship of Germanic Villard
philology, now held by Professor William Professor-
H. Carpenter, the Villard Professorship of ship
Germanic Philology in recognition of the legacy left to the University by the late Henry Villard, himself a friend and patron of learning and constantly active in promoting more intimate relationship between the intellectual life of Germany and that of the United States.

When established, in 1893, the existing Pulitzer

Scholarships were awarded, after competitive examination, to graduates of the public elementary schools of the city of New York, and the successful competitors received their secondary education in the Horace Mann School, maintained by Teachers College. Since the establishment of public high schools in the city of New York, Borough of Manhattan, it has seemed wise to Mr. Pulitzer, as it certainly is sound educational policy, to open the scholarships in future to graduates of the public high, or secondary, schools rather than to graduates of the public elementary schools as heretofore. This change of policy necessitated a new agreement between Mr. Pulitzer and the Trustees, to supersede that of May 10, 1893, and on March 3 the Trustees adopted a new agreement with Mr. Pulitzer and authorized its execution by the Clerk. In their present form the Pulitzer Scholarships will be even more useful than before, and in addition they now offer a strong support to public secondary education in the city of New York.

As a memorial to the late George William Curtis, an anonymous friend of Mr. Curtis and of the University has given an endowment fund of \$1000, together with the design and dies for two medals, one of gold and one of silver, to be awarded annually to students in Columbia College for excellence in the public delivery of English orations, due regard being had for subject-matter, literary quality, and manner of delivery. It may be confidently hoped that these medals, bearing as they do so distinguished and honorable a name, will give new interest to the

**George
William
Curtis
Medals**

instruction of the undergraduate students in the art of cultivated and effective public speech.

Upon application by the authorities of St. Joseph's Theological Seminary at Yonkers, New York, the Trustees, on February 3, granted to the St. Joseph's Theological Seminary students in that institution the same privilege of attending university lectures without payment of any fee for tuition that had previously been granted to students in the Union, General, and Jewish Theological Seminaries in New York and the Drew Theological Seminary at Madison, New Jersey. It is worth noticing that these five institutions represent the Presbyterian, the Protestant Episcopal, the Jewish, the Methodist Episcopal, and the Roman Catholic churches. At a later time I shall point out in some detail how this relationship with various theological seminaries may be developed, and what seems to me to be the proper place of theological study in a modern university under the conditions which prevail in the United States.

At the close of the academic year, Abraham Jacobi, M.D., Professor of the Diseases of Children, and Herman Knapp, M.D., Clinical Professor of Ophthalmology, retired from active Retirement of Professors Jacobi and Knapp service at their own request and by the resignation of their respective chairs. Both are men of scientific eminence and have been for years past faithful and distinguished members of the teaching force of the College of Physicians and Surgeons. Both carry with them into well-earned retirement the high respect of their colleagues and the regard of the entire University. Upon the nomination of the Medical Faculty, Dr. Jacobi was

made Emeritus Professor of the Diseases of Children. His successor in the Professorship of the Diseases of Children is L. Emmett Holt, M.D., LL.D., who brings to the service of the University not only high professional reputation and wide experience, but special knowledge of medical education and deep interest in its improvement.

On March 7 Earl Hall was dedicated with appropriate ceremonies, and after that date the building **Opening of Earl Hall** was thrown open for the use of the students and the student organizations in accordance with the plans agreed upon by the donor and the Trustees. Already this building has shown how sorely a home and centre for the social and religious life of the students was needed. It is very largely used, and in its comfort, attractiveness, and beauty stands as a fitting memorial to the wise generosity of the donor as well as to the deep ethical and religious instincts and principles which enter into our conception of education and training.

The Faculty of Medicine has for some years past been confronted by the fact that the standard of **Admission to the Medical School** admission to the College of Physicians and Surgeons was not high enough to exclude students whose academic training was not sufficient to fit them for a rigorous course of professional study. During the early part of the past academic year the Faculty came to the conclusion that some action was desirable without delay, and without prejudice to any general policy as to admission to the professional schools of the University which might subsequently be determined upon. The Faculty thereupon adopted new regulations regarding

the admission of students to the first-year class of the College of Physicians and Surgeons, and these regulations, having been submitted to the Trustees as required by the Statutes, became operative on July 1, 1902.

In the past the requirements for admission to the first-year class of the College of Physicians and Surgeons have been those prescribed by law as the minimum to be exacted of intending students of medicine. In the language of the statute, these requirements are 48 academic counts, or their equivalent, as counts are defined by the University of the State of New York. But it is also provided by statute that a medical student may matriculate if he has gained a credit of but 36 of the required 48 counts, on condition that he make up the deficiency of 12 counts within a year. In October, 1901, no fewer than 69 of the 269 members of the first-year class entered subject to such conditions.

The new requirements provide that from and after July 1, 1902, no student so conditioned shall be admitted to the College of Physicians and Surgeons. It is expected that the enforcement of this rule will reduce the size of the entering class in 1902 very greatly in comparison with the class that entered in 1901. A more far-reaching change takes effect on July 1, 1903. After that date admission to the first-year class of the College of Physicians and Surgeons, except in the case of college graduates, will be by examination only, and the examination will be the regular tests conducted by the College Entrance Examination Board in June of each year and by the Columbia University Committee on

Entrance Examinations in September. With this rule in force, the standard of admission to the College of Physicians and Surgeons will be the same as that for admission to the undergraduate schools of the University. That is, it will involve a four-years' course of secondary study. The specific subjects upon which the Faculty of Medicine proposes to lay emphasis, by prescribing them for admission, are English, mathematics, elementary Latin, history, and one modern language. The candidate may make good the remainder of the requirement for admission by a selection from any of the subjects ordinarily taught in secondary schools, and accepted in whole or in part for admission by the undergraduate schools of the University. The Faculty recognize perfectly that a still higher standard for admission to the Medical School should be exacted as soon as the financial condition of the University will permit. The first effect of the enforcement of the new standard will probably be to reduce the size of the incoming class from twenty to twenty-five per cent.

For some time past my attention has been attracted by the fact that the great educational **Fellowships for Study in France** advantages of the reorganized French universities were not fully appreciated in the United States. While for more than a generation many of the best class of American students have passed one or more years in residence at a German university, and while the relationship between the English universities and those of the United States has always been more or less close, there has been no similar bond of adequate strength

between the universities of France and our own. This has seemed to me unfortunate because of the many and strong reasons which exist for closer and more intimate knowledge of each other on the part of the peoples of France and of America. I have, therefore, undertaken to secure funds for the establishment at Columbia University of two fellowships, to be awarded annually, the holders to carry on their studies at one of the French universities. In order that the expense of residence abroad, including all academic fees, might be fully met, I have suggested that the value of each of these fellowships should be \$800 at least. I am glad to be able to report that funds for the establishment of one fellowship for one year have already been given and that there is every prospect that it will be possible to offer both fellowships in the year 1903, either upon the basis of a permanent endowment or upon the basis of the necessary funds for the year being given.

In exchange for the establishment of these fellowships, I have ventured to propose to the Minister of Public Instruction in France that the French Government should found two similar fellowships, the holders of which should carry on their studies at Columbia University. My communication upon this subject was presented to the Minister of Public Instruction in June last, and, through the kind offices of Professor Adolphe Cohn of the Department of Romance Languages and Literatures, and those of Mr. James H. Hyde of New York, President of the Alliance Française, the project was placed before the Minister in the best possible light. The suggestion was most favorably received, and one such

fellowship has been established by the French Government for the year 1902-03, and the holder has already been appointed. He is M. A. François Monod, who comes to Columbia to carry on his studies under the direction of the Faculty of Political Science. It is my hope and expectation that with the establishment of these fellowships new and closer relations will be built up between Columbia and the French universities. It is planned to award these fellowships as the existing university fellowships are awarded, but to place no restriction upon the subject or subjects which the holders may study while abroad. In this way the fellowships will be available for students of law, medicine, engineering, or education, as well as for students of the liberal arts and sciences.

The Trustees of Barnard College completed during the year the revision of the Statutes of the College, **Barnard College** and of the By-Laws and Rules of Order of the Trustees, upon which a committee had been engaged for some time. This revision affects the general administration of the University in an important way, in that it brings the procedure of the Barnard College corporation into close conformity with that of the University, and so simplifies and makes easier the administration of all matters in which the two corporations have a common interest.

The endeavor to secure a suitable endowment fund met with unexpected success during the year owing to the generous proposal of Mr. John D. Rockefeller to duplicate all gifts received for the endowment fund before April 1, up to a limit of \$250,000.

The treasurer, Mr. George A. Plimpton, who has served the College so ably and unselfishly in the past, set himself the task of raising the \$250,000, and succeeded in his effort. The income from this new fund will greatly diminish the amount now needed each year to meet the deficit in the running expenses of Barnard College, and will serve as the beginning of an endowment fund which will one day, I do not doubt, be adequate to the large needs and high purposes of the College.

The Trustees have been compelled to abandon the use of Fiske Hall as a dormitory in order to render more space available for laboratories and class-rooms. The loss of the dormitory will be severely felt, but the Trustees hope to receive funds for the erection of one or more dormitory buildings in the near future.

The year at Teachers College has been exceptionally successful. The enormous increase, during the past five years, of the number of college **Teachers** graduates who are pursuing a regular **College** course of study in the history, principles, and practice of education is one of the most striking evidences of the appreciation in which the work of Teachers College is held throughout the country. It is also a measure of the advantage to Teachers College of its incorporation in the University. It is plainly evident that, except in most unusual circumstances and under peculiar conditions, the professional schools which will hereafter attract the largest number of the best prepared students, and which will therefore accomplish the most in the shortest time, are those which are members of the great universities of the country. They share in the many and

peculiar advantages which a university offers to its students, and have a part in that delightful, if indefinable, university atmosphere which has exerted so uplifting an influence, intellectual and moral, for many generations.

The Dean of Teachers College explains in his report the significant revision of the several courses of study which has now been completed. This revision is based upon a careful study of the College's own experience, and will enable it to deal more efficiently than ever before with the different classes of students who come to Teachers College for their professional instruction and training. Dean Russell's observations concerning the so-called collegiate course at Teachers College bear directly upon the question as to the length of the college course and the relation of collegiate to professional and technical study which I have already discussed in some detail.

The establishment, through co-operation with Union Theological Seminary, of definite courses of instruction in the English Bible is of more than passing interest. It marks an attempt to meet the demand, now being heard in various parts of the country, and made with increasing emphasis, for a systematic study, by the best educational methods, of the English Bible as a work of literature and as a text-book of religion and morals. That these courses of instruction will appeal to a large number of students in the University cannot be doubted.

The Speyer School building is approaching completion, and the unfailing generosity of the donors has made it possible to make many important additions to the original plans.

That Teachers College has, since its incorporation in 1889, received in gifts and bequests the sum of \$2,712,823.11 is one of the most striking and significant facts in recent educational history. It bears most impressive witness to the power of an ideal in this great centre of industry, commerce, and finance. The additional fact that nearly the whole of this large sum has been given to the College by the men and women who have guarded its interests as Trustees, and have given generously of time, thought, and labor, or by members of their families, speaks more eloquently than any comment could possibly do.

An unusual number of university officers have died during the year. Richmond Mayo-Smith, Professor of Political Economy and Social Science and a member of the University Council, died on November 11; William G. Baker, a retired member of the Library staff, on January 29; John T. Metcalfe, Emeritus Professor of Clinical Medicine, on January 30; Isaac D. Parsons, Assistant in Electrical Engineering, on February 12; George William Warren, Organist and Lecturer on Music, on March 15; and George C. Hubbard, Assistant in Analytical Chemistry, on May 27. Mr. Parsons and Mr. Hubbard were young men at the very outset of their academic careers and were full of promise. Mr. Baker entered the service of the Library in 1878 and until his withdrawal from active duty in 1899 was a faithful and painstaking officer. Dr. Metcalfe's eminent service to the profession of medicine, to the community, and to the College of Physicians and Surgeons will long be gratefully

Deaths
of University
Officers

remembered. Mr. Warren had for many years contributed greatly to the success of the daily chapel services and had taken responsible charge of the music at all public University functions. Professor Mayo-Smith, distinguished alike as economist, statistician, teacher, and organizer, had placed his remarkable talents at the service of the University for a quarter of a century, and had taken an active part in shaping and in administering its policies. His death while at the very height of his powers was a severe loss to the University and a crushing blow to his colleagues and friends.

The whole form of modern university development has been conditioned by the growth of great cities. The life of the modern universities is becoming more and more of the urban type. Each of the world's great capitals which is or aims to be a centre of influence in the largest sense of the word must and will be the home of a great university. That university will be national, or even international, in sympathy, scope, and influence. But it will be dependent in a large measure—when not, as in Europe, a governmental institution—upon the support of the city in which it is.

And it will of necessity reflect and extend the spirit and temper of that city. The drift of population into the great city centres is paralleled by the rapid growth of the number of students attending the city universities. While there is a difference of opinion as to the desirability of a city as a place of purely collegiate or undergraduate instruction, there

is no doubt whatever as to the superiority of the city's opportunities and environment as a place of graduate, professional, and technical study. The history of Columbia College, which is the oldest part of Columbia University, and in a sense the mother of all the rest, shows clearly that during the past ten years at any rate an increasing number of parents in every part of the country are choosing New York and Columbia as a place to which to send their sons, even for the undergraduate period of study.

The reason for the vast and rapid development of the urban university is, as Cardinal Newman said two generations ago, that a city is by its very nature a university. It draws to itself men and women of all types and kinds; it is the home of great collections of art and science, and it affords abundant opportunities to come under the influence of the best music and the best literature of our time.

The great city, and especially New York, is intensely cosmopolitan, and contact with its life for a short time during the impressionableness of youth is in itself a liberal education. Columbia is the typical urban university, and it is national to the core in its interests and sympathies. It typifies the earnestness, the strenuousness, the practicality, and the catholicity of New York City, and its constituency is drawn from every part of the nation. The tendency of American educational institutions once local to become truly national is a striking characteristic of the changes of the past quarter of a century. Perhaps no other American university has profited more than Columbia by the change, or has done more to bring it about.

The great city universities in Europe and in America owe their leadership to the fact that they are intent upon research and the training of productive scholars on the one hand, and upon the development and support of the highest possible professional training on the other. Each of these institutions is proud of the fact that its faculties include a number of the unquestioned leaders in the world's science and the world's literature. It is the presence of men like these that constitutes a real university; and it is upon their influence and example that the university depends for its present and future usefulness.

In common with all urban universities, Columbia University has before it the task of promoting productive scholarship and teaching efficiency. But its special and peculiar task is to serve New York and to represent sturdily all that is best and most uplifting in the traditions and ambitions of the American metropolis. This latter task is, in fact, that of practical usefulness to the community and of effective leadership in all that concerns good citizenship and the highest personal and civic ideals. Columbia aims to keep always in close touch with the community of which it is so important a part. Its needs are enormous, but the capacity of New York to meet them is even greater; and we rely with confidence upon the generous support of the great city.

NICHOLAS MURRAY BUTLER,
President.

October 6, 1902.

APPENDIX I

STATISTICS REGARDING THE TEACHING AND ADMINISTRATIVE STAFF FOR THE ACADEMIC YEAR 1901-1902

SUMMARY OF OFFICERS

	1900-1901	1901-1902
Professors.....	78	79
Adjunct and Associate Professors.....	15	27
Clinical Professors and Lecturers.....	17	19
Instructors.....	69	62
Demonstrators.....	3	3
Assistant Demonstrators.....	12	11
Tutors.....	35	46
Assistants.....	48	48
Curators.....	3	3
Lecturers.....	25	26
Clinical Assistants.....	74	83
Officers of Instruction.....	379	407
Officers of Administration.....	18	16
Emeritus Officers.....	10	9
Total.....	407	432

VACANCIES

Occurring, unless otherwise indicated, on June 30, 1902.

Professors and Administrative Officers

WILLIAM H. H. BEEBE.	Jan. 1.....	Resigned Secretary.
MARSTON T. BOGERT, A.B., Ph.B.....		Resigned Director of Student Organizations.
NICHOLAS MURRAY BUTLER, Ph.D., LL.D.	Jan. 10.....	Resigned Dean of the Faculty of Philosophy.
GEORGE B. GERMANN, Ph.D.	May 15.....	Resigned Registrar.
FRANK J. GOODNOW, A.M., LL.D.	Nov. 15.....	Resigned Secretary of the Faculty of Political Science.
ABRAHAM JACOBI, M.D., LL.D.....		Resigned Professor of the Diseases of Children.

WILLIAM A. KEENER, LL.D.	Aug. 8	Resigned
Dean of the School of Law.		
HERMAN KNAPP, M.D.		Resigned
Professor of Ophthalmology.		
SETH LOW, LL.D.	Oct. 7	Resigned
President.		
RICHMOND MAYO-SMITH, Ph.D.	Nov. 11	Died
Professor of Political Economy and Social Science.		
JOHN T. METCALFE, M.D.	Jan. 30	Died
Emeritus Professor of Clinical Medicine.		
GEORGE WILLIAM WARREN, Mus. Doc.	Mar. 15	Died
Organist and Lecturer on Music.		
RICHARD HENRY WARREN		Term Expired
Organist.		

Instructors and Demonstrators

WRAY ANNIN BENTLEY, B.S.		Resigned
Instructor in Metallurgy.		
ROBERT ALLYN BUDINGTON, A.M.		Resigned
Assistant Demonstrator of Physiology.		
WILLIAM H. CASWELL, M.D.	Nov. 1	Resigned
Instructor in Neurology.		
ARTHUR MORGAN DAY, A.M.	Mar. 15	Resigned
Instructor in Political Economy and Social Science.		
FRANKLIN A. DORMAN, M.D.		Resigned
Instructor in Obstetrics.		
REGINALD GORDON, A.B.	Jan. 1	Resigned
Instructor in Physics.		
NATHAN WILLIAMS GREEN, M.D.		Resigned
Assistant Demonstrator of Physiology.		
HENRY A. GRIFFIN, M.D.	Dec. 16	Resigned
Instructor in Medical Diagnosis.		

Tutors

LEWIS NATHANIEL CHASE, A.M.		Term Expired
Tutor in Comparative Literature.		
CLAYTON MEEKER HAMILTON, A.M.		Term Expired
Tutor in English.		
AUGUSTIN L. J. QUENEAU, A.M.	Apr. 15	Resigned
Tutor in Metallurgy.		
MILTON C. WHITAKER, M.S.		Resigned
Tutor in Chemistry.		

Lecturers

ELGIN R. L. GOULD, Ph.D.	Feb. 1	Resigned
Lecturer in Political Economy.		
JOHN ANGUS MACVANNEL, Ph.D.		Term Expired
Lecturer in Philosophy.		
HENRY RAYMOND MUSSEY, A.B.		Term Expired
Lecturer in the School of Political Science.		
WILLIAM ZEBINA RIPLEY, Ph.D.	Dec. 12	Resigned
Prize Lecturer in Sociology.		

JAMES DENNISON ROGERS, Ph.D.....	Term Expired
Lecturer in Greek.	
WILLIAM ROY SMITH, A.M.....	Resigned
Lecturer in History.	
CHARLES P. STEINMETZ.....	Term Expired
Lecturer in Electrical Engineering.	
MAX WEST, Ph.D.....	Term Expired
Lecturer in Political Economy.	

Assistants

GRACE ANDREWS, Ph.D.....	Term Expired
Assistant in Mathematics.	
CHARLES W. CRAMPTON, M.D.....	Term Expired
Assistant in Normal Histology.	
WILSON E. DAVIS, A.B.....	Term Expired
Assistant in Mining.	
WOLFRAM E. DREYFUS, Ph.D.....	Term Expired
Assistant in Analytical Chemistry.	
JEANNETTE BLISS GILLESPIE, A.B.....	Resigned
Assistant in Rhetoric.	
ERNEST VALENTINE HUBBARD, M.D.....	Term Expired
Assistant in Pathology.	
GEORGE CANNING HUBBARD, B.S. May 27.....	Died
Assistant in Analytical Chemistry.	
HOLMES C. JACKSON, Ph.D. Oct. 7.....	Resigned
Assistant in Physiological Chemistry.	
WILLIAM B. JOHNSTONE, C.E.....	Resigned
Assistant in Physics.	
JAMES A. MILLER, M.D.....	Term Expired
Assistant in Normal Histology.	
WILLIAM WHITFIELD MILLER, M.D.....	Term Expired
Assistant in Normal Histology.	
EDWARD BEDINGER MITCHELL, A.B.....	Term Expired
Assistant in Comparative Literature.	
MILES REES MOFFAT, A.B., B.S. Jan. 1.....	Resigned
Assistant in Physics.	
ARTHUR COLON NEISH, A.M.....	Term Expired
Assistant in Analytical Chemistry.	
WILLIAM FREDERICK NEUMANN, M.D.....	Term Expired
Assistant in Bacteriology and Hygiene.	
ISAAC D. PARSONS, E.E. Feb. 12.....	Died
Assistant in Electrical Engineering.	
FRANK E. PENDLETON, Mech.E.....	Term Expired
Assistant in Mechanical Engineering.	
ALFRED TINGLE, Ph.D.....	Term Expired
Assistant in Analytical Chemistry.	
HARLAN UPDEGRAFF, A.M.....	Term Expired
Assistant in Philosophy and Education.	
ADA WATTERSON, A.M.....	Resigned
Assistant in Botany.	

Curators

ALEXANDER P. ANDERSON, Ph.D.....	Term Expired
Curator of the Herbarium.	

PROMOTIONS

To take effect July 1, 1902

Professors and Administrative Officers

NAME	FROM	TO	SUBJECT
WILLIAM T. BREWSTER, A.M.	Instructor in	Adjunct Professor of	English
WILLIAM J. GIES, M.S., Ph.D.	Instructor in	Adjunct Professor of	Physiological Chemistry
AMADEUS W. GRABAU, S.D.	Lecturer in	Adjunct Professor of	Paleontology
WILLIAM HALLOCK, Ph.D.	Adjunct Professor of	Professor of	Physics
L. EMMETT HOLT, M.D.	Clinical Professor of	Professor of	Diseases of Children
WALTER B. JAMES, M.D.	Lecturer on the	Secretary	Practice of Medicine
FREDERICK P. KEPPEL, A.B. (Jan. 1)	Assistant Secretary	Adjunct Professor of	Classical Philology
CHARLES KNAPP, Ph.D.	Instructor in	Adjunct Professor of	English
GEORGE C. D. ODELL, Ph.D.	Instructor in	Adjunct Professor of	
CARLO LEONARDO SPERANZA, A.M., B. és L.	Adjunct Professor of the Romance Lan- guages and Litera- tures	Professor of Italian	
CHARLES T. TERRY, A.B., LL.B.	Lecturer on Con- tracts	Professor of Law	
BENJAMIN D. WOODWARD, Ph.D.	Adjunct Professor of	Professor of	Romance Languages and Literatures

Instructors and Demonstrators

FREDERICK R. BAILEY, M.D.....	Tutor in	Instructor in	Normal and Pathological Histology of the Ner- vous System
JOHN HENRY LARKIN, M.D.....	Tutor in	Instructor in	Pathology
AUGUST JEROME LARTIGAU, M.D.....	Tutor in	Instructor in	Pathology
HERSCHEL C. PARKER, Ph.B. (Jan. 1).....	Tutor in	Instructor in	Physics
WILLIAM R. SHEPHERD, Ph.D.....	Tutor in	Instructor in	History
HENRY C. SHERMAN, Ph.D. (July 1, 1901).....	Tutor in	Instructor in	Analytical Chemistry
BRADLEY STOUGHTON, B.S.....	Tutor in	Instructor in	Metallurgy
RUDOLF TOMBO, Jr., Ph.D. (June 1, 1902).....	Tutor in	Instructor in	German
JAMES D. VOORHEES, M.D.....	Tutor in	Instructor in	Obstetrics

Tutors

VICTOR J. CHAMBERS, Ph.D.....	Assistant in	Tutor in	Organic Chemistry
JOHN D. FITZ-GERALD, II., A.B.....	Assistant in	Tutor in	Romance Languages and Literatures
EVERETT J. HALL.....	Assistant in Metal- lurgy	Tutor in Analytical Chemistry and Assaying	
THOMAS H. HARRINGTON, E.M.....	Assistant in Mecha- nical Engineering	Tutor in Drawing	
ADAM LEROY JONES, Ph.D.....	Lecturer in	Tutor in	Philosophy
WILLIAM E. KELLCOTT, A.B.....	Assistant in	Tutor in	Zoology
GEORGE PHILIP KRAPP, Ph.D.....	Lecturer in	Tutor in	English
GEORGE B. PEGRAM.....	Assistant in	Tutor in	Physics
ALFRED N. RICHARDS, Ph.D.....	Assistant in	Tutor in	Physiological Chemistry

CHANGES IN STAFF

CHANGES OF TITLE

To take effect July 1, 1902

Professors

NAME	FROM	TO
WILLIAM H. CARPENTER, Ph.D.	Professor of Germanic Philology	Villard Professor of Germanic Philology
ROBERT W. TAYLOR, M.D.	Clinical Professor of Venereal Diseases	Clinical Professor of Genito-Urinary Diseases

Instructors

WILLIAM K. DRAPER, M.D.	Instructor in Physical Diagnosis	Instructor in Medical Diagnosis
E. MILTON FOOTE, M.D.	Instructor in Surgery	Instructor in Minor Surgery
JAMES R. HAYDEN, M.D.	Instructor in Venereal and Genito-Urinary Diseases	Instructor in Genito-Urinary Diseases
WALTON MARTIN, M.D.	Instructor in Surgery	Instructor in Minor Surgery
RALPH E. MAYER, C. E.	Instructor in Mechanical Engineering.	Instructor in Drawing

Lecturers

HARLAN FISKE STONE, M.A., LL.B.	Lecturer on Criminal Law, Bailments, and Insurance	Lecturer on Law.
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APPOINTMENTS

To take effect July 1, 1902

Professors and Administrative Officers

NAME	OFFICE
FELIX ADLER, Ph.D.	Professor of Social and Political Ethics
FRANCIS M. BURDICK, LL.D. (Oct. 3)	Secretary of the Faculty of Law

NAME	OFFICE
NICHOLAS MURRAY BUTLER, Ph.D., LL.D. (Oct. 7)	Acting President of the University
	(Jan. 6) President of the University
FREDERICK A. GOETZE	Director of Student Organizations
FRIEDRICH HIRTH, Ph.D.	Dean Lung Professor of Chinese
ABRAHAM JACOBI, M.D., LL.D.	Emeritus Professor of the Dis- eases of Children
GEORGE W. KIRCHWEY, A.B. (Oct. 3)	Dean of the Faculty of Law
PAUL MONROE, Ph.D.	Delegate to University Council
HENRY L. MOORE, Ph.D.	Adjunct Professor of Political Economy
EDWARD DELAVAN PERRY, Ph.D. (Jan. 10)	Dean of the School of Philosophy
JOHN DYNELEY PRINCE, Ph.D.	Professor of Semitic Languages
JULIUS SACHS, Ph.D.	Professor of Secondary Education in Teachers College
HENRY ROGERS SEAGER, Ph.D.	Adjunct Professor of Political Economy
DAVID EUGENE SMITH, Ph.D. (July 1, 1901)	Professor of Mathematics in Teachers College
MUNROE SMITH, A.M., J.U.D. (Oct. 18)	Delegate to University Council
	(Nov. 15) Secretary of the Faculty of Political Science
RICHARD HENRY WARREN. (Apr. 17).	Organist
THOMAS DENISON WOOD, M.D. (July 1, 1901)	Professor of Physical Education in Teachers College
FREDERICK J. E. WOODBRIDGE, A.M.	Professor of Philosophy

Instructors and Demonstrators

PEARCE BAILEY, M.D. (Nov. 1) . . .	Instructor in Neurology
HENRY WOOLFE BERG, M.D.	Instructor in Infectious Diseases
RICHARD H. CUNNINGHAM, M.D. . . .	Instructor in Electro-Physiology
HAVEN EMERSON, M.D.	Assistant Demonstrator of Physi- ology
LINNAEUS EDFORD LA FETRA, M.D.	Instructor in the Diseases of Chil- dren
RALPH W. LOBENSTINE, M.D.	Instructor in Obstetrics
RUSSELL BURTON OPITZ, M.D.	Assistant Demonstrator of Physi- ology
EUGENE H. POOL, M.D. (Nov. 1) . .	Assistant Demonstrator of Anat- omy
ARTHUR M. SHRADY, M.D. (Jan. 1)	Instructor in Physical Diagnosis

Tutors

CARL A. ERNST, Ph.D.	Tutor in General Chemistry
HERCULES WALLACE GEROMANOS, S.B.	Tutor in Metallurgy
ALFRED HAYES, A.B., LL.B.	Tutor in Law
ALVIN S. JOHNSON, A.M.	Tutor in Economics and Social Science
AUSTIN FLINT ROGERS, A.M.	Tutor in Mineralogy
BRADLEY STOUGHTON, B.S. (Apr. 15)	Tutor in Metallurgy

Lecturers

GEORGE W. BOTSFORD, Ph.D.....	Lecturer in Ancient History
WALTER L. FLEMING, M.S., A.M...	Lecturer in History
JAMES W. GARNER, B.S., Ph.M...	Lecturer in History
ELGIN R. L. GOULD, Ph.D. (Oct. 7)	Lecturer in Political Economy.
HEINRICH O. HOFMAN, Ph.D.....	Lecturer in Metallurgy
JAMES F. McCLELLAND, E.M.....	Lecturer in Mining
HENRY R. MUSSEY, A.B. (Mar. 15)	Lecturer in the School of Political Science
ELSIE CLEWS PARSONS, Ph.D.....	Lecturer in Sociology
W. ROY SMITH, A.M. (July 1, 1901)	Lecturer in History
CHARLES P. STEINMETZ. (Feb. 1)..	Lecturer in Electrical Engineering
MAX WEST, Ph.D. (Feb. 1).....	Lecturer in Political Economy

Assistants

JOSEPH H. BAIR, Ph.B., A.M.....	Assistant in Anthropology
FRANCES C. BERKELEY, A.B.....	Assistant in English
JEAN ALICE BROADHURST.....	Assistant in Botany
RALPH E. BUFFINGTON, M.D.....	Assistant in Normal Histology
JOHN CABOT, Jr., M.E. (Jan. 1)..	Assistant in Physics
WILLIAM C. CLARKE, M.D. (Nov. 1)	Assistant in Normal Histology
GEORGE H. DANTON, A.B.....	Assistant in Comparative Literature
JOSEPH L. DANZIGER, B.S.....	Assistant in Analytical Chemistry
WILSON E. DAVIS, A.B. (July 1, 1901)	Assistant in Mining
NORMAN E. DITMAN, M.D.....	Assistant in Clinical Pathology
CHARLES H. ELLARD, A.M.....	Assistant in Analytical Chemistry
CYRUS WEST FIELD, M.D.....	Assistant in Pathology
CHARLES FORBES, M.D.....	Assistant in Physics
CLAUDE R. FOUNTAIN, A.B.....	Assistant in Physics
PHILIP B. HAWK, M.S. (July 1, 1901)	Assistant in Physiological Chemistry
TRACY ELLIOT HAZEN, Ph.D.....	Assistant in Botany
LINVILLE L. HENDREN, A.M. (Jan. 1)	Assistant in Physics
FREDERICK W. J. HEUSER, A.B.	Assistant in the Germanic Languages and Literatures
HENRY A. JACKSON, B.S.....	Assistant in Physical Chemistry
CHARLES E. LUCKE, M.S.....	Assistant in Mechanical Engineering
WILLIAM W. MILLER, M.D. (Nov. 1)	Assistant in Normal Histology
MILES R. MOFFAT, A.B., B.S. (Oct. 1)	Assistant in Physics
CHARLES NORRIS, M.D.....	Assistant in Bacteriology
ISAAC D. PARSONS, E.E. (July 1, 1901).....	Assistant in Electrical Engineering
A. EMIL SCHMITT, M.D.....	Assistant in Operative Surgery
WILLIAM C. UHLIG, Ph.B. (July 1, 1901).....	Assistant in Chemistry
EDWIN C. UPTON, B.S.....	Assistant in English
ROSSITER L. WATERS, Mech.E.....	Assistant in Mechanical Engineering
FRANCIS J. WHITE, E.E.....	Assistant in Electrical Engineering
LINSLEY R. WILLIAMS, M.D.....	Assistant in Normal Histology

APPENDIX 2

PUBLIC LECTURES

UNDER THE AUSPICES OF THE UNIVERSITY

AT THE UNIVERSITY

February 26. Victor Hugo Celebration. Addresses by Dr. Henry van Dyke, Mr. Hamilton W. Mabie, Prof. L. Mabileau, and selections read by Prof. A. Cohn.

L'Enseignement Public en France. Prof. Léopold Mabileau,
Directeur du Musée Social

- February 27. Le haut Enseignement théorique: La Sorbonne et le Collège de France.
" 28. Le haut Enseignement pratique: L'École Centrale et le Conservatoire des Arts et Métiers.
March 1. L'Enseignement sociologique: Le Musée Social et l'École des Sciences Politiques.
" 3. L'Enseignement populaire.
March 5. Les Résultats de la Conférence de la Haye. Baron d'Estournelles de Constant, Ministre Plénipotentiaire, Membre de la Chambre des Députés. Hon. Seth Low, LL.D., presided at the lecture.
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China and Chinese Civilization. Herbert Allen Giles, LL.D.,
Professor of Chinese at the University of Cambridge

- March 5. I. The Chinese Language: Its importance—Its difficulty—The Colloquial—Dialects—"Mandarin"—

- Absence of grammar—Illustrations—Pidgin-English—Scarcity of vocables—The Tones—Coupled Words—The written language—The Indicators—Picture characters—Pictures of ideas—The Phonetics—Some faulty analyses.
- March 7. II. A Chinese Library: The Cambridge (Eng.) Library—(A) The Confucian Canon—(B) Dynastic history—The “Historical Record”—The “Mirror of History”—Biography—Encyclopædias—How Arranged—Collections of Reprints—The Imperial Statutes—The Penal Code—(C) Geography—Topography—An old volume—Account of Strange Nations—(D) Poetry—Novels—Romance of the Three Kingdoms—Plays—(E) Dictionaries—The Concordance—Its arrangement—Imperial Catalogue—Senior Classics.
10. III. Democratic China: The Emperor—Provincial Government—Circuits—Prefectures—Magistracies—Head-boroughs—The People—The Magistrate—Other Provincial Officials—The Prefect—The Intendant of Circuit (*Tao-t'ai*)—Viceroy and Governor—Taxation—Mencius on “the people”—Personal liberty—New imposts—Combination—Illustrations.
- “ 12. IV. China and Ancient Greece: Relative values of Chinese and Greek in mental and moral training—Lord Granville—Wên T'ien-hsiang—Han Yü—An Emperor—A land of opposites—Coincidences between Chinese and Greek civilizations—The question of Greek influence—Greek words in Chinese—Coincidences in Chinese and western literature—Students of Chinese wanted.
14. V. Taoism: Religions in China—What is Tao?—Lao Tzü—The *Tao Tê Ching*—Its claims—The philosophy of Lao Tzü—Developed by Chuang Tzü—His view of Tao—A Taoist poet—Symptoms of decay—The Elixir of Life—Alchemy—The Black Art—Struggle between Buddhism and Taoism—They borrow from one another—The corruption of Tao—Its last state.
- “ 17. VI. Some Chinese Manners and Customs: Origin of the queue—Social Life—An eyeglass—Street etiquette—Guest and host—The position of women—Infanticide—Training and education of women—The wife's status—Ancestral Worship—Widows—Foot-binding—Henpecked husbands—The Chinaman a mystery—Customs vary with places—Dog's flesh—Substitutes at executions.

The Dynamics of Living Matter. Jacques Loeb, M.D., Professor of Physiology and Experimental Biology in the University of Chicago

- March 18. I. The General Chemical Character of Life Phenomena.
- " 19. II. The General Physical Constitution of Living Matter.
- " 20. III. Protoplasmic Motion, Muscular Contraction, and Cell Division.
- " 21. IV. The Effects of the Galvanic Current upon Life Phenomena.
- " 24. V. The Effects of Ions upon Various Life Phenomena.
- " 25. VI. The Effects of Light and Heliotropism.
- " 26. VII. Artificial Parthenogenesis and the Problem of Fertilization.
- " 27. VIII. Regeneration and the Reversibility of the Process of Development.

Chanson de Roland. Prof. Henry A. Todd, of Columbia University

- April 9. The French Folk-Epic: Its origin and development. Formative influences of the *Chansons de geste*. Classification of the Epic Cycles and characterization of the *Chansons de geste*.
- " 16. The Chanson de Roland: Its historical basis. The transformation of history into legend. Account of the poem as contained in the earliest preserved redaction. Why the *Roland* is accounted the greatest of the *Chansons de geste*.
- " 23. The Chanson de Roland: History and description (with complete photographic *fac-simile*) of the unique Oxford Manuscript (Digby 23). The language and versification of the *Roland*: The *laisse*, the *verse*, the *assonance*, the *caesura*. The style and literary form of the poem.
- " 30. The Roland Legend: Its later development in France and its diffusion in the literature of Europe: The *Ruolandes-Lied*; the *Karlamagnus Saga*; the *Roland* in English verse; the Spanish *Roncevaux*; the Italian *Rotta di Roncesvalle*, the *Morgante Maggiore*, the *Orlando innamorato* and the *Orlando furioso*. Conclusion.

- May 19. Address to Officers and Students of the University.
Prof. Alfred Croiset, of the University of Paris.

AT COOPER UNION

Lectures on Civil Engineering Subjects. William Hubert Burr, Professor, Columbia University

- February 4. Ancient Civil Engineering Works: The prehistoric works of the Egyptians, Assyrians, and other ancient nations. The canals and other artificial waterways in the Euphrates valley. The masonry and other constructions of the Chaldeans. The construction of the Pyramids of the ancient Egyptians; their masonry and hydraulic works in the valley of the Nile. The timber and masonry bridges of the Romans; their aqueducts, waterworks, and harbors.
- “ 11. Bridges: The early timber and iron bridges of this country. The beginnings of the period of rational design, involving the fundamental theories of the elasticity and resistance of such materials as iron and steel. The analysis of the simple forms of modern bridge trusses, extended so as to include the fundamental elements of graphical analysis, the theory of continuous bridges, and the application of the theories of least work and influence lines. The latter portion of the lecture included the treatment of masonry arches and suspension bridges with examples of applications to the longest spans yet contemplated.
- “ 18. Waterworks for Cities and Towns: This lecture covered some of the general considerations bearing upon the selection of suitable water supplies for cities and towns, the collection and handling of such supplies, and the systems of distribution required for transmission to consumers, with special application to existing conditions in New York City. Attention was also given to the proper sanitary treatment of potable waters including the application and operation of modern filters.
- “ 25. Some Features of Railroad Engineering: The first part of this lecture was devoted chiefly to a few of the main features of railroad location, illustrated by some of the more marked and difficult pieces of that class of work in this and other countries. A general and condensed statement of some features of modern railroad signaling was set forth. The

latter portion of the lecture included the consideration of a few of the latest instances of locomotive construction, including some of the heaviest and most powerful machines yet constructed.

- March 4. Nicaragua Route for the Isthmian Ship Canal: There were given in this lecture general considerations bearing upon the construction of canals for heavy traffic, after which a detailed description of the salient features of the Nicaragua route was set forth. This treatment of the Nicaragua line was based upon the extended investigations recently completed by the Isthmian Canal Commission.
- “ 11. The Panama Route for the Isthmian Ship Canal: A concise and complete treatment of the canal situation on the Isthmus of Panama, including the status of the old and new Panama Canal Companies, was given in this lecture. The greater portion of the lecture, like the preceding, covered the detailed investigations recently completed by the Isthmian Canal Commission.

LECTURES UNDER DEPARTMENTAL AUSPICES

AT THE UNIVERSITY

Department of Astronomy

- January 10. The Cause of an Ice Age. Sir Robert S. Ball, F.R.A.S.
- April 8. Modern Mars. Percival Lowell, Director of Lowell Observatory, Flagstaff, Arizona.
- “ 16. Experiences on the Total Solar Eclipse. Expedition to Sumatra. S. Alfred Mitchell, Ph.D., of Columbia University.
- “ 23. The Capture of a Comet by Jupiter. Charles Lane Poor, formerly Professor of Astronomy at Johns Hopkins University.
- “ 30. Some Recent Remarkable Results of Astronomical Photography. John K. Rees, Professor of Astronomy at Columbia University.

Department of Geology

- April 22. Some Possibilities in Geography Resulting from the Revival of an Ancient Method of Map-Making. Samuel L. Penfield, M.A., Professor of Mineralogy in Yale University.
- May 7. Volcanoes and Volcanic Action. Prof. James F. Kemp

Department of the Germanic Languages and Literatures

- January 15. Frubste Erinnerungen. Carl Schurz, LL.D.
 " 22. Germanische Sagen in den Wagenschen Opern.
 Arthur F. J. Remy, Ph.D.
 " 29. Berlin. Illustriert. Henry Zick, Ph.D.
 February 5. Ossian und sein Verhaltnis zur deutschen Litteratur.
 Rudolf Tombo, Jr., Ph.D.
 " 19. Grillparzer als Lyriker. Mr. Udo Brachvogel.
 " 26. Das deutsche Theater in New York. Mr. Heinrich
 Conried, Director of the Irving Place Theatre.
 March 5. Amerika in der deutschen Dichtung. Emil A. C.
 Keppler, A.M.
 " 12. Das Harzgebirge. Illustriert. Rev. August Ulmann,
 S.T.D., Rector of Trinity School.
 " 19. Zwei Dichter des Weltschmerzes: Holderlin und
 Lenau. Wilhelm A. Braun, A.B.
 " 26. Friedrich der Grosse und die Vereinigten Staaten von
 Amerika. Mr. George von Skal, editor of the *New
 Yorker Staats-Zeitung*.

Department of Indo-Iranian Languages

Lectures on India

- February 4. The Parsis of Modern Zoroastrians of Bombay. Pro-
 fessor A. V. Williams Jackson.
 " 11. Literary Landmarks of India. Professor A. V. Wil-
 liams Jackson.
 " 18. Scenes Connected with Buddha's Life and Fame. Pro-
 fessor A. V. Williams Jackson.
 " 25. Hindu Mythology. Professor A. V. Williams Jackson.
 March 4. Shrines, Monuments, and Temples of India. Pro-
 fessor A. V. Williams Jackson.
 " 11. How the West Became Acquainted with India. Dr
 Arthur F. J. Remy.
 " 18. Sketch of the Indian Philosophical Systems. Mr.
 Montgomery Schuyler, Jr., M.A.
 April 23. Some Problems of Linguistic Study. Louis H. Gray.

Faculty of Political Science

The White Man's Burden. G. Lowes Dickinson, M.A.

- December 2. I. The Government of Dependencies, with Special
 Reference to India.
 " 6. II. Blacks and Whites.
 " 10. III. The South African Crisis and its Historical
 Antecedents.

Department of Romance Languages and Literatures

- November 7. Un prodige scientifique: Evariste Gallois (1826-1846). Professor Jacques Hadamard, LL.D.
- " 14. Victor Hugo: I. La France en 1802. Professor Cohn.
- " 21. Victor Hugo: II. Les fils des soldats de l'Empire. Professor Cohn.
- December 5. I. Victor Hugo: Les fils des soldats de l'Empire. Professor Cohn.
- " 12. Victor Hugo: III. Victor Hugo royaliste. Professor Cohn.
- January 9. Victor Hugo: IV. Le Romantisme; la Préface de Cromwell. Professor Cohn.
- " 16. Victor Hugo: V. La Bataille d' Hernani et la Révolution. Professor Cohn.
- " 23. Victor Hugo: VI. Victor Hugo et la légende Napoléonienne sous la monarchie de juillet. Professor Cohn.
- February 6. La Poésie de la Science et la Science de la Poésie. M. Lazare Weiller, Délégué du Gouvernement français.
- " 13. Victor Hugo: VII. La réaction contre le Romantisme; la chute des Burgraves. Professor Cohn.
- " 20. Victor Hugo: VIII. Révolution, République, Démocratie (1848). Professor Cohn.
- March 6. Victor Hugo: IX. Le Deux-décembre. Les Châtiments. Professor Cohn.
- " 13. Victor Hugo: X. Guernesey. Professor Cohn.
- " 20. Le Père Lacordaire. Father Delaplanche, of the Society of the Fathers of Mercy.
- " 27. Six semaines au Labrador. Mr. Daniel Jordan.
- April 3. Victor Hugo: XI. L'Année Terrible. Professor Cohn.
- " 10. Les Bergères du Lignon. Mr. Henry Bargy.
- " 17. Lecture in Spanish. Cuba y los Estados Unidos. Commandant de Mestre y Amabile.
- " 24. Victor Hugo. XII. Les Dernières Années. Professor Cohn.

 La Famille Française. Monsieur Hugues le Roux.

- March 8. La famille française, hier et aujourd'hui.
- " 10. Le français d'aujourd'hui, l'homme et le jeune homme.
- " 12. La française d'aujourd'hui, la jeune fille et la femme.
- " 15. La crise du mariage.

Department of Zoölogy

- April 11. A Journey to Japan and the Philippines. Bashford Dean, Ph.D.

APPENDIX 3

COMMITTEE ON EMPLOYMENT FOR STUDENTS

REPORT OF ACTING SECRETARY, 1901-02

During the year under review, a total of 228 men applied to the Committee for assistance. Of these, 118 reported, upon blanks provided by the Committee, the amount of money which they earned during the period from July 1, 1901, to May 15, 1902, and the amount which they would probably receive from May 15 to October 1. A summary of these reports follows:

FROM JULY 1, 1901, TO MAY 15, 1902

Tutoring and Teaching:

With the aid of the Committee.....	\$3,404 83	
Without the aid of the Committee.....	5,025 50	
		\$8,430 33

Clerical Work:

With the aid of the Committee.....	339 35	
Without the aid of the Committee.....	1,723 55	
		2,062 90

Technical Work:

With the aid of the Committee.....	170 00	
Without the aid of the Committee.....	548 65	
		718 65

Miscellaneous Work:

With the aid of the Committee.....	1,545 50	
Without the aid of the Committee.....	2,906 80	
		4,452 30
		\$15,664 18

Estimated Earnings for the Summer of 1902:

With the aid of the Committee.....	2,216 00	
Without the aid of the Committee.....	3,615 00	
		5,831 00
		\$21,495 18

The most important extension of the work has been an organized attempt to procure positions in hotels for our men during the summer. Five hundred letters were sent to the proprietors of the more important summer hotels, and as a result, eleven men have been provided for directly through the assistance of the Committee. As usual, most of the money which has been earned by students has been by private tutoring, but the two or three competent stenographers who are on the list of the Committee have also been able to find all the work they could attend to at the University. Many other forms of work, varying in importance from attendant at a ping-pong table to a geological expert in a legal case regarding a boundary line, have been obtained for our students.

In general, the year's experience has shown that the opportunities in New York for a presentable man who is really competent to do some one thing thoroughly well, are very large indeed, if such a man has at least three hours of each day to himself; and while of course it is impossible to guarantee work in any individual case, the Committee feels justified in encouraging such a man to come to Columbia with the expectation that he will be able to pay at least a fair proportion of his expenses. The Committee ought, however, to say frankly that it can be of almost no assistance to students in medicine and applied science, except during the summer vacations (and even here the engineering men have but little time to spare). The amount of practical work which the University demands from these men makes it, barring exceptional cases, simply impossible for the Committee to provide work, or for the men to perform it without injustice to their studies.

For the present, the Committee has very few opportunities to provide work for the women students in the graduate schools, although in the future it is hoped that it can be of some assistance to them as well as to the men in the University.

The Committee is anxious to emphasize to all persons who may read this report that its primary object will be, not to recommend students on account of their financial need (although this, of course, will be considered when other things are equal), but to endeavor to provide a thoroughly com-

petent person for any work which may be brought to its attention, and to make no recommendations at all rather than to attempt to fill any position with a second-grade man. The Committee would also make it clear that, again when other things are equal, it intends to recommend men who have come to Columbia from other parts of the country, as they are presumably at additional expense for board and lodging, and, also, they are less familiar with the opportunities for earning money in New York.

F. P. KEPPEL,
*Acting Secretary, Committee
on Employment for Students.*

May 26, 1902.

APPENDIX

THE ORGANIZATION OF INSTRUCTION IN THE NATURAL AND EXACT SCIENCES AT COLUMBIA UNIVERSITY

PRESIDENT'S ROOM, April 23, 1902.

Prof. J. McK. Cattell,
Columbia University.

DEAR PROFESSOR CATTELL:

Assuming the present admission requirements, both in science and in other subjects, for Columbia College and for the Schools of Applied Science, I should like advice as to how the instruction in the exact and descriptive sciences should be planned and organized, with reference to the best possible results for the University as a whole. The needs of the three following classes of students are to be kept in mind:

1. Those who wish to take much scientific instruction during an undergraduate course with a view to specializing during a period of graduate study in some special field or department;
2. Those who wish to lay the best possible basis during an undergraduate period of study for professional studies in medicine or in the applied sciences; and
3. Those who wish to obtain some knowledge of one or more departments of science as part of a liberal education.

The instruction in the exact and descriptive sciences as now provided for by Columbia University has never been studied or organized as a whole. It has grown up piecemeal under the pressure usually of a practical demand. I should like to get light upon the proper treatment of it as an end in itself, and as part of our University work, looking at that work in the largest possible way.

To this end I am asking Professors R. S. Woodward and Wilson, together with yourself as chairman, to act informally as an advisory committee to me. I should be glad to have a written and detailed expression of the conclusions of this committee, if possible before Commencement Day.

Very truly yours,

(Signed) NICHOLAS MURRAY BUTLER,
President.

May 29, 1902.

President Nicholas Murray Butler, LL.D.

SIR:

We shall reply somewhat fully to your letter of April 23, asking for a report on the organization of instruction in the natural and exact sciences at Columbia University, since the subject appears to be of great importance both for the University and for science. As you state, instruction in the sciences has never been systematically organized at this University, and we are in this regard at a disadvantage as compared with other institutions. At least six groups of students should be considered: (1) Those who intend to go forward to advanced scientific work at the University; (2) those who wish to teach science in elementary, secondary, and normal schools; (3) those who wish to prepare themselves to be scientific experts under the government and curators of museums; (4) those who wish the best preparation for medicine and applied science; (5) those who regard an education largely scientific as the best general training for certain other professions or lines of business, and (6) students whose main work is in other directions, but who elect one or more courses in science.

The methods that have been adopted elsewhere for instruction in the sciences may be divided into three main groups:

(1) Special scientific schools or departments have been established, the course of study usually leading to the B.S. or Ph.B. Harvard, Yale, Princeton, and many of the older

institutions maintain such schools. The difficulty has been that the standard of entrance and graduation in these schools is lower than in the academic departments. Their significance has been chiefly negative, the B.S. not meaning that the graduate is well-trained in science, but that he has not studied the classical languages. These schools have also usually combined professional work in engineering and the like with the study of science as an end in itself, to the disadvantage of the latter.

(2) The State universities have, as a rule, established three co-ordinate colleges or courses, leading respectively to the A.B., the B.S., and the Ph.B. degree. The difference in these courses is chiefly a matter of the entrance examinations, and the A.B. degree does not hold its own in comparison with the other degrees. This method (*cf.* the recent action of Cornell, Michigan, Texas, and Minnesota) is apparently tending to become

(3) The method of the Johns Hopkins University, which other universities seem likely to adopt. This is to have one college or undergraduate department leading to the A.B. degree. The group system is usually adopted, and the name of the group is sometimes attached to the degree.

Your committee believes that of the three plans enumerated the first is the worst and the last is the best. Our school of applied science has been well established as a technical school and should be maintained as such. In a school such as the Lawrence Scientific School of Harvard University, or the Sheffield Scientific School of Yale University, technical work and scientific work are confused. For the students studying the sciences as such, the only distinction between those in the college and those in the scientific school may be that the latter have not passed an entrance examination in Latin. Harvard University also maintains the M.S. and D.S., which may mean not that the students have had a different college and university course from those receiving the A.M. and Ph.D., but that they have attended a different kind of preparatory school. These degrees are, consequently, but seldom conferred. The scientific school in some universities has a three-year course as compared with a four-year course in

the academic department, the entrance examinations are lower, the training in science is often inferior and may even be less in quantity than in the academic department, and the students tend to come from a lower social class; as a result the school of science and its B.S. degree occupy a second-rate position at the university. Should we here establish courses based primarily on the sciences, they must be equal in every respect to the courses based on other subjects.

The plan of three co-ordinate courses—based respectively on language and literature; on philosophy, history, and political science, and on natural and exact science—is preferable to a school of science inferior to the academic department. This method could here be introduced conveniently, as the three colleges would lead up to our three graduate faculties. It would also permit the easy establishment of the courses in commerce, etc., that have been planned. The difficulty appears to be that a college of science would at first be small as compared with the college of arts, as most of those who wish to study the sciences would probably still enter the college of arts. It would cause needless duplication, as most of the professors in the new college would also be members of the historic faculty. There are no satisfactory degrees for the different colleges. We already use the B.S. for technical work in chemistry, architecture, and education, and it has nowhere a definite meaning as a degree for a scientific education. It is possible that we might give a B.Sc. (Columbia), and make it equal to the degree of the University of London (in England B.S. refers to surgery), but this would be difficult of accomplishment. There is danger lest a college of science would not be in fact co-ordinate with the present college, but would become a second-rate department, as in the case of the scientific schools already mentioned.

The third plan—one college with the group system leading to the A.B. degree—appears to be in the line of evolution. The college course and the A.B. degree no longer mean a classical or even a linguistic and literary training. At the English universities this degree may be granted for studies exclusively in the sciences. This is also the case at Harvard

with the exception of one required course in English. It is also in large measure true at this University,* the elections in the junior and senior years last year having been as follows:

Ancient languages.....	72
Modern languages.....	433
Philosophy and political science.....	494
Natural and exact sciences.....	200

Our alternatives therefore appear to be the establishment of a new college, leading to the B.S. (possibly B.Sc.) degree, which might be temporarily administered under the present college or the faculty of pure science; or the arrangement of properly co-ordinated courses in the sciences under the present college, leading to the A.B. degree. The second of these alternatives appears to this committee both better and more in accordance with present educational tendencies.

A group system with adequate provisions for properly co-ordinated courses in the sciences can be arranged in our college if agreement can be reached regarding the requirement of Latin at entrance (or for the degree) and the other studies required of all students in the course. Should agreement on these points be found impracticable for the present, it may still be possible to arrange a suitable group system in the present college leading to the degree either of B.A. or B.S.; but this would be regarded as only a temporary expedient.

We believe that the group system should be adopted despite certain practical difficulties that might be encountered in its operation. There is room for difference of opinion as to

* We add the registration at the University of Chicago for the last winter quarter. The relative registration in the sciences is larger and more typical than here, indicating our lack of proper organization.

Ancient languages.....	395
Modern languages.....	1165
Philosophy and political science.....	1083
Natural and exact sciences.....	1779

the elaboration of the system; indeed it would be undesirable to lay down fixed rules in advance of experience. In general, however, it is suggested that the basis of the system should be a classification of studies as far as practicable into minor courses and major courses, to which may profitably be added in some departments elective post-major courses. Minor courses (which may be given as required studies or as free electives) would consist, say, of five points for one year, majors of the same amount of work for two years, and post-majors of a third year in the same subject. In many departments minors could probably be divided profitably into partial minors of two and three points, thus giving a wider range for free electives.

In general the nucleus of a group would include a major subject combined with two minors or one major in related subjects (20 points), leaving 40 points for post-majors, free electives, and required studies. The committee makes no specific recommendation regarding required studies, but suggests the importance for all scientific students of a good working knowledge of French and German, of courses in English, philosophy, and drawing, and, if practicable, of courses in the general history and methods of science.

It is believed that such a general plan as that outlined above is preferable to a system of pre-requisites in a free elective system. Such pre-requisites would under existing conditions be impracticable in case of the minor courses required of classical or general students, and also in many cases when elected by scientific or other students as free electives. The group system naturally provides not only for pre-requisites, when necessary, but also for a suitable combination of related but not inseparable courses.

We recommend treating separately the first three years and the senior year, the latter being placed under the faculty of pure science, and further, that, as far as practicable, required studies be given in the freshman year; that the work in the major course be in general begun in the freshman or sophomore year; and that free electives, including post-majors, be in general taken in the junior and senior years.

We append schedules showing how the group system might

be applied to the sciences represented by members of your committee.

Respectfully,
 (Signed) J. McK. CATTELL,
Professor of Psychology.
 (Signed) R. S. WOODWARD,
Professor of Mechanics and Mathematical Physics.
 (Signed) EDMUND B. WILSON,
Professor of Zoölogy.

PSYCHOLOGY

ENTRANCE:

Students are recommended to present:

Mathematics.....	4 points	} 15 points
Zoölogy (Natural History).....	1 point	
Physics.....	2 points	
English.....	3 "	
German.....	3 "	
French.....	2 "	

FRESHMAN YEAR:

Preparation for Major

Physics.....	3 "
Mathematics.....	2 "

Minor or preparation

Physics.....	2 "	} 5 points
Mathematics.....	3 "	
Chemistry.....	3 "	
General Biology.....	2 or 3 "	

Electives or required studies

English.....	3 "	} 5 points
German.....	2 or 3 "	
French.....	2 or 3 "	
History.....	2 or 3 "	
Drawing.....	2 or 3 "	
Shop-work, etc.		

SOPHOMORE YEAR:

Major

Psychology A and 10.....	3 "
Psychology.....	2 "

Minors

Scientific Methods	2 or 3	points	} 5 points
Applications of Mathematics	2 or 3	"	
Physics	2 or 3	"	
Physiology	2 or 3	"	
Zoölogy	2 or 3	"	
German (Psychology, Literature, and terminology, etc.)	2 or 3	"	
French (Psychology, Literature, and terminology, etc.)	2 or 3	"	}

Electives

The above minors or other subjects			5 points
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JUNIOR YEAR:

Major

Psychology 2 and 3	3 or 4	"	} 5 points
Psychology 8 and 9	3 or 4	"	
Psychology 16	2	"	

Minors

Philosophy	2 or 3	"	} 5 points
Education	2 or 3	"	
Anthropology	2 or 3	"	
Those of sophomore year			

Electives

The above minors or other subjects			5 points
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SENIOR YEAR:

Major

Psychology 6 or 14	2	"	} 5 points
Psychology 11 or 17	2	"	
Psychology 5	2, 3, or 4	"	
Psychology 7	1	point	
Courses open to juniors		5 points	

Minor

Those of junior year, etc.			5 points
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Electives

Those of junior year, etc.			5 points
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ZOÖLOGY

ENTRANCE:

Students are recommended to present:

Mathematics	4	points	} 15 points
Physics	2	"	
English	3	"	
German	2	"	
French	2	"	
Latin	2	"	

FRESHMAN YEAR:

Preparation for major

Chemistry.....	3	points	}	5 points
Physics.....	2	"		

Minors or preparation

German.....	2 or 3	"	}	5 points
French.....	2 or 3	"		
Drawing.....	1 or 2	"		

Electives or required studies

English.....	2 or 3	"	}	5 points
Mathematics.....	2 or 3	"		
History.....	2 or 3	"		

SOPHOMORE YEAR:

Major

Elementary Biology.....	5	"
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Minors

Scientific Methods, etc.....	2 or 3	"	}	5 points
Botany.....	2 or 3	"		
Physiology.....	2 or 3	"		

Electives, etc.

The above minors or other subjects.....			5 points
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JUNIOR YEAR:

Major

Zoölogy, etc.....			5 points
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Minors

Botany, Physiology, Geology, Psychology, Anthropology, Education, etc...			5 points
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Electives

The above minors or other subjects.....			5 points
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SENIOR YEAR:

Post-major

Zoölogy, etc.....	5	"
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Minors

Those of junior year, etc.....	5	"
Philosophy recommended.		

Electives

Those of junior year, etc.....	5	"
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MATHEMATICAL PHYSICS

(Suggested scheme of work for students desiring to make a special study of the mathematico-physical sciences)

ENTRANCE:

Students are advised to present:

Mathematics	4	points
Botany, Geology, Zoölogy (one natural science)	1	point
Physics or Chemistry	2	points
English	3	"
French	2	"
German	3	"
	<hr/>	
	15	"

FIRST YEAR:

Major

Mathematics	3	"
Physics	2	"

Minors

Chemistry	2	"
Natural Science	3	"

Elective or required work in Language, History, Political Science, etc.	5	"
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SECOND YEAR:

Major

Mathematics	3	"
Mechanics	2	"

Minors

Physics or Chemistry, with laboratory work	3	"
Natural Science	2	"

Elective or required work in Language, History, Political Science, etc.	5	"
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THIRD YEAR:

Major

Mechanics	3	"
Mathematical Physics (some branch of heat, light, sound, electricity, magnetism, etc., treated mathematically)	2	"

Minors

Observational Astronomy and Geodesy	3	"
Physics or Chemistry	2	"

Elective or required work in Language, History, Political Science, etc.	5	"
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FOURTH YEAR:

Major

Mechanics.....	2	points
Mathematical Physics.....	3	"

Minors

Electricity and Magnetism.....	3	"
Physical Astronomy and Geodesy.....	2	"
Elective or required work.....	5	"

APPENDIX 5

GIFTS AND BEQUESTS 1901-02

GIFTS AND BEQUESTS

<i>Gifts and Bequests for the Creation of Trust Funds:</i>			
For the Dean Lung Foundation for the Study of Chinese	.....	\$ 12,000 00	
For the Dean Lung Foundation for the Study of Chinese	.....	1,000 00	
For the Dean Lung Foundation for the Study of Chinese	.....	100,000 00	
Class of 1848 Scholarship Fund	.....	10,000 00	
For the Philolexian Centennial	.....	1,000 00	
Washington Prize Fund			
For the George William Curtis Medals Fund	.....	1,000 00	
On account of $\frac{1}{3}$ residuary estate of the late Stephen Whitney Phoenix	.....	149,533 44	\$274,533 44
<i>For Buildings and Grounds:</i>			
For the completion of Earl Hall	.....	19,540 38	
For Alumni Memorial Hall	.....	811 25	
			20,351 63
<i>For Designated Purposes</i>			
<i>Library:</i>			
Completion of Parliamentary Papers	.....	\$2,040 00	
Crimmins-Mansi Fund	.....	210 00	
Educational Catalogue	.....	500 00	
Carried forward.....		\$2,750 00	\$294,885 07

Brought forward.....	.....	\$2,750 00	
For the Purchase of German University Dissertations	Adolph Lewisohn	3,000 00	
For Works on Labor and Allied Subjects	James Loeb	150 00	
Special Fund for the Completion of the Townsend Records	F. A. Schermerhorn	350 00	
Special Fund for Purchase of Books	Anonymous	10,000 00	
Avery Library, for the Purchase of Books	S. P. Avery	1,216 22	
			17,466 22
<i>Fellowships, Scholarships, and Prizes:</i>			
Annual Fellowships, School of Medicine	Alumni Association, College of Physicians and Surgeons	1,500 00	
Annual Scholarship in American History, 1902-03, to be held by a woman	New York Chapter Daughters American Revolution		
	Mrs. Herbert Parsons	\$162 50	
	Miss Elizabeth Billings	337 50	
		150 00	
Annual Fellowship in Comparative Literature, 1901-02	Anonymous	650 00	
Annual Fellowship in German, 1901-02	Anonymous	650 00	
Annual Fellowship of the University Settlement Society	For the University Settlement Society	250 00	
Toward the Perkins Fellowship in Architecture	W. R. Ware	12 82	
Annual Scholarship in Mining	Benjamin B. Lawrence	200 00	
John D. Jones Scholarship	Wavepex Society	200 00	
Special Pulitzer Scholarships	Joseph Pulitzer	5,750 00	
Toppan Prize in Municipal Law	Mrs. Sarah M. Toppan, exc.	150 00	
			10,012 82
Carried forward.....			\$322,364 11

\$294,885 07

GIFTS AND BEQUESTS 1901-02—Continued

Brought forward.....					\$322,364 11
<i>Departmental:</i>					
Department of Anthropology, for Salaries	Anonymous	.....	\$2,500 00		
Architecture, for Salaries, 1901-03	F. A. Schermerhorn	.....	7,000 00		
Astronomy, to Catharine Bruce Fund	George W. Hill	.....	1,000 00		
Chinese, for Salaries and Current Expenses	Anonymous	.....	4,000 00		
Comparative Literature, for Salaries	Anonymous	.....	1,000 00		
Germanic Department, Special Equipment Fund	George Ehret, Fritz Achelis, Rudolph Kessler, Herman Ridder, G. E. Stechert, Lemcke & Buechner, Ernst Lemcke, Gustav H. Schwab, Prof. Emil L. Boas, and the Deutscher Verein			1,075 00	
Mechanical Engineering, Laboratory and Summer Course	J. A. Ripley	.....	\$150 00		
	Anonymous		50 00	200 00	
Mineralogy, for Special Equipment	C. F. Cox	.....	200 00		
Mining, Special Fund	W. B. Kunhardt	250 00			
	John Stanton	200 00			
	F. A. Schermerhorn	325 00		775 00	
Philosophy and Psychology, for Salaries, 1902-05	Through Wm. H. Baldwin, <i>Chairman</i>				
Physiology, for Equipment of Undergraduate Laboratory	Mrs. F. S. Lee	.....	7,500 00		
Romance Languages, French Literature Fund		.....	500 00		
				472 13	
Carried forward.....					\$26,222 13
					\$322,364 11

Brought forward.....		\$26,222 13	\$322,364 11
Semitic Languages, for Salaries, 1901-03			
Anonymous	\$ 500 00		
Rev. E. A. Hoffman	1,000 00		
St. Bartholomew's Church	500 00		
Anonymous	1,000 00	3,000 00	
Zoölogy, to provide for a series of Public Lectures by Prof. Jacques Loeb	.....	1,000 00	30,222 13
<i>Miscellaneous:</i>			
For the Interest Fund, 1900-1901		68,733 82	
For the Interest Fund, 1901-1902	.....	25,250 00	
Salary of the Secretary of the Woman's Graduate Club	.....	500 00	
Women's Evening Session in the Gymnasium	.....	40 58	
Educational Deficiency, 1900-01			
J. P. Morgan	307 50	615 00	
Mrs. Sarah Bronson	307 50		
From a graduate of the School of Arts who enjoyed the privilege of free tuition while an under- graduate	.....	1,200 00	96,339 40
			<u>\$448,925 64</u>

Gifts other than Money:

Plaster bust of De Witt Clinton	For Exhibition in the University	Fitzhugh Townsend, A.B. '93; E.E. '96
A collection of valuable Avestan manuscripts	Department of Indo-Iranian Languages	Through Professor Jackson
700 paper impressions of Greek inscriptions	Department of Greek	Edward Delavan Perry
Samples of minerals and printed matter		Chilian Commission at the Pan-American
Portrait of George Washington attributed to Gilbert Stuart	For exhibition in the University	Frederick W. Whitridge
Bust of Beethoven	For exhibition in the University	J. Ackerman Coles
1100 autograph letters and letter books from the correspondence of De Witt Clinton from 1793 to 1828.	For the University Library	Wm. C. Schermerhorn
Photograph of S. P. Avery	For the Avery Library	S. Oettinger
Collection of ancient and modern works comprising more than 6000 volumes, known as the T'u Shu Chi Sh'eng	For the University Library	Chinese Government
Sample board of the sockets used with wire cable, and a similar board of the hooks used at the end of wire ropes	Department of Mechanical Engineering	J. H. Williams & Company, 9 Richards St., Brooklyn, N. Y.
Portrait of Professor Ware		Friends and former pupils of Professor Ware
Gold and silver medals	Memorial to George William Curtis	Anonymous
18 Babylonian tablets	Department of Semitic Languages	John Dyneley Prince
Manuscript petition from the Class of 1811 addressed to the Trustees of the College, in respect of the disturbance at Commencement in that year	For the University	Mrs. Isaac M. Dyckman
Bronze bust of Benjamin Franklin	For exhibition in the Library	J. Ackerman Coles

Apparatus and supplies	Department of Physics	Miss Mary E. Merington
Specimen of 71% ferro-chromium	Department of Chemistry	G. F. Seward
Specimens of cloissonné, and of Italian shell cameos	" "	W. L. Hildburgh, E.E., Ph.D.
Specimens Magnalium, Epicarin, and Hedonal	" "	Hugo Schweitzer
132-cell primary battery and a 60-candle power incandescent lamp	" "	L. C. Laudy
Collection of iron and copper pyrites	" "	H. J. Davis
Collection of raw materials for fertilizers	" "	Charles H. Dufourcq
Specimens illustrating manufacture of soda ash	" "	Max Muspratt
Specimens of ores and products illustrating the manufacture of zinc	" "	George Cameron Stone, Ph.B., '79
Specimens of caustic soda and bleaching powder	" "	Castner Electrolytic Alkali Company
Specimen of potassium chloride and chlorate	" "	National Electrolytic Com- pany
Specimens illustrating the manufacture of alumi- num and the refining of bauxite	" "	Charles M. Hall
Specimens illustrating the manufacture of carbor- undum	" "	Edward G. Acheson
4 specimens of Belleek porcelain	" "	Walter S. Lenox, Ceramic Art Company
Specimen of rock salt from Avery Island, La.	" "	H. D. Fuller, Retsof Mining Company
Specimen of native sulphur from Colorado	" "	A. Tibbals
Specimens illustrating the electrolysis of sodium nitrate to make nitrate acid	" "	I. D. Darling, Philadelphia
Specimens of Cassava starch and Comptie starch	" "	Erastus Hopkins, Lake Helen Manufacturing Co.
Collection of platinum metals, osmium, ruthen- ium, rhodium, and palladium prepared by Desmoutis & Co., Paris	" "	Eiiner and Amend
Specimen of Anthracite	" "	George C. O. Haas, A.B., '02
Specimens of volcanic dust from Mt. Pelee	" "	Clarence P. Crissy, Mech.E., '02
Two large brass stands and Welsbach gas burners	" "	Sidney Mason, of the Wels- bach Co., Philadelphia
Collection of specimens illustrating the Gold- schmidt Aluminum Process	" "	Clarence B. Schultz
Electrolytic copper refining	" "	J. B. T. Herreshoff, Nichols Chemical Co.

