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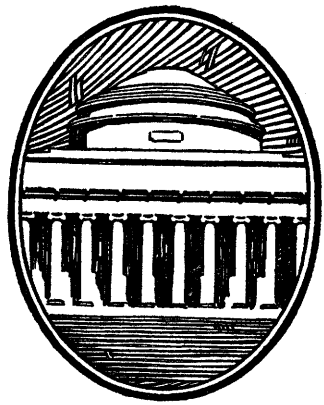
PRESIDENT'S REPORT

VOLUME 63 NUMBER 3



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REPORTS OF THE PRESIDENT AND TREASURER

FOR THE YEAR ENDING JUNE 30, 1927

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REPORT OF THE PRESIDENT

TO THE MEMBERS OF THE CORPORATION:

In accordance with the by-laws of the Corporation I have the honor to submit to you a report covering changes in personnel and the more important points of progress in the work of the various departments during the last year, together with the reports of other administrative officers with reference to the work of their offices.

The Corporation. The term for which Messrs. Lester D. Gardner, Frank W. Lovejoy and William C. Potter were elected expired in June. In place of these retiring members the Corporation elected Messrs. Roger W. Babson, Elisha Lee and William Z. Ripley. Messrs. J. E. Aldred and Frank W. Lovejoy were elected Life Members.

The Faculty. Two deaths have occurred during the year. Dr. Henry P. Talbot, identified with the Institute as student, teacher and administrator for forty-two years, died June 18, 1927. During his term of service, he gave to the Institute his whole hearted devotion. His loss seems irreparable to the Department of Chemistry, the destinies of which he guided so long; to the students who looked to him for advice and help as Dean, and to his associates of the Faculty. His service will be long and gratefully remembered.

Professor F. Jewett Moore, for more than thirty years a member of the Chemistry staff, died November 20, 1926. Professor Moore had retired from active work in 1925, but had maintained a keen interest in the work of the Institute, carrying on research work when his health permitted. His influence was helpful and inspiring, and his loss is sorely felt.

Other losses have been occasioned by the resignations of Brigadier-General Alston Hamilton, of Professor R. T. Haslam, and of Assistant Professors G. L. Clark, L. E. Goodier, A. W. Hanson, R. P. Russell and M. R. Woodward.

Additions to the Faculty have been made as follows:

W. A. Bassett has been appointed Professor of Municipal and Industrial Research, in charge of the Division. Colonel H. E. Cloke has been appointed Professor of Military Science and Tactics, in charge of the Department; R. F. Tucker has been appointed Professor of Building Construction, in charge of the Course; H. T. Mann has been appointed Associate Professor of Petroleum Engineering; C. H. Porter, Associate Professor of Accounting; F. L. Cronin, Assistant Professor of Plumbing Engineering; Major R. C. Eddy, Assistant Professor of Military Science and Tactics; Lieutenant S. G. Frierson, Assistant Professor of Military Science and Tactics; F. K. Morris, Assistant Professor of Geology; and W. C. Holbrook, Assistant Professor of Romance Languages.

Associate Professors W. H. McAdams, H. R. Kurrelmeyer and H. B. Phillips have been advanced to the grade of Professor.

Assistant Professors E. L. Bowles, I. H. Cowdrey, J. L. Gillson and W. P. Ryan have been advanced to the grade of Associate Professor; J. T. Ward has been advanced to the grade of Associate Professor, in charge of the course in Fuel and Gas Engineering.

The following have been promoted to the grade of Assistant Professor: F. W. Adams, H. O. Forrest, P. K. Frölich, T. H. Frost, James Holt, A. S. Jenney, W. H. Newhouse, P. W. Norton, F. J. Robinson, A. L. Russell and D. C. Stockbarger.

R. T. Haslam has been appointed non-resident Professor of Fuel and Gas Engineering.

Professor W. H. Lawrence has been placed in charge of the course in Architectural Engineering.

Professor W. S. Hutchinson has been placed in charge of the Department of Mining and Metallurgy, and Professor Waldemar Lindgren in charge of the Department of Geology.

The various departments of the Institute have, during the past year, carried on with increased efficiency, and steps have been taken in practically all of them to meet the growing demand for able men trained in the fields of science and technology.

The Institute is coöperating with secondary schools in an effort to be of assistance to young men in determining their aptitude for a technical education. The Society of Arts Lectures have been continued during the year. These lectures given by members of the Institute Faculty are open to students of the secondary schools of the vicinity, and are of great value to such students by giving them a clearer understanding of the fields of science and technology, and by assisting them in selecting a future career.

A number of specialists have been invited to lecture at the Institute during the year. The lectures have covered the fields of fundamental science and many branches of engineering; they have been beneficial and inspiring to both the instructing staff and students by presenting new views in the respective fields, and instilling a desire for creative work. A detailed statement as to these lectures will be found in connection with the report of the activities of the various departments.

The Aldred Lectures open to upper classmen, given each year by men who have achieved great success in some branch of engineering, are of the greatest benefit in bringing before these students the conditions to be met with in the practice of the engineering profession, and contain much valuable advice.

The number of students transferring from other educational institutions is increasing, due to the fact that many desire a certain amount of liberal training before entering a professional school. Some of these students discover their fitness for technical work during their college career; others come to the Institute for courses not generally given in technical schools, such as Architecture, Naval Architecture, Aeronautical Engineering and Building Construction. The number coming for graduate work in all departments of science and engineering has considerably increased. In such cases an effort is being made to facilitate the transfer without loss of credit and without repetition of work.

Several of the younger members of the instructing staff have received important Traveling Fellowships enabling them to study abroad with leading experts in their particular

fields and to visit other institutions. The Institute has granted Graduate Scholarships to exceptionally well qualified members of the graduating class, for the purpose of study abroad and elsewhere. The advantage of such fellowships and scholarships is very great in broadening the men and bringing to the Institute the best practices of other institutions. This is especially true in the fields of science where notable progress is being made at many different places. The teacher or the investigator can receive no greater inspiration than to work with an acknowledged leader in his field.

Two double dormitory units, each with a capacity of sixty-eight, were begun early in the spring and will be ready for occupancy during the summer of 1928. These dormitories were provided by the alumni who have undertaken to complete the remaining four units of the group. The group will surround an attractive quadrangle adjacent to the Walker Memorial and will contribute greatly to the welfare and comfort of students at the Institute. It is planned that every class graduated from the Institute up to recent times shall be represented by a room, a suite, a floor or a complete building.

Important and pressing building needs are as follows:

A suitable building for the Department of Biology and Public Health, the work of which is growing rapidly and is hampered by inadequate quarters. Not only is Biology intimately connected with many fields of engineering, but there are specific technological fields based principally upon biology, such as food preservation, industrial hygiene, sanitation and certain phases of public health.

Additional space for graduate and research work in the fields of physics and chemistry must be provided at the earliest possible moment if these branches are to keep pace with modern progress.

Attention is again called to the urgent need for laboratory space suitable for research and instruction in technical fields requiring heavy equipment, such as automotive engineering, work in connection with internal combustion engines, physical metallurgy, chemical engineering, fuel and gas engineering, and the technology of non-metallic materials.

Perhaps the most important need of the Institute at the present time is a suitable endowment for work in the fields of fundamental science. There is no branch of engineering today in which progress does not depend to a large extent upon scientific investigations. The Institute is making considerable progress in the fields of physics, chemistry and biology as well as in the application of higher mathematics to theoretical problems. Every facility should be provided for training exceptional men in the fundamental sciences.

The following statement concerning the work of each department tells of important changes that have been made in curricula and policies. Every member of the instructing staff is given an opportunity to do creative work as to teaching or investigation and to contribute his share of the fundamental data upon which progress in his profession depends. A list of the publications issued by the members of the staff is appended. By far the greater proportion of these publications represent the results of important researches.

Attention is called to the work in Automotive Engineering, Aeronautical Engineering and Building Construction, which have been initiated or in which considerable development has taken place during the year.

DEPARTMENTS OF INSTRUCTION

The following statement regarding the activities of the various departments during the year 1926–27 deals with courses of instruction established or modified, lectures, investigations initiated or completed, and recommendations.

Civil Engineering. No important modifications of instruction have taken place during the past year.

In view of the increased cost of tuition at the Summer Surveying Camp, it seemed desirable to establish a loan fund to assist needy students to attend the Camp. Through the generosity of Mr. Lammot du Pont, 1901, such a fund was provided this year and has been utilized by five students. It is intended that this shall be a revolving fund, each student signing notes to repay in installments the amount

borrowed, the total payments to be completed within two years after leaving the Institute.

Mr. K. C. Reynolds, Instructor in the Department, was awarded the Freeman Traveling Fellowship by the Boston Society of Civil Engineers for study in the hydraulic laboratories of Europe. It is interesting to note that another graduate of this department, Morrough P. O'Brien, 1925, was awarded a similar fellowship by the American Society of Civil Engineers. Also that J. B. Drisko, 1927, was granted a traveling fellowship by the Institute for the same purpose.

An agreement between the Institute and the United States Bureau of Public Roads for a coöperative investigation of tests of subgrade materials was made in October, 1926. Under this agreement the Bureau has maintained at its own expense a research assistant in the Soil Mechanics Laboratory and has provided a considerable amount of equipment for conducting investigations. The results of these investigations have been published from time to time in "Public Roads" and reprints have been bound by the Institute and issued as Contributions from the Department of Civil and Sanitary Engineering. The results of this agreement were so satisfactory to both parties that it has been renewed for the coming year.

A coöperative agreement has been made between the Institute and the Miami Conservancy District to cover the period from July 1, 1927 to July 1, 1928. The object of this agreement is the investigation of the condition of the core walls of earth dams, a subject which is of great importance to the engineering profession. The District undertakes at its own expense to sink shafts and drill holes in order to obtain samples from the core walls of one of the dams built by the District under carefully regulated conditions, and the Institute agrees to make the Laboratory tests of these samples.

The Soil Mechanics Laboratory established last year and equipped with especially designed apparatus has now a collection of one hundred specimens of soil samples from Europe, China and the United States, these samples representing the entire range between extreme types of soil. Part

of these samples have already been classified with respect to compressibility, elasticity, permeability and consistency, the others being retained in an undisturbed state in sealed steel containers for future investigation. Researches conducted in the laboratory during the year, in addition to those conducted under the coöperative agreement with the United States Bureau of Public Roads, include investigations of the effect on the physical properties of clay or remolding the same with different percentages of water, and also of temporarily compressing the same with the object of determining a method of estimating the effect of the history of the sample upon its physical properties; the examination of the errors in the interpretation of results as to the physical properties of soils due to taking only a limited number of samples; the relation between the volume-elasticity of sands and the settlement of loaded areas; the relation between time, settlement and size of loaded areas for plastic material; the establishment of a method for graphically representing certain observations on settlement of buildings; and the investigation of the seepage of water through dams.

A permanent benchmark was constructed on the Institute site during the year by driving a hollow steel shaft to ledge rock one hundred twenty-two feet below the ground surface and filling it with concrete. The elevation of this benchmark has been determined by representatives of the United States Coast and Geodetic Survey. This benchmark will prove valuable to engineers in Greater Boston by furnishing an accurate point of elevation from which to establish levels for foundation construction, particularly in the large areas of filled land adjoining the Charles River in Cambridge and Boston. It will also be of value as a basis for studies of vertical changes in the earth's surface, and in this respect will supplement studies of the movements of the earth's crust already started at the Summer Surveying Camp.

A conference of the Massachusetts State Association of Master Plumbers was held at the Institute on February 16 and 17 under the auspices of the Department and at the initiation of the Professor of Sanitary Engineering. This conference was attended by four hundred seventy-three

members and guests and was apparently highly successful, since at its last meeting those present requested that it be made an annual affair. The members were addressed by the President of the Institute, and numerous papers on subjects of interest to men in this field were presented by various members of the Institute's instructing staff. There is a growing desire on the part of the industry to base it on the best engineering and scientific data.

One of the important events of the year was a series of eight illustrated lectures on hydraulic engineering with special reference to the experimental work of the German hydraulic laboratories, given by Dr. George Henry de Thierry, Professor of Harbor and Canal Engineering and of Hydraulics of the Technische Hochschule at Charlottenburg. These lectures were a source of inspiration to students and staff of the department. Dr. de Thierry, one of the most eminent hydraulic engineers of Europe, is President of the German Society of Harbor Engineering, and of the German Society of Civil Engineers. He is also vice-president of the United German Engineering Societies.

A meeting of the Advisory Committee of the Department was held in New York on January 20, 1927, at which the subjects of discussion were Railroad and Transportation courses and Coöperative Engineering Education with particular reference to Civil Engineering. In addition to the members of the Advisory Committee the deans of certain other educational institutions with experience in coöperative education were present by invitation, also representatives of the United States Bureau of Public Roads, the Committee on Public Relations of the Eastern Railroad Presidents' Conference and the Directors of Investigation of the Society for the Promotion of Engineering Education. The President of the Institute and representatives of the Civil Engineering Department also attended. The report by the Chairman of the Advisory Committee, Morris Knowles, Esq., giving the results of the conference, has already been presented to the Corporation. The following gentlemen have been added during the year to the Advisory Committee: John F. Stevens, President of the American Society

of Civil Engineers, and George Hannauer, President of the Boston and Maine Railroad.

The following new textbooks have been published during the year by members of the Department: "Water Power Engineering," by Professor Barrows, and "Stream Gaging," by Mr. Liddell. The first of these covers the course in Water Power Engineering given at the Institute to students in the Hydroelectric Option. It includes the results hitherto unpublished of a considerable number of experiments made in the Institute laboratories and elsewhere. The book on "Stream Gaging" is written to fill the needs of the students taking the course in this subject given at the Surveying Camp. It is believed that these two books form valuable additions to engineering literature.

Mechanical Engineering. Aside from a special course in machine design prepared especially for the Ordnance Officers of the United States Army, who are detailed to Technology, there have been no changes in the undergraduate work or in the method of undergraduate instruction. The work in motor vehicle testing has been extended to include the phenomena of combustion.

Many of the fundamental subjects of engineering are given by the Mechanical Engineering staff to students of other departments, including Electrical, Civil and Sanitary, Chemical and Mining Engineering, Naval Architecture, etc., at least fifty per cent of the teaching time being given to students of these departments.

Fourteen men received higher degrees in Mechanical Engineering during the year. This is the largest number the Department has ever had.

One of the theses carried on by three graduate students from the Navy was turned over to that Department. There were two undergraduate theses relating to the manufacture of shells which were sent to the Chief of Ordnance of the United States Army, who was enthusiastic in his praise of the work which had been done by students in the Ordnance Unit of the Reserve Officers Training Corps. An undergraduate thesis on Fuel Combustion with Gasoline in the

Internal Combustion Engine was of exceptional merit. A graduate thesis on "Friction Losses in Gear Teeth" was of a high order of merit. There has been a considerable amount of research work done on the gear testing machine, the results having been presented at a meeting of the American Society of Mechanical Engineers.

Members of the staff have been called upon more frequently than ever before to help out the various industries on problems which confronted them, including researches brought to the Department by the Division of Industrial Coöperation and Research.

One of the lecturers not listed on the staff of the Department was Dr. S. Timoshenko of the Westinghouse Electric and Manufacturing Company who lectured on Vibration Problems and on Stress Concentration.

In connection with the courses in production methods it is desirable that there be opportunity to display some of the machinery under discussion. At present there is no room with raised seats available.

An Amsler Testing Machine of 50,000 pounds capacity should be added to the equipment of the Materials Testing Laboratory to facilitate research work in this line. Space is needed for the installation of a chassis testing dynamometer which will be presented to the Institute as soon as room is provided.

Mining and Metallurgy. The most important change during the year was the reëstablishment of Mining and Metallurgy as a separate department. The course in Mining has been enlarged by a new Option, Petroleum Production. This option is similar to Mining Engineering for the first two years, with specialization in the third and fourth years.

The courses and work in Metallography previously given in the Chemistry Department have been transferred to this Department. This has necessitated some rearrangement of the courses in metallography, heat treatment and physical metallurgy.

Important investigations on "Intercrystalline Failure in Metals" have been carried on, and the results will be

published in the near future. Work has also been carried out on the "Physical Properties of Aluminum-Chromium and Aluminum-Chromium-Nickel Steels," the results of which are now published. An investigation of the application of these steels for case-hardening by ammonia is also in progress.

Flotation experiments have been carried out on certain complex Bolivian Tin ores, which have resulted in the development of a method for concentrating these ores.

A member of the staff has been actively interested in methods of Geophysical Prospecting, and has spent the summer in actual work along these lines in the oil fields near Tulsa, Oklahoma.

Dr. C. H. Desch, F. R. S., Professor of Metallurgy at the University of Sheffield, England, gave a short course of lectures on deformation and diffusion in metals.

Dr. William M. Guertler of the Metall-Institut der Technischen Hochschule, Berlin, gave a short course of lectures on corrosion resistance of steels and on the light metal alloys.

Dr. George H. Gilman lectured on Rock Drills and Drill Steels.

Mr. Oliver H. Ralston of the Bureau of Mines lectured on the Work of the Bureau of Mines, and also held conferences with our thesis and graduate men on their problems.

Professor Durward Copeland lectured on South America, its Mining and General Conditions.

Mr. Robert M. Keeney lectured on the Use of Electric Furnaces in metallurgical Work.

Mr. L. W. Emerson, Construction Engineer for the United States Smelting, Refining and Mining Company, lectured on "Construction and Equipment Costs in Mining and Milling."

Mr. Rudolph Emmel, until recently superintendent of gold mines at Zaruma, Ecuador, lectured on problems peculiar to mining in a foreign country and a tropical climate.

Space and equipment are needed for the work in Petroleum Production, as well as for that in Geophysical Prospecting.

In Metallurgy, there is great need for facilities whereby high temperature melting steels and alloys can be made. These include electric furnaces which will call for transformer and other equipment. Forging, rolling and drawing equipment, and furnaces are needed for heat treatment work. It is very desirable to centralize all the metallographic work in the Mining Building at once.

Aeronautical Engineering. Undergraduate instruction in Aeronautical Engineering was given for the first time this year, the enrollment being as follows:

Second Year	21
Third Year	7
Fourth Year	2
Graduate	14

After the year's experience the course has been changed slightly, the shop work being transferred to the summer to allow more room for languages and professional subjects.

It is interesting to note that the graduate enrollment comprised nearly fifty per cent of all graduate students in Aeronautical Engineering in the United States.

The Reserve Officers Training Corps Air Course will be limited to men taking the course in Aeronautical Engineering. It is very difficult to give men from other courses sufficient instruction in Aeronautical Engineering because of their inadequate preparation.

Consideration is being given to the advisability of limiting the enrollment in the course.

The following investigations have been carried on during the year:

Effect of Fuselage Modification of DH4 Model on Propeller Interference. (For Air Corps.)

Aerodynamic Forces and Moments on DH4 Model when Taxiing. (For Air Corps.)

Determination of Changes in Rudder and Yawing Moments Due to Change in Shape and Location of Rudder and Fin on DH4 Model with Propeller. (For Air Corps.)

Determination of Heat Flow in Water Ballast Recovering Unit. (For Goodyear-Zeppelin Co.)

Study of Effects of Various Modifications of Design for Three-Engine Transport. (For Ford Motor Company.)

Determination of Air-Cooled Engine Cylinder Temperatures in Flight. (Done at the Naval Aircraft Factory.)

Comparative Tests of Propeller, in Coöperation with Stanford University.

General Discussion of Tailplane Data from the Aerodynamic View Point. (For Air Corps.)

Research on Stethoscopes.

In addition to the above, more or less routine work has been done on the following projects:

Development of High Lift Airfoil
Development of Slotted Airfoil
Complete series of tests of Amphibian Model
Commercial Transport Tests.

In coöperation with the staff, the following important research work was done by students, mostly graduate, and published in the form of theses:

Confirming Experiments of Effect of Changes in Structure on Wing Flutter by Messrs. G. W. Brady, M. Rauscher and F. P. MeVay.

Effect of Certain Design Changes on Performance of Single Engine Transport by Von Schilling.

Autorotation and Spinning of Complete Airplane Models by E. E. Aldrin.

Investigation of the Effect of Supercharging on Internal Combustion Engines with Various Combination Ratios. The results of this work have been sent to the S. A. E. for publication.

An Investigation of Heat Transfer from Cooling Fins of Air-Cooled Cylinders, published in the form of a thesis by C. G. Halpine, U. S. N., and V. C. Finch, U. S. N.

The Effects of High Speed Centrifugal Induction Blowers on Distribution and Engine Performance, published in the form of a thesis by L. D. Webb, U. S. N., and V. C. Finch, U. S. N.

An investigation of the Bending Moments Imposed on the Master Rod of the Wright J-5 Engine, a thesis by H. L. Van Alstyne.

The following investigations on proposed continuation of investigations of mutual interference effects of airplane propellers and other parts of the airplane. This is to include the effects of radical changes in fuselage form and location, effect of radical engine cylinders with different types of

cowling, the effect of different propellers on performance, the effect of nacelles in multi-engine airplanes, and the measurement of elevator and rudder hinge moments.

Measurements of flow around model airplane as influenced by the propeller, particularly in the region near the tail.

Possible experimental determination of actual airflow near the blades of the propeller as opposed to the mean airflow.

Pressure distribution on tail with slipstream.

Research on various other phases of the supercharging problem.

Investigation of the effect of varying the valve timing and compression ratio on volumetric efficiency and engine performance by means of the National Advisory Committee for Aeronautics Universal Test Engine.

Investigation of the fundamentals of cylinder and piston lubrication and friction.

Continuation of the research already started on the problem of heat dissipation from the finned surface of air-cooled cylinders, in coöperation with the National Advisory Committee for Aeronautics.

Further research on the spectroscopy and visual observation of combustion in an internal combustion engine by means of a quartz cylinder, in coöperation with the Department of Chemical Engineering.

Investigation of some of the fundamentals of carburetor metering devices.

The following specialists have been employed as lecturers during the year:

Dr. Theodore von Karman, in the field of Aerodynamics and Hydronamics.

Mr. Lester D. Gardner, on the subject of Air Transportation in Europe.

Mr. A. A. Merrill, on the Variable Incidence Airplane.

Mr. Anthony Fokker, on Airplane Design.

Dr. S. A. Moss, on the General Electric Superchargers.

Most of the work done by the wind tunnel staff has not yet been published in the form of reports.

The work for the United States Air Corps has been issued as an engineering division report, and some is printed in the form of an Air Corps information circular for distribution in the airplane industry and the Air Corps.

At the present time the Department is very much

cramped for room, but the completion of the Daniel Guggenheim Aeronautical Laboratory, which is now under construction, will provide for the aerodynamics and teaching activities for some time to come. The situation is not so satisfactory with regard to the power plant section of the work, although temporary quarters are sufficient for the coming year. Steps should be taken at once to provide permanent accommodations.

Gratifying progress has been made in securing equipment for power plant investigation. Among the more important items which have been acquired are the following:

Three electric dynamometers; one single cylinder research engine; one single cylinder crank case, equipped to mount various types and sizes of cylinders; two heavy bed plates for the mounting of engines and dynamometers.

There are a number of items of equipment, however, which should be provided for the power plant work this year.

The equipment needed other than power plant requirements are a new five-foot wind tunnel, to be placed in the small wind tunnel room of the new building; two airplane models, especially built for rough handling by students and repeated tests (in the past Army models have been borrowed, which have sometimes been damaged); apparatus for demonstrating Viscous and Density flow phenomena; apparatus for demonstrating Bernoulli's effect; instrument test chamber with means for varying pressure and temperature; techometer test stand and equipment for testing wing ribs to destruction.

Electrical Engineering. The Colloquia established experimentally in the second term of the academic year 1925–26 were continued last year in both terms. The American Telephone and Telegraph Company, the Bell Telephone Laboratories, Inc., the Westinghouse Electric and Manufacturing Company and the General Electric Company coöperated by providing the Colloquium leaders. These Colloquia are intended primarily to bring to our senior students the definite attitude of scientific application which

is now characteristic of executives, designers and inventors in electrical engineering. They have proved satisfactory and an effort is being made to secure the assent of the foregoing companies to a continued coöperation with us in this matter. An effort will also be made to secure certain leaders from the public utility field and from the smaller manufacturing companies.