APPENDIX 6
VANDERBILT CLINIC

REPORT OF TREASURER OF BOARD OF MANAGERS FOR YEAR
ENDING JUNE 30, 1902

Balance

July 1, 1901..... \$ 6,092 82

Receipts

Sale of Prescriptions, Surgical Dressings, etc..	\$18,963 57	
Interest on Investments.....	6,050 00	25,013 57
		\$31,106 39

Expenses

Furniture.....	\$ 87 25	
Salaries and Wages.....	12,856 93	
Drugs, etc.....	4,395 47	
Medical and Surgical Appliances, etc.....	2,132 65	
Apothecary's Department.....	673 05	
Surgical Instruments and Repairs.....	119 85	
Washing.....	412 39	
Stationery.....	395 37	
Current Repairs and Improvements.....	678 51	
Eye Division.....	226 30	
Water.....	187 80	
New Formulary.....	212 40	
Other Expenses.....	790 05	\$23,168 02
		\$ 7,938 37
<i>Balance, June 30, 1902</i>		

COLUMBIA COLLEGE

REPORT OF THE DEAN

FOR THE ACADEMIC YEAR ENDING JUNE 30, 1902

*To the President of Columbia University
in the City of New York,*

SIR:

I beg to submit herewith my report upon the College for the academic year ending June 30, 1902.

The number of students matriculated during the year was 492, distributed as follows:

Seniors.....	94
Juniors.....	99
Sophomores.....	102
Freshmen.....	142
Special Students.....	55—492

In addition to the above there were nineteen university students taking one or more courses in the College, making a total of 511.

A table of the ages of the students at the beginning of the year may be found in the Registrar's Report, as may also the details with regard to the students (thirty-nine in all) admitted on certificate from other colleges.

Of the members of the Freshman class, sixty-three were admitted provisionally—that is, with entrance conditions to fulfil. Such students are held under probation till the end of the first half-year. Just prior to the close of the probationary period, the Dean considers the special reports made

by heads of departments in the case of each conditioned student, and determines whether he is to be admitted to full standing, have his period of probation extended, or be dropped from the roll.

Under this provision, twenty-three were advanced to full standing at the end of the first term; the others had their period of probation extended until the beginning of the next academic year. Five members of the Freshman class, four of the Sophomore class, six of the Junior class, and eight special students retired from the College during the year.

Of the ninety-nine members of the Junior class, five were "belated" Seniors—that is to say, were not allowed to matriculate as Seniors because of deficiency in some requirements for advancement to that class; of the one hundred and two members of the Sophomore class, nine were, in the same sense, "belated" Juniors; and of the one hundred and forty-two members of the Freshman class, thirty-one were, in the same sense, "belated" Sophomores.

Eighty-six members of the Senior class, fifteen "belated" students, one special student, and two who completed the course in three years, one hundred and four in all, satisfied all the requirements for the baccalaureate degree and had conferred upon them, at the Commencement held on the 11th instant, the degree of Bachelor of Arts.

Eight members of the Senior class failed to satisfy the requirements for a degree, and were not graduated.

Under the wide privilege accorded candidates for admission in making the fifteen points required, of the one hundred and twenty-five students admitted on examination to the Freshman class, sixty-three offered both Greek and Latin for entrance, fifty-four offered Latin and not Greek, and eight offered neither Greek nor Latin.

A table is here given, containing the number of hours a week taken by the students in the several classes (of the Seniors, thirteen are unaccounted for, ten having taken the full first-year course in medicine, and three the full first-year course in one of the Schools of Applied Science).

Hours a week	Freshmen (142)	Sophomores (102)	Juniors (99)	Seniors (94)
12	3	..	2	4
13	..	2	..	1
14	6	4	6	17
15	57	7	7	19
16	12	18	17	18
17	34	27	17	11
18	16	24	23	9
19	6	9	13	..
20	7	4	5	1
21	1	4	5	1
22	..	1	3	..
23	..	1	1	..
24	..	1	..	..

The choice of electives, outside of prescribed subjects, the number of students who have, during the last four years, begun the study of Greek, French, German, Chemistry, Physics, Botany, and Zoölogy, and various other tables heretofore given in this annual report, may be found in the Report of the Registrar.

There are two prizes for bestowal upon members of the graduating class: The Prize of the Alumni Association and the Chanler Historical Prize.

The three students nominated by the Faculty and submitted to the Senior class as candidates for the Alumni Prize of \$50, given annually by the Association of the Alumni to the "most faithful and deserving student of the graduating class," were George Henry Danton, Edward Schuster, and Gilbert Oakley Ward; and the first named was chosen by the class to receive the prize.

The Chanler Historical Prize, consisting of the income of a fund of \$1000 bequeathed by J. Winthrop Chanler, of the Class of 1847, and given annually to that member of the graduating class who shall be the author of the best original manuscript essay in English prose on the history of civil government in America, or some other historical subject assigned by the Faculty, was not awarded.

Five scholarships of the annual value of one hundred and fifty dollars each during the College course are open for competition to candidates for admission to the Freshman class who are examined in June and pass complete entrance examinations in subjects aggregating the fifteen points requisite for admission.

The Alumni Competitive Scholarship, open to all candidates. The papers of the candidates who pass a satisfactory examination are considered by the Committee on Admissions, and the one whose papers as a whole are entitled to the highest rank is awarded the scholarship. At the recent examinations, this scholarship was awarded to G. T. Hirsch, Park Avenue School, general average 84.9 per cent. of a possible maximum.

A Hewitt or Harper Scholarship, open for competition to graduates of the New York City High Schools. At the recent examinations, a Harper Scholarship was awarded to Max Kahn, DeWitt Clinton High School, general average 80.4 per cent.

Three Brooklyn Scholarships open for competition to candidates who are residents of Brooklyn, N. Y., and have received their training in either the public or the private schools of that borough. The papers of the qualified competitors who pass a satisfactory examination are considered by the Committee on Admissions, and the three candidates whose papers as a whole are entitled to the highest rank are awarded the scholarships. At the recent examinations these scholarships were awarded to

L. F. SCHIFF, Brooklyn High School, average, 79.6

W. L. CASWELL, Brooklyn High School, average, 77.8

H. W. EASTMAN, Polytechnic Institute, average, 75.8

Upon Mr. Schiff's withdrawal (to enter the Cornell Medical School) the Committee awarded the third scholarship to N. Dickler of the Boys High School, average, 76.5.

One of the regulations as to elective studies is the following:

"The Dean and the head of the department concerned may permit any study prescribed for the degree of Bachelor of Arts to be taken as an elective in an earlier year than that for which it is set down."

There appears to be a growing desire and tendency on the part of students to take advantage of this regulation. The design is, of course, to accomplish all that is practicable, and that may be allowed, of the obligatory work in the Freshman and Sophomore years, thus leaving the latter years free for as much specialization as may be permitted in the direction of a profession or of advanced study in letters and science.

This is but one of several forms of protest of the student body, reflecting in this the general sentiment of the community, against the length of time insisted upon for a degree and the consequently late period at which a young man, liberally educated, can undertake the business of his life.

As is apparent from the table of ages given in the Registrar's Report, the average age of students entering the Freshman class tends to increase, and is now, in the interest of collegiate training, entirely too high. Of the one hundred and twenty-five students admitted on examination to the Freshman class of this current year, more than one-half were over eighteen years of age and less than one-sixth were under seventeen.

Within a generation, great improvements have been made in the science and art of teaching. Much more can be accomplished now and more effectively, in a given time, than was practicable a third of a century ago. This improvement seems to have been utilized to shorten the academic year rather than the entire period of study required for a degree. Would it not be wise to attempt a change in this regard? Is it not time that the discussions, the experiments, the experiences, and the improvements of the last forty years in educational matters should be crystallized into forms of action that would preserve the essential ingredients of a liberal education, as commonly agreed upon, and yet diminish materially the time necessary to obtain the degree of Bachelor of Arts? In allowing students who have completed their Junior year in the College to take their final year under one of our university or professional faculties and count it towards the Bachelor's degree, have we not practically and officially expressed the conviction that a course of three years in the College is sufficient for that degree? In the arrangements lately made by which a student may, in his discretion, take eighteen "points" a year and, by permission of the Dean or work in the Summer Session of the University, or both, make at least two more, and so, in three years or even somewhat less, obtain the sixty "points" required for the degree, have we not recently reaffirmed, in a decided manner, the same conviction? Are we not already logically committed to a three

years' course for the Bachelor's degree? Why then, should we not plainly say so and make arrangements accordingly?

A further amelioration of the present condition might possibly be effected by placing all studies essential to and required for the A.B. degree in the first two years of the College course. At the mature age at which the student now, generally, enters upon his college work, and with the greatly improved methods of teaching in preparatory and high schools, this can, I believe, profitably be done. If it were done, the reasonable desires of the students referred to above would be met, and the third year (if three years be settled upon as the limit required for the A.B. degree) or the third and fourth years (if four years are still deemed necessary) would be available for more extended and effective study in philosophy, history, economics, letters, and science, or for abbreviating and possibly enriching subsequent courses for a professional degree. It would also make practicable a most important provision which is here urgently recommended in the interest of sound learning and of adequate professional training—the placing of all the technical and professional schools of the University upon the first two years of the College course or its equivalent.

I am aware that a year hence, a first degree or its equivalent is to be required for admission to the Law School; but I have grave doubts whether such a degree, if obtainable only after a three or four years' collegiate course, can long remain a feasible pre-requisite for entrance upon the study of law in that school. If the relation of Teachers College to the University would warrant it, or its governing body would sanction it, that college might, I think, with profit to it and to the University, be put upon the same footing in this regard as the other professional schools, at least so far as its higher functions are concerned.

I commend this whole subject to your consideration as one of immediate and grave importance, and am,

Respectfully,

J. H. VAN AMRINGE,

Dean.

COLLEGE HALL, June 28, 1902.

SCHOOL OF LAW

REPORT OF THE DEAN

FOR THE ACADEMIC YEAR ENDING JUNE 30, 1902

*To the President of Columbia University
in the City of New York,*

SIR:

I have the honor to submit the following report of the condition of the School of Law for the academic year ending June 30, 1902.

The number of students primarily registered in the School during the year has been 440, distributed as follows:

Third-Year Class.....	126
Second-Year Class... ..	150
First-Year Class.....	162
Special Students.....	2
	<hr/>
Total.....	440

In addition to the students so registered in the School, 13 students from the College and two from the School of Political Science have taken one or more courses under the Faculty of Law, making a total of 455 students who have been under the direct influence of this School during the year.

The courses given under the auspices of the Law Faculty, the names of the instructors, the number of lectures given per week in each subject, the number of students taking the several courses, and the number presenting themselves for examination therein, are given in the following table:

Instructors	Courses	Hours per Week	Number Registered	Number Examined
<i>First Year</i>				
Mr. Terry.....	Contracts.....	4	172	164
Mr. Stone.....	Criminal Law.....	2	111	108
Prof. Keener.....	Elements of Jurisprudence and Equity.....	2	173	163
Prof. Redfield.....	Pleading and Practice....	2	158	157
Prof. Kirchwey.....	Real and Personal Prop- erty.....	2	173	171
Prof. Burdick.....	Torts.....	2	173	161
Prof. Burgess.....	American Constitutional Law.....	2	57	56
<i>Second Year</i>				
Prof. Canfield.....	Agency.....	2	134	126
Mr. Stone.....	Bailments and Carriers...	2	106	99
Prof. Keener.....	Equity: Trusts.....	2	150	131
Mr. Stone.....	Insurance.....	1	3	1
Prof. Burdick.....	Negotiable Paper.....	2	150	139
Prof. Redfield.....	Pleading and Practice....	2	102	62
Prof. Kirchwey.....	Quasi-Contracts.....	2	144	135
Prof. Kirchwey.....	Real and Personal Prop- erty.....	2	149	135
Prof. Burdick.....	Sales of Personal Property	2	143	133
Prof. Goodnow.....	Administrative Law.....	2	7	5
Prof. Burgess.....	Comparative Constitu- tional Law.....	2	9	8
Prof. Munroe Smith.	Institutes of Roman Law..	2	1	—
<i>Third Year</i>				
Prof. Keener.....	Corporations.....	2	125	124
Prof. Keener.....	Equity.....	2	124	123
Prof. Canfield.....	Evidence.....	2	124	122
Prof. Kirchwey.....	Mortgages.....	2*	102	101
Prof. Canfield.....	New York Law, Doctrines Peculiar to.....	2*	31	31
Prof. Burdick.....	Partnership.....	2	120	119
Prof. Redfield.....	Pleading and Practice....	2*	27	26
Prof. Kirchwey.....	Real and Personal Prop- erty.....	2	118	117
Prof. Burdick.....	Suretyship.....	2*	102	100
Prof. Redfield.....	Wills and Administration.	2	115	113
Prof. Burgess.....	American Constitutional Law.....	2	15	13
Prof. Munroe Smith.	Comparative Jurispru- dence.....	2	2	—
Prof. Moore.....	Conflict of Laws.....	1	6	1
Prof. Moore.....	International Law.....	2	5	1
Prof. Goodnow.....	Municipal Corporations..	1	10	—
Prof. Munroe Smith.	Spanish-American Law...	1	2	—
Prof. Goodnow.....	Taxation, Law of.....	1	7	—

* These courses extend through half a year.

<i>Summary</i>		
	Number of Courses	Number of Hours per Week
First Year.....	8	16
Second Year.....	12	23
Third Year.....	17	26
	<hr/>	<hr/>
Total	37	65

Of these 37 courses, 26, aggregating 47 hours of instruction per week, are given by the Faculty of Law, and 11, covering 18 hours of instruction, by members of the Faculty of Political Science.

The changes from the scheme of the preceding year disclosed by this table are:

1st. The disappearance of the course in Office Practice (3d year), and

2d. The temporary suspension of the courses in Domestic Relations (1st year) and Bankruptcy (3d year), owing to lack of means for carrying them on.

3d. The merging of the courses in Common Law Pleading (1st year), Equity Pleading (2d year), and Code Pleading and Practice (3d year) in the general courses in Pleading and Practice, and the extension of the latter from a total of four hours to five hours per week.

4th. The opening of Professor Burgess's introductory course on American Constitutional Law to the First-Year Class, and the extension of his seminar in American Constitutional Law to a two-hour course in Private Rights under the Constitution, offered to the Third-Year Class, with the consequent reduction of his three-hour course in Comparative Constitutional Law in the second year, to two hours.

5th. The assumption by Mr. Stone of the course in Bailments and Carriers (2 hours) in lieu of Common Law Pleading (1 hour) and Equity Pleading (1 hour), and by Professor Redfield of the course in Wills and Administration heretofore given by Professor Houston.

6th. The transfer of the course in Conflict of Laws from Professor Munroe Smith to Professor Moore.

7th. The biennial offering of Professor Munroe Smith's course in Comparative Jurisprudence to the Third-Year Class

and the opening to that class of his new course in Spanish-American Law.

That the new courses of Professor Redfield in Pleading and Practice meet a real demand is evinced by the fact that the number of students taking them is several times larger than the number who have taken the corresponding courses heretofore, the figures for the last two years being as follows:

	Second Year	Third Year
1900-01.....	6	14
1901-02.....	102	27

As a consequence of the addition of a course in Constitutional Law to the work of the First-Year Class, the course in Criminal Law was made an elective, the students being permitted to choose between the two courses. This accounts for the reduction in the number taking the latter subject.

Attention is called to the increase in the number of students taking the courses in International, Public, and Roman Law offered by members of the Faculty of Political Science, as exhibited in the following table:

	1900-01	1901-02
Administrative Law.....	3	7
Comparative Jurisprudence.....	—	2
Conflict of Laws.....	3	6
Constitutional Law I.....	—	57
Constitutional Law II.....	2	9
Constitutional Law III.....	—	15
International Law.....	3	5
Municipal Corporations.....	—	10
Roman Law.....	2	1
Taxation.....	—	7

showing an increase from 13 to 103, or, omitting the new course offered for the first time to the First-Year Class, from 13 to 46.

In this and the two preceding tables no account is taken of students taking optional courses or pursuing courses with reference to other degrees than that of LL.B. The number of such cases is very considerable, however, and the regular attendance is often largely in excess of the registration for a given course. This is particularly true of the courses in Public Law and the Practice courses, and it explains the condition of the course on Insurance, which, as the only one-hour course

offered to the Second-Year Class, could not be elected as a part of the fourteen hours of work exacted of all candidates for the degree of LL.B., and which was, nevertheless, attended by an average of 50 members of that class.

The final examinations for the degree of LL.B. resulted as follows:

Of the 126 members of the Third-Year Class, 124 presented themselves for examination, of whom 15 failed in one or more subjects.

Of former members of the School who were entitled to take the examinations for the degree, nine presented themselves, of whom eight failed in one or more subjects.

The number of candidates upon whom the degree was conferred was 110.

The most important event in the history of the year—the retirement of Professor William A. Keener from the Deanship of the School—occurred before the opening of the academic year, in August last. The circumstances under which Professor Keener assumed that position, and the nature of the results achieved by him during the ten years of his incumbency of the office, make it impossible to pass over the event without comment, although his continued connection with the School as Kent Professor of Law renders the language of eulogy unfitting. Coming to Columbia at a critical time in the history of the Law School and of the University, it fell to him to carry the School through the troubled period of experiment and transformation upon which it had been launched. How well he performed that task, the Columbia Law School of to-day—so largely the result of his clear vision and uncompromising will—bears eloquent witness. It is the earnest hope of his colleagues of the Law Faculty that his wisdom and experience may long continue to be at the service of the School.

The resignation of Mr. Switzer, in January last, afforded the Faculty of the Law School the opportunity of filling the important position of Law Librarian with a graduate of the School. In the appointment of Mr. John D. Kaps, it is believed that a long step forward has been taken in the administration and development of the Law Library. Mr. Kaps has

already undertaken a thorough examination of the Library, with a study of its needs and possibilities, and has brought to the task an intelligent comprehension of the problem and a zeal in its pursuit, which argue well for the future of the collection. The meagre resources which our Library commands, as compared with the service it is called upon to perform, render such trained and studied supervision doubly important.

The continued prosperity of the Law School, as exemplified in the steady increase in its numbers, is exhibited in the following table (marked A), showing the membership of the School, and the number and percentage of college graduates during the past ten years.

Two other tables (marked B and C, respectively) are given, showing the geographical distribution of the students, and the colleges from which our support has been derived, during the same period of time.

TABLE A
MEMBERSHIP OF SCHOOL. 1892-1902

	1892-3	1893-4	1894-5	1895-6	1896-7	1897-8	1898-9	1899-00	1900-1	1901-2
Number of Students...	266	270	288	323	357	367	349	380	423	440
College Graduates, including College Seniors.....	107	114	125	169	212	230	217	236	267	274
Percentage of Graduates.....	40.26	42.22	43.40	52.32	59.38	62.67	62.18	62.10	63.12	62.27

TABLE B
GEOGRAPHICAL DISTRIBUTION OF STUDENTS, 1892-1902
UNITED STATES

	1892-1893	1893-1894	1894-1895	1895-1896	1896-1897	1897-1898	1898-1899	1899-1900	1900-1901	1901-1902	*
Northern Atlantic Division:	220	212	222	263	280	286	278	295	313	327	
Maine.....		1	.....	2	4	3	2	2	3	2	
New Hampshire...	1	3	1	.....	.....	.....	.....	.....	1	1	
Vermont.....		1	2	2	2	1	.....	.....	.....	.....
Massachusetts....	6	3	5	6	8	9	9	11	8	12	
Rhode Island.....	.....	.....	1	1	2	3	1	.....	1	2	
Connecticut.....	1	.....	3	3	6	4	6	5	5	6	
New York.....	180	179	181	218	213	225	229	248	258	272	
New Jersey.....	27	21	22	22	31	27	21	19	23	18	
Pennsylvania.....	5	4	7	9	14	14	10	10	14	14	

* The discrepancy between these figures and those of the Registrars Report is explained by the fact that students frequently register as from New York City, although for the purposes of this table their residences should be recorded, as has been done, elsewhere.

TABLE B—Continued

	1892-1893	1893-1894	1894-1895	1895-1896	1896-1897	1897-1898	1898-1899	1899-1900	1900-1901	1901-1902
South Atlantic Division:	6	5	4	4	9	9	10	16	18	21
Maryland.....	4	4	3	2	2	1	2	3	2	2
District of Columbia.....							1	1	3	3
Virginia.....					2	3	2	3	2	3
West Virginia.....								1	1	1
North Carolina.....	1				1		1	1	2	1
South Carolina.....		1	1		1	1				2
Georgia.....	1			2	3	4	1	6	7	9
Florida.....							2	1	1	
Delaware.....							1			
South Central Division:	4	3	3	8	7	8	13	15	24	18
Kentucky.....	2	1			1	2	5	7	0	6
Tennessee.....			1	2	3	2	3	3	8	8
Alabama.....		1	1	2	2	2	1	1	2	
Mississippi.....							1	1	1	
Louisiana.....	1								1	1
Texas.....		1	1	4		1	2	2	1	2
Arkansas.....							1	1	1	1
Oklahoma.....	1				1	1			1	
North Central Division:	18	22	22	35	41	41	32	39	49	49
Ohio.....	4	7	4	8	12	12	4	7	11	8
Indiana.....	1	1	3	1	4	4	7	10	8	9
Illinois.....		3	3	5	5	9	6	8	11	12
Michigan.....	1	3		1	1			1	1	2
Wisconsin.....	5	2	1	5	2	2	1	1		
Minnesota.....	2	2	1	2	1	2				
Iowa.....	2	1	3	3	6	5	5	1	5	6
Missouri.....	1	1	3	5	4	3	5	6	7	4
North Dakota.....						1	2	2	2	3
Nebraska.....	1		2	2	2		1	2	3	4
Kansas.....	1	2	2	3	4	3	1	1	1	1
Western Division:	7	6	10	12	19	19	15	14	17	22
Montana.....	2	1	2	2	4	2	2	1	2	2
Wyoming.....				1			1	1	1	
Colorado.....	1				3	6	4	3	3	4
New Mexico.....					1	1	1			
Utah.....	1	2	2	1	2	1	1			
Nevada.....										1
Washington.....				1	2	3	1	1	1	3
Oregon.....	1	1			3	2	1	1	3	4
California.....	2	2	6	6	4	4	4	7	7	7
Idaho.....				1						1
	255	248	261	322	356	363	348	379	421	437

FOREIGN COUNTRIES

	1892-1893	1893-1894	1894-1895	1895-1896	1896-1897	1897-1898	1898-1899	1899-1900	1900-1901	1901-1902
Canada.....				1		1				1
Cuba.....						1				
Hawaiian Islands.....								1	1	
India.....							1			1
Porto Rico.....									1	
Russia.....					1	1				
Scotland.....						1				
Holland.....										1
Total.....	255	248	261	323	357	367	349	380	423	440

TABLE C

ACADEMIC DISTRIBUTION OF GRADUATE STUDENTS

	1892-93	1893-94	1894-95	1895-96	1896-97	1897-98	1898-99	1899-00	1900-01	1901-02
Adelbert College				1	1	1				
Allegheny College, Pa.					1	1	1			
Alma College, Mich.										1
Amherst College	4	1	2	4	9	11	11	7	6	7
Austin College									1	1
Baldwin University									1	1
Bates College				1	1	1				
Beloit College								1		
Bethel College							1	1	2	1
Black Hills College									1	1
Blackburn University				1	1	1				
Boston College									2	1
Bowdoin College										1
Brooklyn Polytech. Inst.	1	2	2	3	4	4	1	1	1	1
Brown University	2	1	1	1	2	2	2	2	1	1
Buchtel College		1	1	1						
Bucknell University					1	1	3	2	1	1
Canisius College, N. Y.									1	3
Carleton College								1	1	1
Central University, Ky.								1	1	1
Centre College, Ky.							2			
Christian Bros. Coll., St. Louis, Mo.			1	1	1	1				
Colby University, Me.									1	1
College of the City of New York	19	24	25	24	26	27	31	33	34	34
Columbia University	22	17	24	28	32	27	23	31	39	56
Columbian University, Wash., D.C.		1								
Cornell College, Ia.					2	2	1		3	
Cornell University, N. Y.	2	3	3	1						5
Crozier Theol. Sem.							1	1	1	
Curry University						1	1	1		
Dartmouth College							1	1		1
De Pauw University			1							
Detroit College	1	1								
Dickinson College, Pa.								1	1	1
Drake University						1				
Earham College, Ind.								1		
Emory College, Va.	1				1	2	1	1		
Eureka College, Ill.						1	2	1	1	1
Fargo College										1
Franklin and Marshall Coll.					1	1				2
Fremont Normal College										1
Georgetown University	2	3	2	1			2	1	1	2
Guilford College, N. C.							1	1	1	
Hamilton College, N. Y.	1				1	1			2	5
Hamline University							1			
Hanover College				1	3	2	2			
Harvard University	17	20	11	21	25	22	22	18	17	8
Haverford College, Pa.						1	1		2	1
Highland Univ., Kansas				1	1	1				
Hobart College, N. Y.		1	2		1	3	3	3	1	1
Holy Cross College, Mass.									1	
Idaho State University										1
Illinois College							1		1	1
Indiana University				1				1	1	1
Johns Hopkins University	1	1	1	1	4	3	2	3	1	1
Kentucky University									1	1
Kenyon College, O.	1	1	1		1	1			2	2
Knox College, Ill.						1	1	3	2	3
Lafayette College, Pa.			1	1		1		2	2	2
Leland Stanford, Jr., Univ.				1	4	6	7	4	5	4
Lincoln University				1	1	1				
McMinnville College, Ore.					1	1	1			
Manhattan College, N. Y.				4	4	4	2			
Marietta College, O.	1	1						1	2	1

TABLE C—Continued

	1892-93	1893-94	1894-95	1895-96	1896-97	1897-98	1898-99	1899-00	1900-01	1901-02
Washburn College.....					1					
Washington and Jefferson Coll., Pa.....			1	1					1	1
Washington and Lee Univ., Pa.....									1	1
Washington Univ., St. Louis, Mo.....					1	1				
Wesleyan University, Conn.....					1		1			
Western Reserve Univ., Ohio.....								1	1	1
Westminster College.....	1	1	1							
Williams College, Mass.....	3	1	1	1	5	11	11	16	13	7
William Jewell Coll., Mo.....			1	1						
Wooster University, Ohio.....									1	1
Yale University.....	9	9	14	27	32	26	28	27	40	32
Total.....	107	113	125	167	209	224	215	234	264	271
Edinburgh University.....						1				
Gymnasium, Frankf.-a-M.....				1	1	1				
McGill University, Canada.....				1	1	2	1	1	1	
Ottawa University, Canada.....										1
St. Mary's College, Montreal.....										1
University of Copenhagen.....										1
University of Havana.....					1	1				
University of Oxford.....						1	1	1	1	
University of Toronto.....		1								
Total.....		1		2	3	6	2	2	3	3
		113		167	209	224	215	234	264	271
Grand Total.....	107	114	125	169	212	230	217	236	267	274

The near approach of the time when the Law School is to go upon a graduate basis renders it fitting and desirable to notice some of the lessons which these statistics teach.

Table A shows that while the total membership of the School of Law has, in the ten years under consideration, increased from 255 to 440, or 72½ %, the increase in the number of college graduates in the same time represents just double that ratio, being 145 % (from 112 to 274); whereas the number of non-graduates has remained nearly stationary, having increased by only 22 (143 to 165), or 15 %.

These are striking facts, and seem to indicate that a school which sets and maintains the highest and most exacting standards makes a constantly increasing appeal to the best-trained minds, while at the same time it tends to repel those whose conception of a legal education is limited to a speedy preparation for the bar.

Concurrently with this remarkable increase in the number

and ratio of college graduates, there has been—as Table B will show—an equally remarkable increase in the number and proportion of students coming to the School from a distance. While in ten years the membership of the School has grown $72\frac{1}{2}\%$, the delegation from the New England States—though still much too small—has in that time increased $187\frac{1}{2}\%$, that from the West 184% , and that from the South 290% ; whereas the representation of New York State and of the old Middle States has not kept pace with the growth of the School, the former being only $56\frac{2}{3}\%$, and the latter 48% larger than in 1892-3.

These are obviously important facts, but they require the light of further statistics to bring out their full significance. Table C shows that the 112 graduates of 1892-3 came from 33 colleges, while the 275 graduates of the current year represent 84 higher institutions of learning. In other words, the large increase in the number of college graduates is not due to the older and larger institutions, but is derived mainly from a multitude of colleges in all parts of the country, at least 18 of which are Southern and 30 are Western institutions of learning.

The coincidence of this fact with the fact previously adverted to—of the large increase in the proportional representation of other sections of the country—leads to the conclusion, which is, indeed, borne out by the records of the School, that it is from those sections that we derive a constantly increasing proportion of our graduate students. Thus it appears that, while only $62\frac{1}{2}\%$ of our students are graduates, of those registered from the South 83% are graduates, and of those that come from the West 87% answer that description. Further, of the 440 students in the School, 243, or 55% , are residents of New York City and its immediate neighborhood, while 197, or 45% , come from a distance. Yet of this New York representation, 137, or 56% , are non-graduates, while of the 197 drawn from a distance, 139, or 71% , are graduates, and only 58, or 29% , are non-graduates. Thus, while the metropolitan students constitute 55% of the total membership of the School, they contribute only $38\frac{1}{2}\%$ of the graduate membership, the 45% of outside students contributing nearly 62% of that total.

It is a fact of some importance in this connection that of the twenty-one applications for Faculty Scholarships (limited to college graduates) received this year, eight came from Southern States and five from the West, only eight being referable to the Eastern and Middle States, while of the four awards made, three went to the South, proper, and one to the Southwest.

These facts show very clearly that, strictly speaking, the strength of the Law School is not correctly represented by the geographical distribution of its students, and that its real centre of gravity is not the city in which it is situated, but is to be found in an expanding area to the south and westward. The result of this process has been to widen enormously the range of the School's influence and to transform it from a local into a national seat of legal learning. In making its appeal primarily to the educated man it has found an ever-widening constituency, and it can hardly be doubted that the force and effectiveness of this appeal will be still more widely felt when it becomes direct and exclusive. The experience here portrayed is a plain revelation of the motives which lead the trained and educated student to the choice of a professional school. There has been nothing in the Columbia Law School of the past decade to tempt the spirit of caste or exclusiveness. The inducements which it has held out are those which always prove most attractive to the best minds—a high ideal of labor and service, high standards of excellence, and the severest discipline. As these qualities of the School will be heightened and emphasized by the impending change in the standards of admission, its influence upon the best class of students all over the country should be correspondingly increased and strengthened.

In dwelling, as I have above, on the proportion and range of academic representation in our student body, I have, I think, made it clear that, while I believe that our present policy will bring us a steadily increasing membership, I regard the quality of that membership as of far greater importance than its size. The real test of the strength of an institution of learning is its power to attract the best minds, and the

measure of its success is not the number but the quality of the men whom it draws within the range of its influence. It is as a guaranty and insurance of the quality of our student body as a whole that our requirement of an academic degree has its real significance.

Whatever opinion may be entertained of the value and importance of college training to an intending professional student in a given case, it cannot be doubted that the selective and disciplinary process of a college course furnishes to the professional school a better class of students than it derives from any other source. The experience of the Law School bears convincing testimony to the truth of this belief. Of 237 men who, in the last ten years, have attained to what may be termed "honor rank," 223, or over 94 %, have been college graduates, and only 14, less than 6 %, non-graduates; while, on the other hand, in the record of failures the non-graduates surpass the graduates three to one, and in hopeless failures the ratio rises as high as six to one. Certainly from the point of view of the Law School and its highest efficiency, these facts furnish a striking vindication—if vindication be needed—of the wisdom of the University authorities in establishing the new entrance requirements.

But the experience above referred to has another aspect, and the argument which rests upon them has a negative as well as a positive side. While the lack of college training or an equivalent discipline may not unfairly be taken as indicating the absence of those qualities which the work of the professional school demands, it by no means follows that the possession of a college degree is conclusive evidence of fitness for that work. The frequent recurrence of failures, and even of hopeless failures, among the graduates on our rolls has left us with no illusions on that subject. The presumption of fitness raised by the college diploma is too often rebutted by the testimony of experience. It must not be forgotten that we value the college degree not for itself, but for what it represents; that what we demand is not men bearing the label of a social or intellectual caste, but men of disciplined powers; and that it is only in so far as our colleges supply us with such men that they perform the service which we require at their

hands and justify the test of fitness for our work which we have set up.

To my mind there is grave question whether we are justified in treating all college graduates as of equal rank; in other words, whether we should admit to the Law School the graduates of all colleges, and whether we should admit all the graduates of any college. The former of these questions we have already answered in the negative by refusing to recognize the diplomas of certain Spanish-American "universities" as evidence of the fitness of their graduates for admission to the School, even on our present standard. The experience of the School seems to show very clearly that some of our domestic colleges and universities should be placed under the same ban. A group of these minor colleges has sent us sixteen of its graduates in the last ten years, only two of whom have passed through the School without a record of failure, and only four of whom have graduated—a showing much worse than that which many a high school and academy has made.

On the other hand, it may be doubted whether, under the "elective system"—perhaps under any system,—there is any but the feeblest presumption that mere "pass men" of any college have the requisite capacity for serious professional work. Of the 80 men whom one of our most distinguished universities has contributed to our rolls in the past ten years, only 48 have persisted and succeeded in reaching the standard required of candidates for a degree, and only 39 have made a distinctly creditable record.

The problem is too serious and too far-reaching to be adequately dealt with in the brief space of this report, but it seems clear that the professional schools which aim to do the best work cannot long rest content with a system of selection which produces such unequal and grotesque results as are recounted above, and that they may yet be compelled to demand some further evidence of fitness for their work than that furnished by an academic degree.

But there is another side to the relation of the professional school to the college. While it is clear that the standard of the college degree admits too many men who have not been brought up to the requirements for professional work of a high

order, it seems equally clear that—under existing conditions for acquiring that degree—it excludes too many men who are, or who might easily become, abundantly fitted for that work. A four years' college course, superimposed upon the years of special preparation therefor, and followed by a three or four years' professional course, is a prospect calculated to deter any but the stoutest or the most indifferent spirit. The average age of the graduate student on entering the Columbia Law School is between $22\frac{1}{2}$ and 23 years. More than one-half the college delegation has passed $22\frac{1}{3}$, and over a third has passed 23 years. These men will be 25, 26 and upwards when, with the diploma of the University in their hands, they enter upon their apprenticeship in some law office. Is it a matter for wonder that many of the most earnest students drop out of the law school at the end of one or two years, that many more deliberately select an inferior school which offers them a shorter road to the bar, and that multitudes forego entirely the advantages of a college education in order that they may, without being deprived of a professional training, reach the threshold of their life's work at an earlier age?

There was a time in the history of education in America—to go no farther afield—when the average man could enjoy a good college training and the best available professional training as well, but the persistent raising of the requirements for admission on the part of our colleges, and the great development of professional education in the last twenty years, have tended to make it more and more difficult to compass them both. The result is that, under our present system, the great majority of men dedicated to a professional career are forced to choose between the college education and an adequate professional training. How most men decide this question the multitudes of untrained minds who fill our law and medical schools and crowd the ranks of the professions have made only too plain. Nor can any one rightly censure the man who seeks to ensure his success in his calling even at the sacrifice of the impulses which prompt him to seek a wider culture. That there is something radically wrong with a system of education which compels a man to choose an inferior or a mutilated professional training in order to gain the coveted advantages of a

college education, or to secure the best available professional training only by sacrificing the education which alone can bring him the full benefits of such training, seems to me to be too plain to require demonstration.

The remedy for this condition of affairs is not—I venture to suggest—to eliminate the college course from the training of the professional student (its importance for that purpose has been abundantly demonstrated), but to adapt this course to his needs by bringing it within a reasonable compass and by shaping its work and its standards so as to answer those needs.

It is true, the work of the professional school is serious work, calling for maturity of mind and seriousness of purpose, as well as for trained powers of observation and reasoning. Our non-graduate students—half of them under twenty, a third of them under nineteen—are much too young and immature. But the best of our colleges, with their present entrance requirements and splendid facilities for the training of youth, would have no difficulty in bringing the average student to the requisite standard of maturity of mind and purpose at the age of twenty-one, or the exceptional student at the age of twenty years. Indeed, I have no doubt that in very many cases they do this now, and that for most earnest students the real and essential purpose of a college education has been attained by the close of his junior year.

Perhaps it may not be out of place to indicate here what, from the point of view of a teacher of law, this purpose is. In the first place, the law school does not look with favor on the modern tendency to specialization in our colleges, to which the junior and senior years are so largely devoted. This, whether it deal with the humanities, or the natural or social sciences, is, in its methods and aims, as purely professional work as that of the law school itself, and plays no proper part in the training of the student for professional study in other lines. In the second place, the law school views with suspicion the extreme applications of the elective principle, under which the student may yield to the temptation to scatter his energies among a multitude of unrelated topics, or skilfully avoid the difficult subjects of the curriculum. There

is no place for the dilettante or the shirk in the professional school.

What the law school asks of the college is that it shall communicate to the student the humane and generous spirit of the true university; that it shall impart the scientific temper and independent spirit of research and criticism which are the essence of its being; that it shall inculcate a competent knowledge of the world and of man; and, finally, that it shall afford a thorough linguistic training. That, with most students, these results can, to a reasonable and adequate degree, be achieved—in fact, *are* thus achieved—in less than the orthodox period of four years, is conceded in the practice of several of our leading universities, though not openly avowed. And if, as President Eliot declares, the average student can “easily” accomplish the task in three years, it seems not unreasonable to suggest that there may be some who can reach the goal in less than three.

Here there is doubtless much room for difference of opinion, but upon this conclusion there should be no difference of opinion—that the bachelor's degree should represent achievement rather than time; that it should be the prize of a definite, co-ordinated body of work in the liberal arts and sciences, free from any specialization or professional study, and that, whether it take four years, or three years, or two, to earn it, it should be awarded when earned. Such a system would do much to reconcile the conflicting claims of liberal and professional study, and would, it appears to me, provide a means for bringing them into complete harmony.

If, in these comments on the scope and purposes of a college education, I seem to have gone beyond my province, I can only plead, as my excuse, the predicament of the law school and of legal education—compelled to choose between the claims of a public service, which rightly calls for the widest possible opportunities for all, and the demands of an academic training which carries the student beyond the threshold of the professional school. I am in complete accord with those who believe that there could not be a greater mistake than to make the best legal education the exclusive possession of a fortunate few. The best opportunities for professional training should

be brought within the reach of all who are fitted, by character and ability, to make good use of them. But I also believe that to offer these opportunities to untrained and immature minds is to squander and prostitute them. For its own protection, as well as in the interests of the professions and of the state, the university is bound to exact of those who participate in its work an adequate preparation therefor. What this may mean in a given case is proper matter for inquiry and discussion. There is manifestly considerable range in the necessities and demands of widely-differing professions. The technical studies of the engineer may well call for a different preparation from that which the so-called learned professions demand. But, for the law student, it seems clear that this service must be performed by the college, and that it should represent the substantial and disciplinary work of the present college course. That this result should be accomplished in less time than is now devoted to it, seems to me to be equally clear.

As bearing upon the appeal which the Law School makes to the college world outside, I would respectfully call your attention to the important service rendered by the Faculty Scholarships, and to renew the recommendation made by my predecessor, Professor Keener, in his reports for 1900 and 1901, for an increase in their number. Going hand in hand with the reputation of the Law School for loftiness of aim and seriousness of purpose, these scholarships create a marked impression of the beneficence and greatness of the University, and emphasize its ideal of high service, which is so attractive to the student body to which we make our appeal. I have referred above to the large number of applications for the scholarships received this year, especially from the West and South. Probably not more than two or three of the applicants will be able to come to Columbia without such assistance. Certainly eighteen of the twenty-one applications are cases of great merit, and represent, in most instances, years of devotion to the ideal for which this University stands. The letters which accompany the applications show that in many Southern and Western colleges the award of one of the scholarships to a

brilliant and deserving graduate is the highest distinction that can come to him, and is regarded as a tribute of honor to the institution and the community to which it ministers. Considered from the most selfish point of view, I cannot conceive of a more profitable investment for the University than a multiplication of this form of benevolence. I would, therefore, respectfully urge that the number of Faculty Scholarships in the School of Law be increased to ten.

In conclusion, I beg to call your attention to the pressing need of the Law School for a separate building, appropriate to its purposes. Not only is its present situation in the Library incongruous with the real purpose of that building, and, as the School grows in numbers and activity, an increasing source of inconvenience and annoyance to those who have occasion to use the general library, but the School has long outgrown the accommodations which its present situation affords, and is carrying on its work with increasing difficulty. That a separate and handsome building would add greatly to the dignity and consequent attractiveness of the School, may be taken for granted.

I would respectfully suggest that the site at the corner of 116th Street and Amsterdam Avenue, now occupied by College Hall, be formally set apart for this purpose, and that plans may be prepared and the co-operation of the graduates and friends of the School invited.

Respectfully submitted,

GEORGE W. KIRCHWEY,

Dean.

SCHOOL OF MEDICINE

REPORT OF THE DEAN

FOR THE ACADEMIC YEAR ENDING JUNE 30, 1902

*To the President of Columbia University
in the City of New York,*

SIR:

I have the honor to submit the following report of the College of Physicians and Surgeons for the year 1901-1902.

In the Department of Medicine several changes of importance have been made. The number of didactic lectures has been diminished to one each week, the place of the remaining lectures being taken in part by recitations by the third-year class twice a week throughout the entire year, held by tutors appointed for this purpose,—in part by a course of bedside clinics in Roosevelt and Presbyterian Hospitals, given by Dr. James three times a week, two hours each, to sections of the class. The purpose of these is specially to give instruction in the natural history of acute disease.

There have been two medical clinics each week at the Vanderbilt Clinic instead of one as formerly, one being given by Professor Delafield, the other by Dr. James.

Professor Kinnicutt's bedside instruction to sections at the Presbyterian Hospital has been given twice a week instead of once a week as formerly, and has been very largely attended during the year.

There has been added to this portion of the curriculum also a course of practical instruction with demonstrations in the infectious diseases given by Dr. Berg at the Willard Parker and Riverside Hospitals. The importance of this branch of medical education makes it especially desirable that the extensive material in the public hospitals of the city should be used for the purposes of clinical instruction in infectious diseases.

It having been thought best to begin the medical cur-

riculum in the second year, a course of recitations once a week to sections has been given to the second-year class upon selected topics in medicine by tutors especially appointed for this purpose.

The facilities of the Department of Pathology have been severely strained during the past year in the instruction of the large number of undergraduate students in Pathology, Bacteriology and Hygiene, and Normal Histology. It was found necessary, in order to meet the requirements of the first-year students in Normal Histology, to ask from the Trustees the appointment of two special assistants in this theme. This request was granted.

Several important original researches have been carried on in Pathology and Bacteriology by members of the teaching force and outside workers.

The department is greatly in need of financial support from the University in the maintenance of its technical departmental library, which is essential both to the work of instruction and research.

In the matter of research, the Department of Physiology has shown its usual activity. Professor Curtis has continued his historical studies of the physiology of ancient times. Professor Lee has extended his investigation with Dr. William Salant of the action of alcohol on muscular tissue, and among other things has proved that the favorable action of that agent in small quantities, which these authors demonstrated last year, is exerted directly on the protoplasm of muscle and not on the intramuscular nervous tissue. The work is now being prepared for publication.

Mr. Budington has completed his examination of the physiological characteristics of the muscle of the earthworm, and has discovered many facts of interest from the standpoint of comparative physiology. The results have appeared in an article by Mr. Budington in the April number of the *American Journal of Physiology*. Mr. Budington has recently been making a study of the physiology of the cardiac muscle and the cardiac nerves of the clam.

Dr. R. H. Cunningham has continued his work of several years on the action of strong electric currents, investigating

especially their action on the sciatic nerve. He has also devoted much time to the study of X-rays, the danger of shocks received from X-ray machines, and the recognition and differentiation of internal diseases by means of the stereoscopic radioscope. Professor Robert T. Morris has carried on a series of experiments to determine the value of Cargile membrane in preventing the formation of post-operative peritoneal adhesions, and a series with antiseptic depilatories for the purpose of learning the range of their usefulness, and is now doing interesting work on the transplantation of ovaries with a view to investigate the resemblance of progeny to parent. Drs. Robert Coleman Kemp and A. W. Gardner have continued their investigations, begun a year ago, of resuscitation in impending death from the inhalation of chloroform. They have also made a detailed study, from a medico-legal standpoint of the administration of chloroform in fatal doses and of the post-mortem phenomena linked with various methods of treatment.

Dr. Haven Emerson has studied the functional significance of the capsule of the kidney and of the pancreas, the action of adrenalin chloride upon the pancreas, and the effect of artificial respiration upon tetanus artificially produced.

At the various scientific meetings of the year the results of the department's work have been reported upon. Professor Lee, who last summer visited several of the British and Continental laboratories, attended in September the Fifth International Congress of Physiologists in Turin and presented three papers, containing the results of researches in the department's laboratories, one on the action of alcohol on muscle, one on the causes of muscle fatigue, and one on rigor mortis. The same author also reported upon his investigations with alcohol before the annual meeting of the American Physiological Society, held in Chicago in December, and before the New York Academy of Sciences at one of its winter meetings.

At the Marine Biological Laboratory, Wood's Hole, Mass., last summer, the investigator's room of this department was placed at the disposal of the Department of Physiological Chemistry, and was profitably used by Professor Gies in an investigation of the problem whether spermatozoa contain an enzyme which has the power of causing the development of mature ova.

The work in the Department of Physiological Chemistry has proceeded along the usual lines, with a somewhat noticeable increase, however, in the number of research workers. Applications for places in the laboratory next year will evidently tax the facilities of the department to the utmost.

Dr. William J. Gies, Instructor in the Department ever since its organization, has this year been advanced to the position of Adjunct Professor of Physiological Chemistry. He has likewise received the appointment of Consulting Chemist to the New York Botanical Garden.

Dr. Alfred N. Richards has been advanced to the position of Tutor in Physiological Chemistry, after several years of successful work as Assistant. Dr. Richards has during the past year done considerable work as a research scholar in the Rockefeller Institute for Medical Research.

During the year another room has been made available for the use of the department, especially for experimental work involving the use of animals. The private library owned by Professor Gies, housed in the laboratory, has been increased somewhat in size during the year, and now consists of about one thousand volumes, available to all the workers in the department.

In the Department of Surgery, in addition to the usual curriculum, there has been added during the past year to the third-year students' tuition a series of short papers by a selected student on subjects not touched on at length in the regular course of instruction and based upon living cases coming under his notice in an immediately preceding clinic. This paper, which is of only eight minutes' length, is read to the assembled class at the next College clinic and discussed by the Professor and the class at large for ten to fifteen minutes. This exercise in the nature of a conference has met with much attention from the class and has developed much zeal.

A further variation of tuition was instituted late in the course which will be continued during the coming term. It is to have three or four of the fourth-year class (of the section then taking hospital instruction at the Roosevelt Hospital) to be notified twenty-four hours prior to the Saturday clinic of

Professor Weir, concerning the one or two cases that may require operation the next day. They are, before the assembled class, to state what operation should be done in this given case, why and how it should be performed. These students are attired in aseptic gowns, allowed in the operation arena, and even permitted to assist the staff when possible. As an adjunct to the usual method of teaching, arrangements are being undertaken to have a number of joint hospital clinics: *i. e.*, clinics in which the attending physician should delineate the medical aspect of the given case which has brought into it a surgical necessity, and then to be followed by the surgeon by his remarks and acts.

The authorities of the Vanderbilt Clinic have accepted the offer of Professors Weir and Bull to place at the command of its Surgical Division a well equipped X-ray apparatus to the care of which a specially qualified assistant has been assigned, and from whom special instruction to the students may be expected. The need of better conditions for the teaching of Operative Surgery grows more and more apparent, and it is coming more and more to the front that a more thorough instruction in surgical anatomy should be given, and given, too, by a surgeon, who alone is competent for such work.

The need of autopsy instruction from a surgical standpoint is also a pressing one, and it is hoped that measures for the improvement of the curriculum in the foregoing respects may be speedily accomplished.

The year has been marked by the retirement from the Faculty of Professor Abraham Jacobi and Professor Herman Knapp, who have for so many years filled their chairs with signal ability and added much to the reputation of the school.

For the first time in the history of the College, six students desirous of entering the first-year class were refused admission because of our inability to furnish the necessary accommodation for them in the laboratories.

In the hope of diminishing the size of the entering class, the Committee on the Curriculum, composed of members of the Faculty, have recommended that hereafter no conditioned student shall be admitted to the first-year class. It is believed that this regulation will prevent in the future the over-

crowding of our School, and enable the instructors to devote more time to each student.

Our graduating class numbered 145. Of this number 101 secured positions in hospitals in this and other cities. When it is considered that these positions are no longer to be obtained through influence—but are awarded only after a rigid competitive examination open to graduates of any medical school in the country, it gives evidence of the superior training of our students, that so large a percentage of these places has been filled by the graduates of this College.

The managers of the Vanderbilt Clinic will erect during the coming summer a small laboratory upon the College grounds for the use of the Professor of Medicine in connection with his clinical teaching. This laboratory is to be a purely clinical one, where the student can examine sputa, urine, blood, or the contents of the stomach, and thus form the habit of precision in diagnosis and treatment. In the Clinic he can see the patient, examine him, and then bring to this laboratory the clinical products, examine them himself, and apply the tests which will determine the diagnosis of the disease. The managers believe this laboratory will prove of great advantage to our advanced students, and the effort to connect knowledge acquired there with the practical work, to be a great step forward.

The attendance of patients at the Clinic during the year has been very large, and the amount of material for teaching purposes most ample.

At the Sloane Maternity Hospital instruction has been given to all our fourth-year students, in midwifery, and also to quite a number of graduates. The demand from the latter is constantly increasing, and courses lasting through the entire summer could be easily maintained. During the year several donations have been made by Mr. Wm. D. Sloane for the purpose of improving the ventilation of the Hospital, and increasing the efficiency of the sterilizing plant.

Every department of the School is now working in a satisfactory manner.

Respectfully,
JAMES W. McLANE, M.D.,

Dean.

SCHOOL OF MINES
SCHOOL OF CHEMISTRY
SCHOOL OF ENGINEERING
SCHOOL OF ARCHITECTURE

REPORT OF THE DEAN

FOR THE ACADEMIC YEAR ENDING JUNE 30, 1902

*To the President of Columbia University
in the City of New York,*

SIR:

I have the honor to present a report of the thirty-eighth annual session, just closed, of the Schools under the Faculty of Applied Science.

For the statistics concerning numbers in attendance in the various classes, and the summary of enrollments, I would refer you to the report of the Registrar, in which this information is summarized in tabular form. It will be apparent from a study of these tables that the growth of the various schools in numbers has been most gratifying as an evidence of the growing reputation of the courses not only in the neighborhood of the University but in the country at large. An increasing tendency has manifested itself for students to take their early years of study and preparation in an institution near their homes, and to come to Columbia and New York City to complete their courses and professional preparation and to obtain the degree of Columbia. This is particularly manifest in Mining, and is a tendency which is considered to be one which should be distinctly fostered. The consequence, as far as registration and the formality of en-

rollment are concerned, is that a greater proportion of students in Applied Science appear to have conditions standing against them during their early years at Columbia than prevails in other departments. The explanation of course is that students coming to Columbia for advanced standing in the great majority of their subjects are apt to have a few of the Columbia requirements in the early years stand as subjects for which they had not had a previous training before coming here. These conditions, therefore, are technical rather than actual so far as the competence of these students is concerned for taking up the work in advanced years.

The effect, however, of this tendency is to crowd and congest the buildings devoted to the work of the students in Applied Science to an extent which is at least uncomfortable, and in some cases constitutes an invasion of convenience in instruction. The number of students which can be taken care of over a given floor area of drawing tables or laboratory desks is definitely limited, and in certain departments this limit has been practically reached this year. The drawing-rooms on the top floor of Engineering must provide for all students in Engineering and in Chemistry. The laboratories in Havemeyer must provide for all students in Engineering, while giving special facilities and privileges to the students in Chemistry in their later years. These same laboratories also must provide for the instruction in General Chemistry open to students of the College and the Schools of Pure Science as electives. The laboratories devoted to Engineering—Electrical, Mechanical, Civil, and Mining—can only be properly used by the system of dividing the classes into squads of a limited size, and it is apparent that the limit to this process of subdivision is set by the number of afternoons available per week and the amount of equipment in each laboratory. The same limitation holds for work in the shop departments of the Mechanical courses, and is perhaps at its worst where the units of equipment are larger, as in the laboratories of Mining and Mechanical Engineering, or costly as in the case of the laboratory of Mineralogy. It must also be recognized that the increasing number of students produces a distinct effect in increasing the number required on the teaching staff both in the

class-room and in the laboratories. It is impossible to do good work with sections in the class-rooms so large that in the natural course of events the opportunity to recite before the class can only come at infrequent intervals. In the laboratory and drawing-room where beginners are taught, it will be apparent that the ignorant and inexperienced student will need the attention of the instructor even more frequently than when he has had some experience in working by himself. To ask the instructors to handle large sections of beginners is to compel the individual student to delay for lack of definite instruction; which must be a distinct loss both in time and in efficiency, and must entail a great strain upon the teaching staff.

In order to meet this difficulty in part for the present and without recourse to the obvious solution presented by increased buildings, the Faculty has directed its Committee on Admissions to enforce more rigidly the standard of scholarship imposed by the published entrance requirements. While this course will reduce the numbers expected in the autumn of 1902, it will also doubtless result in an increase of the candidacy in the autumn of 1903; the students turned back for further preparation next fall will come up with such improved preparation the following year that the University will have to accept them, and the difficulties will repeat themselves thereafter. It also should not be lost sight of, in my opinion, that the experience in some other institutions, which has resulted from an attempt to reduce numbers by this process, has not worked satisfactorily for any length of time. The tendency of human nature to get what it wants for payment of the least price therefor, is likely to outweigh the influence of an alleged increased value of the thing obtained; and while other institutions offer essentially the same courses as Columbia offers, it will not follow that necessarily the applicants for admission to Columbia will be only the very best men from the preparatory schools. It should not be made too difficult for good men to come to Columbia by the interpretation which is put upon the statement of our entrance requirements. The day cannot be far distant when the problem of increased accommodation for the students in Applied Science will have to be faced by the Trustees.

It should not be overlooked, furthermore, that the tendency of an increased requirement for admission, either in name or in effect, is to impose upon the preparatory schools a pressure which is apt to result in forcing them to become schools of *preparation for the entrance examinations* rather than schools for the *education of boys*. The Dean is not prepared at present to make any definite recommendations publicly as to the introduction of a system for the admission of students by a certificate provision; but it is his belief that before long it will be desirable for the University to give careful consideration to this question in view of the difficulties which are entailed when boys are superficially educated to pass examinations and not well educated in the groundwork upon which successful passage of such examinations should really rest with respect to sound scholarship and a reliable preparation, which can be depended upon for use in later study and in the requirements of life.

The two most noteworthy matters in the history of the Faculty of Applied Science during the current year have been an exhaustive report by a Committee of Heads of Departments, which has embodied an effort to equalize the requirements in the various courses with each other, and also to equalize the demands on the students' time in the four years of the present course; and the decision to set forth the School of Architecture as a department of a School of Fine Arts.

The recommendations of the Heads of Departments, embodied in a full report, will go into effect in the various courses as it shall be practicable to carry them out, beginning with October, 1902. The tendency has been to move preparatory courses into the first two years and to leave the second half of the second year and the last two years for the more distinctly professional work of the courses. It has been particularly sought with respect to the last or fourth year to leave its time more free for the Thesis and special work appropriate for such final year, in which a man receives his professional degree. It has been sought, by inquiry among the graduates and best undergraduate students, to ascertain how much time for preparation at home was required for a satisfactory standard of scholarship, and to equalize their assignments in class

and in laboratory at the University and such preparation hours outside. It is manifestly inappropriate when the time of the student is invaded by the demands of one department so that the requirements of another equally important in the broad view are forced into a secondary place by the definite limitations of the numbers of hours per day available for study at the time. The Faculty also felt that it was not right that no time during the hours of daylight should be left available for physical exercise and the relief of the tension in the classroom. The operation of these changes will be watched with great interest during the next two years, which will be required to carry most of them into effect. The Faculty has also experienced this year for the first time a practical operation of the admission of students under the requirements of the College Entrance Examination Board established by the Association of the Colleges and Preparatory Schools of the Middle States and Maryland. It was plainly a necessity that the examinations in June, conducted by this Board, and the examinations in September, conducted by the representatives of the University itself, should be made essentially to agree both in statement and in interpretation. Steps have been taken to bring about this agreement and to give more significance and unity to the work of the Committee on Admissions of the Faculty. Professor William Hallock has been made Chairman of the Committee on Admissions for the coming year.

By action of the Trustees at their May meeting the School of Architecture was set off from the Schools under the Faculty of Applied Science, and was made a part of a School to be organized in the future and to be known as the School of Fine Arts of Columbia University. This step is the logical outgrowth of the policy repeatedly expressed in past legislation by the Faculty, by which the essentially artistic element in the profession of the architect has been recognized, in response to the urgent representations of the officers of the School of Architecture. These have for several years contended that the minimum of engineering required by the general practitioner could be covered in the first three years of the course, leaving the fourth year entirely free for artistic discipline in advanced design, drawing, and research, except for the few who might

elect to devote themselves to engineering studies in order to graduate as architectural engineers. Moreover, in the work of the first three years of the course, the Faculty, at the instance of the department, has pursued the policy of diminishing step by step the closeness of the bond between the courses in Architecture and those in Engineering which existed when the department of Architecture was established twenty-one years ago. The mathematical and scientific courses formerly administered in common for the students in engineering, chemistry, metallurgy, and architecture, have one by one been surrendered into the charge of the Department of Architecture, so far as its own students were concerned, to be administered by its own instructors, upon a scheme specially prepared for the requirements of architectural practice; while the time saved by this specialized treatment has been devoted to historical and artistic studies deemed essential to the well-trained architect.

Thus while, for administrative reasons, the department was at the outset placed under the Faculty of Applied Science, its consistent development on the lines described has made it year by year less dependent upon that Faculty, so that the final severance of the connection has come about without shock or embarrassment of any kind. Until such time as the inauguration of a distinct Faculty of Fine Arts shall become practicable, the School of Architecture will remain under the direct administrative control of the President, who will represent it in the University Council. For such courses in engineering as may be required for those students who elect a fourth or fifth year's work in advanced engineering, the School of Engineering stands ready to cooperate with the School of Architecture precisely as was done under the former relations between the two.

In the work of the department of Architecture for the current year the noteworthy features have been the award of the Columbia Fellowship to Mr. Arthur Ware of the Class of 1898, and of the Perkins Fellowship, now first made available, to Mr. Charles S. Kaiser of the Class of 1901.

The work of the department has been conducted this year with the usual efficiency and satisfaction. It has been unfor-

tunate that the ill-health of Professor Ware has prevented his giving his customary personal attention to the work of the department during the spring, but his absence has been as far as possible compensated for by extra assiduity on the part of his associates. The reports of the publications and researches of officers of other departments of the Schools of Applied Science will be presented in full in the *University Quarterly* in September. Certain of the departments also which are members of the Faculty of Pure Science as well as of Applied Science will make their reports in detail through the Pure Science Faculty.

In the Department of Chemistry 31 different courses were conducted, and a total enrollment is reported of 1119.

In the Department of Mechanics, Professor M. I. Pupin has been absent on leave during the second half-year. His work was carried on partly by the Department of Electrical Engineering and partly by lectures given by C. P. Steinmetz of the General Electric Company. The course in Mechanics has been expanded by giving a half-year of Elementary Mechanics before the year's study of Analytical Mechanics. The larger classes will hereafter be divided into sections in order to secure more effective instruction in these important subjects.

The Department of Mining has this year exhibited great activity and progress in the development of the ore-dressing equipment and ore-testing laboratories. The facilities for studying the methods of mechanical treatment at Columbia are now of the very first order, and the increasing number of students in Mining is doubtless the evidence that this fact is widely recognized. The facilities for hand sampling as preliminary to illustrating and developing the scientific process underlying the large scale treatment here are particularly worthy of imitation. The School has conducted the usual Summer School between the vacation of the third and fourth year by a trip of several weeks' duration to the metal mines of the West, particularly in the Cripple Creek district.

In the Department of Mechanical Engineering a noteworthy increase in its efficiency has been caused by the constituting of two officers of the title of Tutor for the conduct of the work in the drawing room. This department has to carry

on the work of instruction in drawing, regarded as a handicraft or art for the students of the first two years and to lay the foundation for the later work of the students when drawing becomes an instrument or tool for the recording of engineering solutions. There has been a class of 275 men to be taken care of in these drawing rooms, and from the nature of the cases the work is continuous all day long without the cessation between intervals of assignment imposed by regular hours. The Department furthermore has to provide for the work in the solution of engineering problems for students for the degree of Mechanical Engineer in their third and fourth years. It has not been found to work well to have these students of advanced engineering problems working in the same room with those who are learning to draw, but under the present conditions there seems to be no satisfactory solution whereby this difficulty can be avoided. The laboratories devoted to problems in heat and motive-power engines have this year reached a higher stage of efficiency by reason of the gradual completion of the necessary work of installation and equipment. The testing laboratory, however, is still quite inadequately equipped, and limits, by this inadequacy, the number of students which can be taken care of by one instructor in one section at a time. The work in the testing laboratory has been conducted for the students in Civil, Mining, and Electrical Engineering by an assistant in the Department of Civil Engineering, while the Mechanical Engineers and Metallurgists were taught by officers of the Department of Mechanical Engineering.

In the shop laboratories in Teachers College the limit of effective use is definitely in sight this year. The number which can be taken care of at one time in one section in any division is twenty-four, and where the number of students in any course has exceeded this limit it has compelled the formation of two sections with the necessary afternoon assignment to each. The policy established some years ago has been again adhered to, whereby the first sufferers from overcrowding should be the students following the Civil Engineering Course, and second the students taking the Electrical Engineering Course, while the facilities of the shops were to be

limited for the Mechanical Engineering students only in the very last resort. It has been found this year necessary to curtail the courses for both the Civil and Electrical Engineers by reason of the definite limitations set by room and equipment. The developing of the motive power or heat-engine laboratories has also been effectively and definitely stopped by the limitation of the space available for installation and use. The Department has had to decline to receive gifts which would have been most significant and valuable, simply because there was no space in which to dispose of them or make them available.

The vacation class in Mechanical Engineering consists this year in a visit to the shops of the Bethlehem Iron Company, under the guidance of Professor Hutton and Mr. Sleffel. This trip was made at the break at Easter. A most interesting investigation has been in progress during the year under the hand of Instructor I. H. Woolson, upon the form of test or specification which should be satisfactory in the treatment of woods to render them slow-burning in buildings. This work has attracted wide attention and has brought repute to the University as being the first attempt to put this important practical matter upon a distinctly scientific basis. The Department has been greatly favored by the use of the apparatus of the metallurgical laboratory in conducting experiments upon woods which had been treated to make them incombustible by analyzing their behavior under heat to observe their temperature.

The Department of Astronomy has conducted the usual Summer School in Practical Geodesy at Osterville, Massachusetts, under the direction of Professor Jacoby.

The Department of Mineralogy has been fortunate enough to add about 600 specimens to the student collection of minerals and to increase its equipment of duplicate sets and determinative sets. These additions have come partly from the Eggleston Museum, and the work of preparation has been paid for by a gift from Mr. Charles F. Cox. An additional tutorship in Mineralogy has been created to meet the increasing demand on the teaching staff and to render possible a more convenient subdivision of sections by numbers.

In the Department of Civil Engineering an increase of staff has been provided so that it has been possible to make the changes in the plans and adjustment referred to above, giving an increased effectiveness and significance in the latter years of the course.

The Summer Course of Surveying under this Department held at Camp Columbia, Morris, Connecticut, has grown to such an extent that the means at the disposal of the Department can only with difficulty give even limited accommodations. The number in attendance at the Summer Session of 1901 was the greatest in the history of the Course, and amounted during July and August to 119. This large attendance necessitated the entire reorganizing of the administration of the Course, which will go into effect for the Summer Course of 1902, but the increasing numbers foreshadow the possible necessity of relocating the school under circumstances which shall be better adapted to such increased attendance.

In the Department of Electrical Engineering the students of the current year have had the advantage of lectures and class-room instruction from Mr. C. P. Steinmetz of the General Electric Company of Schenectady. A visit to these works under the direction of Adjunct-Professor Sever was made just after the mid-year examinations, and a considerable number of the graduates of the present class will be taken into those works on the completion of their college course. The Electrical Laboratories have been driven to the limit of their capacity and the work of the students in the various courses has been effective and satisfactory. The work of research conducted in connection with these laboratories has been most interesting and has drawn wide attention to the University. The reception to Lord Kelvin, given during the spring, was mainly under the auspices of this Department.

The Department of Metallurgy has received the bronze bust of the late Professor Thomas Egleston, founder of the School of Mines, and has given an honored post to this bust in its laboratory and offices. By the kindness of friends interested in the development of the laboratory idea, a very considerable addition has been made to the equipment of the

Metallurgical Laboratory in its furnaces and other subsidiary apparatus. Most interesting research work in this Department has been conducted this year in the lines of the metallography of alloys and the determination of temperature in metallurgical processes at which the reaction of the process takes place. The Department has conducted its Summer Courses in the study of metallurgical and mechanical processes in connection with iron and steel for the Mechanical Engineers at Pittsburgh and at Phoenixville.

Respectfully submitted,

F. R. HUTTON,
Dean.

SCHOOL OF POLITICAL SCIENCE

REPORT OF THE DEAN

FOR THE ACADEMIC YEAR ENDING JUNE 30, 1902

*To the President of Columbia University
in the City of New York,*

SIR:

I have the honor to submit the following report of the work of the Faculty of Political Science for the scholastic year 1901-1902. During the year the graduate courses offered by this Faculty were attended by a much larger number of students than in any previous year since the establishment of the School. Without including Columbia College Seniors, 58 of whom pursued graduate courses, or Barnard College Seniors, 26 of whom pursued equivalent courses offered by this Faculty, the attendance for the year was 450. Of this number, 250 were primarily registered under the Faculty of Law, 44 under the Faculty of Philosophy, and three under the Faculties of Pure Science and Applied Science. Of the students primarily registered in the School of Political Science, 41 were simultaneously pursuing courses of study in the theological seminaries of New York and New Jersey; 35 in the Union Theological Seminary, three in the Drew Theological Seminary, two in the General Theological Seminary, and one in St. Joseph's Theological Seminary.

Classified from another point of view, 267 of the 450 students were pursuing the courses offered in the School of Political Science as graduate courses leading to the Master's and Doctor's degrees, while 183 law students were taking courses, mainly in public law and comparative jurisprudence, as a part of their legal education.

Of the 450 students, 397 were men and 53 women. Of the latter, 36 were primarily registered in the School of Political Science, 15 in the School of Philosophy, and two in the School of Pure Science.

The growth of the School of Political Science during the past four years is indicated in the following table:

	1898-1899	1899-1900	1900-1901	1901-1902
Total students, excluding Seniors in the College.....	203	228	268	450
Primarily registered in Law.....	93	76	127	250
“ “ in Philosophy	13	19	13	44
“ “ in Pure or Applied Science.....	2	2	2	3
Primarily registered in Political Science.....	95	132	126	153

The great increase during the past year in the total attendance—an increase of 68 per cent.—is chiefly due, as will be noticed, to the greater number of law students who are combining the study of public law with that of private law. At the same time the number of students primarily registered in the School of Political Science shows a gratifying increase of more than 21 per cent. The steady growth of the School during the past decade is best illustrated by a study of the primary registration alone:

1892-95.....average primary registration.....	52
1895-98..... “ “	73
1898-1901... “ “	117
1901-02.....primary registration	153

During the past academic year 45 candidates, having all their subjects, or at least their major subject, under this Faculty, have been promoted to the degree of Master of Arts; and seven candidates, having all their subjects under this Faculty, have been recommended for the degree of Doctor of Philosophy. Three of these seven had their major subject in the field of history, two in public law, and two in economics or sociology. The first doctorates awarded on the recommendation of the Faculty of Political Science were conferred in the year 1882-83. The following table shows the total number of doctorates awarded, from that date to the present time, to candidates having all their subjects, or their major subjects, under the jurisdiction of this Faculty. The table is arranged by quinquennial periods, and indicates the dis-

tribution of the candidates, as regards their major subjects, among the three great groups of historical, legal, and economic studies. It not only shows, like the other tables above presented, a steady growth of the work of the entire School, but it indicates how economics and history, in consequence of the gradual strengthening of the teaching force in these departments, have obtained, during the last few years, a development which brings them fully abreast of public law and jurisprudence.

Doctorates in Political Science

	History	Public Law and Jurisprudence	Economics and Sociology	Totals
1882-87	2	7	3	12
1887-92	3	12	4	19
1892-97	4	10	11	25
1897-1902	9	10	10	29
Totals	18	39	28	85

In the report of the Registrar will be found tabular statements of the courses of study offered in the School, together with the attendance upon each, as follows:

Group I—History and Political Philosophy

- A. European History..... page 322
- B. American History..... page 322
- C. Political Philosophy..... page 322

Group II—Public Law and Comparative Jurisprudence

- A. Constitutional Law.....page 347
- B. International Law.....page 347
- C. Administrative Law.....page 347
- D. Roman Law and Comparative Jurisprudence.....page 347

Group III—Economics and Social Science

- A. Political Economy and Finance.....page 314
- B. Sociology and Statistics.....page 314

WORK IN THE SEMINARS

Seminar in European History

Professor Robinson. 2 hours fortnightly. 10 members.

The subject treated was The Great Schism and the Council of Constance. In addition to reading and discussing Dietrich von Nieheim's *De Schismate Libri III*, the members presented the following papers:

The Attempt of the Council of Constance to Reform the Church.....	Frank A. Fall
Sigismund and the Council of Constance.....	Felix Hecht
Gerson and his Work.....	Henry Johnson
Huss before 1414.....	Louise R. Loomis
The Negotiations Leading up to the Council of Pisa.....	Preserved Smith
The Trial of Huss.....	Susan Titsworth
Wyclif's Influence on Huss.....	Martin Walker
The English "Nation" at Constance.....	William N. Weir

Seminar in Modern European History

Professor Sloane. 2 hours a week. 7 members.

The general subject treated was Napoleon's Continental System. The following papers were read:

British Orders and French Decrees.....	Walter L. Fleming
Prussia's Adhesion to the Continental System..	Frank E. Hinckley
The Berlin Decree.....	Susan M. Kingsbury
The Genesis of the Continental System.....	Samuel E. Moffett
Results of the Continental System.....	Henry R. Spencer
The Milan Decree.....	David Y. Thomas
Napoleon's Justification of his Continental System.....	Rosa V. Winterburn

Seminar in American Colonial History

Professor Osgood. 1 hour a week. 7 members.

The following papers were read:

The Policy of the Northern and Middle Colonies towards the Indians in the Seventeenth Century.....	J. Boyce Smith, Jr.
The Administrative System of Rhode Island in the Seventeenth Century.....	Knowlton Durham
Conditions Affecting Intercourse between America and Europe in the Seventeenth Century.....	John F. Harper
A Comparison between Dutch and English Colonization in New York.....	Harry A. Gordon
The Composition of the Population North and East of the Delaware River in the Seventeenth Century.....	Miriam F. Choate
The Composition of the Population South and West of the Delaware River in the Seventeenth Century.....	Margaret E. Johnson
The Economic System of New England in the Seventeenth Century.....	Ida M. Hollis

Papers presented in connection with the course on American Colonial History contained discussions of the historical literature and the sources relating to the American colonies in the seventeenth century.

Seminar in Political Philosophy

Professor Dunning. 1 hour a week. 1 member.

Mr. William O. Easton presented careful critiques on several of the more prominent works on political theory in recent times.

Advanced Seminar in Constitutional Law

Professor Burgess. 1 hour a week. 5 members.

The subject treated in this Seminar was Judicial Organization in the Principal States of Europe and in the United States.

The following papers were read:

Judicial Organization of the United States. . .	Samuel B. Crandall
Judicial Organization of Great Britain.	William O. Easton
Judicial Organization of the German Empire. . .	James W. Garner
Judicial Organization of Italy.	Frank E. Hinckley
Judicial Organization of Spain.	William C. B. Kemp

The instruction in the course on Private Rights and Immunities under the Constitution of the United States is also largely of the nature of seminar work. The candidates for the Master's degree who have Constitutional Law for a major subject did their research work for their essays in connection with this course. The course was used for this purpose during the past year by fifteen students, five of whom prepared Master's essays upon different questions concerning the rights and immunities of citizens and persons under the Constitution of the United States.

Seminar in Diplomacy and International Law

Professor Moore. 2 hours a week. 8 members.

The following papers were read:

Treaties: Their Making, Interpretation, and Enforcement.	Samuel B. Crandall
The Jurisdiction of the Admiralty.	Howard S. Harrington
Consular Jurisdiction in the East.	Frank E. Hinckley
The Development of International Law in Japan.	Seiji Hishida
Nationality.	Tasaburo Konno

Seminar in Administrative Law

Professor Goodnow. 1 hour a week. 8 members.

The work of the Seminar consisted in the study of cases, one hundred and twenty of which were examined and discussed. No papers were read.

Seminar in Comparative Jurisprudence

Professor Munroe Smith. 1 hour a week. 9 members.

The work of the Seminar during the past year consisted in the comparative study of the doctrines of mistake and fraud in the English law, Roman law, and modern civil law.

The titles of the Digest and Codex of Justinian relating to the action and the exception of fraud were read and discussed, and the corresponding sections of the Motives presented with the first draft of the German Imperial Code were examined. The following papers were read :

Remedies Given to Contracting Parties for Damages Suffered by the Fraud of a Third Person.....	Joseph D. Fackenthal
Fraud as Affecting the Wrongdoer's Assignees..	H. Starr Giddings
The Roman Law of Mistake.....	Edwin C. McKeag
Fraud in Judgments..	Thomas E. O'Brien

Seminar in Political Economy and Finance

Professor Seligman. 2 hours fortnightly. 15 members.

The following papers were read:

Economic Aspects of the Matriarchate.....	Henry R. Mussey
Origin and Development of Slavery.....	Samuel Peskin
Industry and Class Relations in Greece.....	Harry B. Mitchell
Economic Aspects of Colonial Expansion.....	Everett B. Stackpole
Economic Aspects of Colonial Expansion.....	John L. Tildsley
The Theory of Ability.....	John H. Marsching
The Theory of Wages.....	Enoch M. Banks
Relations of Local to General Finance.....	Tsuruziro Hara
Indirect Taxes as a Source of Local Revenues..	Robert B. Olsen
Philosophy of the Single Tax.....	Arthur J. Boynton
Exemption of Improvements in Local Taxation.....	Harry B. Barnett
Theory of Railway Rates held by the Interstate Commerce Commission.....	Frank F. Nalder

Some of the above members, as well as other members, made reports at each session on periodical literature.

Seminar in Political Economy and Finance

Professor Clark. 2 hours fortnightly. 16 members.

The following papers were presented:

Municipal Activities.....	Ray McClintock
Municipal Activities in England.....	Frank F. Nalder
Municipal Activities in the United States.....	Ray W. Thompson
Socialism.....	James A. McQueen
Socialism in the Southwest.....	Wallace E. Miller
The Theory of Monopolies.....	Henry R. Mussey
Governmental Monopolies.....	Yoshimasa Ishikawa
Laws Concerning Monopolies.....	George B. Keeler
Theories of Protection.....	Arthur J. Boynton
Modern Aspects of the Tariff.....	Harry B. Bennett
Theories of Wages.....	Isaac R. Henderson
The Bargain Theory of Wages.....	John S. Hershey
Von Bohm-Bawerk's Theory of Interest.....	Robert B. Olsen
Over-Production.....	Samuel Peskin
European Trusts.....	Everett B. Stackpole
The Value of Money.....	Joseph C. Freehoff
Child Labor in the United States.....	Anna M. Cordley

Seminar in Sociology

Professor Giddings. 2 hours fortnightly. 34 members.

The following papers were read during the first half-year:

The Russian Jews.....	Wallace E. Miller
The Poles.....	Margaret F. Byington
The Sicilians.....	Eleanor H. Bush
The Slavic Austrians.....	Lee Waldorf
The Russian Slavs.....	John A. McCallum
The Hungarians.....	Charles C. Miller
The Slovaks and Lithuanians.....	Charles D. Bates
The Croatians.....	George F. Nason

The following papers were read during the second half-year:

An Analysis of the Statistical Reports of the New York State Board of Charities.....	Clinton A. Billig
Causes of the High Divorce Rate in Cities....	Ray W. Thompson
Critical Analysis of the Statistics and the Literature of the Negro Question.....	Lee Waldorf
Critical Analysis of Early Records of Mission- ary Activity.....	Herbert G. Crocker
Descriptive Sociology of Kansas.....	Wallace E. Miller
Massachusetts during the Great Revival....	Samuel P. Hayes
The Sociological Writings of Gabriel Tarde...	Michael M. Davis, Jr.

WORK OF FELLOWS

During the year the following persons have held fellowships in subjects falling under the jurisdiction of this Faculty:

1. SAMUEL BENJAMIN CRANDALL International Law
 Alfred University, B.S., 1897.
 Columbia University, Scholar in Public Law, 1900-01.
 Mr. Crandall devoted the year to further work in public law under the especial direction of Professor Moore. He made excellent progress in the preparation of his Doctor's dissertation on "Treaties," reading three papers during the year in Professor Moore's Seminar. He read also in Professor Burgess's Seminar. He passed in May his oral examinations for the Doctor's degree.
2. WALTER LYNWOOD FLEMING American History
 Alabama Polytechnic Institute, B.S., 1896; M.S., 1897.
 Columbia University, A.M., 1901.
 Mr. Fleming read a paper in Professor Sloane's Seminar and presented other papers in connection with Professor Robinson's course on Mediæval Institutions and Professor Osgood's course on American Colonial History. He worked under the direction of Professor Dunning upon his Doctor's dissertation. His subject is "The Reconstruction of Alabama," and he expects to spend the summer investigating the sources in that state. He passed in May his oral examinations for the Doctor's degree.
3. JAMES WILFORD GARNER Political Science
 Agricultural College of Mississippi, B.S., 1892.
 University of Chicago, Ph.M., 1900.
 Columbia University, graduate student, 1900-01.
 Mr. Garner, the George William Curtis Fellow, continued his work in public law under the special direction of Professor Burgess. His researches upon the judicial organization of the German Empire took the form of an excellent monograph, a part of which will be published in the *Political Science Quarterly*. Mr. Garner received the Doctor's degree at Commencement. He has been appointed to take the place of Dr. Shepherd, absent on leave, as Instructor in History, and has therefore resigned the Curtis fellowship.
4. EDWIN CORWIN MCKEAG Jurisprudence
 Rutgers College, A.B., 1896; A.M., 1897.
 Columbia University, LL.B., 1900.
 Mr. McKeag worked during the year in public law and jurisprudence, and in political economy and finance.

He took part in Professor Munroe Smith's Seminar, and made good progress in the preparation of his Doctor's dissertation upon "The Doctrine of Mistake in Roman and in English Law." He passed, in June, his oral examinations for the Doctor's degree.

5. ROYAL MEEKER Finance
 Iowa State College, B.S., 1898.
 Columbia University, graduate student, 1899-1901.
 Mr. Meeker was principally engaged during the year in investigating the policy of shipping subsidies, under the direction of Professors Clark and Seligman. On receiving a favorable offer from the Reform Club to do some work for them on the same subject, Mr. Meeker resigned the emoluments of his fellowship. He attended the Seminar in Political Economy, participating in its discussions and making several reports.
6. HENRY RAYMOND MUSSEY Economics
 Beloit College, A.B., 1900.
 Mr. Mussey read papers in Professor Seligman's Seminar and in Professor Clark's Seminar, and continued his investigations on the subject of trusts. On the resignation of Mr. Day, Mr. Mussey was selected to take up Mr. Day's work in the required course in Economics in the College.
7. ULRICH BONNELL PHILLIPS History
 University of Georgia, A.B., 1897; A.M., 1899.
 Columbia University, graduate student, 1900-01.
 Mr. Phillips, the Schiff Fellow, continued his work in history, presenting papers in connection with Professor Osgood's course on American Colonial History, and completing his dissertation upon "Georgia and State Rights" under the direction of Professor Dunning. Upon this dissertation Mr. Phillips received the Justin Winsor Prize offered by the American Historical Association. He received the Doctor's degree from Columbia University at Commencement.
8. DAVID YANCEY THOMAS History
 Emory College, A.B., 1894.
 Vanderbilt University, A.M., 1898.
 University of Chicago, graduate student, 1898-99.
 Mr. Thomas presented papers during the year in connection with Professor Osgood's courses on [American Colonial History and on English History. He has also completed, under the direction of Professor Dunning, his Doctor's dissertation upon "Military Government in the United States Prior to the Civil War." He passed in May his oral examinations for the Doctor's degree.

9. JAMES MICKEL WILLIAMS Sociology
 Brown University, A.B., 1898.
 Union Theological Seminary, B.D., 1901.
 Columbia University, graduate student, 1898-1901.

Mr. Williams was engaged during the past year, under the direction of Professor Giddings, upon a detailed statistical and historical study of a town in central New York, an attempt to combine statistics with description and narration in local history. He also continued the study of social settlements in New York City begun by a former Fellow. He passed, in May, his oral examinations for the Doctor's degree.

Publications under the Supervision of the Faculty Of the Studies in History, Economics, and Public Law, under the editorial management of Professor Seligman, there have appeared during the year three numbers:

- Vol. XIV. No. 3. The Eastern Question. A Study in Diplomacy. By Stephen P. H. Duggan, Ph.D.
 Vol. XVI. No. 1. The Past and Present of Commerce in Japan. By Yetaro Kinoshita, Ph.D.
 Vol. XVI. No. 2. The Employment of Women in the Clothing Trade. By Mabel Hurd Willett (Mrs.), Ph.D.

The *Political Science Quarterly* has continued to prosper. With the close of the year 1901 it completed its sixteenth annual volume. It has devoted special attention during the year to the problems presented by the American control of insular dependencies.

Three successful meetings of the Academy were held during the year. The first was a meeting of the Fellows only, who **Academy of Political Science** participated in a discussion, opened by Professor Seligman, of the work of the Committee of Fifteen. At the second meeting the Hon. A. B. Hepburn read a very thorough paper on the plan submitted by Secretary Gage for the reorganization of the national banking system. The third meeting was addressed by Frederic R. Coudert, Jr., on the topic "Practical Legal Difficulties Incident to a Transfer of Sovereignty."

The History Club held but one regular meeting, at which Professor Seligman read a paper upon "The Economic

Interpretation of History. Under the auspices of this Club there has this year been organized a society of **History** the teachers of history in New York City, and this **Club** last has held two well attended and interesting meetings.

During the year the Faculty has taken the action shown below in the extracts from its minutes on matters **Faculty** of general University interest and importance: **Legislation**

(October 18, 1901)—*Resolved*, That candidates offering Constitutional Law as a major subject must take Administrative Law or International Law, as one minor subject.

(Feb. 21, 1902)—*Resolved*, That the course on Comparative Administrative Law (Public Law 16) be opened to Seniors in Columbia College during the first half-year, and that the course on American Diplomacy (Public Law 7) be opened to Seniors in Columbia College during the second half-year.

Resolved, That Criminal Law be withdrawn from the list of subjects which may be selected for the degrees of Master of Arts and Doctor of Philosophy.

(March 21, 1902)—*Resolved*, That Professor Gottheil of the Department of Semitics be invited to deliver a course of lectures upon the History of Mohammedanism, and that this course be described as History 58.

Resolved, That Professor Jackson of the Department of Indo-Iranian Languages be invited to deliver a course of lectures upon the History of India, and that this course be described as History 57.

Resolved, That Professor Prince of the Department of Semitics be invited to deliver a course of lectures on the History of Western Asia and Egypt, and that this course be described as History 56.

Resolved, That the University Council be requested to create a new subject for the degrees of Master of Arts and Doctor of Philosophy, to be described as Ancient History.

During the past year the following persons, former students of the School of Political Science, have obtained first appointments, or have been advanced to better positions, **Appoint-** as teachers, as state officers, or in the federal civil **ments** service. The dates immediately following each name indicate the period of residence in the School.

I. EDUCATIONAL APPOINTMENTS

CARL L. BECKER, 1898-99, University Fellow, 1898-99,	Instructor in History, Dartmouth College.
ERNEST L. BOGERT, 1897-98,	Professor of Economics and Soci- ology, Oberlin College.

- WILLIAM O. EASTON, 1900-02, A.M., 1902, Instructor in History and Sociology, Adelphi College.
- WALTER L. FLEMING, 1900-02, A.M., 1901; University Fellow, 1901-02; Cand. Ph.D., Lecturer in History, Columbia University.
- JAMES W. GARNER, 1900-02, Curtis Fellow, 1901-02; Ph.D., 1902, Lecturer in History, Columbia University.
- WILLIAM N. GLASSON, 1898, University Fellow, 1898-99; Ph.D., 1900, Professor of Political Economy, Trinity College, Durham, N. C.
- ALVIN S. JOHNSON, 1898-1901, University Fellow, 1900-01; Cand., Ph.D., Tutor in Economics, Columbia University.
- JAMES A. McLEAN, 1892-94, University Fellow, 1892-94; Ph.D., 1894, President, University of Idaho.
- SIMON J. McLEAN, 1895-96, University Fellow, 1895-96; A.M., 1896, Associate Professor of Economics, Leland Stanford Jr. University.
- ULRICH B. PHILLIPS, 1900-02, University Fellow, 1900-01; Schiff Fellow, 1901-02; Ph.D., 1902, Instructor in History, University of Wisconsin.
- WILLIAM Z. RIPLEY, 1891-93, University Fellow, 1891-93; Ph.D., 1893, Professor of Economics, Harvard University.
- WILLIAM R. SHEPHERD, 1893-95, University Fellow, 1893-95; Ph.D., 1896, Instructor in History, Columbia University.
- WILLIAM ROY SMITH, 1898-1900; University Fellow, 1898-1900; Cand. Ph.D., Associate in History, Bryn Mawr College.
- EARL EVELYN SPERRY, 1899-1901, University Fellow, 1900-01; Cand. Ph.D., Instructor in European History, Syracuse University.
- EDWIN P. TANNER, 1897-1900, A.M., 1898; University Fellow, 1899-1900; Cand. Ph.D., Assistant in History, Syracuse University.
- HOLLAND THOMPSON, 1899-1901, University Fellow, 1899-1900; A.M., 1900, Instructor in History, College of the City of New York.
- ALBERT C. WHITAKER, 1899-1901, University Fellow, 1900-01; Cand. Ph.D., Instructor in Economics, Leland Stanford Jr. University.
- ALLAN H. WILLETT, 1898-1901, Ph.D., 1901, Instructor in Economics, Brown University.
- JAMES MICKEL WILLIAMS, 1898-1902, University Fellow, 1901-02; Cand. Ph.D., Instructor in Political Economy, Smith College.

2. GOVERNMENTAL APPOINTMENTS

- DAVID P. BARROWS, 1895-97, Chief of Bureau for non-Christian Tribes, Philippine Islands.
- MILO R. MALTBIE, 1895-97, University Fellow, 1895-96; Ph.D., 1897, Assistant Secretary, Municipal Art Commission, New York City.

JAMES B. REYNOLDS, 1894-97, University Fellow, 1894-95; Annual Fellow, 1895-97; 1900-02,	Secretary to the Mayor of New York City.
MAX WEST, 1891-93, University Fellow, 1892-93; Ph.D., 1893,	Head of Bureau of Statistics, Borough of Brooklyn, Tene- ment House Commission.

3. MISCELLANEOUS APPOINTMENTS

CHARLES E. EDGERTON, 1898-99,	Secretary of the Society for the Restriction of Immigration.
ARTHUR C. HALL, 1894-95, University Fellow, 1894-95; Ph.D., 1901,	Head of Social Settlement, Orange, New Jersey.
ROYAL MEEKER, 1899-1902, Honorary Fellow, 1901-02; Cand. Ph.D.,	Secretary of Committee on Tariff Reform, Reform Club, New York City.
FREDERICK A. WOOD, 1892-94, Seligman Fellow, 1893-94; Ph.D., 1894,	Editorial writer, <i>The Transcript</i> , Boston, Mass.

In the early part of the year, the Faculty of Political Science was called to mourn the death of one of its chief members. Richmond Mayo-Smith, Professor of Political Economy and Social Science, returned to his duties at the beginning of the year in failing health, and was obliged to ask for leave of absence for the purpose of restoring his impaired powers. The Trustees granted most generously his application, and it was hoped that a few months of rest would restore him to his accustomed vigor and to his work. But to the sorrow of his colleagues in this Faculty and in the entire University, his condition rapidly grew worse and he died in November. He was one of the original members of the Faculty, and contributed very largely to the establishment and to the reputation of the School of Political Science. He was, also, most active and efficient in the work of reorganizing the University under its present form, and was the elected representative of this Faculty on the University Council almost uninterruptedly. He contributed more than any other one man to the development of the science of statistics in the United States. As a man, he was loved and respected by all who knew him for his gentle manners, his warm heart, his sound judgment, his absolute truthfulness, and his fidelity to duty. As a teacher, he was noted for his soundness, conservatism, and clearness, and for his devotion to the welfare

of his students. And as a scholar, he was a universally acknowledged leader in the development of economic and statistical science. His published works upon the subjects of Statistics and Sociology, and Statistics and Economics, are epoch-making contributions to those comprehensive domains of knowledge. His loss is felt by his colleagues in this Faculty to be almost irreparable.

To fill the great vacancy thus made, the Faculty recommended, and the Trustees have called, Professor Henry Rogers Seager, Ph.D., from the University of Pennsylvania, and Professor Henry L. Moore, Ph.D., from Smith College, to occupy seats in this Faculty as Adjunct Professors of Political Economy. Both of these gentlemen are well-known scholars and teachers of the first rank, and their colleagues in this Faculty confidently expect that they will prove worthy successors to the founder of the department in which they are called to labor.

Respectfully submitted,

JOHN W. BURGESS,

Dean.

June 7, 1902.

SCHOOL OF PHILOSOPHY

REPORT OF THE DEAN

FOR THE ACADEMIC YEAR ENDING JUNE 30, 1902

*To the President of Columbia University
in the City of New York,*

SIR:

I have the honor to present herewith the twelfth annual report concerning the work of the Faculty of Philosophy, covering the academic year ending June 30, 1902.

I was designated as Acting Dean of the Faculty of Philosophy early in October, 1901, was elected Dean on January 10, 1902.

The fuller tables of statistics hitherto appended to these reports have been omitted here, in accordance with your directions. The information contained therein will be found in the reports of the Registrar of the University, pp. 273-354.

Statement A contains the names of the University Fellows in residence during the academic year 1901-02, and a brief account of the chief work engaged in by each during the year.

The total number of individuals pursuing studies wholly or in part under the jurisdiction of this Faculty has been 360. This shows an increase over the total registration for 1900-01 of 60, or 20 per cent. The growth from 1899-1900 to 1900-01 was 9 per cent. It is to be noted that in this total the proportion of students primarily registered under this Faculty is nearly identical with that of the previous year, the figures being as follows:

1900-01

Primary registration $\frac{233}{288}$, or 81 per cent.

1901-02

Primary registration $\frac{224}{280}$, or 80 per cent.

1. Primary registration:		
Students holding a Bachelor's degree or its equivalent from a foreign in- stitution:	1900-01	1901-02
Men.....	153	181
Women.....	91	113
	<hr/> 244	<hr/> 294
2. Secondary registration:		
From the Faculty of Political Science.....	26	32
From the Faculty of Pure Science..	16	8
From the Faculty of Applied Science	0	1
From the Faculty of Law.....	0	2
From Teachers College.....	14	23
	<hr/> 56	<hr/> 66
	<hr/> 300	<hr/> 360

Of the 32 primarily registered under the Faculty of Political Science and secondarily under this Faculty, 5 were also candidates for the degree of bachelor of laws. The 23 students from Teachers College entered here under "Secondary Registration" were not candidates for either of the higher degrees under this Faculty, all such candidates being included under our primary registration.

The number of students under the Faculty of Philosophy who were also students in one or another of the theological seminaries in or near New York and were admitted to Columbia University under the original resolution of the Trustees, dated April 7, 1890, and its later extension, is shown in the following table, the figures for 1900-01 being added for comparison:

	1900-01	1901-02
Union Theological Seminary.....	18	15
General Theological Seminary.....	4	3
Jewish Theological Seminary.....	9	10
Drew Theological Seminary, Madison, N. J.....	2	1
St. Joseph's Theological Seminary, Yonkers, N. Y.....	0	1
	<hr/> 33	<hr/> 30

The total number of auditors enrolled during the year was the same as in 1900-01, viz.: 28, distributed among the various departments as follows:

Anthropology.....	I
Comparative Literature.....	I
English.....	II
Germanic Languages.....	2
Greek.....	I
Music.....	4
Psychology.....	6
Romance Languages.....	2
	28

In the Registrar's Report will be found a tabulated statement of the degrees held by the 294 students primarily enrolled under this Faculty, and a similar statement of the institutions at which these degrees were earned.

The number of courses of instruction and research given during the year by the several departments of this Faculty appears in the following table:

Department	Number of courses	Increase from previous year	Decrease
Comparative Literature.....	10	1	—
English.....	17	2	—
Germanic Languages.....	17	3	—
Greek.....	9	—	—
Indo-Iranian Languages.....	8	—	2
Latin.....	12	—	2
Linguistics.....	1	—	—
Music.....	6	—	—
Philosophy and Ethics.....	8	—	1
Psychology and Anthropology.....	19	4	—
Romance Languages.....	19	4	—
Semitic Languages.....	9	1	—

The courses in Education, as given primarily at Teachers College, do not figure in the above table.

UNIVERSITY FELLOWS APPOINTED FOR 1902-03, BY DEPARTMENTS

Division of Philosophy and Psychology :

Philosophy.....	I
Psychology.....	I
Anthropology.....	I

Division of English and Literature:

English.....	I
Letters (Proudfit).....	I

Division of Classical Philology:

Classical Philology (Drisler).....	I
Greek.....	I

<i>Division of Modern European Languages:</i>	
Germanic Languages.....	2
	(1 Schurz)
Romance Languages.....	1

The fellowships in Education are now assigned to Teachers College.

DEGREE OF DOCTOR OF PHILOSOPHY, MAJOR SUBJECTS CLASSIFIED
ACCORDING TO DEPARTMENTS, 1901-02

<i>Division of Philosophy and Psychology:</i>	
Philosophy.....	1
Psychology.....	0
Anthropology.....	0
Department of Education.....	6
<i>Division of English and Literature:</i>	
English.....	0
Comparative Literature.....	0
<i>Division of Classical Philology:</i>	
Greek.....	1
Latin.....	0
Classical Archæology.....	0
<i>Division of Oriental Languages:</i>	
Semitic.....	3
Indo-Iranian.....	0
Comparative Philology.....	0
<i>Division of Modern European Languages:</i>	
Germanic.....	0
Romance.....	1
	<hr/>
	12

DEGREE OF DOCTOR OF PHILOSOPHY, MINOR SUBJECTS CLASSIFIED
ACCORDING TO DEPARTMENTS, 1901-02

<i>Division of Philosophy and Psychology:</i>	
Philosophy.....	2
Ethics.....	1
Psychology.....	4
Anthropology.....	2
Department of Education.....	4
<i>Division of English and Literature:</i>	
English.....	3
Comparative Literature.....	0
<i>Division of Classical Philology:</i>	
Greek.....	1
Latin.....	1
Classical Archæology.....	1

<i>Division of Modern European Languages:</i>	
Germanic.....	0
Romance.....	1
<i>Division of Oriental Languages:</i>	
Semitic.....	2
Indo-Iranian.....	1
	23

DEGREE OF MASTER OF ARTS, MAJOR SUBJECTS CLASSIFIED ACCORDING
TO DEPARTMENTS, 1901-02

<i>Division of Philosophy and Psychology:</i>	
Philosophy.....	10
Psychology.....	1
Anthropology.....	0
Department of Education.....	41
<i>Division of English and Literature:</i>	
English.....	17
Comparative Literature.....	8
<i>Division of Classical Philology:</i>	
Greek.....	3
Latin.....	6
<i>Division of Modern European Languages:</i>	
Germanic.....	3
Romance.....	1
<i>Division of Oriental Languages:</i>	
Semitic.....	0
Indo-Iranian.....	0
Comparative Philology.....	0
	90

DEGREE OF MASTER OF ARTS, MINOR SUBJECTS CLASSIFIED ACCORDING
TO DEPARTMENTS, 1901-02

<i>Division of Philosophy and Psychology:</i>	
Philosophy.....	9
Psychology.....	13
Anthropology.....	0
Department of Education.....	54
<i>Division of English and Literature:</i>	
English.....	27
Comparative Literature.....	7
<i>Division of Classical Philology:</i>	
Greek.....	7
Latin.....	13
<i>Division of Modern European Languages:</i>	
Germanic.....	8
Romance.....	4

Division of Oriental Languages:

Semitic.....	2
Indo-Iranian.....	2
Comparative Philology.....	0
	<hr/>

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To the many societies and clubs, associated with the several departments, which exist for the discussion of scientific subjects connected with the work of these departments, has been added during the past year a new one, the Classical Club, under the auspices of the Division of Classical Philology. The activity of these societies, such as the Deutscher Verein, the Romance Club, and others, cannot be too highly commended, as giving opportunity for that informal intercourse of instructors and students, and informal occupation with scientific subjects, which quicken and intensify the interest of both teachers and pupils in the highest degree. The management of such clubs is, as it should be, largely in the hands of the students.

Some changes have occurred during the year in the composition and arrangement of the Faculty. The arduous duties of the Presidency of the University made it impossible for Professor Butler to continue all the courses announced by him, but the Seminar in Education was carried on by him during the year, his other courses being divided among the instructors in the Department of Philosophy and Education. Professor Hyslop has been absent on leave, his work being carried on chiefly by Dr. Jones.

The Trustees, at their meeting of March, 1902, set off the work in education from that in philosophy, assigning it entirely to Teachers College, which thus becomes, for the Faculty of Philosophy, an elaborate Department of Education, its head being the Dean of Teachers College. This division had been tacitly assumed, for administrative purposes, throughout the greater part of the academic year. The Department of Anthropology was similarly set off from the Department of Psychology and reconstituted on an independent basis, and a new department formed, to be called Department of Philosophy and Psychology, with Professor Cattell as administrative head. At the request of the Faculty,

seats in the Faculty of Philosophy have been assigned to Professors F. T. Baker and Julius Sachs of Teachers College.

By action of the Trustees on May 5th the Department of Music was removed from the jurisdiction of this Faculty. The consequent withdrawal of Professor MacDowell from the Faculty is a matter of great regret to the members; but the interests of the Department of Music will undoubtedly be much better conserved by the new arrangements made for it. The creation of two new professorships in this Faculty, one in the Department of Semitic Languages and one in Social and Political Ethics, is a reinforcement on which the Faculty may well congratulate itself; and the election of Professor Prince and Dr. Adler to fill these chairs, and that of Professor Woodbridge to the chair of Philosophy, guarantees to the University the activity of thoroughly competent incumbents.

The Faculty legislation during the year has been confined to matters of administrative routine. The recommendations made by this Faculty to the University Council, on March 8, 1901, concerning the choice of subjects for the higher degrees, were adopted by the Council, in a somewhat modified form, at its meeting in November, 1901. It is now possible for a candidate, with the consent of the Dean and the Professor in charge of his major subject, to select both minor subjects within the same department, or to divide a minor subject, taking parts of two subjects germane to his major subject. During the past year two candidates have availed themselves of this privilege, taking both minors in English.

Two recent innovations of this Faculty have been put to a thorough test during the past year, and in both cases the wisdom of the change has been abundantly proved. The first is the rule which limits the admission to full candidacy for the Doctor's degree to those who can show a reading knowledge of French, German, and (except in certain departments) Latin. The second is the division of the Faculty, for the purpose of examining candidates for the Doctor's degree, into the three groups of (a) philosophy, psychology, and education, (b) ancient languages and literatures, and (c) modern European languages and literatures. Under this system, the attendance at the examinations has been much larger than

under the old, and the proceedings have been in every way more dignified and interesting. A further improvement has been the holding of these examinations in the Trustees' Room. As the oral tests last sometimes for more than two hours the gain in holding them in attractive and impressive surroundings is very great, both to candidates and examiners, and the opinion has been universally expressed that this, the most important of all examinations held by the University, has gained vastly in dignity by the change. The examination of one of the candidates, whose major subject was in Romance Languages, was honored by the presence of M. Alfred Croiset, Dean of the Faculty of Letters in the University of Paris, who not only showed great interest in the proceedings, but took part in them at the invitation of the Dean, and appended his name to the report of the examination.

As will be seen from the figures quoted above, a very large proportion of the candidates for the higher degrees (50 per cent. of the doctors, 45 per cent. of the masters) under this Faculty offered education as major subject. This is due largely to the relations of the Faculty with Teachers College, and to the regulation now in force by which a candidate for the "master's" or "doctor's diploma" of Teachers College may be also, without additional requirement of essay or dissertation, or of courses to be taken, a candidate for the master's or doctor's degree of Columbia University. This arrangement undoubtedly offers many advantages, particularly from the point of view of Teachers College, but it is obvious that very careful administration is necessary to uphold the full dignity of the University degree. The choice of the names "master's diploma" and "doctor's diploma" I cannot but think unfortunate, as likely to lead to confusion between the honor awarded by Teachers College and that bestowed by the University, because the term "diploma" is inseparably connected in the public mind with the possession of a degree. In many departments the theoretical instruction in the subject-matter given at Columbia is paralleled by instruction in the principles and practice of teaching that subject-matter given at Teachers College. Two corresponding courses of this kind, each given at one of these two parts

of the University, may be of equivalent grade, but are not necessarily so; nor does it follow that an essay accepted for the master's diploma would *ipso facto* be accepted for the master's degree. In every such case it would seem only proper that an essay or dissertation dealing with *instruction* in any given subject should be submitted also for the approval of the department of Columbia University which teaches that subject, and not merely for the approval of the corresponding department of Teachers College.

Respectfully submitted,

EDWARD DELAVAN PERRY,
Dean.

June 25, 1902.

Statement A

UNIVERSITY FELLOWS, 1901-1902

1. ALLAN PERLEY BALL . . . Latin
(Honorary Fellow.)
Amherst College, A.B., *magna cum laude*, 1892, and A.M., 1895; Student at the Collège de France, 1898-1899; Columbia University, Scholar in Latin, 1899-1900; Fellow in Latin, 1900-1901.
Title of dissertation: The Satire of Seneca on the Deification of Claudius, commonly called the *Apokolokyntosis*.
2. JOHN ERSKINE . . . Letters
(Proudfit Fellow.)
Columbia University, A.B., 1900; Proudfit Fellow in Letters, 1900-1901.
Topics for papers or reports: The Use of the Subjunctive and the Infinitive in the Early Entries in the Anglo-Saxon Chronicle; the Metre of *Ralph Roister Doister*; The Dramatic Element in Dryden's Satire; Dryden's Lyric Poetry; Pope's Moral Essays; John Gay; Thomas Otway; The Personal History of Molière's Characters, as Implied in the Structure of his Dramas.
3. FRANK ANDREWS FALL . . . Comparative Literature
(Annual Fellow.)
Albion College, A.B., 1899; Columbia University, Annual Fellow in Comparative Literature, 1900-1901.
Subjects of investigation: The Influence of Oriental Literature upon English Literature since the Organization of the East India Company; The Tradition of Chivalry in Mediæval and Modern Literature; Characteristics of Spanish Literature; The Genius of Calderon; The Council of Constance and its Effects—a study in primary sources; Dietrich von Niem's *Chronicle of the Great Schism*; The Literature of the Italian Renaissance; Spread of the Renaissance Influence through Europe.
Topics for papers or reports: English Books of Oriental Travel; Oriental Influence upon Beckford, D'Israeli, Southey, Byron, and Keats; Chivalry in Boiardo's *Orlando Innamorato* and Ariosto's *Orlando Furioso*; The Mediæval Idea of Love, and the Influence of Platonism upon it; The Cid Story and its Influence; The Don Juan Tradition and its Influence; The Mythological Plays and *Autos* of Calderon; Efforts of the Council of Constance toward Reform; Macchiavelli and the Doctrine of Virtù; Guillaume Budé and Étienne Dolet, Pioneer Humanists of France.

4. JAMES JOSEPH FINNIGAN . . . Romance Languages
Columbia University, A.B., 1900; Scholar in Romance Languages, 1900-1901.
Topics for papers or reports: Émile Augier; Alexandre Dumas, Fils.
Title of dissertation (probably): Phillippe Quinault (1635-1688).
5. JOHN SMITH HARRISON . . . Comparative Literature
Columbia University, A.B., 1899, and A.M., 1900; Scholar in Comparative Literature, 1900-1901.
Subject of investigation (for dissertation): Platonism in English Poetry.
Topics for reports or papers: The Platonism of Ficino.
6. WILLIAM HARRY HECK . . . English
(Honorary Fellow.)
Wake Forest College, A.B., 1897, and A.M., 1899; Columbia University, Graduate Student, 1899-1900; Fellow in English, 1900-1901.
Topics for reports or papers: Andrew Marvell; The Minor Satires of Butler; Variations of the Types of Pentameter Couplets Used from 1675 to 1725; Dryden's *Hind and Panther*; The Poems of Parnell; Hobbes's *Leviathan*.
7. WILLIAM JONES . . . Anthropology
Harvard University, A.B., 1900; Columbia University, A.M., 1901; President's University Scholar, 1900-1901.
Subject of investigation: The Ethnology and Linguistics of the Sauk and Fox Indians.
Topic for paper: Episodes in the Culture-Hero Myth of the Sauks and Foxes (*Journal of American Folk-Lore*, Vol. XIV, pp. 225-239).
8. JAMES FRANKLIN MESSENGER . . . Psychology
University of Kansas, A.B., 1895; University of New Mexico, A.M., 1900; Harvard University, Graduate Student, 1900-1901.
Subject of investigation for dissertation: An Experimental Study of the Perception of Number.
Topics for papers: The Perception of Number through the Sense of Touch (Monograph Supplement to *The Psychological Review*); Reports on the above-mentioned investigation; Various reports in philosophy, psychology, and education.
9. ANNINA PERIAM . . . German
(Annual Fellow.)
The Woman's College of Baltimore, A.B., 1898; Columbia University, A.M., 1901.

Subject of investigation: The Siegfried-saga in the *Nibelungenlied*.

Topics for papers or reports: Klinger's *Sturm und Drang* and *Die Zwillinge*.

10. HARVEY WATERMAN THAYER . . . German
Bowdoin College, A.B., 1895; Harvard University, A.B., 1896; Student at the University of Leipsic, 1898-1899.
Subject of investigation: The Siegfried-saga in the Elder Edda.
Topics for papers or reports: The Folksong in Relation to the "Storm and Stress Period" of the 18th Century.
11. SAMUEL MARION TUCKER . . . English
Wofford College, A.B., 1896; Columbia University, A.M., 1901.
Topics for papers or reports: The Prose Work of Butler; The Prologues of Dryden; The Verse-Satires of Swift; The Special Features of the Diction and Verse-form of *Hudibras*; The Bibliography of the American Satire.

SCHOOL OF PURE SCIENCE

REPORT OF THE DEAN

FOR THE ACADEMIC YEAR ENDING JUNE 30, 1902

*To the President of Columbia University
in the City of New York,*

SIR:

I have the honor to submit the tenth annual report on the work of the Faculty of Pure Science. This report refers to the academic year ending June 30, 1902.

The statistics of attendance in the School of Pure Science are summarized in the following statement. For details with respect to the School as a whole and with respect to the departments represented therein, reference is made to the report of the Registrar of the University. The figures given below apply solely to those students who pursued graduate work in the School. They show a decrease of about ten per cent. in the aggregate from the corresponding figures of the preceding year.

Number of students registered primarily under the Faculty of Pure Science:

Candidates for higher degrees.....	57
Students not candidates for degrees.....	4—61

Number of students registered primarily under other Faculties of the University:

Candidates for higher degrees from:

College of Physicians and Surgeons.....	19
Schools of Applied Science.....	9
School of Philosophy.....	5
Teachers College.....	7
Barnard College.....	1—41

The total number of students receiving instruction or pursuing research in the School during the year was, therefore, 102. This number is less by ten than the number in the School during the previous year, the primary registration being two less and the registration through other schools being eight less than last year.

The degree of Doctor of Philosophy was conferred on eleven candidates, and the degree of Master of Arts was conferred on fifteen candidates during the year. The **Summary of Degrees Awarded** records of these candidates and the titles of their dissertations and essays will be found in the report of the Registrar.

The average number of years, for these candidates, elapsing between the time of attainment of the first degree and the time of attainment of the higher degree is 5.9 for the Doctors and 3.3 for the Masters; the shortest and longest intervals being respectively 3 and 12 for the former and 1 and 10 for the latter.

With this decennial report it appears fitting to present the following brief table showing the number of degrees conferred upon candidates on recommendation of the Faculty for each of the years since its organization.

TABLE SHOWING NUMBER OF DEGREES CONFERRED

Degree	1893	1894	1895	1896	1897	1898	1899	1900	1901	1902	Totals
A.M.....	2	7	4	14	10	27	19	24	25	15	147
Ph.D.....	3	3	6	3	4	8	14	9	8	11	69

The "John Tyndall Fellowship for the Encouragement of Research in Physics," which is awarded on recommendation of the head of the Department of Physics, was held during the year by Bergen Davis, Ph.D., Columbia University, 1901, and this fellowship was re-awarded to him for the ensuing year. Dr. Davis is pursuing advanced work in experimental physics at the University of Göttingen. An account in abstract of an important investigation on "The Motion of Ions in a Varying Magnetic Field," in which he is engaged, is pub-

lished in *Science*, N. S., Vol. XV, No. 387. It is of interest to note that in this research Dr. Davis has been able to apply the extremely delicate methods which he perfected in his studies of vibrating gases in the Department of Physics at Columbia.

The "Barnard Fellowship for Encouraging Scientific Research," which is awarded by joint action of the Faculties of the College, the Schools of Applied Science, and the School of Pure Science, has been held during the year by John Alexander Mathews, Ph.D., Columbia University, 1898; and this honor was again conferred upon him for the ensuing year. He has continued his researches in metallurgy at Columbia under the general direction of Professor Henry M. Howe. Dr. Mathews has held also during the year the Carnegie Research Scholarship of the Iron and Steel Institute of Great Britain; and his metallurgical investigations published during the year have won for him from that Institute a gold medal, which was awarded in May, 1902.

Five candidates for the higher degrees held University Fellowships in the School during the year. Of these, William Austin Cannon, in Botany, has pursued extended **Work of** researches in hybridization, completing work for **University** the doctorate at the end of the year, the title of **Fellows** his dissertation being "Studies in plant hybrids." Austin Flint Rogers, Fellow in Mineralogy, has likewise completed work for the doctorate. He has made a special study of crystallography, culminating in a series of papers entitled "Crystallographic studies" for his dissertation. His abilities in this and other lines of work have led to his appointment to the position of Tutor in Mineralogy in the University for the coming year. Mr. Walter Stanborough Sutton, Fellow in Zoölogy, has completed an extended and successful investigation on the early history of the germ-cells in the Orthoptera, yielding results having an important bearing on problems in cellular biology, such as the determination of sex and the mechanics of cell-division. Mr. Satoru Tetsu Tamura, who, as a first alternate, became Fellow in Mechanics, in addition to the courses he has pursued in Mechanics, Physics, and Chemistry, has given special attention to the theory of errors

and the mathematico-physical theories of meteorology. He has presented a seminar paper in each of the latter subjects during the year. Mr. Charles Partridge Weston, Fellow in Mechanics, has made a detailed investigation of the principal division errors of the White Bronze Meter of the Department of Mechanics. This work, involving many thousand observations with a cathetometer of precision and extensive calculations in application of the theory of adjustments, was made the subject of an essay for the Master's degree. Mr. Weston's efficiency in Astronomy and Geodesy, pursued as a minor subject, has led the Department of Astronomy to secure his aid in the work of the Summer School of Astronomy and Geodesy.

Work of University Scholars There were eleven University Scholars in the School during the year, namely:

NORRIS CALEB BAILEY, B.S.,	<i>Mathematics,</i>
ARTHUR HORACE BLANCHARD, C.E.,	<i>Mechanics,</i>
CHARLES BROOKOVER, A.B., M.S.,	<i>Zoölogy,</i>
CLAUDE RUSSELL FOUNTAIN, A.B.,	<i>Mathematics,</i>
FRANK ALBEE GIFFIN, A.B., A.M.,	<i>Mathematical Physics,</i>
EDWARD CLARK HOOD, A.B.,	<i>Zoölogy,</i>
DOUGLAS W. JOHNSON, B.S.,	<i>Geology,</i>
CHARLES WILLIAM STODDART, A.B.,	<i>Chemistry,</i>
JULIA CATHERINE STIMSON, A.B.,	<i>Zoölogy,</i>
LEWIS ADDISON YOUTZ, Ph.B., Ph.M.,	<i>Chemistry,</i>
CHARLES ZELENY, B.S., M.S.,	<i>Zoölogy.</i>

Of these, Messrs. Bailey and Blanchard completed the requirements for the Master's degree, and Mr. Youtz, who was a student at the University during the previous year, completed the requirements for the doctorate. Mr. Brookover, in addition to his course work, has been engaged in a research on the circulatory system of *Chlamydoselachus*. Mr. Fountain made noteworthy progress in his studies, and by reason of the recommendations of the Department of Mathematics he was awarded a Scholarship for the ensuing year, which he declined in order to accept an appointment as Assistant in Physics in the University. Mr. Giffin, with the approval of the departments concerned and the Faculty, changed his major subject from Mathematics to Mathematical

Physics and took up the study of the retarding effect of water on metallic spheres falling through it. The experimental part of this research, which furnishes for the first time data of a high order of precision, was completed at the end of the year. These data and their discussion and interpretation will be presented by Mr. Giffin in a doctorate dissertation. The work of Mr. Hood was confined chiefly to the requirements of the lecture and laboratory courses of his major and minor subjects. Mr. Johnson served as an efficient assistant to Professor Kemp in field work for the U. S. Geological Survey in the Adirondack region during the summer of 1901. He was granted a leave from the University May 1, 1902, in order to pursue independent geological investigations in the field, in New Mexico. His zeal and abilities led to his appointment to a University Fellowship for the ensuing year. Mr. Stoddart, in addition to his prescribed work, prepared a paper read before the Columbia University Chemical Society, Dec. 9, 1901. The work of Miss Stimson was confined to the pursuit of the laboratory and lecture courses of her selection. Mr. Zeleny completed and published the results of an investigation on "A case of compensatory regulation in the regeneration of annelids." His progress in this and other researches has led to his appointment to the John D. Jones Scholarship of the Wawepex Society for the present summer.

For a nearly complete record of the publications of the members of each departmental staff for this academic year, reference is made here to the *University Quarterly* for September, 1902. It may suffice, therefore, in this connection, to remark that these publications embrace, in addition to numerous addresses, reviews, and briefer investigations, several volumes and memoirs of original contributions to science. Of investigations nearing completion or in progress, as shown by departmental reports to the Dean, it would be impracticable to give an adequate summary here, since no one may pretend to a competent knowledge of the twelve different branches of science represented in the School of Pure Science. It may be said, however, that this work, which must be regarded as the

most important as well as the most arduous work of a graduate school, has been carried on to the full extent of the time and facilities available to the departments.

The Department of Botany reports important accessions of photographs illustrating special phases of plant growth and plant ecology, and a large collection of material, preserved mainly in formalin, illustrating the stages of development in a series of typical plants. These additions have been secured chiefly through the labors of Dr. C. C. Curtis, of the departmental staff. The equipment of the Department of Physics has been increased by several pieces of apparatus constructed by the members of the departmental staff. The Department of Zoölogy likewise reports enlarged collections of microscopical and embryological preparations, and valuable additions of illustrative material collected by Professor Bashford Dean in Japan and in the Philippines.

Since special reports on departmental needs have been submitted recently, it is unnecessary to enlarge on them here. It is sufficient to state that they are in some cases already urgent and in all cases worthy of careful consideration in the progressive interests of the School.

In addition to the many semi-popular addresses and lectures given by members of the Faculty before scientific and academic bodies during the year, it seems proper to note especially the lecture on "The Cause of an Ice Age," given by Sir Robert Ball, January 10, 1902, and the remarkable series of lectures given during March, 1902, by Professor Jacques Loeb on "The Dynamics of Living Matter." This series will be published in book form shortly as one of the Columbia University Biological Series.

On the occasion of the recent visit of Lord and Lady Kelvin to this city, the scientific societies of America united to tender them a reception, which was held in the gymnasium of the University April 21, 1902. As the late Barré de Saint-Venant was called by common consent "The Dean of Elasticians," so we may fitly call Kelvin "The Dean of Physicists," for he has been a

leader in all branches of physical science for more than a half-century. It was a source of pleasure, therefore, to the members of the academic staff, and especially to those of us devoted to the mathematico-physical sciences, to unite in this spontaneous tribute of regard for the admirable life and labors of this eminent man of science.

In response to a recommendation of the Faculty, voted at its meeting of April 25, 1902, the Trustees at their meeting of June 2, 1902, assigned Professors John F. Woodhull, Richard E. Dodge, Francis E. Lloyd, and David Eugene Smith, of the Faculty of Teachers College, to seats in the Faculty of Pure Science. **Assignments to the Faculty**

Very respectfully submitted,

R. S. WOODWARD,

Dean.

BARNARD COLLEGE

REPORT OF THE DEAN

FOR THE ACADEMIC YEAR ENDING JUNE 30, 1902

*To the President of Columbia University
in the City of New York,*

SIR:

The academic year 1901-1902 in Barnard College has shown an increase of 47 students over the registration of the previous year. Of this increase 46 students were in the regular classes, where growth is most desirable. Although the scholarship of special students is even more strictly safeguarded than that of regular students, still any irregularity in course must detract from the chief benefit of a college,—its power to inculcate a broad general culture. It is, therefore, fully in accord with the ideal of the administration that there should be 14 fewer students in special courses; this decrease is more than made good by an increase of 16 students in the list of candidates for a higher degree at Columbia University pursuing minor subjects at Barnard College.

The Freshman class consists of 98 students, of whom 69 were admitted on examination, 8 in full on Regents' Academic Diplomas, 9 on a combination of examination and certificate, and 4 by transfer from other colleges. Of these students 57 were admitted under one or more conditions, 37 have already removed all entrance conditions by the quality of their scholarship in Freshman courses, 24 have examinations yet to take before promotion, and 3 have been dropped from the roll of the class.

By transfer from other colleges 28 students have been added to the registration list, 5 of whom were admitted to the

Senior class, 2 to the Junior, 5 to the Sophomore, and 4 to the Freshman class, and 12 as special students. Two students were admitted by examination to advanced standing, one to the Junior and one to the Sophomore class. The general registration figures will show in comparison with the statistics of the preceding year that the geographical distribution of students has varied little from that of last year. Until we can erect a permanent dormitory to take the place of Fiske Hall, which will hereafter be required for academic purposes, we shall expect a slight decrease of patronage from a distance. The effect of this upon college life will be most detrimental, as a wider horizon is given every student by the diversity of experience possessed by her associates. We must develop a dormitory system, and draw students from a distance in order to make impossible that most unlovely form of provincialism,—the provincialism of a great city.

The College has lost 21 students during the year: 1 transferred to another college; 18 withdrew for family reasons, and 1 was dropped from the roll of the College for unsatisfactory scholarship. The Junior class lost by sudden death one of its especially beloved members, Jessie Kaufmann. By her will she left her library to the College. Her parents have established a permanent memorial to her in founding a competitive scholarship, to be awarded upon the merits of the entrance examinations to a student who has no relative able to help her financially. This scholarship will be held for the entire course unless forfeited under the general rules of the College.

The amount of the Fiske Graduate Scholarship has been placed at the disposal of the Dean for the aid of needy students. This change was made by the Trustees, **Scholar-** with the approval of the donor, because of the re- **ships** removal of women graduate students from the jurisdiction of Barnard College under the new contract between the University and the College. For several years the Committee of the Trustees on Scholarships have assumed the responsibility of soliciting the \$1800 required annually to provide for twelve Student Scholarships. This has necessitated great effort on their part, and grows more onerous each year. The Committee has therefore started a Scholarship Endowment Fund,

by which it hopes soon to place the provision for these scholarships upon a secure financial basis, and to render the annual solicitation of gifts for this purpose unnecessary.

This movement toward the endowing of scholarships is quite in line with the general purpose of the Trustees to make **Endow-** the proper endowment of all departments of the **ment** College their next work,—knowing, as they do, that the College cannot rely much longer upon the generous annual gifts which the early friends of the enterprise have had the public spirit and local pride to give. A small beginning toward a general endowment had already been made when Mr. John D. Rockefeller's offer to duplicate all gifts which the friends of the College would make before a given date, up to the limit of \$250,000, gave fresh incentive to the effort. By the tireless devotion of the Treasurer, Mr. Geo. A. Plimpton, the desired sum was raised. Although it does not show in many new courses or in widely extended equipment, it gives security to the financial management of the College, and helps largely towards an assured endowment fund.

A wholesome expansion has been shown in the courses of study. In many departments the normal annual growth has **New** been provided for either by modifications of exist- **Courses** ing courses, or by entirely new ones. The Department of Economics has had its Faculty quite fundamentally reorganized, and a corresponding rearrangement of courses has followed. The new course in Economic Readings will give an opportunity for critical study of the social teachings of Carlyle, J. S. Mill, Kingsley, Ruskin, and T. H. Green, and also of the recent development of economics in England; an opportunity which will be eagerly improved by the many students who look forward to lives of active interest in settlement and philanthropic work. The field study of family groups has been greatly extended and dignified into a separate course, Sociology 16, which offers opportunity for the direct study of our local institutions for social betterment in New York City.

In no department has more needed extension of courses been made than in that of biology. Through the generosity of friends of the College, a physiological laboratory has been

equipped, and a thorough course in physiology is for the first time opened to the students. This will provide most satisfactorily for the scientific instruction in the subject; but Barnard College will be far from meeting its full privilege towards its students until it can furnish the allied courses in practical hygiene and in physical training. A certain responsibility for the health of our students is little felt because of their residence in their own homes. But a year of careful observation has convinced me that students in a country college can never need systematic physical development so much as these city girls who spend so much time in the cars with no exercise and little pure air.

When this physical need is met, the next in importance is in the Department of Art. To-day no woman can claim a well-rounded general culture unless she knows the his- **Courses**
 tory and principles of art criticism, and it is greatly **Needed**
 hoped that this department, especially essential for cultured women, may be established in the near future. It also seems advisable to provide for the history of philosophy and for anthropology in such a manner that they may be open to qualified Juniors, and thus make a much fuller course in philosophy available for such students as show peculiar aptitude for that subject.

Mingled with genuine and deep regret at the loss of our dormitory life for the coming year, there exists a pleasure at the added facilities which the Fiske Hall of Science **Fiske Hall**
 will furnish. New and larger laboratories in gen- **of**
 eral and organic chemistry, new physical laborato- **Science**
 ries, adequate lecture-, office-, and supply-rooms,—all indicate the new departmental enthusiasm with which the increasing numbers of students will be cared for. The rearrangement of rooms gives us also four large lecture-rooms of seating capacity equal to that of the Theatre—that is, sufficient for the largest classes. This means that history courses will now have proper provision for maps, English courses for blackboards, and that the Theatre may be reserved for its legitimate uses. The evils of overcrowding which have embarrassed us during the past year are happily at an end for the present.

The year which has just closed has shown most satisfactory

conditions of scholarship and of public sentiment in the student body. The needs which we see before us are those produced by gratifying development. We trust that our many proved friends, and new friends not yet known, may feel it an opportunity to serve their own community by meeting these needs. Their urgency would seem to be in the order in which they are mentioned: (1) land in the immediate vicinity of our present buildings, before it increases further in value; (2) a dormitory to give a nucleus for college social life; (3) a students' building for the physical needs of over four hundred students who spend about five hours a day on the college grounds; (4) general endowment to assure the already incurred annual budget; (5) special endowments to provide new facilities in physical training, history of art, biblical literature, archæology, and philosophy.

With pleasure in reporting to you such satisfactory progress during the year, I remain, Mr. President,

Very respectfully yours,

LAURA DRAKE GILL,

Dean of Barnard College.

Schedule II.

Brought forward..... \$111,953 98

GIFTS FOR PERMANENT PURPOSES:

Eliza Taylor Chisholm Memorial
Scholarship..... \$3,000 00

Scholarship Fund:

Miss Slade.....	\$3,000	
Mr. Bowles Colgate.....	1,000	
Mrs. H. M. Sanders.....	1,000	
Mrs. Wm. Moir.....	1,000	
Miss M. Billings.....	500	
Miss E. Billings.....	500	
Mrs. Seth Low.....	250	
Mrs. H. Parsons.....	100	
Mrs. Woodhouse.....	100	
Mrs. Dorman.....	100	
Mrs. Murray.....	100	
Mr. Wm. Colgate.....	100	
Mrs. Todd.....	50	
Miss Brown.....	30	
Mrs. Wann.....	25	
Subscribers.....	20	
		7,875 00

Endowment Fund:

Mr. J. D. Rockefeller.....	189,300 00	
Anonymous, through President Butler.....	50,000 00	
Anonymous.....	30,000 00	
Mrs. M. F. Collard.....	12,000 00	
Mr. William Ziegler.....	10,000 00	
Mr. Jacob H. Schiff.....	10,000 00	
Anonymous.....	5,000 00	
Mrs. Jabez Bostwick.....	5,000 00	
Mr. Frederic B. Jennings.....	5,000 00	
Mr. Isaac Guggenheim.....	5,000 00	
Mr. John D. Archbold.....	5,000 00	
Miss M. W. Bruce.....	5,000 00	
Mr. J. Henry Smith.....	5,000 00	
Mr. William K. Vanderbilt.....	5,000 00	
Mr. Felix Warburg.....	2,500 00	
Mr. Mortimer L. Schiff.....	2,500 00	
Mrs. Seth Low.....	2,000 00	
Miss Mabel Slade.....	2,000 00	
Mr. Henry Phipps.....	1,500 00	
	\$362,675 00	\$111,953 98
Carried forward.....		

Brought forward.....	\$362,675 00	\$111,953 98
Mr. G. S. Bowdoin.....	1,000 00	
Mr. Seth Milliken.....	1,000 00	
Mrs. William H. Osborn.....	1,000 00	
Mr. James Loeb.....	1,000 00	
Mr. Hicks Arnold.....	1,000 00	
Mr. Edward W. Sheldon.....	1,000 00	
Mr. William A. Read.....	1,000 00	
Mr. S. R. Guggenheim.....	1,000 00	
Mrs. A. E. Wood.....	1,000 00	
Mr. William C. Whitney.....	1,000 00	
Mr. William C. Schermerhorn.....	1,000 00	
Miss S. Rhineland.....	1,000 00	
Mr. J. T. Terry.....	1,000 00	
Mr. H. P. Wertheim.....	1,000 00	
Mr. L. A. Heinsheimer.....	1,000 00	
Mr. James Talcott.....	1,000 00	
Mr. William Salomon.....	1,000 00	
Miss Caroline P. Stokes.....	1,000 00	
Miss Olivia E. P. Stokes.....	1,000 00	
Mr. Franklin B. Lord.....	1,000 00	
Mr. Abram S. Hewitt.....	1,000 00	
Mr. Louis C. Tiffany.....	1,000 00	
Mr. James Eastman.....	1,000 00	
Mrs. Frederick F. Thompson.....	1,000 00	
Mr. James Stillman.....	1,000 00	
Mr. S. D. Babcock.....	1,000 00	
Mrs. Charles B. Alexander.....	1,000 00	
Mr. A. R. Flower.....	500 00	
Mr. J. L. Riker.....	500 00	
Mrs. M. J. Plant.....	500 00	
Mr. Francis Lynde Stetson.....	500 00	
Mr. Kalman Haas.....	500 00	
Mrs. R. T. Auchmuty.....	500 00	
Mr. H. H. Benedict.....	500 00	
Mr. E. Thalman.....	500 00	
Mrs. J. C. Hoagland.....	500 00	
Mr. S. Guggenheim.....	500 00	
Mrs. Adrian H. Joline.....	250 00	
Mr. James G. Wentz.....	250 00	
Mr. Philip Lehman.....	250 00	
Mr. Edward Wassermann.....	250 00	
Mrs. Julius Beer.....	250 00	
Anonymous.....	200 00	
Mrs. Melvil Egleston.....	200 00	
Carried forward.....	\$396,325 00	\$111,953 98

Brought forward.....	\$396,325 00	\$111,953 98
Mr. John F. Dillon.....	200 00	
Mrs. S. V. Harkness.....	100 00	
Mrs. N. E. Baylies.....	100 00	
Mr. F. S. Flower.....	100 00	
Mrs. D. H. McAlpin.....	100 00	
Brooklyn Barnard Club.....	100 00	
Mrs. O. B. Potter.....	25 00	
	<hr/>	397,050 00
Total receipts for the year.....		<hr/> \$509,003 98

BARNARD COLLEGE

1901-1902

DISBURSEMENTS

GENERAL PURPOSES:

Business Administration.....	\$1,900 00	
Educational Administration.....	69,944 01	
Care of Buildings and Grounds.....	10,884 75	
	<hr/>	\$82,728 76

ELLA WEED LIBRARY:

Salaries.....	400 00	
Purchase of books, repairs, and incidentals.....	350 62	
	<hr/>	750 62

AID TO STUDENTS:

Scholarships:

Students' Scholarships.....	1,950 00	
Lucile Pulitzer Scholarship.....	150 00	
Jennie B. Clarkson Scholarship....	150 00	
Ella Weed Scholarship.....	150 00	
Brearley School Scholarship.....	150 00	
Emily James Smith Scholarship....	150 00	
Anna E. Barnard Scholarship.....	150 00	
E. T. Chisholm Memorial Scholarship.....	150 00	
Peebles and Thompson's School Scholarship.....	150 00	
The Graham School Scholarship....	150 00	
Trustees Competitive Entrance Scholarship.....	150 00	
Veltin School Alumnae Scholarship..	150 00	
Mrs. Donald McLean Scholarship...	150 00	
	<hr/>	3,750 00

Fellowship:

Hartley House Fellowship.....		300 00
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Prizes:

Kohn Mathematical Prize.....	50 00	
Herrman Botanical Prize.....	50 00	
Balance of income from L. Pulitzer Scholarship.....	270 00	
	<hr/>	370 00

SCIENTIFIC DEPARTMENTS:

Department of Botany.....	600 28	
Department of Chemistry.....	852 92	
Department of Physics.....	478 59	
Department of Zoölogy.....	698 73	
	<hr/>	2,630 52

FEES RETURNED TO STUDENTS.....

512 19

Carried forward.....		<hr/>	\$91,042 09
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Brought forward.....		\$91,042 09
UNDERGRADUATE INSTRUCTION AT:		
Columbia University.....	\$2,576 00	
Teachers College.....	1,364 00	
	<hr/>	3,940 00
FISKE HALL:		
Salaries and wages.....	6,915 51	
Food.....	102,42 14	
Heat and light.....	2,994 18	
Contingent expenses.....	1,801 79	
Summer Session, 1901.....	2,528 86	
	<hr/>	24,482 48
MISCELLANEOUS:		
Loans paid.....	38,500 00	
Equipment of Zoölogical Laboratory..	1,511 35	
Interest charges.....	857 22	
Fiske Hall: Alterations.....	210 92	
American School for Classical Studies at Rome.....	100 00	
	<hr/>	41,179 49
INVESTMENTS:		
Eliza Taylor Chisholm Memorial Scholarship.....	2,760 00	
Endowment Fund.....	298,262 22	
	<hr/>	301,022 22
Total expenditures.....		\$461,666 28
Difference brought forward between overdraft.... 9,269 02 and cash on hand, July 1, 1901..... 183 87		
	<hr/>	9,085 15
Cash on hand, July 1, 1902: Fund to cover deficiency.....	38,252 55	
	<hr/>	47,337 70
		\$509,003 98

TEACHERS COLLEGE

REPORT OF THE DEAN

FOR THE ACADEMIC YEAR ENDING JUNE 30, 1902

*To the President of Columbia University
in the City of New York,*

SIR:

I have the honor to submit the following report of the work of Teachers College for the academic year, 1901-02.*

The total enrollment for the year has been 2451 persons, of whom 709 were students in College, 900 were extension students, and 842 were pupils in the Horace Mann and Speyer Schools. These numbers are an increase over last year of 20% in college students, 32.6% in extension students, and 20% in school pupils. Of the College students, 222 were college graduates, 77 had had a partial college course, and 191 were normal school graduates before entering Teachers College. The graduates of secondary schools who entered the professional courses because of having had special technical training or experience in teaching, numbered 165.

These facts exhibit strikingly the recent growth of the College. Five years ago only 30 students were college graduates and only one of these was a regular student pursuing a course leading to a diploma. During the same period the number of students with previous normal training has grown from 6 to 191, while the number of students admitted to special

* The reports of the Superintendent of Schools and of the Librarian, the Registrar, and the Treasurer are printed separately, and may be had on application to the Secretary of Teachers College.

courses because of irregular preparation has fallen from 61 to 52.

The following table shows the attendance during the past five years:

Table Showing Registration from 1897 to 1902

	1897-98	1898-99	1899-00	1900-01	1901-02
Resident Students...					
Regular Students..	72	213	347	419	535
Special and Irregular Students....	97	122	107	174	174
Teachers College Schools.....	395	534	626	702	842
Horace Mann Schools.....	395	534	567	639	752
Speyer School.....			59	63	90
Extension Students .	299	1173	750	679	900
Total.....	863	2042	1830	1974	2451

The total class registration in regular College courses has been 2833, as against 2542 in the previous year. There were **Class Reg-** offered during the year under review 40 courses in **istration** Education which were attended by 1276 students and 72 courses in other departments attended by 1626 students. Moreover, 58 courses in Columbia University and 42 courses in Barnard College were attended by 126 and 81 Teachers College students, respectively. Approximately 45 per cent. of the total class registration were in the courses in Education, 32 per cent. being in the general courses in the history and philosophy of Education, educational psychology and the theory and practice of teaching. Two courses in biology, two in English, three in French and German, two in history, one in mathematics, and two in physics and chemistry, were closely allied to similar courses given in other departments of the University, but only those in French

and German were strictly parallel. The remaining academic courses, sixty in all, have no parallel in any other University department. Less than three per cent. of the work, therefore, can be said to duplicate work done elsewhere in the University; and the excuse for giving these courses is that in each one a sufficient number registered to form a complete section, thereby making it both more convenient and more economical to give the instruction in Teachers College.

So rapid has been the growth in the general education courses that it has been deemed advisable for administrative purposes to break up the division of education into five departments—the history and philosophy of education, educational administration, educational psychology, elementary education, and secondary education. A new professorship has been established in secondary education, and an additional instructor or assistant has been appointed to each of the other departments.

There is no need to speak in this connection of Dr. Julius Sachs, the new professor of secondary education. His eminent services to secondary education, both as a teacher and adviser, are well known and fully appreciated the country over. He offers three courses for the ensuing year: (1) A general course in the theory and practice of secondary education at home and abroad; (2) a course of investigation of secondary-school curricula; and (3) a seminar for graduate students.

The most significant legislation of the year has been the revision of the courses of instruction and the regulations for graduate work. For some time it has been felt that the two distinct types of students in Teachers College—college graduates and normal-school graduates—could not do their best work in the same classes. The normal students have a lower academic standing, but from their training and practical experience they are stronger in all their professional work. The college graduates, on the other hand, are capable of pursuing exhaustive investigations, but frequently break down in the practical work of teaching and school management. The Faculty has resolved, therefore, to offer in each department a series of carefully graded courses extending over three, four, or five years. At

least one course in each department is introductory to all others in that group and must be completed before the student will be admitted to the more advanced and more specialized work. Thus, certain courses are open only to juniors and seniors, others to seniors and graduates, and still others to graduates only. The graduate courses are of two kinds: practica and seminars. A practicum is a course intended for investigation within a limited field. It aims to extend the general knowledge of the subject, already acquired by the student in an introductory course, by means of lectures, collateral reading, experimentation, and discussion, to familiarize him with what others have done or are doing in the field, and through the preparation of a report or essay to acquaint him with approved methods of critical investigation. Every candidate for a Master's degree or diploma is required to take at least one, and every candidate for a Doctor's diploma or degree at least two, of these courses. Candidates for the Doctor's diploma or degree are also required to take without credit at least one seminar, and in connection therewith to prepare a dissertation which shall give evidence of original investigation and research. A seminar presupposes a practicum, and a practicum presupposes one or more introductory courses in the same department. Students desiring to take an advanced course must first satisfy the requirements of the prerequisite courses by examination or by giving evidence of the completion of substantially equivalent courses elsewhere. With the approval of the Committee on Graduate Students, an instructor may permit a student who is deficient in a prerequisite course to pursue that course parallel with the more advanced course.

The changes in the courses of instruction, above mentioned, led naturally to a revision of the courses of study—especially those courses specially intended for graduate students. The standard for admission as a graduate student was fixed at the completion of an undergraduate professional course in Teachers College or an equivalent collegiate and professional education obtained elsewhere in an approved institution of learning. The result is that students of similar training and ability are treated alike. The fact of college

graduation in academic courses only does not confer the privilege of graduate rank in Teachers College, any more than in a school of medicine or law.

The practical difficulties of administering any other plan are obvious. For example, Teachers College has for several years granted a "secondary diploma" to all students **New** completing the course prescribed for teachers in **Diplomas** secondary schools. The academic requirement for admission was a baccalaureate degree and three years of specialization in the subject which the candidate intended to teach, but by an agreement with Columbia and Barnard Colleges their seniors might enter the course. The result was that in any one class might be found seniors with no experience in teaching, graduates with mature scholarship but inexperienced as teachers, and graduates who were both able scholars and fine teachers. It need not be said that it was found to be extremely difficult, not to say impossible, to keep such a class together and do satisfactory work. Hence, following the revision of the courses of instruction, it was resolved to designate all diplomas granted for undergraduate work Bachelor's diplomas, meaning thereby the completion of a course four years in advance of the high school. The next step was to provide, in lieu of the old "secondary" and "higher" diplomas, a Master's diploma and a Doctor's diploma, signifying the completion of a graduate course of at least one and two years, respectively. The advantage of this nomenclature is that its significance is at once apparent to any one familiar with university terminology. Moreover, the scheme provides for really graduate work in every department and makes the arrangement and gradation of courses of instruction of practical account.

The statistics of the past year show very positive growth in the graduate courses and in the professional courses of the junior and senior years. In view of increasing **Collegiate** demands in all departments, it is an open question **Course** whether the collegiate course of the freshman and sophomore years should longer be maintained. The course was introduced in 1893 in order to prepare students more effectively for the professional studies of the junior and senior years.