The importance of the theory of probability and its applications in the electrical engineering industries led us to seek lectures on that subject, and the Bell Telephone Laboratories, Inc., were good enough to loan us Dr. T. C. Fry, an expert on the subject in their employ and a man of fine personality, under the generous conditions corresponding to those by which they contributed the time of Doctors Crandall and Wegel for classes in sound, speech and audition the preceding year. The success of Dr. Fry's course and the demonstration of its importance in the field of electrical communications and other branches of electrical engineering had led the Mathematics Department to place this subject on its permanent list. The Physics Department has continued the subject of sound, speech and audition.

The Honor Group experiment is proving eminently satisfactory. During the past year a Special Counselor was provided for the Honor Group of the Class of 1928, who will continue until this group graduates. This arrangement has proved so satisfactory that plans have been made to have another instructor as a Special Counselor to the Honor Group of the Class of 1929. This assignment as Special Counselor takes about one-half of the time of an Instructor.

The Department has gone a good deal further during the past year in effectively sectionalizing the classes in the electrical engineering subjects of the course according to the ability of the students, making the sections of an average of about twenty students each, and arranging the subject matter so that the more capable and ambitious students may cover the ground much more intensively and more broadly than those of less speedy intellect, while the intellectually slower students may carry on at a pace fitting to their mental make-up. It has been arranged that men may

move from section to section during the term as their progress warrants. This latter arrangement is a great improvement on our former plan in which changes were made readily only at the opening of a new term. This treatment of the classes has been under the direction of the Chairman of the Department Committee on Undergraduate Instruction, and it will be carried forward with such improvements as our experiences of the past year indicate to be desirable.

With the coöperation of the American Telephone and Telegraph Company and its associated companies, the Western Electric Company, the New York Telephone and Telegraph Company and the Bell Telephone Laboratories, Inc., the communications option of the Electrical Engineering Department has now been one full year in operation and the evidence indicates a real success. The coöperation by the companies, their officers and employees has been cordial and satisfactory. The students express satisfaction, and it is believed that a sound situation has been developed. The coöperation with the General Electric Company, Stone & Webster, Inc., Boston Edison Electric Illuminating Company, and the Boston Elevated Railway has continued. The time in which the students enter the coöperation in all these channels has been changed from the middle to the end of the second year, and it is believed that this modification will be an improvement.

It is desirable to arrange a railroad transportation and motive power coöperation. This presents some difficulties because it belongs more definitely in the Mechanical Engineering field than in the Electrical Engineering field. However, it is believed that such a railroad coöperation can be brought to pass jointly by the Mechanical Engineering and Electrical Engineering Departments, the negotiations for which were tentatively approved by the Faculty two or three years ago.

A notably interesting instance of industrial coöperation was established two years ago when the Department undertook to give graduate instruction to engineers in the employ of the General Electric Company with the understanding that these engineers should be given instruction for three

academic terms at Lynn by members of the Institute's staff who would go to Lynn for the purpose, followed by a leave of absence for the engineers to enable them to spend an academic term at the Institute. It was anticipated that competent young employees approved by the Company, who are adequately prepared to do graduate study, should be able to carry through the study and research needful for securing a Master of Science degree in Electrical Engineering and do the work creditably. The first group of young men under this arrangement received their Master's degree last June. There were six of them and a seventh will complete his thesis and other work in the autumn. This group of students has proved to be as satisfactory as any group of equal number of candidates for Master's degrees who were matriculated with us last year. The students expressed satisfaction in the work and members of the group who will come to us during the second term of the next academic year are making good progress. A third group is being established. It is understood that the officers of the Lynn works who originally requested that we take this matter up, continue to look upon the project with favor.

The research on the Influence of Quality and Quantity of Illumination on Industrial Efficiency which was financed through the National Research Council has been completed, and a report will be written in the autumn. A great deal of interesting and valuable material has been secured by the experimental investigation as well as by the study and coördination of literature.

The mechanical and the thermal integrating machines for quickly solving some of the differential equations in electricity and magnetism which have been difficult to solve by the ordinary methods have been completed and publications relating to them are under preparation.

A calculating table for investigating the characteristics of power transmission and distribution networks with both alternating and direct-current conditions, permanent and transient, has been designed and is under construction with the coöperation of the General Electric Company.

The short-wave radio research carried on in coöperation

with Colonel Green's station at South Dartmouth has continued. Data have been secured on the variation of "cut-off" wave length as a function of the seasons and the time of day, for the purpose of examining the propriety of the Heaviside Layer Theory. A study of antennae models is under way for the purpose of determining space-radiation characteristics. A new frequency standard device has been developed from which it is practicable to secure four thousand useful frequencies from a single standard source and which renders the verification of radio frequencies a rapid and accurate process over a wide range.

A new research on radio communication between points of power distribution systems has been undertaken, its finances provided by the Edison Electric Illuminating Company of Boston.

The statistical study of repeated dielectric breakdowns has been extended to strips of cellulose acetate as a homogeneous material, and the results from this series will be applied to a critical examination of the Wagner or thermal theory of dielectric failure.

The National Electric Light Association investigation of the deterioration by time and temperature of insulating paper used for insulating high voltage cables is in its fifth year. A special investigation is under way to determine the effect of absorbed moisture.

A number of lesser researches have been carried on and some are noted in the publications listed. Others have been completed and are being prepared for publication. I will particularly mention the theses of Mr. E. R. Wayne, the first Swope Fellow in Electrical Engineering of the Class of 1926, and Mr. Joel Tompkins, second Swope Fellow in Electrical Engineering of the same class. Each of these men received the Master of Science degree last June. Their theses were respectively on the subjects of "Study Skin Effect in Conductors in a Slot," and "The Effect of Location of Neutral Grounding Points on Single Phase Short-Circuit Currents and Voltages to Ground." Other theses on synchronous machinery and giving results of applications of the integrating machines are being put in form for publication.

An electrical accounting machine has been worked out by Assistant Professor Woodruff and Mr. Edward Rogal, one of our alumni.

Specialists that have been employed as lecturers during the year are as follows:

The lectures by Dr. T. C. Fry which were given during the second term on the subject of the Theory of Probabilities and Its Applications, are referred to above.

The names of the Colloquium leaders and their subjects are as follows:

Dr. S. Timoshenko, The Mechanical Design of Rotating Electrical Machinery, Westinghouse Electric and Manufacturing Company.

Mr. Charles L. Fortescue, Power Transmission, Westinghouse Electric and Manufacturing Company.

Messrs. F. T. Hague and C. A. Weber, Rotating Electrical Machinery, Westinghouse Electric and Manufacturing Company.

Messrs. R. V. L. Hartley and J. W. Horton ('14), Frequency Relationships in Electrical Communications, Bell Telephone Laboratories.

Messrs. P. L. Alger ('15) and G. H. Rockwood ('26), Recent Developments in Computing Losses in Electrical Machinery, General Electric Company, and Massachusetts Institute of Technology.

Mr. L. W. McKeehan, Atomic Magnetostriction, Bell Telephone Laboratories.

Miss Edith Clarke ('19) and Mr. C. A. Nickle, Developments in Regulators to Improve Stability in Parallel Running and in Power Transmission, General Electric Company.

Messrs. L. Espenschied and Ralph Bown, Long-Distance Radiotelephony as a Link in Wire Systems, American Telephone and Telegraph Company.

Messrs. E. E. Johnson and R. H. Park ('23), Study of Magnetic Fields and the Predetermination of Magnetic Flux Densities in Air Gaps, General Electric Company.

Mr. R. E. Doherty of the General Electric Company and Mr. John Mills of the Bell Telephone Laboratories, Inc., each addressed the Department staff on the principles of teaching to be utilized in electrical engineering. They presented data of relative success in their earlier years of employment which have been characteristic of graduates of the various engineering schools of the country.

A number of rearrangements of space are quite important to the Department, and certain additional laboratory facilities are needed, including facilities for illumination studies and for more intensively studying transient electrical and magnetic reactions in electrical machinery.

The development of the Honor Group work and sectionalizing of classes for ability leads very definitely to the need of a reading room associated with the Faculty office suite in order to bring a more intimate contact between the Faculty and the most capable undergraduate students, corresponding to the general arrangements that we have been bringing to pass gradually in association with our laboratories for graduate work in Electrical Engineering.

Naval Architecture and Marine Engineering. The undergraduate work of the Department followed the normal course in both options. The number of students is still small, due to the serious depression of the shipping industry throughout the whole world. This depression is, however, apparently passing, and the numbers have already improved somewhat, which improvement we hope will continue. The number in Naval Construction is also small, but the students are of the usual high grade which we are accustomed to find in the Annapolis men. The Lloyd's Scholarship which had been withheld the previous year was awarded to the best applicant of the year, who justified his selection by obtaining an "H" in every one of his subjects in the June examination.

In the field of research, Professor Hovgaard applied the results of his investigations into the "Deformation of Pipes" to the more complicated problem of the "Deformation and Stress Distribution of Airships," and a candidate for the Master's degree has done some good original mathematical investigation into the "Vibration of Engine Parts," with special reference to Marine Diesel Machinery.

The Museum has been favored with a very valuable contribution in the shape of a full model of a modern fruit steamer which has been presented by Mr. D'Antoni of New Orleans, Louisiana. During the summer the Director of the Museum visited the Pepysian Library at Magdalene College,

Cambridge, the Science Museum at South Kensington and the Historical Museum at the Royal Naval College, Greenwich, and consulted with the officers in charge of these collections on various points regarding the prints in the Clark Collection and history of older vessels generally.

Studies are being made of model tanks to secure the data necessary in designing this equipment for the Department. It is hoped that the design and construction may be undertaken during the coming year.

Architecture. The great accomplishment of the year has been the Faculty's approval of the five-year course leading to the degree of Bachelor in Architecture, to replace the present four-year course leading to the degree of Bachelor of Science in Architecture. In the entering class are the first students to enroll for this course.

It seems proper at this time to suggest another development in the Department, namely, a course in Architectural Administration. At present the work of the architect is divided under three main headings — that of the designer, that of the architectural engineer, and that of the executive or architectural administrator. The latter is as necessary in the present world as is the engineering administrator, and while his education should properly be based on a well rounded preparation in the essentials of an architectural education, his later years of study might very properly be devoted to topics particularly related to finance, estimating and organization, all essentials in present day architectural practice.

The year has seen one other change that is of interest to the graduates of the Department, namely, the withdrawal of the architectural bulletin from the *Technology Review*, and its publication semi-annually as a separate pamphlet. It will contain a selection of the student work, together with such important items of news as may appeal to the general alumni body. It is believed that this change will more nearly meet the needs of the Department as well as the interests of the alumni.

Last year's report on the success of the new course in

Color Theory is confirmed by another year's experience, and the prospects of continued success have been improved by the establishment of what might be called a museum for the Color material that we have been accumulating for many years.

The Department and the Institute are both to be congratulated on an offer received from Mr. Thomas Adams, our lecturer on Town Planning, to publish under the auspices of the Institute a large amount of valuable material on town planning that he has been accumulating for several years.

The exceptional resources of the Department in fine architectural drawings have been immensely increased in value through the kindness of Mrs. Bertram G. Goodhue, who has given the Department, as guardian, the majority of her husband's original drawings and sketches. At the same time mention should be made of original drawings by Richard Morris Hunt, a gift of his son Richard H. Hunt.

A portrait of Professor Chandler has come to the Department as a gift from those who were students in Architecture during Professor Chandler's administration. An effort is now under way to establish a scholarship fund in Professor Chandler's name from which full tuition for one student may be paid annually.

There could be no greater help toward improving the general standard of our work than an organized effort on the part of its alumni in different localities to select and encourage promising students in Architecture. A conspicuous example of such assistance is that rendered for years past by the alumni in Cincinnati.

The curriculum of Course IV-A was revised during the past year. The most important changes were the increase in time devoted to the study of materials and in the earlier commencement of the courses in Applied Mechanics. The latter now begin with the first term of the second year and prepare the student to start his work in structural analysis and design with the first term of the third year.

The total registration during the year was the largest in the history of the course. Indications point to a slight decrease in numbers for 1927–28 in part due to two obvious

causes. First the decrease in building operations with a consequent decrease in the demand for graduates; second the establishment of the course in Building Construction. In previous years many of the students preparing themselves for work in Contracting have entered IV-A. Some of these students are now diverted to XVII.

Attention was called in last year's report to the success of our students in the competition for the Paris Prize, and it is a pleasure to announce that this initial success has been carried further during the past year by the winning of this Prize, for the first time in the history of the Department, by one of our students, Donald S. Nelson, who is thus entitled to two and one-half years' study abroad.

A report of the year's activities should not close without a word of appreciation to the Visiting Committee and the coöperating advisory architects who together with the members of Departments in Cambridge have encouraged and helped the students of this Department.

Economics and Course in Engineering Administration. The instruction in Business Management given to the students in the fourth year has been improved by dividing the class into sections. This made it possible to utilize to some degree the case method for discussion. It is planned to continue this method during the coming year, and we believe that a definite step will be made in advance through this opportunity.

A research on the organization and management of small businesses was carried on last year by the class in Business Management.

Professor Fernstrom collected material on a storage and handling problem in factories and during the winter organized this data and presented it in report form to the Newport News Shipbuilding and Dry Dock Company.

Professor Schell and his staff collected a very considerable amount of first-hand information from over one hundred small firms. The present accumulation of material seems to be sufficient to enable those engaged in the study to make a final report. Further investigation, however, appears to be

desirable with respect to special industries such as metal working, textiles and woodworking, and it is hoped during the present year to devote considerable attention to the small metal working industries.

Professor Tucker is continuing his investigation and research on home financing.

Professor Dewey, during a part of the year, has made studies in certain phases of the Economic History of Massachusetts during the Colonial period.

A large number of men not on the Institute Staff gave lectures to the various classes.

The following table gives the number in each subject:

Business Management	21
Corporate Finance and Investments	9
Industrial Relations	11
Total	41

The Department is somewhat handicapped for lack of recitation and lecture rooms for students taking accounting, cost accounting and statistics owing to the fact that space has temporarily been assigned for the course in Building Construction. Arrangements have been made, however, whereby the Department will be properly provided with rooms for the coming year.

Biology and Public Health. A laboratory course in organic chemistry has been added, thus supplementing the lecture course, and providing better preparation for biochemistry. The courses in general biology and zoölogy have been revised, better coördinated and somewhat extended. Courses in biochemistry, industrial microbiology, and technology of foods have been improved and increased in scope by reorganization of the laboratory work. The important courses in public health laboratory methods and infection and immunity have had a larger amount of time assigned with excellent results. The work in industrial hygiene has been increased. New Graduate courses have been developed in advanced parasitology, pathology, economic aspects of entomology and planktonology. The courses

in advanced bacteriology, microbiology, and biochemistry have been enlarged in scope. The most notable advance in graduate work has been the establishment of a weekly biological seminar attended by all staff members and graduate students, at which thoroughly prepared digests on assigned topics are critically discussed.

It is recommended and already planned to increase the work in food bacteriology and also to go thoroughly into the microbiology of textile fibers and fabrics.

The following investigations have been completed during the year:

The National Government and Public Health. (A thesis for degree of Dr. P. H.) A study of the Residual Nitrogen as shown by the Nitrogen Partition of the Renal Excretion (a thesis for Ph.D. degree). A New Fermentation Yielding Butyl and Isopropyl Alcohols. (A thesis for Ph.D degree.) An Introduction to the History of Climate and Tuberculosis. (A thesis for C. P. H.)

The Bacteriology of Rubber Latex. (Thesis for S. M. degree.) Studies on the Disinfectant Action of Soaps.

Investigation of the Electropure Process of Milk Treatment.

The Effect of Polarized Light on Biochemical Reactions.

A Comprehensive Plan for Health Training in the Public Schools of Cleveland.

A Tuberculosis Survey of Cambridge.

The Mycology and Bacteriology of Mildew of Cotton Fabrics.

The Microbiology and Biochemistry of Cordage Fibers.

The Disinfectant Action of Colloidal Iodine.

The Use of Blood-Agar in Sanitary Control of Milk Supplies.

A Study of the Pollution of Streams in Massachusetts.

Also several minor investigations of technical interest are under way.

The applications of Biology are of the utmost importance. The Department should be provided with adequate quarters at once; otherwise its usefulness will be greatly handicapped.

Fuel and Gas Engineering. Eight graduate students carried on regular work in this course during the past year — the second of its operation. Many changes in subject matter of individual courses and methods of instruction, indicated desirable by the experience of the first year, were made.

Field work, which is an essential part of the training in Fuel and Gas Engineering, was inaugurated. Stations were established at the plants of the Cambridge Gas Light Company, the Iroquois Gas Company, the Lackawanna Works of the Bethlehem Steel Company and the Bayonne Refinery of the Tide Water Oil Company — the latter two in coöperation with the School of Chemical Engineering Practice.

A fifth station has since been added — the Edgar Station of the Edison Electric Illuminating Company of Boston. This is one of the most modern and efficient of central stations and affords a most excellent opportunity for students to become familiar with the advanced equipment in the power generation field.

Experimental work on cokes produced from coal from the same mine carbonized in three different types of retort was carried on along three lines: (*a*) determining the suitability of these cokes for domestic use; (*b*) comparison of these cokes as to suitability for use in water gas generators; (*c*) from the standpoint of heat losses in air blow and from the standpoint of capacity for reducing steam. The results of this work were brought together in the form of two reports which were presented before the Technical Section of the American Gas Association.

Work has been completed on the rates of flame propagation in mixtures of hydrogen and carbon monoxide with oxygen and air. A further study of flame propagation in these gases with water vapor present is now being carried on. The apparatus used for this type of research has been greatly improved upon. The results have great practical application in that a knowledge of the thermal reactions of gases is fundamental to the study of ideal gas mixtures. The work has been initiated by the American Gas Association, and we have offered to coöperate in any way possible.

One reason for the delayed progress in the design of lime kilns has been the lack of accurate data on the rate at which decomposition takes place in stones of various sizes and types. Determinations of heat conductivity of some limestones have been completed. The heat conductivity of lime prepared from typical limestones is now being investigated

in coöperation with the Research Laboratory of Applied Chemistry.

Work paralleling to a certain extent investigations now under way on German and British coals is being carried out on ten American coals of various types, ranging from lignite to anthracite. The coking and swelling constituents of three of these coals have been determined by the Fischer method and it is hoped to continue this work this year.

The effect of preheated air on the coking and swelling constituents of Westmoreland coal has been studied with the viewpoint of learning more about the effect of preheated air, when used with stokers.

The wide use of domestic oil burners has prompted an investigation to determine the optimum operating conditions for such burners in hot water heating boilers. This work has been completed and is about ready for publication.

Aside from the pure science value of all investigations of catalytic phenomena, the importance of methods of synthesizing hydrocarbons from gases such as commercial water gas is bound to increase. The catalytic synthesis of hydrocarbons from hydrogen and carbon monoxide has been investigated in two theses with favorable results. This work is to be continued.

The staff has been in active coöperation with various committees of the American Gas Association. Among other activities this year a six weeks test of the Glover West Retorts at Stamford, Connecticut, was conducted. The results of this are published in the 1927 Transactions of the American Gas Association.

In coöperation with the Research Laboratory of Applied Chemistry, the production of synthetic fuels at high pressures and temperatures has been in progress. Active investigations leading to the development of suitable organic boiler fluids have also been carried on under similar circumstances. Other subjects on which work has been done are the following:

Methods for distilling coal tar, determination of naphthalene in scrubbing oil, effect of flue gas on radiation from powdered coal flames, effect of recirculated flue gas on

flames, effect of low temperature coke on production of water gas.

In addition to other less important problems, it is planned to actively pursue the following lines of work the coming year:

Radiation from luminous and non-luminous flames, constitution of coals, synthesis of hydrocarbons, hydrogenation of coal to liquid fuels, organic boiler fluids, flame propagation in gaseous mixtures, radiation from gases.

The work on these problems will be not only from the purely scientific aspect, but also with a viewpoint to the application of the results to industrial processes.

The following lectures were delivered to the students and others interested by men of prominence in special fields of fuel utilization:

"Low Pressure Gas Distribution," by H. S. Carter of the Malden and Melrose Gas Light Company.

"Coke Ovens," by D. W. Wilson of the Wilputte Coke Oven Corporation.

"The Purification of Gas," by Dr. F. W. Sperr, Jr., of the Koppers Company.

"The Dry Quenching of Coke and the Treatment of By-Products," by A. M. Beebee of the Rochester Gas & Electric Corporation.

"High Pressure Gas Distribution," by A. W. Grant, Jr., of the Koppers Company.

General Georges Patart, Inspector-General of Explosives for France, spoke to a large audience on November 29, 1926, on "Production of Methanol and Liquid Fels from Water Gas."

As a part of the field work, Mr. E. A. Norris, of the Stone & Webster Corporation, lectured on the "Design of the Modern Central Station."

It is intended to make certain of these lectures a regular part of the course. In addition, arrangements are being made for other special lectures this year on various aspects of fuel utilization and power generation.

The plans for effective extension of work in Fuel and Gas Engineering call for a separate building suitably equipped, as the present activities are greatly hampered by lack of space.

Chemical Engineering. The most important modifications of instructional work have been the development in coöperation with the War Department of courses of instruction especially designed to meet the needs of Chemical Warfare officers assigned for study at the Institute and the establishment in connection with Fuel and Gas Engineering of an additional station of the Practice School at the Bayonne Refinery of the Tidewater Oil Company. The program of supervised study referred to in the last report has been expanded and it is planned to incorporate this permanently in the curriculum. The most serious instructional deficiency in applied chemistry is in the field of colloidal and amorphous materials, but the Department hopes to be able to improve this situation during the coming year.

The Department completed and published the results of important investigations on the conduction of heat between cylinders and air outside them under conditions of forced convection and on the graphical design of condensers for saturated vapors. It initiated researches on the absorption and recovery of vapors from complex mixtures of vapors and gases and on the rectification of the products and has already obtained results of value. The importance of this field is apparent when one realizes that over ten per cent of all the gasoline of the country is recovered by methods of this general type. Studies of the mechanism of condensation of a vapor mixed with permanent gas and of the drying of porous solids were also started. The most important developments, however, have been the securing of more effective coöperation with industry. Thus, during the year an investigation of the mechanism of adhesion was undertaken in coöperation with the Dennison Manufacturing Company and through the courtesy of a friend of the Department it was possible to conduct a full scale test of a commercially operating crude oil rectifying column and still. The latter type of work is peculiarly valuable, for only by collecting and analyzing data of this sort can engineers secure the constants and coefficients necessary for the dependable design of commercial apparatus of the highest efficiency. In connection with its work with the Massachusetts Laundryowners Associa-

tion, the Department also hopes to start during the coming year a study of the underlying mechanism of detergency.

It is difficult to state more emphatically than in preceding years the Department's need for additional laboratory space and facilities for its research program. No expansion along such lines should be sought until increased facilities are available. The seriousness of this need, however, should not blind us to the desirability of again having available for teaching the floor space sacrificed some years ago to research work, particularly drawing rooms and engineering laboratory space for undergraduate instruction. Such facilities would greatly increase the efficiency of teaching.

Chemistry. The most important instructional problem of the Department, that of the First Year course, has received further study throughout the year, and definite gains are noted resulting from the segregation in special sections of students possessing clear records. The results are distinctly worth continuing in spite of certain technical difficulties connected with the large number of students relative to the space available, both for recitations and laboratory work.

The staff members of the Inorganic Chemical division have shown an increasing interest in research which it is desirable to encourage. A number of senior students chose their thesis subject in this field and the problem of suitable space is again a difficulty which is increasingly embarrassing to the instructors whose offices have been converted into student laboratories. The time is not far distant when it will be wise to consider the provision of space to be devoted exclusively to inorganic research.

The staff of the division of Analytical Chemistry at the end of this year suffers the loss of Professor R. S. Williams, who has been transferred to the Department of Mining and Metallurgy.

The Analytical division has developed its teaching further this year in the direction of making its courses increasingly educative rather than merely informative. The development of microchemical analysis as a new course

has made distinct progress as well as the courses in electrometric and electrolytic methods. It is of interest to note also that an increasing number of graduate students from the departments of Mechanical Engineering and Aeronautical Engineering come to the division for special work.

The division of Organic Chemistry has further developed its courses for United States army officers in the direction of meeting the requirements of this important student group. The task of providing for this additional group makes the matter of space a difficult problem which will have to be faced if proper teaching efficiency is to be maintained. Professor Morton has introduced an important course in the application of physical chemistry to the solutions of problems in organic chemistry. This course has been of value on account of the fact that a number of researches in organic chemistry are now in progress in which the methods of physical chemistry are being used.