In 1898, by a regulation requiring candidates for the secondary diploma to present a baccalaureate degree for admission, or in lieu thereof to take the prescribed course leading to the degree of Bachelor of Arts in Columbia College or Barnard College, all students who intended to fit themselves for teaching in secondary schools were ruled out of the collegiate course in Teachers College. This regulation made the course introductory only to the professional courses which lead to diplomas in kindergarten and elementary teaching and in teaching the special subjects of domestic art, domestic science, fine arts, and manual training. Experience shows that some such provision is necessary to encourage college students to enter upon teaching in the elementary schools. Every inducement has been made to students of Columbia and Barnard Colleges to take up courses in Teachers College other than those leading to secondary teaching, but without success. During the past five years 168 students of Barnard College have been enrolled in Teachers College; 79 of them have been candidates for the secondary diploma, but not one has undertaken any other course. This, too, in face of the well-known difficulty in securing positions in secondary schools and of the extraordinary demand for work in elementary schools and for teachers of technical subjects. The reasons are not far to seek. It is to be expected, in the first place, that students who have spent from eight to ten or twelve years in preparatory school and college will be inclined to continue in an academic atmosphere. They are not inclined to teach young children or to take up work in technical subjects with which they have had no acquaintance. In the second place, the degree of specialization which is encouraged, if not actually demanded, in our modern colleges, makes it difficult for the college graduate to fit himself for teaching in any other than secondary schools. The elementary teacher must be prepared in English, history, civics, mathematics, physics, chemistry, botany, zoölogy, physiology, geography, drawing, music, and (in the lower grades, at least) manual training through work with wood, iron, clay, and textiles. From this array of subjects, not to mention the theory and practice of teaching, educational psychology, school law,

and the history and principles of education on which candidates for elementary positions are invariably examined before certification by our leading city school authorities, it is apparent that the average college graduate is poorly equipped for such work. Not all of these subjects are customarily taught in the American college, and when they are, such subjects as music and drawing are rarely presented in such a way as to make them of value to the elementary teacher. Moreover, the regular subjects of the college curriculum are so specialized that a student may find it necessary to spend two or three years in a single department in order to cover the field even in a general way. In the subject of history, for example, the elementary teacher should know something of the history of Greece and Rome, of mediæval Europe, and of modern England and America. To do this in any satisfactory manner, the Columbia or Barnard student should take courses amounting to at least twelve hours. In like manner, the college student who would fit himself for nature study in elementary schools must take five or six science subjects in his college course. This requirement alone means twenty to twenty-four credits in science out of a total of sixty credits in the entire college course. And if to this be added the credits required in foreign languages, higher mathematics, philosophy, and political economy, and other subjects which are properly considered desirable electives, it will be seen that it is practically impossible to combine a liberal college course and a professional course designed to fit teachers for elementary schools.

The theoretical solution of the problem obviously is the addition of a professional course to the college course, making in all a course of five or six years in length; but practically this is no solution at all. The economic conditions in the field of public elementary education do not warrant such a period of preparation. The only feasible plan is to shorten the college course, or omit it entirely. The latter plan is that adopted in normal schools throughout the country. It has its advantages, but its disadvantages are equally obvious. The collegiate course in Teachers College is an attempt to shorten the college course by omitting certain subjects alto-

gether and by giving other courses shorter or more comprehensive than are usually offered in college. Thus the intending elementary teacher may secure in two or three years a fairly liberal preparation in academic subjects and still be able after four years' work to meet the usual professional requirements.

From a purely academic standpoint such a course is not the equivalent of a four-year collegiate course, but it is the full equivalent of the present Columbia course when the senior year is devoted to law, medicine, or applied science. But it may be objected on the ground of the shorter and more comprehensive courses which make up the Teachers College curriculum that the liberal training is less intensive and therefore less valuable. The only answer to this charge is that for the work which Teachers College students must do, the broader academic training is worth more than the collegiate training so characteristic of the present day. Specialization has its place, but specialization should follow rather than accompany or precede the more liberal training. In our work, the specialization comes late in the course, and is largely confined to the department of education. In this way Teachers College combines academic and professional courses, both extensive and intensive, to make them worthy of the University degree of Bachelor of Science in Education.

Teachers College needs all its resources for the support of its professional and graduate work, and it would welcome any plan whereby a high-school graduate could secure two years of liberal training in Columbia College or Barnard College without being required to conform to the present regulations for the degree of Bachelor of Arts. Such a two-year course could doubtless be designed and administered in a manner that would make it of great service to all the professional schools of the University. But it is imperative that such a course be complete in itself and that the student, when he begins his professional work, pass over entirely to the jurisdiction of the professional school. The most serious drawback to the present arrangement whereby a senior may combine collegiate and professional study, at least so far as concerns

Teachers College, is that the student's interests are divided and his success correspondingly impaired. If professional study is worth doing at all, it is worth doing well.

In my last report I referred to the burden imposed upon my office by the correspondence relating to the appointment of teachers. During the present year the volume of this correspondence has greatly increased, but a very satisfactory plan has been devised for handling it. In October, 1901, the President designated as University Committee on Appointments to college positions in education and to positions in normal schools, secondary schools, elementary schools, and kindergartens, Dean Russell, chairman, and Professors Dutton, Kemp, McMurry, Smith, and Trent. The Committee organized early in the year and adopted a scheme of procedure which has greatly reduced the demands which have heretofore been made on the corps of instructors. According to this plan, no open letters are given to students, but instead the secretary of the Committee sends to any school officer who makes inquiry for teachers, or, on the request of candidates for particular positions, a complete set of confidential statements concerning the candidate's ability as estimated by his instructors. These communications are marked "confidential," and the request is made that they be returned to the sender—under no circumstances given to the candidate. In this way it is hoped that full justice will be done all candidates and that those seeking Columbia students for teaching positions will secure precisely the information they most need. The success of this first year's work of the Committee is largely due to its secretary, Miss I. L. Pratt, who has been untiring in her efforts to serve the interests of our students and at the same time to secure the confidence of local school authorities. She reports that during the twelve months ending September 15, 1902, she has received direct requests for 580 teachers, as against 320 during the previous year. The number of positions to which our students have been appointed or to which they have returned after leave of absence is 201, distributed as follows:

Colleges and Universities.....	14	
Normal Schools.....	11	
Superintendents of Schools.....	3	
Supervisors and Special Teachers.....	38	
Secondary Schools.....	91	
Elementary Schools.....	44	
Kindergartens.....	11	
Other Positions.....	14	
		— 226
Less Names Counted Twice.....		25
		— 201

From a comparison of the above figures it will be seen that the demand has far outrun the supply. Our graduating class this year numbered 148, a few of whom, for personal or family reasons, have not accepted appointments. Nevertheless, 190 appointments have been made, showing that many have left College before the completion of their course. The results of the year show that students who are thoroughly qualified have no difficulty in securing desirable positions, but as heretofore the most insistent demand is for teachers in normal schools, for supervisors and primary teachers, and for special teachers of domestic economy and manual training. During the past year there has been an unexpected call for teachers of mathematics and the natural sciences. In some of these departments the committee has had no one to recommend for four or five months, and that during the period when engagements are usually made.

The increasing demand for teachers of domestic economy in institutions of all grades, from rural schools to colleges, suggests the desirability of strengthening our departments of domestic art and domestic science. They are now fairly well equipped for the training of special teachers in these subjects, but we have almost no facilities for doing the advanced work which will soon be called for. We need the full time of an instructor for investigation in the chemistry of foods and stimulants, giving special attention to the changes that take place during cooking. Another important field is the production, manufacture, and adulteration of foods. There can be no domestic *science* until the arts of cooking and food-supply are ably supported by expert knowledge in the field of chemistry and economics. The subject, considered in all its bearings, is so important for the health

and moral well-being of society that I have no hesitation in presenting our problem to the consideration of philanthropic friends. Full justice to these departments requires a new building costing about \$300,000, and about \$10,000 annually for salaries, over and above our present expenditures. The best site for such a building is on 121st Street between the Macy Manual Arts Building and the Horace Mann School, a location peculiarly advantageous in that it would join the new Physical Education Building and make possible a close connection between departments which have as a common aim the promotion of pure and wholesome living.

The practical aspects of education are also apparent in the demand for nature study. Time was—and not so long ago—when the study of the natural sciences in the **Nature** lower schools was confined for the most part to a **Study** systematic treatment of plants and animals. So far as specimens were concerned, dead ones were as good as live ones, and a plaster model of more service than either. Of late, however, the stress has been put upon getting a first-hand knowledge of living objects. The processes of growth and development have been zealously followed, and pupils taken out of doors for study rather than to a museum or storehouse. Now some teachers are beginning to see that animals thrive best in a favorable environment, that plants spring up under particular conditions of soil, temperature, and moisture, and that the economic aspects of the subject are of equal importance with the scientific. In short, teachers are beginning to ask for agriculture as a part of a nature-study course. In the great farming districts of the south and west it is highly important that the teachers of natural science should have some familiarity with the science which so directly concerns the great majority of school-children. It serves as the best connecting link between what the pupils bring with them to school and what the teacher would have them carry away as a result of his instruction. Moreover, it is equally important that those who are to spend their lives in agricultural pursuits should have as teachers in their youth those who take an intelligent interest in agricultural problems. It rarely happens that what is treated with re-

spect in the school becomes an object of contempt out of school. My argument takes no account of the question whether agriculture should be taught in the schools or not. That problem will ultimately be solved to the satisfaction of those most interested. But I do say that nature study under a teacher who has no conception of the principles of agriculture and horticulture is only half fitted for his work. I should say the same of the teacher of mathematics who is ignorant of mensuration and mechanics, or of the teacher of literature who cannot himself write English. The ability to make a plant grow and to know why it grows are surely of as great significance from the educational point of view as to know what it is or how to classify it.

Some instruction in the application of the biological and physical sciences to agriculture and horticulture is, in my opinion, a necessary part of the course in nature study as given in Teachers College. A joint course by our present instructors would go far to remedy the defect, but there is need also of a special course in the principles and general practice of agriculture. Practical work in agriculture is impossible and probably, for our purpose, unnecessary during the academic year. But frequent excursions might easily be arranged, and during the summer vacation opportunity could doubtless be given for practical instruction on the farm. In the furtherance of some such plan we may expect the coöperation of the School of Practical Agriculture and Horticulture at Briarcliff Manor, and of its Director, Mr. George T. Powell, who has personally assured us of his share to bring his work into closer touch with ours. The initial expense for lectureship in agriculture and for the necessary excursions ought not to exceed \$1000.

The public school system of this country is justly a pride to all Americans, but we are apt to forget that the **Bible** foundations of our national life and character were laid **Study** under an educational system which bears little resemblance to that of the present day. The old education may have been defective in many ways, but it secured the active coöperation of home, church, and school to an extent now unknown. The religious element was predominant and

the English Bible was the book of life. Children were brought up to obey its precepts, to appreciate its charm, and to speak its language. And from the daily life the Bible permeated the literature and became a part of the records of the age. The controlling cause may have been an unreasoning devotion to a creed and a superstitious fear which are incompatible with our modern freedom of thought, but the fact remains that if we would understand our own history or literature we must know a good deal of the English Bible. That knowledge, it is only too certain, is not forthcoming under present conditions. One of the reasons for the failure is the lack of teachers who themselves know the Bible. We may deplore the wretched work of our Sunday-schools, but nothing better can be expected until better teachers are available.

The great majority of Teachers College students are earnest Christians, and many of them are active workers in Sunday-schools. They realize that a better knowledge of the Bible will not only improve their education but that it will also be of assistance to them in their future professional work. Hence when, two years ago, through the generosity of Mr. William E. Dodge, a short course of Bible study was provided, a large number of students immediately seized the opportunity. Last year, by an arrangement with the Union Theological Seminary, a course of one hour a week was given by Dr. Richard Morse Hodge, and although no credit was allowed for such work, the class retained its membership throughout the year. This evidence of genuine interest in the work has led the Faculty to approve of a course on Old Testament History and Literature to be given next year by Dr. Hodge, and to assign it a regular place in the program and a credit of two hours a week towards any diploma or the degree of Bachelor of Science. Students from other departments of the University will be welcome in this class, and so long as no such instruction is given elsewhere in the University, I trust we may be able to provide it in Teachers College. It may in time grow into an important department which will have as its professional aim the improvement of teaching in Sunday-schools. The endowment of a single professorship

is all that is needed to begin a work which, so far as I know, has never yet been attempted, but which is greatly needed in the education of American youth.

In my last annual report I mentioned the gift of nine scholarships for the benefit of southern teachers during the year 1901-02. It is a pleasure to say that as a result of this trial and of further study of conditions in the south, seventeen scholarships, of the annual value of \$300, have been placed at our disposal for next year. The donors are Messrs. John Crosby Brown, V. Everit Macy, George Foster Peabody, and the General Education Board. So many applications were received within thirty days following the announcement of the scholarships that the greatest difficulty was experienced in making a choice of candidates. In this juncture the assistance of Dr. Wallace Buttrick, secretary of the General Education Board, was most timely and effective. As a result, every new appointee is a teacher holding a responsible position in some southern normal school or city school system, from which leave of absence will be granted for the year of study in Teachers College. A more representative group of teachers, embodying the spirit and ambitions of the "New South," could hardly be found anywhere.

I consider it a great compliment that the General Education Board should have given eight scholarships for the express purpose of introducing into the southern states the methods of training teachers which are followed in Teachers College. It bespeaks the confidence of a body of business men who are exerting untold influence upon public education in the south, and at the same time it recalls to us the responsibility which we bear for the proper guidance of education in all parts of the Union. Although it is only three years since we first began to send out graduate students, the list of those who have taken leading positions in normal and training schools and in universities is not insignificant. It includes Adelphi College; Arcot Mission College, Vellore, India; Blairsville College, Pennsylvania; College of the Sisters of Bethany, Topeka, Kansas; Mississippi Agricultural College; Morgan College, Baltimore; Pennsylvania College,

Gettysburg, Pa.; Robert College, Constantinople, Turkey; Vassar College; Wellesley College; Clark University; Leland Stanford Jr. University; Ohio University, Athens; Ohio State University, Columbus; University of Illinois; University of Nebraska; University of Utah; University of Missouri; University of West Virginia; University of Colorado, and the following normal and training schools: Collegiate Institute, Kingston, Ontario; Chicago Normal School, Chicago, Ill.; Hampton Institute, Hampton, Va.; Polytechnic Institute, Brooklyn, N. Y.; Packer Collegiate Institute, Brooklyn, N. Y.; Peabody Normal School, Nashville, Tenn.; Pratt Institute, Brooklyn, N. Y.; Northfield Seminary, Northfield, Mass.; State Normal School, Charleston, Ill.; State Normal School, Whitewater, Wis.; State Normal School, Ypsilanti, Mich.; State Normal and Training School, Winona, Minn.; State Normal School, Fredonia, N. Y.; State Normal School, San Diego, Cal.; State Normal School, Athens, Ga.; State Normal School, Brockport, N. Y.; State Normal School, Aztec, New Mexico; State Normal School, Millersville, Pa.; Normal College, New York City; State Normal School, Oshkosh, Wis.; State Normal School, Greeley, Colorado; State Normal School, Cheney, Wash.; State Normal School, Potsdam, N. Y.; State Normal School, Farmville, Va.; State Normal School, Steven's Point, Wis.; Training School for Teachers, New York City; Training School, Albany, N. Y.; The Central Normal School, Lock Haven, Pa.; Washington Normal School, Detroit, Mich.

This list is in part our contribution to the professional training of teachers in America. It represents only three years—and those at the beginning—of what we hope to make an honorable career in the history of education.

The educational administration of the College becomes each year more complex and exacting. Until the past year all matters pertaining to the admission and promotion of students have been handled in the Dean's office, but with the growth of the College it has been found necessary to conduct this business through committees of the Faculty. Two standing committees—one on undergraduate students, the other on graduate students

**Faculty
Com-
mittees**

—have shared in the work, and to their patience, tact, and good judgment is due much of the success which has marked the year's administration.

The Horace Mann School has completed its first year in the new building. The change in location, with its attendant reforms in management and necessary adjustments to new surroundings, called for mutual forbearance and hearty coöperation of pupils and teachers, but with wise management by superintendent and principals the year closed with most obstacles and difficulties overcome. The building has been found admirably adapted to its purposes, and the growth of the school already makes necessary the fitting up of a part of the fifth story. During the summer vacation a large hand-work room and a social room for the use of the graduates and high-school pupils will be made ready for occupancy at the opening of the ensuing school year.

The Speyer School is patiently awaiting the completion of its new building, which is promised in December next. This building is even more extensive and elaborate than was first conceived, but by the generosity of Mr. and Mrs. Speyer the plans as formulated by the architect will be carried out at an additional expense of \$25,000. It is hardly probable that the School can be put into full operation before mid-year, but the new building will afford relief to conditions in the present school that have become well-nigh intolerable. It has been only through the ingenuity and devoted service of Miss Schüssler and her associates that it has been possible to retain the semblance of a school in the utterly inadequate quarters which we have been able to provide.

It is a pleasure to record that a generous friend of the College has given the sum of \$250,000 for the erection and equipment of a building for physical education. In my last annual report the need of such a building was set forth and since the announcement of the gift the plan as originally outlined has been warmly approved by the press and by educators in all parts of the country. The editor of *The World's Work* has requested permission to publish a leading article on it, saying that he regards it as

one of the most significant contributions to public education in recent years. It is peculiarly gratifying to know that the name of one who has for many years been foremost in his support of liberal education will be linked with a department which, I believe, will be a blessing not only to Teachers College but also to the entire educational system of America.

The total expenditures for the year (except permanent investments) were \$276,432.54, of which \$252,474.47 were for current expenses paid from general funds. The total receipts, not including gifts for permanent investment, were \$273,350.77, of which \$86,035 were from gifts, \$172,076.63 from earnings, and \$15,239.14 from income of trust funds. The deficiency in the general fund for current expenses amounted to \$69,934, not including \$7,282.77 for extraordinary expenses, as against \$70,980 estimated in the budget. The extraordinary expenses were \$4,000 for money borrowed to close the fiscal year, 1900-01, and \$3,282.77 for interest charges. The donations for general purposes amounted to \$74,135, making necessary a loan of \$10,000 to meet the deficiency in the year's accounts. To this indebtedness must be added \$40,000 due on four lots west of the Macy Building, and \$110,000 expended upon the new heating plant and alterations in the main building necessitated by the removal of the Horace Mann School.

The financial situation is one of mingled regret and gratification. The gifts received during the past year have amounted to \$260,472.40, and \$392,700 have been pledged for specific purposes. The most important are \$250,000 from a friend and supporter during many years for a Physical Education Building; \$175,800 from Mr. and Mrs. V. Everit Macy for the increase of our endowment funds, and \$98,709.42 for the completion of the Horace Mann School; \$25,000 from Mr. and Mrs. James Speyer for the Speyer School; \$12,500 from Mr. George Foster Peabody for a lot east of the College; \$2,500 from the estate of Mrs. Peter B. Bryson for the endowment of the Tileston Scholarship, and upwards of \$69,000 through our trustees for general purposes. All of these gifts, with a single exception, have come from persons who are or have

been trustees of the College. Indeed, of the \$2,712,823.11 which have been given to the College since its incorporation, all but about \$300,000 have come from trustees or their immediate relatives.

It is a cause for congratulation that those best informed of our work are so ready to support it, but it is to be deeply regretted that the aim of the institution appeals to so few persons of means. In the nature of things our work can never be of a popular character; it arouses little enthusiasm because its results are found only in the good our students may do in future years in widely separated parts of the country. Moreover, our students do not come from wealthy homes, and they are not likely ever to become wealthy themselves; hence, unlike most colleges and professional schools, we can count on no financial support from our alumni. We must appeal, therefore, to philanthropists whose generosity is not limited by sectional or sectarian claims, and who have an abiding faith in the efficacy of education as a means of promoting civic righteousness and social welfare.

The following table shows the income of the College from all sources since its incorporation:

STATEMENT OF RECEIPTS SINCE THE INCORPORATION OF
TEACHERS COLLEGE*

Years	Earnings— chiefly from Tuition Fees	Income from Trust Funds	Donations for current Expenses and Library	Gifts for Endowment	Gifts for Grounds, Buildings, and Equipment	Total
1889-90	\$11,351 69	.....	\$32,805 00	.....	\$ 61,203 12†	\$105,359 81
1890-91	16,709 67	.....	24,905 00	.....	525 00	42,139 67
1891-92	20,510 89	.....	25,437 29	.....	160,000 00	211,948 18
1892-93	23,414 42	.....	25,648 00	.....	312,125 00	361,187 42
1893-94	26,871 11	.....	32,375 00	.....	153,132 50	212,378 61
1894-95	44,756 13	.....	46,400 40	.....	110,978 24	202,134 77
1895-96	55,837 03	.....	63,520 00	\$ 5,000 00	228,877 59	353,234 62
1896-97	51,924 79	.....	69,451 00	47 25‡	31,324 06	152,747 10
1897-98	66,464 68	\$ 252 50	66,170 00	11,795 18	124,612 01	269,294 37
1898-99	96,582 57	530 00	74,732 00	121,424 85	10,375 60	303,645 02
1899-00	105,149 00	4,266 29	66,536 00	135,331 07	190,000 00	501,282 36
1900-01	132,759 48	8,866 00	93,185 00	591 69	167,841 87	493,244 04
1901-02	172,076 63	12,605 82	86,035 00	3,042 84	171,395 55	445,155 84
	\$824,408 09	\$26,520 61	\$707,199 69	\$277,232 88	\$1,728,390 54	\$3,563,751 81

* Receipts from dormitories and supplies are not included.

† Including \$30,203.12, estimated value of property transferred by Industrial Education Association.

‡ Income of Ruth and General Loan Funds is added to the principal of the funds.

The above table discloses at a glance the strength and weakness of the College. The first column indicates that there has been a rapid increase, especially since 1898, in the number of students who are willing to pay a large fee (a larger fee than is paid in any training school for teachers in the world; in this country the great majority of such schools are entirely free) for instruction in Teachers College. A much larger number would annually come to us, were living in New York City less expensive. No more certain testimonial of the deed of such an institution as Teachers College could be adduced than in the number and character of its students, who not only bear the high fees and the expense of living in New York but also, in so many cases, the travelling expenses from distant parts of the United States and Canada. Knowing, as I do, the strict economies practised by nearly all our students and the struggles which so many of them make to remain in College throughout their course, I am the more grateful to those friends who have provided us with scholarships, loan funds, and other means of assisting worthy students.

In this connection it should also be noted that Whittier Hall, the new dormitory erected by the Morningside Realty Company, is an important contribution to the resources of the College. It not only provides a good home under almost perfect hygienic conditions, but the rates now in force make it possible for many students to come to New York who could not otherwise do so, and it relieves to a corresponding extent the financial burden of many others. It may not prove a paying investment to the stockholders, but there is no question of its value to Teachers College and Columbia University.

The second column of the above tabulated statement discloses the greatest weakness in the whole financial situation. *Income from endowment in 1901-02, \$12,605.82, or less than five per cent. of the current expenses.* The earnings of the year, mostly from students' fees, were over 68 per cent. of the current expenses. And even if a portion of the receipts from the Horace Mann School be considered as income from invested funds, the fact still

**Student
Aid**

**Whittier
Hall**

**Need of
Endow-
ment**

remains that the income from endowment is only about one-fourth of the donations out of hand, and less than one-fourteenth of the tuition fees from students. The deficiency which must annually be met by special gifts is, in my opinion, far too large for safety. Every year adds to the difficulty of making both ends meet, and every year discloses greater possibilities of usefulness. Great as is the demand for expansion (and in many ways it is almost irresistible), we cannot afford to go more deeply into debt. The earning capacity of the College has increased by \$120,000 within six years, the equivalent of \$3,000,000 invested at four per cent. The most imperative need of the future is an endowment of \$3,000,000 to duplicate the capital which our students provide. The limit of self-help has practically been reached, but I trust that our progress may not be stayed for lack of such assistance as this record of self-help justifies.

Respectfully submitted,

JAMES E. RUSSELL.

SUMMER SESSION

REPORT OF THE DIRECTOR

FOR THE SESSION OF 1902

*To the President of Columbia University
in the City of New York.*

SIR:

I desire herewith to present the third annual report of the Summer Session of Columbia University, held from July 7 to August 15, 1902.

The third year of the existence of the Summer Session of the University may be regarded as marking the passage of summer instruction at this institution from the experimental stage to its place as part of the regular and permanent work of the University. That this was recognized by the Trustees is shown by the language of the resolution passed in October, 1900, which gave authority to the President "to make provision for a Summer Session in 1901 and thereafter until otherwise ordered." It may be said in general that the more even distribution of students in the various courses, and the natural and regular conduct of the Summer Session, both on the part of the officers of the institution and the students themselves, have been indicative of a full recognition of an established curriculum.

Owing to the election of the Director of the Summer Session of 1901 to the Presidency of the University, it became necessary to appoint a new member of the Administrative Board. The President appointed Professor James Chidester Egbert, Jr., to serve with himself and Dean Russell of Teachers College.

The work of the Session was, thereupon, arranged upon the plan which proved so satisfactory in the preceding years.

The scope of the instruction, however, was considerably enlarged as will be shown in detail below:

Upon the recommendation of the Administrative Board of **Officers of the Summer Session**, the following persons were **Instruction** appointed by the President to give instruction at the Summer Session of 1902:

<i>Department of Biology</i>	1 course
Elizabeth Carss, Instructor	
Elsie Kupfer, Assistant	
<i>Department of Chemistry</i>	5 courses
Edmund Howd Miller, Adjunct Professor	
Cavalier Hargrave Jouët, Tutor	
Victor John Chambers, Tutor	
<i>Department of Education</i>	9 courses
Franklin Thomas Baker, Professor	
Charles Alexander McMurry, Instructor in Summer Session	
John Angus MacVannel, Instructor	
Elizabeth Carss, Instructor	
Andrew Wheatley Edson, Instructor in Summer Session	
Ernest Norton Henderson, Instructor in Summer Session	
<i>Department of English</i>	4 courses
Abraham Valentine Williams Jackson, Professor	
William Peterfield Trent, Professor	
William Tenney Brewster, Adjunct Professor	
George Clinton Densmore Odell, Adjunct Professor	
Jeannette Bliss Gillespy, Assistant	
George Christian Otto Haas, Assistant in Summer Session	
<i>Department of Fine Arts</i>	1 course
George Sawyer Kellogg, Instructor in Summer Session	
<i>Department of Geography</i>	2 courses
Richard Elwood Dodge, Professor	
Clara Barbara Kirchwey, Assistant	
<i>Department of German</i>	6 courses
William Addison Hervey, Instructor	
Rudolf Tombo, Jr., Instructor	
Rudolf Tombo, Sr., Tutor	
<i>Department of History</i>	4 courses
Arthur Charles Howland, Instructor	
James Thomson Shotwell, Lecturer	
<i>Department of Latin</i>	4 courses
James Chidester Egbert, Jr., Professor	
Nelson Glenn McCrea, Adjunct Professor	
Gertrude Wolff, Assistant in Summer Session	

<i>Department of Manual Training</i>	2 courses
Lucy Hess Weiser, Tutor	
William Horace Noyes, Instructor in Summer Session	
<i>Department of Mathematics</i>	5 courses
James Maclay, Adjunct Professor	
Cassius Jackson Keyser, Instructor	
<i>Department of Philosophy</i>	3 courses
John Angus MacVannel, Instructor	
Adam Leroy Jones, Tutor	
<i>Department of Physical Training</i>	4 courses
Watson Lewis Savage, Director	
Jessie Hubbell Bancroft, Instructor in Summer Session	
Gustav Herrman Bojus, Instructor in Gymnasium	
Charles Holroyd, Instructor in Gymnasium	
Minnie Jacobs, Assistant in Summer Session	
<i>Department of Physics</i>	4 courses
William Hallock, Professor	
Frank Leo Tufts, Tutor	
<i>Department of Psychology</i>	4 courses
Edward Lee Thorndike, Adjunct Professor	
Adam Leroy Jones, Tutor	
Joseph Hershey Bair, Assistant in Summer Session	
<i>Department of Romance Languages</i>	3 courses
Louis Auguste Loiseaux, Instructor	

These instructors are drawn from the teaching force of the University with the exception of Miss Jessie Hubbell Bancroft, Director of Physical Training Brooklyn (N. Y.) Public Schools; Mr. Andrew Wheatley Edson, Assistant Superintendent of Schools, New York City; Dr. Charles Alexander McMurry, Instructor in the State Normal School, DeKalb, Illinois.

The teaching force of the Session of 1901 numbered 32 instructors and 6 assistants; that of 1902, 38 instructors and 7 assistants. Courses were offered for the first time in Biology and Chemistry, and, as in 1900, in Geography. A number of new courses were given in Education, German, History, Latin, Mathematics, and Romance Languages. The increase in courses in 1901 over those of 1900, was 15; and that of 1902 over 1901 was 18.

The following tables show the progress which marks the career of the Summer Session in three years:

Department	Courses offered, 1900	Total Enrolment, 1900	Courses offered, 1901	Total Enrolment, 1901	Courses offered, 1902	Total Enrolment, 1902
Biology	—	—	—	—	1	21
Botany	3	28	—	—	—	—
Chemistry	—	—	—	—	5*	59
Education	5	458	7	495	9	462
English	5	237	5	238	4	174
Fine Arts	—	—	1	45	1	59
Geography	2	59	—	—	2	38
German	—	—	3	67	6	101
History	1	15	3	71	4	51
Latin	—	—	2	14	4	51
Manual Training	2	21	2	44	2	72
Mathematics	3	73	3	71	5	108
Philosophy	1	24	3	58	3	53
Physical Training	2	42	4	67	4	88
Physics	2	40	4	56	4	82
Psychology	2	88	4	155	4*	89
Romance Languages	—	—	2	20	3	51
Total	28	1085	43	1401	61	1559

* No students registered for the Research Courses in Chemistry and Psychology.

	1900		1901		1902	
Biology.....	—	—	—	—	21	1.34 %
Botany.....	28	2.58 %	—	—	—	—
Chemistry.....	—	—	—	—	59	3.78 %
Education....	458	42.21 %	495	35.27 %	462	29.63 %
English.....	237	21.84 %	238	16.99 %	174	11.23 %
Fine Arts.....	—	—	45	3.20 %	59	3.78 %
Geography....	59	5.43 %	—	—	38	2.43 %
German.....	—	—	67	4.77 %	101	6.48 %
History.....	15	1.39 %	71	5.05 %	51	3.27 %
Latin.....	—	—	14	1.14 %	51	3.27 %
Manual Train- ing.....	21	1.94 %	44	3.13 %	72	4.61 %
Mathematics...	73	6.74 %	71	5.05 %	108	6.92 %
Philosophy....	24	2.21 %	58	4.13 %	53	3.39 %
Physical Train- ing.....	42	3.87 %	67	4.77 %	90	5.64 %
Physics.....	40	3.68 %	56	4.05 %	80	5.26 %
Psychology....	88	8.11 %	155	11.03 %	89	5.70 %
Romance Lan- guages.....	—	—	20	1.42 %	51	3.27 %
	1085	100.00 %	1401	100.00 %	1559	100.00 %

In the foregoing tables it appears that the decrease in numbers in Education, English, History, and Psychology is more than counterbalanced by the number attending in such subjects as Chemistry, offered for the first time this year, and in the new courses in German, Latin, Mathematics, and Romance Languages. This certainly indicates, first, that the growth of the Summer Session is due to the increase in courses and the expansion of the curriculum; second, that the subjects selected were well adapted for summer instruction and met the demands of prospective students.

It is also worthy of remark that 59 students have attended Chemistry in its first year, and that Physics has shown a most gratifying increase. The advantages and opportunities which the University with its fine laboratories can offer in scientific work have been recognized and should be placed within the reach of students throughout the year. The results of this year's work justify expansion along the lines of scientific work and in other scientific departments.

The following table shows the courses of instruction in detail and the registration for each course:

COURSES OF INSTRUCTION, 1902

Instructor	Title of Course	Enrolment		
		Men	Women	Total
	<i>Department of Biology</i>			
Miss Carss and Miss Kupfer	s5. Biological Nature Study	1	20	21
	<i>Department of Chemistry</i>			
Dr. Chambers	sA. General Chemistry	25	8	33
Prof. Miller	sB. Teachers' Course	2	2	4
Dr. Joüet	s7. Qualitative Analysis	4	—	4
Prof. Miller and Dr. Joüet	s19. Quantitative Analysis	17	1	18
Prof. Miller	Research Course	—	—	—
		48	11	59
	<i>Department of Education</i>			
Mr. Henderson	s1b. History of Education	30	30	60
Dr. MacVannel	s2. Principles of Education	32	55	87
Dr. McMurry	s5. General Method in Teaching	14	29	43
Mr. Edson	s6. School Management and Supervision	29	38	67
Dr. McMurry	s10. Special Method in School Studies	18	64	82
Prof. Baker	s13a. English in Secondary Schools	16	26	42
Prof. Baker	s14. English in Elementary Schools	4	45	49
Mr. Henderson	s28. Sources in History of Education	3	4	7
Miss Carss	s41. Nature Study in Elementary Schools	1	24	25
		147	315	462
	<i>Department of English</i>			
Prof. Odell, Prof. Brewster, and Miss Gillespy	sA. Rhetoric and English Composition	13	49	62
Prof. Jackson	s15. Anglo-Saxon Literature and Historical English Grammar	9	11	20
Prof. Jackson	s19. Shakspeare	12	40	52
Prof. Trent	s47. English Literature from 1625 to Close of 17th Century	18	22	40
		52	122	174
	<i>Department of Fine Arts</i>			
Mr. Kellogg	s15. History and Interpretation of Art	15	44	59
	<i>Department of Geography</i>			
Prof. Dodge and Miss Kirchwey	s1. General Geography	3	23	26
Prof. Dodge and Miss Kirchwey	s8. Geography of North America	1	11	12
		4	34	38

Instructor	Title of Course	Enrolment		
		Men	Women	Total
	<i>Department of German</i>			
Mr. Hervey and Dr. R. Tombo, Sr.	sA. Elementary Course	19	16	35
Dr. R. Tombo, Jr.	s2. Intermediate Course	7	7	14
Mr. Hervey	s3. Literary Course	8	9	17
Dr. R. Tombo, Jr.	s6. History of German Literature	9	4	13
Mr. Hervey	s7. Goethe's Faust	6	6	12
Dr. R. Tombo, Jr.	s8. Practical Course	1	9	10
		50	51	101
	<i>Department of History</i>			
Mr. Shotwell	s1a. Mediæval History	7	9	16
Mr. Shotwell	s10. Historical Bibliography: Mediæval and Modern History	—	2	2
Dr. Howland	s38. Discovery and Colonization of America	3	16	19
Dr. Howland	s39. History of the United States	3	11	14
		13	38	51
	<i>Department of Latin</i>			
Prof. Egbert	s1. The Epigrams of Martial: Roman Life	5	7	12
Prof. Egbert	s2. Roman Historical Readings: The Reign of Nero. The Annals of Tacitus	5	5	10
Prof. McCrea	s3. Latin Prose Composition	1	15	16
Prof. McCrea	s4. Vergil's Æneid	4	9	13
		15	36	51
	<i>Department of Manual Training</i>			
Miss Weiser	s1. Manual Training for Lower Grades	11	33	44
Mr. Noyes	s2. Wood-working for Elementary Schools	12	16	28
		23	49	72
	<i>Department of Mathematics</i>			
Prof. Maclay	sA. Solid Geometry	17	13	30
Dr. Keyser	s3a. Logarithms and Trigonometry	11	13	24
Prof. Maclay and Dr. Keyser	s3b. Advanced Algebra	13	17	30
Dr. Keyser	s4. Analytical Geometry	9	8	17
Prof. Maclay	s6. Differential and Integral Calculus	5	2	7
		55	53	108
	<i>Department of Philosophy</i>			
Dr. MacVannel	s1. Introduction to Philosophy	11	8	19
Dr. Jones	s9. Logic: Deductive and Inductive	12	12	24
Dr. MacVannel	s12. Philosophical and Educational Practicum	7	3	10
		30	23	53

Instructor	Title of Course	Enrolment		
		Men	Women	Total
Miss Bancroft	<i>Department of Physical Training</i> s1a. Physical Training for Elementary Schools: Free Gymnastics	1	10	11
Miss Bancroft	s1b. Physical Training for Elementary Schools: Games, Light-Apparatus Gymnastics	—	16	16
Dr. Savage, Mr. Bojus, Mr. Holroyd, and Miss Jacobs	s2a. Practical Gymnastics: Elementary Course	10	29	39
Dr. Savage, Mr. Bojus, Mr. Holroyd, and Miss Jacobs	s2b. Practical Gymnastics: Advanced Course	14	8	22
		25	63	88
Prof. Hallock and Dr. Tufts	<i>Department of Physics</i> s1. General Physics	26	7	33
Prof. Hallock and Dr. Tufts	s1a. Laboratory Course in General Physics	31	2	33
Prof. Hallock and Dr. Tufts	s1b. Laboratory Methods	6	4	10
Prof. Hallock and Dr. Tufts	Research Course	5	1	6
		68	14	82
Dr. Jones	<i>Department of Psychology</i> sA. Elements of Psychology	14	34	48
Prof. Thorndike	s2. Experimental Psychology	11	9	20
Prof. Thorndike	s11. Genetic Psychology	9	12	21
Prof. Thorndike	Research Course	—	—	—
		34	55	89
	<i>Department of Romance Languages</i>			
	<i>French</i>			
Mr. Loiseaux	sA. Elementary Course	11	14	25
Mr. Loiseaux	s1. Intermediate Course	4	8	12
	<i>Spanish</i>			
Mr. Loiseaux	s1. Elementary Course	7	7	14
		22	29	51
Total number of students receiving instruction in the several courses.....		602	957	1559

In the Department of Education two new courses were offered, one in School Management and Supervision, the other in Sources in the History of Education. The first of these, under the direction of Mr. Edson, has been attended by 67 students, and has been a most valuable course.

The three new courses in German were, History of German Literature, Goethe's Faust, and Practical Course. They were attended by 35 students.

The new course in History, with 19 students, was entitled, Discovery and Colonization of America.

In Latin four new courses were given, the two supplanting those of last year being on Martial and Tacitus. The course in Latin Prose Composition has been attended by 16, and that in Vergil's *Æneid* by 13 students.

The Department in Mathematics offered new courses in Solid Geometry, attended by 30 students; and in Analytical Geometry, attended by 17 students.

The Department of Romance Languages offered an elementary course in French,—attended by 25 students, and an elementary course in Spanish attended by 14 students.

With the exception of the Department of Education, all those offering new courses have shown a marked increase in the number of students.

As to the character of the work it may be said that there is no body of students connected with the University that shows more sincere devotion and greater earnestness of purpose. The instructors are enthusiastic in their commendation of their students, whose work they class in many instances with that of the post-graduates of the University: while, on the other hand, the students express in no uncertain words their great satisfaction with the curriculum and the instruction they receive.

The total number of students enrolled at the Summer Session of 1902 was 643, a gain of 63, or 10.82%, over the registration of 1901, and a total gain of more than 54% over the registration of 1900. As the total number of students enrolled in the several courses was 1559, the average number of courses taken was 2.42, as compared with 2.41 in 1901, and 2.6 in 1900.

In the table given below the number of students taking one or more courses is shown. It should be said, however, that special permission for taking more than two courses was not required in Fine Arts and in certain courses in Physical Training, hence the number indicated below as taking three courses is larger than the number of those who were granted an additional course as a special privilege:

Students taking 1 course	57	57
“ “ 2 courses.....	283	566
“ “ 3 “	276	828
“ “ 4 “	27	108
	643	1559

In no instance was a student allowed to take four courses unless the additional, or fourth, course, was either that in Fine Arts or one in Physical Training.

The previous academic training of the student-body at the Summer Session is shown in the following table:

	Gradu- ates of		Partial Courses in		Total	
Colleges	181	28.15 %	89	13.84 %	270	41.99 %
Professional Schools for Teachers	205	31.88 %	69	10.73 %	274	42.61 %
Other Secondary or Higher Institutions	61	9.49 %	9	1.40 %	70	10.89 %
	447	69.52 %	167	25.97 %	614	95.49 %
No Secondary or Higher Training					29	4.51 %
					643	100.00 %

From this table it is seen that although 4.51 % of the 643 students are classed as having no secondary or higher training, which is an increase of 2.6 % over the number of 1901, the number with collegiate training has increased 6.71 %, and a slight

increase appears in the number of students from professional schools for teachers, which has always been gratifyingly large.

Emphasis should be laid upon the fact that of the total enrolment only 4.51% could not be classed as having had some training in secondary schools or in institutions for higher education. The question has been asked whether the University would encourage students, making good deficiencies in preparatory work, to attend courses of the Summer Session. In view of the facts just mentioned, it is clear that the courses offered by the University at its Summer Session must be of a high character so as to be appropriate for the great body of its students. If this is maintained, the question of the attendance of deficiency students becomes simply a question as to their fitness to carry on and profit by the various courses.

The following table affords a basis of comparison between the students at the Summer Session of 1901 and those at the Summer Session of 1902, with regard to their previous academic education:

	1901	1902
Graduates of Colleges.	152	181
Partial Courses in Colleges.	53	89
Graduates of Professional Schools for Teachers.	216	205
Partial Courses in Professional Schools for Teachers.	27	69
Graduates of other Secondary or Higher Institutions.	82	61
Partial Courses in other Secondary or Higher Institutions.	38	9
	<hr/>	<hr/>
	568	614
Having no Secondary or Higher Training.	11	29
	<hr/>	<hr/>
	579	643

Instruction at a Summer Session fills a unique place in the educational system, for it is given at a time when those ordinarily engaged in teaching have opportunity to study under trained educators. This is recognized and appreciated, for the large majority of the students in attendance are teachers.

The following table shows the kind or grade of educational work in which the 491 students who are teachers are engaged:

Students Classified according to Teaching Positions

Elementary Schools.....	286	44.48 %
Secondary Schools.....	92	14.31 %
Higher Educational Institutions.....	32	4.98 %
Normal Schools.....	24	3.73 %
Superintendents.....	2	.31 %
Special Teachers.....	6	.93 %
Teachers in Private Schools.....	49	7.62 %
	<hr/>	<hr/>
	491	76.36 %
Not Engaged in Teaching.....	152	23.64 %
	<hr/>	<hr/>
	643	100.00 %

Of the 643 students at the Summer Session of 1902, 415, or 64.54%, entered the University for the first time. Those previously matriculated in the University numbered 228, or 35.46%, while of this number 132 were in attendance at the Summer Session of 1900 or that of 1901.

Students Classified as Old and New

Previously Matriculated in the University.....	228	35.46 %
New Students.....	415	64.54 %
	<hr/>	<hr/>
	643	100.00 %

Because of a prevalent opinion that very few men attend the summer session of a university, it is interesting to consider the following table, which shows that of the 643 students in attendance, 252 are men, *i. e.*, about 40%:

Students Classified according to Sex

	1900	1901	1902
Men.....	114	153	252
Women....	303	426	391
	<hr/>	<hr/>	<hr/>
	417	579	643
	100.00 %	100.00 %	100.00 %

In the following table a classification is made which shows the distribution of the student-body over the country and the number coming from foreign lands:

Students Classified according to Residence

North Atlantic Division:		1901			1902		
Maine.....	—				2		
Vermont.....	—				1		
Massachusetts.....	9				9		
New Hampshire.....	2				—		
Connecticut.....	6				21		
New York: Outside New York City.	50				60		
New York City:							
Manhattan and the Bronx...	236				241		
Brooklyn...	85				67		
Queens....	16				19		
Richmond.	10	347	397		14	341	401
New Jersey.....	54				71		
Pennsylvania.....	17	485	83.77 %		26	531	82.58 %
South Atlantic Division:							
Maryland.....	7				9		
District of Columbia...	7				4		
Virginia.....	4				6		
North Carolina.....	2				4		
South Carolina.....	1				2		
Georgia.....	8				8		
Florida.....	—	29	5.00 %		1	34	5.29 %
South Central Division:							
Kentucky.....	1				—		
Tennessee.....	—				2		
Alabama.....	8				2		
Mississippi.....	—				1		
Louisiana.....	3				—		
Texas.....	6				5		
Arkansas.....	1				—		
Oklahoma.....	1	20	3.46 %		—	10	1.54 %
North Central Division:							
Ohio.....	5				13		
Indiana.....	3				7		
Illinois.....	2				6		
Michigan.....	1				5		
Wisconsin.....	3				3		
Minnesota.....	4				—		
Iowa.....	3				—		
Missouri.....	11				18		
Nebraska.....	2	34	5.88 %		1	53	8.24 %
Western Division:							
Montana.....	1				1		
Colorado.....	2				5		
Utah.....	1				3		
Washington.....	—				1		
California.....	4	8	1.38 %		2	12	1.87 %
Canada.....	1		.17 %		1		.16 %
Cuba.....	1		.17 %		—		—
Peru.....	—		—		1		.16 %
Scotland.....	1		.17 %		—		—
China.....	—		—		1		.16 %
		579	100.00 %			643	100.00 %

It is noticeable here that the great majority of the students come from the States of the North Atlantic Division, but the proportion has been gradually decreasing, inasmuch as it stood 88% in 1900, 83.77% in 1901, and 82.58% in 1902. Twenty-nine states, one territory, and three foreign countries have representatives.

The course of public lectures given during the Summer Session of 1901 proved of so much value and interest to the **Public** students that a similar course was arranged for the **Lectures** Summer Session just closing. These were held on Tuesday and Thursday afternoons of each week. Five were upon scientific subjects, and four were of a literary character. On July 17th the students enjoyed the privilege of listening to a most interesting address by Dr. Michael Ernest Sadler. The lecturers for the Summer Session of 1902 were Professors Rees and Perry, and from the staff of instructors, Professors Dodge, Hallock, Jackson, Thorndike, and Trent, and Dr. Keyser and Mr. Shotwell.

The following list gives the lectures in detail with their subjects and the attendance upon each:

	Attendance
July 8—Professor WILLIAM HALLOCK, Electrical Waves and their Application in Wireless Telegraphy. (Illustrated)	102
10—Professor JOHN KROM REES, The Sun: A Study of its Surface and Surroundings. (Illustrated)	110
15—Dr. CASSIUS JACKSON KEYSER, What is Space in Four Dimensions?	160
17—MICHAEL ERNEST SADLER, A.M., LL.D., Director of Special Inquiries and Reports, Education Office, London, England, Some Points of Contrast in the Educational Situa- tion in England and America	170
22—Professor WILLIAM PETERFIELD TRENT, The Teaching of Literature	160
24—Professor ABRAHAM VALENTINE WILLIAMS JACKSON, The Early Drama of India, with Parallels from Shakspeare	160
29—Professor RICHARD ELWOOD DODGE, Life Conditions in a Desert, with especial Reference to Southwestern United States. (Illustrated)	165

July 31—Professor EDWARD DELAVAN PERRY, Rambles in Greece. (Illustrated)	140
Aug. 5—Professor EDWARD LEE THORNDIKE, The Evolution of the Human Mind	160
7—Mr. JAMES T. SHOTWELL, A New Science? Recent Changes in the Subject of History	130

In addition to the above, Professor Hallock and Dr. Tufts, of the Department of Physics, gave six lectures, with demonstrations, as supplementary to their own work and of general interest to the students of the Summer Session. These were upon the following subjects:

Prof. HALLOCK...	{	a. Waves in Matter, Sound. b. Visible Waves in the Ether, Light. c. Invisible Waves in the Ether, Radiant Heat and Electric Waves.
Dr. TUFTS.	{	a. The Structure of Matter, or the Physical Molecule. b. The Relation of Electricity to Matter, or the Ion. c. Radiant Matter and the Electron.

Another excellent feature of last year's Summer Session, the excursions to historical sites and to the museums of New York, was repeated this year. These excursions were conducted by Mr. George S. Kellogg of Teachers College. The number of students taking advantage of the opportunity thus offered was much larger than last year, and the interest and enjoyment were very marked.

Excursions of 1902

		Number of Students
July 12.	West Point, N. Y.....	75
19.	Tarrytown and Sleepy Hollow.....	105
26.	Seabright, N. J.....	37
Aug. 2.	Metropolitan Museum of Art.....	80
9.	American Museum of Natural History, and the New York Zoölogical Park and Botanical Museum in Bronx Park.....	40
16.	Brooklyn Museum and Prospect Park.....	

Mr. Kellogg has also given two evenings in the week to about 35 students who have desired to study the art collection in the Metropolitan Museum of Art more thoroughly than was possible in a hurried visit of one day.

FINANCIAL REPORT

Balance

Balance from Summer Session of 1900 (see Annual Report)....	\$2,236	39
Balance from Summer Session of 1901 (see Annual Report)....	4,680	24
	<u>\$6,916</u>	<u>63</u>

	1901	Income	1902	
A. Tuition fees. 580 * @ \$25	\$14,500	642 @ \$25	\$16,050	00
		1 @ 4.17	4	17
B. Matriculation fees.....416 @ 5	2,080	418 @ 5	2,090	00
C. Gymnasium fees.....111 @ 5	555	122 @ 5	610	00
	<u>\$17,135</u>		<u>\$18,754</u>	<u>17</u>
Less fees returned.....	145		181	68
	<u>\$16,990</u>		<u>\$18,572</u>	<u>49</u>
				<u>18,572</u>
				<u>49</u>
				<u>\$25,489</u>
				<u>12</u>

Expenditures

A. Administration:				
1. Advertising....	—		—	
2. Clerical Services.....	\$196 73		\$178 50	
3. Postage and Express.....	313 49		84 14	
4. Printing.....	662 31		966 69	
5. Stationery and Incidentals..	139 27		131 00	
	<u>\$1,311 80</u>		<u>\$1,360 33</u>	
B. Instruction:				
1. Salaries.....	9,020 00		11,830 00	
2. Supplies.....	220 64		216 21	
3. Public Lectures	100 00		50 00	
	<u>\$9,340 64</u>		<u>\$12,046 71</u>	
C. Buildings and Grounds:				
a. Columbia University:				
1. Water Rates...	167 00		299 90	
2. Gas and Electricity.....	78 19		130 93	
3. Fuel.....	374 85		578 00	
4. Cleaning.....	50 00		56 20	
5. Superintendent's Supplies	112 00		118 00	
6. Labor and Attendance....	642 28		918 36	
7. Service at Lectures.....	33 00		33 00	
8. Entertainment in Gymnasium	—		25 00	
	<u>\$1,457 32</u>		<u>\$2,159 39</u>	
b. Teachers College..	200 00		300 00	
	<u>\$1,657 32</u>		<u>\$2,459 39</u>	
Total.....	\$12,309 76		\$15,866 43	
		Balance.....	\$9,622 69	

* One student paid tuition fee without registering. This explains the discrepancy between the financial returns (for 580 students) and the number registered (579) for the year 1901.

The first item in the financial report shows the balance credited to the Summer Session under the authority of the Trustees, and includes the unexpended balance of income from the Summer Session of 1900 and that of 1901. The second item indicates the income of the Summer Session of 1902, less the amount (\$181.68) returned to students who, for various reasons, were compelled to withdraw after payment of fees, together with a comparative statement of the income of 1901. The income from fees for the Summer Session of 1902 was \$18,754.17, reduced by fees returned (\$181.68) to \$18,572.49. The third item shows the expenditures for the Summer Session of 1902 compared with those of the preceding year. The expenditures of 1902 amount to \$15,866.43, as against \$12,309.76 for 1901. The balance for the Summer Session of 1902 is \$2,706.06, which, with the balance of the preceding years, amounts to \$9,622.69, credited to the Summer Session account.

The increase in the expenditures under the heading Buildings and Grounds is due to the opening of the laboratories and to the more general use of the swimming pool and shower baths.

	1901		1902	
	Total	Per Capita	Total	Per Capita
Administration.....	\$1,311 80	\$2 26	\$1,360 33	\$ 2 11
Instruction.....	9,340 64	16 10	12,046 71	18 73
Buildings and Grounds.....	1,657 32	2 86	2,459 39	3 82
	<hr/>	<hr/>	<hr/>	<hr/>
	\$12,309 76	\$21 22	\$15,866 43	\$24 66

The average fee paid by each student in 1902 was \$28.88, against \$29.36 of 1901. The excess of receipts over expenditures, per capita, in 1900 was \$5.76; in 1901, \$8.14; and in 1902, \$4.21. These figures indicate the readiness shown on the part of the University to increase the advantages offered to summer students when it is recognized that an ever increasing number are desirous of studying under the direction of the University, even with a loss of the usual vacation.

The increase in the number of students attending summer sessions at various universities is shown in the following table.

It may be said that there is now widespread recognition of their importance in the general educational scheme:

	1900	1901	1902
California University.....	433	790	830
Columbia University.....	417	580	643
Cornell University.....	356	423	546
Harvard University.....	784	766	737

It is a most valuable guide in forming plans for the future development of the Summer Session to compare the results of the plans for the present year with the suggestions found in the report of the Director of last year. In that report the statement was made that "it would be entirely safe to plan a Summer Session on the hypothesis that there will be an attendance of 600 students, paying an average fee of \$29.25, or \$17,550 in all." The actual attendance was 643, and the average fee \$28.88 + or \$18,572.49.

The suggestion was made that "courses be offered in Chemistry and Geography, and the number of courses in French, History, Latin, and Mathematics be increased." This plan of expansion was carried out in every particular, and has proved entirely successful. In fact, there is evidence that the increase in numbers is due largely to the increase in courses.

For the future, then, we may reasonably look for a gradual increase in the number of students, if the opportunities for study are increased along lines which have been laid down for this year. The experience of the present session justifies a gradual extension of scientific work, and courses in Geology and Mineralogy would be appreciated. I would also recommend courses in Political Economy and Civil Government. It would be helpful to students in Physical Training if elementary courses were given in Anatomy and the Physiology of Exercise, which would prepare them for what is in reality advanced work in that subject.

It is especially important that the courses of any one year should be so planned as to be supplementary to those of the preceding year. Thus, in illustration, students who have taken elementary Anglo-Saxon should have an opportunity for further study in this subject. It appears to be entirely pos-

sible to construct a curriculum for Summer Sessions so that students deprived of opportunities of study during the winter may, by attending in the summer, in successive years, pass through a complete and consistent course of study. There is also much encouragement for the extension of summer courses in subjects which would appeal particularly to those who desire advanced or post-graduate work.

Finally, there is much that may be done to make the student realize that he is a student of the University. A curriculum which would lead to regular attendance for a series of years; also an arrangement looking to the gathering of all the students for literary or social purposes, would be helpful in the attainment of this end.

Respectfully submitted,

JAMES C. EGBERT, JR.,

Director.

August 15, 1902.

LIBRARY

REPORT OF THE LIBRARIAN

FOR THE ACADEMIC YEAR ENDING JUNE 30, 1902

*To the President of Columbia University
in the City of New York,*

SIR:

I have the honor to submit herewith the annual report of the Library of this University for the year ending June 30, 1902.

It has been possible during the past year to readjust the occupancy and equipment of several rooms, to the manifest **Readjust-** advantage of the departments interested and to **ment** the greater convenience and efficiency of all workers. The removal of the law club-room to the space under the main entrance to the Library, and the transfer of the Bursar's office to the room formerly occupied by the law students, made it possible to place the Bureau of Supplies in the one-time office of the Bursar; thus bringing it immediately adjacent to the office of the Registrar, under whose general supervision the work of the Bureau of Supplies is carried on. This made it feasible to transfer to the room hitherto occupied by the Bureau of Supplies, the Periodical Reading Room. The space is all too limited, and the room is in many ways not at all well fitted for this use; but the comparatively slight discomfort and inconvenience of the readers is more than offset by the greater general efficiency secured by the transfer of other departments.

The heavy screen or shelved partition which has always stood back of the Loan Desk was removed to the one-time

Periodical Room, and has become the division between the Cataloguing Department and the Order Department. The room itself is large enough to permit of this double occupancy, and yet give every convenience for the work. It will be remembered that the cataloguers were located immediately back of the Loan Desk. They find their present quarters much more quiet, the light better, and the work of the department less subject to interruption.

The Order Department was transferred from the Librarian's office, where it had been for more than two years; and finds ample room for effective service.

The large middle room, formerly occupied by both the Cataloguing Department and the Loan Desk, has been given up to the Loan Division of the Readers' Department. The desk has been enlarged, the catalogue cases have been withdrawn from the corridor and placed around the room, and some 2500 special reserve books have been shelved back of the desk—to be used on a day-and-hour schedule. These changes have been greatly appreciated by all who have had occasion to use the Library. For the first time in many years the workers on both sides of the Loan Desk are enjoying natural light and are finding ample space for the service.

The return of the Librarian to his own office has been greatly appreciated not only by himself but by those who have had occasion to transact business directly with him.

The general effect of these changes, especially those which were made for the Loan Division, has been to create an impression of resources and organization and equipment entirely competent for both general and special demands; and in dignity and general worth quite commensurate with the Library and the building which it occupies.

A brief summary of the work and methods of the Order Department may not be out of place in this report. When orders for books, sent in by officers or others, reach the **The Order** department the first duty is to verify the author **Department** and title. Then prices must be looked up, and the **ment** proper entries made on the order books and on the accounts of the proper officers, and order cards sent out to our purchasing agents. Nearly six hundred second-hand catalogues,

containing items approved by officers and others, have been compared with our own catalogue during the past year, and orders written for such titles as were not already on our shelves.

When the books are received, the orders are taken from the files; titles, dates, and prices are verified by comparing the books and the orders; the date of receipt, the source, and the cost price are entered on the orders and in the books: and the books are then stamped and accessioned and sent forward to be plated, embossed, and catalogued. Cards are sent to the different officers, announcing the receipt of their orders. The cost of each book is entered upon the account kept with the department ordering it, and a statement of the unexpended appropriation of each department is sent monthly. A large number of subscriptions are for books which come out in parts — the total number is 288: and the continuations of these are cared for by this department.

Two hundred and forty-eight new readers' tickets and 149 renewals, and 76 cards of admission to seminar rooms, have been written, forwarded, and the proper records made. A special list of the volumes and unbound material given by the American Mathematical Society, consisting of 991 volumes and 70 unbound numbers, has been prepared. Proper accounts of all expenditures on the various book funds are kept, and a monthly balance sheet drawn. Lists of new books have been prepared twice each week for the *Spectator*.

Much has been accomplished during the past year in the way of completing sets of periodicals.

There have been sent to this department twice a month from regular agents, a large number of new publications for inspection. This brings the latest publications directly to the notice of officers and students, and a large number of these books have been ordered by the proper departments and have been retained in the Library. Many more would have been ordered if funds had permitted.

Orders have been sent to the number of 3608, of which 1471 were from second-hand catalogues. Of these last, 389 were sold before our orders reached the dealers. A total of 4538 orders have been received, which includes some orders "outstanding" at the close of the last fiscal year. Two hun-

dred and fifteen orders have been cancelled. Cancellations have been made either because titles were unobtainable or because they proved to be extracts from transactions of societies which are already in the Library. The total number of volumes added to the Library during the year by purchase was 10,816, by gift 4422, by exchange 112, and by binding of pamphlets 562.

In addition this Library has become the depository for the collections of the Holland Society and of the American Mathematical Society.

Nearly twenty-five thousand pamphlets were presented to the Library during the year.

The Library now numbers 327,622 volumes.

The Supervisor of this department suggests that the Trustees establish a fund to be known as the "Lost-Book Fund," and that all monies paid for books lost, all fines exacted for books overdue or for other violations of Library regulations, and all monies arising from the sales of duplicates, be turned into this fund to be used by the Library in replacing lost volumes.

The attention of the Trustees is again called to the fact that in accepting the gift of Prof. Egleston's library they agreed to continue such sets of serials as were contained therein, but thus far have made no special provision for such continuations. Some of these sets have fallen in arrears for lack of funds to continue subscriptions.

By the Order Department more than elsewhere in the Library is felt the constant pressure arising from insufficient appropriations and revenues. While it is entirely true that these have always been generous, it is equally true that they are not sufficient to meet the demands of this large and growing University. Appropriations which when distributed to different departments give to some not more than \$100 and to very few more than \$300, are certainly below the line of entire satisfaction. The best of all that is published, the last word that is spoken by those in authority, ought to be within the reach of all officers and students: and this can only be accomplished by much larger expenditures than we are making to-day.

In her annual report to the Librarian, the Supervisor expresses the keen appreciation of the members of her staff of the additional space, greater quiet, and close proximity to the Order Department: all of which have aided in making all work move forward much more smoothly and comfortably and efficiently than ever before. The appointment of a page for the exclusive use of the Cataloguing Department and the Order Department has added much to the ease and rapidity with which the work of the two departments has been accomplished.

During the past year we have trained three apprentices—all for whom we can find room; and have been able to add these to the staff. These apprentices give such service as they may be able to render for such instruction as we can offer.

There have been added to the catalogue 70,581 cards, the majority of them typewritten on the new machine, which is now doing very satisfactory work. The use of the parti-colored ribbon has so nearly dispensed with hand-work on the cards that two young women are now able to do the work for which six were required in the days of hand-printing.

We have continued to unite with other libraries in the co-operative cataloguing of scientific periodicals, and we have received from this source during the past year 3772 cards at a total expense to us of \$25.16.

During the year the services of expert Hebrew and Arabic scholars have been secured for cataloguing nearly a thousand books and manuscripts in those languages, hitherto practically inaccessible.

For many years the more prominent librarians of the country have felt that a system of co-operative cataloguing, if feasible, might save to the individual libraries much duplication of labor and expense. After many conferences, and after a careful consideration of the whole subject for more than a year by a committee of the American Library Association, the Library of Congress, which prints its own cards, has entered into an arrangement whereby any library may order cards for any book which is owned and catalogued by the Library of Congress; the expense being but a trifle of that

which is ordinarily incurred by the individual library. We have endeavored to profit by this arrangement: but the accessions of the Library of Congress are largely American copyrighted books and our accessions of American books form a small proportion of the total number of titles purchased during a given year. We have not been able therefore to save enough in the expense of cataloguing to pay us for the extra trouble in sending orders to Washington, in cutting and punching the cards after they reach us, and especially in withholding our books from the shelves until these cards can be received. We are so near the great publishing centres that we often receive American books and accession and catalogue them and place them on our shelves ten days before the cards from Washington reach us. However, this work is clearly in an experimental stage, and we very gladly joined with others in giving it a longer trial.

The appropriation made for the work of this department covers the payment for periodicals and other serials and the expense of all binding done for the Library. **Serial De-** By an economic and careful management of the **partment** work of the binding division, a sufficient amount of money has been saved to permit an extension of the list of periodicals; upon which we have spent something over \$300, following the advices of heads of University departments.

The work of binding and rebinding has been carried on during the year with rather unusual success. The policy of using one of the minor city binderies, which would give the work of this Library preference as to time and attention, has been continued. At times there has been such pressure and we have been in such haste to have work completed, that we have employed two binderies rather than one. While we had some difficulty at the first of the year in connection with our former binder, because of financial troubles which came to him through taking up a side business in which he was inexperienced; throughout the nearly five months' trouble in the bookbinding trade, caused by a general lockout and an extended strike, this Library did not suffer any inconvenience whatever. More volumes than ever before have been bound and rebound, the quality of the material and workmanship

has been very satisfactory, and at the close of the year this department of the Library is still sufficiently within its appropriations to enable it to transfer to the Order Department, for the purchase of miscellaneous books, quite a large balance.

The past year has seen unusual activity and unusual success in collecting national, state, and civic documents and reports, and the reports of public and semi-public organizations. Special care has been taken to fill up the gaps in the sets of these reports and publications, and many of them are already quite complete. The care and classification of miscellaneous pamphlets and unbound material has been carried forward successfully; and there are very few titles now in this Library that are not easily accessible.

In the last report from this Library reference was made to an experiment, then recently undertaken, in the way of direct dealings with the dealers in second-hand books, on the Continent. This experiment has been continued during the last year, and has proved entirely satisfactory. It is hardly too much to say that this Library now receives nearly all the second-hand catalogues published in the world, which are of special value. With rare exceptions, all departments of the University have made constant use of the information thus gathered. The Supervisor of this department has been exceedingly efficient and helpful in this matter, and it is quite probable that the greater number of purchases made in this way during the last year have not cost us one-half the usual prices. Hundreds of volumes have been purchased for even one-tenth the original value. This close touch with the dealers of Europe has enabled us to supply with the least possible delay unusual demands of University departments; and the Library now owns some titles for which it has been searching for many years. The old method of sending out a *carte-blanche* order to a foreign dealer, to find a given title within his own time and at his own price, has practically been abandoned.

The Supervisor of this department has also rendered very efficient service in the matter of the contract for German dissertations, of which the Library expects to receive not

less than 40,000 within eighteen months; in the selection and purchase of the books of the Historical Reading Room in University Hall; and in the selection and purchase of the books for the new department of Chinese language and literature.

Early in February, by the courtesy of the President of the University, who withdrew from the room so long occupied as a President's office and made it available for its present purpose, opportunity was at last found for the definite organization of a Bibliographic collection; the care of which has been added to the many duties of the department under consideration. The cases from the Phoenix galleries, so-called, have been transferred to this room, and sufficient shelving has been put in place to permit the collection of a large number of valuable bibliographic sets and the display of some of the rarest books owned by this Library. This room, however, sadly needs more cases and more shelving before the most efficient work can be accomplished. In this connection it is a pleasure to note that some of the leading collectors of the city have already promised some of their rarest volumes for historic exhibits which it is hoped may be made in this room from time to time in the future.

At the middle of the academic year the Supervisor of this department, Mr. W. M. Gilbert, was called to a position in the executive office; and Mr. Frank Erb, an assist- **Shelf De-**
ant at the Loan Desk for several years, was **partment**
advanced to the position of Acting Supervisor for the remainder of the fiscal year.

The work of the department has followed usual lines. The construction of the Library and the distribution of its contents are such as to make a corps of well trained and active pages the most efficient means of handling the books. As the erection of new buildings makes possible the withdrawal of instructional work from the Library, and more rooms in this building are available for strictly library purposes, we hope to substitute electric power for the present rather unsatisfactory pneumatic system and reorganize the entire service. At present, however, the work of the pages is very satisfactory.

By opening exchange accounts with several of the larger universities and with two of the most responsible book-dealers, we have disposed of nearly all of the duplicates of the Library. Duplicates of government publications are returned to Washington from time to time, as they accumulate. This leaves room in the sub-basement for the storage of some special collections, and with some additional shelving will permit a careful shelving and classification of *Columbiana*.

The shelf-reading has been carried on with unusual care, and a large number of titles thought to be lost have been found and returned to their places. The total final losses of the University are very small, especially when it is remembered that this Library permits free access to its stacks by all officers and nearly all students. The close of the present fiscal year shows not to exceed 1200 titles missing*: and it is more than probable that a large percentage of these will be found before the opening of the next academic year.

It is not the practice in this Library to say to a patron that a book is out, simply because it cannot be found. A book is "out" of the Library only when it is properly charged out and the holder is known. This means that when a call is made for a certain volume, and it cannot be found in its place upon the shelves, and is not definitely charged out, immediate and prolonged search is made. It takes time and assistants to maintain this work, but the results fully warrant this expenditure.

There is need of additional shelving, in nearly every department of the Library. To meet present requirements with what shelving we have, has compelled a very serious division of the books, and has made breaks in classification which create delay in the search for the books and waste the time of the patrons of the Library. The remaining half of the general stack room ought to be shelved at once.

The work of gilding (adding the stack-numbers to the books) and repairing has been unusually satisfactory through the year. It will add much to the efficiency of this depart-

* Not for the year just closing, but the total aggregate losses since the records of this Library have been kept.

ment if one stitching machine and a trimming machine can be added to its equipment.

Loan Division.—The extensive changes in the equipment of this division, and especially the additional floor-space and desk-room provided, have made possible a more systematic subdivision of work, which in turn permits the use of a larger number of assistants in an entirely satisfactory manner. The general work of the division has been carried on much more advantageously than ever before, at a comparatively small increased cost of service.

It has not been found desirable or necessary to make any special changes in the method of serving readers. Some slight gain has been made in the rapidity of such service, the daily records often showing an average of five titles (in and out) each two minutes of the working day.

Additional floor-space, additional desk-room, and additional service have made it possible to greatly extend the reservation of books, on a day-and-hour scheme, along the lines of special study, throughout the entire academic year. The shelving facilities back of the Loan Desk now cover about 3000 volumes, in addition to perhaps 2000 reserved as formerly upon the shelves of the General Reading Room. This is nearly five times as many reservations as were made even three years ago. The plan has received the hearty approval of officers and students of the University. By close cooperation with all instructors, this class of books is constantly being changed in accordance with the progress made in the various courses of reading assigned to the students.

The records for the year show a decrease in the total number of volumes loaned and renewed of nearly seventeen thousand. But this decrease is not to be taken as indicating any decrease in the uses of the Library. Exactly the contrary is true. The lessened number of loans is due to the larger number of books reserved on the day-and-hour scheme just referred to, as well as to an intelligent though at times perhaps instinctive rather than conscious movement on the part of all patrons of the Library toward the greater use of the books in the building. No better or

more interesting proof of this last statement is afforded than the unusually frequent recall of books from borrowers before the expiration of the loan period (two weeks) at the urgent request of officers of the University, even of some officers who think that they are opposed to this drift of University sentiment. In other words, the University public is naturally and inevitably accepting a reference library as more desirable than a circulating library, when all users are considered. It is not at all difficult to understand this trend of events. Every well-managed University library will show decreasing recorded uses as the convenience and facilities for the use of the library in the building increase. There is a possible fourteen hours' use of every volume each day while it remains in the Library. There is a probable use of each volume of perhaps four hours a day (maximum) while it is out of the library and in the hands of the individual officer or student. There is a possible loss in use therefore of ten hours a day when a book is withdrawn. Officers and students are coming to recognize this, and are more and more willing to suffer some slight inconvenience, as in the choice of time for using a given volume, for the sake of the general welfare. Incidentally, the increasing number of students residing in the immediate neighborhood of the University has a bearing upon this question, and adds another to the many reasons for the erection of dormitories upon the University grounds.

The number of persons who have borrowed books from the Library within the current year was 3049, classified thus:

Officers of the University: including instructors, tutors, and assistants.....	425
Graduates: Columbia, 612; Barnard, 81; Teachers College, 22	715
Students: Columbia, 1433; Barnard, 351; Teachers College, 108	1892
Auditors.....	17

The character of the circulation for use outside the building may be determined from the following comparative statement:

Last December (1901), 4027 volumes were loaned out, as against December 1900, 5405 volumes; classified as follows:

	1901-02	1900-01		1901-02	1900-01
Bibliography	70	100	Philology	416	560
Philosophy	157	274	Science and Useful Arts	1000	803
Religion	111	158	Fine Arts	87	90
Sociology and Education	418	670	History and Biography	553	822
			Literatures, including Fiction	1215	1928

The amount of fines for books kept out of the Library beyond the time permitted by the rules was \$325.55 as against \$335.40 of the preceding year. It is interesting to note that the reason why the fines have not fallen off in proportion to the decrease in general circulation is the fact that there has been an increase of fines in connection with the day-and-hour scheme.