The undergraduate courses in theoretical chemistry have benefited by the coöperation of the staff of the Research Laboratory of Physical Chemistry. The plan will be continued with a view to establishing a more intimate connection between the undergraduate and graduate phases of the educational program. A course in radiation chemistry formerly given as an elective has now been made a required subject in the fourth year and serves to round out courses now offered in physical chemistry.

The graduate students in the Department numbered forty-three, of which twenty-six were candidates for the Doctor of Philosophy degree. The investigation programs of both the Research Laboratory of Organic Chemistry and the Research Laboratory of Physical Chemistry have been satisfying in the progress recorded. Indeed a new field of Organic Chemistry is developing, having as an objective the quantitative determination and correlation of our knowledge of the effect of structure on chemical behavior.

The following investigations have been conducted by the Department:

The Chemical Reactivity of Atoms and Groups in Organic Compounds.

The Liability of Bonds Between Carbon Atoms as Influenced by Heat and Catalytic Agents.

Some New Reactions of Unsaturated Hydrocarbons.

A Study of New Industrial Products Prepared from Petroleum.

Continuation of Studies in Qualitative Methods for the Identification of Organic Compounds.

Studies of the Derivatives of Urea, Guanidine and Related Subjects.

Condensations under the Influence of Sodium.

The Effect of Applied Potential on the Diaphragm in Electro-osmosis.

Studies on the Energy Expended in Muscular Exercise.

Studies on the Preparation of the Hydrazides, Azides, Urethanes and Amines of Certain Hydrocarbon Radicals.

The Unsaturated Compounds of Silicon.

The Electro-Deposition of Chromium.

Study of the Acid, Base and Salt Systems in Non-Aqueous Solvents.

A New Principle Applied to Methods of Combustion.

Study of the Pressure-Volume-Temperature Relations of Liquid and Gaseous Systems through Wide Temperature and Pressure Ranges.

The Study of the Absolute Temperature Scale.

Measurements of Latent and Specific Heats at Low Temperatures.

Measurements of the Dielectric Constants of Gases.

The Study of the Properties of Steam for the American Society of Mechanical Engineers.

Studies of the Absorption Spectra of Gases at High Pressures and Low Temperatures.

Study by Phase Rule Methods of Compounds between Hydrogen and various metals.

Measurement of the Chemical Potential of Ammonia in a Mixture of Gases.

A Study of the Properties of Strong Electrolyte Solutions by Investigations of the Potentials of Concentration Cells, and the Potentials at the Junctions of Salt Solutions and the Freezing Points of Electrolyte Solutions.

A Study of Normal Electrode Potentials.

A Study of the Freezing Point of Organic Compounds.

A Careful Repetition of the Joule Experiment.

Some of the longer investigations in Physical Chemistry will be concluded in the near future, particularly the investigation of the properties of steam which was started four

years ago. The thermometric problems in the active charge of Professor Beattie are now about ready to be undertaken after preparations begun some years ago. This work is of the utmost fundamental importance alike for pure science and engineering.

Few special lecturers spoke exclusively to the Department of Chemistry because of the fact that so many of the lectures in Physics given by men of international reputation were of such interest to the Department that they were attended by the staff and graduate students of this Department. Lecturers to the Department of Chemistry were Professor Richard C. Tolman, California Institute of Technology, in December, 1926; Professor Edouard Urbain of Paris in April, 1927, and Professor H. R. Kruyt of Utrecht, Holland, in May, 1927.

The Department of Chemistry has suffered a great loss through the death of two of the most loyal members of its staff, Professor F. Jewett Moore and Professor Henry P. Talbot. As a memorial to Professor Moore, his widow has made a gift of $25,000 to be used under the direction of a Committee from the staff for the purpose of making the teaching of Chemistry more interesting and attractive. Dean Talbot left to the Institute for the use of the Department of Chemistry his library of chemical books. This included several sets of chemical journals and more than two hundred volumes of chemical books, miscellaneous in character.

Physics. Extensive changes have been made in the texts used for teaching during the year with marked increase in the efficiency of instruction, particularly with larger classes. Two courses in meteorology for a group of Naval students have been introduced. Changes in the general schedule of the course have given more opportunity for students to pursue particular lines of work in physics in which they might be interested. The number of students who have enrolled in this course for the second year is thirteen as compared with seven in the second year class for the preceding year.

A very material increase has been made in the equip-

ment of the Spectroscopic Laboratory, and a Coolidge cathode ray tube has been supplied to the X-ray Laboratory. Considerable progress has been made in the work of duplication of the equipment in the first and second year physical laboratories so that instruction in lecture, laboratory, and classroom work may be kept more nearly in step.

The following investigations are under way but not completed:

Further development of automatic recording spectrophotometer.

Study of the daily variations in intensity of the ultra-violet rays in sunlight.

Radiographic examination of steel spiders for centrifugal drive.

Study of electrolytic and chemical methods of preventing corrosion of condenser tubes.

Determination of the physical properties of some new alloy steels at high temperatures.

Determination of the thermal conductivity of light alloys and new alloy steels at high temperatures.

Further study of absorption spectra of organic compounds.

Photoelastic investigations of stresses in boiler shells.

Investigation of momentary stresses in rapidly moving parts of internal combustion engines.

Further investigation of the physical properties of high alumina refractories.

Determination of rate of passage of heat through cylindrical metal walls coated with resistant materials.

Development of apparatus for the production of doubly ionized lithium.

Study of fluorescent effects developed by the discharge of the Coolidge cathode ray tube.

The Department has had for visiting lecturers, giving longer or shorter courses during the past year, the following eminent scientists:

Prof. E. Schroedinger of Zurich and Leipzig.
Prof. A. Joffe of the Polytechnical Institute at Leningrad.
Prof. Victor Henri of Zurich.
Dr. C. G. Abbot of the Smithsonian Institution.
Dr. Arthur Haas of Vienna.

Professors Schroedinger and Joffe are two of the outstanding figures in the world of mathematical and experimental physics.

The members of the staff have published a number of papers during the year. A study of the titles of these papers will indicate the extent of the activity of the staff, and would seem to be ample justification for the expenditures which have been made in connection with our initial efforts to build up a research staff in physics. The publications are divided about equally, half being upon theoretical subjects and half on matters relating to industrial physics.

During the past year considerable space has been remodeled and given over to research and advanced work in Physics, but this can only be considered as temporary and is but a small part of the space needed to develop physics to the extent urgently called for in both pure and applied science.

Building Construction. The Course in Building Construction was established in the fall of 1926, and the first class consisting of seventeen men was organized in February, 1927. The work started with the second year problem which is wood construction as represented by the details of a dwelling. In order to complete this problem, the session was extended into the summer term and ended July ninth.

The fall term of 1927 finds fourteen students in the third year, twenty-seven in the second year, and seven taking work of both years, making forty-eight in all. In addition there are twenty registered in the freshman class.

Judging from experience thus far it is reasonable to assume that there will be close to one hundred men in this course in the fall of 1928.

Division of Industrial Coöperation and Research. The number of technical questions and problems for research has shown no particular increase. Among the problems which are under investigation at present are (1) an investigation of the heating capacity of copper radiators; (2) an extensive study of the physical properties of alloy steels at high temperatures; (3) a series of investigations of the mechanical and thermal properties of some new building materials; (4) a study of the rate of heat transfer through con-

denser tubes under various service conditions; (5) the study and development of some super-refractories; (6) an investigation of the electro-chemicals available for the protection of condenser tubes from corrosion; (7) an investigation of the merits of the new process of manufacturing woolen fabrics; (8) an exhautive study of the distribution of work in the regular operation of American typewriting machines, and many others.

A systematic effort is being made to encourage industrial companies to bring to the Division individual problems even though their program for research work is not such as to warrant a yearly contract. These individual researches are undertaken at cost plus an overhead charge varying according to the nature of the work.

Division of Industrial and Municipal Research. This Division was established in November, 1926 for the purpose of providing communities with competent impartial advisory service regarding their industrial and other problems involving the interests of the community as a whole, and to train and develop men for work in this field.

The field in which the Division operates can appropriately be designated as "community planning" rather than "city planning" in the ordinary connotation of the latter term. In other words it considers the industrial and other problems of the community as a whole rather than the individual problems of particular industries. Thus, the work of the Division is not concerned with the actual preparation of a city plan but with the diagnosis and interpretation of conditions that would indicate the need for a plan of this kind. Operating under this policy the work done will in no way encroach upon those fields now served adequately by the consulting or industrial engineers, nor should it be confused with those services supplied by engineering organizations and consultants engaged in city planning or related work.

In the event that the Division is requested to serve communities in which the outstanding problems relate to such matters as zoning and traffic regulation, it is proposed,

in general, to undertake such work under an arrangement whereby the services of a thoroughly competent consultant in these fields would be obtained to provide the necessary specialized service and advice. A zoning and limited traffic study has been made for the city of Meriden, Connecticut, under an arrangement of this kind. In furnishing service to communities where the work demands specializing service that the Division with its limited staff might not be in a position to furnish, the policy is followed of calling in outside experts to meet this need. It is perhaps worth while noting that a satisfactory working arrangement designed to provide service of this kind has been effected between the Division and a prominent firm of engineering consultants in Boston, at the request of the latter.

A basic idea in establishing the Division was that all service furnished should be paid for by the community served. Thus when the Division contracts to furnish any definite service the charge made for such service is on the basis of actual cost plus a moderate percentage to include overhead expense and service fee, all subject to a stipulated maximum price. It was found desirable on account of local conditions to modify slightly the basis of payment on the two contract jobs undertaken to date, namely an industrial survey of Metropolitan Providence, and a zoning and traffic survey of Meriden, Connecticut. It has been recognized that the work of the Division would involve investing considerable time and effort producing no financial return. Where such work involves conference or attendance at meetings out of town, a general policy embodying the following features has been followed. Where a conference with the Director is requested for the purpose of considering the matter of undertaking an industrial survey or other work, no charge is made for service performed, but the parties served are requested to meet travel or other expense incurred. This policy in general has met with a ready response from parties concerned.

Review of Work Done. It is gratifying to note that, following the establishment of the Division and the publication of a statement of the service it is designed to pro-

vide, there was an almost immediate display of interest in the work on the part of Chambers of Commerce, educational institutions and various organizations engaged in studying community problems. Twenty-three New England communities and four outside of New England have taken up with the Division the matter of obtaining service to meet their local needs. In the case of twelve communities in New England, special conferences have been held at which the purpose and scope of the work of the Division was explained, and six of these have requested cost estimates of work contemplated. Other effort along this line has included a considerable amount of correspondence and numerous office conferences.

Those communities which after conference have indicated their intention to proceed with some sort of a community survey and which have requested cost estimates of the work contemplated include: Bangor, Maine; Worcester and Lowell, Massachusetts; New Haven, Bridgeport, Ansonia, Derby, Seymour and Shelton, Connecticut; Warwick, Rhode Island. In each of these the primary interest was in some sort of an industrial survey comparable to that being made for the Metropolitan area of Providence. The cities of Bangor, Maine and Ansonia, Derby, Seymour and Shelton, Connecticut, and Warwick, Rhode Island, contemplate including zoning in the study of industrial conditions. Other communities which have displayed an interest in the matter of an industrial survey but which have not taken any definite action towards proceeding with such work are: Chicopee, Holyoke, Pittsfield and Greenfield in Massachusetts; and Laconia, New Hampshire.

It is difficult to measure the results of this educational work of the Division. With the exception of Meriden and Providence none of the communities which have opened negotiations with the Division for service have yet consummated these by entering into a definite contract. This would indicate that a considerable amount of painstaking effort along educational lines will be necessary in order to interpret to communities the significance and value of the service that the Division is in a position to furnish.

The New England Council has, since the establishment of the Division, displayed an active interest in the work. Also the United States Department of Commerce and the United States Chamber of Commerce have actively coöperated in furthering the work of the Providence Industrial Survey.

Industrial Survey of Metropolitan Providence. The industrial survey of Metropolitan Providence comprised the following features:

A descriptive inventory of the industrial and business resources of the community together with an analysis and interpretation of the data thus obtained with respect to the local situation. This work constitutes two interrelated but distinct problems. The first, a study of industrial conditions, that is, those relating to production, and the second a study of wholesale and retail business establishments which constitutes the problem of distribution.

A brief review of those elements in community life such as transportation, housing, banking and other facilities and certain activities carried on by local government which relate to, or influence the industrial and business welfare of the community. This work is nearly completed.

Zoning and Traffic Survey of Meriden. The Meriden work included the preparation of a zoning ordinance, a major street plan, and the formulation of certain regulations affecting the control and development of land. In line with the desires of the Zoning Commission it was agreed that the work should be limited to the preparation of a zoning ordinance and necessary accompanying maps, and should not include any elaborate report.

The preparation of the zoning ordinance and accompanying maps was carried on under the direct supervision of Mr. Arthur Comey, of Cambridge, a man of recognized professional standing in that field of work. The Meriden zoning ordinance was adopted at the October meeting of the City Council. The major street plan and other features of the work are likewise completed and will be submitted to the Zoning Commission of Meriden at its next meeting. It is

believed that the service furnished to Meriden is equal to any similar work done for other communities. It is perhaps worth noting that this has been accomplished at a total cost of $5,000.

One of the difficulties in getting communities to take needed action in the preparation of suitable zoning ordinances is the matter of expense involved. The work in Meriden demonstrates that a zoning ordinance and street plan can be prepared at comparatively small expense if certain fundamental principles are followed in its direction. It is believed that the Division is in a position to provide similar much needed service to other New England communities.

Geology. No essential changes have been made in the teaching of geology.

The number of chemists who are taking the short course in mineralogy in the second term is steadily increasing. There are also an increasing number of chemists who take the course in microscopic crystallography.

A few students attended the course on microscopic investigations of ceramic products given by Mr. Buerger and which was preceded by a general course in optical crystallography.

A new course entitled "Chemistry Applied to Ore Deposition" was given by Dr. H. C. Boydell to fourth year and advanced students. This is intended as a modification of the course in Thermochemistry and Chemical Equilibrium with principles specially applicable to ore deposits. It proved an excellent course and will be continued during the present academic year for advanced students only.

A course on evolution was planned for undergraduate students to be given in the second term of the present academic year. The subject of micropaleontology, which is of great importance in the study of petroleum deposits, has proved interesting to many students and will be continued under the guidance of Mr. J. A. Cushman, special lecturer.

Doctor Terzaghi, of the Department of Civil Engineering, who is eminently qualified for teaching engineering

geology, has taken over a part of this subject and teaches the students in Civil Engineering.

Professor Lindgren devoted a large part of his spare time to the complete revision of his textbook on "Mineral Deposits." Professor Shimer continued the preparation of his book on evolution, now nearly ready. Professor Gillson conducted a number of investigations, particularly of deposits of talc, and studied miscellaneous problems of petrology and mineralogy. Doctor Newhouse investigated the system iron sulphide-nickel sulphide and prepared a paper on the succession of minerals in ores and on the criteria of replacement. Mr. Buerger investigated the deformation of sulphides under pressure. As part of his thesis, Dr. W. C. Morse prepared a monograph on the Carboniferous Formations of Mississippi, and Mr. Gunning investigated the ores of the Lardeau lead silver district of British Columbia. Several investigations were conducted by Dr. Boydell as will be seen under the list of papers.

Three lectures on "Determinations of Gravity Applied to Prospecting for Mineral Deposits" were given by Dr. William Bowie of the Division of Geodesy, United States Coast and Geodetic Survey.

Two lectures on "Electrical Methods of Prospecting" were given by Mr. H. T. F. Lundberg of the Swedish-American Prospecting Company.

As far as research and advanced students are concerned the Department had a very successful year. There were nine graduate students and three special students registered.

In regard to undergraduate students we were not so fortunate. The total number registered was four. Practically no freshmen register in this course, though a number come in during junior or sophomore years from other departments. It seems impossible to impress upon the young men who are at the Institute the important fact that geology and economic geology offer attractive careers. We have no trouble to place the undergraduate students who receive the Bachelor of Science degree here. It seems that the majority of students come here with the intention of pursuing engineering study, and the idea of geology being an engineering

subject of great importance is difficult to implant in their minds. In this respect we are quite differently situated from the universities who always receive a number of young men who intend to devote themselves to the sciences and their application. Lecturing to the freshmen seems to produce no effect.

The reputation of the Department, however, as a graduate school seems well established.

The Department has sufficient laboratories. There is need, however, of a number of new petrographic microscopes and similar optical instruments. In most cases they have to be purchased from current appropriations which are inadequate. As each of these microscopes costs about $300, a small equipment fund, say of $1,000, would be most welcome. The Museum of Economic Geology, which contains many extraordinarily fine ore specimens, is inadequately sheltered in antiquated cases, and new dustproof cases should be provided for this unique collection.

The money available for the purchase of books and periodicals is insufficient, and it is becoming increasingly difficult to keep the library up to date. It is to be remembered that a large part of the money allotted for this purpose must be spent for the binding of books and periodicals.

Mathematics. There has been no marked change in the undergraduate part of our work during the past year. The present text for the general course in Calculus has been in use for about five years, and it has seemed opportune to have a somewhat thorough revision. Professor Woods and Professor Bailey have fortunately been willing to undertake this.

The plan of a general unified course, introducing the Fundamental Calculus ideas early in the first year, has been thoroughly tried out in the present and preceding texts during the past twenty years and will be continued in the new edition. The changes consist mainly in modifications of the order and method of presentation and in the systematic revision of the extensive problem material.

As elective and graduate courses the following have

been given during the year: Least Squares and Probability, Advanced Calculus, Theoretical Aeronautics, Fourier's Series and Integral Equations, Mathematical Laboratory, Advanced Wing Theory, Theory of Functions, Theory of the Gyroscope, Modern Algebra, Vector Analysis, Riemannian Geometry, Analytical Mechanics, Theory of Statistics, History of Mathematical Science, and Modern Differential Geometry.

The personnel of the Department has been strengthened by the return of Assistant Professor Wiener from an interesting and profitable year in Europe, and by the accession of Dr. D. J. Struik as lecturer for the year.

The active scientific interest of members of the Department is shown in the accompanying list of publications and in the successive numbers of the Journal of Mathematics and Physics published during the year.

English and History. The importance of giving students training so that they may acquire ease in speaking in a natural yet effective fashion is fully recognized by the Department. For the past two years the men in the first and second year courses in English have been required to meet in small groups several times each term; and at every meeting each man present is required to give a brief talk. The chief object of these exercises is to help the students in freeing themselves from the awkwardness and timidity from which most boys of their age suffer when they are called upon to stand on their feet and speak. In the case of not a few, the circumstances connected with their life and education before they entered the Institute have been of such a character that in their oral, as in their written work, they have many difficulties to overcome. The situation is not peculiar to Technology; it exists generally and constitutes a problem the seriousness of which is recognized in high and preparatory schools. Under these circumstances, for the English Department to carry the students a long way toward proficiency in speaking is well-nigh impossible; nevertheless, with the training extended as it is over two years, the success which has been achieved, particularly in helping the students to clear away their first difficulties, is encouraging.

During the latter part of the year an interesting experiment was made in the second-year course in English by providing an opportunity for a small group of the better men in the course to pursue their work under the tutorial system. These men were relieved of the requirements of the regular course as to both reading and class attendance; each man chose a special subject for study which he carried out in consultation with his tutor. As a result of the experiment, next year thirty-five men in the second-year class will be allowed to take this work. In order to be admitted to the group a student must have shown ability in the first-year course and must present a program of study in history, literature, or some allied field; this program he will pursue by himself under the guidance of his tutor. Thus the Department will be able to give recognition to those men who have genuine interests in cultural lines of study, and will provide conditions under which they may develop freely and rapidly. In conducting this work the Department is fortunate in having on its staff men who through their broad range of study and their skill as teachers are highly qualified to play their part in the tutorial system.

Romance Languages. A new course, a general study, was given by Mr. M. Denkinger in practice in expression of general and technical ideas in French. The class was small, but the results were good. During Professor Langley's absence this course will be cancelled, but should be repeated in the following year.

During the year the work of instruction has shown better results than before, though the same difficulties have been present. The rule requiring students to pass off early all conditions in language has filled the course in Elementary and Intermediate French with students naturally weak in the subject. This has required very strenuous efforts on the part of the instructors in order to obtain results. At the beginning of each term extra sections had to be formed to accommodate the unusual numbers.

Military Science and Tactics. Special effort has been made during the past year to popularize the Infantry

Drill. Some success along these lines has been the reward. The uniform has been somewhat improved. The coat collar has been re-cut; gilt buttons substituted for gun-metal; leather belts for the web belt; and leather leggings for the old wrap puttees; and the overseas cap substituted for the old visor cap. These uniform changes have added considerably to the *esprit de corps* of the Reserve Officers Training Corps organization.

The uniform for advanced course students remains practically the same with the exception of the insignia on the coat lapels; on the lower lapels of the coat, the insignia of the arms of the Service is worn, and on the upper lapels an enamel and gold shield showing the coat of arms of the Institute and the colors of the same.

Another important addition to the Department of Military Science is the organization of a band. This band is now in the formative stage, but shows great promise of being a most desirable acquisition for the Institute.

The question of securing additional space and in locating all the departments in closer proximity to each other has been brought up and due attention will be given to this matter when opportunity affords.

Hygiene. A resume of the year's work is as follows:

Medical Cases	5,922
Surgical Cases	5,703
Contagious Cases	15
Physical Examinations	1,390
Excuses Issued	3,125
Total	16,155

Of the 1,390 men examined, 505 were freshmen, 36 were transfer students, 350 were members of the Reserve Officers Training Corps, and 499 were students having re-examinations. Out of the group of 505 freshmen, 139 were found with defects. These defects were corrected, if possible, and the men were advised or ordered to report to the Department every week or month, depending on the nature of the case.

The chief defects found were:

Acne	2	Epilepsy	2
Albuminuria	15	Flat Feet	4
Arthritis	1	Hammer Toes, both feet	1
Asthma	1	Hernia	3
Color Blindness	6	High Blood Pressure	11
Defective Eyesight	34	Infantile Paralysis (old)	1
Defective Hearing	6	Low Blood Pressure	2
Defective Heart	8	Postural Defects	3
Deformed Elbow	1	Underweight	38
Total	139		

It was found necessary to send 204 men to specialists for treatment, and 28 men were sent to hospitals.

The specialists consulted were laryngologists, otologists, dermatologists, genito-urinary specialists, dentists, oculists, and radiologists.

Patients were sent to the hospital on account of the following conditions: Hernia, Appendicitis, Infections, Acid Burn of Eyes, Acidosis, Malaria, Papiloma of Lip, Sarcoma of Foot, Chronic Sinusitis, Otitis Media, Observation, Mastoiditis, Concussion, etc.

There were only fifteen contagious disease cases, which is perhaps an exceptional record for such a large number of people under control.

During the year there were three deaths, two from Appendicitis and one from Infection. None of these men were being treated by the Department.

A comparison of the clinic calls by months for 1925–26 and 1926–27 is as follows:

	1925–1926		1926–1927
July	790	July	497
August	596	August	332
September	687	September	891
October	2,326	October	2,601
November	1,902	November	1,329
December	1,860	December	1,339
January	1,953	January	1,391
February	1,967	February	1,191
March	2,105	March	1,308
April	1,961	April	1,482
May	1,740	May	1,523
June	1,242	June	1,454
Total	19,129	Total	15,338

Previous to graduation 170 seniors were examined, and the result of these examinations showed that the average gain in weight during the four years at the Institute was four and three-quarters pounds; the chest expansion increase one inch; and the height increase three-quarters inch. Their general health seemed to be very good.

It is hoped that next year all members of the senior class will avail themselves of this opportunity and have a complete examination before going into their various walks of life. They should be encouraged to do this and the examination should be looked upon as a privilege and not a hardship or personal affront. This senior examination is, in our opinion, most important, as shown by the fact that last year 103 graduates asked for copies of their physical examinations after graduation, in order to procure various positions which they aspired to and to meet the demands of their future employers.

During the year 1926–27 the work has apparently been quite successful and no serious epidemics or injuries have been encountered. The general health of the student body seems to be improving each year. Now that the construction of the new infirmary is under way, I feel that with the added facilities for caring for the student, faculty and employees, the work will be more efficiently handled.

Summer Session. The Summer School is now running smoothly, and the work is done in accordance with the directions issued by the Summer Sessions Committee.

The attendance was slightly less than in the year 1926, being 1,448 as against 1,470 for 1927. The number of teachers enrolled was 125 in 1927 as against 123 in 1926. The attendance at the Summer Surveying Camp dropped from 83 in 1926 to 47 in 1927.

It is also true that the rate charged in the summer is slightly higher than that charged in the winter. It would seem more efficient use might be made of the Summer Surveying Camp. This camp could easily accommodate 100 men and without very much addition to the staff. Many of the colleges teaching Civil Engineering have no Summer camp,

and it is believed were the Institute to open the Summer Camp to men properly qualified as to training at other institutions, the enrollment here might be appreciably increased.

Graduate Courses and Scholarships. All matters pertaining to the graduate work of the Institute are in charge of the Faculty Committee on Graduate Courses and Scholarships. This Committee is composed of a representative of every department offering graduate work. The Dean of Graduate Students is Chairman of the Committee, *ex officio*. The various departments are all now organized to handle graduate work.

All new students are expected to consult the Dean of Graduate Students upon their arrival at the Institute for advice as to general procedure. The credentials and credits of each student are referred to his Departmental Committee and the Committee submits a report embodying its recommendations as to his status on admission, to the Committee on Graduate Courses and Scholarships. This report, when approved, forms the basis upon which the student proceeds with his subsequent work. This procedure, which will become operative for the first time this fall, will, it is hoped, work out to the advantage of all concerned.

The number of students registering for graduate work leading to higher degrees continues to increase, the total registration as of November 1, 1926 being 328, an increase of fourteen over that of the preceding year. Students were pursuing courses leading to higher degrees as follows:

Doctor of Science	36
Doctor of Philosophy	37
Doctor of Public Health	1
Master of Science	249
Master in Architecture	5

The students represented 109 different colleges, universities and technical schools distributed through forty states and seventeen foreign countries.

A considerable number of these students were on the instructing staff on a half-time or full-time appointment;

of these thirty-two were working for the Doctor's degree and twenty-one for the Master's degree. This arrangement works well in most cases. The opportunity offered to continue graduate work while holding an appointment as assistant or instructor is a strong inducement in attracting the right kind of men to continue work for higher degrees. In many cases it is the only way by which a student can finance himself through a period of post graduate study.

During the past year 192 students completed the requirements for advanced degrees as follows:

Doctor of Philosophy	11
Doctor of Science	6
Doctor of Public Health	1
Master in Architecture	7
Master of Science in specified Department	135
Master of Science without specification	32

Approximately one-half of those registered for graduate work completed their courses of study during the year.

Scholarships and Fellowships. The Committee on Graduate Courses and Scholarships received 194 applications for financial aid during the past year. With the funds available 145 awards varying in amounts from tuition to $1,000 were made. With the increase in tuition to become effective in 1928 it is earnestly hoped that additional scholarship funds will be placed at the disposal of the Committee, otherwise grants will have to be reduced either in number or amount and this will seriously affect the growth of our graduate work. So pressing has the need for additional funds become that the Committee on Graduate Courses and Scholarships recommended for the coming year that the appropriation previously used for relieving younger members of the staff from a portion of their teaching duties in order that they might have more time for research, be transferred to outright scholarships to meet the tuition fees of members of the staff and other students who are working for higher degrees. Under present conditions at the Institute the members of the staff interested in and capable of carrying on independent

research are given both time and opportunity for such work, so that special provision is no longer necessary.

It is very gratifying to report that a number of substantial Fellowships have been established during the past year. One Fellowship of $2,000 has been established by the Arkwright Club for research in Textiles. Two graduate scholarships of $1,000 each have been established by the Proprietors of the Locks and Canals of Lowell, Massachusetts, open to graduates of the Lowell Textile School for advanced study in Textile Engineering and Textile Chemistry. A special circular on opportunities for graduate study and research in the field of Textile Engineering and Textile Chemistry has been prepared during the year, and it is hoped that a number of graduate students may be attracted to this field in which there is a demand for highly trained specialists.

Ten Fellowships of $1,000 each, open to graduate students properly qualified to carry on research in the field of Automotive Engineering, have also been established by friends of the Institute. Five appointments have already been made to these Fellowships for the coming school year and some interesting researches will be undertaken. A notice of the available graduate scholarships and Fellowships was prepared the past year and given a wide circulation among the colleges of the country, this being now a customary practice among institutions offering scholarships to graduates of other colleges.

The Institute is coöperating in the movement to establish Graduate Scholarships for "exchange students" from foreign countries. For many years it has been the policy of the Institute to offer free tuition to a properly accredited foreign graduate student provided a similar courtesy is extended to an Institute student by a university or technical school in the country from which he came. Thus we have had a number of exchange students from Scandinavia, Belgium and France and this coming year the exchange has been extended to include Germany and Switzerland. The young men who are now here under exchange auspices appear to have been exceptionally well chosen.

With a graduate school of between three hundred and

four hundred students made up of men from all over the United States and many foreign countries, the time has come when some provision should be made for their social welfare. At present many of our graduate students have no opportunity of meeting students outside their Department or Laboratory, and thus miss entirely the great benefit to be derived from associating with other students engaged in graduate work and research outside their own field. A dormitory where students could live and become acquainted and meet for general discussions, would be of inestimable value.

Society of Arts. The usual course of four Popular Science Lectures was given the past winter to pupils of the secondary schools on Friday and Saturday afternoons, and to the general public on Sunday afternoons during the months of December, January, February and March.

This year's course of lectures, judged from the very large audiences, was perhaps the most successful of any thus far given, as the lecture hall was crowded to capacity at nearly every occasion, and many expressions of admiration of the demonstrations shown in the lectures were received. All of the lecturers stressed some of the most recent advances in science and engineering which were illustrated by beautiful and striking experiments and by slides and motion pictures.

The complete schedule of lectures for the season's course is given below:

December 12 — "X-Rays and Their Applications," by John T. Norton, S.B., Assistant Professor of Physics.

January 16 — "Invisible Light and Its Effects," by Donald C. Stockbarger, Sc.D., Instructor in Physics.

February 13 — "Engineering — the Foundation of Modern Civilization," by Charles M. Spofford, S.B., Professor of Civil Engineering.

March 13 — "Some Chemical Discoveries and their Effects on Modern Life," by James F. Norris, Ph.D., Professor of Organic Chemistry.

REPORT OF THE ACTING DEAN OF STUDENTS

The primary duty of the Dean's office is "to coöperate with the President in matters relating to the general welfare of students, including discipline." Traditionally the Institute has adhered to the policy that its students are to be considered as men, capable of being trusted to regulate their non-academic life and to administer their undergraduate activities and social affairs without direct supervision on the part of the Faculty. In this respect Technology is unique among so-called higher institutions of learning in the United States.

Experience has demonstrated that this confidence has not been misplaced, but never has student government at the Institute faced a crisis such as it met in connection with the disturbances surrounding the Field Day in November, 1926. Press reports of the affair, erroneous in many respects and exaggerated in almost every respect, brought the good name of the Institute unfavorably into public notice.

It should be a source of pride and satisfaction to everyone connected with the Institute that the Institute Committee, the undergraduate governing body, dealt with the issue so promptly and effectively. The report of the investigation, conducted by its sub-committee, resulted in a unanimous recommendation by the Institute Committee that fourteen students be disciplined. The findings were approved by the President's Committee and were accepted by the President with the result that he expelled two offenders, suspended two for one term, and placed ten on probation.

During the academic year, in addition to the above cases, three students were required to withdraw by the President for disciplinary reasons; four were required to withdraw by the Faculty for academic misdemeanors; three were placed on probation by the Dean's office on account of misconduct.

Because of poor scholarship, 145 men were dismissed by the Faculty during 1926–27. The corresponding figures for 1925–26 and 1924–25 were 137 and 153, respectively.

In December, 1926, the Assistant Dean was appointed Chairman of the Faculty Committee on Undergraduate Scholarships. Nearly one-seventh of the undergraduate body are aided by grants. Holders of scholarships, besides maintaining high scholastic standing, do so under the handicap of inadequate financial

resources. They are students who, accustomed to be self-reliant, would ordinarily have no special reasons for consulting the Dean's office. Placing the Chairmanship of the Committee in the office has served, therefore, as a means of introduction and has brought about closer relationships with this large group of promising students.

The extent of the work of the Scholarship Committee during 1926–27 may be expressed by the statement that awards for 1927–28 were made to 306 men and 14 women, and that these grants totalled $57,535 to the men and $3,600 to the women. It is interesting to observe that these figures represent approximately 7.3 per cent of the total tuition receipts from undergraduate students.

The settlement of the Field Day matter referred to earlier in this report, giving as it did a most convincing demonstration that the undergraduates accepted, not only the privileges and honors, but also the attendant responsibilities of self-government, came just prior to the time when Dean Henry P. Talbot was stricken with an illness which subsequently proved fatal.

It was at the close of the academic year 1920–21 that Professor Talbot was appointed Dean upon the retirement of Professor Burton. Noted always for his keen and sympathetic interest in the problems connected with student life, outside as well as inside the classroom, Professor Talbot accepted the Deanship as offering broader opportunities for service to the Institute. His extremely conscientious and effective administration of the perplexing, and often trying, problems met with in the Dean's office commanded the respect of students and Faculty. His constant wish to meet students "man fashion" as he expressed it, won their confidence. The hundreds of messages of sympathy to Mrs. Talbot from graduates and former students — some from men whom a less understanding and less sympathetic counsellor would have permanently estranged — bear eloquent tribute to his success.

To the evidence of these impartial witnesses, I may be pardoned if I add a personal word, for no one could have had a more kind, sympathetic and loyal friend than he was to me. As one whose proud privilege it was to share his confidence over a period of six years, and who was perhaps more closely than others aware of the incessant strain of responsibilities he carried, the conclusion that he literally gave his life to the Institute is inescapable.

H. E. LOBDELL.

REPORT OF THE LIBRARIAN

A small but gratifying increase in the use of the Library during the year 1926–27 is shown by the following record of circulation:

TABLE I

COMPARATIVE CIRCULATION, 1925–1926 AND 1926–1927

	1925–1926	1926–1927
Central Library, Books	21,078	21,363
Unbound Periodicals	1,641	1,560
Architecture, Books	4,592	3,947
Photographs	9,937	11,584
Economics and Civil Engineering	2,032	1,960
Geology	1,603	1,902
Mathematics	1,134	1,193
Mining and Metallurgy	1,905	2,358
Naval Architecture, Books	396	615
Periodicals and Pamphlets	33	105
Total circulation, Institute Library	44,351	46,587

The growth of the Library during the year was as follows:

Books acquired by purchase	1,850
Books acquired by binding	1,557
Gifts: volumes	1,047
Gifts: pamphlets	2,325
Maps	76
Total items added:	6,855

This total is somewhat smaller than that shown in previous reports, principally owing to the effort made to keep expenditures strictly within the appropriation in the face of rising costs of books, periodicals and binding. The average cost per volume of books purchased during the year was in fact $4.47, which is the highest average cost yet experienced by the Library.

After allowing for books worn out or permanently lost, the net increase in the size of the Library and the cost thereof are shown by the following tables:

TABLE 2

NET ACCESSIONS 1926–1927

	Books	Maps
Central Library		
General	1,772	56
Aeronautical Engineering	249	—
Biology and Public Health	382	—
Chemistry	393	—
Chemical Engineering	125	—
Civil and Sanitary Engineering	285	—
Economics	193	—
Electrical Engineering	398	—
English and History	143	—
Geology	129	—
Mathematics	4	—
Mechanical Engineering	124	—
Military Science	31	—
Physics	218	—
Totals, Central Library	4,446	56
Departmental Libraries		
Architecture	114	—
Civil and Sanitary Engineering	112	—
Economics	407	—
Geology	195	20
Mathematics	73	—
Mechanical Engineering	15	—
Mining and Metallurgy	354	—
Modern Languages	59	—
Naval Architecture	125	—
Walker Memorial	408	—
Others	278	—
Totals, Departmental Libraries	2,140	20
Grand Totals	6,586	76
Total contents, June 30, 1926	235,915	—
Total contents, June 30, 1927	242,501	—

It will be noted that in counting accessions no distinction is now made between bound books and pamphlets. If a pamphlet is sufficiently important to be shelved and catalogued it should be counted, regardless of the fact that it has paper covers. It may be a far more valuable unit in the Library collection than many a

pretentiously bound volume. This practice has long been followed by many of the larger libraries. It should be added that the Institute Library has also many thousand pamphlets not accessioned and hence not counted.

TABLE 3

COST OF ACCESSIONS 1926–1927, CLASSIFIED BY DEPARTMENTS

Department	Books	Periodicals	Binding	Total
From Library Appropriation				
General	$744.83	$548.50	$577.12	$1,870.45
Aeronautical Engineering	86.91	61.38	38.83	187.12
Architecture	270.81	92.78	321.65	685.24
Biology and Public Health	330.93	401.74	107.38	840.05
Chemistry	601.86	329.08	451.75	1,382.69
Chemical Engineering	154.77	329.07	92.39	576.23
Civil and Sanitary Engineering	252.02	306.39	343.46	901.87
Economics	352.77	314.91	322.20	989.88
Electrical Engineering	324.11	280.03	412.52	1,016.66
English and History	249.33	92.29	13.22	354.84
Geology	272.63	277.24	188.06	737.93
German	0.92	19.06	18.15	38.13
Mathematics	95.01	102.26	74.75	272.02
Mechanical Engineering	161.97	186.35	223.46	571.78
Military Science and Tactics	57.62	27.35	.....	84.97
Mining and Metallurgy	360.30	267.52	288.22	916.04
Naval Architecture	195.31	106.21	98.03	399.55
Physics	272.58	415.41	171.50	859.49
Romance Languages	.....	12.53	7.69	20.22
Total from Library Appropriation	$4,784.68	$4,170.10	$3,750.38	$12,705.16
From Endowment Funds				
General (Barker Fund)	$186.70	———	———	$186.70
General (Flint Fund)	267.21	———	———	267.21
English and History (Tod Fund)	130.06	———	———	130.06
Mechanical Engineering (Kerr Fund)	12.72	———	———	12.72
Walker Memorial (Cilley Fund)	1,761.34	———	———	1,761.34
Total from Endowment Funds	$2,358.03	———	———	$2,358.03
From Departmental Appropriations				
Research Laboratory of Applied Chemistry	$64.64	$40.25	———	$104.89
School of Chemical Engineering Practice	69.51	61.47	———	130.98
Fuel and Gas Engineering Course	132.99	85.31	———	218.30
Research Laboratory of Physical Chemistry	247.71	———	———	247.71
Walker Memorial	———	170.81	———	170.81
Others	628.85	118.50	47.30	794.65
Total from Departmental Appropriations	$1,143.70	$476.34	$47.30	$1,667.34
Grand Total	$8,286.41	$4,646.44	$3,797.68	$16,730.53

The total contents of the Institute Library includes the following volumes in the departmental libraries:

TABLE 4

NUMBER OF VOLUMES IN DEPARTMENTAL LIBRARIES, JUNE 30, 1927

Architecture	5,462
Civil and Sanitary Engineering	2,875
Economics	3,764
Geology	2,792
Mathematics	3,015
Mining and Metallurgy	7,257
Modern Languages	1,452
Naval Architecture	3,267
Walker Memorial	6,380
Others	2,438
Total	38,702

One of the most important activities of the Library, namely the service rendered to readers by the two Reference Assistants, cannot well be reported in figures. It includes such varied duties as answering questions, helping students in the use of the card catalogue and printed indexes, procuring photostatic copies of articles in periodicals or books (93 were furnished during the year), notifying members of the Instructing Staff concerning new books or articles in their several fields, and addressing students on the use of the Library and the literature of most interest to them. It also involves the conduct of a considerable inter-library loan business with other college and university and general libraries. During 1926–27 we borrowed from other libraries 232 volumes and lent them 447.

Such progress as the Library has made during the year has been chiefly in the improvement of working conditions and equipment. Most notable was the complete change in the overhead lighting system in the main Reading Room. The original equipment had been inadequate from the beginning and had to be supplemented after a few years by table lights. In the spring of 1927 the lights at the top of the dome were replaced by thirty-two 500-watt Hippo floodlights. The resulting illumination has been most satisfactory, although we shall not quite be able to do away with the table lights.

The complete remodelling and enlargement of the circulation

desk, according to a carefully considered plan, was accomplished during the summer. As rebuilt the desk is enabling us to give much better service to readers, and to control better the issuance of books reserved for courses.

During the summer the duplicate collection on the seventh floor, which had been in a sorry condition, was brought into a semblance of order by the aid of extra student help. At the first opportunity we shall list these duplicates and offer for sale all that the Library does not need to keep as reserve stock.

On Open House Day, April 30, the Library was open to visitors and an attendance of about 4,000 was recorded. A large proportion of these undoubtedly were not attracted by the Library itself so much as by the pendulum which the Department of Physics had hung from the inner dome to demonstrate anew Foucault's experiment proving the rotation of the earth.

Much might be said about the need of expanding our reference service so as to give a more direct and complete service to many departments not now utilizing the Library's resources to the full. Many departments would undoubtedly welcome such expansion. Preceding it, however, should come a more adequate fund for books, periodicals and binding. The Library's annual "book fund" of $12,500 looks ample until it is seen that out of it must be obtained not only books but periodicals and binding. All of these items are priced high at the present time, and divide the appropriation about equally each year. In view of the fact stated above that the average cost of such books as our Library requires is $4.47 per volume, it is easy to see why we were able to buy only 1,850 volumes during the year.

In a survey of fifteen New England college libraries made in 1926 by a committee of New England college librarians, a great variation was found in library expenditure per student for books, periodicals and binding. This varied from $22.81 down to $2.16, the Institute Library occupying ninth place with a per capita expenditure of $5.24. The average was found to be $9.39. The expenditure per faculty member was from $252.81 to $25.98, with the Institute Library in twelfth place with an expenditure of $35.93. The average was $106.

It is evident from the above figures that the Institute Library, far from being extravagant in the purchase of books, is consider-

ably below the average New England college library in its annual investment in book stock. I use the word "investment" because such expenditure ought to be regarded as a permanent investment on which a valuable annual return may be expected in the increased professional capacity of graduates and faculty that comes from thorough acquaintance with the professional literature provided by a well-equipped library.

Hence, if we are to raise the standard of Institute Library service to the average and above it, one of the first requirements will be an increased fund for books, periodicals and binding. With our present book appropriation and our small endowment income combined we are able only to keep up with the strikingly important books of the year in science and technology, buying generally only one copy of each. No attempt can be made to build up the Library in particular subjects or to complete broken periodical sets.

This is lamentable. The leading technical school of the United States cannot afford to have less than the best technical school library in the country. Not only should our annual book appropriation be larger, but we should impress upon graduates of the Institute who wish to do something for their Alma Mater that the needs of the Library are as important and urgent as those of any department or any laboratory.

Quite as important as the need of a more adequate book, periodical and binding fund is the need of additional trained and experienced cataloguers. The work of the catalogue department is the foundation upon which the whole library service rests or falls. In our Library it involves the intelligent handling of highly scientific and technical material, and calls for well-paid expert cataloguers. We need two more on the permanent staff.

The problem of the proper development of Walker Memorial Library is still unsolved. Under date of June 23, 1927, I submitted to you a memorandum proposing a plan for its reorganization as a circulating branch of the Institute Library, the principal items of which were, first, the appointment of an assistant to aid the present Walker librarian, Mrs. King, in installing and conducting a modern circulating system, and second, the eventual addition of the Institute Librarian to the Committee on the Cilley Fund. Under present conditions only a comparatively few students receive benefit from Walker Memorial Library. Yet the "cultural"

books there housed are especially needed by students whose major thought is necessarily occupied so much with engineering subjects.

GIFTS

The outstanding gift of the year was the generous bequest of Mr. Walter S. Barker, of Cambridge, of $10,000 "for a permanent Library fund." The income of this fund may well be used for the acquisition of important books which the Library cannot afford to purchase out of its regular book fund. Mr. Barker, although not a Technology man, was deeply interested in the Institute and was one of the original trustees of the Frank H. Cilley fund.

From the estate of Henry P. Merriam '86, the Library received fourteen boxes of books relating to shipbuilding and marine and other steam engineering. The exact number of books in this collection has not yet been determined.

Another sizable gift was that presented by Colonel F. W. Phisterer, recently in charge of the Department of Military Science and Tactics, upon his transfer to another post. This collection included 201 volumes and 185 pamphlets, mostly on military subjects.

The estate of Charles W. Holtzer, late of the Holtzer-Cabot Electric Company, presented us twelve volumes from his library.

Lord Camperdown sent us, as he has done for several years, the recent publications of the Iron and Steel Institute, the Institution of Naval Architects, the Institution of Civil Engineers, and the Junior Institution of Engineers.

Mrs. Waldo O. Ross, whose husband was of the Class of 1868, presented a two-volume art work by G. Pietro Campana, entitled "Antiche opere in plastica."

Mr. William Francklyn Paris presented two of his own works: "The House that Love Built," and "Decorative Elements in Architecture."

The Department of Chemistry presented a pamphlet volume containing papers by the late Professor F. Jewett Moore.

Messrs. Fay, Spofford & Thorndike presented a copy of their "Great Lakes Commerce and the Port of Oswego."

Dr. Dewey turned over to the Library, as in previous years, a large number of books and other material received by him as managing editor of the *American Economic Review*.

Similarly, *Technology Review* presented us seven useful books received by them as review copies.

The following organizations generously presented the Library with their own publications: *Technology Review*, *Tech Engineering News*, *The Tech*, and Technology Christian Association.

The following members of the Instructing Staff presented the Library with copies of their own works:

Professor H. K. Barrows: Water Power Engineering.
Professor G. L. Clark: Applied X-Rays.
Professor D. R. Dewey: The Credit Factor in the Structure of Industry.
Professor W. J. Drisko: Exercises in Mechanics. Revised edition.
Professor W. J. Drisko: Light.
Professor A. H. Gill: Short Handbook of Oil Analysis. 11th edition.
Professor H. W. Hayward: Materials of Construction; their Manufacture and Properties. 3d edition.
Professor M. P. Horwood: Tuberculosis Survey of Boston.
Professor D. C. Jackson: Alternating Currents and Alternating Current Machinery.
Professor E. B. Millard: Physical Chemistry for Colleges. 2d edition.
Professor Dean Peabody, Jr.: Reinforced Concrete Design, for the Use of Students of the Lowell Institute School.
Professor R. H. Smith: Textbook of Advanced Machine Work. 8th edition.
James A. Tobey: National Government and Public Health.
Professor C. E. Turner: Pamphlet sketches of Jenner and Trudeau.
Dr. H. W. Underwood, Jr.: Moore and Underwood's Experiments in Organic Chemistry. 3d edition.