The amount collected for lost books, not included in the above, was \$10.13. In addition to this amount, some books reported as lost have been replaced by the borrower, by gift of new copies of identical editions: which have been accepted in lieu of the cost of the book.

During the year the number of books circulated as inter-library loans has been much larger than usual, and there has been an unusual increase in the shipment of books to and from officers of the University during vacation periods. A total of 343 volumes were loaned to 58 libraries, classified by states as follows:

California	6	Missouri	6	Pennsylvania	68
Colorado	1	Nebraska	7	Tennessee	5
Connecticut	11	New Jersey	28	Washington, D.C.	11
Illinois	3	New York	155	Wisconsin	11
Iowa	7	North Carolina	1		
Massachusetts	13	Ohio	10		

The cost of transportation has been paid by the borrowing library. From letters in hand it is evident that this service has been keenly appreciated.

This Library borrowed 117 volumes from 9 libraries classified as follows:

Massachusetts	93	Rhode Island	4
New Jersey	2	Washington, D.C.	12
New York	6		

The cost of transportation in connection with these loans has been quite generally paid by the Library and not by the person using the books, since many of the loans were made in connection with class-work and were called for directly by officers of the University and not by the students themselves.

While our relations with all other libraries have been peculiarly pleasant, special acknowledgments are due to Harvard University, Boston Public Library, Boston Atheneum, and the Library of Congress for the very prompt and courteous manner in which they have rendered assistance to our readers.

From the Pan-American Exposition, some 25 volumes were transferred directly to the South Carolina Exposition, and have not yet been returned.

Reference Division.—The average daily number of students occupying the General Reading Room has steadily increased and the demand for more room is imperative. The number of outsiders, not only those holding readers' tickets but largely those who are occasional visitors in search of special information, has likewise been greater than in previous years. Among these latter have been many students from public and private schools, especially students from the city high-schools, seeking references on topics for debates, in many instances accompanied by their instructors. Graduate students and officers from other institutions are continually with us, as well as students from near-by colleges and from the library schools of Brooklyn, Albany, and Philadelphia. We have at least a dozen literary workers of high standing among our almost daily visitors.

The assignment of desk-room in the General Reading Room to the curator of the card catalogue has made it possible to have continuous service in the Reading Room, even during the absence of the Head Reference Librarian when aiding readers in connection with their work.

It is a difficult matter to represent in any adequate way by statistics the uses made of the Library. However, the following statement of loans for use in the building may be taken as typical of the increase on all lines, and will be interesting and suggestive:

LOANS FOR USE IN THE BUILDING *				
Weeks	1899	1900	1901	1902
1st	830	1,077	1,153	1,951
2d	863	1,191	1,422	1,533
3d	777	899	1,448	1,904
4th	641	1,156	1,523	1,558
5th	565	985	1,259	1,785
6th	667	939	1,120	1,808
7th	580	1,128	1,567	1,734
8th	608	1,108	1,546	1,407
9th	661	1,154	1,577	2,206
10th	855	1,290	1,544	1,776
11th	735	1,232	1,697	1,966
12th	673	1,377	1,731	2,100
13th	588	1,238	1,680	2,026
	9,133	14,774	19,267	23,754

The average attendance of evening readers during the year has been about one hundred.

The catalogue of books on Education was completed in September, and the distribution of copies began early in October. The total number of titles thus recorded in the Libraries of this University is nearly fourteen thousand. While this work was passing through the press, a card catalogue supplementary to it was begun, which has been continued for all educational matter as received, and now represents nearly 600 volumes and more than 1600 pamphlets. The reports of the Departments of Education of the several States, except New York, and of the school boards of all towns and cities, except New York City, have been transferred to the Bryson Library at Teachers College. All current educational periodicals, except the *Educational Review*, *Pedagogical Seminary*, and the *School Review*, are sent to the same library as soon as received here. About 100 volumes of school and text books, not suited to the demands of this Library, and some duplicates, have likewise been sent to the Bryson Library, either for use there or for the library of the Horace Mann School.

In order to complete as far as possible our sets of college publications, slips from the proof sheets of the *Educational Catalogue*, showing what we have, with a circular letter asking

* Exclusive of loans made at the "reserve desk," on the day-and-hour scheme, aggregating about 10,000 volumes for the quarter.

that deficiencies be supplied, were sent to thirty-five state universities and to some sixty colleges. Some of these institutions responded promptly and liberally, while others are still to be heard from. College student periodicals have been transferred from Room 306 to Room 105, where they are kept on file but not catalogued.

The Reference Division of the Readers' Department includes the Avery Library. The founders have again shown their generosity, not only by a gift of \$1000 for current expenses but by gifts and purchases amounting to quite half as much more. These will be found set forth in detail in the usual report of gifts for the year.

The condition of Professor Ware's health has limited his activities to the department over which he presides, and the actual selection of books for the Avery Library during the year has been largely in the hands of Mr. Russell Sturgis, who especially represents the architectural profession and is in constant communication with Mr. Avery. It is impossible to overestimate the value to the Avery Library of Mr. Sturgis's experience, conservative judgment, and strong personality: and his continuance upon the Purchasing Committee has been a source of great satisfaction to all concerned.

The policy of creating special card indexes has been adhered to during the year. It is not possible to do this without the assistance of specialists of exceptional training. During the past winter such assistance has been secured for painting and sculpture, in the person of the instructor in the History of Art in the Brearley School; and a large amount of very satisfactory work has been done.

The use of the Avery by the general public has steadily increased. The room being open to all comers, and by the terms of the foundation being a reference library only, no formal record is kept of the use of the books.

The large unfurnished room at the south end of the suite has been constantly occupied for various kinds of work in connection with the uses of the Avery Library and with the Department of Architecture. Ultimately, when this entire building is available for the Library, it is hoped that the room under the Avery Library may be converted into an

atelier for the Department of Architecture, and that the room now used for this purpose may be stacked and used for storing the larger and least used volumes.

The greater part of the material in the Avery Library is open to readers. Workers are encouraged to go to the shelves and search the books at will. By request of the Architectural Department students are permitted to use ink in tracing. Notwithstanding this freedom, which is perhaps peculiar to this Library and not permitted in any other library of the same standing, the books have not suffered any serious deterioration.

This Library forms a very delightful auditorium for possibly a hundred people, maximum, within sight of a lantern screen. Several lectures and book-talks have been given here during the year. The President of the University has held two public receptions in the Library.

The opportunities and influences of the Avery Library are large and are enlarging.

During the year the Committee has purchased 132 volumes, and has more than fifty orders still outstanding; 98 volumes have been presented, of which very many came directly from the founders. This Library now contains more than 17,000 volumes, the actual cost of which has been about \$70,000. At present the endowment amounts to \$30,000, with an annual income of something more than \$1200.

Among the notable additions to the Avery Library during the current year are the following:

Emile Molinier: *Le Mobilier royal français aux XVII et XVIII siècles*, folio, 1902, four parts published.

Gaston Migeon and Emile Molinier: *Treasures and Masterpieces of Art at the Paris Universal Exposition*, Goupil et cie., Paris, 1901, 4 vols., folio.

Vorlegeblätter für Archæologische übungen, very rare first series, Vienna, 1869-1876, 1 vol., folio.

Burlington Fine Arts Club: *Exhibition of a Collection of Silver-smith's Work of European Origin*, London, 1901, 1 vol., folio.

Burlington Fine Arts Club: *Exhibition of Chased and Embossed Steel and Iron Work of European Origin*, London, 1900, 1 vol., folio.

Calzini, *Urbino e i suoi monumenti*, Urbino, 1897, 1 vol., folio.

Niccolini: *Domus Vettiorum: la nouvelle maison de Pompei*, Naples, 1896, 1 vol., folio.

Rodolfo Lanciani: *Forma urbis Romæ, consilio et auctoritate Regiæ academiæ syncæorum*, Milan, 1893-1900, 1 vol., folio, completion.

Reiss und Stübel: *Necropolis of Ancon in Peru*. A contribution to our knowledge of the culture and industries of the Empire of the Incas. Berlin, 1880-87, 3 vols., folio.

Belcher and Macartney: *Later Renaissance Architecture in England*. A series of examples of the domestic buildings erected subsequent to the Elizabethan period. 2 vols., folio, London, 1901, completion.

Section 2 of Chapter VI of the statutes of this University, before the recent amendment, read as follows:

Department Libraries "All books, maps, charts, and other printed matter heretofore or hereafter purchased for the use of any department shall be deemed to be a part of the Library, and shall be stamped and catalogued as such, and such books will be kept in the Library when not required in the respective departments for special uses; and their presence shall be periodically verified and their condition inspected by the Librarian or one of his assistants. Such books shall be purchased by the Librarian and paid for out of the general book fund, except that books may be purchased by the head of a department and charged to the appropriation of that department, such purchase having first been approved by the President."

Strictly construed, this made the Librarian responsible for a large amount of departmental equipment: such as all maps, charts, and other printed matter used directly and only for the purpose of instruction; certain annuals practically useless at the close of each year, and very generally thrown aside then, even if not actually "used up" during the year; dictionaries and other reference books which are for the use of the department only. Moreover, the Library was obliged to meet the expense of cataloguing all these, and they were all counted as so many volumes in this Library: which could not be true in any fair or sensible use of the words. Still further, if this statute were literally obeyed most of these collections would be returned to the Library at the close of each academic year for storage and care. As a matter of fact, for years the statute had been outgrown and neglected, and all existing conditions made its amendment exceedingly desirable and necessary.

The purchase of manuscripts, books, maps, and charts and other printed and illustrative matter naturally divides on three lines, as follows—subject of course to available revenues:

(1) The University authorities should furnish each department, for the exclusive use of the head of the department and of his assistants of every degree, such titles as are peculiarly necessary in their University work, and such as these gentlemen cannot be reasonably asked to secure for themselves. The University authorities have every reason to expect that each officer will incur constant expense and considerable expense in keeping himself well informed in his departmental matters, and in conducting research or other forms of original work—especially if the results of such work are directly remunerative to the officer, and bear but indirectly upon his University duties: though it must be confessed that it is not easy to draw this line. But beyond this demand upon the personal resources of the officer—wherever the line may be drawn—are other demands, as noted above, which are quite as imperative and which the University authorities ought to meet. This means the steady growth of what need never become a large library, in the private rooms (at the University) of the head of each department: a collection not to be loaned outside of the department, and not to be subject to the call or use of others than officers of the department.

(2) The University authorities should furnish each department, for the exclusive use of the officers and students of that department, such material, printed or other, as is so strictly technical in character and so peculiarly and immediately and continuously valuable and necessary in direct connection with the lectures and with the laboratory work of the department (in the broadest sense of the words "laboratory work") as to be properly considered laboratory equipment. For the present discussion it is sufficient to include under this statement the books which an officer or student needs at his elbow, for frequent and always immediate reference in connection with any phase of his regular departmental work.

This means the steady growth of what has been called a

departmental library, a title which has proved too elastic and liable to serious differences of interpretation: as a substitute for which I would suggest the term laboratory library; and this whether speaking of a department in science, in history, in philosophy, or in the languages and literatures—in speaking of any department. Necessarily we have made something of a start in this direction, but without any very definite plan. Because of limitations in our resources with which to meet this demand, we have thus far transferred books, etc., from the General Library to the departments. But the outcome is far from satisfactory. As we are not yet able to duplicate these collections, the volumes are necessarily subject to the call of any one entitled to use this Library. This results in constant confusion and disappointment, because either the department or the would-be borrower is unable to secure a book when it is most needed; in a division of responsibility as to the care of the collection; and in a serious limitation in the use of the books, arising from the fact that the departmental hours are but little more than half those of the Library. There is no way by which all this, and more, may be prevented except by extraordinary and really unwarranted expenditure for care and maintenance, or by duplication as far as duplication is desirable and necessary for the greatest efficiency.

(3) The University authorities must provide for the Library proper, in the usual way. This needs no discussion or amplification.

After careful consideration of this entire question, and after many conferences with those most interested, the following amendment to this statute was adopted, January 6, 1902:

“(a) All books, maps, charts, and other printed matter strictly technical in character and peculiarly and immediately valuable and necessary in direct connection with the lectures and laboratory work of departments, heretofore or hereafter purchased for the exclusive use of any department, shall be deemed a part of the equipment of such departments, shall be paid for out of departmental appropriations, and shall be scheduled and cared for under the rules governing departmental equipment. Such departmental equipment shall be

purchased by heads of departments and charged to the equipment appropriations for such departments, such purchases having first been approved by the President; but specific appropriations for this class of equipment may not be used for the purchase of other equipment.

“(b) All other books, maps, charts, and other printed matter shall be deemed a part of the Library, and shall be stamped and catalogued as such. Such books and other material shall be purchased by the Librarian, and paid for out of the general book fund, or other specific appropriations, or out of the revenues from specific gifts and bequests.”

It is not possible, with our somewhat limited resources, to put this statute immediately and completely into effect. This cannot be done until we are able to duplicate in the General Library such titles as ought to be left in the care of the departments, under this statute, as departmental equipment. The amendment covers conditions which are desirable and which will be realized as rapidly as our resources will permit. It is helpfully suggestive, and the growth of the Library can now be along somewhat predetermined lines, and can be just as rapid and can go just as far as the Trustees may find desirable and feasible. It is hardly possible that there will be need of further changes in this particular section of the statute for some years to come.

The general purpose of the amendment is to relieve the Librarian of responsibility for that which is properly departmental equipment; to secure the purchase of this equipment under some uniform system by departmental funds, as is already done in some departments; to remove the possibility of friction between departmental officers and the Librarian, which would naturally arise under the earlier statute because of differences of opinion as to the character and extent of such purchases; and to make possible a strictly truthful and accurate statement as to the contents of this Library, regarding it as a collection readily accessible to all officers and students of this University and for their constant use.

On request, the Librarian will at all times co-operate with the heads of departments and other University officers in the purchase of titles for departmental uses under this statute.

This will give the departments the advantages of discounts, etc., granted this Library; and will relieve the departments of the burden of correspondence, of U. S. customs business, and of all detailed book-keeping. If it is thought desirable, as affording still further relief from irksome details, the Librarian will prepare and maintain lists or invoices of this class of departmental equipment, and will inspect and report upon the same in detail to the Trustees annually.

It is suggested that hereafter in the annual reports of the needs of departments, officers include specific requests for appropriations for (1) "Books and other printed matter for the use of officers," (2) "Books and other printed matter for laboratory uses."

Under existing financial conditions, the only immediate result of amending the statute will be to relieve the Librarian of technical responsibility for a quantity of material which all agree is in no respect a part of the Library collections.

Through the generosity of Mr. W. C. Schermerhorn, who placed \$2500 at the disposal of the Librarian for this purpose, **Notable Additions** we have come into possession of a collection including nearly 1100 letters to De Witt Clinton from persons of varying degrees of prominence in city and state, aggregating more than 6000 pages. Among the more noted writers are Philip Freneau, Aaron Burr, Gouverneur Morris, James Madison, James Monroe, Andrew Jackson, John Adams, Thomas Jefferson, Martin Van Buren, Lafayette, Robert Fulton, John Jacob Astor, Thomas Paine, Albert Gallatin, John Jay, and Henry Clay.

The most important section of the mass of letters is that which relates to canals, comprising perhaps one-quarter of the bulk of the correspondence. Another large section relates to scientific and agricultural subjects, in which Governor Clinton was deeply interested. A slightly smaller section covers educational and literary matters.

There are also six thick volumes, quarto and folio, comprising over 3000 pages of Governor Clinton's letter books, mostly in his autograph. These contain transcripts, some at full length, others merely abstracts, of hundreds of letters written by him.

There is an additional folio volume, containing miscellaneous matter, memoranda for speeches, etc.

The whole forms a most unique collection of valuable unpublished manuscript.

Following are a few of the many treasures gathered during the current academic year, through European correspondents:

Pacioli del Borgo: *Suma de Arithmetica Geometria Proportioni et Proportionalita*, Venice, 1494, the first book on algebra; and many other early mathematical works.

Guarinus de Ordine Docendi ac Studendi, printed in Venice in 1474. This little book is probably the second pedagogical work ever printed, and is of special interest to Columbia because of its unusually complete pedagogical collection.

Gerson's Donatus, printed in Strassburg in 1474; one of the earliest school books in existence, and the earliest one in this Library.

The first edition of Iamblichus, Proclus, Porphyrius, Synesius, Pfellus, Pythagoras, Xenocrates, Marsilius, Ficinus, published in one volume by the great Aldus in 1499; a beautiful specimen of craftsmanship, and of great importance in the history of philosophy.

A volume of Lactanius, from the library of Pope Clement XI., printed in Venice in 1478. The arms of the Pope are impressed on both sides of the decorative old binding. In the near future this volume will be regarded as a great treasure. It has a large number of annotations in a handwriting that closely resembles that of Michael Angelo.

A copy of the first *Polyglot Psalter*, printed in Genoa in 1516; published by the great scholar, the Bishop Augustino Justiniano, and remarkable not only for its typography, but because it contains the first biography of Columbus and a somewhat detailed account of America and its inhabitants. This account is given in a gloss to Psalm xix., of 138 lines.

A ninth century Codex, written in Carolingian minuscules, and containing the letters of St. Jerome; by far the earliest manuscript in the Library.

The *Hypognosticon Laurentii Dunelmensis*, etc.; known as a twelfth century manuscript, but is certainly not earlier than the end of the thirteenth century. Of the greatest importance because it was written in England, and contains a very important, early, and unpublished version of Lawrence of Durham's hypognosticon.

A magnificent manuscript on parchment, containing Terence's six comedies, written in Italy in the first quarter of the fifteenth century.

A Chinese printed volume, the title of which is *Tse Chi Tung Kien Kang Mu*; or a general history of China, printed in China in 1350—that is, one hundred years before printing was given to Europe by Guttenberg.

The famous 1487 edition of Dante with the Landino commentary.

The most important separate and collected editions of J. Ludovicus Vives, which we bought for a post-graduate student, who is especially interested in Vives.

The *Editio princeps* of Aristotle's and Theophrastus's works, published in 6 vols. by Aldus in 1495-1498.

The complete sets of the *Proceedings and Transactions of the London Zoölogical Society*.

Almost a complete set of all the first editions of Galileo's works.

The first editions of several of the works of Pascal.

Newton's *Philosophiæ naturalis principia mathematica*, London, 1687.

Mention should be made of the gift to this University by the Foreign Office of China of the "T'u Shu Chi Ch'eng," a standard collection of ancient and modern works comprising those that deal with matters of great moment, as well as those that treat of minor details. It is the most comprehensive collection of books that has been made in China. The collection consists of over 6000 volumes, divided into thirty-two heads or classes, and treats of every subject known to Chinese literature. It is, in fact, a complete collection of ancient and modern works in which all facts regarding China are recorded and classified, all sources of information indicated, and all authorities cited and discussed. The work was originally undertaken by a commission of eminent Chinese scholars appointed by Emperor Kang Hsi, who reigned from 1662 to 1723. From the scientific point of view, the gift is absolutely invaluable, as it puts at the disposal of American students a collection of sources not heretofore accessible to them. The monetary value of the collection is estimated at 10,000 taels, or about \$7000.

Among the more notable sets secured or completed are the following: *Situation financière des communes*, 21 vols.; *Bulletin consulaire française*, 15 vols.; *Canadian Government Emigration Records*, 21 vols.; *Sinclair's Statistical Account of Scotland*, 21 vols.; *Gazzetta chimica Italiana*, 35 vols.; *Busken-Huet. Litterarische fantasien*, 26 vols.; Ten Brink's *Litterarischen Schetsen*, 19 vols.; *Executive Journal U. S. Senate Secret Sessions, 1789-1869*, 18 vols.; *Pennsylvania Archives*, 38 vols.; *Panckoucke Bibliothèque latine-française*, 35 vols.; *Annales*

telegraphiques, 31 vols.; Bicentennial Publications of Yale University, 25 vols.; Galileo, Opera, 16 vols., 1542; *Chinese Repository*, 20 vols.; *Abhandlungen aus der naturlehre der Schwedischen Akademie der Wissenschaften*, 52 vols.; *China Review*, 24 vols.; *Chinese Recorder*, 24 vols.; *Point du jour*, 27 vols.; *Journal d'agriculture*, 25 vols.

In extending the usual recognition to the Supervisors and to other members of the Library staff, for their faithfulness and efficiency during the year, and for the courtesy **The Library** and consideration which have marked their rela- **Staff** tions not only to the Librarian but to University officers and students and to all who are using the Library, it seems entirely proper that the attention of the Trustees should be called to the high standing of the staff in the matter of general equipment for their work.

It is more than possible that the exacting demands of the various positions upon the staff are not fully appreciated. The men and women who can render competent service in this Library, and who can satisfy the requirements of their positions, must necessarily base their special training and successful experience upon rather unusual intellectual qualities and upon quite unusual culture. As a single example, in a university library the large number of books printed in foreign languages makes it necessary that the greater number of the staff shall have at least a "title-page" and "contents" knowledge of these languages; and that many of them should have a fair reading knowledge besides. A recent canvass of the staff shows that 32 are able to meet the requirements of their positions in French, 30 in German, 25 in Latin, 22 in Italian, 19 in Spanish, and 6 in Greek.

Four of the staff have a sufficient knowledge of six languages, nine of five, four of four, seven of three, and one of two. Nine of the staff are college and university bred, and a large number of the others have had special training equivalent to a portion at least of a college course.

The Trustees have very courteously and, by the quite general agreement of the University and college world, very wisely, given a librarian the rank of a full professor. With the statement just made, it would seem that an assistant

librarian (when we have one) should rank as an adjunct professor, that supervisors of departments and reference librarians should rank as instructors, and that the cataloguers should rank at least as tutors. The requirements for these several positions being fairly equal with the requirements made in the different grades of instruction, and the daily demands being quite as exacting, the question of equality in remuneration is naturally suggested.

I desire again to give full credit to the detailed and accurate departmental reports, which have made the preparation of this report little more than editorial work.

And to this I add my continued appreciation of the consideration and thoughtfulness of the President and of the Trustees and officers of the University, as manifested in all their relations to the Library and to myself.

Respectfully submitted,

JAMES H. CANFIELD,
Librarian.

July 1, 1902.

ADDITIONS TO THE LIBRARY

1901-1902

	1901							1902						Total
	July	Aug.	Sept.	Oct.	Nov.	Dec.	Jan.	Feb.	March	April	May	June		
Purchase	984	966	719	1116	693	848	807	564	759	676	806	1878	10,816	
Exchange	4	.....	.....	31	1	2	1	.....	36	12	24	1	112
Given	247	69	345	317	364	344	637	169	749	505	267	409	4,422	
Pamph. bound	236	1	51	22	8	28	39	16	41	108	11	1	562	
From dups.	.....	.....	.....	.....	.....	.....	1	.....	1	7	72	1	82
On deposit	303	.....	149	4	3	.....	11	1	91	12	20	12	606
Total	1774	1036	1264	1490	1069	1222	1496	750	1677	1320	1200	2302	16,600	

STATISTICS OF THE USE OF THE LIBRARY

	Days Open 1901-1902	Days Open 1900-1901	Loans 1901-1902	Loans 1900-1901	Renewals 1901-1902	Renewals 1900-1901	Total Loans 1901-1902	Total Loans 1900-1901	Daily Average 1901-1902	Daily Average 1900-1901	Largest Loaned 1901-1902	Largest Loaned 1900-1901	Smallest Loaned 1901-1902	Smallest Loaned 1900-1901	Fines 1901-1902	Fines 1900-1901	Readers' Tickets 1901-1902	Readers' Tickets 1900-1901
July	26	25	3,219	3,071	812	980	4,031	4,051	155.0	162.0	193	205	49	71	\$15.60	\$13.80	11	12
Aug.	27	27	2,844	2,141	641	623	3,485	2,764	120.0	102.3	174	128	50	51	11.90	9.95	17	9
Sept.	24	25	2,973	3,046	1,033	1,080	4,106	4,726	166.0	189.0	193	206	53	77	11.25	11.35	15	6
Oct.	27	27	7,155	9,502	985	1,422	8,140	10,984	301.4	406.8	375	520	118	200	26.45	25.40	34	55
Nov.	25	25	7,673	9,341	903	1,539	8,656	10,884	345.4	435.2	533	619	107	123	31.35	34.50	40	147
Dec.	25	26	7,368	7,248	1,453	1,484	8,821	8,732	324.8	335.8	418	436	139	172	37.15	35.70	28	15
Jan.	26	27	7,831	9,910	1,310	1,545	9,141	11,455	351.8	424.2	445	600	120	39	30.05	52.60	30	24
Feb.	24	24	7,152	9,347	1,124	1,503	8,276	10,850	344.8	482.0	494	645	120	162	23.45	32.40	11	38
Mar.	25	26	8,568	11,142	1,218	1,400	9,786	12,638	391.4	480.0	511	584	230	231	32.65	30.95	13	22
April	24	25	8,875	10,234	1,376	1,730	10,251	11,964	427.1	478.5	458	684	249	244	38.85	33.80	18	27
May	27	27	7,150	8,992	1,074	1,429	8,224	10,421	304.5	385.9	408	300	70	110	42.80	39.55	22	6
June	25	25	3,151	3,214	588	708	3,739	3,922	149.5	156.8	186	300	58	58	15.05	15.70	9	11
	305	309	73,959	87,848	12,577	15,540	86,536	103,388	283.7	334.6					\$325.55	\$335.40	248	372

¹ The falling off in loans for use outside the Library shows the increasing use of the Library as a reference library. See page 242.

This statement does not include the loans from the Science Seminar, 2,146 volumes; nor does it include 109,421 volumes loaned for use in the building.

No record can be kept of the use of the Library through the open-shelf system which obtains in nearly every department of this Library.

² Of this amount, \$9.70 were collected through the Science Seminar.

³ Readers' tickets renewed, 1900-1, 106; 1901-2, 149.

RECORD OF GIFTS

1901-1902

	Vols.	Pam.		Vols.	Pam.
Aberdeen Univ. Library	2	1	Auburn Theol. Seminary		1
Actuarial Soc. of Amer.		3	Australasian Ass'n Adv. Sci.	2	
Adrian Coll.		1	Austria Handelsminister.	1	
Adirondack Sanitarium		1	Austro-Hungarian Vice-Con-		
Alabama Auditor		2	sul		213
Geol. Survey	2	3	Auto Era		4
Mine Inspector		1	Automobile		7
R'y Comm.	1		Automobile News		3
Sec'y of State		1	Automobile Review		8
State Bar Ass'n	1	1	Automobile Topics		41
Treasurer		1	Avery, S. P.	50	7
Univ. (Tusca-		1	Bagel, August	1	
loosa)		1	Balch, E. S.	1	
Alfred University		1	Balch, T. W.	2	
Allegheny—Carnegie Lib'y		1	Baldwin, Agnes		1
Alman & Co.	1		J. F.		2
Am. Acad. Polit. Soc. Sci.		1	University		1
Ass'n Adv. Science		1	Barbe, Waitman	1	
Banker's Ass'n	1		Baron Saneyoshi	1	
Baptist Miss. Union		2	Bash, Mrs. J.	1	
Bar Ass'n	1		Barnard Bulletin Editors		16
Church B'ldg Fund		1	Basle Univ. Bibliothek		71
Comm.		1	Batchellor, A. S.		2
Microscopical Soc.	1		Beebe, W. H. H.	12	28
Congregat. Ass'n.		2	Beer, William	1	
Electro-therap. Ass'n.	1		Belgium Ministere d'Indus.		
Foundrymen's Ass'n.		123	et Travail	5	3
Hist. Ass'n	1	1	Belknap Summer Home		1
Inst. of Architects	2		Beloit College		1
Inst. of Min. Eng.	1		Bemis, E. W.		1
Iron and Steel Ass'n		1	Berkshire Industrial Farm		12
Jewish Hist. Society		1	Berlin Technis. Hochschule		6
League Civic Improv.		1	Univ. Bibliothek		183
Mathemat. Society	4	84	Bernice Panahi Bishop Mu-		
Museum Nat. Hist.		4	seum	1	6
Numismat. and Arch.		1	Besançon Université		1
Society		1	Birchard & Co.	1	
Scenic and Historic		2	Blackford, C. M., Jr.		1
Preserv. Society		1	Blackmar, F. W.	1	
Soc. P. C. A.		1	Bodleian Library		3
Soc. of Civil Eng.	1		Bolton, Mrs. S. K.	1	
Soc. Mechan. Eng.	1		Bonn Universität		3
Amherst College	1	212	Borntraeger, Gebrüder		1
Armour Inst. Tech.		1	Borst, C. A.	2	
Amsterdam Univ. Bibl.	68		Boston Assoc. Charities		1
Anderson, W. S.		1	Chamber Commerce	1	
Andover Theol. Sem. Lib'y		1	Auditor	1	
Argentine Repub. Dep't de			Club of Odd Vols.	1	
Relations Exterior y			Gen. Theol. Lib'y	2	
Cultes		4	Museum Fine Arts		2
Argentine Repub. Teachers			Provident Ass'n		1
Assoc.		1	Public Library	1	7
Arizona Auditor		6	Transit Com.	1	
University		11	University		14
Arkansas Bureau of Mines	1		Bowditch, C. P.		1
Secretary State	2		Bowdoin College		6
University		1	Bradford Carnegie Lib'y		1
Ass'n of Amer. Anatomists		2	Brentano's		1
Law Schools		2	Breslau Univ. Library		125
Coll. and Prep. Sch.			Brockhaus, F. A.	3	
of Southern States		1	Brookline Pub. Library		13
Collegiate Alumnae		1	Brooklyn Daily Eagle	10	3
Milit. Surgeons U. S.		1	Diet Dispensary		1
Atlanta University		1	Eye and Ear Hos-		
Atkins, George	2		pital		1

	Vols.	Pam.		Vols.	Pam.
Brooklyn German Evangelical Aid Soc.		1	Chicago Library Club		1
" Home for Consumptives		2	" Milw. and St. Paul Railway Co.		1
" Indust. Sch. Ass'n		2	" Moody Bible Inst.		1
" Inst. Arts and Sci.	1		" Municipal Lib'y		1
" Polytech. Inst.		2	" Public Library		9
" Pub. Library		11	" Sunset Club	1	
Brower, W. S.		1	" Theological Sem.		2
Brown, A. N.	109	109	" Union League Club.		1
" J. C.	3	80	" University		1
" J. S.	1		" University Lib'y		26
Brown & Sharp Mfg. Co.	1		" University Press		15
Brown Univ.	1	99	Chickering & Sons	1	
Browne, N. W.	6		Christian Science Pub. Soc.		42
" T. B.	1		Christiania Univ. Bibl.		9
Broydè, Isaac		2	Cincinnati Lloyd Library		5
Bryn Mawr College		2	" Museum Ass'n		70
Buck, A. H.	1		" Public Library		4
Bucknell University	2		Cleveland Public Library		2
Budapest Statis. Bureau	1	3	" Univ. School		1
Buenos Ayres Museo Nac.		2	Coan, T. M.		2
" Universidad	3	11	Colby College Library		19
Buffalo Charity Organ. Soc.		1	Cole, G. W.	356	1115
" Grosvenor Library	1		Colin, Armand	1	
" Merchants' Ex.		1	Coll. of Phys. and Surgeons	70	77
" Pub. Library		2	College Settlement Ass'n		1
Bur. of Amer. Ethnology	3		Colorado Auditor	1	
Burlington (Vt.) City Clerk		1	" Board of Health	2	
Bush, Miss E. H.	1		" Bureau of Mines		2
Butler, C. H.	1	13	" Coll. (Col. Springs)		3
" N. M.	454	2063	" Industrial Sch. for Boys (Golden)		5
California Attorney-Gen.	4	1	" School of Mines		12
" Controller		1	" State Engineer	1	
" Health Board		1	" Indus. School for Girls		1
" Inst. for Deaf and Blind		14	" Normal School (Greeley)		10
" Insurance Com.	2	1	" University		21
" Bd. of Horticulture		2	Columbia Spectator		11
" Lunacy Comm.	1	1	Columbia Univ. Geol. Dep't		22
" Mineralogist		1	" Chem. Dep't	1	69
" State Library	4	5	" Engin. Dep't	7	
" State Mining Bur.		5	" Metall. Dep't	30	2
" Surveyor-Gen.		3	" Pres. Office	318	3377
" University	4	9	" Press	13	1
Call, E. P.	1		" Class of 1902	1	
Cambridge University		1	Columbian University		6
" (Mass.) City Clerk		1	Columbus (Ohio) City Clerk	1	
" Pub. Library	1	1	" Pub. Sch. Lib'y		1
" (Mass.) Sup. Sch.		1	Compton, A. D.	1	1
Canada Dep't Agriculture	2	4	Conant, W. C.	1	
" Geol. Survey	3	6	Confer. of Amer. Rabbis		1
" Royal Society	1		" of Church Clubs U.S.		1
Canfield, J. H.	2	819	Congregational Education Soc		1
Cape, Mrs. E. P.	32	4	Conn. Bank Commission	1	
Cardozo, E. H.	2	1	" Bldg and Loan Ass'n	4	1
Carlisle Indian School		46	" Bur. Labor Statis.	2	
Carlton College		1	" Comptroller	1	4
Carnegie Inst. (Washington)		1	" Health Board	1	
Carpenter, G. R.	5	45	" Humane Society		1
" W. H.	2	23	" Factory Inspector	1	
Carthage College		1	" Indus. Sch. for Girls		2
Catholic Univ. of America		1	" Insurance Commis.	1	
Cattell, J. McK.	206	1099	" Public Library		28
Chanler, W. A.	14		" Railroad Commission	1	
Chicago Bd. of Education	2	2	" Sch. for Imbeciles	1	
" Civic Federation		2	" Sewage Commission	1	
" Field Columbian Museum		4	" Shell-fish Commission		14
" John Crerar Lib'y		5	" State Library	50	16
			" State Prison		2

	Vols.	Pam.		Vols.	Pam.
Convocation of American Churches in Europe		1	France Min. de l'Instr. Pub.	1	28
Co-op. Union (Manchester, Eng.)	1		" Min. des Trav. Pub.	4	
Cornell University		1	" Office du Travail		5
Council Bluffs Pub. Library		1	" U. S. Embassy	11	17
Croes, J. J. R.		1	Franklin and Marshall Coll.		1
Crozer Theol. Sem. Lib'y		1	Franklin College		1
Cumberland University		1	Freiburg Univ. Bibliothek.		124
Currie, Miss C. B.		12	Frieländer, R.		18
Curry, Malcolm			Gamba, F. P.		1
Curtis, J. G.	1		General Electric Co.		33
Cust, R. N.	4		Geneva Université	1	
Daggert, J. M.		1	Georgetown College (Ky)		1
Dalhousie University		1	" University		2
Dartmouth College	1	2	Georgia Attorney-General		2
Davenport Acad. of Nat. Sci.		1	" R'y Commission		1
Davidson College		2	" University		1
Davis, A. McF.		1	Girard College		1
Day, W. S.	4		German, Mrs. G. D.	4	33
Dayton Public Library		1	Gerould, J. T.	1	1
Dean, B.		28	Giddings, F. H.		303
Dearborn, G. V. N.		5	Giessen Univ. Bibliothek.		93
De Costa, B. F.		1	Gilbert, W. M.	1	
Delaware Adjutant-Gen.	1		Ginsberg, Louis		1
" Treasurer		1	Glasgow University	1	
Denver University	4		" Hunterian Mus.	1	
Detroit Public Library	1		Glead, J. W.		1
" University School		1	Gloucester City Clerk		1
De Peyster, J. Watts		1	Goodnow, F. J.	1	
De Vinne, T. L.	5	2	Gottheil, R. J. H.	1	1
District of Columbia Health Dep't	1		Göttingen Univ. Bibl.		67
Dodge, W. E.		1	Gould, G. M.	15	19
Dorpat University		23	Grabau, A. W.	1	
Dresden Kön. Zool. & Anthropolog. - ethnograph. Museum		1	Great Britain Parliament		1
Dresden Sächsische Technische Hochschule	2		" Board Trade		4
Dresden Statistisches Amt.	1		Green, S. A.	1	9
Drew Theological. Sem.	2		Giffin, T. H.	41	16
Drexel Institute	2		Groningen Rijks. Univ.	5	1
Duc de Loubat	4		Grün, Paula	1	
Dumble, E. T.		7	Guatemala Facultad de Derecho y Notariado	1	3
Dunning, W. A.	7	18	Haarlem Van Lennep Com.		12
Durand, Ruel	1		Haas, G. C. O.	11	
Earlham College		1	Halle Universität		120
Edwards, G. V.		2	Hallock, William	5	
Egbert, J. C.	4		Hamilton, C. M.		2
Ehlers, E. M. L.	1		Hamilton, Miss Neena	1	
Einstein, L. D.	6	2	Hamilton College		1
Elgin Education Board		1	Hampton Normal Institute		3
England Education Board	1		Hampton-Sidney College		1
English, T. D.	1		Hand, M. E. N.		1
Episcopal Theol. School		1	Harrison, Caskie		3
Erlangen Univ. Bibliothek.		103	Hartford City Clerk	1	
Estabrook, H. D.	1		" Hospital		1
Ex Dono Amicis	80		" Retreat for Insane		1
Fabbri, Ermanus		2	" Theological Sem.		1
Fischer, E. S.		1	Harvard College	2	4
Fish, Nicholas	4		" Dante Soc.		1
Fisk University		1	" Mus. Comp. Zool.		17
Fitchburg (Mass.) City Clerk	2		" Coll. Observatory		3
Fitzpatrick, F. W.	1		Haverhill Public Library		2
Fleischmann, E. A.	1		Hawaiian Evangel. Ass'n		1
Fleming, W. H.	1		Heidelberg Univ. (Tiffin, O.)		1
Florida Agric. Commission		4	" Bibl. (Ger.)		121
" Health Board		2	Helm, N. W.		1
" Railroad Commis.		2	Hill, D. J.		1
" Treasurer		2	Holden, E. B.	134	5
Fokkens, F.	1		" E. S.	2	23
Fowler, A. M.	1	1	Hollinger & Co.	1	
			Horton-Smith, Lionel		1
			Howe, H. M.	7	
			Hoy, D. F.		21
			Hubert, P. G.		1
			Huguenot Soc. of London		1

	Vols.	Pam.		Vols.	Pam.
Huntington, W. R.	1		Kazan University	2	5
H. Sophie Newcomb Memorial College		2	Keller, A. G.		1
Idaho Treasurer	4		Kemp, J. F.	13	
" University	4		Kemsies, F.		11
Illinois Attorney-Gen.	2		Kentucky University		4
" Auditor	9	3	Kenyon College		1
" Board Pharmacy	5	3	Keppel, S. P.		1
" Canal Commission		11	Kepler, E. A. C.		4
" College		32	Kerr & Co.		1
" State Bd. Arbit.	4	2	Kew Royal Botanic Garden		1
" State Entomologist	1	4	King, W. F.		1
" Factory Inspector	3	1	Knight, E. C.	1	
" Farmers' Institute	4		Knox College		1
" Insane Asylum		1	Konvalinka, J. G.		3
" Labor Bureau	2		Kupfer, Miss Lillian	1	
" Live Stock Com.	2	6	Kündig, Henry	1	
" Railroad Commis.	1		Kunz, George		1
" St. Lab. Nat. Hist.		1	Lake Mohonk Arbitration Conference		1
" St. Penitentiary		12	Lane, W. C.	1	
" St. Reformatory	1		Lausanne University		1
" University	1	35	Law, J. D.		1
" Y. M. C. A.		1	Lawrence, C. I.	1	
Independent Labor Party		1	Lawrence Public Library		1
" Order Benai Berith		1	Lawson, Miss J. K.		1
Indian Rights Association	2		Leadville Sup't of Schools		1
Indiana Auditor of State	7	15	Lecointe, M. C.		12
" Charities Board		4	Lee, F. S.	1	
" Geol. Survey	2		Leipzig Univ. Bibliothek		302
" Health Board	5	3	Leipziger, Miss		1
" Hosp. for Insane		4	Leland Stanford Jr. Univ.		1
" Labor Commission	2		Lemcke, E. E.		1
" Med. Regis. and Examination Bd.	1		Lesage, J. S.		1
" Reformatory		2	Levasseur, E.	2	
" Sch. for Feeble Minded		9	Leyden Rijks. Univ. Bibl.		13
" State Library	16	18	Lewis Institute		1
Institut de France		8	Lille Univ. Bibliothek		1
Inst. of Civil Eng. (Eng.) of Mining Engineers	1		Liverpool Public Library		1
Internat. Engin. Congress	3		London Howard Ass'n		10
" Union Am. Rep.		2	" Pathological Soc.	1	
Iowa Agricultural College		2	" School Board	1	
" College		1	" Selden Society		1
" Health Board	3	2	" Women's Indus. Council		1
" Labor Bureau		1	Long Island Throat Hosp.		4
" Masonic Library		1	Louisiana Auditor	1	
" Railroad Commission	1		" Labor Bureau		1
" University	12		Louvain Université	3	46
Irwel, Lawrence		1	Low, Seth	76	19
Italy Min. di Agricoltura	1	3	Lowell (Mass.) Water Board		1
" Min. delle Finanze	1	2	Lund Univ. Bibliothek	2	
" Min. Pub. Istruzione	1		Lyon Univ. Bibliothek		6
Jackson, A. V. W.		18	McClure & Co.		1
Jamaica Institute		1	McGill University		12
Japan Dept. of Finance	2	1	McMaster University		1
Jena Univ. Bibliothek		106	Macmillan Co.		8
Jennings, J. G.	1		McMurry, F. M.	3	
Jersey City Pub. Library		3	Madras (India) Gov. Mus.		1
Joffe, J. A.	2		Magmisson, Erik		5
John B. Seton University	1		Maine Central R.R. Co., Education Dept.		1
John Rylands Library	29		" Gen. Conf. Congreg. Churches		1
Johns Hopkins University		1	" Labor Bureau	1	
Joseph, O. L.	1		" University		1
Judson, A. B.	47		Manchester (N. H.) Auditor Supt.	2	
Kansas City Comptroller		1	" " Pub. Inst.		1
" Education Bd.		1	" " Water Com.		1
Kansas Acad. of Science	1		Manchester (Eng.) Geol. Soc.		1
" Attorney-General	1		Manila Mining Bureau		1
" Bar Association		6	Manitoba College		1
" Health Board	7	6			
" Labor Bureau	1				
" Treasurer	2				

	Vols.	Pam.		Vols.	Pam.
Marburg Univ. Bibliothek		91	Missouri Auditor	6	
Maryland Geol. Survey	1		" Insurance Supt.	1	
" Health Board		5	" Labor Bureau	2	
" Soc. for the Hist.		1	" Railroad Commis.	2	
of the Germans			" St. Insane Hosp.		2
Mason, H. L.	1		" University		43
" W. E.		1	Monroe, Paul		6
Mass. Agric. College		5	Montclair Bible Teach. Coll.		9
" Ancient and Honora-			Montevideo Museo Nacional		1
ble Artillery Co.	1		Montpelier Univ. Bibl.		1
" Arbitration Board	1		Montreal Char. Organ. Soc.		1
" Bridgewater State			Moore, J. B.	3	
Normal School		6	Morgan, J. L. R.	1	
" Cattle Commission	1		Mort, L. F.	1	
" Charity Board	1		Moses, A. J.		273
" Civil Service Commis.		2	Motor World		31
" Chief District Police.	3		Mottet, Henry		1
" Education Board	1		Mount Holyoke College		1
" Gas and Electric Light			Munich Acad. der Wissen.		7
Commission	1		" Univ. Bibliothek		79
" General Hospital		1	Murray, T. H.		1
" Health Board	1		Nash, J. McL.	1	
" Inst. of Technology		8	National Ass'n St. Libr'ns		1
" Labor Bureau	9	9	" Bank of N. Amer.	1	
" Prison Commission	1		" Civil Service Ref.		
" Public Records Com.		1	League		1
" Railroad Commis.	1		" Educational Ass'n		37
" Savings Banks Com.	2		" Florence Crittenton		
" Secretary of State	1		Mission		12
" Soc. for Prevention			" Incorp. Waifs'		
Cruelty Animals		12	" Ass'n (Eng.)		1
" St. Board of Insanity	1		" League for the		
" State Hospital		1	Protection of		
" State Library	8	1	the Family		1
" Treasurer		1	Nebraska Supt. Pub. Inst.	1	8
Matteawan State Hosp. (N.		1	Nelson, C. A.		4
Y.)		1	Nevada Agric. Exp. Station		20
Mayolez et Audiarte, Edit.		2	" State University		24
Merck & Co.		1	New Brunswick Supt. Educ		2
Metcalf & Co., Limited		1	University		1
Meth. Epis. Church Educ. Bd.		1	New England Anti-Imper-		
Meyer, A. B.		1	ialist Leag.		1
Michigan Adjutant-Gen.	1		" Anti - Vivi-		
" Agric. College		1	sect. Leag.		5
" Asylum for Insane			New Hampshire Insur. Com.	1	
Criminals	5	1	New Haven Agric. Exp.		
" Bd. of Auditors	1	8	Station		2
" Bd. of Pardons	1	2	New Jersey Adjutant-Gen.		
" Dairy and Food			Assessors	2	
Commission	3	1	" Ass'n for the		
" East. Insane Asy.		12	Study of Chil.		
" Health Board	1	23	and Youth		1
" Inst. for Deaf			" Banking Dept.	3	
(Flint)	3	3	" Geol. Survey	1	
" Labor Bureau	2		" Health Board	1	
" Land Office	2		" Labor Bureau	1	
" Railroad Commis.	2		" Pub. Inst. Dept.	2	
" Salt Inspector		4	" State Library	2	4
" Sec. of State	5	20	" Prison	1	7
" St. Agric. College		7	" Treasurer	1	
" State Library	25	39	New Mexico University		5
" St. Normal Coll.		21	N. S. Wales Bd. Int. Exch.	3	1
" State Prison	1		" Gov. Statist	1	13
" Supt. Pub. Inst.	1		" Linnæan Soc.	1	
" Treasurer	1	15	" Mines Dept.	5	2
" University	1	5	N. Y. City Accounts Com.		2
Minnesota St. Agric. Soc.	3		" Aguilar Library		1
" Statis. Commis.	3	6	" Ass'n for Imp.		
" University		5	Cond. of Poor		1
Mississippi Health Board		9	" Athletic Club	1	
" Indust. Inst.		1	" Authors Club	1	
" Railroad Com.	1	6	" Blue Anchor Soc.		1
" Penitentiary		2	" Botanic. Garden.		3

	Vols.	Pam.		Vols.	Pam.
N.Y. City Bryan Democ. League		8	N.Y. City St. Mary's Hosp.		1
" Bryson Day Nursery		1	" St. Nicholas Soc. School Board	1	1
" Char. Org. Soc.	24	208	" Supt. of Schools	1	
" Ch. of Sea and Land		1	" Seaman's Christian Association		1
" Citizens Union Club	1	14	" Sheltering Arms Soc. française de Bienfaisance	1	1
" History Club		1	" Soc. P. C. C.	1	1
" Library	11		" Society Library		1
" Magistrates Bd. College	1	2	" Soc. Lying-in Hosp.		1
" Cutler School		1	" Soc. of N. Y. Hos. Transport. Club		1
" Deaconess Home		10	" Trinity Church Union League Club	1	1
" Econ. Pub. Co.	1		" United Hebrew Charities		1
" Educ. Dept.	2	28	" University		5
" Engineers' Club	1		" Univ. Club	1	
" Evening Post	1		" Univ. Penn. Club		3
" Gen. Mem. Hosp. and Tradesmen		2	" Washington H'ts Library		1
" Gospel Mission to the Tombs		1	" Webb's Acad.		1
" Grolier Club	7		" Webster Library		1
" Harlem Eye, Ear, and Throat Inf. Historical Soc.		2	" Working Girls' Vacation Soc.		1
" Home for Incur. Homœp. Med. Coll.		1	" Yacht Club		12
" Hosp. Saturday and Sun. Ass'n		1	" Y. M. C. A.		2
" House of the Annunciation	1		" Zoological Soc.		2
" Indian Ass'n		1	N.Y. St. Ass'n Opposed to the Suffrage of Women		1
" Inf. for Women and Children		1	" Attorney-General	1	
" Inst. for Blind		1	" Bar Association	1	
" Inst. for Inst. of Deaf and Dumb		1	" Chamber of Com.	1	
" Isabella Heimath Home for Aged		1	" Charities Board	4	6
" Juvenile Asylum . Kindergarten		1	" Char. Aid Ass'n		1
" Ass'n		1	" Civil Service Com.		4
" Labor News Co.	1	31	" Coll. of Forestry		1
" Lawyers' Co-op. Publishing Co.		1	" Comptroller	1	
" Life Ins. Co.		3	" Craig Colony for Epileptics		1
" Lotos Club	1		" Health Board	4	4
" Merchants' Ass'n		1	" Historian	2	
" Metal Exchange	1		" Insurance Supt.	4	2
" Metropol. Club	7		" Labor Bureau	4	3
" Met. Mus. of Art		1	" Legislature	3	3
" Met. Throat Hos.		1	" Library	3	1
" Midnight Mission		1	" Museum		2
" Mt. Sinai Hosp.		1	" Railroad Com.	46	2
" Municip. Art Soc.		1	" Sec. of State	2	5
" Nat. Arts Club	2		" Supt. of Banks	5	1
" New Eng. Soc.		1	" Supt. Pub. Inst.	1	8
" No. East. Disp.		1	" Tax Commission		54
" North. Disp.		1	" University		1
" Parks Dep't	5		" Woman's Hospital		1
" Pennsylvania Soc.	1		" Y. M. C. A.		1
" People's Inst.		1	Newark Educ. Board		1
" Public Library		102	" Newton (Mass.) Printing and Stationery Board	1	
" Registration and Trust Co.		2	" Niagara Falls Pub. Library		1
" Repub. Co. Com.		15	" Niederlein, Gustavo		1
" St. Francis Hosp.		1	" Noa, F. M.		24
" St. George's Ch.		1	" Noble, John		1
" St. Luke's Hosp.		2	" Nogueiro, Julio	1	
			" No. Carolina Coll. of Agric.		1
			" Health Board		4
			" Univ. Library		3
			North Cen. Ass'n Colleges and Secondary Schools		1

	Vols.	Pam.		Vols.	Pam.
Schoff, Wilfred	1		Telford, C. M.	1	
Schoolmasters' Ass'n of N. Y.		1	Tennessee University	2	24
Schuyler, Montgomery	1		Theol. Sem. of the Ref. Ch. in America		2
Searles, E. F.	1		Texas University		4
Seligman, E. R. A.	187	550	Third Ch. of Christ. Sci.	1	
Sellers, E. J.	1		Thomas S. Clarkson Mem. School of Technology		2
Sever, G. F.	1		Tokio Imp. University		8
Shepard, A. K.	1	1	Tombo, Rudolf, Jr.	1	
" F. J.	1		Tompkins, H. B.		1
Sherwood Press		2	Toronto Astronomical Soc.		1
Sherwood, W. L.		5	" Public Library		2
Shufeldt, R. W.		3	" Univ. Library	2	5
Siena (Italy) R. Acad. dei Fisiocritici		7	Torrey Botanical Club	3	
Sihler, E. G.	1		Toulouse Univ. Bibl.	1	12
Silbernagel	41		Toulane University		1
Silk Ass'n of America		1	Trinity College (N. C.)		2
Simkhovitch, G. V.	20	11	Univ. (Toronto)	8	3
Simms, Joseph	4	1	Trudeau, E. L.		31
Simmons College		3	Tübingen Univ. Bibliothek		51
Simonson, Gustav	2		Tufts College		3
Singer, Isidor		1	Uhlig, Gustav		3
Smith, E. R.	1		Union of Am. Hebrew Con- gregations		1
" Thomas	1	1	" Theological Sem.		1
" W. H.	1		Unitarian Conference of Middle States and Canada		1
" W. W.		7	U. S. Agricultural Dep't	1	15
" College		14	" Census Office	2	1
Smithsonian Institution	10	67	" Civil Service Commis.	2	
Soc. for Encourag. of Arts, Manuf., and Com.		1	" Education Board	4	11
" for the Propagation of the Faith		2	" Geological Survey	8	36
" of Colonial Wars	1		" Industrial Commis.	12	
" of Mayflower Descend.	1		" Interior Dep't	6	39
" Army of the Potomac		1	" Interst. Commerce Com.		1
Somerville (Mass.) City Clk. Mayor	1 1 1		" Justice Dep't		8
Son, C. A.	1		" Labor Dep't	7	1
Spingarn, J. E.		4	" Library of Congress	109	4956
Soper, G. A.		3	" Lighthouse Board	1	
South Carolina Health Bd.		1	" Manufac. Perfumers' Ass'n		1
" Dakota Sch. of Mines School		1	" Military Academy		3
Southborough St. Mark's School		1	" Naval Academy		110
Southern Educ. Ass'n		1	" Observatory		1
Springfield (Mass.) City Library Association		1	" Navigation Commis.	1	
Stanford University		2	" Navy Dep't		1
Statute Law Book Co.		1	" Patent Office	1	
Stechert, G. E.	1		" Railroad Commission		1
Steeves, H. R.	2		" Secretary of Senate	1	3
Stephens, Miss Kate	1		" State Dep't	10	8
Staubenville Supt. Schools		1	" Supt. of Documents	259	518
Stockholm Konglight Bibl.		1	" Treasury Dep't	8	9
" Royal Ethno- graphical Mus.		3	" War Dep't	22	278
Stocquart, Emile		1	" Weather Bureau	1	3
Stoeckel, Carl	1		Unity Publishing Co.		52
Stonyhurst College Obser- vatory		1	Unknown Giver	19	127
Strassburg Universitäts		87	Unwin, T. F.		1
Straus, O. S.	1	1	Upsala University Library	2	27
Struthers, Joseph	3		Utah University		1
Sturgis, Russell	23	23	Utrecht University Library		52
Superior (Wis.) Normal Sch.		1	Van de Water, G. R.		1
Swansea Training College		1	Vanderbilt University		5
Swarthmore College		1	Van Ingen	1	
Switzerland Bur. de Statist.		1	Vermont Agric. Exp. Stat. University	2	6
Syracuse Education Board		1	Veteran Corps of Artill.		1
" Public Library		1	Vicksburg Nat. Milit. Park Commission		2
" St. Inst. for Feeble Minded Children		1	Victoria (Aus.) Mines Dep't University (Eng.)	1	1
Teachers College	19	177	" (Canada)		0

	Vols.	Fam.		Vols.	Fam.
Vienna Universitäts Bibl.		5	Whitehead, H. C.		1
Viereck, L.	1		Wilcox, E. M.		3
Villanova College		1	Wilkes-Barre Wyoming His. and Geological Soc.		1
Virginia University		4	Williams College Library Co.	1	4
Voelkel, T.	1		Wilmington Institute		15
Wait, J. C.	2		Winans, G. W.	1	
Waldman, Max	1		Wingate, C. F.	9	14
Ward, John		1	Winona (Minn.) Health Bd.		1
Wardwell, T. O.		1	Wisconsin Historical Soc.	1	3
Warner, G. E.	2	10	" University		7
Washburn College		2	Wittenburg College		1
Washington (D. C.) Biol. Soc.		27	Wood, C. E. S.	1	
" " Phil.Soc.		2	" R. D. & Co.	1	
" " Sch. for Boys		1	" T. B.	1	
" University		7	Worcester (Mass.) Acad.		
" Co. Free Lib'y		2	" Public Lib'y		11
Wehle, Miss Hannah		22	" Co. Law Lib'y		1
Welcome Chem. Research Laboratories (Eng.)		4	" Polytech. Inst.		1
Wells College		2	Wurtzburg UniversitätsBibl.		5
West, Max	1		Wyoming University		1
West Va. Labor Statist. Bur. " Mine Inspector		1	Yale University	24	2
" University		22	Yamada, S.		2
Western Reserve Univ.		2	Yohannan, M.	1	
" Univ. of Penn.		1	Yorkshire Phil. Society		1
Western, S. B.		1	Y. M. C. A. International Com.		3
Westinghouse Electric Co.		24	Zeiss, Carl	1	
Whinfield, E. H.	1				
White, Van Glahn & Co.	1				
				3,971	23,272

Archduke Ludwig Salvator	1	Chart
California State Mining Bureau	2	Maps
Canada Geological Survey	1	Map
Cattell, Prof. J. McK.	83	Charts
Kazan University	3	Maps
Nebraska Labor Statistics Bureau	1	Map
New Jersey Geological Survey	1	"
U. S. Geological Survey	136	Maps
U. S. State Department	1	Chart

Mr. W. C. Hamm has given a large and complete collection of newspaper clippings, on politics in the different States.

17 Cases of Chinese publications have been received from the Chinese Government.

Mrs. S. M. Dibblee gave 335 volumes from the library of her son, Frederick W. Dibblee (deceased), Columbia Arts '80, Law '82, for Earl Hall.

THE GYMNASIUM

REPORT OF THE DIRECTOR

FOR THE YEAR ENDING JUNE 30, 1902

*To the President of Columbia University
in the City of New York,*

SIR:

I have the honor to submit the following report of the work of the Gymnasium Department for the academic year 1901-02.

The staff given in my last report has continued to serve throughout the present year with the exception of a minor change in office-boy attendance. The plan of instruction has been the same as in the past; the work of the office, expanding with four years' use of the Gymnasium, is well ordered and arranged; and the administration of the department in every direction has moved with ease and efficiency.

The steady growth of the required classes and the increased interest in the optional work made it seem advisable to add to the number of hours for instruction. A morning period was added on Tuesdays and Thursdays for Freshmen and First-Year men, thus providing for regular instruction at 10.30, 11.30, and 12.30 on four days of the week. This freedom of hours made it possible for the students to avoid conflicts with other courses and also served to reduce the size of these divisions. The afternoon class on Mondays, Wednesdays, and Fridays, open to law, graduate, and advanced students, was likewise given on two other days of the week. The average attendance on three of these days for the past two years furnishes an interesting comparison:

Month	1900-1901	1901-1902
Oct.	16	28
Nov.	24	42
Dec.	25	38
Jan.	22	42
Feb.	23	32
Mar.	26	40

Owing to the number of entrances to the Gymnasium due to connections with the new story overhead, it was found impracticable to keep an accurate count of the men making use of the building. As showing, however, the increase in general efficiency, the following table will be most convincing:

ATTENDANCE ON MAIN FLOOR

(EXCLUDING SATURDAYS AND HOLIDAYS)

	1900-1901			1901-1902		
	Monthly total	Divisor	Daily average	Monthly total	Divisor	Daily average
Nov.	4,412	(20)	220.6	3,196	(9)	355
Dec.	2,810	(14)	200.7	4,259	(14)	304
Jan.	3,502	(18)	194.5	5,005	(15)	334
Feb.	3,426	(17)	201.5	3,900	(11)	354
Mar.	3,914	(21)	186.5	4,684	(16)	293
Apr.	2,415	(19)	127.1	1,755	(6)	292
	<u>20,479</u>	(109)	187.	<u>22,799</u>	(71)	321

During the year a slight increase was noted in the use of the swimming-pool, the figures showing a total attendance of 22,861 as against 21,975 for the same period last year. Fifty students were taught to swim and much more instruction was given in advanced swimming than ever before. In this connection I beg to call your attention to my letter of March 18, in which it was recommended that Mr. Holroyd be allowed to give his entire time to teaching and that separate provision be made for the care of the pool.

For the first time there is prospect that our accommodations will soon be outgrown, since the number of lockers unused this year is less than the regular increase in the demand. Out of 1472 lockers, there were assigned to students during the year 1418 lockers, or 123 more than in the year previous. While lockers (44 in number) in the crew rooms will afford

relief at the first shortage, it is evident that provision must be made in the near future for the extension of the large locker room and an increase in the number of lockers.

Over one thousand physical examinations have been made during the year, and 395 pass cards have been issued to candidates for athletic teams: 180 of this number received first-grade cards; 201 received second-grade cards; and the remaining 14 received third-, or lowest-, grade cards. About a dozen others were barred from various grades of athletics. The Director's office has been visited more freely for consultation and inquiry as to medical treatment, and over one hundred dressings and minor operations have been made during the year. It is gratifying to note that accidents within the department have been almost nil, there being none whatever of a serious nature. Such a record of safety reflects great credit upon the watchfulness and judgment of the floor and pool instructors.

The number of applications received for instructors in gymnastics is a new and welcome feature. Such positions have been recorded from over twenty colleges, schools, and other institutions, and several of this number, local in character, have been filled by students of the University. In offering these places, a difficulty appears in the fact that students taking up such work become professionals and are barred from further participation in college athletics. It has been impossible to fill the college positions recorded in the files of the office, since men have not been attracted to Columbia, heretofore, to prepare for this branch of teaching. We therefore welcome the institution of such a course at Teachers College, the need of which was observed to President Low in my letter of February 18, 1901.

An appeal to secure a place for the display of athletic trophies was repeated by the Director early in the year and met with prompt and complete action on the part of the students. A committee was organized to undertake this task, rooms for the reception of trophies won for Columbia were turned over to the organization, and such trophies in the care of the Director were put in its charge. Trophies have since been recovered and gifts added to this collection, which is

accessible at all times, the key being obtainable at the office of the Gymnasium upon proper application.

An active interest has been taken in all branches of indoor sport, and the season also has been successful from the standpoint of competition with other colleges. The interesting factor in these contests is the steady improvement noted in the Columbia teams during the progress of the season, so that an excellent showing was made in the important meeting at the close. These teams, in the first three instances, are direct representatives of the department in athletics, and their achievements throw credit upon the instructors in the department, who began the season in some cases with comparatively raw material. The Gymnastic Team gained second honors in the intercollegiate meets and was first among the colleges in the national championships. The Water Polo and Relay Swimming Teams retained the intercollegiate championship, and the Water Polo Team was the first to score against the famous Knickerbocker Athletic Club champion team since 1900, and the first to score against the Club at any time in the latter's pool. In the Intercollegiate Strength Competition, Columbia raised her standard 7377.2 points, taking second place to Harvard in the greatest contest on record to date. The average strength of our own best fifty men is this year greater than that of last year's intercollegiate fifty. The individual record of the University in this contest was subsequently raised from 1814 points to 2072.2 points, which is the third highest college test recorded. In the final fencing contest, Columbia took second place, and one of her men tied for the individual championship. For the first time to our knowledge, intercollegiate handball games were played, both matches being won by the University team. The Varsity Basketball Team tied with Yale for first place, thus equalling the general success of our other teams.

With regard to the condition of the athletic grounds at Williamsbridge, little need be added to my reports of the past two years, other than a statement of the use made of the Oval. During the season the track, lacrosse, and class baseball teams made use of the field for part of their schedules. The outside organizations using the grounds were the Columbia

Oval Cricket Club, Trinity, Drisler, Cutler, Sachs, and De La Salle Schools, the Interscholastic Athletic Association, and the McKim, Mead, and White Baseball Teams. The total income derived from this source amounted to \$880, as against \$600 last year, while the expenses foot at \$600 for Caretaker and \$153.72 for Repairs and Supplies.

Respectfully submitted,

WATSON L. SAVAGE,

Director of the Gymnasium.

COLUMBIA UNIVERSITY

REPORT OF THE REGISTRAR

FOR THE ACADEMIC YEAR ENDING JUNE 30, 1902

*To the President of Columbia University
in the City of New York,*

SIR:

I have the honor to submit herewith the annual report of the Registrar of the University for the academic year ending June 30, 1902. The usual statistics are herein included, consisting in the main of two distinct categories: first, tables indicating the enrollment, geographical distribution, and previous collegiate preparation of our students, together with certain Commencement statistics; second, tables relating to the enrollment of students in all departments of the University Corporation (*i. e.*, exclusive of Barnard College and Teachers College).

It is gratifying to report that the University's sphere of influence has been considerably extended during the year now closing: 5134 students have been enrolled in the various schools of the affiliated institutions, as compared with 4440 students enrolled during 1900-1901, representing a gain of 15.63 %. In the University Corporation alone, inclusive of the Summer Session, the enrollment increased from 3145 to 3481, a gain of 10.68 %. Exclusive of the Summer Session, the increase has been from 2728 to 2902, a gain of 6.37 %. There has been a gain in every department of the University, except in the class of auditors. A comparison of Table I, submitted herewith, with the corresponding table for 1900-1901 (President's Report, 1901, p. 246), readily furnishes the following percentages of gains for the respective faculties: Columbia College, 3.36 %; Barnard College, 12.62 %; graduate faculties of Political Science, Philosophy, and Pure Science, 17.32 %; Faculty of Applied Science, 10.60 %; Faculty of Law, 4.02 %; Faculty of Medicine, 1.50 %; Teachers College, 20.08 %; Summer Session, 38.85 %; Extension Students, 32.55 %; Auditors, 22.22 % (loss).

TABLE I

REGISTRATION AT COLUMBIA UNIVERSITY, IN ALL FACULTIES,
DURING THE ACADEMIC YEAR 1901-1902

FACULTIES	First Year	Second Year	Third Year	Fourth Year	Specials	Graduates	Total
Columbia College.....	142	102	90	94	55	.....	492
Barnard College.....	98	72	48	51	70	.....	339
Total undergraduates.....							831
Faculties of Political Science, Philosophy, and Pure Science } Total non-professional gradu- } ate students } (*).....					12	496	508
Faculty of Applied Science.....	193	158	130	91	43	11	626
Faculty of Law.....	162	150	126	.....	2	.....	440
Faculty of Medicine.....	253	198	179	148	31	.....	809
Teachers College (†).....							634
Total professional students.....							2509
Deduct double registration (‡).....							134
Net total resident students in } the University }.....							3714
Summer Session 1901.....							579
Auditors.....							27
Teachers College extension students (§).....							900
Total occasional students and auditors.....							1506
Deduct double registration (||).....							86
Net total occasional students } and auditors }.....							1420
Grand net total.....							5134

* The total 508 does not include 94 college graduates studying under the professional faculties of Law, Medicine, and Applied Science, who are also candidates for the degree of A.M. or Ph.D.

† For a statistical classification of students primarily enrolled in Teachers College, consult the report of the Dean of Teachers College, p. 193.

‡ The 134 are distributed as follows: 12 students in Columbia University and 38 in Barnard College are also enrolled in Teachers College as candidates for a professional diploma; 84 Teachers College students are enrolled in the graduate faculties as candidates for the higher degrees.

§ Teachers College extension students enjoy the same rights and privileges, and are subject to the same conditions, in the courses for which they enroll, as the regular students of the College.

|| This includes those Summer Session students of 1901 who returned for work at the University during the academic year 1901-1902.

The geographical distribution of students in the University Corporation, shown in Table II, embraces 45 states, 4 territories, and 12 foreign countries. I have indicated in parentheses after the names of the various divisions the percentages of representation from the respective divisions. It may be of interest to compare these percentages with the corresponding percentages for the year 1900-1901, which are herewith given:

	1902	1901
North Atlantic Division.....	84.93	84.34
South Atlantic Division.....	2.40	2.45
South Central Division.....	2.19	2.78
North Central Division.....	5.87	5.94
Western Division.....	3.02	2.82
Insular Territories.....	0.03	0.15
Foreign Countries.....	1.56	1.52

TABLE II

RESIDENCES OF STUDENTS—(A) THE UNITED STATES

1901-1902	College	Law	Medicine	Applied Science	Political Science	Philosophy	Pure Science	Total
North Atlantic Division (84.93 %):	468	342	711	539	100	236	46	2442
Connecticut.....	5	6	38	15	1	3	2	70
Maine.....			4	1	1	4	1	11
Massachusetts.....	3	9	31	4	5	9	1	62
New Hampshire.....		1	4	1	1	1		7
New Jersey.....	54	17	109	50	10	19	1	260
New York*.....	397	294	496	457	77	192	38	1951
Pennsylvania.....	7	13	12	10	3	6	1	52
Rhode Island.....		2	1	2	1	1	1	19
Vermont.....	2		5			2	1	10
South Atlantic Division (2.40 %):	4	18	21	11	3	11	1	69
Delaware.....			1	1		2	1	5
District of Columbia.....	2	3	1	2		1		9
Florida.....			3					3
Georgia.....	1	9	8	2	2	1		23
Maryland.....		1		4		2		7
North Carolina.....		1	4	1	1	3		10
South Carolina.....		2	1			2		5
Virginia.....	1	1	2	1				5
West Virginia.....		1	1					2
South Central Division (2.19 %):	8	17	20	2	7	8	1	63
Alabama.....	1		3	1	1	1		7
Arkansas.....		1	2		1			4
Kentucky.....	1	6	6		2	1		16
Louisiana.....		1		1				2
Mississippi.....	1		1		1	3	1	7
Oklahoma.....						1		1
Tennessee.....		7	2		1			10
Texas.....	5	2	6		1	2		16
North Central Division (5.87 %):	8	45	32	23	27	27	7	169
Illinois.....		8	3	3	6	4		24
Indiana.....	2	9	5	2	2	2		22
Iowa.....	1	6	2	1	2	4	2	18
Kansas.....		1			1		1	3
Michigan.....	1	2	3		4	5	1	16
Minnesota.....	1		1	3		3	1	9
Missouri.....	1	4	2	4	1		1	13
Nebraska.....		4	1	2		3		10
North Dakota.....		3						3
Ohio.....	1	8	11	6	6	4	1	37
South Dakota.....	1			2		1		4
Wisconsin.....			4		5	1		10
Western Division (3.02 %):	3	16	12	36	7	9	4	87
California.....	1	4	3	5	5	8		26
Colorado.....	1	2	2	10			2	17
Idaho.....		1						1
Montana.....	1	2	2	5				10
Nevada.....		1	1					2
New Mexico.....				4			1	5
Oregon.....		3	1	1		1	1	7
Utah.....				8				8
Washington.....		3	1	3	2			9
Wyoming.....			1					1
Insular Territory (0.03 %):			1					1
Porto Rico.....			1					1
Total (98.44 %):	491	438	796	611	144	291	59	2830

* 1623 students claim New York City for their permanent residence, distributed among the faculties as follows: College, 343; Law, 235; Medicine, 404; Applied Science, 397; Graduate Faculties of Political Science, Philosophy, and Pure Science, 244.