Gifts were received also from other members of the Instructing Staff and Alumni, as follows:

President Stratton
Professor R. P. Bigelow
Professor William Emerson
Professor R. T. Haslam
Professor W. S. Hutchinson
Professor J. R. Jack
Professor D. C. Jackson
Professor W. Lindgren
Professor E. F. Miller
Professor C. L. Norton
Professor C. F. Park
Professor C. M. Spofford
Professor H. W. Tyler
Charles R. Main '09
P. A. Mosman '87
Thomas Spooner '09

W. N. SEAVER,
Librarian.

REPORT OF THE REGISTRAR

FOR THE YEAR 1926–27

TABLE 1

THE CORPS OF INSTRUCTORS (November 1)

	'08	'09	'10	'11	'12	'13	'14	'15	'16	'17	'18	'19	'20	'21	'22	'23	'24	'25	'26
Professors: Emeriti	1	1	1	3	3	3	4	4	4	5	5	5	6	5	8	8	7	7	6
Retired	1	1	1	3	3	3	4	5	7	7	6	6	6	7	6	5	5	7	5
Non-Resident	3	3	3	3	3	3	3	3	2	2	2	2	2	2	2	3	3	3	3
Research (Not counted elsewhere)	—	—	—	4	3	1	1	—	—	—	—	—	—	—	—	—	—	—	—
Total	5	5	5	13	12	10	12	12	13	14	13	13	14	14	16	16	15	17	14
Professors	39	43	43	40	47	46	59	63	61	59	58	52	56	56	56	61	64	63	68
Associate Professors	17	14	18	17	16	23	23	23	30	32	29	33	34	35	40	43	42	49	55
Assistant Professors	32	31	30	33	35	33	36	31	36	38	33	39	49	54	48	46	51	53	51
Instructors (Members of Faculty)	—	—	—	—	—	—	—	—	—	—	—	—	—	25	30	25	17	14	11
Active Faculty	88	88	91	90	98	102	118	117	127	129	120	124	139	170	174	175	174	179	185
Instructors (Not members of Faculty)	62	69	66	64	67	74	70	79	90	70	67	99	109	84	80	92	98	112	116
Assistants	50	51	55	50	49	54	52	58	54	38	35	39	79	93	87	60	59	53	63
Faculty Instructors and Assistants	200	208	212	204	214	230	240	254	271	237	222	262	327	347	341	327	331	344	364
Research Associates	6	12	8	5	3	1	3	3	5	4	1	8	19	19	19	25	26	21	24
Research Assistants	1	1	5	6	7	8	15	11	14	7	5	10	15	13	16	17	21	29	38
Lecturers	31	18	21	25	16	19	23	28	31	29	13	13	14	15	15	6	16	21	23
Total Active Members	238	239	246	240	240	258	281	296	321	277	241	293	375	394	391	375	394	415	449

TABLE 2

REGISTRATION SINCE THE FOUNDATION OF THE INSTITUTE
(As of November 1)

Year	Number of Students	Year	Number of Students	Year	Number of Students
1865–66	72	1886–87	637	1907–08	1,415
1866–67	137	1887–88	720	1908–09	1,461
1867–68	167	1888–89	827	1909–10	1,479
1868–69	172	1889–90	909	1910–11	1,506
1869–70	206	1890–91	937	1911–12	1,559
1870–71	224	1891–92	1,011	1912–13	1,611
1871–72	261	1892–93	1,060	1913–14	1,685
1872–73	348	1893–94	1,157	1914–15	1,816
1873–74	276	1894–95	1,183	1915–16	1,900
1874–75	248	1895- 96	1,187	1916–17	1,957
1875–76	255	1896–97	1,198	1917–18	1,698
1876–77	215	1897–98	1,198	1918–19	1,819
1877–78	194	1898–99	1,171	1919–20	3,078
1878–79	188	1899–00	1,178	1920–21	3,436
1879–80	203	1900–01	1,277	1921–22	3,505
1880–81	253	1901–02	1,415	1922–23	3,180
1881–82	302	1902–03	1,608	1923–24	2,949
1882–83	368	1903–04	1,528	1924–25	2,938
1883–84	443	1904–05	1,561	1925–26	2,813
1884–85	579	1905–06	1,466	1926–27	2,671
1885–86	609	1906–07	1,397		

TABLE 3

Classification of Students by Courses and Years

Course	1924–25						1925–26						1926–27					
	YEAR						YEAR						YEAR					
	1	2	3	4	G	Total	1	2	3	4	G	Total	1	2	3	4	G	Total
Aeronautical Engineering XVI	—	—	—	—	14	14	—	—	—	—	15	15	28	21	7	2	14	72
Architectural Engineering IV-A	22	20	16	8	2	68	33	30	16	13	—	92	22	42	29	17	—	110
Architecture IV	32	21	39	29	5	126	29	31	24	43	6	133	36	38	33	38	5	150
Biology and Public Health VII	2	7	11	4	8	32	1	5	9	13	13	41	2	2	6	12	14	36
Chemical Engineering X	52	48	76	61	26	263	45	66	42	61	21	235	53	53	61	42	30	239
Chemical Engineering Practice X-A	—	—	—	—	41	41	—	—	—	—	46	46	—	—	—	—	42	42
Chemical Engineering Practice X-B	—	—	—	9	—	9	—	—	—	13	—	13	—	—	—	5	—	5
Chemistry V	10	20	20	24	53	127	16	14	15	21	44	110	22	19	21	15	45	122
Civil Engineering I	70	82	90	70	10	322	47	65	82	91	13	298	56	51	65	84	17	273
Electrical Engineering VI	126	111	96	78	41	452	123	99	131	83	60	496	97	71	92	106	68	434
Electrical Engineering VI-A	44	59	48	43	30	224	33	63	40	36	43	215	21	49	49	33	36	188
Electrochemical Engineering XIV	15	12	19	11	4	61	15	12	11	16	4	58	9	11	16	8	6	50
Engineering Administration XV	83	123	108	104	3	421	58	97	108	101	1	365	63	73	100	97	1	334
Fuel and Gas Engineering	—	—	—	—	—	—	—	—	—	—	3	3	—	—	—	—	8	8
General Engineering IX-B	10	12	32	45	—	99	16	7	25	33	—	81	3	9	10	22	—	44
General Science IX-A	—	4	2	4	—	10	1	4	2	3	—	10	2	1	1	2	—	6
Geology XII	2	1	4	6	7	20	1	—	4	6	10	21	1	1	1	3	9	15
Mathematics IX-C	1	3	1	4	1	10	5	—	4	2	2	13	2	2	3	4	6	17
Mechanical Engineering II	84	88	97	121	19	409	65	92	87	101	29	374	55	70	76	102	34	337
Military Engineering	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	1	—	1
Mining Engineering and Metallurgy III	16	17	25	26	12	96	10	12	15	21	10	68	6	11	16	12	12	57
Naval Architecture XIII	4	7	13	16	—	40	8	7	8	14	2	39	9	7	8	9	2	35
Naval Construction XIII-A (Grad. U. S. N. A.	—	—	—	12	—	12	—	—	—	7	12	19	—	—	—	9	6	15
Naval Construction XIII-A Sp. (Not Grad. U. S. N. A.)	—	—	—	17	—	17	—	—	—	—	—	—	—	—	—	—	—	—
Physics VIII	2	5	2	4	8	21	2	4	5	1	12	24	6	10	4	4	7	31
Sanitary and Municipal Engineering XI	2	5	2	1	2	12	3	3	5	2	2	15	2	6	5	4	—	17
Unclassified	—	—	—	—	—	32	—	—	—	—	—	29	—	—	—	—	—	33
Totals	577	645	701	697	286	2,938	511	611	633	681	348	2,813	495	547	603	631	362	2,671

TABLE 4

Classification* by Courses of Students Since 1916

	1918–19	1919–20	1920–21	1921–22	1922–23	1923–24	1924–25	1925–26	1926–27
Engineering Courses . . . . . *Total*	876	2,154	3,117	3,069	2,767	2,617	2,560	2,432	2,261
Aeronautical Engineering XVI	81	2	7	10	15	12	14	15	72
Architectural Engineering IV-A	9	46	47	54	38	67	68	92	110
Chemical Engineering (Inc. X-A, X-B)	155	381	526	492	430	370	313	294	286
Civil Engineering I	111	255	377	312	319	326	322	298	273
Electrical Engineering (Inc. VI-A)	135	305	561	657	658	627	676	711	622
Electrochemical Engineering XIV	16	74	105	98	74	79	61	58	50
Engineering Administration XV	67	375	529	572	484	417	421	365	334
Fuel and Gas Engineering	—	—	—	—	—	—	—	3	8
General Engineering IX-B	—	33	34	47	75	115	99	81	44
Mechanical Engineering II	172	472	651	580	471	435	409	374	337
Military Engineering	—	—	—	—	—	—	—	—	1
Mining Engineering and Metallurgy III	40	103	140	121	94	85	96	68	57
Naval Architecture and Marine Engineering XIII	75	66	95	78	59	46	40	39	35
Naval Construction (Grad. U. S. N. A.) XIII-A	6	18	30	32	41	12	12	19	15
Naval Construction (Not Grad. U. S. N. A. XIII-A Sp.	—	—	—	—	—	17	17	—	—
Sanitary and Municipal Engineering XI	9	24	15	16	9	9	12	15	17
Science Courses . . . . . *Total*	90	153	188	208	231	226	220	219	227
Biology VII	49	56	24	30	26	34	32	41	36
Chemistry V	33	66	93	106	128	130	127	110	122
General Science IX-A	—	—	8	8	11	13	10	10	6
Geology XII	1	15	19	22	20	17	20	21	15
Mathematics IX-C	1	1	2	1	8	10	10	13	17
Physics VIII	6	15	42	41	38	22	21	24	31
Architecture IV . . . . . *Total*	18	73	83	87	117	88	126	133	150
School of Public Health . . . . . *Total*	—	—	25	20	—	—	—	—	—
Unclassified . . . . . *Total*	—	—	23	121	65	18	32	29	33
First Year (Course not indicated) . . . . . *Total*	835	698	—	—	—	—	—	—	—
Grand Total	1,819	3,078	3,436	3,505	3,180	2,949	2,938	2,813	2,671

* Previous to 1920–21 the election of Courses by first-year students was not recorded.

TABLE 5

CLASSIFICATION BY COURSES AT THE END OF THE SCHOOL YEAR SINCE 1921

	1921	1922	1923	1924	1925	1926	1927
Engineering Courses . . . . Total	2,848	2,858	2,458	2,378	2,319	2,232	2,010
Aeronautical XVI	6	14	15	12	13	14	80
Building Construction XVII .	—	—	—	—	—	—	33
Chemical X, X-A, X-B . . .	491	431	382	351	284	278	250
Civil I	343	290	295	300	313	284	241
Electrical VI, VI-A	496	635	575	579	621	663	582
Electrochemical XIV	101	90	70	62	54	54	46
EngineeringAdministration XV	511	541	413	378	397	351	307
Fuel and Gas	—	—	—	—	—	3	9
General IX-B	43	51	95	122	96	81	38
Mechanical II	605	586	434	409	381	364	313
Military Engineering	—	—	—	—	—	—	1
Mining Engineering and Metallurgy III	130	110	83	83	81	64	48
Naval Architecture and Naval Construction XIII	104	97	90	74	68	59	46
Sanitary and Municipal XI .	18	13	6	8	11	17	16
Science Courses . . . . . Total	186	217	215	195	208	209	224
Biology VII	24	38	27	28	35	39	39
Chemistry V	96	102	116	112	118	107	113
General Science IX-A	5	8	8	9	8	9	6
Geology XII	20	28	24	15	18	18	19
Mathematics IX-C	—	—	11	10	8	13	16
Physics VIII	41	41	29	21	21	23	31
Architecture IV . . . . . *Total*	136	149	149	139	185	221	241
Special and Unclassified . Total	61	105	40	17	35	31	41
School of Public Health. . Total	18	—	—	—	—	—	—
Grand Total	3,249	3,329	2,862	2,729	2,747	2,693	2,516

TABLE 6

Geographical Classification of Students from 1916

United States	1916	1917	1918	1919	1920	1921	1922	1923	1924	1925	1926
North Atlantic . Total	1,502	1,316	1,436	2,261	2,415	2,467	2,237	2,154	2,151	2,081	1,975
Connecticut	69	49	59	91	104	104	88	89	88	87	79
Maine	32	26	34	58	66	61	49	53	50	45	45
Massachusetts	1,110	1,005	1,022	1,517	1,516	1,540	1,449	1,418	1,479	1,407	1,347
New Hampshire	30	26	28	48	41	46	41	49	40	46	53
New Jersey	53	47	58	113	123	123	100	104	87	80	80
New York	122	101	140	264	341	354	314	265	256	263	247
Pennsylvania	57	31	58	113	143	160	134	113	94	100	77
Rhode Island	17	19	26	42	54	49	35	39	40	35	31
Vermont	12	12	11	15	27	30	27	24	17	18	16
South Atlantic . .Total	81	43	50	129	160	167	149	142	143	128	119
Delaware	4	7	3	14	15	12	10	11	8	9	9
District of Columbia	27	10	14	37	37	39	38	39	43	46	39
Florida	7	1	6	10	14	14	13	10	10	11	14
Georgia	5	3	2	8	8	11	11	9	10	7	7
Maryland	9	4	7	13	18	33	29	28	23	15	15
North Carolina	5	4	2	9	11	7	11	4	10	6	7
South Carolina	9	4	3	5	8	7	6	7	8	11	8
Virginia	8	6	9	24	36	35	28	25	24	14	11
West Virginia	7	4	4	9	13	9	3	9	7	9	9
South Central . .Total	49	42	41	79	91	111	113	78	77	67	73
Alabama	5	6	5	12	4	8	8	8	7	7	9
Arkansas	1	—	—	1	6	6	9	5	5	5	2
Kentucky	9	6	5	14	20	21	25	14	11	12	14
Louisiana	7	5	5	10	9	7	10	8	4	9	5
Mississippi	2	4	2	6	5	9	4	3	2	1	4
Tennessee	8	3	3	10	12	19	18	14	17	8	8
Texas	17	18	21	26	35	41	39	26	31	25	31
North Central . . Total	146	124	118	271	337	312	279	251	259	243	240
Illinois	31	27	19	49	67	67	63	63	62	55	61
Indiana	5	9	10	18	27	26	21	14	15	19	18
Iowa	6	1	5	15	18	18	14	7	11	10	9
Kansas	3	1	3	7	6	5	4	9	8	9	9
Michigan	16	14	19	26	29	26	26	27	35	28	24
Minnesota	6	4	5	18	24	31	28	19	22	18	17
Missouri	18	15	14	37	35	33	32	31	29	27	28
Nebraska	5	3	1	4	11	11	6	6	7	6	5
North Dakota	1	—	—	2	4	5	1	3	2	2	4
Ohio	43	42	34	68	85	65	60	56	56	48	48
South Dakota	1	1	—	2	2	5	2	—	—	1	2
Wisconsin	11	7	8	25	29	20	22	16	12	20	15
Western . . . . Total	52	45	42	120	139	149	129	117	87	83	78
Arizona	1	—	1	2	5	3	5	5	3	2	3
California	22	16	14	41	47	52	47	37	28	32	27
Colorado	8	7	7	26	23	28	16	19	17	13	10
Idaho	2	1	—	1	4	4	3	3	1	1	1
Montana	1	3	6	8	8	8	9	6	6	7	9
Nevada	—	—	—	1	1	—	—	—	—	—	1
New Mexico	—	—	—	4	4	4	4	3	—	—	1
Oklahoma	1	—	2	3	2	5	4	3	5	5	6
Oregon	6	6	7	9	11	14	17	15	10	8	7
Utah	5	5	—	5	10	8	5	4	4	3	2
Washington	4	4	5	15	20	21	15	19	12	11	11
Wyoming	2	3	—	5	4	2	4	3	1	1	—
Territories and Dependencies . . . .Total	5	5	5	13	27	31	26	23	24	22	16
Alaska	—	1	—	—	—	1	1	1	—	—	—
Canal Zone	—	—	1	1	2	2	2	2	3	3	—
Hawaii	—	1	1	—	3	4	6	2	2	4	4
Philippine Islands	2	—	—	7	11	14	9	7	12	11	7
Porto Rico	3	3	3	5	11	10	8	11	7	4	5
Total for United States	1,835	1,575	1,692	2,873	3,169	3,237	2,933	2,765	2,741	2,624	2,501

TABLE 6 (*Continued*)

Foreign Countries	1916	1917	1918	1919	1920	1921	1922	1923	1924	1925	1926
Total	122	123	127	205	267	268	247	184	197	189	170
Abyssinia	—	—	—	—	—	—	1	1	1	—	—
Africa	1	—	—	—	—	—	—	—	—	—	—
Albania	1	1	—	—	—	1	—	—	—	—	—
Argentine Republic	1	1	—	3	5	7	8	2	1	1	—
Armenia	—	2	2	3	2	—	—	1	—	1	—
Asia Minor	1	—	—	—	—	1	—	—	—	—	—
Australia	—	—	—	2	1	—	2	2	1	—	—
Austria-Hungary	1	—	—	—	—	—	—	—	—	—	—
Barbadoes	—	—	—	—	—	—	—	1	1	1	—
Belgium	—	—	—	—	2	5	10	4	5	6	5
Bermuda	—	—	—	—	—	—	—	1	1	1	2
Bolivia	—	—	—	—	—	1	1	—	—	—	—
Brazil	1	3	2	4	7	5	3	2	2	2	1
Bulgaria	—	—	—	—	1	1	1	2	1	1	—
Canada	15	9	10	38	41	41	29	23	34	34	41
Chile	8	11	6	7	8	6	3	4	2	1	—
China	39	42	38	40	58	60	57	46	35	44	33
Colombia	3	2	4	6	2	1	2	—	2	1	2
Costa Rica	1	1	1	1	1	—	—	—	—	—	2
Cuba	8	4	5	4	8	8	11	10	10	5	2
Czechoslovakia	—	—	—	—	3	1	1	1	—	—	1
Denmark	1	3	1	1	3	4	2	—	1	2	1
Dominican Republic	—	—	—	—	—	—	1	—	—	—	—
Dutch West Indies	—	—	—	—	1	1	—	—	—	—	—
Ecuador	1	1	4	2	1	1	—	—	—	—	1
Egypt	1	1	—	1	—	—	1	—	1	—	—
England	1	—	—	1	3	8	4	3	5	4	3
Esthonia	—	—	—	—	—	—	—	—	—	1	1
France	—	—	—	2	2	3	3	4	3	4	2
Germany	1	1	—	—	—	—	—	—	—	1	2
Greece	—	2	3	2	4	3	2	—	3	1	3
Guatemala	—	1	—	—	1	—	—	—	—	1	—
Honduras	3	3	—	1	—	—	—	—	—	—	—
Hungary	—	2	—	—	—	—	1	1	1	1	—
India	1	—	—	2	6	5	6	6	9	8	8
Ireland	—	—	—	1	1	1	1	—	—	—	—
Italy	2	—	—	1	—	1	1	2	4	6	1
Japan	8	9	15	10	12	6	6	2	9	10	7
Korea	—	—	—	—	1	1	1	1	1	2	2
Liberia	—	—	—	—	—	—	—	—	—	—	1
Mexico	12	4	5	9	18	15	12	11	17	12	11
Newfoundland	—	—	—	—	—	—	—	—	1	3	2
New Zealand	—	—	—	—	—	—	1	1	—	—	—
Nicaragua	—	—	—	—	—	1	—	—	—	—	—
Norway	—	6	12	38	30	21	15	6	7	3	1
Palestine	—	1	—	—	1	1	1	1	1	1	1
Panama	—	—	—	—	—	—	—	—	—	—	7
Paraguay	—	—	—	—	—	1	1	1	—	—	—
Peru	1	1	—	3	3	3	2	2	3	2	2
Poland	—	1	—	—	—	—	—	—	—	—	—
Roumania	—	—	—	—	—	2	1	1	1	2	2
Russia	2	4	10	8	12	12	16	11	5	6	6
Salvador	1	1	—	—	—	—	—	—	—	—	—
Scotland	—	—	—	1	1	1	1	—	—	—	1
Serbia	—	—	—	—	—	1	1	—	—	—	—
Siam	1	—	—	5	8	8	8	6	6	1	—
Smyrna	—	—	—	—	1	—	1	—	—	—	—
South Africa, Union of	—	—	1	2	4	4	3	4	4	4	3
Spain	—	1	4	2	5	4	6	3	3	2	—
Straits Settlements	—	1	1	—	1	—	—	—	—	—	1
Sweden	—	2	—	—	2	1	—	2	—	—	—
Switzerland	—	—	—	1	—	7	2	3	1	1	2
Syria	1	—	—	—	—	2	4	2	2	2	2
Tahiti	—	—	—	—	—	1	1	2	1	—	—
Turkey	5	1	1	1	1	2	1	2	3	4	3
Uruguay	—	1	2	3	6	9	12	7	6	3	1
Venezuela	—	—	—	—	—	—	—	—	2	3	4
West Africa	—	—	—	—	—	—	—	—	1	1	—
Grand Total, United States and Foreign	1,957	1,698	1,819	3,078	3,436	3,505	3,180	2,949	2,938	2,813	2,671

TABLE 7

WOMEN STUDENTS, 1926–27. CLASSIFIED BY COURSES AND YEARS

COURSES	YEAR						
	First	Second	Third	Fourth	Graduate	Unclassified	Total
Architecture	4	8	1	4	—	—	17
Biology and Public Health	—	—	3	4	4	—	11
Chemical Engineering	—	—	—	1	1	—	2
Chemistry	—	3	1	—	4	—	8
Electrical Engineering	—	—	—	1	—	—	1
Mathematics	—	—	1	—	—	—	1
Unclassified	—	—	—	—	—	1	1
Total	4	11	6	10	9	1	41

TABLE 8

NUMBER OF OLD AND NEW STUDENTS

Year	Students of the previous year who return to the Institute	New Students Entering from Other Colleges	Other New Students and Former Students Returning	Total
1921–1922	2,151	476	878	3,505
1922–1923	2,024	455	701	3,180
1923–1924	1,886	434	629	2,949
1924–1925	1,958	465	515	2,938
1925–1926	1,856	358	599	2,813
1926–1927	1,747	382	542	2,671

TABLE 9

GRADUATES OF COLLEGES REGISTERED, 1926–1927

American Colleges and Universities Represented

	1921–22	1922–23	1923–24	1924–25	1925–26	1926–27
Adelphi	1	1	—	—	—	—
Akron	2	1	—	—	—	1
Alabama	6	—	2	—	—	—
Alabama Polytechnic Inst.	—	4	2	3	2	—
Alfred	—	1	—	—	—	—
Allegheny	1	4	2	1	1	1
American	—	—	—	—	—	1
Amherst	1	2	3	3	4	5
Arizona	—	—	—	—	—	1
Arkansas	—	—	—	—	1	—
Armour Institute of Tech.	1	1	—	—	3	4
Assumption	—	—	—	1	—	1
Austin	1	—	—	—	1	—
Barnard	—	2	2	2	2	—
Bater	4	—	—	1	2	2
Baylor	1	—	—	1	1	2
Beloit	1	1	—	—	—	—
Bethany	1	—	—	—	—	—
Biddle	1	1	1	—	—	—
Birmingham-Southern	1	1	—	—	—	—
Boston College	10	9	5	5	5	5
Boston University	4	2	2	5	1	—
Bowdoin	4	3	1	1	—	2
Brigham Young	—	—	—	—	—	1
Brooklyn Polytechnic	—	—	—	—	—	1
Brown	7	5	6	5	5	5
Bryn Mawr	5	1	2	1	—	—
Bucknell	—	1	1	—	—	—
Buffalo	1	—	—	—	—	—
Butler	1	1	1	1	—	—
California	5	5	8	1	9	12
California Inst. of Tech.	1	—	—	1	—	1
Campion	—	—	—	—	1	1
Canisius	1	1	2	—	—	—
Capital	—	—	—	1	1	1
Carleton	3	1	1	—	—	2
Carnegie Inst. of Tech.	—	—	—	—	1	3
Case School of Applied Science	—	2	3	1	—	1
Catholic Univ. of America	—	1	—	—	1	—
Central (Pella, Ia.)	—	—	1	1	1	—
Centre	—	—	1	2	1	3
Chicago	2	2	2	6	2	4
Christian Brothers	—	—	—	—	—	1
Cincinnati	1	1	—	—	—	—
Citadel	—	2	1	1	—	—
City of New York	9	6	6	4	4	2
Clark	3	1	1	1	3	3
Clemson Agricultural	1	—	—	—	1	1
Colby	2	—	1	—	—	—
Colgate	5	2	1	—	1	—
Colorado College	2	1	1	—	1	—
Colorado School of Mines	—	1	2	—	1	2
Colorado University	2	1	1	1	—	—
Columbia	7	6	3	2	4	1
Connecticut Agricultural	—	—	—	1	—	—
Cooper Union	—	—	—	—	—	1
Cornell University	5	3	2	—	3	7
Cotner	1	—	—	—	—	—
Dartmouth	12	7	11	11	10	10
Davidson	1	2	2	2	1	1
Dayton	—	1	—	—	—	1
Delaware	—	1	2	3	1	1
Denison	1	1	—	—	—	—
Denver	—	—	1	—	1	—
De Pauw	—	—	—	—	2	3
Detroit	—	1	—	1	—	1
Dickinson	1	1	1	1	—	—
Drake	—	1	—	1	—	—
Drexel Institute	—	1	—	—	1	2
Duke	—	—	—	—	—	1
Elmira	—	—	—	1	—	—
Emory	—	—	1	—	—	—
Emporia	—	—	1	1	2	2
Erskine	—	—	—	1	—	—
Fairmount	1	—	—	—	—	—
Fordham	2	1	—	—	—	—
Franklin and Marshall	1	—	—	—	—	1
Friends	1	1	1	1	1	1
Furman	—	—	1	1	1	—
Geneva	—	—	—	—	1	1
Georgetown	1	1	—	2	5	3
Georgia	—	—	—	1	—	—
Georgia School of Tech.	2	1	1	1	2	3
Gettysburg	—	1	—	—	—	—
Gonzaga	—	—	—	—	—	1
Gooding	—	—	—	—	—	1
Grinnell	3	1	1	1	—	—
Hamilton	3	3	1	—	1	1
Hanover	1	—	—	—	—	—
Harvard	14	12	14	9	13	14
Haverford	7	7	5	3	2	3
Hillsdale	1	—	—	—	—	1
Hiram	—	—	—	—	—	1
Holy Cross	2	1	1	2	1	—
Howard	2	1	1	—	—	1
Hunter	—	—	—	—	1	1
Idaho	1	—	—	—	—	—
Illinois	3	4	3	1	2	5
Indiana University	4	3	2	1	2	2
Iowa State	1	5	1	1	3	3
Johns Hopkins	3	1	—	2	3	—
Kalamazoo	1	—	—	—	—	—
Kansas City School of Law	—	—	—	1	1	—
Kansas State Agric.	—	—	1	1	2	—
Kansas University	2	2	1	—	—	3
Kentucky	1	1	—	—	—	3
Kenyon	1	2	—	1	1	1
Knox	—	—	—	—	—	1
Lafayette	—	1	1	—	1	1
Lawrence	2	—	—	—	—	—
Lehigh	—	4	—	1	2	2
Louisiana State	1	—	—	—	—	1
Louisville	—	—	1	1	1	2
Loyola	2	2	1	1	—	—
Maine	2	1	1	—	1	2
Manhattan	1	—	—	—	—	1
Marietta	—	—	—	—	—	1
Maryland	—	—	1	—	—	3
Massachusetts Agric.	—	1	1	2	—	1
Massachusetts Institute of Technology	68	78	87	102	117	118
Mercer	1	1	1	—	—	1
Miami	—	2	—	1	2	—
Michigan	6	8	4	9	3	2
Michigan Agricultural	—	1	—	—	—	—
Middlebury	2	—	1	3	2	2
Minnesota	6	4	2	2	3	—
Mississippi	2	—	—	—	—	1
Mississippi Agricultural and Mechanical	1	—	—	—	—	1
Missouri	3	—	3	4	3	2
Missouri School of Mines	—	—	—	1	—	—

GRADUATES OF COLLEGES REGISTERED, 1926–1927 — *Continued*

American Colleges and Universities Represented

	1921–22	1922–22	1923–24	1924–25	1925–26	1926–27
Missouri State Teachers	—	—	—	—	—	1
Missouri Wesleyan	1	—	—	—	—	—
Montana	—	1	1	—	—	—
Montana School of Mines	—	2	—	—	—	—
Morehouse	—	—	1	1	1	1
Mount Holyoke	2	2	2	1	2	3
Mount St. Mary's	—	—	1	—	—	—
Muhlenberg	—	—	1	1	1	1
Nebraska	1	1	1	1	2	3
New Hampshire	2	3	2	2	1	5
New Mexico	1	1	1	—	—	—
New Rochelle	—	—	—	—	—	1
New York State	—	—	—	1	1	1
North Carolina	1	4	1	1	—	—
North Dakota	—	—	—	—	—	1
North Dakota Agricultural	1	—	—	—	—	1
Northeastern	2	1	2	4	3	5
Northwestern	6	3	1	3	3	1
Norwich	1	2	2	—	1	1
Notre Dame	—	—	1	1	2	3
Oberlin	2	2	—	—	1	1
Occidental	—	—	2	2	—	—
Ohio Northern	—	3	—	—	—	—
Ohio State	1	2	1	—	1	3
Ohio Wesleyan	—	1	2	4	2	—
Oklahoma Agr. and Mech.	—	—	—	2	2	2
Ohlahoma University	—	1	—	—	—	1
Oregon	2	2	—	2	1	1
Oregon Agricultural	2	1	—	—	1	1
Ottawa Univ. (Kansas)	—	1	—	—	—	—
Pacific	1	1	1	1	—	1
Pennsylvania (Gettysburg)	3	—	—	—	—	—
Pennsylvania Military	—	3	2	3	2	1
Pennsylvania State	5	4	4	1	2	2
Pennsylvania University	4	3	1	2	3	5
Pittsburgh	2	—	—	—	1	—
Polytechnic Coll. of Eng.	—	—	—	—	—	1
Pomona	1	1	2	1	1	2
Princeton	16	11	13	12	12	12
Providence	—	—	1	—	1	1
Purdue	1	—	2	—	1	3
Radcliffe	2	1	2	2	2	—
Randolph-Macon	—	—	—	—	—	1
Reed	2	2	2	1	—	—
Rensselaer Polytech. Inst.	—	1	1	2	4	4
Rhode Island State	1	1	—	—	—	1
Rice Institute	2	1	1	1	2	—
Richmond	—	—	1	1	—	—
Roanoke	—	1	1	1	1	—
Rochester	3	5	3	3	1	—
Rockford	—	—	—	1	—	—
Rockhurst	—	—	—	—	1	1
Roger Williams	1	1	1	1	1	—
Rose Polytechnic Institute	—	—	—	—	1	1
Rutgers	—	—	—	—	—	1
Sacred Heart	1	1	1	—	—	—
St. Bonaventure	—	—	1	1	1	—
St. Francis Xavier	—	—	—	—	—	1
St. Louis	1	—	—	2	—	—
St. Olaf	—	—	—	—	—	1
Simmons	—	—	1	3	1	1
Simmons (Texas)	—	—	—	1	1	—
Simpson	1	1	—	—	1	1
Smith	—	—	1	3	1	2
South Carolina	—	—	—	2	1	1
South Carolina Military	1	—	—	—	—	—
So. Dakota Sch. of Mines	1	1	—	—	—	—
South Dakota	2	—	—	—	—	—
Southwestern	—	—	1	—	—	—
Spring Hill	3	2	—	—	—	—
Stanford	3	2	6	4	5	2
Stetson	—	—	2	2	—	—
Stevens Institute of Tech.	—	—	—	1	1	1
Swarthmore	2	—	1	—	—	2
Syracuse	1	3	1	2	2	2
Temple	—	—	—	—	1	—
Texas	4	7	2	5	3	7
Texas, Agr. and Mech.	1	—	—	3	3	4
Texas Military	1	—	—	—	—	—
Transylvania	1	1	—	—	—	—
Trinity (Hartford, Conn.)	2	—	—	1	1	—
Trinity (Wash., D. C.)	—	1	—	—	1	—
Tri State	1	—	2	4	3	1
Tufts	4	4	2	3	2	4
Tulane	—	—	1	—	1	1
Union	—	—	1	2	—	—
U. S. Military Academy	32	22	6	5	6	7
U. S. Naval Academy	39	46	25	27	20	20
Ursinus	1	1	—	—	—	—
Utah	1	1	—	1	1	—
Valparaiso	—	1	—	2	—	—
Vanderbilt	1	1	3	1	—	2
Vassar	2	—	—	—	1	1
Vermont	1	1	1	—	2	2
Virginia	6	6	3	7	2	2
Virginia Military	8	10	5	6	8	5
Virginia Polytechnic Inst.	—	2	1	—	1	1
Virginia Union	—	1	1	—	1	—
Wabash	3	—	1	1	—	—
Washburn	—	—	—	1	—	—
Washington	2	4	6	4	3	6
Washington and Jefferson	1	2	2	—	—	—
Washington and Lee	1	1	2	—	—	—
Washington Law	—	—	—	—	—	1
Washington State	—	1	1	1	2	—
Waynesburg	—	—	—	1	1	—
Wellesley	3	5	5	6	4	7
Wesleyan	—	6	3	1	1	3
Western Maryland	2	—	—	—	—	—
Western Reserve	1	2	—	—	—	—
Westminster (Colo.)	2	2	2	—	—	—
West Virginia	—	—	—	1	4	5
Whitman	1	—	1	—	—	—
Willamette	—	1	1	1	—	1
William Jewell	1	—	1	—	—	—
William and Mary	—	1	—	2	1	1
Williams	5	7	10	6	5	8
Wisconsin	1	4	5	3	6	6
Wittenberg	1	1	—	1	1	1
Wofford	—	—	—	1	2	—
Wooster	—	—	—	1	—	—
Worcester Polytechnic	—	1	1	—	2	1
Yale	13	9	2	9	11	5

GRADUATES OF COLLEGES REGISTERED, 1926–1927 — *Continued*

American Colleges and Universities Represented

No. of Colleges Represented	1921–22	1922–23	1923–24	1924–25	1925–26	1926–27
American	142	141	137	141	132	147
Foreign	55	63	70	55	50	48
Total	197	204	207	196	182	195
No. of Graduates of Colleges						
Candidates for Advanced Degrees	208	277	264	285	327	331
Pursuing Undergraduate Work	352	130	150	168	142	183
Total	560	407	414	453	469	514

TABLE 10

NEW STUDENTS FROM OTHER COLLEGES, 1926–1927

Class Joined at the Institute	Years Spent at College				Total
	One	Two	Three	Four or more	
First year	51	16	—	8	75
Second year	12	24	12	22	70
Third year	—	7	8	30	45
Fourth year	—	—	—	28	28
Graduate year	—	—	—	160	160
Unclassified	—	—	—	4	4
Total	63	47	20	252	382

TABLE 11

STUDENTS FROM COLLEGES CLASSIFIED BY COURSES, 1926–1927

Graduates and Students from Colleges 37.4% of the Total Number of Students	Aeronautical Engineering	Architecture	Biology and Public Health	Chemical Engineering	Chem. Eng. Practice X-A	Chem. Eng. Practice X-B	Chemistry	Civil Engineering	Electrical Eng. (Inc. VI-A)	Electrochemical Engineering	Engineering Administration	Fuel and Gas Eng.	General Science	General Engineering	Geology	Mathematics	Mechanical Engineering	Military Engineering	Mining Eng. and Metallurgy	Naval Architecture	Naval Construction	Physics	Sanitary and Municipal Eng.	Unclassified	Total	Per cent of total number of Students
Graduates .	16	38	17	36	41	—	52	48	113	7	14	7	—	2	10	6	58	1	15	6	15	8	1	3	514	19.2
Non-graduates	11	71	3	28	—	3	7	55	124	8	57	—	—	11	2	1	74	—	8	9	—	4	1	8	485	18.2
Total . .	27	109	20	64	41	3	59	103	237	15	71	7	—	13	12	7	132	1	23	15	15	12	2	11	999	37.4

TABLE 12

AGES OF FIRST YEAR STUDENTS, OCTOBER, 1926

Under 17	10
17 to 17½	36
17½ to 18	66
18 to 18½	77
18½ to 19	90
19 to 19½	58
19½ to 20	40
20 to 20½	35
20½ to 21	21
21 to 22	25
22 to 23	12
23 to 24	8
Over 24	17
Total	495

Omitting those under 17, and over 24, on October 1, the average age was 19 years.

TABLE 13

Degrees of Bachelor of Science Awarded by Years and Courses

Year	Aeronautics	Architecture	Civil Engineering	Chemical Eng.	Chemical Eng. Practice X-B	Chemistry	Electrical Eng. (Inc. VI-A)	Electrochemical Engineering†	Engineering Administration	Geology	General Course or General Science	General Eng.	Mathematics	Mechanical Eng.	Military Eng.	Mining Eng. and Metallurgy	Natural History or Biology	Naval Arch.	Physics	Sanitary Eng.	Total	Total by Decades
1868	—	—	6	—	—	1	—	—	—	—	1	—	—	1	—	6	—	—	—	—	14	
1869	—	—	2	—	—	1	—	—	—	—	—	—	—	2	—	—	—	—	—	—	5	
1870	—	—	4	—	—	1	—	—	—	—	1	—	—	2	—	2	—	—	—	—	10	29
1871	—	—	8	—	—	2	—	—	—	—	—	—	—	2	—	5	—	—	—	—	17	
1872	—	—	3	—	—	3	—	—	—	—	—	—	—	1	—	5	—	—	—	—	12	
1873	—	1	12	—	—	7	—	—	—	—	1	—	—	2	—	3	—	—	—	—	26	
1874	—	1	10	—	—	—	—	—	—	—	2	—	—	4	—	1	—	—	—	—	18	
1875	—	1	10	—	—	1	—	—	—	—	2	—	—	7	—	6	—	—	1	—	28	
1876	—	1	12	—	—	5	—	—	—	—	4	—	—	8	—	8	2	—	3	—	43	
1877	—	4	12	—	—	2	—	—	—	—	—	—	—	6	—	8	—	—	—	—	32	
1878	—	3	8	—	—	3	—	—	—	—	1	—	—	2	—	2	—	—	—	—	19	
1879	—	1	6	—	—	3	—	—	—	—	—	—	—	8	—	3	1	—	1	—	23	
1880	—	—	3	—	—	1	—	—	—	—	1	—	—	—	—	3	—	—	—	—	8	226
1881	—	3	3	—	—	8	—	—	—	—	2	—	—	5	—	6	1	—	—	—	28	
1882	—	3	2	—	—	6	—	—	—	—	1	—	—	5	—	5	1	—	1	—	24	
1883	—	1	3	—	—	3	—	—	—	—	—	—	—	7	—	5	—	—	—	—	19	
1884	—	—	5	—	—	12	—	—	—	—	—	—	—	6	—	13	—	—	—	—	36	
1885	—	2	4	—	—	4	2	—	—	—	1	—	—	7	—	8	—	—	—	—	28	
1886	—	1	9	—	—	7	10	—	—	—	1	—	—	23	—	7	1	—	—	—	59	
1887	—	1	10	—	—	9	8	—	—	—	3	—	—	17	—	8	1	—	1	—	58	
1888	—	5	11	—	—	10	17	—	—	—	1	—	—	25	—	4	3	—	1	—	77	
1889	—	3	14	—	—	8	17	—	—	—	2	—	—	24	—	5	1	—	1	—	75	
1890	—	5	25	—	—	13	18	—	—	—	6	—	—	28	—	3	3	—	2	—	103	507
1891	—	6	18	7	—	11	23	—	—	1	1	—	—	26	—	4	3	—	3	—	103	
1892	—	13	22	4	—	7	36	—	—	1	7	—	—	26	—	4	6	—	1	6	133	
1893	—	2	25	8	—	8	41	—	—	2	6	—	—	30	—	5	2	—	—	—	129	
1894	—	14	21	12	—	11	33	—	—	—	5	—	—	31	—	4	1	—	3	3	138	
1895	—	15	25	11	—	14	33	—	—	—	4	—	—	30	—	3	—	5	2	4	144*	
1896	—	24	26	7	—	17	48	—	—	3	7	—	—	34	—	10	3	5	3	4	190*	
1897	—	16	25	12	—	20	33	—	—	1	7	—	—	40	—	7	2	9	3	4	179	
1898	—	29	32	9	—	25	33	—	—	—	6	—	—	41	—	7	3	7	4	3	199	
1899	—	22	30	10	—	22	32	—	—	—	1	—	—	37	—	9	2	8	2	1	173*	
1900	—	21	32	11	—	19	23	—	—	—	5	—	—	34	—	21	3	9	3	4	185	1,573
1901	—	21	37	14	—	17	25	—	—	1	6	—	—	39	—	18	1	16	1	4	200	
1902	—	18	24	9	—	14	35	—	—	—	3	—	—	46	—	14	5	14	3	7	192	
1903	—	15	26	10	—	13	39	1	—	1	1	—	—	37	—	27	1	12	3	4	190	
1904	—	24	34	7	—	15	34	8	—	1	5	—	—	45	—	32	3	17	5	2	232	
1905	—	12	46	13	—	23	31	3	—	1	3	—	—	54	—	26	3	24	—	5	244	
1906	—	22	47	10	—	21	37	3	—	—	—	—	—	69	—	38	2	19	4	6	278	
1907	—	21	37	14	—	10	32	5	—	2	—	—	—	52	—	22	—	10	—	3	208	
1908	—	19	48	15	—	16	38	2	—	—	—	—	—	61	—	19	4	5	—	2	229	
1909	—	18	51	13	—	12	42	3	—	—	—	—	—	41	—	30	5	5	3	9	232	
1910	—	18	57	18	—	10	36	3	—	—	2	—	—	57	—	24	3	11	—	12	251	2,256
1911	—	10	46	19	—	12	49	5	—	—	2	—	—	49	—	17	1	6	1	15	231*	
1912	—	21	55	31	—	7	52	3	—	—	1	—	—	47	—	21	4	3	2	14	260*	
1913	—	26	58	30	—	12	43	8	—	—	—	—	—	50	—	20	2	4	1	15	269	
1914	—	19	60	37	—	9	51	8	—	—	4	—	—	65	—	17	6	8	1	19	301*	
1915	—	30	49	33	—	23	42	10	—	—	3	—	—	69	—	5	3	7	3	12	287*	
1916	—	37	45	32	—	11	56	14	—	—	2	—	—	84	—	5	5	9‡	3	18	318*	
1917	—	27	49	43	—	12	45	10	37	2	5	—	—	63	—	14	10	9‡	1	17	343*	
1918	—	28	45	40	—	10	50	11	29	1	4	2	—	75	—	10	7	4	3	5	322*	
1919	—	16	45	44	—	8	49	6	28	—	1	3	—	66	—	7	9	7	4	6	297*	
1920	—	19	52	63	—	6	30	9	48	—	4	1	—	55	—	13	2	12	2	2	318	2,946
1921	—	11	98	92	—	9	75	15	70	3	—	15	—	127	—	24	3	18	1	3	563*	
1922	—	32	64	98	15	11	109	25	126	8	1	25	—	56	—	27	8	16	8	7	636	
1923	—	31	64	73	19	16	77	16	115	8	2	23	3	106	—	23	6	13	9	3	606*	
1924	—	21	69	57	8	13	125	17	81	2	4	35	1	82	—	19	6	11	3	1	553*	
1925	—	24	56	53	8	18	108	9	94	3	2	37	2	97	—	23	2	10	5	—	550*	
1926	—	31	76	45	13	19	105	14	94	4	2	33	1	76	—	20	5	14	1	2	551*	
1927	1	32	61	33	4	13	76	6	76	3	1	18	3	58	1	8	6	4	3	2	411	
Total	1	801	1,837	1,037	67	623	1,898	214	798	48	137	192	10	2,249	1	713	151	331	105	224	11,407	

Bachelors of Science (omitting twenty-seven counted twice, students graduating in two different years)	11,380
Masters of Science	1,398
Masters in Architecture	41
Doctors of Philosophy, of Engineering, of Science, and of Public Health	144
Total	12,963

* Deducting names counted twice (students graduating in two courses) or receiving an advanced degree in addition to an earlier degree.

† Prior to 1909 this Course was designated as Option 3 (Electrochemistry) of Course VIII.

‡ Two received the degree in XIII-B in 1916 and three in 1917.

TABLE 14

DEGREES DOCTOR OF PHILOSOPHY AWARDED

Year	Biology	Chemistry	Geology	Mathematics	Physics	Total
1907	—	3	—	—	—	3
1908	—	3	—	—	—	3
1909	—	—	—	—	—	—
1910	—	1	1	—	—	2
1911	1	—	—	—	—	1
1912	—	3	3	—	—	6
1913	—	1	—	—	—	1
1914	—	2	—	—	—	2
1915	—	2	—	—	—	2
1916	—	1	1	—	1	3
1917	—	3	1	—	—	4
1918	—	3	1	—	—	4
1919	—	—	—	—	1	1
1920	—	4	1	—	—	5
1921	1	3	—	—	3	7
1922	—	4	1	—	—	5
1923	—	5	1	—	—	6
1924	2	10	—	—	2	14
1925	—	11	—	—	—	11
1926	—	2	2	—	—	4
1927	2	6	1	1	1	11
Total . .	6	67	13	1	8	95

TABLE 15

DEGREES OF DOCTOR OF ENGINEERING AWARDED (*Discontinued after 1918*)

Year	Electrical Engineering	Electrochemical Engineering	Total
1910	1	—	1
1914	1	—	1
1916	1	—	1
1917	—	1	1
Total	3	1	4

TABLE 16

Degrees of Doctor of Science Awarded

Year	Aero. Eng.	Chem. Eng.	Chemistry	Civil Eng.	Elec. Eng.	Geology	Mathematics	Mech. Eng.	Metallurgy	Min. Eng.	Physics	Total
1911	—	—	—	—	1	—	—	—	—	—	—	1
1912	—	—	—	—	—	—	—	—	—	—	—	—
1913	—	—	—	—	—	—	—	—	—	—	—	—
1914	—	—	—	—	—	—	—	—	—	—	—	—
1915	—	—	—	—	1	—	—	—	—	—	—	1
1916	1	—	—	—	—	—	—	—	—	—	—	1
1917	—	—	—	—	1	—	—	—	—	—	—	1
1918	—	—	—	—	—	—	—	—	—	—	—	—
1919	—	—	—	—	—	—	—	—	—	—	—	—
1920	1	—	—	—	—	1	—	—	—	1	—	3
1921	—	—	—	—	—	—	—	—	—	—	—	—
1922	1	—	1	—	1	—	—	—	—	—	—	3
1923	1	—	—	—	—	1	—	—	1	—	2	5
1924	—	2	—	—	1	1	—	—	1	—	1	6
1925	1	3	—	—	—	—	—	—	3	—	—	7
1926	1	1	1	1	1	—	—	—	4	—	—	9
1927	—	—	—	—	1	—	1	1	2	—	1	6
Total	6	6	2	1	7	3	1	1	11	1	4	43

TABLE 17

Degrees of Doctor of Public Health Awarded

Year		Total
1925		1
1927		1
Total		2

TABLE 18

Degrees of Master in Architecture Awarded

Year		Total
1921		3
1922		2
1923		7
1924		8
1925		5
1926		9
1927		7
Total		41

TABLE 19

Degrees of Master of Science Awarded

	Aeronautical Engineering	Architectural Engineering	Architecture	Biology and Pub. Health	Civil Engineering	Chemical Engineering	Chem. Eng. Practice	Chemistry	Electrical Eng. (Inc. VI-A)	Electrochemical Eng.	Eng. Administration	Fuel & Gas Eng.	Geology	General Science	Mathematics	Mechanical Engineering	Metallurgy	Mining Engineering	Naval Architecture	Naval Con., U. S. N.	Naval Con., Foreign Stud	Physics	Sanitary Engineering	No Course	Total
1886	—	—	—	—	—	—	—	1	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	1
1887	—	—	—	—	—	—	—	1	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	1
1888	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
1889	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
1890	—	—	—	—	—	—	—	—	—	—	—	—	—	1	—	—	—	—	—	—	—	—	—	—	1
1891	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
1892	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
1893	—	—	1	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	1
1894	—	—	—	—	1	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	1
1895	—	—	1	—	—	—	—	1	—	—	—	—	—	—	—	—	—	—	—	—	—	1	—	—	3
1896	—	—	2	—	—	—	—	1	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	3
1897	—	—	2	—	—	1	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	1	—	—	4
1898	—	—	1	—	—	2	—	—	—	—	—	—	—	—	—	1	—	—	—	—	—	1	—	—	5
1899	—	—	1	1	—	—	—	1	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	3
1900	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
1901	—	—	2	—	—	—	—	—	—	—	—	—	—	—	—	2	—	—	—	—	—	—	—	—	4
1902	—	—	3	—	—	—	—	3	—	—	—	—	—	—	—	2	—	—	—	—	—	—	—	—	8
1903	—	—	5	—	—	—	—	—	—	—	—	—	—	—	—	1	—	—	—	—	—	—	1	—	7
1904	—	—	4	—	—	—	—	1	2	—	—	—	—	—	—	1	—	—	—	3	—	1	—	—	12
1905	—	—	9	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	8	—	—	1	—	18
1906	—	—	3	—	—	—	—	1	—	—	—	—	—	—	—	—	—	—	2	3	—	—	—	—	9
1907	—	—	6	—	—	1	—	—	—	—	—	—	—	—	—	—	—	—	—	8	—	—	—	—	15
1908	—	—	1	—	—	—	—	1	3	—	—	—	—	—	—	—	—	—	—	7	—	—	—	—	12
1909	—	—	6	—	2	1	—	1	1	—	—	—	1	—	—	1	—	2	—	3	—	1	—	—	19
1910	—	—	6	1	2	—	—	1	1	—	—	—	—	—	—	1	—	—	—	7	—	—	—	—	19
1911	—	—	5	2	2	—	—	2	4	—	—	—	—	—	—	2	—	—	—	3	—	—	—	—	20
1912	—	—	4	2	3	—	—	3	2	—	—	—	—	—	—	—	—	2	—	4	—	—	2	—	22
1913	—	—	4	1	1	7	—	—	1	—	—	—	1	—	—	2	—	1	—	2	—	—	—	—	20
1914	—	—	3	2	3	3	—	5	2	—	—	—	1	—	—	1	—	—	—	2	—	—	3	—	25
1915	1	—	4	—	1	2	—	2	10	1	—	—	—	—	—	4	—	1	1	2	—	—	—	—	29
1916	5	—	7	1	5	1	—	3	6	1	—	—	—	—	—	4	—	—	—	2	5	—	1	—	41
1917	4	—	3	—	3	1	—	1	5	—	—	—	—	—	—	1	—	1	—	9	—	1	2	—	31
1918	5	—	1	1	1	1	—	1	2	—	—	—	—	—	—	2	—	1	—	—	—	—	—	1	16
1919	2	—	—	—	4	—	—	3	4	1	—	—	—	—	1	1	—	—	—	—	—	—	—	—	16
1920	—	—	1	4	3	—	—	2	7	1	—	—	3	—	1	5	—	1	—	19	—	1	—	4	52
1921	3	1	—	2	29	—	—	6	4	—	—	—	2	—	—	10	—	—	—	20	—	—	—	17	94
1922	5	1	—	5	6	32	4	37	1	—	—	—	2	—	2	4	—	3	—	10	—	1	—	18	131
1923	10	—	—	5	3	34	1	45	—	—	—	—	2	—	—	15	1	—	4	21	—	3	—	26	170
1924	4	—	—	5	6	41	1	34	1	—	—	—	1	—	—	8	1	1	—	12	—	5	—	28	148
1925	5	1	—	5	3	35	3	35	1	1	—	—	—	—	—	10	2	1	—	—	—	2	1	21	126
1926	6	1	—	2	5	20	2	60	1	—	—	—	3	—	—	6	1	—	—	12	—	—	—	25	144
1927	9	—	1	6	2	26	4	54	2	—	—	2	6	—	1	13	—	2	—	6	—	1	—	32	167
Total	59	4	84	13	62	77	188	56	319	10	1	2	22	1	5	97	5	16	7	163	5	19	11	172	1,398

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MASSACHUSETTS INSTITUTE OF TECHNOLOGY

TREASURER'S REPORT

FOR THE YEAR ENDED JUNE 30, 1927

AUDITORS' CERTIFICATE

We have examined the books and accounts of the Treasurer and the Bursar of the Massachusetts Institute of Technology for the year ended June 30, 1927, and we report upon the accompanying financial statements of the Treasurer, as follows:

We agreed the investment accounts in detail with certified lists of securities obtained from the Old Colony Trust Company of Boston, Massachusetts, and from the Security Trust Company of Rochester, New York, and verified the several other assets and liabilities shown in the Treasurer's Balance Sheet, Schedule D.