TABLE II (continued)

(B)—FOREIGN COUNTRIES

1901-1902	College	Law	Medicine	Applied Science	Political Science	Philosophy	Pure Science	Total
Australia.....			1	1				2
Canada.....		1	4	1	1	2	1	10
Cuba.....			5	3				8
England.....				5				5
Germany.....				1				1
India.....		1	1			1		3
Japan.....					8		1	9
Mexico.....			1	2				3
Russia.....	1							1
South Africa.....				1				1
South America.....			1	1				2
Total.....	1	2	13	15	9	3	2	45
Grand Total (1.56 %):....	492	440	809	626	153	*294	61	2875

Table III is of a comparative nature, indicating the geographical distribution of students since 1891.

* 85 of these are registered in Teachers College.

TABLE III

COMPARATIVE TABLE SHOWING THE GEOGRAPHICAL DISTRIBUTION OF STUDENTS SINCE 1891

(A)—THE UNITED STATES

	1891	1892	1893	1894	1895	1896	1897	1898	1899	1900	1901	1902
North Atlantic Division:	1578	1400	1435	1585	1712	1634	1666	1848	1894	2069	2273	2442
Maine.....	4	6	6	10	8	14	14	10	9	9	12	11
New Hampshire.....	8	6	5	6	6	4	4	3	4	4	4	7
Vermont.....	5	5	7	8	9	6	9	13	6	10	13	10
Massachusetts.....	27	30	35	37	42	34	36	41	37	62	57	62
Rhode Island.....	15	12	8	9	12	10	8	10	11	11	18	19
Connecticut.....	51	35	33	30	40	35	40	54	58	70	63	70
New York.....	1250	1112	1137	1246	1335	1286	1308	1433	1501	1630	1799	1951
New Jersey.....	180	165	178	212	229	210	214	237	230	230	256	260
Pennsylvania.....	38	29	26	27	31	35	33	47	38	43	51	52
South Atlantic Division:	29	32	38	31	31	30	41	47	45	69	66	69
Delaware.....	2	1	1	1	2	2	2	2	2	2	2	5
Maryland.....	4	5	8	8	9	5	6	4	5	7	7	7
District of Columbia	3	6	5	3	3	3	1	2	3	5	6	9
Virginia.....	6	4	7	5	4	5	5	10	10	14	9	5
West Virginia.....	1	3	3	5	2	1	5	4	2	2	3	2
North Carolina.....	5	6	5	2	1	2	9	8	8	15	12	10
South Carolina.....	1	1	2	3	2	2	2	2	2	1	5	5
Georgia.....	7	7	5	3	7	10	12	14	11	20	22	23
Florida.....	1	1	3	1	1	2	1	3	2	3	2	3
South Central Division:	24	21	30	42	41	34	35	47	42	48	75	63
Kentucky.....	4	5	9	11	14	10	8	10	11	13	22	16
Tennessee.....	4	7	6	6	5	8	7	9	6	5	14	10
Alabama.....	3	3	4	7	8	6	7	10	8	8	13	7
Mississippi.....	2	1	1	1	1	1	1	2	2	3	2	7
Louisiana.....	2	1	3	1	1	1	2	2	1	2	3	2
Texas.....	6	4	8	16	12	9	5	11	9	14	15	16
Arkansas.....	3	1	1	1	1	1	4	2	5	3	4	4
Oklahoma.....	1	1	1	1	1	1	1	1	1	1	2	1
North Central Division:	73	65	81	97	102	113	115	130	133	159	160	169
Ohio.....	20	19	25	28	26	35	37	37	25	34	41	37
Indiana.....	1	4	4	8	12	5	10	11	17	24	21	22
Illinois.....	15	10	6	16	9	9	12	19	24	23	20	24
Michigan.....	3	3	4	7	2	3	7	7	10	16	11	16
Wisconsin.....	12	10	13	10	8	13	8	13	11	9	5	10
Minnesota.....	5	6	8	8	12	11	6	7	8	8	8	9
Iowa.....	3	5	7	4	6	8	12	13	11	8	13	18
Missouri.....	9	4	5	6	14	17	9	12	11	14	17	13
North Dakota.....	1	1	2	2	3	3	3	1	2	2	2	3
South Dakota.....	1	1	1	1	1	1	1	1	1	1	1	4
Nebraska.....	3	2	3	4	5	4	6	2	7	12	10	10
Kansas.....	1	1	4	4	4	4	7	7	6	8	3	3
Indian Territory.....	1	1	1	1	1	1	1	1	1	1	1	1
Western Division:	25	24	29	27	25	27	38	45	55	59	76	86
Montana.....	6	1	3	1	2	3	4	4	8	7	8	10
Wyoming.....	1	1	1	1	1	1	1	1	2	1	1	1
Colorado.....	7	5	3	1	1	2	6	12	12	13	21	17
New Mexico.....	1	1	1	1	1	1	1	1	1	1	3	5
Arizona.....	1	1	1	1	1	1	1	1	1	1	1	1
Utah.....	1	2	3	3	5	2	4	5	6	5	9	8
Nevada.....	1	1	1	1	1	1	1	1	3	3	1	2
Idaho.....	1	1	1	1	1	1	1	1	1	1	1	1
Washington.....	4	2	1	1	1	4	4	4	1	2	4	9
Oregon.....	3	5	6	8	3	1	5	3	3	3	5	7
California.....	3	7	12	11	13	13	14	15	19	24	23	26
Insular and Non-contiguous Territories:												
Alaska.....	1	1	1	1	1	1	1	1	1	3	4	1
Hawaiian Islands.....	1	1	1	1	1	1	1	1	1	3	2	1
Porto Rico.....	1	1	1	1	1	1	1	1	1	1	1	1
Total.....	1729	1542	1614	1783	1911	1839	1895	2117	2170	2407	2654	2830

TABLE III (continued)

(B)—FOREIGN COUNTRIES

	1891	1892	1893	1894	1895	1896	1897	1898	1899	1900	1901	1902
North America:	10	13	15	18	22	21	14	18	15	18	20	21
Bermuda.....	1	1	1									
Canada.....	1	6	7	10	11	12	7	11	10	9	6	10
Central America.....	1	3		1	2	3					1	
Costa Rica.....	4		2	2	1	1						
Cuba.....	2	1	2	4	4	4	4	5	4	5	7	8
Mexico.....	1	1	2	1	1	1	2	2	1	4	6	3
Porto Rico.....			1		2							
Santo Domingo.....					1							
West Indies.....			1				1					
South America:	2	4	4	2	3	1				1	2	2
Brazil.....		1										
Peru.....	1	1	1									
U. S. of Colombia..	1	2	3	1	3	1						
Unclassified.....				1						1	2	2
Europe:	5	9	5	1	2	2	5	13	7	7	8	7
Austro-Hungary.....		3	2					3				
England.....	1									2	6	5
France.....		1	1	1		1					1	
Germany.....	2	1									1	1
Ireland.....							1	1	1	1		
Italy.....		1				1					1	
Russia.....		2			1		1	5	3			1
Scotland.....			1					1				
Spain.....	1	1			1		1	1	1			
Sweden.....			1									1
Switzerland.....								1				
Turkey.....	1						2	1	2	1	1	
Asia:	5	3	3	1	4	7	3	5	10	16	8	12
Asia Minor.....	1				1			1				
China.....	1	1										
India.....		1										3
Japan.....	3		2	1	3	7		3	9	14	6	9
Persia.....							3	1	1	1	1	
Syria.....		1	1							1	1	
Africa:		2					1	1	3	2	2	1
Egypt.....		1										
Liberia.....		1										
South Africa.....							1	1	3	2	2	1
Australia:										1	1	2
Oceania:					1	1	3	3	3			
Hawaiian Is.....					1	1	3	3	3			
Total	22	31	27	22	32	32	26	40	38	45	41	45
Grand Total *	1751	1573	1641	1805	1943	1871	1921	2157	2208	2452	2695	2875

41.6% of our students are graduates of institutions of collegiate rank, as compared with 40.3% in 1901. These 1197 students are graduates of 220 higher institutions of learning in the United States, and of 34 similar institutions in foreign countries. Detailed information covering this point is to be found in Table IV.

* Exclusive of auditors.

TABLE IV
 PERCENTAGE OF DEGREES
 (A)—HIGHER INSTITUTIONS IN THE UNITED STATES

1901-1902	College	Law	Medicine	Applied Science	Political Science	Philosophy	Pure Science	Total
Adelphi College.....					2	5		7
Alabama Polytech. Inst.....			1	1	1			3
Albany Medical College.....			1					1
Albion College, Mich.....						2		2
Alfred University, N. Y.....			1		3	2		6
Alma College, Mich.....		1						1
Amherst College.....		3	5	1	7		1	22
Armour Inst. of Tech.....				1				1
Austin College.....		1						1
Baker University.....					1			1
Baldwin University.....		1						1
Bates College.....						1		1
Bellevue Hospital Med. Coll., N. Y.			1					1
Beloit College.....					3	1		4
Berea College.....						1		1
Bethel College.....		1						1
Blackburn University.....					1			1
Black Hills College.....		1						1
Boston University.....		1	2		3			6
Bowdoin College.....		1			1	1		3
Brooklyn Polytech. Inst.....				2				2
Brown University.....		1	9		3	2	1	16
Bryn Mawr College.....					2	8	3	13
Buchtel College.....							1	1
Bucknell University.....		1				1		2
Buffalo Law School.....	1							1
Canisius College, N. Y.....		3						3
Carleton College.....		1	1					2
Case School Appl. Science.....				1				1
Central Female College, Mo.....						1		1
Central Pennsylvania Coll.....						1		1
Central University, Ky.....		1						1
Centre College, Ky.....					1			1
Colby University, Me.....		1			1	1		3
Colgate University, N. Y.....			2			2	1	5
Coll. of the City of New York.....		34	42	16	4	40	5	141
College of Pharmacy, N. Y.....			7	2				9
Colorado College.....					1			1
Columbia University.....		80	30	6	26	63	22	227
Concordia College, Ind.....					1			1
Cornell University, N. Y.....		5	2	1	2	9	1	20
Creighton College, Neb.....				1				1
Cumberland Presb. Theol. Seminary					1			1
Cumberland University, Tenn.....					1			1
Dalhousie University.....					1			1
Dartmouth College.....		1	1			2		4
Davidson College.....					1			1
Delaware College.....						1		1
Dennison University.....					1		1	2
De Pauw University.....			1			1		2
Detroit College.....			1					1
Dickinson College, Pa.....		1	2					3
Drew Theol. Sem., N. J.....					1	2		3
Earlham College, Ind.....			1			1		2
Emory College, Va.....			1		2			3
Episcopal Theological Seminary.....			1					1
Eureka College, Ill.....		1						1
Fargo College.....		1						1
Franklin College.....			3					3
Franklin and Marshall Coll.....		2		1				3

TABLE IV (continued)

1901-1902	College	Law	Medicine	Applied Science	Political Science	Philosophy	Pure Science	Total
	Fremont Normal College, Neb.	1						1
	Garrett B. Institute.				1			1
	Geneva College, Pa.					2		2
	Georgetown University	2	2					4
	Grant University.				1			1
	Grove City College, Pa.					1		1
	Hamilton College, N. Y.	6	3		2			11
	Hamline College					1		1
	Harvard University.	10	19	7	3	14		53
	Haverford College, Pa.	1						1
	Heidelberg College, Ohio					1		1
	Highland Park Normal School						1	1
	Hillsdale College.				1			1
	Hiram College, Ohio				2	1		3
	Hobart College, N. Y.	1	1		1	1		4
	Holy Cross College, Mass.		6					6
	Hospital School of Medicine, Md.		1					1
	Illinois College.	1						1
	Illinois Wesleyan University.					1		1
	Indiana University.	1	1			3		5
	Iowa College.				3	1		4
	Iowa State College.		1					1
	Johns Hopkins University.	1		3		1		5
	Kentucky School of Medicine.		1					1
	Kentucky State College.		3					3
	Kentucky University.	1	2					3
	Kenyon College, O.	2						2
	Knox College, Ill.	3				2		5
	Lafayette College, Pa.	2	2	1		1		6
	Lake Forest University			1		1		2
	Lehigh University, Pa.		1					1
	Leland Stanford Jr. Univ.	4	3	2	3	2	2	16
	Long Island College Hospital.		1					1
	Manhattan College, N. Y.		2		1	2		5
	Marietta College, O.	1						1
	Maryland College of Pharmacy.		1					1
	Mass. Agricultural College.		1					1
	Mass. Inst. of Tech.					1		1
	Memphis Hospital Med. Coll.		1					1
	Mercer University.	1						1
	Middlebury College, Vt.					1		1
	Miss. Agr. and Mech. Coll.				1		1	2
	Miss. Industrial Inst.					1		1
	Monmouth College.					1		1
	Mount Angel College.	1						1
	Mount Holyoke College, Mass.					2		2
	Mount Union Coll., O.				2			2
	Nebraska State Coll.					1		1
	Nebraska Wesleyan Coll.					1		1
	New Hampshire State Coll.		1					1
	New York Law School.		1		4	1		6
	New York State Normal College.					2		2
	New York University.	1	11	1	7	18		38
	Normal College, Danville, Ind.					1		1
	Northern Ind. Normal College.					1		1
	Northwestern University, Ill.					2		2
	Norwegian Lutheran College.					1		1
	Notre Dame University, Ind.		3					3
	Oberlin College, O.	2	1		2	2		7
	Ohio State University.					3	1	4
	Ohio Wesleyan University.		1		5			7
	Oxford College.					1		1
	Pennsylvania Military College.	1	1		2			4
	Pennsylvania State Coll. (A. & M.)	2	1					3

TABLE IV (continued)

1901-1902	College	Law	Medicine	Applied Science	Political Science	Philosophy	Pure Science	Total
Princeton University.....		9	22	6	4	6	1	48
Purdue University.....						1		1
Radcliffe College, Mass.....					1	3		4
Redfield College.....						1		1
Richmond College, Va.....		2	1					3
Roanoke College, Va.....		1				1		2
Rock Hill College.....			1					1
Rutgers College, N. J.....		1	8	1	2			12
St. Francis College, N. Y.....			1					1
St. Francis Xavier College, N. Y.....		12	4	3		4		23
St. John's College, Md.....		2						2
St. John's College, Mhntn., N. Y.....			2	1				3
St. Joseph's College.....			1					1
St. Paul's College, Pa.....						1		1
St. Peter's College.....			6					6
St. Stephen's College, N. Y.....						1		1
St. Vincent's College.....		1						1
Santa Clara College, Cal.....		2						2
Seton Hall College, N. J.....			1					1
Simpson College, Iowa.....							2	2
Smith College, Mass.....					5	8		13
South Carolina College.....		1						1
South Dakota Agr. College.....				1				1
South Dakota State College.....				1				1
Southwestern University, Texas.....			1			2		3
Stevens Institute, N. J.....							2	2
Storrs Agricultural Coll., Conn.....			1					1
Swarthmore College, Pa.....							1	1
Syracuse University, N. Y.....					1	3		5
Trinity College, Conn.....			3	1	1	4	1	10
Trinity College, N. C.....			1					1
Tufts College, Mass.....		1						1
Tulane University, La.....				1				1
Union College.....							1	2
United States Military Academy.....		1						1
University of Alabama.....			1					1
University of Buffalo.....				1				1
University of California.....		3	2		1	3		9
University of Chicago.....		1		1	1	2		5
University of Cincinnati.....						2		2
University of Colorado.....			1			2	1	4
University of Georgia.....		4	1		1	1		7
University of Idaho.....		1						1
University of Iowa.....		2		1			1	4
University of Kansas.....					1	1	2	4
University of Louisville.....	1	1						2
University of Maine.....				1	1	1	1	4
University of Michigan.....					4	7		11
University of Minnesota.....					4	4	1	5
University of Mississippi.....			1			1		2
University of Missouri.....		1		1				2
University of Nashville.....						2		2
University of Nebraska.....		2	3					5
University of Nevada.....								1
University of New Mexico.....						1		1
University of North Carolina.....			1	1	1	1		4
University of Omaha.....						1		1
University of Oregon.....		2				1	1	4
University of the Pacific.....					1			1
University of Pennsylvania.....			1	1	1			3
University of Rochester.....		3	2				2	7
University of So. Carolina.....					1			1
University of the South, Tenn.....		3		1				4
University of Tennessee.....					1			1

TABLE IV (continued)

1901-1902	College	Law	Medicine	Applied Science	Political Science	Philosophy	Pure Science	Total
University of Utah.....				3				3
University of Vermont.....			2				2	4
University of Virginia.....		1	4					5
University of Washington.....		1						1
University of Wisconsin.....					2			2
University of Wooster.....		1						1
Vanderbilt University, Tenn.....		3			2			5
Vassar College, N. Y.....					3	15	1	19
Villanova College, Pa.....		1						1
Virginia Military Institute.....				1				1
Wabash College, Ind.....		1			1	1		3
Wake Forest College, N. C.....		1				1		2
Wartburg College, Iowa.....				1				1
Washburn College.....					2			2
Washington and Jefferson Univ., Pa.....		1				1		2
Washington and Lee Univ., Va.....		1	1					2
Wellesley College, Mass.....					4	12		16
Wells College, N. Y.....					1			1
Wesleyan University, Conn.....			4	1	3	8	2	18
Western Maryland College.....						1		1
Western Medical College.....			1					1
Western Reserve University, O.....		1						1
Western University of Pa.....					2	1		3
Whitman College.....					1			1
Williams College, Mass.....		7	11	2	1	1	3	25
Wittenberg College, O.....					1			1
Wofford College, S. C.....						1		1
Woman's College, Baltimore.....						2		2
Woman's Medical Coll., N. Y.....					1			1
Wooster University, O.....					1	2		3
Yale University.....	1	32	41	21	6	8	2	111
Total graduates of domestic institutions.....	4	302	316	102	169	343	69	1305

TABLE IV (continued)

(B)—HIGHER INSTITUTIONS IN FOREIGN COUNTRIES

1901-1902	College	Law	Medicine	Applied Science	Political Science	Philosophy	Pure Science	Total
Durham University, England.....				1				1
Gymnasium, Lucerne, Switzerland..				1				1
Gymnasium of S. S. Vidensky, Russia					1			1
Imperial University, Moscow.....			1					1
Keiojyuku University, Japan.....					2			2
K. K. Lehrer - Bildungsanstalt, Vienna.....						1		1
Königl. Gymnasium, Leipzig.....				1				1
Königl. Lehrer-Seminar, Sagan, Ger- many.....						1		1
London University.....							1	1
Lycée Braila, Roumania.....				2				2
McGill University, Canada.....							1	1
Matanzas Institute, Cuba.....				1				1
Oberreal-Schule, Freiburg, Germany					1			1
Ottawa University.....		1						1
Porto Rico University.....			1					1
Provincial Institute, Santiago, Cuba			2					2
Queen's University, Canada.....					1		1	2
Real Gymnasium, Vilna, Russia.....					1			1
St. Mary's College, Montreal.....		1						1
Santa Cruis, Gonzaga, Cuba.....				1				1
Tetsugakkwan, Tokyo, Japan.....					1			1
Tokyo Imperial University, Japan..					1		1	2
Tokyo Semmon, Gakko, Japan.....					2			2
University of Bonn.....							1	1
University of Cambridge.....				1	1			2
University of Copenhagen.....		1						1
University of Dijon.....						1		1
University of Halle.....					2			2
University of Havana.....			1	6				7
University of Marburg.....						1		1
University of Rome.....			2					2
University of Toronto.....			1			2		3
University of Vienna.....						1		1
University of Würzburg.....			1					1
Total graduates of foreign institu- tions.....		3	9	14	13	7	5	51
Grand total graduates of higher in- stitutions.....	4	305	325	116	182	350	74	1356
<i>Deduct for graduates of more than one institution.....</i>		<i>31</i>	<i>20</i>	<i>5</i>	<i>34</i>	<i>56</i>	<i>13</i>	<i>159</i>
Total students holding degrees.....	4	274	305	111	148	294	61	1197
Total students enrolled.....	492	440	809	626	153	294	61	2875
Percentage holding degrees 1902.....	0.8	62.2	37.7	17.7	96.7	100.	100.	41.6
Percentage holding degrees 1901.....	0.4	62.2	38.7	15.9	93.7	100.	100.	40.3

The number and nature of the degrees held by our students are shown in Table V, wherein it appears that our 1197 college graduates hold 1436 degrees which have been granted by 254 institutions.

TABLE V
NATURE OF DEGREES HELD BY STUDENTS

DEGREES	College	Law	Medicine	Applied Science	Political Science	Philosophy	Pure Science	Total
A. Degrees signifying, in general, a liberal education								
Bachelor of Pedagogy.....						4	1	5
" Arts.....	1	221	201	53	107	210	30	832
" Literature.....		5	3		7	4	1	20
" Philosophy.....		14	21	9	12	25	6	87
" Sacred Theology.....								2
" Science.....	1	27	54	35	14	38	16	185
" Divinity.....			1		6	3		10
Doctor of Philosophy.....			2	1	2	3	4	12
Master of Arts.....		32	11	2	30	72	20	167
" Laws.....			1			1		3
" Science.....			2	1	1	2	4	10
" Literature.....			1			1		2
" Philosophy.....					3	1	1	5
" Pedagogy.....						4		4
Testimonium Maturitatis.....			1	2	4	4		11
Cand. Juris.....		1						1
Doctor of Pedagogy.....						1		1
" Divine Science.....			1					1
Total.....	2	300	299	103	190	381	83	1358
B. Degrees signifying, in general, a technical education								
Bachelor of Agriculture.....			1					1
" Laws.....	1	3	1		8	8		21
" Engineering.....				1			1	2
" Mining Engineering.....				1				1
Civil Engineer.....		1	1	4		1	2	9
Doctor of Medicine.....	1		14	1	3	2	4	25
Electrical Engineer.....				1				1
Graduate in Pharmacy.....			9	2				11
Mechanical Engineer.....				2			1	3
Mining Engineer.....				1			2	3
United States Military Academy.....		1						1
Total.....	2	5	26	13	11	11	10	78
Total degrees held.....	4	305	325	116	201	392	93	1436
<i>Deduct for students holding more than one degree.....</i>		<i>37</i>	<i>20</i>	<i>5</i>	<i>53</i>	<i>08</i>	<i>32</i>	<i>230</i>
Students holding degrees.....	4	274	305	111	148	294	61	1197

During the academic year 1901-1902 the University conferred honors on 779 individuals, to whom were granted 846 degrees and diplomas. This information is summarized in Table VI.

TABLE VI
DEGREES AND DIPLOMAS GRANTED, 1901-1902

	Men	Women	Total
A. Degrees conferred in course			
Bachelor of Arts.....	109	50	159
" Laws.....	110		110
" Science (Education).....	2	15	17
" Science (Architecture).....	15		15
" " (Chemistry).....	6		6
Engineer of Mines.....	17		17
Civil Engineer.....	11		11
Electrical Engineer.....	23		23
Mechanical Engineer.....	21		21
Metallurgical Engineer.....	1		1
Doctor of Medicine.....	145		145
Master of Arts.....	106	49	155
Doctor of Philosophy.....	30	3	33
Total.....	596	117	713
<i>Deduct duplicates*</i>	<i>10</i>	<i></i>	<i>10</i>
Total individuals receiving degrees in course.....	586	117	703
B. Honorary degrees			
Doctor of Science.....	1		1
" Laws.....	4		4
Total.....	5		5
C. Teachers College diplomas granted			
Doctor's diploma in education.....	3		3
Master's " " ".....	20	8	28
Bachelor's " " ".....	7	27	34
Higher diploma.....	3	1	4
Secondary ".....	4	4	8
Elementary ".....	1	21	22
Kindergarten diploma.....		11	11
Domestic Art.....		3	3
Domestic Science ".....		14	14
Fine Arts.....		5	5
Manual Training ".....	4	2	6
Fine Arts and Manual Training diploma.....		1	1
Total.....	42	97	139
Total degrees and diplomas granted.....	633	214	847
<i>Deduct duplicates †.....</i>	<i>35</i>	<i>34</i>	<i>69</i>
Total individuals receiving degrees and diplomas...	598	180	778

Tables VII, VIII, IX, and X present in detailed form full information concerning the names of candidates on whom were conferred the degrees of Master of Arts and Doctor of Philosophy during the academic year 1901-1902, the major and minor subjects studied, and the titles of dissertations offered by them, for the said degrees, under the Faculties of Political Science, Philosophy, Pure Science, and Applied Science, respectively.

* Distributed as follows: LL.B. and A.M., 6; M.D. and A.M., 2; C.E. and A.M., 2.

† In addition to those noted under *, the following duplications occur: A.B. and Bachelor's Diploma in Education, 4 men, 19 women; A.M., and Secondary Diploma, 1 man, 3 women; A.M. and Higher diploma, 1 man; Ph.D. and Doctor's Diploma, 3 men; A.M. and Master's Diploma, 15 men, 9 women; A.M. and Bachelor's Diploma, 1 man, 3 women.

TABLE VII

RECOMMENDATIONS FOR DEGREES, 1901-1902

Students having their major subject under the Faculty of Political Science

DOCTOR OF PHILOSOPHY

Candidate	Major Subject	Minor Subjects	Title of Dissertation
1. Stephen Pierce Hayden Duggan, B.S., College of the City of New York, 1890; M.S., 1896; A.M., Columbia University, 1899.	International law.	Constitutional law and Administrative law; European history.	The Turkish question: a study in diplomacy.
2. James Wilford Garner, B.S., Mississippi Agricultural and Mechanical College, 1892; Ph.M., University of Chicago, 1900.	Constitutional law and Administrative law.	International law; American history.	Reconstruction in Mississippi.
3. Yetaro Kinoshita, A.B., Hiram College, 1899; A.M., Yale University, 1901.	Political economy and finance.	Sociology and statistics; International law.	The past and present of Japanese commerce.
4. Newton D. Mereness, A.B., University of Michigan, 1892; A.M., 1894.	European history.	American history; Sociology and statistics.	Maryland as a proprietary colony.
5. Ulrich Bonnell Phillips, A.B., University of Georgia, 1897; A.M., 1899.	American history.	European history; Political economy and finance, and International law.	Georgia and state rights.
6. Charles Lee Raper, A.B., Trinity College, North Carolina, 1892.	American history.	European history; Political economy and finance.	North Carolina: a royal province.
7. Mabel Hurd Willett, (Mrs.), B.L., Smith College, 1895.	Sociology and statistics.	Political economy and finance; European history.	The employment of women in the clothing trade.

TABLE VII (continued)

MASTER OF ARTS

Candidate	Major Subject	Minor Subjects	Title of Essay
1. John Michel Barrett, A.B., Georgetown University, 1899.	Constitutional law.	Political economy and finance; Criminal law.	Women's suffrage in the United States.
2. William Francis Beers, Jr., A.B., Columbia University, 1901.	Constitutional law.	Administrative law; Sociology and statistics.	Capitalistic monopolies from the point of view of political science and of constitutional law.
3. Clinton Ambrose Billig, A.B., Ohio Wesleyan University, 1898.	Sociology and statistics.	Political economy and finance; European history.	An analysis of the statistical tables of the New York State Board of Charities, 1900.
4. Arthur Jerome Boynton, Ph.B., Beloit College, 1896; A.B., Harvard University, 1901.	Political economy and finance.	Sociology and statistics; International law.	The philosophy of the single tax.
5. Ralph James M. Bullowa, A.B., College of the City of New York, 1900.	Constitutional law.	Criminal law; European history.	Cummings <i>vs.</i> Richmond County Board of Education.
6. Margaret Frances Byington, A.B., Wellesley College, 1900.	Sociology and statistics.	Political economy and finance; Education.	A study of Poland.
7. Valentine Laura Chandor, A.B., Columbia University, 1900.	European history.	American history; Sociology and statistics.	Decree of the National Assembly abolishing the Feudal System, August 11, 1789.
8. Miriam Foster Choate, A.B., Smith College, 1899.	American history.	European history; Sociology and statistics.	The composition of the population of the colonies north and east of the Delaware in the seventeenth century.
9. Herbert Gould Crocker, B.L., Washburn College, 1897.	Sociology and statistics.	Political economy and finance; European history.	Analysis of the records of missionary activity in the United States from 1800 to 1850.
10. Knowlton Durham, A.B., Columbia University, 1901.	American history.	European history; Political economy and finance.	The administrative system of Rhode Island during the seventeenth century.
11. William Oliver Easton, A.B., Wittenberg College, 1893.	Political philosophy.	Constitutional law; American history.	The critical philosophy of Baruch Spinoza, with special reference to that of Thomas Hobbes.

TABLE VII (continued)

Candidate	Major Subject	Minor Subjects	Title of Essay
12. Joseph Diehl Fackenthal, A.B., Columbia University, 1900.	Roman law and comparative jurisprudence.	American history; Criminal law.	Remedies given to contracting parties for damages suffered by the fraud of a third person.
13. Moses Leonard Frazier, Ph.B., Mt. Union College, 1896; Ph.M., 1899; LL.B., New York Law School, 1899.	Constitutional law.	Sociology and statistics; Criminal law.	Pennoyer vs. Neff (95 U. S.).
14. Walter Diedrich Gerken, B.S., Cornell University, 1899.	American history.	Constitutional law; Education.	The Iroquois in their relation to the struggle between France and England in North America.
15. Henry Starr Giddings, A.B., Columbia University, 1900.	Roman law and comparative jurisprudence.	Criminal law; Political philosophy.	Fraud as affecting the wrongdoer's assignees at Roman and at English law.
16. Harry Allen Gordon, A.B., College of the City of New York, 1901.	Constitutional law.	Criminal law; American history.	A comparison between English and Dutch colonization in New York.
17. John Ferguson Harper, B.S., College of the City of New York, 1901.	American history.	European history; Political economy and finance.	Conditions affecting intercourse between England and her American colonies in the seventeenth century.
18. Howard Sawyer Harrington, A.B., Columbia University, 1899.	International law.	Criminal law; American history.	The jurisdiction of admiralty.
19. Samuel Perkins Hayes, A.B., Amherst College, 1896.	Sociology and statistics.	Political economy and finance; European history.	Sociological study of the population of Massachusetts in the first half of the eighteenth century.
20. Daniel Valentine Hopps, A.B., University of Georgia, 1899.	Administrative law.	Political economy and finance; Criminal law.	Constitutionality of the methods employed by executive agencies in the collection of taxes and the abatement of nuisances.
21. Raeburn William Jenkins, A.B., College of the City of New York, 1899.	Constitutional law.	Criminal law; History of diplomacy.	Lawton vs. Steele, and Duncan vs. Missouri.
22. Henry Johnson, B.L., University of Minnesota, 1899.	American history.	European history; Administrative law.	A history of the Fifteenth Amendment.

TABLE VII (continued)

Candidate	Major Subject	Minor Subjects	Title of Essay
23. Margaret Edith Johnson, A.B., Adelphi College, 1899.	American history.	European history; Education.	The composition of the population of the colonies south and west of the Delaware River in the seventeenth century.
24. George Beckwith Keeler, A.B., Columbia University, 1901.	Political economy and finance	Political economy and finance; Roman law and comparative jurisprudence.	The present laws on monopolies.
25. Walter Thomas Kohn, A.B., College of the City of New York, 1900.	Constitutional law.	American history; Criminal law.	Consular jurisdiction and the constitution.
26. Tosaburo Konno, Equiv. A.B., Tokyo Law School, 1894.	International law.	Constitutional law; Political economy and finance.	Nationality.
27. Robert Percy Levis, A.B., University of Rochester, 1898.	Administrative law.	American history; Criminal law.	Civil-service decisions.
28. Samuel Samter Levy, A.B., Yale University, 1900.	Constitutional law.	American history; Criminal law.	History of the customs relations between Porto Rico and the United States.
29. Louise Ropes Loomis, A.B., Wellesley College, 1897.	European history.	American history; Greek.	The work of Manuel Chrysoloras.
30. Oscar Lowenstein, A.B., Columbia University, 1900.	Administrative law.	American history; Criminal law.	The constitutionality of registration laws in the United States.
31. James Callanan Madigan, A.B., College of the City of New York, 1900.	Constitutional law.	Criminal law; Political economy and finance.	Cases of Iowa <i>vs.</i> Iowa C. R. R., and Eldridge <i>vs.</i> Trezevant.
32. John Harold Marsching, Abiturienten-Zeugnis, Oberrealschule von Freiburg i. B., Germany, 1900.	Political economy and finance.	Sociology and statistics; American history.	The theory of ability.
33. Charles Clark Miller, A.B., Princeton University, 1900.	Sociology and statistics.	Political economy and finance; European history.	The Hungarian.
34. Harry Brainerd Mitchell, A.B., Amherst College, 1901.	Political economy and finance.	Sociology and statistics; American history.	Industry and class relations in Greece.

REGISTRAR'S REPORT

TABLE VII (continued)

Candidate	Major Subject	Minor Subjects	Title of Essay
35. George Frank Nason, Equiv. A.B., Cumberland University, 1897.	Sociology and statistics.	Political economy and finance; European history.	Croatia-Slavonia.
36. Thomas Edward O'Brien, A.B., Columbia University, 1900.	Roman law and comparative jurisprudence.	American history; Criminal law.	Fraud in judgments.
37. Oscar Lewis Pond, A.B., Indiana University, 1899.	Constitutional law.	Political economy and finance; Criminal law.	Civil-rights cases.
38. John Boyce Smith, Jr., A.B., Columbia University, 1901.	American history.	European history; Criminal law.	Policy of the northern and middle colonies toward the Indians in the seventeenth century.
39. Preserved Smith, A.B., Amherst College, 1901.	European history.	American history; Constitutional law.	The origin of the German ecclesiastical states.
40. John Oakley Spencer, Ph.B., Illinois Wesleyan University, 1888; A.M., 1891; Ph.D., 1894.	Constitutional law.	Political economy and finance; American history.	The diplomatic relations of the United States with the far East.
41. Everett Birney Stackpole, A.B., Bowdoin College, 1900.	Political economy and finance.	Sociology and statistics; International law.	Economic aspects of colonial expansion.
42. Hodzumi Tanaka, A.B., Tokyo-Semmon-Gakko, 1896; A.M., 1898.	Political economy and finance.	Sociology and statistics; International law.	The financial condition of Japan.
43. Martin Walker, A.B., Concordia College, 1896.	European history.	American history; German.	Huss's debt to Wiclif.
44. Mayer Joseph Weinstein, A.B., Columbia University, 1900.	Constitutional law.	Roman law and comparative jurisprudence; American history.	Criticism and doctrines of case of <i>Jullis vs. Lake Erie and Western Railroad Company</i> .
45. Loren Newton Wood, B.S., Carleton College, 1899.	Constitutional law.	Political economy and finance; International law.	Citizenship as interpreted in the slaughter-house cases.

TABLE VIII

RECOMMENDATIONS FOR DEGREES, 1901-1902

Students having their major subject under the Faculty of Philosophy

DOCTOR OF PHILOSOPHY

Candidate	Major Subject	Minor Subjects	Title of Dissertation
1. William Alfred Ackerman, A.B., Lafayette College, 1894; A.M., 1897.	Education.	Philosophy; Anthropology.	The administration of public school textbooks in the United States.
2. Frank Puterbaugh Bachman, A.B., University of Chicago, 1896.	Education.	Education; Psychology.	The public elementary school curriculum of England.
3. Edwin Cornelius Broome, Ph.B., Brown University, 1897; Ph.M., 1898.	Education.	Education; English.	An historical and critical discussion of college admission requirements.
4. Marianna Catherine Brown, A.B., Vassar College, 1893.	Education.	Psychology; European history.	Sunday-school movements in America.
5. Israel Davidson, A.B., College of the City of New York, 1895.	Semitic languages and literatures.	Semitic languages and literatures; English.	Parody and related forms in Jewish literature.
6. Gertrude Mary Hirst, Equiv. A.B., Cambridge, University, England, 1890.	Greek language and literature.	Latin language and literature; Classical archaeology.	The cults of Olbia.
7. Richard Thayer Holbrook, A.B., Yale University, 1893.	Romance philology.	Romance literature; Anglo-Saxon	Dante and the animal kingdom.
8. George Allen Hubbell, B.S., Antioch College, 1890; A.M., 1891.	Education.	Education; Anthropology.	Horace Mann in Ohio.
9. William Hallock Johnson, A.B., Princeton University, 1888; A.M., 1897; B.D., 1897.	Philosophy.	Psychology; Ethics.	The free-will problem in modern thought.
10. David Levine, A.B., College of the City of New York, 1896.	Semitics.	Philosophy; Education.	"Bustan al-Ukul," or "The Garden of the Sciences."
11. Frank Rollins, A.B., Wesleyan University, 1899.	Education.	Psychology; Sociology and statistics.	School administration in municipal government.
12. Abraham Yohannan, A.B., Urmiah College, Persia, 1870; A.M., Columbia University, 1895.	Semitic languages and literatures.	Syriac; Indo-Iranian.	Modern Syriac dictionary.

TABLE VIII (continued)

MASTER OF ARTS

Candidate	Major Subject	Minor Subjects	Title of Essay
1. John William Adams, A.B., Cornell University, 1901.	Education.	Education; Mathematics.	Ideal correlation between mathematics and physics in American high schools.
2. Antoinette Affeld, A.B., Vassar College, 1901.	Education.	Education; Germanic languages and literatures.	Wildenbruch's "Das Marchen von den zwei Rosen," with notes and vocabulary.
3. Lewis Burton Alger, Ph.B., University of Michigan, 1897.	Education.	Education; Geography.	The origin of the university.
4. Saul Badanes, Pd.M., New York University, 1891; Pd.D., 1894.	Education.	Education; English.	Auguste Comte's theory and practice of education.
5. Florence Theodora Baldwin, A.B., Columbia University, 1900.	Latin language and literature.	Greek language and literature; Roman archæology and epigraphy.	Repeated lines in Lucretius.
6. Martha Ann Beecher, Ph.B., Syracuse University, 1894.	Education.	Education; Mathematics	Methods of attacking propositions in geometry.
7. Clara de Lissa Berg, A.B., Columbia University, 1898.	Comparative literature.	Comparative literature; European history.	The influence of Petrarch in England.
8. Mabel Boak, A.B., Vassar College, 1901.	Education.	Education; English.	The syntax of the first book of Vergil's Æneid.
9. Victor Fitch Mount Bonsall, A.B., Columbia University, 1901.	Latin language and literature.	Greek language and literature; Roman archæology.	Some modern phases of Roman society.
10. Annie Mabel Brooks, A.B., Smith College, 1898.	Education.	Education; Sanskrit.	A study of the geography of Cæsar.
11. Elizabeth Hankinson Bunnell, A.B., Mt. Holyoke College, 1894.	Education.	Education; Latin language and literature.	The influence of James Madison upon education.
12. Herbert Grant Campbell, Ph.B., Cornell College (Ia.), 1896.	Philosophy.	Psychology; Sociology and statistics.	Critical review of Hume's theory of causation.
13. Alice Casamajor, A.B., Adelphi College, 1899.	Education.	European history; Sociology and statistics.	The growth of the study of history in secondary schools in the United States.
14. Raymond Chamberlain, Ph.B., Illinois Wesleyan University, 1900; A.B., Columbia University, 1901.	Philosophy.	Ethics; Education.	Influence of the epistemology of Kant upon the theory of education.

TABLE VIII (continued)

Candidate	Major Subject	Minor Subjects	Title of Essay
15. Emily Josephine Clark, A.B., Wellesley College, 1882; A.M., 1893.	Latin language and literature.	Roman archaeology; Education.	The Rome of Romulus, considered topographically.
16. David Excelmons Cloyd, Ph.B., University of Minnesota, 1901.	Education.	Philosophy; Sociology and statistics.	Benjamin Franklin and education.
17. Marion Sarah Coan, A.B., Bates College, 1899.	Education.	English; English.	Historical English grammar in the high school.
18. Margaret Elmer Coe, A.B., Smith College, 1897.	English.	English; Comparative literature.	Samuel Sewall; a study in New England character.
19. Harrison Siner Colburn, B.S., Purdue University, 1900.	Education.	Education; American history.	A study of evening schools.
20. Elizabeth Christine Cook, A.B., Smith College, 1899.	English.	English; Education.	Noah Webster's theories on English usage.
21. Margaret Elsie Cross, B.S., Central Normal College (Ind.), 1888.	Education.	Education; Sociology and statistics.	The origin and development of public education in Louisiana.
22. Ellwood P. Cubberley, A.B., University of Indiana, 1891.	Education.	Psychology; Sociology and statistics.	Syllabus outline of the history of education.
23. Elizabeth Teresa Daly, A.B., Bryn Mawr College, 1901.	English.	English; French language and literature.	Pater as a critic of English poetry.
24. Alice Belle Dawson, A.B., Oxford College, 1891.	Education.	Education; Latin language and literature.	The development of method in Latin in the secondary schools of the United States.
25. Jean Louise de Forest, Ph.B., Wesleyan University, 1896.	English.	European history; Education.	Charles Wolfe: his life and works.
26. Sidney Harry Dixon, A.B., Columbia University, 1900.	Latin language and literature.	Greek language and literature; Education.	The mining economy of the ancient Romans.
27. Darius Eatman, A.B., University of North Carolina, 1897.	Education.	Education; English.	A study of Bryant's poetry.
28. Aaron Eiseman, Ph.B., New York University, 1901.	Philosophy.	Education; Sociology and statistics.	The conception of the logos in Greek philosophy, with special reference to the Philonian system.

TABLE VIII (continued)

Candidate	Major Subject	Minor Subjects	Title of Essay
29. Isabel Elias, A.B., Trinity College (N. C.), 1899.	English.	Germanic languages and literatures; European history.	De Quincey's theory of style.
30. Edith Miriam Fairchild, Ph.B., Berea College, 1897.	English.	English; History.	Early American magazines.
31. Frank Andrews Fall, A.B., Albion College, 1899.	Comparative literature.	Comparative literature; European history.	Mezentius: a character sketch.
32. Frederick Ernest Farrington, A.B., Harvard University, 1894.	Education.	Education; Psychology.	Cicero's educational ideals.
33. Abram Fischlowitz, B.S., College of the City of New York, 1890; C.E., New York University, 1895.	Education.	Education; Psychology.	An inductive study of the abilities involved in drawing.
34. Emma Abbie Fountain, A.B., Colby University, 1895.	Education.	English; Education.	History of the study of English in New England secondary schools (1635-1901).
35. Sidney Marsden Fuerst, A.B., Columbia University, 1901.	Education.	Education; English.	The correlation of special tests with class standing and general ability.
36. Edward Montague Gammon, B.S., University of Georgia, 1895.	Education.	Education; Psychology.	The development of ideas on physical training in the United States.
37. Robert McCheyne George, B.S., Geneva College, 1897.	English.	English; Education.	Anna Seward.
38. Alice Schieffelin Gibson, A.B., Vassar College, 1901.	Education.	Education; English.	Matthew Arnold's studies in French and German education.
39. Anna Liguoria Gray, Ph.B., Brown University, 1899.	English.	English; Education.	Maturin as a novelist.
40. Glen Arnold Grove, A.B., Colgate University, 1897.	English.	English; Philosophy.	The comedies of William Shakespeare compared with their prototypes.
41. Paula Grün, Certif. K. K. Lehrerbildungs - Anstalt, Vienna, 1895.	Germanic languages and literatures.	Germanic languages and literatures; Indo-Iranian and Linguistics.	Lenau's "Faust" compared with Goethe's.

TABLE VIII (continued)

Candidate	Major Subject	Minor Subjects	Title of Essay
42. John William Hall. B.S., Teachers College, Columbia University, 1901.	Education.	Education; Geography.	Practice teaching in Ger- man normal schools.
43. Edgar Halliday, A.B., Princeton Uni- versity, 1898.	Education.	Education; Greek.	Pestalozzi: his life and principles.
44. Felix Hecht, B.S., College of the City of New York, 1900.	English.	Psychology; European history.	The influence of Keats upon the early poetry of Tennyson.
45. Florence French Henry, A.B., Cornell Univer- sity, 1901.	Latin language and litera- ture.	Greek language and litera- ture; Geol- ogy.	The influence of Oriental cults on Roman reli- gion.
46. Frederick William Justus Heuser, A.B., Columbia Uni- versity, 1901.	Germanic lan- guages and literatures.	Germanic lan- guages and literatures; French lan- guage and literature.	Traces of Old Norse litera- ture in the works of Sir Walter Scott.
47. Carrie May Hille- meier, A.B., Wellesley Col- lege, 1901.	Philosophy.	Philosophy; Education.	Causality: a comparison of Hume's and Kant's doctrines.
48. Abbie Sylvia Hod- getts, A.B., Nebraska Wes- leyan University, 1896.	English.	English; Education.	Dryden's prose style.
49. Harry Hopkins Hub- bell, A.B., Williams College, 1898.	Education.	Education; Latin.	Studies in the vocabulary of Cæsar's "Gallic War."
50. Percy Hughes, A.B., Alfred Univer- sity, 1899.	Philosophy.	Psychology; Education.	A discussion of the limits and divisions of ethics.
51. Hilda Emily Joseph- thal, A.B., Columbia Uni- versity, 1901.	Comparative literature.	English; Soci- ology and statistics.	Heine, Beranger, and Burns.
52. Mordecai Menahem Kaplan, A.B., College of the City of New York, 1900.	Philosophy.	Education; Sociology and statis- tics.	The ethical system of H. Sidgwick.
53. Mary Stewart Ken- nedy, Pd.M., New York Uni- versity, 1899; A.B., Adelphi College, 1901.	Comparative literature.	French; Phi- losophy.	Herder and his relations to romanticism.

TABLE VIII (continued)

Candidate	Major Subject	Minor Subjects	Title of Essay
54. Willis Holmes Kerr, A.B., University of Omaha, 1900.	English.	Philosophy; European history.	Periodical literature in America, 1790-1815.
55. Adele Louise Klein, A.B., University of Michigan, 1901.	Germanic languages and literatures.	Germanic languages and literatures; Education.	The sources and style of Goethe's "Stella."
56. Rose Lois Kraker, A.B., Columbia University, 1901.	Comparative literature.	English; Germanic languages and literatures.	Volney in his influence on Shelley.
57. Emily Pauline Locke, B.L., Smith College, 1900.	Education.	Biology; Botany.	Botany as a high-school study and as an entrance option to college.
58. Margaret McLean, A.B., Southwestern University, 1892.	English.	English; Education.	A study of Wordsworth's sonnets with special reference to their structure.
59. George Kempton Martin, B.S., College of the City of New York, 1893.	Education.	Education; Psychology.	The development of the elementary curriculum.
60. Holly Whitford Maxson, A.B., Alfred University, 1897.	Education.	Education; Geography.	Influence of Horace Mann on the training of teachers.
61. Katharine Hedges Meigs, A.B., Smith College, 1891.	Education.	Education; Botany.	How may the high-school work in biology be made to meet the demands of both the school and the college?
62. Charles Barclay Moore, A.B., Wabash College, 1900.	English.	English; Education.	The conventions of the Greek and the Elizabethan stage.
63. George Morris, B.S., Rutgers College, 1889; M.S., 1894.	Education.	Psychology; Chemistry.	Correlations among the abilities involved in high-school work.
64. Virginia Newcomb, A.B., Columbia University, 1900.	Romance languages and literatures.	Romance languages and literatures; Latin.	A comparison of the versification of Edmond Rostand and Victor Hugo.
65. Mary Percival, A.B., Mt. Holyoke College, 1898.	Education.	English; English.	An introduction to a collection of old English ballads designed for high-school work.
66. Frederick Torrel Persons, A.B., Yale University, 1894.	English.	English; European history.	William Cowper and his relation to the evangelical movement.
67. Ernest William Sutton Pickhardt, A.B., Harvard University, 1898; LL.B., New York Law School, 1900.	Greek language and literature.	Latin language and literature; Greek archæology.	Color-adjectives in Pindar.

TABLE VIII (continued)

Candidate	Major Subject	Minor Subjects	Title of Essay
68. May Hinton Pollack, A.B., Columbia Uni- versity, 1896.	Education.	Education; Latin.	Development of method in Latin in the second- ary schools of the United States.
69. Salomon Zuscha Pro- kesch, Ph.B., New York Uni- versity, 1900.	Philosophy.	Education; Semitics.	The ethics of the Talmud.
70. William Bernard Raf- ferty, A.B., St. Lawrence University, 1890.	Education.	Education; Philosophy.	Gradation and promo- tion in the elementary schools of New York City.
71. Katharine Campbell Reiley, A.B., Vassar College, 1895.	Latin language and litera- ture.	Latin archæ- ology; Greek archæ- ology.	A comparison of the philo- sophical terminology of Lucretius and Cicero.
72. James Joseph Rey- nolds, B.S., College of the City of New York, 1893; LL.B., New York University, 1897.	Education	Education; Psychology.	Promotion and grading in the elementary schools of the United States.
73. Sarah Grace Royce, A.B., Smith College, 1890.	Greek.	Latin; Educa- tion.	A study of the marriage customs of ancient Greece, as revealed in the poetry.
74. Edna Bell Simpson, A.B., Columbia Uni- versity, 1900.	Comparative literature.	Comparative literature; Germanic languages and litera- tures.	Petrarchism in Italy.
75. Herbert Fedor Small, A.B., Columbia Uni- versity, 1901.	Comparative literature.	Comparative literature; English.	The influence of Petrarch in Germany.
76. Alexander Godfrey Smith, A.B., Columbia Uni- versity, 1900.	Psychology.	Education; English.	A comparative study of the abilities of school children in the school subjects.
77. Beatrice Stepanek, A.B., Wellesley Col- lege, 1895.	Greek language and litera- ture.	Latin language and litera- ture; Educa- tion.	The Homeric shield of Achilles and the Hesi- odic shield of Herakles.
78. Anthony Henry Suz- zallo, A.B., Leland Stanford, Jr., University, 1899.	Education.	Psychology; Sociology and statis- tics.	The development of the text-book problem in colonial elementary schools.
79. Beekman Ramsay Terhune, A.B., Princeton Uni- versity, 1901.	Education.	Education; Latin.	Comparison of Latin be- ginner's books.
80. Edwin Carleton Up- ton, B.S., University of Maine, 1897.	English.	English; Edu- cation.	English grammars of the eighteenth century.

TABLE VIII (continued)

Candidate	Major Subject	Minor Subjects	Title of Essay
81. John Edgar Wade, B.S., College of the City of New York, 1897.	Education.	Education; Psychology.	The manual element in education.
82. Mark Waldmann, Graduate of Lehrer- Seminar, Berlin, 1895; of Lehrer- Seminar, Sagan, 1899.	Philosophy.	Education; Psychology.	The influence of the Græco-Roman schools on Ecclesiastes.
83. Lake George Watson, Ph.B., Earlham Col- lege, 1900.	Education.	Education; Germanic languages and litera- tures.	Course of study for the first two years of school.
84. Herman Jay Wells, A.B., Williams Col- lege, 1887.	Education.	Education; Philosophy.	The study of literary form in the higher gram- mar grades.
85. Myra Wirén, B.L., Minnesota State University, 1900.	Comparative literature.	Comparative literature; English.	Thomas Wyatt and the introduction of Italian influence into English poetry.
86. Nathan Wolf, Ph.B., New York University, 1900.	Philosophy.	Education; Semitics.	Knowledge and faith in the church philosophy of the middle ages.
87. Oscar Israel Woodley, A.B., Albion College, 1901.	Education.	Philosophy, English.	The place and importance of the subjective self in teaching.
88. Adrian Monroe Yar- rington, B.L., Cornell Univer- sity, 1892.	Education.	Education; Political economy and finance.	American history in the high school.
89. Stark Young, A.B., University of Mississippi, 1901.	English.	English; Com- parative lit- erature.	The poetry of James Montgomery.

TABLE IX

RECOMMENDATIONS FOR DEGREES, 1901-1902

Students having their major subject under the Faculty of Pure Science

DOCTOR OF PHILOSOPHY

Candidate	Major Subject	Minor Subjects	Title of Dissertation
1. Benjamin Arthur Bensley, A.B., University of Toronto, 1896.	Paleontology.	Zoölogy; Paleontology.	The evolution of the Australian marsupialia, with remarks on the relationship of the marsupials in general.
2. Leopold Boroschek, B.S., College of the City of New York, 1897; A.M., Columbia University, 1900.	Chemistry.	Chemistry; Physics.	Some new derivatives of the mono-nitro-orthophthalic acids.
3. William Austin Cannon, A.B., Leland Stanford, Jr., University, 1899; A.M., 1900.	Botany.	Physiology; Zoölogy.	Studies in plant hybrids.
4. Carl Gundersen, A.B., Leland Stanford, Jr., University, 1897; A.M., Columbia University, 1899.	Mathematics.	Astronomy; Mechanics.	On the measure or content of assemblages of points.
5. Cassius Jackson Keyser, B.S., University of Missouri, 1892; A.M., Columbia University, 1896.	Mathematics.	Mechanics; Mechanics.	The plane geometry of the point in space of four dimensions.
6. George Alfred Lawrence, A.B., Leland Stanford, Jr., University, 1892; M.D., Columbia University, 1895; A.M., 1896.	Neurology.	Zoölogy; Anthropology; Bacteriology.	Studies upon the cerebral cortex in the normal human brain and in dementia paralytica.
7. Floyd Jay Metzger, Ph.B., Buchtel College, 1899.	Chemistry.	Chemistry; Physics.	A new separation of thorium from cerium, lanthanum and didymium, and its application to the analysis of monazite.
8. Charles Joseph Pretzfeld, A.B., Columbia University, 1898; A.M., 1900.	Chemistry.	Chemistry; Physics.	A new separation of mercury from arsenic, antimony, and copper, and its application to the analysis of tetrahedrite.
9. Austin Flint Rogers, A.B., University of Kansas, 1899; A.M., 1900.	Mineralogy.	Geology; Chemistry.	Crystallographic studies: (a) The morphology of certain organic compounds. (b) The calcites of the New Jersey trap region. (c) New graphical methods.

TABLE IX (continued)

Candidate	Major Subject	Minor Subjects	Title of Dissertation
10. John Cutler Torrey, A.B., University of Vermont, 1898.	Zoölogy.	Botany; Physi- ology.	The early development of Thalassema.
11. Lewis Addison Youtz, Ph.B., Simpson Col- lege, 1890; Ph.M., 1893.	Chemistry.	Chemistry; Mineralogy.	A study of the quantita- tive determination of antimony.

MASTER OF ARTS

Candidate	Major Subject	Minor Subjects	Title of Essay
1. Norris Caleb Bailey, B.S., Wesleyan Uni- versity, 1899.	Mathematics.	Mechanics; Education.	The representation of dis- continuous functions by analytic formulæ.
2. Arthur Horace Blan- chard, C.E., Brown Univer- sity, 1899.	Mechanics.	Civil Engineer- ing; Miner- alogy.	A review of the methods employed in the erection and reconstruction of framed structures.
3. Irving Crawford Bull, Ph.B., Yale Univer- sity, 1901.	Chemistry.	Chemistry; Physics.	On the determination of lead in ores.
4. Hariette Arms Curtiss, Ph.B., Syracuse Uni- versity, 1900.	Zoölogy.	Botany; Edu- cation.	The origin of the gonads in the platodes.
5. Lenda Tracy Hanks, A.B., Columbia Uni- versity, 1901.	Botany.	Botany; Politi- cal economy and finance.	The North American Ge- raniaceæ.
6. Charles Cotton Har- rold, B.S., University of Georgia, 1898.	Medicine.	Physiology; Physiology.	The action of phlorhizin on muscle.
7. Lewis Durant Mead, B.S., University of California, 1898.	Medicine.	Physiological chemistry; Physiological chemistry.	The chemical reaction of osseomuroid.
8. Rosina Julia Rennert, A.B., Columbia Uni- versity, 1901.	Botany.	Zoölogy; Psy- chology.	Seeds and seedlings of arissema tryphyllum and arissema dracor- tium.
9. Alfred Eugene Roberts, A.B., Wesleyan Uni- versity, 1899.	Chemistry.	Chemistry; Physiological chemistry.	A comparison of the re- cently proposed meth- ods for determining po- tassium.
10. Floyd Thomas Voris, B.S., Highland Park Normal College, 1892; M.S., 1900.	Physics.	Chemistry; Chemistry.	The absorption of light by various polished metal- lic surfaces.

TABLE IX (continued)

Candidate	Major Subject	Minor Subjects	Title of Essay
11. Charles Partridge Weston, B.C.E., Maine State College, 1896; C.E., University of Maine, 1899.	Mechanics.	Mathematics; Astronomy.	Determination of the division errors of the white bronze meter of the department of mechanics.
12. Lorande Loss Woodruff, A.B., Columbia University, 1901.	Zoölogy.	Zoölogy; Physiology.	On the multiplication of <i>stylonychia mytilus</i> .

TABLE X

RECOMMENDATIONS FOR DEGREES, 1901-1902

Students having their major subject under the Faculty of Applied Science.

DOCTOR OF PHILOSOPHY

Candidate	Major Subject	Minor Subjects	Title of Dissertation
1. Robert Henry Bradford, B.S., University of Utah, 1895.	Metallurgy.	Mineralogy and geology; Mining.	Reactions of the Ziervogel process, and their temperature limits.
2. Robert Heywood Fernald, B.M.E., Maine State College, 1892; M.E., Case School of Applied Science, 1898; A.M., Columbia University, 1901.	Mechanical engineering.	Mechanics; Mathematics.	Working details of a gas-engine test, including a method of determining the temperatures of exhaust gases.
3. Charles Edward Lucke, B.S., College of the City of New York, 1895; M.S., New York University, 1899.	Mechanical engineering.	Mechanics; Physics.	The heat-engine problem.

MASTER OF ARTS

Candidate	Major Subject	Minor Subjects	Title of Essay
1. Samuel David Bleich, B.S., College of the City of New York, 1899.	Civil engineering.	Civil engineering; Mechanics.	Vortex motion.
2. Charles Albert Fach, B.S., University of Missouri, 1901.	Mining.	Metallurgy; Geology.	Study of the cost of producing copper in certain Michigan copper mines.
3. John Arthur Morgan, E.E., Lafayette College, 1901.	Electrical engineering.	Mechanical engineering; Mechanics.	Resistance of electrotypes.
4. Charles Edward Morrison, B.S., College of the City of New York, 1897.	Civil engineering.	Civil engineering; American history.	Slavery and nullification in South Carolina.
5. David Heydorn Ray, A.B., College of the City of New York, 1897; B.S., Columbia University, 1901.	Architecture.	Architecture; Astronomy.	First geodetic work in America; being an account of the work of Charles Mason and Jeremiah Dixon in determining the boundary between the royal grants of Lord Baltimore and William Penn, and the incidental measurement of a meridian arc of one degree.

TABLE X (continued)

Candidate	Major Subject	Minor Subjects	Title of Essay
6. William T. Reich, Mech.E., Technical University of Vienna, 1888.	Electrical engi- neering.	Mechanics; Civil engi- neering.	Internal impedance of al- ternating current ma- chines.
7. Charles Comfort Starr, Ph.B., Yale Univer- sity, 1900.	Mining.	Geology; Metallurgy.	A design for the hoisting plant at an iron mine.
8. Hugh Philip Tiemann, B.S., Columbia Uni- versity, 1900.	Metallurgy.	Mechanical en- gineering; Mineralogy.	The temperature limits of the conversion of mor- tensite into graphite in pure cast iron.
9. Charles Rapelyea Wyc- koff, Jr., B.S., Polytechnic In- stitute of Brooklyn, 1899.	Civil engineer- ing.	Civil engineer- ing; Mechan- ics.	Moments of inertia.

The following tables represent in condensed form the titles of the courses in which instruction has been given in each department of the University during the academic year 1901-1902, the officers who have given the courses, the number of hours a week for which the courses have been scheduled, and the number and classification of students authorized to attend the courses.

DEPARTMENT OF ANATOMY

No.	Title of Course	Instructor	Lessons each Student	Hours a Week	Students				Grand Total
					A.B.	A.M., Ph.D.	M.D.	Spec.	
1	Vertebrate Morphology.	Huntington	.....	3	.....	198	4	202
2	Demonstrations to Sections.	Lambert	.....	1	.....	240	.....	250
3	Demonstrations to Sections.	Vosburgh and Carmalt	.....	2	.....	240	.....	250
5	Laboratory Course.....	Huntington, Gallaudet, and Asst. Demonstrators.	.....	.....	10	.....	8	268
6	Laboratory Course.....	Huntington, Gallaudet, and Asst. Demonstrators.	.....	.....	.....	.....	.....	.....
7	Demonstrations to Sections.	Demonstrators.	.....	.....	.....	198	.....	198
8	Demonstrations to Sections.	Gallaudet	.....	3	.....	198	.....	198
9	Demonstrations to Sections.	Floyd	.....	2	.....	198	.....	198
10	Laboratory Course in Animal Morphology	Flint	.....	1	.....	198	.....	198
19	Cranial Topography	Huntington	.....	Res.	.....	1	.....	1
20	Comparative Anatomy of the Heart and Vascular System.	Huntington	.....	Res.	.....	1	.....	1
23	Topography of the Pelvic Viscera, Muscles, and Fasciæ	Huntington	.....	Res.	.....	3	.....	3
		Huntington	.....	Res.	.....	3	.....	3
		Total	30	8	1720	12	1770

DEPARTMENT OF ARCHITECTURE

No.	Title of Course	Instructor	Hours a Week	Students				Grand Total
				A.B.	A.M.	B.S. Arch.	Spec.	
1	Ancient Architectural History	Kress	4	1	.....	26	1	28
3	Modern Architectural History	Hamlin, Kress	2	.....	.....	39	8	47
4	Theory of Architecture, Color—Style	Ware	1	.....	.....	31	6	37
5	History of Ancient Ornament	Hamlin	1	.....	.....	28	7	35
7	History of Modern Ornament	Hamlin	1	.....	.....	40	9	49
8	Elements of Architecture	Partridge	3	1	.....	25	1	27
91	Architectural Drawing	Harriman	8	1	.....	24	1	26
92	Freehand Drawing	Hamlin	4	1	.....	72	6	79
93	Historical Drawing	Kress	2	1	.....	24	.....	25
10	Projections, Shades, and Shadows	Sherman	3	.....	.....	34	4	38
11	Perspective (12 Lectures)	Ware	1	.....	.....	22	3	25
12	Descriptive Geometry	Sherman	2	.....	.....	19	.....	19
131	Specifications	Warren	2	.....	.....	18	2	20
132	Building Materials	Warren	2	.....	.....	18	2	20
141	Arch. Engineering (Analytical Geometry)	Sherman	2	.....	.....	28	.....	28
142	Arch. Engineering (Analytical Mechanics)	Sherman	3	.....	.....	19	.....	19
143	Arch. Engineering (Applied Mechanics)	Snelling	6	.....	.....	14	.....	14
15	Architectural Design	Ware, Hamlin, Partridge	14	.....	.....	59	8	67
16	Archæology, French	Kress	2	.....	.....	19	.....	19
16	Archæology, German	Kress	2	.....	.....	13	.....	13
17	Architectural Essays	Ware, Sherman	1	.....	.....	50	2	52
18	Advanced Architectural History	Ware	2	.....	.....	16	.....	16
19	Advanced Architectural Design	Hamlin, Hornbostel	25	.....	.....	17	2	19
20	Advanced Architectural Engineering	Snelling	15	.....	.....	1	.....	1
21	Advanced Architectural Practice	Warren	15	.....	.....	1	.....	1
22	University Course in Architectural Design and Practice	Ware, Hamlin, Hornbostel	3 ^a	.....	.....	1	.....	2
	Thesis		.....	.....	.....	16	1	17
	Total		.....	5	1	674	63	742

DEPARTMENT OF ASTRONOMY

No.	Title of Course	Instructor	Hours a Week	Students						Grand Total
				A. B.		A. M., Ph. D.		C. E.		
				M.	W.	M.				
1	General Astronomy	Rees, Mitchell	2	24	4					28
30	Geodesy	Rees, Mitchell	2					24		24
31	Geodesy	Jacoby	2					22		22
32	Geodesy (Summer School)	Jacoby, Mitchell	*					12		12
33	Geodesy	Jacoby, Rees	2					11		11
4	Spherical and Practical Astronomy	Mitchell, Rees	4				2			2
		Total		24	4		2	69		99

* 6 weeks' field work, June 4-July 15.

DEPARTMENT OF BOTANY

No.	Title of Course	Instructor	Hours a Week	Students							Grand Total	
				A.B.	A.M., Ph.D.		T.C.	E.M.	C.E.	Spec.		
					M.	W.						
1	Elementary Botany.....	Curtis.....	3	4	2							7
2	Comparative Anatomy of Vas- cular Plants.....	Curtis.....	3	1								1
3 & 7	Plant Physiology.....	Curtis.....	3	1		1						2
5	Botanical Problems.....	Curtis.....	3	1								1
8	General Botany.....	Underwood, Ander- son.....	2	1								79
9	Taxonomy of Spermatophyta..	Lloyd.....	10					47	30			1
12	General Physiology.....	MacDougal.....	10		1							1
13	Embryology of Spermatophyta	Lloyd.....	10		1	2						2
16	Physiology of the Cell.....	Underwood, Mac- Dougal.....	10		1							3
25	Taxonomy of Pteridophyta...	Underwood.....	5									1
	Total.....			8	5	5	1	47	30		2	98

DEPARTMENT OF CHEMISTRY

No.	Title of Course	Instructor	Students												
			A.B.	A.M., Ph.D.		M.D.	E.M.	Met. E.	B.S. Chem	C.E.	E.E.	Mech.	Spec.	Grand Total	
			M.	W.											
1	General Inorganic Chemistry..	Chandler, Laudy.													
2	General Inorganic Chemistry.	Whitaker, Tucker. Pellew, Vulte. Goodell, Uhlig.....				53	1	11	31	39	34	1		219	
3	Physical Chemistry.	Morgan.....			194			8						194	
4	Physical Chemistry.	Morgan.....	10					2						12	
5	Physical Chemistry.	Morgan.....	2	1										3	
7	Qualitative Analysis.....	Wells, Neish, Whitaker, Dreyfus.....				57	2	13	37	45	40	2		220	
9	Quantitative Analysis.....	Miller, Jouet.....	5					9						18	
10	Advanced Inorganic Chemistry.	Whitaker.....	6					5						13	
11	Quantitative Analysis.....	Sherman, Tingle.....								38				38	
12	Quantitative Analysis.....	Miller, Jouet.....				47								50	
13	Quantitative Analysis.....	Sherman.....						15						16	
14	Quantitative Analysis.....	Miller, Sherman.....	7					3						12	
16	Quantitative Analysis.....	Miller.....	3											4	
17	Assaying.....	Miller, Hubbard.....	2			42	3	15						65	

DEPARTMENT OF CHEMISTRY—(continued)

No.	Title of Course	Instructor	Students											Grand Total			
			A.B.	A.M., Ph.D.		M.D.	E.M.	Met. E.	B.S. Chem.	C.E.	E.E.	Met. E.	Spec.				
				M.	W.												
19	Quantitative Analysis, Short Course.....	Jouet.....	1	2												2	5
20	Organic Chemistry, Elementary.....	Chambers.....	4	1												3	8
30	Organic Chemistry, Laboratory.....	Bogert, Chambers.....	3	2												2	7
31	Organic Chemistry.....	Bogert, Chambers.....	3	3						13							10
32	Organic Chemistry.....	Bogert, Chambers.....	1	1						5							6
33	Organic Chemistry, Laboratory.....	Bogert, Chambers.....		1						1							2
23	Organic Chemistry, Research.....	Bogert.....		2													2
24	Industrial Chemistry, General.....	Chandler, Pellew.....															
25	Industrial Chemistry, Special.....	Laudy.....	11	1			37	3	7	28	30	26	26	2	1	1	145
26	Industrial Chemistry, Laboratory.....	Chandler, Pellew.....	1	1					20								24
27	Industrial Chemistry, Laboratory.....	Pellew, Tucker.....		1						1						3	14
28	Industrial Chemistry, Electro.....	Pellew, Tucker.....	2														2
		Pellew, Tucker.....		1								4					6
		Total.....	107	52	1	194	236	13	128	96	156	101	26	1110			

DEPARTMENT OF CIVIL ENGINEERING

REGISTRAR'S REPORT

311

No.	Title of Course	Instructor	Hours a Week	Students							Grand Total		
				A.B.	A.M., Ph.D.	E.M.	Met. E.	C.E.	E.E.	Mech. E.		Special	
1	Theory of Surveying, 2d half.	Dougherty...	2	5		53	4	33				3	98
2	Road Engineering, 1st half.	Falk.....	2	1				29				1	31
3	Water Supply and Irrigation, 2d half.	Lovell.....	2	1				31				2	34
4	Masonry Structures.	Lovell.....	2					23					23
5	Resistance of Materials.	Burr, Lovell	6			36		20	19				76
6	Graphic Statics, 2d half.	Falk.....	4 1/2		1	35		19					54
7	Theory of Trusses, 2d half.	Falk.....	4 1/2					21					21
8	Sewage Disposal, 1st half.	Black.....	2					20					20
9	Railroad Engineering, 5 months.	Lovell.....	5 1/2					13					13
10	Design and Construction of Bridges, etc.	Burr, Falk	4 1/2					14				1	15
11	Foundations, 1st half.	Burr.....	4 1/2					9				1	10
12	Hydraulics, 1st half.	Burr.....	2			20		12		5		1	38
13	Sewers and Harbors, 2d half.	Burr.....	2					11					11
14	Theory of Railroad Surveying	Lovell.....	1					25					25
14a	Railroad Surveying.	Lovell.....	1	1		54						1	56
15	Surveying, between 1st and 2d years.	Lovell, Summer School.	*			49		32				1	82
16	Surveying, between 2d and 3d years.	Lovell, Summer School.	*	1		30	1	15					47
17	Surveying, between 3d and 4th years.	Lovell, Summer School.	*			17		12					29
22	Foundations (C. E. 11)	Burr.....											1
23	Hydraulics (C. E. 12)	Burr.....			1							1	1
24	Long Span Bridges (C. E. 10)	Burr.....			1								1
25	Elastic and Masonry Arches (C. E. 4)	Burr.....			1								1
27	Hydraulic Engineering.	Burr.....										1	1
	Thesis.....	Burr.....						9					9
	Total.....			9	4	294	5	348	19	5		13	697

* Daily, six weeks.