We satisfied ourselves by extensive tests of the recorded transactions for the year that income receivable had been duly accounted for and that expenditures were properly controlled and authorized.

We Hereby Certify that the accompanying Balance Sheet and the Statements of Income and Expenditures correctly set forth respectively the financial condition of the Institute at June 30, 1927, and the financial results for the year ended at that date, and that such financial statements are in accordance with the books of the Institute.

We extended our examination to include the transactions relating to the accounts of the Wyeth and Hewett Funds, of which the Massachusetts Institute of Technology acts as Trustee, and satisfied ourselves that the provisions of the Trust Agreements had been fulfilled.

Our examination embraced also the accounts of the Massachusetts Institute of Technology Pension Association, which we found to be correctly stated.

Respectfully submitted,

Patterson, Teele & Dennis,
Accountants and Auditors.

September 27, 1927.

TREASURER'S REPORT

To the Corporation of
the Massachusetts Institute of Technology:

The statements submitted herewith show the financial condition of the Massachusetts Institute of Technology as of June 30, 1927, as well as the financial transactions during the fiscal year ended on the date.

The following gifts and legacies have been received during the year.

Capital Gifts:

Alumni Fund Payments	$116.00	
Robert D. Kahn, for Architectural Department Fund	250.00	
Estate of Edmund Dana Barbour, for Endowment	743,580.00	
Estate of Walter S. Barker, for Library Endowment	10,000.00	
Estate of William Sumner Bolles, for William Sumner Bolles Scholarship Fund (additional)	568.83	
Howard Coonley, for Bursar's Fund	200.00	
R. F. Pach, for Bursar's Fund	200.00	
C. L. Edgar, for Bursar's Fund	200.00	
Maria T. Catlin, for Nino Tesher Catlin Scholarship Fund	1,000.00	
Class of 1888 Dormitory Fund	1,225.00	
Class of 1892 Dormitory Fund (additional)	7,250.00	
Class of 1898 Loan Fund	2,460.00	
Class of 1901 Dormitory Fund	40,525.00	
Carl P. Dennett, for Loan Fund	500.00	
Estate of Charles W. Eaton, for Endowment	170,854.50	
Educational Endowment Fund Payments	6,756.98	
Estate of Ida F. Estabrook, for Endowment	2,157.51	
Estate of Henry C. Frick, for Endowment (additional)	39,200.00	
William C. Hunneman, for Prize Fund	1,050.00	
Industrial Fund Payments	27,621.00	
Emma B. Moore, for Forris Jewett Moore Fund (Chemical Department)	25,000.00	
John E. Aldred, for Municipal and Industrial Research Fund	101,850.00	
New Dormitory General Fund	596.00	
Coleman du Pont, for New Land	35,000.00	
L. du Pont, for Summer Surveying Camp Loan Fund	500.00	
Estate of Edmund K. Turner, for Endowment (additional)	4,459.95	
Estate of Samson R. Urbino, for Scholarship	1,000.00	
Estate of Theodore N. Vail, for Endowment (additional)	12,236.00	
Estate of Kenneth F. Wood, for Endowment	25,000.00	
		$1,261,356.77

Miscellaneous Gifts:

Arkwright Club Scholarship Fund	$2,000.00	
Contributions, Boat House Equipment	6,283.00	
Contributions, Course XV Fund	110.00	
E. I. du Pont de Nemours Co., for Fellowship	750.00	
Boston Consolidated Gas Co., for Fuel and Gas Scholarship	350.00	
Massachusetts Gas Co., for Fuel and Gas Scholarship	350.00	
Louis J. and Mary E. Horowitz, for Horowitz Building Construction Fund	10,000.00	
Proprietors of the Locks and Canals Fellowship	2,000.00	
E. H. R. Green, for Short Wave Research Fund	10,500.00	
Gerard Swope, for Fellowships	3,500.00	
Estate of F. E. Weston, for Scholarship	200.00	
Estate of S. M. Weston, for Scholarship	200.00	
American Telephone and Telegraph Co., for Course VI	5,000.00	
General Electric Co., for Courses VI and VIII	20,000.00	
H. W. Underwood, Jr., for Current Purposes	50.00	
		61,293.00
		$1,322,649.77

At its meeting on March 9, 1927 the Corporation voted to set the tuition fee at $400 per year, beginning in October, 1928, and to eliminate laboratory fees and undergraduate dues. The present tuition is $300 per year while laboratory fees and undergraduate dues average about $30, so that the net increase in tuition will be about $70. This should increase the annual income from students approximately $175,000.

On October 1, 1926, the Massachusetts Institute of Technology Pension Association was established for the protection of the instructing and administrative staff. To the funds of the Association each member contributes 5 per cent of his salary. To the Association the Institute contributed $25,000 as a reserve fund and also contributes annually 3 per cent of the salary of each member. In addition the Institute carries group life insurance to the extent of $5,000 for each member. This means that the contribution of the Institute is practically equal to the 5 per cent contributed by the staff. Following is a statement of the Trustees as of June 30, 1927:

MASSACHUSETTS INSTITUTE OF TECHNOLOGY PENSION ASSOCIATION

BALANCE SHEET, JUNE 30, 1927

Assets

Investments (below)	$93,989.00
Cash	1,082.97
Total	$95,071.97

Liabilities

Salary Deductions (5%)	$43,024.30
Appropriations, M. I. T. (3%)	25,895.68
Appropriations, M. I. T. (reserve)	25,000.00
Net Income (collected)	1,151.99
	$95,071.97

Investments

$5,000	Dominion of Canada	5½s	1929	$5,050.00
7,000	City of Montreal	5s	1936	7,000.00
5,000	United Kingdom, G. B. & Ireland	5½s	1937	5,045.00
7,000	American Sugar Ref.	6s	1937	7,252.00
5,000	Am. Tel. & Tel. Co.	5s	1946	5,142.00
10,000	Cedar Rapids Mfg. & Power	5s	1953	10,000.00
10,000	Detroit Edison Co.	5s	1940	10,000.00
5,000	Mass. Gas Co.'s	4½s	1929	5,000.00
7,000	Miss. Riv. Pow'r 1st	5s	1951	7,000.00
15,000	Penn. R. R. Eq. Tr.	5s	1930	15,000.00
7,000	Central Dist. Mfg. 1st	5½s	1937	7,000.00
5,000	Chic. & N. W. Ry. Co., Eq. Tr.	5s	1933	5,000.00
500	Shares General Elec. Co. Spec. Stock			5,500.00
	Total Investments			$93,989.00

Arrangements have also been made for providing group life and health insurance on a contributory basis for all office and maintenance employees of the Institute. This will go into effect October 1, 1927.

Attention is called to the book value of the Institute's securities amounting to $29,000,000. The market value of these securities as of June 30 is approximately $3,000,000 in excess of the book value. This explains in part the high average yield for the year of 5.5 per cent.

Respectfully submitted,

EVERETT MORSS,
Treasurer.

October 1, 1927.

SCHEDULE A

FINANCIAL RESULT OF OPERATION FOR YEAR ENDED JUNE 30, 1927 COMPARED WITH THE PREVIOUS YEAR

	1925-26	*1926-27*
Current Operating Expense (Schedule C) . . .	$2,778,712.11	$3,084,883.62
Current Operating Income (Schedule B).	2,831,567.73	3,010,357.81
Excess Income, 1925–1926	52,855.62	.....
Excess Expense, 1926–1927	.....	74,525.81
PROFIT AND LOSS		
Loss (Schedule S)	$1,230.88	$981.17
Net Profit for 1925–1926	51,624.74	.....
Net Loss for 1926–1927.	.....	75,506.98
Excess Income of Funds, credited to Funds, 1925–1926.	32,988.59	.....
Excess Expense of Funds, charged to Funds, 1926–1927.	.....	97,803.51
Increase of Current Surplus (Schedule S) . .	$18,636.15	$22,296.53

SCHEDULE B
OPERATING INCOME FOR YEAR 1926-1927

	Regular Courses	*Research and Funds*	*Total*
INCOME FROM STUDENTS:			
(*a*) Tuition Fees, Regular	$678,864.20	.....	.....
Tuition Fees, Summer Session	133,557.86	.....	.....
Laboratory Fees	41,253.50	.....	.....
Locker Fees	1,428.16	.....	.....
Entrance Examination Fees	3,355.00	.....	.....
Condition Examination Fees	13,780.00	.....	.....
Registration Fees	2,014.00	.....	.....
Sale of Lecture Notes (Net)	243.70	.....	.....
Net Dormitory Income (Schedule C–17)	20,437.58	.....	.....
	$894,934.00	.....	$894,934.00
INCOME FROM INVESTMENTS:			
Endowments, General Purposes, (Schedule P)	$1,042,550.06	$300,831.25	$1,343,381.31
(*a*) Endowment for Scholarships, applied	58,820.00	.....	58,820.00
Endowments, Designated Purposes (Schedule R)	69,859.50	127,815.50	197,675.00
(*b*) Net (Schedule Q)	$1,171,229.56	$428,646.75	$1,599,876.31
INCOME FROM NATIONAL GRANTS:			
Federal Aid from Act 1862	$5,306.68	.....	.....
Act 1890	16,666.67	.....	.....
	$21,973.35	.....	$21,973.35
INCOME FROM OTHER SOURCES:			
American Telephone and Telegraph Co., Course VI-A	$5,000.00	.....	.....
General Electric Co., Course VI-A	20,000.00	.....	.....
Division of Laboratory Supplies	6,211.83	.....	.....
Trustees H. C. Frick Estate	75,015.67	.....	.....
E. A. Wyeth Fund	68.316.00		
Bank Interest	8,536.38	.....	.....
Huntington Hall, Rental	3,500.00	.....	.....
Walker Building, Boston	10,000.00	.....	.....
Gift for Current Purposes	50.00	.....	.....
	$196,629.88	.....	$196,629.88
MINOR FUND EARNINGS:			
Total (Schedule R)	.....	$296,944.27	$296,944.27
TOTAL OPERATING INCOME (Schedule A)	$2,284,766.79	$725,591.02	$3,010,357.81

(*a*) Total Tuitions and Scholarships, $871,242.06.
(*b*) Additional Income offset by Accrued Interest, Expenses, etc., $40,724.11.

SCHEDULE C
OPERATING EXPENSE FOR YEAR 1926-1927

	Regular Courses	*Research and Funds*	*Total*
ACADEMIC EXPENSES:			
Salaries of Teachers (C–1)	$1,100,498.74	.....	.....
Wages Accessory to Teaching (C–1)	43,688.02	.....	.....
Wages, Laboratory Service (C–1)	57,549.31	.....	.....
Department Expenses (C–2)	130,305.15	.....	.....
General Library (Schedule C–3)	42,622.73	.....	.....
	$1,374,663.95	.....	$1,374,663.95
ADMINISTRATION EXPENSES:			
Salaries, Officers	$70,175.00	.....	.....
Wages, Clerical Staff (C–4)	61,151.66	.....	.....
Printing and Advertising (C–5)	31,489.76	.....	.....
General Expense (C–6)	88,398.32	.....	.....
	$251,214.74	.....	$251,214.74
PLANT OPERATION AND MAINTENANCE:			
Wages, Building Service (C–7)	$119,367.25	.....	.....
Power Plant Operation (C–8)	118,819.58	.....	.....
Fire Insurance (Net)	7,313.48	.....	.....
Repairs and Alterations (C–9)	162,806.91	.....	.....
	$408,307.22	.....	$408,307.22
SPECIAL APPROPRIATIONS:			
Total (C–10)	$106,671.89	.....	$106,671.89
MISCELLANEOUS EXPENSES:			
Pension and Insurance Plan	$43,159.30	.....	.....
Division of I. C. and Research	21,525.00	.....	.....
Civil Eng. Summer Camp 1926 (C–11)	15,899.01	.....	.....
Mining Eng. Summer Camp 1926 (C–12)	3,092.90	.....	.....
Athletic Field	9,512.39	.....	.....
Boat House and Launches	6,116.45	.....	.....
*Walker Memorial (Schedule C–14)	21,326.24	.....	.....
	$120,631.29	.....	$120,631.29
EXPENSES OF MINOR FUNDS:			
Total, including Salaries (Schedule R)	.....	$358,372.66	358,372.66
AWARDS (other than Und. Schol.):			
Total (Schedule C–15)	.....	44,521.81	44,521.81
PAYMENTS FROM SPECIAL FUNDS:			
Total (Schedule C–16)	.....	420,500.06	420,500.06
TOTAL OPERATING EXPENSE (Schedule A)	$2,261,489.09	$823,394.53	$3,084,883.62

*Not including Dining Service (see Schedule C-13).

SCHEDULE C-1
SALARIES OF TEACHERS, WAGES ACCESSORY TO TEACHING AND LABORATORY SERVICE

Department	*Teachers Salaries (Net)*	*Wages Accessory to Teaching (Net)*	*Wages Laboratory Service (Net)*
Summer Session	$76,432.00	.....	.....
Aeronautics	15,500.00	$946.00	.....
Architecture	56,850.00	3,195.00	$2,035.40
Biology	31,525.00	1,144.00	1,642.00
Chemistry	120,036.70	3,749.44	1,272.00
Chemistry, Res. Lab. of Physical	20,233.00	*.....	*.....
Chemical Engineering	22,660.00	1,404.00	1,894.60
Chemical Engineering, Prac. School	19,738.00	*.....	.....
Civil Engineering	66,518.00	2,568.00	.....
Division of Laboratory Supplies	.....	.....	17,384.55
Drawing	24,500.00	164.48	.....
Economics	51,884.25	4,231.84	.....
Electrical Engineering	113,165.08	5,339.00	9,440.94
Electrical Engineering Research	4,132.00	*.....	1,768.00
English and History	45,559.66	2,185.00	.....
Fuel and Gas Engineering	10,825.00	517.00	.....
General Eng. and General Science	1,000.00	*.....	.....
General Studies	2,800.00	.....	.....
German	8,500.00	*.....	.....
Hygiene	20,750.00	3,644.92	1,600.00
Lantern Operation	.....	.....	696.50
Mathematics	57,350.00	*.....	.....
Mechanical Engineering	141,978.80	5,324.87	12,299.44
Military Science	6,130.00	816.00	.....
Mining, Metallurgy and Geology	54,731.25	3,956.27	4,315.22
Naval Architecture	29,400.00	1,120.00	1,610.66
Physics	90,750.00	3,350.00	1,590.00
Romance Languages	7,550.00	32.20	.....
Totals (Schedule C)	$1,100,498.74	$43,688.02	$57,549.31

*Included in appropriation for Department Expenses (Schedule C-2).

SCHEDULE C-2
†DEPARTMENT EXPENSES (Net)

Department	*Expense (Net)*	*Overdrafts*
Aeronautics	$1,000.00	$113.26
Aeronautics, Power Plant	†2,486.68	.....
Architecture	2,937.37	.....
Biology	†2,500.00	.....
Chemistry	16,900.00	105.24
Chemistry, Research Laboratory of Physical	5,250.00	83.82
Chemical Engineering	4,079.14	.....
Chemical Engineering Practice School	14,500.00	1,352.85
Civil Engineering	†1,898.53	.....
Civil Engineering, Special	1,000.00	.....
Drawing	593.09	.....
Economics	1,898.00	219.96
Economics, Special	600.00	.....
Electrical Engineering	7,495.07	.....
Electrical Engineering, Communications Laboratory	5,000.00	360.05
Electrical Engineering, Research and Thesis	†8,000.00	22.69
English and History	700.00	.....
Fuel and Gas Engineering (inc. Field Stations)	4,500.00	1,232.46
General Engineering and General Science	737.38	.....
General Studies	250.00	66.94
German	259.62	.....
Hygiene	2,198.77	.....
Mathematics	838.66	.....
Mechanical Engineering	†18,457.44	.....
Mechanical Engineering, Special	1,935.00	.....
Military Science	1,304.06	.....
Mining, Metallurgy and Geology	†5,000.00	15.83
Naval Architecture	1,200.00	97.18
*Nautical Museum	(1,411.03)	.....
Physics	16,200.00	206.72
Romance Languages	17.02	.....
United States Ordnance Officers	569.32	.....
	$130,305.15	$3,877.00
	(Sched. C)	(Sched. D-2)

SCHEDULE C-3
GENERAL LIBRARY

Salaries of Officers	$5,800.00
Wages, Clerical Staff	22,259.90
Expenses	14,562.83
Total (Schedule C)	$42,622.73

*Appropriation — Pratt Fund.
†Certain special appropriations not included (see Schedule 3C-10).

SCHEDULE C-4
WAGES, CLERICAL STAFF, ADMINISTRATION OFFICES

Offices of the President, Dean and Secretary	$13,566.31
Registrar's Office	22,103.67
Bursar's Office	17,389.68
Superintendent's Office	8,092.00
Total (Schedule C)	$61,151.66

SCHEDULE C-5
PRINTING AND ADVERTISING

Printing, Bursar's Office	$1,107.48
Printing, Registrar's Office	5,413.88
Printing, Offices of President, Dean, Secretary and Superintendent	1,730.14
Advertising in M. I. T. Publications	2,128.45
Bulletins: President's and Treasurer's Reports	1,182.00
General Catalog	5,068.50
Directory	1,210.50
"The Massachusetts Institute of Technology"	958.17
Summer Session 1927	2,562.50
Department Bulletins, etc.	1,743.75
Graduate Study and Research	470.50
Examinations	1,882.59
Class Schedules	1,138.00
Maintenance of Catalog of Former Students	2,607.16
Class Cards and Registration Material	915.10
1926 Summer Session Advertising	838.59
Reprints and Binding	532.45
Total (Schedule C)	$31,489.76

SCHEDULE C-6
GENERAL EXPENSE (Net)

Bursar's Office		$3,628.46
Registrar's Office		3,250.65
Superintendent's Office		3,314.32
Fees, Dues, Commissions, etc.		36,929.37
Secretary's Office		995.91
Graduation, Receptions, etc.		9,963.91
President's Office		1,371.36
Ice and Ice Water		1,047.33
Dean's Office		572.85
Endowment Fund Expenses		56.51
Trucking of Mail		1,545.31
News Service		4,997.79
New Student Publicity		1,275.46
Undergraduate Scholarship Committee		727.08
Towel Supply		161.40
Traveling Expenses		2,857.89
Telephone Service		15,855.82
Identification Photographs		586.44
Miscellaneous		1,848.08
Total		$90,985.94
Less Credits, Janitor's Supplies	$190.88	
Office Supplies	733.53	
Laundry	663.12	
Postage	6.62	
Blue Printing	102.67	
Trucking	890.80	
		2,587.62
Total (Schedule C)		$88,398.32

SCHEDULE C-7
WAGES, BUILDING SERVICE

Shop Foremen (net)	$3,355.77
Janitors: Supervisory	2,400.00
Staff	49,627.41
Night Cleaners: Supervisory	1,908.00
Staff	17,575.04
Watchmen (including Cambridge Police)	15,403.82
Window Cleaning	9,884.57
Heating and Ventilation	9,232.32
Messengers	1,055.68
Mail Service	2,869.10
Elevator, Shipper, Stockroom and Matron	5,655.54
Miscellaneous	400.00
Total (Schedule C)	$119,367.25

SCHEDULE C-8
POWER PLANT OPERATION (Net)

Coal		$88,991.96
Water		3,238.40
Supplies		3,077.35
Repairs		16,921.38
Ashes and Trucking		759.11
Salaries		31,417.78
Electricity (Rogers Building)		3,522.50
Total		$147,928.48
Less Transfers to Dormitories, Dining Service, Walker Memorial	$18,530.95	
Inventory, Coal (Schedule D–2)	10,577.95	
		29,108.90
Total (Schedule C)		$118,819.58

SCHEDULE C-9
REPAIRS, ALTERATIONS AND MAINTENANCE

Buildings, etc.	*Supplies and Repairs*	*Alterations*	*Total*
Group No. 1	$9,062.68	$2,289.43	$11,352.11
Group No. 2	12,010.84	7,934.26	19,945.10
Group No. 3	7,860.90	48.44	7,909.34
Group No. 4	10,035.47	406.80	10,442.27
Group No. 5	4,498.39	742.52	5,240.91
Group No. 8	3,995.41	937.26	4,932.67
Group No. 10	7,974.84	54.37	8,029.21
Rogers Building, Boston	11,954.90	.....	11,954.90
Building 30, Service Building	1,030.30	.....	1,030.30
Building 35, Mechanic Arts	909.17	.....	909.17
Building 46, Compression Lab.	716.29	.....	716.29
Miscellaneous Wooden Buildings	1,476.55	.....	1,476.55
President's House	3,113.76	.....	3,113.76
Furniture	2,947.45	.....	2,947.45
Elevators	3,098.53	.....	3,098.53
Water	5,230.71	.....	5,230.71
Gas	3,116.04	.....	3,116.04
Grounds	56,498.89	.....	56,498.89
Rubbish	2,041.71	.....	2,041.71
Undistributed (net)	2,821.00	.....	2,821.00
Total (Schedule C)	$150,393.83	$12,413.08	$162,806.91

SCHEDULE C-10
SPECIAL APPROPRIATIONS

*Journal of Mathematics and Physics	$2,250.00
Society of Arts	1,788.82
Reprints — Purchase and Binding	600.00
New Equipment	6,448.00
Chemicals furnished to Laboratories	5,318.79
*Model, Great Court, No. 457	1,710.00
*Research in Health Education, No. 379	1,500.00
*Research Laboratory of Applied Chemistry	6,000.00
*Alumni Dormitory Committee	10,000.00
*Ore Dressing Laboratory, No. 470	2,000.00
*Elec. Eng. Research Laboratory, No. 468	15,000.00
Aeronautics Power Plant, Nos. 463, 479, 506, 523, 535	14,945.00
*Civil Engineering Dept., Nos. 314, 476, 477	1,167.10
Whiting Concerts, No. 478	2,000.00
*Mechanical Eng. Dept., No. 482	1,100.00
*New Stacks in Library, No. 508	23,720.00
*Squash Courts, No. 344	4,042.54
Levelling, Land West of Massachusetts Avenue, No. 341	2,731.64
*Publication of De Donder's Book, No. 485	900.00
Lecture Notes, Physics Department	1,000.00
Miscellaneous, Nos. 472, 511, 537, 541	2,450.00
	$106,671.89

*See Minor Funds, pages 64 and 65.