DEPARTMENT OF COMPARATIVE LITERATURE

No.	Title of Course	Instructor	Hours a Week	Students								
				A.B.	A.M., Ph.D.		T.C.	Special	Audi- tors.	Grand Total		
					M.	W.						
1	Introduction to the Study of Literature	Woodberry, Chase.	3	24	2	.....	.....	1	1	1	.....	29
2	English Literature from 1789 to Death of Tennyson.....	Woodberry.....	3	86	.....	.....	.....	.....	13	.....	.....	99
3	English Literature from 1660 to 1789...	Chase.....	3	12	.....	.....	.....	.....	2	.....	.....	14
4	English Literature from the Birth of Shakespeare to 1660.....	Woodberry.....	3	34	1	.....	.....	1	2	.....	.....	38
5 ^a	The Theory, History, and Practice of Criticism.....	Woodberry, Spin- garn.....	2	17	.....	.....	.....	.....	.....	.....	.....	17
6	Studies in Literature.....	Woodberry.....	1	.....	8	16	.....	.....	.....	.....	.....	24
7	Lyric Poetry in Middle Ages and Re- naissance.....	Spingarn.....	3	.....	2	4	.....	.....	.....	.....	.....	6
8	Elements of Romanticism in 18th Cen- tury.....	Chandler.....	3	.....	4	10	.....	.....	.....	.....	.....	14
10	The Italian Renaissance and the Dif- fusion of its Influence throughout Europe.....	Spingarn.....	3	.....	8	6	.....	.....	.....	.....	.....	14
	Seminar A.....	Woodberry.....	1	.....	3	2	.....	.....	.....	.....	.....	5
	Seminar B.....	Spingarn.....	1	.....	2	1	.....	.....	.....	.....	.....	3
	Seminar C.....	Chandler.....	2	.....	2	4	.....	.....	.....	.....	.....	6
	Total.....		.....	173	32	43	.....	2	18	1	.....	269

DEPARTMENT OF DERMATOLOGY

No.	Title of Course	Instructor	Lectures each Student	Hours a Week	Students	
					M.D.	Grand Total
1	Clinical Lectures at the Vanderbilt Clinic on the Diseases of the Skin.....	Fox.....	.....	1	148	148
2	Practical Instruction at the Vanderbilt Clinic in the Diagnosis and Treatment of the Diseases of the Skin.....	G. T. Jackson.....	10	.....	148	148
Total.....					296	296

DEPARTMENT OF DISEASES OF CHILDREN						
No.	Title of Course	Instructor	Lessons each Student	Hours a Week	Students	
					M.D.	Grand Total
1	Clinical Lectures at the Vanderbilt Clinic upon the Diseases of Children.....	Jacobi.....	.....	1	148	148
2	Practical Instruction at the Vanderbilt Clinic in the Diagnosis and Treatment of the Diseases of Children.....	Huber.....	10	.....	148	148
3	Hospital Clinics, Roosevelt Hospital.....	Jacobi.....	.....	2	148	148
4	Hospital Clinics, Babies' Hospital.....	Holt.....	16	.....	148	148
Total.....					592	592

DEPARTMENT OF ECONOMICS AND SOCIAL SCIENCE

No.	Title of Course	Instructor	Hours a Week	Students						Grand Total
				A.B.	A.M., Ph D.		LL.B.	Special		
					M.	W.				
A	Outlines of Economics, 2d half.	Seligman, Day, Mussey	3	94	1		3	6	104	
1	Economic History of England and America, 1st half.	Seligman	3	24	2	1	4	6	37	
2	Principles of Economics.	Clark	1	6	6				12	
3	Practical Political Economy.	Gould, West.	3	33	14	3	2	3	55	
4	Science of Finance.	Seligman	2	10	34			2	46	
5	Fiscal and Industrial History of the United States, 1st half.	Seligman	2		27	3			30	
7	Railroad Problems, 2d half.	Seligman	2		32	3			35	
9	Economic Theory I.	Clark	2	1	25	6			32	
10	Economic Theory II.	Clark	2	1	23	6			30	
11	Communitistic and Socialistic Theories, 1st half.	Clark	2	11	21	6		1	39	
12	Theories of Social Reform, 2d half.	Clark	2	11	24	3		1	39	
14	Seminar Pol. Econ. and Finance, 2d half.	Seligman, Clark	2		18	1			19	
15	Principles of Sociology.	Giddings	2	18	29	6		1	54	
17	Statistics, 2d half.	Giddings	2		16	6		2	24	
20	Social Evolution, 1st half.	Giddings	2		46	9			55	
21	Progress and Democracy, 2d half.	Giddings	2		41	10			51	
22	Pauperism, Poor Laws, and Charities, 1st half	Giddings	2		19	7			26	
24	The Civil Aspects of Ecclesiastical Organi- zations.	Bayles, Giddings	1		2				2	
30	Seminar in Sociology.	Giddings	2		29	9			38	
Total				209	409	79	9	22	728	

DEPARTMENT OF ENGLISH

No.	Title of Course	Instructor	Hours per Week	Students										Grand Total			
				A.B.		A.M., Ph.D.		T. C.		LL.B.		Special			Aud.		
				M.	W.	M.	W.	M.	W.	M.	W.	M.	W.				
A	Rhetoric and English Composition.....	Odell, Brewster, Hamilton.....	3	108									12				120
B	English Composition.....	G. R. Carpenter, Odell, Hamilton, Odell, Hamilton.....	2	121									9				130
1	English Composition.....	G. R. Carpenter.....	3	48		4	6						3				61
2	English Composition.....	G. R. Carpenter.....	3	30		2	5						5				42
3	English Composition.....	G. R. Carpenter.....	2			13	17						1			1	33
4	Elocution.....	Lewis.....	2	52		3							1				62
6	Theory and Practice of Public Speaking.....	Ringwalt.....	3	10									1				11
8	English Composition.....	Brewster.....	3	9									1				10
9	Debating.....	Ringwalt.....	3	9		1							1				12
15	Anglo-Saxon and Historical English Grammar.....	Krapp.....	3	3		3	5						1				12
16	Anglo-Saxon Literature.....	Krapp.....	2			3	4										7
17	Chaucer.....	Price.....	2	5		1	4										16
19	Shakspeare.....	Price.....	2	15		1	2						2				20
21	American Literature.....	Brander Mathews.....	3	58		6							10				74
23	English Poetry.....	Odell.....	3	27		1							2				30
25	The Development of the English Drama.....	Brander Mathews.....	3	31									1				32
32	English Language and Literature of the Sixteenth Century.....	Price.....	2			6	9										15
33	Anglo-Saxon Prose and Historical English Syntax.....	Price.....	2			3	1										4
40	Epochs of the Drama.....	Brander Mathews.....	2			20											20
42	Molière and Modern Comedy.....	Brander Mathews.....	2			4							1				5
47	English Literature from 1660 to 1745.....	Trent.....	2			6	3										9
49	English Literature in the First Half of the Nineteenth Century	Trent.....	2	1		15	30										58
	Total.....			527	1	95	88		1	3	2	54		1	11		783

DEPARTMENT OF GERMANIC LANGUAGES

No.	Title of Course	Instructor	Hours a Week	Students												Grand Total	
				A.B.		A.M., Ph.D.		* L.L.B.	* E.M.	* B.S. Chem.	* E.E.	* B.S. Arch.	Spec.	Aud.			
				M.	W.	M.	W.										
A	Elementary Course.....	Hervey, Tombo, Keppler.....	3	46		3	1	1									57
1	Elementary Course.....	Remy, Keppler.....	6	4													7
2	Grammar, Reading, Composition.....	Remy, Keppler.....	3	52		3	1	1		2							63
3a	Selected Works of Goethe, Schiller, and Lessing.....	Hervey.....	3	21		4							1			1	27
3b	Selected Works of Goethe, Schiller, and Lessing.....	Hervey.....	3	31		1									1		33
4	Historical Prose.....	Tombo.....	3	5		1									1		7
6	History of German Literature.....	Thomas.....	2	23		3	2										28
7	Goethe's Faust.....	Thomas.....	2	8			5										13
8	Practice in Speaking and Writing.....	Tombo.....	2	17		3	2							2			24
9	History of the German Language.....	W. H. Carpenter.....	2	3		4	6										13
10a	Great German Writers.....	Thomas.....	2	2		3	6										11
14	Icelandic.....	W. H. Carpenter.....	2	1		5	3										9
17	Gothic.....	Remy.....	2			3	3										6
19	Teachers' Course.....	Bagster-Collins.....	2				2										2
20	Geschichte der deutsch. Litt. im 19. Jahrh.....	Thomas.....	2	2		3	3									1	17
21	Middle High German.....	W. H. Carpenter.....	2	3		4	1										8
22	Grammar and Composition.....	Hervey.....	2	33											3		36
	German Seminar.....	W. H. Carpenter, Thomas.....				8	3										11
	Total.....			251	3	51	43	2	1	2				1	15		372

* Not required for the degrees indicated.

DEPARTMENT OF GREEK

No.	Title of Course	Instructor	Hours a Week	Students						
				A.B.	A.M., Ph.D.		Special		Grand Total	
				M.	W.	M.	W.			
A	Elementary Course.....	Rogers.....	5	6		2		8		
B	Selected Orations of Lysias, Homer's Odyssey	Young, Rogers.....	3	40		1		41		
1	Elements of Greek Archæology.....	Young.....	2	6				6		
3	Euripides's Medea, Sophocles' Philoctetes, Plato.....	Young, Perry.....	3	14	1			15		
4	Rapid Reading of Homer.....	Wheeler.....	2	4				4		
6	Æschylus' Prometheus, Sophocles' Anti- gones, Thucydides.....	Perry, Young.....	3	8				8		
7	Advanced Greek Prose Composition.....	Wheeler.....	2	3	4	4		11		
12	The Lyric and Bucolic Poets.....	Perry.....	2	4	4	3		7		
14	New Testament Greek.....	Young.....	2	8	1			9		
16	Thucydides and Demosthenes.....	Perry, Wheeler.....	2	1	4	4		9		
18	Introduction to Greek Archæology.....	Young.....	2	1	5	8	1	15		
21	Greek Epigraphy.....	Wheeler.....	2		3	1		4		
24	Methods of Classical Philology.....	Perry.....	1		3	1		4		
	Greek Seminar.....		3		7	3		10		
Total.....				91	32	24	3	151	1	

DEPARTMENT OF GYNECOLOGY

No.	Title of Course	Instructor	Lessons each Student	Hours a Week	Students	
					M.D.	Grand Total
1	The Principles and Practice of Gynecology (Mar.-May)	Tuttle	.....	3	179	179
2	Recitations and Demonstrations	Whiting	8	.....	190	190
3	Clinical Instruction at the Vanderbilt Clinic	Tuttle	.....	1	250	250
4	Practical Instruction in Diagnosis, Treatment, and the Use of Instruments	Jarman and Stone	10	.....	179	179
5	Hospital Clinics in Operative Gynecology	Tuttle	.....	3	?	?
Total					798+	798+

DEPARTMENT OF HISTORY AND POLITICAL PHILOSOPHY

No.	Title of Course	Instructor	Hours a Week	Students							Grand Total	
				A.B.	A.M., Ph.D.		LL.B.	Special				
					M.	W.						
A	Epochs of Ancient, Mediaeval, and Modern History.....	Shepherd, Shotwell	3	124								137
1	Continental European History.....	Shepherd, Shotwell	3	7		1						10
2	Continental European History.....	Dunning, Shepherd	3	15		1						16
3	English History to the Reform Bill, 1832.....	Shepherd, Smith...	3	15								16
4	History of the United States to Close of Re-construction.....											
6	History of Great Britain during Eighteenth and Nineteenth Centuries.....	Dunning, Smith...	3	39						9		48
10	Historical Bibliography.....	Osgood, Cushing...	2	1		8						16
11	Development of European Culture during the Later Middle Ages and Renaissance.....	Robinson, Osgood..	2			6	2					8
12	Mediaeval Institutions.....	Robinson.....	2	8		12	15					35
14a	France under Louis XVI.....	Robinson.....	2			1	1					2
14b	The Age of the Revolution, 1791 to 1815.....	Robinson.....	2			11	4					15
15	The Work of Napoleon.....	Sloane.....	2			14	5					19
18	Seminar in Later Mediaeval and Modern Euro-pean History.....	Sloane.....	2			1						1
30	Transitions in American History.....	Robinson.....	2			5	4					9
31	Political and Constitutional History of the United States.....	Sloane.....	2	14		21					3	38
32	American Colonial History during the 17th Century.....	Burgess.....	2	35		34	2	101	3			175
34	European Politics and the War of 1812.....	Osgood.....	2			15	10					25
35	The United States during the Civil War and Reconstruction.....	Sloane.....	2			6	8					14
37	Seminar in American Colonial History.....	Dunning.....	2			18	4	2				24
40	General History of Political Theories.....	Osgood.....	1			4	3					7
42	Seminar in Political Philosophy.....	Dunning.....	1			21	8					29
		Dunning.....	1			1						1
		Total.....		279		165	67	103	31			645

DEPARTMENT OF INDO-IRANIAN LANGUAGES

No.	Title of Course	Instructor	Hours a Week	Students				
				A.B.	A.M., M.	Ph.D. W.	Special	Grand Total
1	Sanskrit.....	Jackson.....	3	1	1	1	.....	3
2	Avestan.....	Jackson.....	2	1	.....	.....	.....	1
3	Sanskrit.....	Jackson.....	2	1	3	.....	.....	4
4	Advanced Avestan.....	Jackson.....	2	1	.....	.....	.....	1
8	Sanskrit Literature.....	Jackson.....	1	6	.....	.....	.....	6
11	Modern Persian.....	Yohannan.....	1	1	1	.....	.....	3
12	Modern Persian, Advanced Seminar.....	Yohannan.....	2	2	.....	.....	.....	2
	Introduction to the Science of Language.....	Jackson.....	1	1	.....	.....	.....	1
		Jackson.....	2	1	2	.....	.....	5
		Total.....	.....	4	17	4	1	26

DEPARTMENT OF LARYNGOLOGY

No.	Title of Course	Instructor	Lessons each Student	Hours a Week	Students	
					M.D.	Grand Total
1	A Systematic Course of Didactic Lectures.....	Lefferts.....	.....	1	148	148
2	Practical Clinical Instruction in the Use of the Laryngoscope, Rhinoscope, and Tongue Spatula.....	Simpson.....	10	.....	148	148
3	Individual Clinical Demonstration.....	Frothingham.....	?	.....	148	148
		Total.....	.....	.....	444	444

DEPARTMENT OF LATIN

No.	Title of Course	Instructor	Hours a Week	A.B.	Students			Grand Total
					A.M., Ph.D.	Spec.	W.	
A	Cicero.....	Egbert, McCrea.....	3	77	.....	.....	1	78
B	Reading of Selections in Prose and Verse Illustrative of the Public and Private Life of the Romans	Peck.....	3	28	.....	.....	.....	28
X	Elementary Course I.....	Olcott.....	5	13	.....	.....	2	15
Y	Elementary Course II.....	Olcott.....	3	18	.....	.....	4	22
1	Tacitus.....	Olcott.....	3	17	.....	.....	1	18
2	Horace.....	McCrea.....	2	35	.....	.....	2	37
3	Juvenal Satires.....	Egbert.....	3	6	.....	.....	.....	6
4	Terence.....	McCrea.....	2	10	2	.....	.....	12
5	Roman Epigraphy.....	Egbert.....	2	.....	4	5	.....	9
6	Rapid Reading.....	Peck.....	2	2	.....	3	.....	5
10	The private Life of the Romans.....	McCrea.....	2	20	.....	.....	1	21
12	Roman Epigraphy, Advanced.....	Egbert.....	2	.....	3	1	.....	4
20	Roman Oratory.....	McCrea.....	2	4	11	13	.....	28
22	Prose Composition.....	McCrea.....	2	2	5	8	.....	15
28	Lectures on the History of Classical Philology.....	Peck.....	2	.....	4	8	.....	12
29	Roman Tragedy.....	Knapp.....	3	1	.....	2	.....	3
32	The Topography and Monuments of Ancient Rome.....	Olcott.....	2	.....	1	2	.....	3
33	The Topography and Monuments of Ancient Rome (Imperial Period).....	Olcott.....	2	.....	.....	3	.....	3
34	Latin Versification.....	Peck.....	2	.....	1	3	.....	4
	Seminar.....	Peck, Egbert.....	1	.....	5	4	.....	9
Total.....				233	36	52	11	332

DEPARTMENT OF MATERIA MEDICA AND THERAPEUTICS

No.	Title of Course	Instructor	Hours a Week	Students		
				M.D.	Special	Grand Total
1	The Didactic Course.....	Peabody.....	3	377	2	379
2	The Clinical Instruction in Therapeutics.....	Peabody.....	1	?	.....	?
Total.....				377+	2	379+

DEPARTMENT OF MATHEMATICS

No.	Title of Course	Instructor	Hours a Week	Students										Grand Total		
				A.B.	A.M., Ph.D.		E.M.	Met. E.	Ch. E.	C.E.	E.E.	Mech.	Spec.			
				M.	W.											
A	Geometry, Algebra, and Trigonometry.....	Maclay, Keyser, Mitchell, Ling..	3	106												110
1	Trigonometry, 1st half.....	Fiske.....	3	21												21
2	Advanced Algebra, 2d half.....	Fiske.....	3	18												18
3	Trigonometry, Algebra, 1st half..	Maclay, Keyser, Mitchell, Ling..	5	21				57	1	12	35	41	39			206
4	Analytical Geometry, 2d half. ...	Maclay, Keyser, Mitchell, Ling..	5	19				64	2	14	37	40	35			211
5	Analytical Geometry.....	Van Amringe...	3	8												9
6	Calculus.....	Van Amringe...	3	10	1			44	1	9	25	34	29		1	154
7	Differential Equations.....	Mitchell.....	3	2						1						3
101	Advanced Calculus.....	Fiske.....	3	1	1											2
102	Theory of Functions of a Complex Variable.....	Maclay.....	3		6	1										7
106	Theory of Groups.....	Cole.....	3		1	2										3
107	Modern Theories of Geometry...	Keyser.....	3		3	2										5
Total.....				206	12	5	165	4	36	97	115	103			6	749

DEPARTMENT OF MECHANICAL ENGINEERING

No.	Title of Course	Instructor	Hours a Week	Students										Grand Total
				A.B.	Ph.D.	E.M.	Met. E.	Chem.	C.E.	E.E.	Mech.	Spec.		
1	Mechanical Drawing.....	Mayer, Miller..	4½	18		85	5	12	58	73	60	3	314	
2	Engineering Drawing.....	Mayer, Miller..	4½	2		29	3	28	40	40	26	1	129	
3	Shop Work.....	Weick.....	6	6				37	40	38	38	1	122	
4	Shop Work.....	Weick.....	6	6				37	40	38	38	1	122	
5	Shop Work, Summer Work.....	Weick.....	*								32		32	
6	Shop Work, 1st half.....	Sleffel.....	6	1				28	31	27	25		87	
7	Shop Work, 2d half.....	Benns.....	6	1				28	32	25	25		86	
8	Shop Work, Summer Work.....	Benns.....	*								26		26	
9	Shop Work, 1st half.....	Benns.....	4								28		28	
10	Properties of Materials.....	Woolson.....	2	1							45	52	1	99
11	Engineering of Power Plants.....	Hutton.....	1		36		14	23	33	24	1	1	131	
12	Engines and Boilers.....	Hutton.....	2		18	1	5	8	20	27	1	1	80	
13	Engines and Boilers.....	Hutton.....	2		17	1	5	9	20	27	1	1	80	
14	Mechanical Engineering Laboratory.....	Pendleton.....	1								27		27	
15	Mechanical Engineering Laboratory.....	Cathcart, Pendleton.....	1½								27		27	
16	Testing Laboratory.....	Woolson.....	4				2				27		29	
17	Mechanical Engineering Laboratory.....	Cathcart, Pendleton.....	Res.								24	47	71	
18	Machinery and Mechanism.....	Woolson.....	2								41	28	78	
19	Heat and Heat Engines, 1st half.....	Hutton.....	3		22			12	24	22	20		81	
20	Dynamics and Motors, 2d half.....	Hutton.....	1		16	1		8	24	20	20		70	
21	Dynamics and Motors, 2d half.....	Hutton.....	1		16	1		8	24	20	20		70	

DEPARTMENT OF MECHANICS

No.	Title of Course	Instructor	Hours a Week	Students										Grand Total	
				A.B.	A.M., Ph.D. M.	W.	E.M.	Met. E.	Chem.	C.E.	E.E.	Mech.			
1	Analytical Mechanics.....	Woodward.....	3		5		28	2				21	18	23	97
2	Elementary Mechanics.....	Pfister.....	2	4											4
3	Theoretical Mechanics.....	Pfister.....	2		2										2
4	Thermodynamics.....	Pfister.....	3									10	21	21	52
6	Theory of Dynamo and Motor.....	Pupin, Towns- end.....	3										22	22	22
7	Theory of Dynamo and Motor.....	Pupin.....	3										20	20	20
8	Theory of Alternators and Transform- ers, 1st half.....	Pupin.....	3		1								25	2	28
9	Theory of Variable Currents, 2d half.....	Steinmetz.....	2		1								20	2	29
10	Advanced Theoretical Mechanics.....	Woodward.....	2		3								1		4
11	Theory of Potential Function.....	Woodward.....	2		5	3					1		1		10
18	Theory of the Conduction of Heat in Solids.....	Woodward.....	2		5										5
19	Analytical Mechanics.....	Pfister.....	2								13				14
20	Thermodynamics.....	Pfister.....	2						20						20
Total.....				4	22	3	49	2		14	31	134	48	307	

DEPARTMENT OF METALLURGY

No.	Title of Course	Instructor	Hours a Week	Students											
				A.B.	A.M. Ph.D.	E.M.	Met. E.	Phos.	C.E.	E.E.	Mech.	Spec.	Grand Total		
1	General Metallurgy, 3 months...	Bentley.....	3	....	4	42	2	13	1	1	....	....	....	....	66
3	Metallurgy of Iron and Steel, 2d half.....	Howe.....	3	....	4	....	3	1	14	26	29	3	....	....	80
4	Metallurgy of Copper, 3 months.....	Howe.....	3	1	4	23	....	4	2	....	....	....	....	....	38
5	Metallurgy of the other Non-ferrous Metals, 5 months.....	Bentley.....	3	....	3	39	2	14	....	....	....	....	....	....	62
6	Laboratory Work, 2d half.....	Howe, Bentley.	4 afts.	....	3	....	4	....	....	....	....	....	....	....	7
6a	Laboratory Work, 1st half, 1 month.....	Howe, Bentley.	10 afts.	....	3	18	....	....	....	....	....	....	....	....	23
9	Microscopic Study of Iron, Steel, and other Metals.....	Howe, Bentley.	Res.	....	1	....	....	....	....	....	....	....	....	....	2
13	The Chemistry of Roasting Processes.....	Howe.....	Res.	....	1	....	....	....	....	....	....	....	....	....	1
16	Search for New and Useful Alloys.....	Howe.....	Res.	....	1	....	....	....	....	....	....	....	....	....	1
19	Wet Processes for Extracting Gold, Silver, and Copper.....	Howe.....	Res.	....	1	....	....	....	....	....	....	....	....	....	1
	Thesis.....	Howe.....	Res.	....	....	....	1	....	....	....	....	....	....	....	1
	Total.....			1	25	122	12	32	17	27	29	17	282		

DEPARTMENT OF MINERALOGY

No.	Title of Course	Instructor	Hours a Week	Students							Grand Total	
				A.B.	A.M., Ph.D.	E.M.	Mct. E.	B.S. Chem.	C.E.	Special		
1	Blowpipe Analysis, 1st half.	Moses, Luquer, McCord.....	3½	5	.....	56	1	13	.....	.....	2	77
2	Crystallography, 1st half.	Moses.....	2	3	.....	57	2	13	.....	.....	1	76
3	General Mineralogy.	Moses.....	3	2	.....	.....	.....	.....	.....	.....	.....	4
4	Descriptive Mineralogy, 1st year, 2d half.....	Moses, Luquer....	3½	3	.....	56	1	9	.....	.....	2	71
-4a	Descriptive Mineralogy, 2d year, 1st half.....	Moses, Luquer....	3½	3	.....	45	2	7	.....	.....	3	60
5	Minerals of Building Stones.	Luquer.....	2	1	.....	.....	.....	.....	.....	32	1	35
6	Optical Mineralogy, 2 months.	Luquer.....	3½	1	.....	47	4	.....	.....	.....	2	56
9	Physical Crystallography.	Moses.....	0	.....	.....	.....	.....	.....	.....	.....	.....	2
10	Physical Crystallography.	Moses.....	6	.....	.....	.....	.....	.....	.....	.....	.....	1
Total.....				18	8	261	10	42	.....	32	11	382

DEPARTMENT OF MINING

No.	Title of Course	Instructor	Hours a Week	Students							Grand Total
				A.B.	A.M., Ph.D.	E.M.	Met. E.	C.E.	Spec.		
1	Excavation and Tunnelling, 1st half.....	Peele.....	3	3	1	40	.....	.....	.....	1	45
2	Boring and Shaft Sinking, 2d half.....	Peele.....	2	2	3	39	.....	.....	.....	3	47
2b	Earth and Rock Excavation, 1st half....	Peele.....	2	.....	.....	.....	.....	23	.....	.....	23
3	Mining.....	Munroe.....	2	.....	6	41	.....	.....	.....	1	54
4	Ore Dressing.....	Munroe.....	2	.....	3	47	.....	.....	.....	1	58
5	Ore Dressing Laboratory (3 weeks afts.)...	Munroe, Kurtz..	.....	.....	3	20	.....	.....	.....	1	25
6	Mine Engineering, 1st half.....	Munroe.....	2	.....	5	18	.....	.....	.....	.....	28
7	Mine Plant.....	Peele.....	3	.....	6	28	.....	.....	.....	.....	34
7a	Mine Constructions, 2d half.....	Peele.....	1	.....	.....	34	.....	.....	.....	1	36
8	Design of Mine Plant.....	Peele, Kurtz....	6	.....	1	18	.....	.....	.....	.....	19
9	Mine Surveying, 2d half.....	Munroe.....	1	.....	2	20	.....	.....	.....	2	25
10	Mine Administration, 2d half.....	Munroe.....	1	.....	3	22	.....	.....	.....	1	31
11	Summer School in Mining (6 weeks).....	Peele, Kurtz....	.....	.....	.....	20	.....	.....	.....	.....	20
	Thesis.....	.....	.....	.....	1	22	.....	.....	.....	.....	23
Total.....			.....	5	34	369	12	49	9	468	

DEPARTMENT OF MUNICIPAL OR PRIVATE LAW

No.	Title of Course	Instructor	Hours a Week	Students			Grand Total
				A.B.	LL.B.		
1	Elements of Jurisprudence and Equity I.	Keener.	2	13	160	173	
2	Contracts.	Terry.	4	13	159	172	
3	Real and Personal Property I.	Kirchwey.	2	13	160	173	
4	Torts.	Burdick.	2	13	160	173	
4a	Criminal Law.	Stone.	2	8	128	136	
5	Pleading and Practice I.	Redfield.	2	5	158	163	
7	Quasi-Contracts.	Kirchwey.	2	.....	.....	.....
8	Equity II.	Keener.	2	.....	.....	.....
9	Real and Personal Property II.	Kirchwey.	2	.....	.....	.....
10	Agency.	Canfield.	2	.....	.....	.....
11	Bailments and Carriers.	Stone.	2	.....	.....	.....
12	Sales of Personal Property.	Burdick.	2	.....	.....	.....
14	Pleading and Practice II.	Redfield.	2	.....	.....	.....
15	Negotiable Paper.	Burdick.	2	.....	.....	.....
16	Pleading and Practice III., 1st half.	Redfield.	2	.....	.....	.....
17	Corporations.	Keener.	2	.....	.....	.....
18	Equity III.	Keener.	2	.....	.....	.....
19	Evidence.	Canfield.	2	.....	.....	.....
20	Insurance.	Stone.	1	.....	.....	.....
21	Partnership.	Burdick.	2	.....	.....	.....
22	Real and Personal Property III.	Kirchwey.	2	.....	.....	.....
23	Suretyship and Mortgage.	Burdick, Kirchwey.	2	.....	.....	.....
24	Wills and Administration.	Redfield.	2	.....	.....	.....
25	Doctrines Peculiar to New York Law, 2d half.	Canfield.	2	.....	.....	.....
	Total.			65	3199	3264	

DEPARTMENT OF NEUROLOGY

No.	Title of Course	Instructor	Lessons each Student	Hours a Week	Students	
					M. D.	Grand Total
1	The Diseases of the Mind and Nervous System (5 months).....	Starr.....	.....	1	327	327
2	Clinical Lectures at the Vanderbilt Clinic.....	Starr.....	.....	1	148	148
3	Practical Instruction in Neurology.....	Peterson, Bailey.....	10	.....	148	148
4	Insanity.....	Peterson.....	4	.....	148	148
Total.....					771	771

DEPARTMENT OF OBSTETRICS

No	Title of Course	Instructor	Lessons each Student	Hours a Week	Students	
					M.D.	Grand Total
1	Theory and Practice of Obstetrics (Oct.-Mar.)	Cragin . . . . .	. . . . .	3	179	179
2	Recitations and Demonstrations	Voorhees	24	. . . . .	190	190
3	Practical Instruction at the Sloane Maternity Hospital	Dorman . . . . .	?	. . . . .	148	148
Total					517	517

DEPARTMENT OF OPHTHALMOLOGY

No.	Title of Course	Instructor	Lessons each Student	Hours a Week	Students		Grand Total
					M.D.		
1	Clinical Lectures upon the Diseases of the Eye.	Knapp. ....	.....	1	179		179
2	Practical Instruction in the Use of the Ophthalmoscope.	May.	5	.....	179		179
3	Practical Instruction in the Refraction and Motility of the Eye.	Claiborne.	5	.....	179		179
4	Hospital Clinics on the Diseases and the Operative Surgery of the Eye, at the New York Ophthalmic and Aural Institute.	Knapp. ....	.....	2	?		?
Total.					537+		537+

DEPARTMENT OF ORTHOPÆDIC SURGERY

No.	Title of Course	Instructor	Lessons each Student	Hours a Week	Students	
					M.D.	Grand Total
1	Clinical Lectures at the Vanderbilt Clinic.....	Gibney.....	.....	1	148	148
2	Practical Instruction at the Vanderbilt Clinic....	Whitman.....	10	.....	148	148
3	Clinics, Hospital for Ruptured and Crippled.....	Gibney, Whitman.....	.....	*1	148	148
Total.....					444	444

* Class sections of 20.

DEPARTMENT OF OTOTOLOGY

No.	Title of Course	Instructor	Lessons each Student	Students	
				M.D.	Grand Total
1	Practical Instruction in the Diagnosis of the Diseases of the Ear.....	Cowen, Lewis.....	8	179	179
2	Didactic Instruction in Pathology and Therapeutic Methods.....	Buck.....	4	179	179
Total.....				358	358

DEPARTMENT OF PATHOLOGY

No.	Title of Course	Instructor	Hours a Week	Students				
				A.B.	A.M., Ph.D.	M.D.	Spec.	Grand Total
1	A.—PATHOLOGY Autopsy Technique and Pathological Anatomy (8 weeks).....	Hodenpyl, Thatcher, Briggs, Wood.....	1	.....	.....	190	.....	190
2	Practical Instruction in General Pathology, Pathological Anatomy and Histology, and in the Bacteriology of the Infectious Diseases ($\frac{1}{2}$ year).....	Prudden, Hodenpyl, Larkin, Bailey, Lartigan, Hubbard...	6	.....	.....	179	1	180
3	Demonstrations in Pathological Anatomy.....	Hodenpyl, Larkin....	2	.....	.....	179	.....	179
4	Pathological Anatomy and Histology, Experi- mental Pathology, Bacteriology and Hygiene, as Applied to Medicine and Clinical Pathology.	Prudden, Freeborn, Hodenpyl, Wood, Hiss, Lartigan.....	18	.....	.....	.....	5	5
Total (Pathology).....				.....	.....	548	6	554
B.—NORMAL HISTOLOGY								
1	Practical Instruction in General Normal His- tology ($\frac{1}{2}$ year).....	Freeborn, Bailey, Crampton, Banker, Miller.....	6	10	.....	240	2	252
2	Practical Instruction Similar in Character and Method to that under 1 ($\frac{1}{2}$ year).....	Freeborn, Bailey, Strong, Crampton, Banker, Miller.....	4	.....	.....	190	.....	190
Total (Normal Histology).....				10	.....	430	2	442

DEPARTMENT OF PHILOSOPHY AND EDUCATION

No.	Title of Course	Instructor	Hours a Week	Students												
				A.B.		A.M., Ph.D.		J.L.B.		B.S. (T. C.)		Dip. (T. C.)		Special		Aud.
				M.	W.	M.	W.	M.	W.	M.	W.	M.	W.	M.	W.	
1	A.—PHILOSOPHY. Historical and Critical Introduction to Philosophy.	MacVannel, Sheldon.	3	37	5	3	1									46
2	Ethics.	Lord.	3	39	1									2		42
3	The Philosophy of Kant and his Successors.	Sheldon.	2	1	28	6								1		36
6	Epistemology.	Jones.	2		9											9
7	Ethics, Advanced Course.	Jones.	3		11								1			12
8	Principles and Problems of Esthetics.	Jones.	2		2	2										4
9	Logic and Scientific Method.	Lord.	3	35	1								4			40
11	Studies in European Philosophy from the Renaissance to the Enlightenment.	Sheldon.	2	1												1
14	Philosophical Practicum Seminar.	Jones.	2		12	1										13
Total (Philosophy).				113	69	12	1						7	1		203
B.—EDUCATION.																
1	History of Education.	Monroe.	2 or 3	8	40	27	29									205
2	Principles of Education.	MacVannel.	2 or 3	5	1	28	33									129
3	Applications of Psychology in Teaching.	Thorndike.	3 (3/8)	2	1	2	1									188
4	Critic Work and Practice Teaching.	McMurry.	3 or 4			16	4									42
5	Supervision and Critic Teaching.	McMurry.	3 or 4			16	4									29
6	School Administration.	Dutton.	2		1	28	3									51
8	Secondary Education.	Russell, Brown.	2		3	20	27									56
9	Child Study.	Thorndike.	2		2		2									57
10	Primary Teaching.	Wohlfarth.	2													17
11	Theory and Practice of Teaching Art and Drawing.	Churchill, Chambers.	2													10
12	Theory and Practice of Teaching Biology in Secondary Schools.	Lloyd, Bigelow.	2		1	1	5									7
13	Theory and Practice of Teaching English in Secondary Schools.	Baker.	2		5	10	6	13								38
14	Theory and Practice of Teaching English in Elementary Schools.	Baker.	3 (1/2)													24

DEPARTMENT OF PHYSICS

No.	Title of Course	Instructor	Hours a Week	Students										Grand Total		
				A.B.	A.M., Ph.D.		M. D.	E.M.	Met	Ph.D.	C.E.	E.E.	Mech.		Spec.	
					M.	W.										
1	General Physics.....	Rood, Tufts	3	88					52	1	11	31	37	31	9	260
2	Magnetism and Electricity.....	Rood.....	3 or 5	8	5											13
3	Units and Measurements.....	Hallock.....	3 or 5	5	5			41		4	1	26	32	57	2	173
4	Light and Heat.....	Rood.....	4	2	3											5
8	Undulating Theory of Light.....	Hallock.....	2		5	1										6
9	Electromotive Force of Standard and Constant Cells.....	Parker.....	Res.			1										1
13	Photometry.....	Tufts.....	Res.			1										1
18	Viscosity of Solids.....	Hallock.....	Res.			1										1
20	Advanced Course in Spec- trometry.....	Tufts.....	Res.		5											5
22	Calorimetry.....	Tufts.....	Res.		1											1
24	Interference of Light.....	Hallock.....	Res.		1											1
25	Polarized Light.....	Hallock.....	Res.		1											1
30	Use of the Microscope.....	Hallock.....	Res.		1											1
38	Elements of Theoretical Physics.....	Tufts.....	Res.		4											4
40	Absolute Measurements of Current and Electromo- tive Force.....	Parker.....	Res.								1					1
	Research.....	Staff.....	Res.		3											3
	Laboratory.....	Staff.....	Res.												1	1
	Conductivity.....	Parker.....	Res.		1											1
31	Elementary General Phy- sics.....	Hallock.....	3			259										259
	Total.....			103	37	2	259	93	5	13	57	69	88	12		738

DEPARTMENT OF PHYSIOLOGICAL CHEMISTRY

No.	Title of Course	Instructor	Hours a Week	Students				Grand Total
				A. B.	A. M., Ph. D.	M. D.	Spec.	
1	General Physiological Chemistry	Chittenden, Gies	8	8	1	187	.....	196
2	Advanced Physiological Chemistry	Gies	6	.....	2	.....	10	12
3	Special Physiological Chemistry	Gies, Richards	12	.....	1	.....	3	4
Total				8	4	187	13	212

DEPARTMENT OF PHYSIOLOGY

No.	Title of Course	Instructor	Hours a Week	Students				Grand Total
				A.B.	A.M., Ph.D.	M.D.	Spec.	
1	General Physiology.....	Lee.....	1	.....	8	.....	.....	8
2	Laboratory Course in General Physiology.....	Lee, Budington....	5	.....	8	.....	1	9
3	The Physiology of Man as Related to that of other Mammals and of Lower Vertebrates.....	Curtis, Lee, Green..	4	10	.....	457	3	470
Total.....			.....	10	16	457	4	487

DEPARTMENT OF PRACTICE OF MEDICINE

No.	Title of Course	Instructor	Lessons each Student	Hours a Week	Students		
					M.D.	Special	Grand Total
1	The Practice of Medicine.....	James.....	.....	1	1	328
2	Clinical Lectures on General Medicine.....	De lafield, James.....	.....	2	.....	327
3	Bedside Instruction.....	James.....	12	.....	.....	148
4	Physical Diagnosis.....	Draper, Norrie, Sumner.....	24	.....	.....	179
5	Hospital General Diagnosis.....	Jackson, Lockwood, Griffin.....	20	.....	.....	148
6	Recitations in General Medicine.....	Bovaird, Evans, Potter, Salley.....	30	.....	.....	179
7	Recitations in General Medicine.....	Dow.....	30	.....	.....	190
8	Hospital Clinics in General Medicine.....	Peabody, James, Ball, Kinnicutt.....	.....	2, 3	.....	?
Total.....					1498+	1	1499+

DEPARTMENT OF PUBLIC LAW AND JURISPRUDENCE

No.	Title of Course	Instructor	Hours a Week	Students				
				A.B	A.M., Ph.D.	LL.B.	Spec.	Grand Total
1	Comparative Constitutional Law.....	Burgess.....	2	1	46	26	.....	73
2	Governmental Organization of the Territories and other Dependencies of the United States.....	Burgess.....	1	.....	15	.....	2	17
3	Private Rights and Immunities under the Constitution of the United States.....	Burgess.....	.....	.....	24	.....	2	26
4	American Constitutional Law Historically Viewed.....	Burgess, Cush- ing.....	2	.....	37	101	.....	138
5	Advanced Seminar in Constitutional Law.....	Moore.....	1	1	13	.....	.....	13
6	History of Diplomacy.....	Moore.....	2	.....	17	1	3	21
7	History of American Diplomacy.....	Moore.....	2	.....	21	1	4	27
8	International Law.....	Moore.....	2	.....	26	6	2	34
10	Seminar in International Law.....	Moore.....	2	.....	9	.....	.....	9
15	History and Principles of Colonial Administration.....	Goodnow.....	2	.....	4	.....	1	5
16	Comparative Administrative Law of the United States and the Principal European States.....	Goodnow.....	2	.....	17	19	.....	36
17	Municipal Administration.....	Goodnow.....	2	.....	4	.....	3	7
18	The Law of Taxation.....	Goodnow.....	1	.....	5	.....	1	6
19	The Law of Municipal Corporations.....	Goodnow.....	1	.....	3	.....	1	4
20	Seminar in Administrative Law.....	Goodnow.....	1	.....	4	.....	1	5
21	Roman Law I., 1st half.....	Munroe Smith.....	2	.....	13	12	1	26
22	Roman Law II., 2d half.....	Munroe Smith.....	2	.....	12	12	1	25
24	Comparative Jurisprudence.....	Munroe Smith.....	2	.....	3	.....	.....	3
25	International Private Law.....	Moore.....	1	.....	11	.....	.....	11
26	Spanish-American Law.....	Munroe Smith.....	1	.....	2	.....	.....	2
29	Seminar in Legal History and Comparative Legislation.....	Munroe Smith.....	1	.....	6	.....	.....	6
Total.....			.....	2	282	180	22	486

DEPARTMENT OF SEMITIC LANGUAGES

No.	Title of Course	Instructor	Hours a Week	Students					
				A.B.		A.M., Ph.D.	Special		Grand Total
				M.	W.		M.	W.	
1	Biblical Hebrew	Gottheil	2	2					2
2	Biblical Hebrew	Gottheil	2	3	1				7
3	Biblical Hebrew	Gottheil	2	3	1				11
4, 5	Rabbinical Hebrew	Gottheil	2			4	1		5
11	Assyrian, Advanced Course	Gottheil	2			2		1	3
12	Arabic	Gottheil	2			2			2
13	Arabic, Second Course	Gottheil	2			3			3
15	Syriac	Gottheil, Yohannan	2			5			5
18	Semitic Seminar	Gottheil	2			3			3
Total				8	2	29	1	1	41

DEPARTMENT OF SURGERY

No.	Title of Course	Instructor	Hours a Week	Lessons Each Student	Students	
					M.D.	Grand Total
1	Surgical Pathology, General and Regional Surgery	Bull, Weir	1		327	327
2	Clinics in General Surgery	Bull, Weir	2		327	327
3	Minor Surgery and Bandaging	Foote, Martin		16	179	179
4	Practical Instruction in Minor Operative Surgery	Foote, Martin		12	148	148
5	Operative Surgery upon the Cadaver	Hartley, Peck, Bickham, Taylor		12	148	148
6	Practical Instruction in Surgery	Gallaudet, Hotchkiss, Brewer, Blake		16	148	148
7	Practical Instruction in the Surgery of Children	Dowd		8	179	179
8	Recitations in General and Regional Surgery	Eliot	2, 3		327	327
9	Hospital Surgical Clinics or Demonstrations	Weir, Bull, Hartley, Markoe, Abbe, McCosh, Eliot, Coley, Poore	1 1/2		200	200
Total					1983	1983

DEPARTMENT OF ZOOLOGY

No.	Title of Course	Instructor	Hours a Week	Students						Grand Total
				A.B.	A.M., Ph.D. M. W.	M.D.	E.M.	Spec.		
1	Elementary Zoology, 2d half	Dean	3				48		48	
2	Elementary Zoology	Wilson, Dean, Calkins, McGregor	4½	9		1		2	14	
3	General Zoology	Dean, Calkins, McGregor	6	2					7	
4	Comparative Neurology	O. S. Strong	3	1					5	
5	Comparative Zoology	Osborn, Wilson	10	5	3				8	
5a	Readings and Conferences	Dean, McGregor	1	1	1				2	
6	Comparative Embryology, 2d half	Wilson	6	4	2				6	
7	Cellular Biology, 2d half	Wilson	6	4	2				6	
8	Mammals, Living and Fossil	Osborn	6	4	1				5	
9	Fishes, Living and Fossil, 2d half	Dean	2	1	1				2	
10	Special Morphology (The Protozoa) 2d half	Calkins	2	1	4				5	
11	Advanced Biology (Research)		12	12					10	
13	The Human Brain and Spinal Cord	O. S. Strong	3	2				2	3	
15	Sanitary Biology, 1st half	Calkins	3	2					2	
16	Practical Histology		2	1					1	
Total				49	12	1	48	7	130	

OF INSTRUCTION IN THE VARIOUS DEPARTMENTS

APPLIED SCIENCE							POLITICAL SCIENCE		PHIL-OSOPHY		PURE SCIENCE		Barnard Undergraduates	Total
1st Class	2d Class	3d Class	4th Class	A.M.	Ph.D.	Special	Higher Degrees	Non-Candidates	Higher Degrees	Non-Candidates	Higher Degrees	Non-Candidates		
29	16	13	15	1		12								476
76	3	19	9			1					2			90
170	4					1							5	61
83	136	52	12	1	1	18			4		10	1		102
	74	72	36	2	1	11					1			672
							1		34		1			287
											1			211
														148
	*													148
4	104	97	50	3		5	117	3	24		2	1		315
							5		35		2		1	271
														486
5	49	49	5	3	2	8			2		5			178
														145
*2	*1	*1					9		34				3	273
							1		32		1			117
														368
							64	1	21					347
									12					15
														148
									39					270
170	131	10	1		1	2			6		5		1	370
166	134	115	74	2		12								499
	11	110	67	4		1			1		11			524
	10	78	57	3	2	13								209
67	68	14	4	1		8					4			177
8	46	55	25	4	1	12					4			176
							4							154
														462
													30	53
														178
														516
														178
														148
														178
														795
							5		41					138
167	111	3	3	1		3	3		143		4		12	175
									2		15	1		599
														202
											8			471
														517
							3		48		1		3	193
									10				12	32
							47	1			1			237
							3		34					216
									9		1		1	11
							1		1					26
									16				1	23
														326
45	2					2			3		22	1		91

* Optional. Does not count towards a degree.

In the departmental statistics appearing on pages 273-351, the enrollment in the various courses of instruction given during the year by the departments has been indicated; that is, reference is there made to units of instruction. But owing to repetitions caused in many instances by students pursuing more than one course in a department, it is impossible, without further information, to analyze the nature of any departmental clientele. Accordingly, there has been prepared the table that appears on pp. 352-353, wherein is indicated, free from repetition, the proper classification of the students who attended one or more courses of instruction in the respective departments.

Respectfully submitted,

GEO. B. GERMANN,

Registrar

REPORT

*To the Trustees of Columbia College
in the City of New York :*

The Treasurer makes the following report of the financial affairs of the Corporation for the year ending June 30th, 1902.

BALANCE SHEET, JUNE 30, 1902

Dr.

Cash Accounts—

General Funds:

New York Life Insurance and Trust Co.....	\$4,682 01
Bank of New York, N. B. A.....	7,000 55
Corn Exchange Bank—University Branch:	
Subject to Treasurer's Check.....	\$ 2,019 98
Subject to Bursar's Check.....	22,575 59

Hudson River Bank.....	24,595 57
Bursar.....	1,810 57
Superintendent.....	50 00
Secretary.....	50 00
Librarian.....	30 00
Treasurer's Office.....	50 00
	3,500 00

\$41,768 70

Trust Funds:

Continental Trust Co.....	56,027 77
Funds for Designated Purposes:	
Students' Loan Fund (Continental Trust Co.).....	\$4,403 18
Catherine Wolfe Bruce Fund (Mercantile Trust Co.).....	7,866 57
Loubat Fund income (N. Y. Life Ins. and Trust Co.).....	1,736 11
	14,005 86

Carried forward.....

\$111,802 33

BALANCE SHEET, JUNE 30, 1902—Continued

Brought forward.....			
Rents due and unpaid (Schedule 16, page 61)			\$ 111,802 33
Investment of Trust Funds (Schedule 12, page 35)			5,032 00
Income of Trust Funds (Overdrafts, Schedule 13, 7th col., page 53).....			1,674,624 01
Bloomington Site (for details of cost see Treasurer's Report of July 1, 1898).....		\$6,856,112 25	2,033 76
University Hall, Enlargement.....		108,636 36	
University Hall, Equipment.....		9,620 89	
Earl Hall.....		164,844 65	
College Hall.....		15 00	
College of Physicians and Surgeons, Buildings, Additions, and Improvements.....		89,990 65	
Williamsbridge Property, N. Y. City		126,859 00	
General Society Properties, Nos. 18 East 16th St., 711-15 Seventh Ave., and 168-170 West 48th St.....		342,257 37	
Loubat Property, 503-11 Broadway, N. Y.....		1,100,000 00	
Butler Mortgage, less apportionment to investment of Trust Funds.....		7,622 90	
Loans from Students' Loan Fund on Students' Notes.....			8,805,959 07
Alumni Association College of Physicians and Surgeons, for Alumni Prize, 1902.....			2,239 00
Gaillard-Loubat Library Endowment Fund (Advances from General Funds).....			500 00
Interest Account, 1901-2 in anticipation of gifts to the Interest Fund... Summer Session 1902.....			178,833 73
			98,586 17
			862 74
			<u>\$10,886,472 81</u>

Cr.

Principal of Trust Funds (Schedule 11, page 33)		\$1,717,916 91
Income of Trust Funds, Credit Balances (Schedule 13, 8th col., page 53)		15,181 01
Students' Loan Fund		6,642 18
Funds for Designated Purposes (Schedule 14, page 56)		53,452 93
Miscellaneous Credits:		
Bloomingdale Site, Accounts Payable	\$13,809 28	
Deposit Ledger Account, University	401 30	
Key Deposit Account, University	553 30	
Students' Ledger Account, University	2,790 48	
South and West Halls, Alterations and Improvements	115 72	
Summer School (Surplus for 1900 and 1901)	6,916 63	
Premium Account	27 40	
<hr/>		
Sundry Gifts and Legacies acc't (Schedule 15, page 60)		24,614 11
Interest Fund (Subscriptions for Interest Acc't for 1901-02 and succeeding years):		2,980,015 91
Interest Fund, 1901-02	\$25,250 00	
Interest Fund, 1902-03	1,000 00	
Interest Fund, 1903-04	1,000 00	
Interest Fund, 1904-05	1,000 00	
Interest Fund, 1905-06	1,000 00	
Interest Fund, 1906-07	1,000 00	
Interest Fund, 1907-08	1,000 00	
<hr/>		
		31,250 00
<hr/>		
Carried forward		\$4,829,073 05

BALANCE SHEET, JUNE 30, 1902—Continued

Outstanding Debt:	Brought forward.....	\$4,829,073 05
Bloomington Site Mortgage.....	\$1,000,000 00	
Columbia College 3% Mortgage Gold Bonds, due 1909	1,900,000 00	
Columbia College Notes.....	750,000 00	
Williamsbridge Property Mortgage.....	48,000 00	
Philolexian Prize Fund.....	1,240 00	
Loubat Mortgage, 503-511 Broadway, N. Y.....	3,699,240 00	
Personal Estate.....	1,100,000 00	
	1,252,159 76	
	<u>\$10,880,472 81</u>	

RECEIPTS AND PAYMENTS

RECEIPTS

Cash Balances, July 1, 1901—		
General Funds:		
New York Life Insurance and Trust		
Co.....	\$38,805 73	
Bank of New York, N. B. A.....	7,672 92	
Corn Exchange Bank—University		
Branch:		
Subject to Treasurer's		
Check.....	\$3,208 09	
Subject to Bursar's		
Check.....	1,304 78	
		4,512 87
Hudson River Bank.....		1,558 85
Bursar, Petty Cash.....		100 00
Superintendent, Petty Cash.....		50 00
Secretary, Petty Cash.....		10 00
Librarian, Petty Cash.....		50 00
		<u>52,760 37</u>
Trust Funds:		
Continental Trust Co.....	25,828 74	
		<u>78,589 11</u>
Funds for Designated Purposes:		
Catherine Wolfe Bruce		
Fund (Mercantile Trust		
Co.).....	\$ 8,056 39	
Earl Hall Fund.....	119,847 36	
Loubat Fund Income....	1,335 54	
Students' Loan Fund (Con-		
tinental Trust Co.).....	4,087 39	
		<u>133,326 68</u>
		<u>\$211,915 79</u>
Income of the Corporation as shown in		
Schedule 3, pages 9 and 10.....	869,338 59	
Income of Trust Funds (Schedule 13,		
column 3, pages 53 to 55).....	68,651 60	
Receipts for Designated Purposes (Schedule		
4, pages 11 and 12).....	115,063 61	
		<u>1,053,053 80</u>
Interest Account (Schedule 8, page 29):		
On Purchase Money Mort-		
gage on Wheelock Pro-		
perty (less amount ap-		
portioned to various		
Trust Funds).....	\$ 304 92	
On deposits of General		
Funds.....	2,376 28	
		<u>\$1,264,969 59</u>
Carried forward..	\$2,681 20	

Brought forward. .	\$2,681 20		\$1,264,969 59
Interest Account (<i>Continued</i>):			
On deposits of Special Funds	1,121 42		
On portion of Butler Mortgage transferred to the Dean Lung Fund.	76 00		
	<u>1,197 42</u>	\$3,878 62	
Rents, Special Real Estate Account (Schedule 9, page 30):			
Williamsbridge Property	780 00		
General Society Properties.	7,498 10		
503-511 Broadway, N. Y.	53,046 61		
	<u>61,324 71</u>		65,203 33
Miscellaneous Receipts (Schedule 5, pages 13 to 15)			<u>548,087 12</u>
			<u>\$1,878,260 04</u>

PAYMENTS

Current Expenses (Summary of Schedule 6, page 27)	\$1,030,036 47		
Interest (Schedule 8, page 29):			
On Bloomingdale Site Mortgage	\$35,000 00		
On Columbia College 3% Mortgage Bonds	57,150 00		
On Columbia College Notes	31,653 12		
On Williamsbridge Property Mortgage	1,920 00		
On Special Fund for Departments of Mining and Metallurgy	486 03		
On Uninvested Trust Funds	396 03		
	<u>126,605 18</u>		
Expenses of Special Real Estate, as shown in Schedule 9, page 30, exclusive of interest apportionment:			
Williamsbridge Property	2,506 97		
General Society Properties	5,049 59		
Gaillard-Loubat Library			
Endowment Fund.	94,367 62		
	<u>101,924 18</u>		1,258,565 83
Miscellaneous Payments (Schedule 10, pages 31 and 32)			507,891 88
Cash Balances, June 30, 1902—(See Balance Sheet)			111,802 33
			<u>\$1,878,260 04</u>

INCOME OF THE CORPORATION

(Exclusive of Income of Trust Funds, Interest and Special Real Estate Accounts)

RENTS

Upper Estate.....	\$217,763 00	
Lower Estate.....	168,816 00	
	<u>386,579 00</u>	
Arrears of Rent.....	7,166 50	
Interest on Rents.....	636 28	
Rent of West Hall.....	345 00	
	<u>394,726 78</u>	

FEES

Morningside:

Matriculation Fees.....	2,540 00	
Tuition Fees.....	278,983 75	
Graduation Fees.....	11,890 00	
Special Examination Fees....	120 00	
Auditors' Fees.....	1,100 00	
Gymnasium Fees.....	11,746 00	
Gymnasium, Women's Evening Session. Fees and Gifts....	149 58	
	<u>306,529 33</u>	

College of Physicians and Surgeons:

Matriculation Fees.....	1,195 00	
Tuition Fees.....	152,615 00	
Graduation Fees.....	3,700 00	
	<u>157,510 00</u>	

Tuition Fees for students at Columbia:

From Barnard College.....	2,576 00	
“ Teachers College.....	1,265 00	
	<u>3,841 00</u>	

467,880 33

MISCELLANEOUS

Barnard College, for Steam Heat and Power.....	3,500 00	
Barnard College, for Electric Cur- rent Supplied.....	1,412 98	
Sales of University Catalogue....	121 00	
Sales of Brewer's Notes, Depart- ment of Anatomy.....	234 90	
	<u>5,268 88</u>	
Carried forward.	\$5,268 88	\$862,607 11

Brought forward.....	\$5,268 88	\$862,607 11
Sale of Old Greenhouses (net)...	6 50	
Sales of History, College of Physicians and Surgeons.....	1 50	
Sales of Material, Department of Anatomy.....	1,306 75	
Sales of Material, Department of Osteology.....	27 50	
Sales of Material, Department of Physiology.....	67 69	
Sales of Material, Department of Pathology.....	52 66	
	<hr/>	6,731 48
		<u>\$869,338 59</u>

RECEIPTS FOR DESIGNATED PURPOSES

From Barnard College towards salaries in the following Departments:

English	\$6,900 00	
Germanic Languages and Literatures.	2,800 00	
Greek and Latin at Barnard.	6,500 00	
Philosophy and Education.	1,000 00	
Romance Languages and Literatures.	4,800 00	
Botany	3,600 00	
Chemistry at Barnard.	2,550 00	
Mathematics.	6,100 00	
Physics	2,300 00	
Zoölogy.	2,500 00	
School of Political Science.	12,400 00	
	<hr/>	\$51,450 00

Educational Administration, Salaries (gift) . . .	500 00	
Educational Administration, Lectures (gift) . .	1,000 00	
Educational Administration, Sextennial Catalogue (sales)	51 80	
	<hr/>	1,551 80

Library:

Books and Binding (sales and fines)	406 48	
Completion of Parliamentary Papers (gifts) . .	2,040 00	
Crimmins-Mansi Fund (gift)	210 00	
Educational Catalogue (gift)	\$500 00	
Educational Catalogue (sales)	28 93	
	<hr/>	528 93
Lewisohn Dissertation Fund (gift)	3,000 00	
James Loeb Fund (gift for 1901-02)	\$75 00	
James Loeb Fund (gift for 1902-03)	75 00	
	<hr/>	150 00
F. A. Schermerhorn Fund (gift)	350 00	
Special Fund, 1901 (gift)	10,000 00	
	<hr/>	16,685 41

Fellowships, Scholarships, and Prizes:

Alumni Fellowships, School of Medicine (gift)	1,500 00	
Annual Fellowship in American History (gift for 1902-03)	650 00	
Annual Fellowship in Comparative Literature (gift)	650 00	
Annual Fellowship in German (gift)	650 00	
Annual Fellowship—University Settlement Society (gift)	250 00	
Lawrence Annual Scholarship (gift)	200 00	
John D. Jones Scholarship (gift)	200 00	
	<hr/>	

Carried forward. \$4,100 00 \$69,687 21

Brought forward.....	\$4,100 00	\$69,687 21
Special Pulitzer Scholarships (gift).....	5,750 00	
Toppan Prize in Municipal Law (gift).....	150 00	
	<hr/>	10,000 00
Comparative Literature, Salaries (gift).....		1,000 00
Germanic Languages and Literatures: Special Equipment Fund (gift).....		1,075 00
Oriental Languages, Salaries:		
(Gift for 1901-02).....	1,000 00	
(Gift for 1902-03).....	1,000 00	
	<hr/>	2,000 00
Philosophy and Psychology, Salaries (gift for 1902-03).....		7,500 00
Psychology and Anthropology, Salaries (gift)..		2,500 00
Romance Languages and Literatures, Depart- mental Appropriation (gift).....		2 13
French Lecture Fund (gift).....	470 00	
	<hr/>	472 13
Architecture, Salaries:		
(Gift for 1901-02).....	3,500 00	
(Gift for 1902-03).....	3,500 00	
	<hr/>	7,000 00
Chemistry: Supplies (breakage and supplies)..		7,821 65
Civil Engineering, Departmental Appropria- tion:		
Road tests.....	\$157 00	
Less one-half paid Mr. Black.....	78 50	
	<hr/>	78 50
Sale of Lecture Notes.....	24 02	
	<hr/>	102 52
Electrical Engineering, Departmental Appropria- tion:		
Sales of material.....		38 01
Mechanical Engineering, Mechanical Labora- tory and Summer School:		
Sales.....	815 08	
Gifts.....	200 00	
	<hr/>	1,015 08
Mineralogy: Special Equipment Fund (gift)..		200 00
Mining—Gift.....		775 00
Political Science—Historical Reading Room Equipment Fund:		
Sale of Books.....		76 29
Chinese, Salaries (gift for 1902-03).....		3,000 00
Physiological Chemistry, Supplies (sales).....		800 72
		<hr/>
		<u>\$115,063 61</u>

MISCELLANEOUS RECEIPTS

AFFECTING PRINCIPAL OF TRUST FUNDS

Center Fund:

From sale of property corner Flatbush Ave. and Sterling Place, Brooklyn.....	\$45,000 00	
Less Brokerage and Legal Expenses.....		947 75
		<u>\$44,052 25</u>

From sale of property No. 129 West 17th St., N. Y.....	10,500 00	
Less Legal Expenses		30 25
		<u>10,469 75</u>

\$54,522 00

Class of 1848 Scholarship Fund:

Gift of an anonymous friend to found this scholarship.....	10,000 00
--	-----------

George William Curtis Medals Fund:

Gift from an associate of George William Curtis in the Civil Service Reform Work, to establish this fund.....	1,000 00
---	----------

Dean Lung Fund:

Additional gifts from an anonymous friend for the Department of Chinese	113,000'00
---	------------

Philolexian Centennial Washington Prize Fund:

Gift from the Philolexian Society to establish this fund.....	1,000 00
---	----------

Phoenix Legacy:

On account of one-third part of the residuary estate of the late Stephen Whitney Phoenix	\$149,533 44	
Profit on sales of securities....	475 00	
		<u>150,008 44</u>

Less Legal Expenses.....	500 00	
		<u>149,508 44</u>

AFFECTING INVESTMENT OF TRUST FUNDS

Center Fund:

On account of principal of bond and mortgage of Edmund H. Wright	1,000 00
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Phoenix Legacy:

\$5000 Brooklyn Public Park 7 % Loan Bonds sold (book value).....	6,250 00
---	----------

Carried forward.....	\$6,250 00	<u>\$330,030 44</u>
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Brought forward.....	\$6,250 00	\$330,030 44
\$3000 Menominee River Railroad Co.'s Extension Bonds sold (book value).....	3,450 00	9,700 00
Clark Scholarship Fund, School of Medicine: Bond and mortgage of Thomas F. Gray paid		10,000 00

AFFECTING FUNDS FOR DESIGNATED PURPOSES

Principal of Students' Loan Fund:		
Interest received on deposits.....	85 09	
Interest received on Students' Notes.....	70 70	
		155 79
Students' Loan Fund:		
Students' Notes paid.....		360 00
Principal of Catherine Wolfe Bruce Fund:		
From Dr. Geo. W. Hill as a gift to the De- partment of Astronomy, and credited to this fund by request of Prof. Rees.....	1,000 00	
Interest received on deposits.....	210 18	
		1,210 18
Principal of Earl Hall Building Fund:		
From William E. Dodge to complete the erection of Earl Hall.....	19,540 38	
Interest received on deposits.....	1,262 51	
		20,802 89
Special Fund for Departments of Mining and Metallurgy Interest.....		486 03
Alumni Memorial Hall Gift:		
From the Columbia College Alumni Associa- tion towards the enlargement of Univer- sity Hall Building.....		811 25
Interest Fund, 1900-01:		
Balance of Subscriptions for Interest Ac- count for 1900-01.....		68,733 82
Interest Fund, 1901-02:		
On account of Subscriptions for Interest Account for 1901-02.....		25,250 00
Gift for Interest Fund for the years 1902-08.		6,000 00
General Guarantee Fund, 1900-01:		
Subscriptions for the deficiency in Income for the year 1900-01.....		615 00

MISCELLANEOUS

Butler Mortgage:		
General funds withdrawn from investment in portion of the Jacob D. Butler Mortgage.		12,000 00
Carried forward.....		\$486,155 40

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Brought forward.....	\$486,155 40
Bequest of the late Henry Villard.....	50,000 00
Edward L. Stabler, gift.....	1,200 00
Summer School:	
Surplus for the years 1900 and 1901.....	6,916 63
Students' Ledger Account:	
Advance fees.....	3,347 92
Deposit Ledger Account:	
Advance payments by students for material.....	176 72
Key Deposit Account:	
Advances for keys by students.....	263 05
Premium Account, for premium on securities in the Center Fund marked off.....	27 40
	<hr/>
	\$548,087 12
	<hr/> <hr/>

CURRENT EXPENSES.

	Expenditures in Detail	Total Expenditure	From Income of Corporation	From Income of Trust Funds	From Gifts, etc.
General Expenses					
BUSINESS ADMINISTRATION:					
Salaries.....	\$ 9,312 00				
Office Rent.....	1,100 00				
Contingent Expenses.....	2,250 41				
Treasurer's Office, Sundries.....	265 79				
Clerk's Office, Sundries.....	1,639 71				
Insurance.....	4,851 19	\$ 19,419 10	\$ 19,419 10		
EDUCATIONAL ADMINISTRATION:					
Salaries, Morningside.....	\$31,655 56				
Salaries, School of Medicine.....	6,250 00				
Printing.....	37,905 56				
Printing and Distributing President's Report.....	7,008 58				
Advertising.....	896 42				
Guarantee for University Quarterly.....	1,387 30				
Lectures.....	800 00				
Commencement.....	2,324 03				
Baccalaureate.....	1,500 00				
President's Emergency Fund.....	200 00				
Barnard Society.....	1,201 16				
Philolexian Society.....	196 55				
Bureau of Supplies.....	191 69				
Diplomas.....	5,000 00				
Telephone Service.....	750 00				
Sextennial Catalogue.....	143 85				
Installation of President Butler.....	117 65				
Pan-American Exposition, 1901.....	7,968 82				
American School for Oriental Study and Research in Palestine.....	1,027 92				
	100 00				
Carried forward.....	68,719 53	19,419 10	19,419 10		

	19,419 53	19,419 10	19,419 10	19,419 10
Brought forward.....	68,719 53			
American Mathematical Society (3d annual pay- ment).....	100 00			
Office Supplies and Sundries, School of Medicine.....	700 00			
Printing and Postage on Catalogue, School of Medi- cine.....	1,250 00			
Alcohol, School of Medicine.....	666 82			
Fees for Columbia students at Barnard College..... \$1,200 33				
Teachers College..... 1,325 00				
	2,525 33	73,961 68	72 209 88	\$1,751 80
BUILDINGS AND GROUNDS (116th St.):				
Superintendent of Buildings and Grounds.....	4,500 00			
Water Rates.....	2,582 00			
Gas and Electricity.....	2,999 53			
Fuel.....	11,824 62			
Cleaning.....	2,246 67			
Superintendent's Supplies.....	3,499 55			
Repairs.....	7,496 22			
Furniture and Fixtures.....	2,251 30			
Uniforms.....	498 18			
Wages: Boiler House and Janitorial Service.....	35,679 98			
Boat House.....	2,139 22			
Changes in Library.....	1,399 38			
Special Repairs.....	3,996 61			
Fire Repairs.....	15			
Shrubs and Trees.....	300 00			
	81,413 41	81,413 26		15
BUILDINGS AND GROUNDS (59th St.):				
Wages: Boiler House and Janitorial Service.....	14,759 19			
Assistant Superintendent of Buildings and Grounds.....	1,500 00			
Repairs.....	2,499 84			
Furniture and Fixtures.....	749 70			
Gas and Electricity.....	1,980 76			
Fuel.....	6,998 98			
Cleaning.....	1,199 25			
Superintendent's Supplies.....	2,449 55			
Water Rates.....	2,365 00			
	34,511 27	34,511 27		
	209,305 46	207,553 51		1,751 95
Carried forward.....				

	Expenditures in Detail	Total Expenditure	From Income of Corporation	From Income of Trust Funds	From Gifts, etc.
Brought forward.....		\$209,305 46	\$207,553 51		\$1,751 95
GYMNASIUM:					
Salaries.....	\$6,500 00				
Janitorial Service.....	1,796 68				
Laundry Service.....	1,798 09				
Supplies and Repairs.....	489 11				
Women's Evening Session.....	165 58	10,749 46	10,583 88		165 58
SLOANE MATERNITY HOSPITAL.....		12,500 00		\$12,500 00	
VANDERBILT CLINIC.....		5,650 00		5,650 00	
JACOBI WARD IN ROOSEVELT HOSPITAL.....		1,400 00		1,400 00	
CHAPEL:					
Chaplain.....	800 00				
Organist.....	1,000 00				
Choir.....	250 00	2,050 00	2,050 00		
LIBRARY:					
Salaries.....	36,919 29				
Books and Binding.....	9,068 60				
Incidentals.....	2,246 57				
Binding Manuscripts.....	47 20				
Educational Catalogue.....	943 47				
Avery Architectural Collection.....	1,684 12				
Barnard Library Fund.....	3,975 23				
Cotheal Fund.....	333 33				
Dean Lung Fund in Chinese.....	624 45				
Drisler Classical Fund.....	478 26				
Law-Book Trust Fund.....	109 90				
Schurz Library Fund.....	495 00				
Carried forward.....	57,795 42	241,654 92	220,187 39	19,550 00	1,917 53

Brought forward.....	57,795 42	241,654 92	220,187 39	19,550 00	1,917 53
Completion of Parliamentary Papers.....	1,923 82				
John D. Crimmins Collection.....	5 36				
Crimmins-Mansi Fund.....	16 00				
Lewisohn Dissertation Fund.....	76 90				
James Loeb Fund.....	64 05				
William G. Low Fund.....	144 96				
Senff Collection in History, 1897.....	16				
F. A. Schermerhorn Fund.....	350 02				
Special Fund, 1898.....	1,022 07				
Special Fund, 1899.....	340 62				
Special Fund, 1900.....	3,375 69				
Special Fund, 1901.....	7,838 13	72,953 20	49,189 72	7,670 29	16,093 19
EMERITUS OFFICERS.....		2,583 31	2,583 31		
FELLOWSHIPS, SCHOLARSHIPS AND PRIZES:					
University Fellowships.....	11,700 00				
University Scholarships.....	4,500 00				
Class of '70 Fellowship.....	500 00				
Brooklyn Scholarships.....	1,800 00				
Brooklyn Scholarships at Barnard.....	1,800 00				
President's University Scholarships.....	1,125 00				
Benefactors' Scholarships.....	10,725 00				
Beck Scholarship.....	150 00				
Faculty Scholarships.....	3,400 00				
Curtis Scholarships.....	300 00				
Harper Scholarship.....	150 00				
Hewitt Scholarships.....	300 00				
Moffatt Scholarships.....	300 00				
Schermerhorn Scholarships.....	600 00				
Stuart Scholarship.....	150 00				
Alumni Association Scholarships, College.....	600 00				
Alumni Competitive Scholarships, College.....	450 00				
Carried forward.....	38,550 00	317,191 43	271,960 42	27,220 29	18,010 72

	Expenditures in Detail	Total Expenditure	From Income of Corporation	From Income of Trust Funds	From Gifts, etc.
Brought forward.....	\$38,550 00	\$317,191 43	\$271,960 42	\$27,220 29	\$18,010 72
FELLOWSHIPS, SCHOLARSHIPS AND PRIZES— <i>Continued</i>					
Barnard Fellowship.....	500 00				
Beck Prize.....	400 00				
Bennett Prize.....	40 00				
Campbell Scholarships.....	300 00				
Curtis Fellowship.....	600 00				
McKim Fellowships.....	2,000 00				
Pulitzer Scholarships (to Teachers College).....	2,500 00				
Proudfit Fellowship in Letters.....	555 00				
Schiff Fellowship.....	600 00				
Seidl Fellowship.....	480 00				
Trowbridge Fellowship.....	500 00				
Tyndall Fellowship.....	648 00				
Waring Fund (to Mrs. Waring).....	2,000 00				
Waring Fund (to Miss Waring).....	2,000 00				
Clark Scholarship, School of Medicine.....	675 00				
Harsen Prizes for Clinical Reports, School of Medicine.....	250 00				
Harsen Prizes for Examination, School of Medicine.....	1,000 00				
Harsen Prizes, Expenses, School of Medicine.....	226 75				
* Alumni Association Prize, School of Medicine.....	500 00				
Alumni Fellowships, School of Medicine.....	1,500 00				
Annual Fellowship in Comparative Literature.....	650 00				
Annual Fellowship in German.....	650 00				
Annual Fellowship, University Settlement Society.....	250 00				
John D. Jones Scholarship.....	200 00				
Lawrence Annual Scholarship.....	200 00				
Special Pulitzer Scholarships.....	5,750 00	63,524 75	38,583 00	15,241 75	9,700 00
		\$380,716 18	\$310,543 42	\$42,462 04	\$27,710 72

* Advanced from General Funds and charged against the Alumni Association of the College of Physicians and Surgeons. See Balance Sheet.

Philosophy, Philology and Letters

COMPARATIVE LITERATURE:						
Salaries.....	\$ 8,100 00					
Departmental Appropriation.....	71 87	\$ 8,171 87	\$ 7,171 87			\$ 1,000 00
ENGLISH:						
Salaries.....	29,520 00					
Departmental Appropriation.....	63 50	29,583 50	22,683 50			6,900 00
GERMANIC LANGUAGES AND LITERATURES:						
Salaries.....	16,608 26					
Departmental Appropriation.....	50 00					
Special Equipment Fund.....	184 00	16,842 26	13,058 26	\$ 800 00		2,984 00
GREEK:						
Salaries.....	12,500 00					
Departmental Appropriation.....	46 67	12,546 67	12,546 87			
GREEK AND LATIN AT BARNARD:						
Salaries.....	6,500 00	6,500 00				6,500 00
LATIN:						
Salaries.....	10,500 00					
Departmental Appropriation.....	39 33	10,539 33	10,539 33			
MUSIC:						
Salaries.....	7,200 00					
Departmental Appropriation.....	870 98	8,070 98	3,417 39	4,653 59		
ORIENTAL LANGUAGES:						
Salaries.....	8,000 00					
Departmental Appropriation.....	45 00	8,045 00	7,045 00			1,000 00
PHILOSOPHY AND EDUCATION:						
Salaries.....	12,449 96					
Departmental Appropriation.....	196 91	12,646 87	11,646 87			1,000 00
Carried forward.....		112,946 48	88,108 89	5,453 59		19,384 00

	Expenditures in Detail	Total Expenditure	From Income of Corporation	From Income of Trust Funds	From Gifts, etc.
Brought forward.....		\$112,946 48	\$88,108 89	\$5,453 59	\$19,384 00
PSYCHOLOGY AND ANTHROPOLOGY:					
Salaries.....	\$10,500 00				
Departmental Appropriation.....	499 97	10,999 97	5,628 76	2,871 21	2,500 00
ROMANCE LANGUAGES AND LITERATURES:					
Salaries.....	21,300 00				
Departmental Appropriation.....	102 13	21,754 38	16,600 00		5,154 38
French Lecture Fund.....	352 25				
		\$145,700 83	\$110,337 65	\$8,324 80	\$27,038 38
Natural and Exact Sciences					
ARCHITECTURE:					
Salaries.....	26,000 00				
Departmental Appropriation.....	1,000 00				
Models and Diagrams.....	03	\$27,000 03	\$23,500 03		\$3,500 00
ASTRONOMY:					
Salaries.....	8,700 00				
Departmental Appropriation.....	250 00				
Observatory for Apparatus.....	45 00				
Summer Class in Geodesy.....	800 00				
Computations and Measurements.....	59 40	9,854 40	9,795 00		59 40
BOTANY:					
Salaries.....	9,100 00				
Departmental Appropriation.....	598 90	9,698 90	6,098 90		3,600 00
Carried forward.....		46,553 33	39,393 93		7,159 40

Brought forward.....		39,393 93		7,159 40
CHEMISTRY:				
Salaries.....	7,500 00			
Salaries, General Chemistry.....	4,800 00			
Salaries, Analytical Chemistry and Assaying.....	9,500 00			
Salaries, Industrial Chemistry.....	3,900 00			
Salaries, Organic Chemistry.....	2,500 00			
Salaries, Laboratory at 59th St.....	3,600 00			
Salaries, Additional Servants.....	1,185 57			
Supplies.....	13,321 33			
Salaries at Barnard College.....	2,550 00			
Special Equipment Fund, 1900.....	2 00	36,985 25	1,500 00	10,373 65
CIVIL ENGINEERING:				
Salaries.....	10,600 00			
Departmental Appropriation.....	445 03			
Assistance in Summer School of Surveying.....	600 00			
Janitor in Summer School of Surveying.....	199 52			
General Expenses at Summer School of Surveying.....	1,653 62			
Repairing Instruments for Summer School of Surveying.....	98 43			
Improvements at Farm.....	199 04			
Rent of Farm.....	100 00	13,793 12		102 52
ELECTRICAL ENGINEERING:				
Salaries.....	9,418 18			
Departmental Appropriation.....	1,038 01			
MECHANICAL ENGINEERING:				
Salaries.....	15,586 67			
Departmental Appropriation.....	499 44			
Mechanical Laboratory and Summer School.....	2,012 95			
Drawing.....	299 77			
Use of Teachers College Shops.....	5,600 00	22,983 75		1,015 08
Carried forward.....	143,762 89	122,574 23	2,500 00	18,688 66

	Expenditures in Detail	Total Expenditure	From Income of Corporation	From Income of Trust Funds	From Gifts, etc.
Brought forward.....		\$143,762 89	\$122,574 23	\$2,500 00	\$18,688 66
GEOLOGY AND PALÆONTOLOGY:					
Salaries.....	\$9,500 00				
Departmental Appropriation.....	500 00				
Summer School in Geology.....	200 00	10,200 00	10,200 00		
MATHEMATICS:					
Salaries.....	23,400 00				
Departmental Appropriation.....	73 85	23,473 85	17,373 85	6,100 00	
MECHANICS:					
Salaries.....	10,600 00				
Departmental Appropriation.....	39 37				
Apparatus.....	50 86	10,690 23	10,440 23	250 00	
METALLURGY:					
Salaries.....	7,700 00				
Departmental Appropriation.....	1,140 39				
Special Fund.....	2,346 91				
Special Equipment Fund, 1900.....	5 47				
Laboratory Equipment.....	31	11,202 08	8,099 39	750 00	2,352 69
MINERALOGY:					
Salaries.....	5,700 00				
Departmental Appropriation.....	499 92				
Special Equipment Fund.....	199 96	6,399 88	6,199 92		199 96
MINING:					
Salaries.....	10,600 00				
Departmental Appropriation.....	1,250 00				
Special Fund.....	2,610 63				
Special Equipment of Laboratory.....	32	14,460 95	11,850 00		2,610 95
PHYSICS:					
Salaries.....	499 99				
Departmental Appropriation.....	21,650 00	22,149 99	19,349 99	500 00	2,300 00
Carried forward.....		242,339 87	206,087 61	4,000 00	32,252 26

	Expenditures in Detail	Total Expenditure	From Income of Corporation	From Income of Trust Funds	From Gifts, etc.
Brought forward.....		\$21,480 60	\$21,480 60		
PHYSIOLOGICAL CHEMISTRY:					
Salaries.....	\$ 6,800 00				
Supplies (including Special Helper).....	2,182 14	8,982 14	8,181 42		\$800 72
CLINICAL INSTRUCTION:					
Salaries.....		14,200 00	14,200 00		
MATERIA MEDICA AND THERAPEUTICS:					
Salaries.....	7,500 00				
Departmental Appropriation.....	7 45	7,507 45	7,507 45		
OBSTETRICS AND GYNECOLOGY:					
Salaries.....	12,300 00				
Departmental Appropriation.....	85 49	12,385 49	12,385 49		
PATHOLOGY:					
Salaries.....	28,130 27				
Departmental Appropriation.....	2,399 99				
Apparatus.....	198 90	30,729 16	30,729 16		
PHYSIOLOGY:					
Salaries.....	12,700 00				
Departmental Appropriation.....	611 11				
Marine Table, Wood's Hole.....	100 00	13,411 11	13,411 11		
PRACTICE OF MEDICINE:					
Salaries.....		13,300 00	13,300 00		
SURGERY:					
Salaries.....	12,500 00				
Departmental Appropriation.....	250 00	12,750 00	12,750 00		
		\$134,745 95	\$133,945 23		\$ 800 72

SUMMARY OF SCHEDULE 6

TREASURER'S REPORT

	From Income of the Corporation	From Income of Trust Funds	From Gifts, Receipts, etc.	Totals
General Expenses.....	\$310,543 42	\$42,462 04	\$27,710 72	\$380,716 18
Philosophy, Philology, and Letters.....	110,337 65	8,324 80	27,038 38	145,700 83
Natural and Exact Sciences.....	218,631 90	7,403 08	35,107 45	261,142 43
School of Law.....	37,349 15	.....	.....	37,349 15
School of Political Science.....	51,783 25	.....	17,110 73	68,893 98
Department of Chinese.....	.....	1,487 95	.....	1,487 95
School of Medicine.....	133,945 23	.....	800 72	134,745 95
Total Payments from Income of Corporation.....	\$862,590 60	.....	.....	.....
Total Payments from Income of Trust Funds.....	.....	\$59,677 87	.....	.....
Total Payments from Gifts, Receipts, etc.....	.....	.....	\$107,768 00	.....
Total Current Expenses.....	.....	.....	.....	\$1,030,036 47

SUMMARY OF INCOME AND OPERATING EXPENSES

INCOME

Income of the Corporation (Schedule 3, page 10).....\$869,338 59

OPERATING EXPENSES

Items provided out of the General Funds of the Corporation (Summary of Schedule 6, second column, page 27) 862,590 60Excess Income for year ending June 30, 1902..... \$6,747 99

INTEREST ACCOUNT

INTEREST PAID, AS FOLLOWS:

On Bloomingdale Site Mortgage.....	\$35,000 00	
On Columbia College 3 % Mortgage Gold Bonds.....	57,150 00	
On Columbia College Notes.....	31,653 12	
On Williamsbridge Property Mortgage. . .	1,920 00	
On Special Fund for Departments of Mining and Metallurgy.....	486 03	
On Uninvested Trust Funds.....	396 03	\$126,605 18

LESS INTEREST RECEIVED, AS FOLLOWS:

On Purchase Money Mortgage on Wheelock Property, made by Jacob D. Butler (less amount apportioned to various Trust Funds).....	304 92	
On Deposits of General Funds.....	2,376 28	
On Deposits of Special Funds.....	1,121 42	
Accrued Interest on Portion of Butler Mortgage transferred to the Dean Lung Fund.....	76 00	3,878 62
		<u>122,726 56</u>

DEDUCT INTEREST APPORTIONED TO SPECIAL REAL ESTATE ACCOUNT, AS FOLLOWS:

Williamsbridge Property.....	4,845 98	
General Society Properties.....	13,210 83	
Gaillard-Loubat Library Endowment Fund.....	6,083 58	24,140 39
		<u>*\$98,586 17</u>

* The Interest Fund, 1901-02, is applicable to the reduction of this amount.

SPECIAL REAL-ESTATE ACCOUNT

WILLIAMSBRIDGE PROPERTY:

Interest.....	\$4,845 98		
Taxes and Water Rates.....	1,594 32		
Insurance.....	138 93		
Caretaker.....	600 00		
Sundries.....	173 72	\$7,352 95	
Less Rent of Oval.....		780 00	\$6,572 95

GENERAL SOCIETY PROPERTIES:

Interest.....	13,210 83		
Taxes and Water Rates.....	3,559 40		
Insurance.....	278 15		
Agent's Commissions.....	187 44		
Caretaker (No. 18 East 16th St).	480 00		
Sundries.....	544 60	18,260 42	
Less Gross Rents.....		7,498 10	10,762 32

GAILLARD-LOUBAT LIBRARY EN-
DOWMENT FUND:

Payments to Joseph F. Loubat under An- nuity Agreement.....	60,000 00		
Interest.....	6,083 58		
Taxes and Water Rent.....	17,558 17		
Insurance.....	6,434 37		
Agent's Commissions.....	1,326 16		
Sundries.....	9,048 92	100,451 20	
Less gross rents from Nos. 503-511 Broadway, N.Y.		53,046 61	47,404 59
			<u>\$64,739 86</u>

MISCELLANEOUS PAYMENTS

AFFECTING INVESTMENT OF TRUST FUNDS:

Center Fund.

Invested in Bond and Mortgage of Frank Maunsell, on property corner Flatbush Ave. and Sterling Place, Brooklyn.....	\$35,000 00
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Class of 1848 Scholarship Fund.

Invested in 32 shares Atlanta & Charlotte Air Line Railroad Co.'s stock @ 171 $\frac{1}{8}$	5,476 00
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Dean Lung Fund.

Invested in \$50,000 Chesapeake & Ohio Railroad Co.'s 4 $\frac{1}{2}$ % General Mortgage Bonds, due 1992.....	\$53,987 50
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Invested in 268 shares Atlanta & Charlotte Air Line Railroad Co.'s stock @ 171 $\frac{1}{8}$	45,861 50
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Invested in portion of Butler Mortgage.	12,000 00	111,849 00
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Philolexian Centennial Washington Prize Fund.

Invested in \$1000 Chesapeake & Ohio Railroad Co.'s (Craig Valley Branch) 5 % First Mortgage Bond, due 1940	1,000 00
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Phoenix Legacy.

Invested in various stocks and bonds..	153,112 54
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AFFECTING FUNDS FOR DESIGNATED PURPOSES:

Students Loan Fund.

Loans, 1901-02, to students on their notes.....	200 00
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Principal of Catherine Wolfe Bruce Fund.

Payments to Prof. J. K. Rees for Department of Astronomy.....	1,400 00
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Carried forward.....	<u>\$308,037 54</u>
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Brought forward.....		\$308,037 54
CONSTRUCTION AND EQUIPMENT:		
Earl Hall.		
Construction.....	\$110,024 04	
Staging.....	364 39	
Steam Heating.....	17,747 00	
Electric Wiring and Ventilating.....	4,450 00	
Electric Fixtures.....	2,244 05	
Painting and Decorating.....	850 00	
Cork Carpets.....	277 21	
Architects' Commission.....	3,924 89	
Consulting Engineer, Commission.....	440 00	
Electrical Engineer, Commission.....	222 50	140,544 08
University Hall, Equipment.		
Expended to date.....		7,094 61
MISCELLANEOUS:		
Columbia College Notes.		
Amount paid in reduction of outstanding debt.....		50,000 00
Summer Session, 1901.		
Expenditures in 1901-02 for account of Summer Session, 1901.....		1,302 91
Summer Session, 1902.		
Expended in 1901-02 for account of Summer Session, 1902.....		862 74
Students' Ledger, School of Medicine.		
Over-payment in 1900-01 by students, returned.....		50 00
		<u>\$507,891 88</u>

PRINCIPAL OF TRUST FUNDS

For investments, see Schedule 13.

	Principal	Invested	Uninvested
Avery Architectural Fund....	\$ 30,000 00	\$ 30,000 00	
Barnard Fellowship Fund...	10,000 00	10,000 00	
Barnard Library Fund.....	59,501 64	59,501 64	
Margaret Barnard Fund.....	16,231 67	16,231 67	
Beck Prize Fund.	8,000 00	8,000 00	
Beck Scholarship Fund.....	2,000 00	2,000 00	
Bennett Prize Fund.....	1,000 00	1,000 00	
Bunner Prize Fund.....	1,000 00	1,000 00	
Campbell Scholarship Fund.	6,000 00	6,000 00	
Center Fund.....	178,046 50	157,524 50	\$20,522 00
Chanler Prize Fund.....	1,000 00	1,000 00	
Class of 1848 Scholarship Fund.....	10,000 00	5,476 00	4,524 00
Columbia Fellowship Fund..	13,000 00	13,000 00	
Cotheal Fund.....	6,000 00	6,000 00	
Curtis Fellowship Fund....	10,000 00	10,000 00	
Curtis Medals Fund.....	1,000 00		1,000 00
DaCosta Professorship Fund.	86,576 83	86,576 83	
Dean Lung Professorship Fund.....	213,000 00	211,849 00	1,151 00
Drisler Classical Fund.....	10,000 00	10,000 00	
Dyckman Fund	10,000 00	10,000 00	
Eaton Professorship Fund...	3,055 79	3,055 79	
Gebhard Fund	20,000 00	20,000 00	
German Lecture Fund.....	1,000 00	1,000 00	
Illig Fund.....	2,000 00	2,000 00	
Law-Book Trust Fund	4,250 00	4,250 00	
Loubat Fund	7,000 00	7,000 00	
McKim Fellowship Fund. . .	20,000 00	20,000 00	
Member of Class of '85 Fund.	1,050 00	1,050 00	
Moffatt Scholarship Fund...	2,000 00	2,000 00	
Mosenthal Fellowship Fund.	7,500 00	7,500 00	
Perkins Fellowship Fund....	5,700 00	5,700 00	
Philolexian Centennial Wash- ington Prize Fund	1,000 00	1,000 00	
Phoenix Legacy.....	149,508 44	143,412 54	6,095 90
Proudfit Fellowship Fund in Letters.....	13,875 00	13,875 00	
Pulitzer Scholarship Fund...	50,448 75	50,448 75	
Schermerhorn Scholarship Fund.....	5,000 00	5,000 00	
Schiff Fellowship Fund. . . .	15,000 00	15,000 00	
Schurz Fellowship Fund....	10,000 00	10,000 00	
Schurz Library Fund.....	10,000 00	10,000 00	
Seidl Fund.....	12,000 00	12,000 00	
Stuart Scholarship Fund....	6,000 00	6,000 00	
Carried forward.....	\$1,018,744 62	\$985,451 72	\$33,292 90

PRINCIPAL OF TRUST FUNDS—*Continued*

	Principal	Invested	Uninvested
Brought forward..	\$1,018,744 62	\$985,451 72	\$33,292 90
Trowbridge Fellowship Fund	10,000 00	10,000 00	
Trust Fund for Psychology.	100,000 00	100,000 00	
Tyndall Fellowship Fund...	10,945 50	10,945 50	
Waring Fund (for Mrs. Waring).....	50,000 00	50,000 00	
Waring Fund (for Miss Waring).....	50,000 00	50,000 00	
	<u>\$1,239,690 12</u>	<u>\$1,206,397 22</u>	<u>\$33,292 90</u>

SCHOOL OF MEDICINE:

Clark Scholarship Fund.....	\$14,000 00	\$ 4,000 00	\$10,000 00
Harsen Prize Fund.....	31,114 10	31,114 10	
Jacobi Ward Fund.....	50,000 00	50,000 00	
Proudfit Fellowship Fund in Medicine.....	13,875 00	13,875 00	
Smith Prize Fund.....	2,337 81	2,337 81	
Stevens Prize Fund.....	1,899 88	1,899 88	
Sloane Maternity Hospital Fund.....	250,000 00	250,000 00	
Vanderbilt Clinic Endow- ment Fund.....	115,000 00	115,000 00	
	<u>\$478,226 79</u>	<u>\$468,226 79</u>	<u>\$10,000 00</u>
	<u>\$1,717,916 91</u>	<u>\$1,674,624 01</u>	<u>\$43,292 90</u>

INVESTMENT OF TRUST FUNDS

June 30, 1902

EVERY ARCHITECTURAL FUND:

Gift of Samuel P. Avery and Mary Ogden Avery in memory of their deceased son, Henry Ogden Avery. The income of the fund to be applied to the purchase of books relating to architecture, decorations, and allied arts. Established in 1890.

\$15,000.	Lehigh Valley Railroad Co.'s		
4½ %	First Mortgage Bonds, due 1940..	\$15,000	00
\$5,000.	Northern Pacific Railroad Co.'s		
	Prior Lien Railway and Land Grant		
4 %	Gold Bonds, due 1997.....	5,000	00
Interest in Bond and Mortgage of Jacob D. Butler for \$250,000 on "Wheelock Property," 161st Street and Broadway, Borough of Manhattan, due 1904, at 4 %.....			
		10,000	00
		<u>\$30,000</u>	00

BARNARD FELLOWSHIP FUND:

Legacy from the late President Barnard (who died in 1889), to support a fellowship to be entitled the "Barnard Fellowship for Encouraging Scientific Research."

Certificate No. 68, Series 898, issued by the Lawyers' Mortgage Insurance Company, secured by Bond and Mortgage of John T. Williams, on property on Church Street, near White Street, Borough of Manhattan, due on or before September 27, 1904, at 4 %.....

		10,000	00
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BARNARD LIBRARY FUND:

The residuary estate of the late President Barnard was left to the Trustees of Columbia College to constitute a fund under the name of the "Barnard Fund for the Increase of the Library," the income of which is to be devoted to the purchase of books, especially those relating to physical or astronomical science; but out of the income of this fund so much as may be necessary is to be applied in procuring a gold medal of the bullion value of not less than \$200, to be styled the "Barnard Medal for Meritorious Service to Science," to be awarded every five

Carried forward.....	<u>\$40,000</u>	00
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Brought forward.....		\$40,000 00
years on the judgment of the National Academy of Science of the United States. The medal will be next awarded in June, 1905.		
\$11,000. Buffalo, Rochester & Pittsburg Railroad Co.'s 5 % General Mortgage Gold Bonds, due 1937.....	\$10,960 57	
\$10,000. Illinois Central Railroad Co.'s 4 % Bonds, due 1953.....	7.950 67	
Mortgage Deed of Almira Hopkins Spencer on property at Litchfield, Connecticut, to secure a promissory note of Almira Hopkins Spencer and Linus P. Bissell for \$3,500, at 5 %.....	3,500 00	
\$35,000 Columbia College 3 % Mortgage Gold Bonds, due 1909.....	35,000 00	
Interest in Bond and Mortgage of Jacob D. Butler for \$250,000 on "Wheelock Property," 161st Street and Broadway, Borough of Manhattan, due 1904, at 4 %.....	2,090 40	59,501 64

MARGARET BARNARD FUND:

The residuary estate of the late Margaret Barnard (who died in 1889), widow of the late President Barnard, was left to the Trustees of Columbia College "to augment the sum left by my late husband."

\$16,000. Columbia College 3 % Mortgage Gold Bonds, due 1909.....	16,000 00	
Interest in Bond and Mortgage of Jacob D. Butler for \$250,000 on "Wheelock Property," 161st Street and Broadway, Borough of Manhattan, due 1904, at 4 %.....	231 67	16,231 67

BECK FUNDS:

The late Charles Bathgate Beck (who died in 1894) bequeathed the sum of \$10,000 to be applied as follows: \$2,000 to found one free scholarship, the income to be applied "to the free yearly tuition and education in said College of one student forever, under such terms and conditions as the rules of said College and said Trustees shall prescribe." The income of the remaining \$8,000 to be used for an annual prize "to the student in the Law School who shall pass the best examination in Real Estate Law."

Carried forward.....	\$115,733 31
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Brought forward..... \$115,733 31

BECK SCHOLARSHIP FUND

\$2,000. Lehigh Valley Terminal Railroad Co.'s 5 % First Mortgage Gold Bonds, due 1940..... \$2,000 00

BECK PRIZE FUND

\$8,000. Lehigh Valley Terminal Railroad Co.'s 5 % First Mortgage Gold Bonds, due 1940..... 8,000 00 10,000 00

BENNETT PRIZE FUND:

Gift of James Gordon Bennett. The Income of the Fund, or a medal of equal value, to be given for an "essay in English Prose upon some subject of contemporaneous interest in the domestic or foreign policy of the United States." Established in 1893.

\$1,000. West Shore Railroad Co.'s 4 % First Mortgage Bond, due 2361..... 1,000 00

BUNNER PRIZE FUND:

Gift of friends of the late Henry Cuyler Bunner The income of the Fund to be used to provide every year the "H. C. Bunner Medal," to be given to the student who shall present the best essay on an assigned subject in American Literature. Established in 1896.

Certificate No. 77, Series 808, issued by the Lawyers' Mortgage Insurance Co., secured by Bond and Mortgage of John T. Williams on property on Church Street, near White Street, Borough of Manhattan, due on or before September 27, 1904, at 4 %..... 1,000 00

CAMPBELL SCHOLARSHIP FUND:

Gifts of \$3,000 each from Miss Maria L. Campbell and Miss Catharine B. Campbell, for the establishment of two scholarships in the College, in memory of Robert B. Campbell, of the Class of 1844, and Henry P. Campbell, of the Class of 1847.

Interest in Bond and Mortgage of Jacob D. Butler for \$250,000 on "Wheelock Property," 161st Street and Broadway, Borough of Manhattan, due 1904, at 4 %..... 6,000 00

Carried forward..... \$133,733 31

Brought forward.....

\$133,733 31

CENTER FUND:

Gift of Mary E. Ludlow, in memory of her son, the late Robert Center. The income of the Fund to be applied either to the salary of a Professorship of Music, or other instructors in music, or to Fellowships or Scholarships in Music, or to be used in any one or more of these ways or such other ways as shall in the judgment of the Trustees tend most effectively to elevate the standard of musical instruction in the United States, and to offer the most favorable opportunities for acquiring instruction of the higher order. Established in 1896.

\$4,000. Belleville and Carondelet Railroad Co.'s 6 % First Mortgage Bonds, due 1923.....	\$4,574 00	
\$6,000. Georgia Pacific Railroad Co.'s 6 % First Mortgage Bonds, due 1922	6,885 00	
\$75,000. Columbia College 3 % Mortgage Gold Bonds, due 1909.....	75,000 00	
\$16,000. Northern Pacific Railroad Co.'s Prior Lien Railway and Land Grant 4 % Gold Bonds, due 1907.....	16,000 00	
Bond and Mortgage of Edmund H. Wright on property on Schenectady Avenue, Borough of Brooklyn, due July, 1899, at 5 %.....	5,000 00	
Bond and Mortgage of H. Wood Sullivan on property on Sterling Street, Borough of Brooklyn, due 1902, at 5 %....	4,000 00	
Bond and Mortgage of Eversley Childs and William C. Pate on property on Malbone and Sterling Streets, Borough of Brooklyn, due August 15, 1904, at 5 %.....	8,750 00	
Bond and Mortgage of Frank Maunsell on property on Flatbush Avenue and Sterling Place, Borough of Brooklyn, due January 20, 1905, at 4 %.....	35,000 00	
Interest in Bond and Mortgage of Jacob D. Butler for \$250,000 on "Wheelock Property," 161st Street and Broadway, Borough of Manhattan, due 1904, at 4 %.....	2,315 50	
Cash on hand.....	20,522 00	178,046 50

CHANLER PRIZE FUND:

Bequest of J. Winthrop Chanler, of the Class of 1847, to found an annual prize for "the best original manuscript essay in English Prose on the History of

Carried forward.....

\$311,779 81

Brought forward.....		\$311,779 81
Civil Government of America, or some other historical subject."		
\$1,000. St. Paul, Minneapolis & Mani- toba Railroad Co.'s 4½ % Consolidated Mortgage Bond, due 1933.....		1,000 00

CLASS OF 1848 SCHOLARSHIP FUND:

Gift of an anonymous friend to establish this fund.		
32 shares Atlanta & Charlotte Air Line Railroad Co.'s stock.....	\$5,476 00	
Cash on hand.....	4,524 00	10,000 00

COLUMBIA FELLOWSHIP FUND:

Established by the Trustees for a travel-
ling fellowship in the Department of
Architecture, in recognition of the
liberality of Mr. F. Augustus Schermer-
horn, of the Class of 1868. to this De-
partment. This fellowship is awarded
in every even-numbered year. Estab-
lished in 1889.

\$13,000. Lehigh Valley Railroad Co.'s 4½ % First Mortgage Bonds, due 1940		13,000 00
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COTHEAL FUND:

Gift of Mrs. James R. Swords and Mrs.
Samuel Lawrence as a memorial to
their brother, Alexander I. Cotheal.
The income of the fund to be used
and applied to the purchase of books
in the Oriental Languages, or relating
to Oriental Countries. Established in
1896.

Bond and Mortgage of Alexander Latner, on property No. 437 East 86th Street, Borough of Manhattan; due 1906, at 4½ %.....		6,000 00
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CURTIS FELLOWSHIP FUND:

Gift of the George William Curtis Me-
morial Committee to establish a fellow-
ship in the School of Political Science
in Columbia University, to bear the
name and to perpetuate the memory
of the late George William Curtis. The
holder of the fellowship to devote him-
self to the study of the science of gov-
ernment, with a special view to its
application to the then existing con-
dition of the United States, or of the
State or City of New York, and to pub-
lish a monograph on some subject re-

Carried forward.....		\$341,779 81
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Brought forward.....		\$341,779 81
lating to the then existing condition of the United States, etc. Established in 1899.		
\$10,000. Scioto Valley & New England Railroad Co.'s 4 % First Mortgage Gold Bonds, due 1989.....		10,000 00
GEORGE WILLIAM CURTIS MEDALS FUND:		
Gift from an associate of George William Curtis in the Civil-Service Reform work, to establish this fund.		
Cash on hand.....		1,000 00
DA COSTA FUND:		
The late Charles M. Da Costa, a member of the Class of 1855 (who died in 1890), bequeathed to the Trustees of Columbia College \$100,000. Of this sum, the Trustees, on October 6, 1891, set apart \$80,000 for the endowment of a Chair in the Department of Biology. This sum has been increased by the profits of certain investments.		
\$20,000. Central Railroad Company of New Jersey 5 % Consolidated Mortgage Bonds, due 1937.....	\$20,000 00	
\$66,000. Columbia College 3 % Mortgage Gold Bonds, due 1909.....	66,000 00	
Certificate No. 80, Series 898, issued by the Lawyers' Mortgage Insurance Co., secured by Bond and Mortgage of John T. Williams, on property on Church Street, near White Street, Borough of Manhattan, due on or before September, 27, 1904, at 4 %.....	500 00	
Interest in Bond and Mortgage of Jacob D. Butler for \$250,000 on "Wheelock Property," 161st Street and Broadway, Borough of Manhattan, due 1904, at 4 %.....	76 83	86,576 83
	<hr/>	
THE DEAN LUNG PROFESSORSHIP OF CHINESE FUND:		
Gift of anonymous friend, to found a Department of Chinese Languages, Literatures, Religion, and Law, and especially for the establishment of a Professorship to be known as the Dean Lung Professorship of Chinese.		
Interest in Bond and Mortgage of Jacob D. Butler for \$250,000 on "Wheelock Property," 161st Street and Broadway, Borough of Manhattan, due 1904, at 4 %.....	112,000 00	
	<hr/>	
Carried forward.....	\$112,000 00	\$439,356 64

Brought forward.....	\$112,000 00	\$439,356 64
\$50,000. Chesapeake & Ohio Railroad Co.'s 4½ % General Mortgage Bonds, due 1992.....	53,987 50	
268 shares of Atlanta & Charlotte Air Line Railroad Co.'s stock.....	45,861 50	
Cash on hand.....	<u>1,151 00</u>	213,000 00

DRISLER CLASSICAL FUND:

Gift of President Low, for the endowment of the "Henry Drisler Classical Fund" for the purchase of books, maps, charts, busts, and such other equipment as will tend to make instruction in the classics more interesting and effective. Established in 1894.

Interest in Bond and Mortgage of Jacob D. Butler for \$250,000 on "Wheelock Property," 161st Street and Broadway, Borough of Manhattan, due 1904, at 4 %.....

10,000 00

DYCKMAN FUND:

Gift of Isaac Michael Dyckman in memory of his uncles, Dr. Jacob Dyckman and Dr. James Dyckman, both of the College of Physicians and Surgeons, to establish the "Dyckman Fund for the Encouragement of Biological Research." "The interest derived therefrom to be devoted annually to such object consistent with the purposes of the gift as shall be recommended by the Department of Zoölogy and approved by the President." Established in 1899.

\$10,000. Scioto Valley & New England Railroad Co.'s 4 % First Mortgage Gold Bonds, due 1989.....

10,000 00

EATON PROFESSORSHIP FUND:

On account of \$100,000 bequest of Dorman B. Eaton, deceased, to endow and maintain a Professorship of Municipal Science and Administration in the College.

Interest in Bond and Mortgage of Jacob D. Butler for \$250,000 on "Wheelock Property," 161st Street and Broadway, Borough of Manhattan, due 1904, at 4 %.....

3,955 79

Carried forward..... \$675,412 43

Brought forward.....		\$675,412 43
GEBHARD FUND:		
Bequest of Frederick Gebhard to found a Professorship of the German Language and Literature. Established in 1843. \$20,000. West Shore Railroad Co.'s Guaranteed 4 % First Mortgage Bonds, due 2361.....		20,000 00
GERMAN LECTURE FUND:		
Composed of gifts for an endowment for Public Lectures in German at the University. The income to be used for advertising, printing, slides, etc., for this course.		
Interest in Bond and Mortgage of Jacob D. Butler for \$250,000 on "Wheelock Property," 161st Street and Broadway, Borough of Manhattan, due 1904, at 4 %.....		1,000 00
ILLIG FUND:		
Bequest of William C. Illig, of the Class of 1882, School of Mines. The income of the fund to be applied to the purchase of prizes to be awarded to students of the graduating class of the School of Mines, who shall, in the judgment of the Faculty, have merited the same by commendable proficiency in such scientific subjects as the Faculty may designate. Established in 1898. Certificates Nos. 78 and 79, Series 898, issued by the Lawyers' Mortgage Insurance Company, secured by Bond and Mortgage of John T. Williams, on property on Church Street, near White Street, Borough of Manhattan, due on or before September 27, 1904, at 4 %..		2,000 00
LAW-BOOK TRUST FUND:		
Created by act of the Trustees on March 5, 1900, by the consolidation of the Alexander Coles Gift (\$500); John Jay Jenkins Legacy (\$500); John McKeon Fund (\$1,000); Sampson Simson Fund (\$1,000); and Edgar J. Nathan Gift (\$250). The income to be applied to the purchase of law books.		
Certificates Nos. 73 and 74, Series 898 (each \$2,000), issued by the Lawyers' Mortgage Insurance Company, secured by Bond and Mortgage of John T. Williams, on property on Church Street, near White Street, Borough of Manhattan, due on or before September 27, 1904, at 4 %.....	\$4,000 00	
Carried forward.....	\$4,000 00	\$698,412 43

Brought forward..... \$4,000 00 \$698,412 43

Interest in Bond and Mortgage of Jacob D. Butler for \$250,000 on "Wheelock Property," 161st Street and Broadway, Borough of Manhattan, due 1904, at 4 %..... 250 00 4,250 00

LOUBAT FUND:

Gift of Joseph F. Loubat (Duc de Loubat), for prizes to be given every five years for works in the English Language on the History, Geography, Archæology, Ethnology, Philology, or Numismatics of North America. First prize, \$1,000; second prize, \$400. The prizes will be next awarded in June, 1903. Established in 1892.
 \$7,000. Buffalo, Rochester & Pittsburg Railroad Co.'s 5 % General Mortgage Bonds, due 1937..... 6,979 75
 Certificate No. 12,680 of the New York Life Insurance and Trust Company at 3 %..... 20 25 7,000 00

MCKIM FELLOWSHIP FUND:

Gift of Charles F. McKim for two traveling fellowships in the Department of Architecture. These fellowships are awarded in every odd-numbered year. Established in 1880.
 \$20,000. St. Paul, Minneapolis & Manitoba Railroad Co.'s 4½ % Consolidated Mortgage Bonds, due 1933..... 20,000 00

MEMBER OF CLASS OF '85 FUND:

The gift of Grant Squires, of the Class of 1885. The income of the fund to be awarded every five years to defray the expenses of a sociological investigation that promises results of a scientific value. Established in 1895.
 Certificate No. 76, Series 808, issued by the Lawyers' Mortgage Insurance Company, secured by Bond and Mortgage of John T. Williams, on property on Church Street, near White Street, Borough of Manhattan, due on or before September 27, 1904, at 4 %..... 1,050 00

Carried forward..... \$730,712 43

Brought forward.....	\$730,712 43
MOFFATT SCHOLARSHIP FUND:	
Bequest of William B. Moffatt, M.D., of the Class of 1838, "for the purposes of one or more scholarships for the education and instruction of one or more indigent students." Established in 1863. \$2,000. St. Paul, Minneapolis & Manitoba Railroad Co.'s 4½ % Consolidated Mortgage Bonds, due 1933.....	2,000 00
MOSENTHAL FELLOWSHIP FUND:	
Gift of friends of the late Joseph Mosenthal to found a fellowship in Music. Established in 1898.	
Certificate No. 69, Series 898, issued by the Lawyers' Mortgage Insurance Company, secured by Bond and Mortgage of John T. Williams, on property on Church Street, near White Street, Borough of Manhattan, due on or before September 27, 1904, at 4 %.....	7,500 00
PERKINS FELLOWSHIP FUND:	
Bequest of Willard B. Perkins (who died in 1897). The income of the fund to be expended every four years for a travelling fellowship in the Architectural Department. The fellowship will be next awarded in June, 1906.	
Certificate No. 71, Series 898, issued by the Lawyers' Mortgage Insurance Company, secured by bond and Mortgage of John T. Williams, on property on Church Street, near White Street, Borough of Manhattan, due on or before September 27, 1904, at 4 %.....	5,700 00
PHILOLEXIAN CENTENNIAL WASHINGTON PRIZE FUND:	
Gift from the Philolexian Society to establish this fund. The accumulated interest thereof to be expended every four years for a life-size bronze bust of George Washington, to be given to that member of the Philolexian Society who, in the opinion of the President of the University, the President of the Society, and a third man of their choosing, shall be deemed most worthy upon his delivery of an original patriotic address.	
\$1,000. Chesapeake & Ohio Railroad Co.'s (Craig Valley Branch) 5 % First Mortgage Gold Bond, due 1940.....	1,000 00
Carried forward.....	\$746,912 43

Brought forward.....

\$746,912 43

PHŒNIX LEGACY:

On account of one-third part of the residuary estate of the late Stephen Whitney Phœnix, bequeathed to Columbia College.

16 shares Albany & Susquehanna Railroad Co.'s stock.....	\$2,000 00	
19 shares Catawissa Railroad Co.'s Preferred Stock.....	475 00	
8 shares Cincinnati, Hamilton & Dayton Railroad Co.'s Preferred Stock.....	365 00	
11 shares Cincinnati, Hamilton & Dayton Railroad Co.'s Common Stock.....		
5 shares Consolidated Gas Company of New York stock.....	273 53	
102 shares Delaware & Hudson Co.'s stock.....	10,200 00	
103 shares Delaware, Lackawanna & Western Railroad Co.'s stock.....	6,180 00	
\$6,000. Harlem River and Portchester Railroad Co.'s 7 % First Mortgage Bonds, due 1903.....	6,000 00	
219 shares Illinois Central Railroad Co.'s stock.....	27,003 10	
11 shares of stock of National Bank of Commerce of New York.....	1,540 00	
\$3,000. New York Central & Hudson River Railroad Co.'s 4 % Gold Extended Debt Certificates of 1853, due 1905.....	3,000 00	
66 shares New York, New Haven & Hartford Railroad Co.'s stock.....	10,560 00	
33 shares Pittsburg, Fort Wayne & Chicago Railroad Co.'s stock.....	4,125 00	
18 shares Rensselaer & Saratoga Railroad Co.'s Consolidated Capital Stock.....	2,290 91	
90 shares United New Jersey Railroad & Canal Co.'s stock.....	14,400 00	
Bond and Mortgage of Moritz Simon and wife on property No. 93 Park Row, Borough of Manhattan, due December, 1904, at 4 %.....	15,000 00	
Bond and Mortgage of Morris Goldberg and Nathan Schancupp on No. 136 Monroe Street, Borough of Manhattan, due May, 1903, at 4½ %.....	15,000 00	
Bond and Mortgage of Lillie A. King on No. 2262 Second Avenue, Borough of Manhattan, due November, 1902, at 4 %.....	15,000 00	
Bond and Mortgage of Austin Flint Morris on No. 13 West 60th Street, Borough of Manhattan, due May, 1905, at 4 %.....	10,000 00	
Cash on hand.....	6,095 90	149,508 44

Carried forward.....

\$896,420 87

Brought forward.....

\$896,420 87

ALEXANDER MONCRIEF PROUDFIT FELLOWSHIP FUND:

Legacy (of \$15,000) from the late Alexander Moncrief Proudfit, of the Class of 1892 (who died in 1899), to found a fellowship to be known as the Alexander Moncrief Proudfit Fellowship in Letters, "to be held only by such persons as, being the sons of native-born American parents, shall have taken the degree of Bachelor of Arts after a three years' residence in Columbia College, and shall, while enjoying such Fellowship or the income thereof, remain unmarried. Such fellowship to be for the encouragement of study in English Literature." Established in 1899.

\$12,000. Northern Pacific Railroad Co.'s Prior Lien Railway and Land Grant 4 % Gold Bonds, due January 1, 1997.	\$12,000 00	
Interest in Bond and Mortgage of Jacob D. Butler for \$250,000 on "Wheelock Property," 161st Street and Broadway, Borough of Manhattan, due 1904, at 4 %.....	1,875 00	13,875 00

PULITZER SCHOLARSHIP FUND:

Gift of \$100,000 by Joseph Pulitzer to found thirty scholarships for graduates of City Grammar Schools, one-half the sum to be used on improvements on the New Site at 116th Street. Established in 1893.

\$25,000. Niagara Falls Power Co.'s 5 % First Mortgage Consolidated Bonds, due 1932.....	22,500 00	
\$29,000. Manhattan Elevated Railroad Co.'s 4 % Consolidated Bonds, due 1990.....	27,948 75	50,448 75

SCHERMERHORN SCHOLARSHIP FUND:

Bequest of John J. Schermerhorn of the Class of 1825, "for the purpose of free scholarships, the nomination to which shall vest in my nearest male relative in each generation during his lifetime." Established in 1877.

\$5,000. St. Paul, Minneapolis & Manitoba Railroad Co.'s 4½ % Consolidated Mortgage Bonds, due 1933.....	5,000 00	
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Carried forward.....

\$965,744 82

Brought forward..... \$965,744 62

SCHIFF FELLOWSHIP FUND:

Gift of Jacob H. Schiff to found a fellowship in the School of Political Science, to be annually awarded by the Faculty on the nomination of the donor or his eldest living male descendant, etc. Established in 1898.

Certificate No. 67, Series 898, issued by the Lawyers' Mortgage Insurance Company, secured by Bond and Mortgage of John T. Williams, on property on Church Street, near White Street, Borough of Manhattan, due on or before September 27, 1904, at 4 %..... 15,000 00

CARL SCHURZ FELLOWSHIP FUND:

From the Carl Schurz Fund Committee to establish this fellowship in honor of Carl Schurz. Established April 2, 1900.

Interest in bond and Mortgage of Jacob D. Butler for \$250,000, on "Wheelock Property," 161st Street and Broadway, Borough of Manhattan, due 1904, at 4 %..... 10,000 00

CARL SCHURZ LIBRARY FUND:

From the Carl Schurz Fund Committee to establish this fund in honor of Carl Schurz, the income to be devoted to the purchase of books, maps, pamphlets, and the like, in the field of the German Language and Literature. Established March 5, 1900.

Interest in Bond and Mortgage of Jacob D. Butler for \$250,000 on "Wheelock Property," 161st Street and Broadway, Borough of Manhattan, due 1904, at 4 %..... 10,000 00

SEIDL FUND:

The proceeds of a Memorial performance held at the Metropolitan Opera House, on March 23, 1899, in honor of the late Anton Seidl. The income of the fund to be paid to Mrs. Seidl during her life time, and thereafter "to be awarded at least every second year to the most promising candidate, either man or woman, prepared to devote himself to the study of musical composition at Columbia University, or elsewhere in this country or abroad."

\$12,000. Scioto Valley & New England Railroad Co.'s 4 % First Mortgage Gold Bonds, due 1989.....

12,000 00

Carried forward.....

\$1,012,744 62

Brought forward.....

\$1,012,744 62

STUART SCHOLARSHIP FUND:

The gift of Mrs. Cornelia A. Atwill, in memory of her grandsons, Sidney Barculo Stuart, of the Class of 1880, and Eugene Tolman Stuart, of the Class of 1881, to found two scholarships in the College, to be known as "Stuart Scholarships." Established in 1895.

Certificate No. 70, Series 898, issued by the Lawyers' Mortgage Insurance Company, secured by Bond and Mortgage of John T. Williams, on property on Church Street, near White Street, Borough of Manhattan, due on or before September 27, 1904, at 4 %.....

6,000 00

TROWBRIDGE FUND:

Gift of the Alumni Association of the School of Mines as a Memorial to the late Professor Trowbridge, to establish the "William Petit Trowbridge Fellowship in Engineering." The income of the fund, to be not less than \$500 per year, is payable to the widow of Professor Trowbridge during the pleasure of the Trustees. Established in 1893.

\$10,000. Lehigh & Hudson River Railroad Co.'s 5 % First Mortgage Gold Bonds, due 1911.....

10,000 00

TRUST FUND FOR PSYCHOLOGY:

Gift of John D. Rockefeller, as an endowment of the head professorship of the Psychological Department of Columbia University. Received November 17, 1899.

\$50,000. Wisconsin Central Railroad Co.'s 4 % First General Mortgage Gold Bonds, due July 1, 1949.....

\$45,750 00

\$50,000. Northern Pacific Railroad Co.'s 4 % Prior Lien Railway and Land Grant Gold Bonds, due January 1, 1997.....

50,750 00

Interest in Bond and Mortgage of Jacob D. Butler for \$250,000 on "Wheelock Property," 161st Street and Broadway, Borough of Manhattan, due 1904, at 4 %.....

3,500 00

100,000 00

Carried forward.....

\$1,128,744 62

Brought forward..... \$1,128,744 62

TYNDALL FELLOWSHIP FUND:

Gift of the late Professor John Tyndall of London. The income of the fund to be applied to the support of "American pupils who may have shown decided talents in Physics, etc." Established in 1885.

\$11,000. West Shore Railroad Co.'s 4 %
First Mortgage Bonds, due 2361..... 10,945 50

WARING FUNDS:

The Chamber of Commerce of the State of New York, in the latter part of the year 1898, raised by public subscription the sum of \$100,000, to perpetuate the memory of the late Col. George E. Waring. The income of the fund (to be not less than \$4,000 per year), to be paid semi-annually to the widow and daughter of Colonel Waring during their lifetime, and, thereafter, "the income shall be devoted to the purpose of instruction in municipal affairs in such manner as the President and Board of Trustees of said College may direct."

FOR MRS. WARING

\$14,000. Illinois Central Railroad Co.'s 4 % Bonds, due 1953.....	\$14,000 00
\$8,000. Scioto Valley & New England Railroad Co.'s 4 % First Mortgage Gold Bonds, due 1989.....	8,000 00
Interest in Bond and Mortgage of Jacob D. Butler for \$250,000 on "Wheelock Property," 161st Street and Broad- way, Borough of Manhattan, due 1904, at 4 %.....	28,000 00
	<hr/>
	50,000 00

FOR MISS WARING

\$10,000. Scioto Valley & New England Railroad Co.'s 4 % First Mortgage Gold Bonds, due 1989....	\$10,000 00	
Interest in Bond and Mort- gage of Jacob D. Butler for \$250,000 on "Wheel- ock Property," 161st St. and Broadway, Borough of Manhattan, due 1904, at 4 %.....	40,000 00	50,000 00
	<hr/>	<hr/>
		100,000 00

Carried forward..... \$1,239,690 12

Brought forward.....		\$1,239,690 12
CLARK SCHOLARSHIP FUND, SCHOOL OF MEDICINE:		
Bequest of the late Alonzo Clark, M.D., formerly President of the College of Physicians and Surgeons, for the purpose of promoting the discovery of new facts in Medical Science. First prize bestowed October 1, 1894.		
17 shares United New Jersey Railroad and Canal Co.'s stock (par \$100 each) .	\$3,874 94	
Certificate No. 81, Series 898, issued by the Lawyers' Mortgage Insurance Company, secured by Bond and Mortgage of John T. Williams, on property on Church Street, near White Street, Borough of Manhattan, due on or before September 27, 1904, at 4 %.....	125 06	
Cash on hand.....	10,000 00	14,000 00
HARSEN PRIZE FUND, SCHOOL OF MEDICINE:		
Founded by the late Jacob Harsen, M.D., in 1859. The income of the fund to be given in prizes as follows: Clinical Reports, three prizes: First prize, \$150; Second prize, \$75; Third prize, \$25. Proficiency at Examinations, three prizes: First prize, \$500; Second prize, \$300; Third prize, \$200.		
28 shares of United New Jersey Railroad and Canal Co.'s stock (par \$100 each) .	6,382 25	
Bond and Mortgage of William Moores on property on north side of 129th Street, 315 feet east of Fourth Avenue, Borough of Manhattan, due 1902, at 4 %.....	15,000 00	
Certificate No. 75, Series 898, issued by the Lawyers' Mortgage Insurance Company, secured by Bond and Mortgage of John T. Williams, on property on Church Street, near White Street, Borough of Manhattan, due on or before September 27, 1904, at 4 %.....	1,624 94	
Columbia College 3 % Mortgage Gold Bonds, due 1909.....	8,000 00	
Interest in Bond and Mortgage of Jacob D. Butler for \$250,000 on "Wheelock Property," 161st Street and Broadway, Borough of Manhattan, due 1904, at 4 %.....	106 91	31,114 10
JACOBI WARD FUND, SCHOOL OF MEDICINE:		
Gift of an anonymous donor, "to endow a ward for children in the Roosevelt Hospital." Established in 1899 as a Memorial to the donor's wife and in honor of Dr. Abraham Jacobi.		
Carried forward.....		\$1,284,804 22

Brought forward.....		\$1,284,804 22
\$25,000. New Jersey Junction Railroad Co.'s 4 % First Mortgage Bonds, due 1986.....	\$25,000 00	
Bond and Mortgage on property No. 209 East 17th Street, Borough of Manhattan, due 1904, at 4 %.....	15,000 00	
Bond and Mortgage of Ruth Walters et al. on property Nos. 719 and 721 9th Street, Borough of Manhattan, due 1885 at 5 %.....	7,500 00	
Certificate No. 72, Series 898, issued by the Lawyers' Mortgage Insurance Company, secured by Bond and Mortgage of John T. Williams, on property on Church Street, near White Street, Borough of Manhattan, due on or before September 27, 1904, at 4 %.....	2,500 00	50,000 00
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MARIA MCLEAN PROUDFIT FELLOWSHIP FUND
IN MEDICINE:

Legacy (of \$15,000) from the late Alexander Moncrief Proudfit, of the Class of 1892 (who died in 1899), to found a fellowship to be known as the "Maria McLean Proudfit Fellowship," to be held only by such persons as, being the sons of native-born American parents, shall, under the direction of the Medical Faculty of Columbia College, pursue advanced studies in Medicine, and shall, while enjoying this fellowship or the income thereof, remain unmarried. Established in 1889.

\$12,000. Northern Pacific Railroad Co.'s Prior Lien Railway and Land Grant 4 % Gold Bonds, due January 1, 1997.	12,000 00	
Interest in Bond and Mortgage of Jacob D. Butler for \$250,000 on "Wheelock Property," 161st Street and Broadway, Borough of Manhattan, due 1904, at 4 %.....	1,875 00	13,875 00
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SLOANE MATERNITY HOSPITAL FUND, SCHOOL
OF MEDICINE:

Gift of William D. Sloane and Emily Thorne Sloane, his wife, as an endowment to the Sloane Maternity Hospital to make all its beds free in perpetuity. Established in 1889.

Michigan Central Railroad Co.'s (Detroit and Bay City) First Mortgage 5 % Bonds, due 1931.....	125,000 00	
Chicago & Northwestern Railroad Co.'s 5 % Sinking Fund Debenture Bonds, due 1933.....	125,000 00	250,000 00
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Carried forward..... \$1,598,679 22

Brought forward.....		\$1,598,679	22
SMITH PRIZE FUND, SCHOOL OF MEDICINE:			
Gift of relatives, friends, and pupils of the late Joseph Mather Smith, M.D., as a Memorial of his services as Professor in the College of Physicians and Surgeons from 1826 to 1866. An annual prize of \$100 is to be awarded for the best essay on the subject of the year presented by an Alumnus of the College.			
11 shares of the United New Jersey Railroad and Canal Co.'s stock (par \$100 each).....		2,337	81
STEVENS PRIZE FUND, SCHOOL OF MEDICINE:			
Established by the late Alexander Hodgson Stevens, M.D., formerly President of the College of Physicians and Surgeons. The income of the fund is awarded every three years for the best medical essay covering original research as determined by the Committee in charge of the Prize. To be next awarded in June, 1903.			
9 shares of the United New Jersey Railroad and Canal Co.'s stock (par \$100 each).....		1,899	88
VANDERBILT CLINIC ENDOWMENT FUND, SCHOOL OF MEDICINE:			
Gift of Cornelius, William K., Frederick W., and George W. Vanderbilt, as a perpetual Memorial to their father, the late William H. Vanderbilt, and as an endowment for the Vanderbilt Clinic. Established in 1896.			
Michigan Central Railroad Co.'s (Detroit and Bay City) First Mortgage 5 % Bonds, due 1931.....	\$100,000	00	
Chicago & Northwestern Railroad Co.'s 4 % Extension Bonds, due 1926.....	10,000	00	
Canada Southern Railroad Co.'s 5 % Second Mortgage Bonds, due 1913.....	5,000	00	115,000 00
			<hr/>
		\$1,717,916	91

RECEIPTS AND DISBURSEMENTS OF INCOME OF TRUST FUNDS FOR
THE YEAR ENDING JUNE 30, 1902

FUND	Debit Balances, July 1, 1901	Credit Balances, July 1, 1901	Income, 1901-1902	Total Credits	Expenditures, 1901-1902	Debit Balances, June 30, 1902	Credit Balances, June 30, 1902
Avery Architectural Fund.....			\$2,491 22	\$2,491 22	*\$2,491 22		
Barnard Fellowship Fund.....			400 00	400 00	400 00		
Barnard Library Fund.....			1,982 76	1,982 76	*1,982 76		
Margaret Barnard Fund.....			489 26	489 26	*489 26		
Beck Prize Fund.....		\$1,539 54	400 00	1,939 54	400 00		\$1,539 54
Beck Scholarship Fund.....			100 00	100 00	†100 00		
Bennett Prize Fund.....		51 25	40 00	91 25	40 00		51 25
Bunner Prize Fund.....		79 50	40 00	119 50			119 50
Cambell Scholarship Fund.....		88 67	240 00	328 67	300 00		28 67
Center Fund.....			4,653 59	4,653 59	†4,653 59		
Chanler Prize Fund.....			45 00	45 00			45 00
Class of 1848 Scholarship Fund			37 54	37 54			37 54
Columbia Fellowship Fund.....		325 00	585 00	910 00			910 00
Cotheal Fund.....			270 00	270 00	*270 00		
Curtis Fellowship Fund.....		788 89	400 00	1,188 89	600 00		588 89
Curtis Medals Fund.....			4 60	4 60			4 60
DaCosta Professorship Fund...			3,003 08	3,003 08	†3,003 08		
Dean Lung Professorship Fund.....	\$388 88		5,472 18	5,472 18	||4,087 95		1,384 23
Drisler Classical Fund.....			400 00	400 00	*400 00		
Dyckman Fund.....			400 00	400 00	400 00		
Eaton Professorship Fund.....		21 32	71 87	93 19			93 19
Gebhard Fund.....			800 00	800 00	†800 00		
Carried forward.....	\$388 88	\$2,894 17	\$22,714 98	\$25,220 27	\$20,417 86		\$4,802 41

FUND	Debit Balances, July 1, 1901	Credit Balances, July 1, 1901	Income, 1901-1902	Total Credits	Expenditures, 1901-1902	Debit Balances, June 30, 1902	Credit Balances, June 30, 1902
Brought forward.....							
German Lecture Fund.....	\$388 88	\$2,894 17	\$22,714 98	\$25,220 27	\$20,417 86		\$4,802 41
Illig Fund.....		10 67	40 00	50 67			50 67
Law-Book Trust Fund.....		419 49	80 00	499 49			499 49
Loubat Fund.....			170 00	170 00	*170 00		
McKim Fellowship Fund.....		1,685 54	400 57	2,086 11			2,086 11
Member of Class of '85 Fund.....		900 00	900 00	1,800 00	1,800 00		
Moffatt Scholarship Fund.....		42 00	42 00	84 00			84 00
Mosenthal Fellowship Fund.....			90 00	90 00	190 00		
Perkins Fellowship Fund.....		374 56	300 00	674 56			674 56
Phoenix Legacy.....		559 18	240 82	800 00			800 00
Proudfit Fellowship Fund in Letters.....			6,907 83	6,907 83	24,000 00		2,907 83
Pulitzer Scholarship Fund.....			555 00	555 00	555 00		
Schermerhorn Scholarship Fund.....			2,410 00	2,410 00	2,410 00		
Schiff Fellowship Fund.....			225 00	225 00	225 00		
Schurz Fellowship Fund.....		124 25	600 00	724 25	600 00		124 25
Schurz Library Fund.....		469 97	400 00	869 97			869 97
Seidl Fund.....			400 00	400 00	*400 00		
Stuart Scholarship Fund.....			480 00	480 00	480 00		
Trowbridge Fellowship Fund.....			240 00	240 00	1240 00		
Trust Fund for Psychology.....			500 00	500 00	500 00		
Tyndall Fellowship Fund.....	1,268 79		4,140 00	2,871 21	12,871 21		
Waring Fund (Mrs. Waring).....			440 00	440 00	440 00		
Waring Fund (Miss Waring).....	720 22		2,000 00	1,279 78	2,000 00	\$720 22	
	7 26		2,000 00	1,992 74	2,000 00	7 26	
Carried forward.....	\$2,385 15	\$7,479 83	\$46,276 20	\$51,370 88	\$39,199 07	\$727 48	\$12,899 29

Brought forward.....	\$2,385 15	\$7,479 83	\$46,276 20	\$51,370 88	\$39,199 07	\$727 48	\$12,899 29
SCHOOL OF MEDICINE							
Clark Scholarship Fund.....			806 12	847 33	675 00		172 33
Harsen Prize Fund.....	41 21		1,189 28	1,977 30	1,476 75		500 55
Jacobi Ward Fund.....	788 02		1,475 00	93 72	1,400 00		
Proudfit Fellowship Fund in Medicine.....	1,381 28					1,306 28	
Smith Prize Fund.....		494 84	555 00	1,049 84			1,049 84
Stevens Prize Fund.....		280 56	110 00	390 56			390 56
Sloane Maternity Hospital Fund.....		78 44	90 00	168 44			168 44
Vanderbilt Clinic Endowment Fund.....			12,500 00	12,500 00	12,500 00		
	\$3,766 43	\$9,162 90	\$68,651 60	\$74,048 07	\$60,900 82	\$2,033 76	\$15,181 01

* Transferred to their respective Library accounts.

† Transferred to "Income and Expense" account.

‡ Transferred to following:

Chemistry.....	\$1,500
Electrical Engineering.....	1,000
Mechanics.....	250
Metallurgy.....	750
Physics.....	500
	<u>\$4,000</u>

|| \$2,600 transferred to Library account.

FUNDS FOR DESIGNATED PURPOSES, RECEIPTS AND DISBURSEMENTS FOR THE YEAR
ENDING JUNE 30, 1902

EXCLUSIVE OF RECEIPTS FROM BARNARD COLLEGE FOR SALARIES.

ACCOUNT	Credit Balances, July 1, 1901	Appropriated by Trustees	Receipts, 1901-1902	Total Credits	Payments, 1901-1902	Credit Balances, June 30, 1902
Educational Administration:						
Salaries.....			\$500 00	\$500 00	\$500 00	
Lectures.....			1,000 00	1,000 00	1,000 00	
Sextennial Catalogue.....		\$662 80	51 80	714 60		\$714 60
Printing and Postage on Catalogue— School of Medicine.....				590 74	590 74	
Paris Exposition—1900.....	\$590 74			19 40		19 40
Pan-American Exposition—1901.....	*1,800 25			1,800 25	*1,800 25	
American School for Oriental Study and Research in Palestine.....	150 00			150 00	100 00	50 00
American Mathematical Society Gift.....	300 00			300 00	100 00	200 00
Buildings and Grounds, 116th Street Fire Repairs.....	15			15	15	
Gymnasium: Women's Evening Session.....	16 00		149 58	165 58	165 58	
Library:						
Binding Manuscripts.....	229 30			229 30	47 20	182 10
Books and Binding of.....			406 48	406 48		406 48
Avery Architectural Collection.....	227 31		2,491 22	2,718 53	1,684 12	1,034 41
Barnard Library Funds.....	1,722 75		2,472 02	4,194 77	3,975 23	219 54
Cothel Fund.....	85 60		270 00	355 60	333 33	22 27
Dean Lung Fund.....			2,600 00	2,600 00	624 45	1,975 55
Law-Book Trust Fund.....	10 00		170 00	180 00	169 90	10 10
Schurz Library Fund.....	104 20		400 00	504 20	405 00	99 20
Drisler Classical Fund.....	78 26		400 00	478 26	478 26	
Carried forward.....	\$5,333 96	\$662 80	\$10,911 10	\$16,907 86	\$11,974 21	\$4,933 65

Brought forward.....	\$5,333 96	\$662 80	\$10,911 10	\$16,907 86	\$11,974 21	\$4,933 65
Completion of Parliamentary Papers.....	.....	.....	2,040 00	2,040 00	1,923 82	116 18
Crimmins—Mansi Fund.....	.....	.....	210 00	210 00	16 00	194 00
John D. Crimmins Collection.....	5 36	.....	.....	5 36	5 36	.....
Educational Catalogue.....	.....	414 54	528 93	943 47	943 47	.....
Lewisohn Dissertation Fund.....	.....	.....	3,000 00	3,000 00	76 90	2,923 10
Ias. Loeb Fund.....	26 31	.....	150 00	176 31	64 05	112 26
Wm. G. Low Fund.....	218 39	.....	350 00	218 39	144 96	73 43
F. A. Schermerhorn Fund.....	02	.....	.....	350 02	350 02	.....
Senff Collection in History—1897.....	16	.....	.....	16	16	.....
Special Fund—1898.....	1,022 07	.....	.....	1,022 07	1,022 07	.....
Special Fund—1899.....	379 64	.....	.....	379 64	340 62	.....
Special Fund—1900.....	4,293 40	.....	.....	4,293 40	3,375 69	.....
Special Fund—1901.....	.....	.....	10,000 00	10,000 00	7,838 13	.....
Fellowships, Scholarships, and Prizes: Annual Fellowships: School of Medicine.....	.....	.....	1,500 00	1,500 00	1,500 00	.....
Annual Fellowship in American History.....	.....	.....	650 00	650 00	.....	650 00
Annual Fellowship in Comparative Literature.....	.....	.....	650 00	650 00	650 00	.....
Annual Fellowship in German Literature.....	.....	.....	650 00	650 00	650 00	.....
Annual Fellowship—University Settlement Society.....	.....	.....	250 00	250 00	250 00	.....
Lawrence Annual Scholarship.....	.....	.....	200 00	200 00	200 00	.....
John D. Jones Scholarship.....	200 00	.....	200 00	400 00	200 00	200 00
Special Pulitzer Scholarships.....	.....	.....	5,750 00	5,750 00	5,750 00	.....
Toppan Prize in Municipal Law.....	.....	.....	150 00	150 00	.....	150 00
Philosophy, Philology, and Letters: Comparative Literature, Salaries.....	.....	.....	1,000 00	1,000 00	1,000 00	.....
Germanic Languages and Literatures: Special Equipment Fund.....	.....	.....	1,075 00	1,075 00	184 00	891 00
Oriental Languages, Salaries.....	.....	.....	2,000 00	2,000 00	1,000 00	1,000 00
Philosophy and Psychology, Salaries.....	.....	.....	7,500 00	7,500 00	.....	7,500 00
Psychology and Anthropology, Salaries.....	.....	.....	2,500 00	2,500 00	2,500 00	.....
Carried forward.....	\$11,479 31	\$1,077 34	\$51,265 03	\$63,821 68	\$41,959 46	\$21,862 22

ACCOUNT	Credit Balances, July 1, 1901	Appropriated by Trustees	Receipts, 1901-1902	Total Credits	Payments, 1901-1902	Credit Balances, June 30, 1902
Brought forward.....	\$11,479 31	\$1,077 34	\$51,265 03	\$63,821 68	\$41,959 46	\$21,862 22
Psychology and Anthropology: Special Equipment Fund, 1900.....	12 13			12 13		12 13
Romance Languages and Literatures: Departmental Appropriation.....			2 13	2 13	2 13	
French Lecture Fund.....			470 00	470 00	352 25	117 75
Natural and Exact Sciences: Architecture, Salaries.....			7,000 00	7,000 00	3,500 00	3,500 00
Models and Diagrams.....	03			03	03	
Astronomy: Observatory for Apparatus.....	54 44			54 44	454 44	
Geodesy for Instruments.....	122 03			122 03	1122 03	
Computations and Measurements.....	59 40			59 40	59 40	
Publication of Work on Variation of Latitude.....	1,600 00			1,600 00		1,600 00
Catherine Wolfe Bruce Fund.....	8,056 39		1,210 18	9,266 57	1,400 00	7,866 57
Chemistry: Supplies.....			7,821 65	7,821 65	7,821 65	
Special Equipment Fund—1900.....	2 00			2 00	2 00	
Civil Engineering: Departmental Appropriation.....			102 52	102 52	102 52	
To Replace Instruments Destroyed by Fire.....	1,405 55			1,405 55		1,405 55
Electrical Engineering: Departmental Appropriation.....			38 01	38 01	38 01	
Mechanical Engineering: On account Special Outfit.....	3 64			3 64	3 64	
Mechanical Laboratory and Summer School.....			1,015 08	1,015 08	1,015 08	
Special Fund for Equipment.....	1 51		3 64	5 15		5 15
Mechanics: Special Equipment Fund—1900.....	400 08			400 08		400 08
Carried forward.....	\$23,196 51	\$1,077 34	\$68,928 24	\$93,202 09	\$56,432 64	\$36,769 45

TREASURER'S REPORT

Brought forward.....	\$23,196 51	\$1,077 34	\$68,928 24	\$93,202 09	\$56,432 64	\$36,769 45
Metallurgy: Laboratory Equipment.....	31			31	31	
Metallurgy: Special Fund.....			3,300 00	3,300 00	2,346 91	953 09
Metallurgy: Special Equipment Fund, 1900.....	5 47			5 47	5 47	
Mineralogy: Special Equipment Fund.....			200 00	200 00	199 96	04
Mining and Metallurgy: Special Fund.....	14,311 15		486 03	14,797 18	|| 5,300 00	9,497 18
Mining: Special Fund.....	1,055 02		2,775 00	3,830 02	2,610 63	1,219 39
Mining: Special Equipment of Labora- tory.....	32			32	32	
Zoology: Senff Zoological Expedition.....	660 56			660 56		660 56
Zoology: Special Fund for Equipment.....	10 16			10 16		10 16
Zoology: Special Equipment Fund, 1901.....	12 35			12 35		12 35
Zoology: Special Fund for 1901.....	550 00			550 00	355 00	195 00
Zoology: Special Fund for Zoological Equipment.....	19			19	19	
School of Political Science: Historical Reading Room Equipment Fund.....	4,931 15		76 29	5,007 44	4,710 73	296 71
Chinese: Salaries.....			3,000 00	3,000 00		3,000 00
School of Medicine: Physiological Chemistry, Supplies.....			800 72	800 72	800 72	
Miscellaneous: Alexander M. Welch Gift.....	839 00			839 00		839 00
	\$45,572 19	\$1,077 34	\$79,566 28	\$126,215 81	\$72,762 88	\$53,452 93

* Account closed by transfer of \$772.33 unexpended balance of appropriation.

† Special Funds for 1899, 1900, and 1901 have been consolidated into one account known as "Library Special Fund."

‡ These Credits emanated in an appropriation and have been turned back.

§ \$3,64 transferred from "Mechanical Engineering: On Account of Special Outfit" to "Mechanical Engineering: Special Fund for Equipment."

|| Transferred \$3,300 to Metallurgy Special Fund, \$2,000 to Mining Special Fund.

STATEMENT AS TO ARREARS OF RENT, JUNE 30 1902

Arrears of Rent, July 1, 1901.....	\$7,166 50	
Less amount collected in 1901-02.....	7,166 50	
	<hr/>	
Arrears accrued during year 1901-02.....		<u>\$5,032 00</u>
Estate of Geo. W. Bassett.....6 months to May 1, 1902.	\$1,300 00	
Edward F. Anderson, Trustee...6 months to May 1, 1902.	1,250 00	
Gabriel A. Healy.....Balance to May 1, 1902..	875 00	
Elvira Fischer-Hansen.6 Months to May 1, 1902.	525 00	
Miss A. M. Somerville.6 Months to May 1, 1902.	357 00	
Imogen Brown.Balance to May 1, 1902..	725 00	
		<u>\$5,032 00</u>

NEW YORK, August 15, 1902.

We hereby certify that we have examined the accounts of the Treasurer of Columbia College for the year ending June 30, 1902, and find them to be correct and duly vouched for.

PATTERSON, TEELE & DENNIS,

Certified Public Accountants.