SCHEDULE C-11

CIVIL ENGINEERING SUMMER CAMP (1926) TECHNOLOGY, MAINE

Income:		
From Students and Staff	$8,065.02	
Miscellaneous	306.14	
Total Income		$8,371.16
Expenses:		
Teachers' Salaries and Expenses	$8,910.41	
Construction and Repairs	3,485.17	
Caretaker	1,440.00	
Taxes and Insurance	975.53	
Administration, Telephone, etc.	420.05	
Wages — Operating	2,071.50	
Provisions and Supplies	4,324.17	
Coal, Wood, Gas and Ice	1,175.48	
Express and Freight	695.17	
Laundry, etc.	172.69	
Dodge Truck	600.00	
Total Expense		$24,270.17
Net Expense (Schedule C)		$15,899.01

SCHEDULE C-12

MINING ENGINEERING SUMMER CAMP (1926) DOVER, N. J.

Income:		
From Students and Staff	$804.91	
Miscellaneous	28.11	
Total Income		$833.02
Expenses:		
Teachers' Salaries and Expenses	$1,905.07	
Repairs and Equipment	138.38	
Caretaker	360.00	
Insurance	329.57	
Administration, Telephone, etc.	114.13	
Wages — Operating	500.00	
Provisions and Supplies	436.66	
Coal, Wood, Gas and Ice	93.04	
Miscellaneous	49.07	
Total Expense		$3,925.92
Net Expense (Schedule C)		$3,092.90

SCHEDULE C-13

DINING SERVICE (Net)

Inventory July 1, 1926			
Utensils		$14,402.65	
Stock		2,437.95	
			$16,840.60
Expenditures:			
Food		65,002.08	
Salaries		46,079.86	
Light, Heat and Water		4,917.60	
Ice, Refrigeration		1,158.32	
Laundry		2,842.61	
Dining Room and Kitchen Equipment		2,715.24	
Repairs		1,239.28	
Printing and Advertising		770.20	
Administration Expense		662.46	
Express, Freight, etc.		86.33	
Insurance		875.00	
Dining Service, Reserve Fund (Schedule R)		4,874.55	
			131,223.53
Total			$148,064.13
Income:			
Coupon Books	$68,287.17		
Less Outstanding Coupons (Schedule D)	601.17		
		$67,686.00	
Cash		65,764.60	
			$133,450.60
Inventory, June 30, 1927:			
Utensils		$11,565.27	
Stock		3,048.26	
			14,613.53
Total			$148,064.13

SCHEDULE C-14

WALKER MEMORIAL (Net)

Income:			
Undergraduate Dues		$2,500.00	
Games		3,474.22	
Total			$5,974.22
Expenses:			
Salaries		9,853.86	
Light, Heat, Power		4,247.92	
Water		371.59	
Repairs, Alterations, Maintenance		9,347.45	
New Equipment		1,747.26	
Trucking and Administration		391.97	
Supplies		799.01	
Insurance		367.80	
Magazines and Papers		173.60	
Net Expense			27,300.46
Net Loss (Schedule C)			$21.326,24

SCHEDULE C-15
AWARDS FROM FUNDS (Other than Undergraduate Scholarships)

Edward Austin Fund for Research	$4,250.00
Edward Austin Fund for Graduate Scholarships	17,902.50
Teachers' Fund, Retiring Allowances	3,890.00
Robert A. Boit Fund, Prizes	250.00
James Means Prize Fund	440.00
Arthur Rotch Prize Fund, Prizes	200.00
Arthur Rotch "Special" Prize Fund, Prizes	200.00
Bursar's Fund, for Student Loans	4,829.31
Dean's Fund, for Student Loans	550.00
Misc. Funds, for Graduate Scholarships and Fellowships	7,687.50
Jonathan Whitney Fund:	
For Technology Christian Association	1,500.00
Undergraduate Dues	2,822.50
Total (Schedule C)	$44,521.81

SCHEDULE C-16
PAYMENTS FROM SPECIAL FUNDS

Special Deposit — Avon Street, for Rent	$2,350.23
Undergraduate Dues Reserve, Interest	201.82
Frank Harvey Cilley, for Books	1,761.34
Class Endowment Reserve Funds, for Premium Payments	4,104.42
Charles Lewis Flint Library, for Books	258.22
Henry C. Frick, for Taxes	4,202.13
William Hall Kerr Fund, for Books	12.72
M. I. T. Teachers Insurance Fund, for Premium Payments	17,045.55
John Hume Tod, for Books	130.06
Technology Matrons' Teas, for Teas	354.54
F. W. Boles Memorial, for Architecture Department	823.16
Edmund D. Barbour, for Fees	25,342.03
Edmund K. Turner, for Annuity and Tax	2,030.00
Pratt Naval Architectural, for Annuity and Expense	11,862.28
John E. Aldred, for Division of Municipal and Industrial Research	4,207.50
Pratt Naval Architectural, for Nautical Museum	1,411.03
Samuel Cabot, for Applied Chemistry Research	3,248.61
C. B. Richardson, for Applied Chemistry Research	1,600.00
Pension Plan Reserve, to M. I. T. Pension Association	25,439.09
Technology Plan, for Equipment	4,602.00
Ellen H. Richards, for Research	746.57
Edward Whitney, for Volcanic Research	327.36
William L. Chase, for Homberg Infirmary	7,500.00
Ednah Dow Cheney, for Women's Room	939.40
Eastman Contract Fund, to George Eastman	300,000.00
Total (Schedule C)	$420,500.06

SCHEDULE C-17
DORMITORY OPERATION Net)

Income:			
From Rentals		$71,446.65	
Fee Refunds		3,960.61	
Total			$67,486.04
Expenses:			
Salaries		$16,126.13	
Laundry		2,485.70	
Heat, Light, Power		6,916.50	
Water		1,303.15	
Repairs		6,702.60	
Supplies	$5,994.12		
Less Inventory	3,081.75		
(Schedule D–2)		2,912.37	
Insurance		680.04	
Trucking		80.97	
Printing, Administration, Telephone		869.55	
New Equipment		1,471.45	
Interest on Mortgage Loan (Whitney Fund)		7,500.00	
Total			47,048.46
Net Income (Schedule B)			$20,437.58

SCHEDULE D

TREASURER'S BALANCE SHEET

1

ENDOWMENT ASSETS

Securities and Real Estate (Schedule H)	$29,146,085.42
Cash: For Investment (Schedule D-3)	257,746.31
Total June 30, 1927	$29,403,831.73

2

CURRENT ASSETS

Cash: For General Purposes (Schedule D-3)	$108,286.39
Accounts Receivable (Schedule D-1)	54,937.27
Students' Fees, Receivable	477.82
Students' Deposits, Receivable	469.25
Premiums Paid on Unexpired Insurance	22,814.76
Inventories and Advances for 1927–28 (Schedule D-2)	116,384.52
Total June 30, 1927	$303,370.01

3

EDUCATIONAL PLANT ASSETS

Land, Buildings, and Equipment, June 30, 1926	$12,620,469.84
Additions during year	33,733.88
Cash for New Construction	2,808.66
Total, June 30, 1927 (Schedule J)	$12,657,012.38

SCHEDULE D

JUNE 30, 1927

1

ENDOWMENT FUNDS

Funds (Schedule Q)	$29,403,831.73
Total, June 30, 1927	$29,403,831.73

2

CURRENT LIABILITIES

Minor Funds (Schedule R)	$129,818.43
Accounts Payable	18,538.02
Students' Fees and Deposits Payable (Schedule D-4)	98,846.52
*Undergraduate Dues, Balance	1,148.18
Dining Room Coupons, Outstanding	601.17
Total	$248,952.32
Surplus, Available for Current Expenses (Schedule S)	54,417.69
Total June 30, 1927	$303,370.01

3

EDUCATIONAL PLANT CAPITAL

Endowment for Educational Plant, June 30, 1926	$12,585,469.84
Appropriated during year	71,542.54
Total, June 30, 1927 (Schedule K)	$12,657,012.38

*See also Undergraduate Dues Reserve (Schedule R).

SCHEDULE D-1
DETAIL OF ACCOUNTS RECEIVABLE

United States Government, Miscellaneous Contracts	$2,463.80
Boathouse Committee	1,248.09
Division of M. & I. Research Contracts	5,477.76
Research Laboratory of Applied Chemistry Contracts	14,359.35
Harvard Coöperative Society, Inc. (Notes)	2,154.60
Thorp & Martin, Inc. (June rental)	2,912.17
Miscellaneous Accounts	26,321.50
Total (Schedule D)	$54,937.27

SCHEDULE D-2
DETAIL OF INVENTORIES AND ADVANCES FOR 1926-1927

Department Overdrafts (Schedule C-2)	$3,877.00
Summer Session Salaries, Advanced	2,866.00
Civil Engineering Summer Camp 1927, Advanced	1,782.83
Mining Engineering Summer Camp 1927 Advanced	91.67
Inventories — Notes held by Coöperative Society and M.I.T.	3,685.65
Dormitory Supplies	3,081.75
Dining Service, Food, Utensils, etc.	14,613.53
Walker Memorial Games, Candy, Cigars, etc.	568.95
Stamps and Envelopes	327.82
Office Supplies	1,879.69
Building and Janitors' Supplies	4,270.70
Architectural Students' Supply Room, Stock	984.99
Stock Room: Pipe, Fittings, Lumber, Hardware, Paint, Oil, Glass and Miscellaneous Supplies	15,658.38
Division of Laboratory Supplies: Chemicals, Glassware, Platinum, etc.	52,117.61
Coal	10,577.95
Total (Schedule D)	$116,384.52

SCHEDULE D-3

TOTAL CASH RECEIPTS AND DISBURSEMENTS FOR THE YEAR

Total Cash Receipts	$5,806,232.39
Total Cash Disbursements	5,726,546.89
Excess of Receipts	$79,685.50
Cash, June 30, 1926	289,155.86
Cash, June 30, 1927	$368,841.36

CASH BALANCE

Cash for Investment — on Deposit (Schedule D)		$257,746.31
Cash for New Construction (Schedule D)		2,808.66
Cash for Current Purposes (Schedule D)		
On Deposit	$103,886.49	
In Office	4,399.90	
		108,286.39
Total Cash (Schedule D)		$368,841.36

SCHEDULE D-4

STUDENTS' FEES AND DEPOSITS, PAYABLE AND IN ADVANCE

Registration Fees, Summer Session 1927	$3,990.00
Tuition Fees, Summer Session 1927	74,303.25
Students' Deposits Payable	8,408.58
Students' Deposits, Summer Session 1927	4,648.19
Dormitory Deposits in Advance	1,530.00
Dormitory Rentals 1927–1928	207.50
Dormitory Rentals, Summer Session 1927	4,984.00
Deposits, Civil Engineering Camp 1927	545.00
Deposits, Mining Engineering Camp 1927	230.00
Total (Schedule D)	$98,846.52

SCHEDULE H

INVESTMENTS, BONDS, STOCKS

Par Value	*Description of Securities*	*Rate*	*Maturity*	*Balance June 30, 1926*
	GOVERNMENT AND MUNICIPAL BONDS			
$50,000	British Columbia, Province of . . .	4½%	1939	.....
64,000	Canada, Dominion of, 10-Year Gold	4½%	1936	$63,120.00
260,000	Canada, Dominion of, 30-Year Gold	5%	1952	258,511.88
20,000	Canada, Dominion of, 10-Year Gold	5½%	1929	25,500.00
1,000	Cincinnati, City of, Street Imp. . .	4½%	1933	1,011.00
500	Cincinnati, City of, Street Imp. . .	4½%	1935	519.00
1,000	Cincinnati, City of, Street Imp. . .	4½%	1935	1,043.00
6,500	Cincinnati, City of, Condemnation .	4½%	1945	7,040.00
100,000	Columbus, City of, Water Ext. No. 2	4½%	1944	105,804.00
80,000	Great Britain and Ireland	5½%	1937	85,784.00
18,000	Kansas City, Sewer, 2d Issue . . .	4½%	1935	18,683.00
5,000	Kansas City, 23d St. Trafficway . .	4½%	1935	5,189.00
50,000	Los Angeles, City of, Water Works .	4½%	1942	51,917.00
10,000	Los Angeles, City of, Water Works .	4½%	1943	10,296.00
15,000	Los Angeles, City of, Water Works .	4½%	1943	15,446.00
50,000	Maisonneuve, City of (Montreal) .	5%	1954	49,000.00
5,000	Mass., Comlth. of Met. Park Loan .	3½%	1936	.....
18,000	Montreal, City of	5%	1936	25,000.00
100,000	Montreal, City of	5%	1942	97,500.00
10,000	New York, City of, Corporate Stock	4¼%	1964	10,351.00
5,000	New York, City of, Corporate Stock	4½%	1967	4,625.00
33,000	Norfolk, City of, Va., Appropriation	4%	1954	33,000.00
50,000	Omaha, City of, Nebraska	4½%	1934	51,653.00
50,000	Omaha, City of, Water Works . . .	4½%	1941	52,771.00
50,000	Ontario, Province of, Debenture . .	5½%	1937	50,491.00
50,000	Ontario, Province of, Debenture . .	6%	1943	53,899.00
50,000	Ontario, Province of, Debenture . .	5%	1952	49,250.00
41,000	Ottawa, City of, Ontario	4½%	1930	39,003.30
1,000	Ottawa, City of, Ontario	4½%	1935	945.00
2,000	Ottawa, City of, Ontario	5%	1930	1,995.00
10,000	Ottawa, City of, Ontario	5%	1945	9,975.00
5,000	Ottawa, City of, Ontario	5%	1947	5,060.00
50,000	Ottawa, City of, Ontario	5½%	1927	50,457.00
7,000	Ottawa, City of, Ontario	5½%	1931	7,072.00
42,000	Ottawa, City of, Ontario	5½%	1932	42,525.00
60,000	Ottawa, City of, Ontario	5½%	1939	61,744.00
2,000	Ottawa, City of, Ontario	6%	1927	2,000.00
1,000	Ottawa, City of, Ontario	6%	1929	1,016.00
1,000	Ottawa, City of, Ontario	6%	1931	1,027.00

SCHEDULE H

REAL ESTATE AND MORTGAGES

Purchases and Charges during the year	*Sales and Credits during the year*	*Balance June 30, 1927*	*Accrued Interest, etc.*	*Income Received*
$48,325.00	.....	$48,325.00	$225.00	$2,250.00
.....	.....	63,120.00	.....	2,880.00
.....	.....	258,511.88	.....	13,000.00
.....	$5,300.00	20,200.00	.....	1,420.83
.....	2.00	1,009.00	.....	45.00
.....	3.00	516.00	.....	22.50
.....	5.00	1,038.00	.....	45.00
.....	30.00	7,010.00	.....	292.50
.....	342.00	105,462.00	.....	4,500.00
4.88	5,122.88	80,666.00	.....	4,720.83
.....	86.00	18,597.00	.....	810.00
.....	24.00	5,165 00	.....	225.00
.....	128.00	51,789.00	.....	2,250.00
.....	19 00	10,277 00	.....	450.00
.....	28.00	15,418.00	.....	675.00
.....	.....	49,000.00	.....	2,500.00
4,900.00	.....	4,900.00	.....	.....
.....	7,000.00	18,000.00	.....	1,279.16
.....	.....	97,500.00	.....	5,000.00
.....	10.00	10,341.00	.....	425.00
.....	.....	4,625.00	.....	225.00
.....	.....	33,000.00	.....	1,320.00
.....	237.00	51,416.00	.....	2,250.00
.....	198.00	52,573.00	.....	2,250.00
.....	49.00	50,442.00	.....	2,750.00
.....	244.00	53,655.00	.....	3,000.00
.....	.....	49,250.00	.....	2,500.00
.....	.....	39,003.30	.....	1,845.00
.....	.....	945.00	.....	45.00
.....	.....	1,995.00	.....	100.00
.....	.....	9,975.00	.....	500.00
.....	3.00	5,057.00	.....	250.00
.....	457.00	50,000.00	.....	2,750.00
.....	18.00	7,054.00	.....	385.00
.....	105.00	42,420.00	.....	2,310.00
.....	146.00	61,598.00	.....	3,300.00
.....	.....	2,000.00	.....	120.00
.....	8.00	1,008.00	.....	60.00
.....	7.00	1,020.00	.....	60.00

Schedule H (*Continued*)

Par Value	*Description of Securities*	*Rate*	*Maturity*	*Balance June 30, 1926*
	GOVERNMENT AND MUNICIPAL BONDS (*Continued*)			
$5,000	Ottawa, City of, Ontario	6%	1936	$5,270.00
1,000	Ottawa, City of, Ontario	6%	1938	1,067.00
8,000	Ottawa, City of, Ontario	6%	1939	8,536.00
8,000	Ottawa, City of, Ontario	6%	1940	8,566.00
1,000	Ottawa, City of, Ontario	6%	1948	1,084.00
10,000	Ottawa, City of, Ontario	6%	1951	10,856.00
50,000	Toronto, City of, Ontario, Gen. Loan	5%	1932	50,000.00
10,000	Toronto, City of, Ontario	5%	1935	9,845.00
35,000	Toronto, City of, Ontario	5%	1936	34,475.00
18,000	Toronto, City of, Ontario	5%	1937	17,721.00
23,000	Toronto, City of, Ontario	5%	1939	22,655.00
9,000	Toronto, City of, Ontario	5%	1942	8,830.80
5,000	Toronto, City of, Ontario	6%	1934	5,165.00
23,000	Toronto, City of, Consolidated Loan	6%	1944	24,136.00
18,000	Toronto, City of, Consolidated Loan	6%	1945	18,920.00
9,000	Toronto, City of, Consolidated Loan	6%	1946	9,474.00
50,000	Winnipeg, City of, Debenture . .	5%	1943	48,750.00
7,000	Winnipeg, City of, Gr. Water Dist.	5%	1952	6,790.00
25,000	Winnipeg, City of	6%	1946	26,652.00
2,000	Worcester, City of	3½%	1929	.....
	Sold or matured during year . . .			189,350.00
$1,691,000	*Total Government and Municipal Bonds*			$1,858,365.98
	INDUSTRIAL BONDS			
$50,000	Allis-Chalmers Mfg. Co., Gold Deb.	5%	1937	.....
43,000	Am. Agri. Chem. Co., 1st Ref. S. F.	7½%	1941	$46,560.00
50,000	American Radiator Co., Gold Deb. .	4½%	1947	.....
79,000	American Sugar Ref. Co.	6%	1937	87,779.00
100,000	American Thread Co., 1st Mtge. . .	6%	1928	99,500.00
50,000	Anaconda Cop. Min. Co., 1st Con. "A"	6%	1953	49,125.00
25,000	Armour & Co. of Del., 1st Mtge. "A"	5½%	1943	24,000.00
50,000	Chicago P. O. Serv. Bldg. 1st Mtg. "A"	5½%	1936	49,375.00
50,000	Chile Copper Co. Gold	5%	1947	.....
50,000	Corning Gl. Wks. S. F. Gold Deb. "A"	5½%	1937	49,500.00
1,250	Eastern States Exposition Gold (Reg.)	4%	1963	312.50
100,000	First National Pictures, Inc.	6%	1928	100,250.00
25,000	Fruit Growers Ex. Co., Equip. Tr. "G"	4½%	1934	.....
25,000	Fruit Growers Ex. Co., Equip. Tr. "G"	4½%	1935	.....
100,000	Gulf Oil Corp. of Pennsylvania Gold	5%	1937	96,750.00

Schedule H (*Continued*)

Purchases and Charges during the year	*Sales and Credits during the year*	*Balance June 30, 1927*	*Accrued Interest, etc.*	*Income Received*
.....	$30.00	$5,240.00	.....	$300.00
.....	6.00	1,061.00	.....	60.00
.....	45.00	8,491.00	.....	480.00
.....	44.00	8,522.00	.....	480.00
.....	4.00	1,080.00	.....	60.00
.....	36.00	10,820.00	.....	600.00
.....	.....	50,000.00	.....	2,500.00
.....	.....	9,845.00	.....	500.00
.....	.....	34,475.00	.....	1,750.00
.....	.....	17,721.00	.....	900.00
.....	.....	22,655.00	.....	1,150.00
.....	.....	8,830.80	.....	450.00
.....	23.00	5,142.00	.....	300.00
.....	69.00	24,067.00	.....	1,380.00
.....	51.00	18,869.00	.....	1,080.00
.....	25.00	9,449.00	.....	540.00
.....	.....	48,750.00	.....	2,500.00
.....	.....	6,790.00	.....	350.00
.....	87.00	26,565.00	.....	1,500.00
$2,000.00	.....	2,000.00	.....	35.00
.....	189,350.00	.....	.....	5,082.19
$55,229.88	$209,341.88	$1,704,253.98	$225.00	$90,808.01
$49,375.00	.....	$49,375.00	$208.33	.....
325.00	$5,175.00	41,710.00	.....	$3,412.50
48,000.00	.....	48,000.00	31.25	.....
135.20	7,443.42	80,470.78	.....	5,160.00
.....	.....	99,500.00	.....	6,000.00
.....	.....	49,125.00	.....	3,000.00
.....	.....	24,000.00	.....	1,375.00
.....	.....	49,375.00	.....	2,750.00
96,725.00	48,500.00	48,225.00	.....	27.78
.....	.....	49,500.00	.....	2,750.00
.....	.....	312.50	.....	.....
.....	250.00	100,000.00	.....	6,000.00
24,607.25	.....	24,607.25	56.25	562.50
24,573.75	.....	24,573.75	56.25	562.50
.....	.....	96,750.00	.....	5,000.00

Schedule H (*Continued*)

Par Value	*Description of Securities*	*Rate*	*Maturity*	*Balance June 30, 1926*
	INDUSTRIAL BONDS (*Continued*)			
$15,000	Harvard Coöperative Society, Gold	6%	1931	$15,000
50,000	International Paper Co., Convertible	6%	1941	.....
1,000	Inter. Paper Co., 1st & Ref. Gold "B"	5%	1947	.....
7,000	New England Oil Refining Co., 1st Mtg.	8%	1931	.....
50,000	Pejepscot Paper Co., Gold	6%	1928	50,258.00
1,300	Phila. & Reading Coal & Iron Ref. Mtg.	5%	1973	.....
50,000	Prudence Co., Inc., Mtg.	5½%	1933	.....
2,700	Reading Co., Gen. & Ref. Mtge. "A"	4½%	1997	.....
25,000	Simonds Saw & Steel Co., Deb. "F"	5½%	1929	24,687.50
25,000	Simonds Saw & Steel Co., Deb. "G"	5½%	1930	24,645.00
50,000	Smith & Wesson, Inc., 1st Mtge. S. F.	5½%	1938	49,500.00
100,000	Solvay Am. Inv. Corp., Sec. Gold Notes	5%	1942	.....
15,000	Standard Oil Co. of N. J.	5%	1946	.....
100,000	Standard Oil Co. of N. Y.	4½%	1951	.....
75,000	Swift & Co., 1st S. F.	5%	1944	70,827.50
9,000	U. S. Cold Storage Co., 1st Mtge. R. E.	6%	1945	16,360.00
213,000	U. S. Steel, 10–60 Yr. S. F.	5%	1963	224,684.00
50,000	Waltham Watch & Clock Co.	6%	1943	49,000.00
5,000	Winchester Repeat. Arms Co., 1st Mtg.	7½%	1941	.....
	Sold or matured during year			73,550.00
$1,642,250	*Total Industrial Bonds*			$1,201,663.50

	INDUSTRIAL STOCKS	*Div.*	*Shares*	
*$50,000	American Car & Foundry Co., Com.	6%	500	$50,875.00
13,750	American Pneumatic Serv. Co., 1st Pf.	7%	275	13,750.00
5,000	American Sugar Refining Co., Pref.	7%	50	5,900.00
50,000	Amoskeag Mfg. Co., Pref.	4½%	500	41,395.00
34,200	Amoskeag Mfg. Co., Common	...	342	25,285.50
50,000	Anaconda Copper Mining Co., Cap.	6%	1,000	47,500.00
25,000	Armour & Co. of Delaware, Pref.	7%	250	23,500.00
16,000	Brill Corporation, Class A	...	160	8,183.00
8,000	Brill Corporation, Class B	...	80	1,636.60
25,000	Century Ribbon Mills, Inc., Pref.	7%	250	24,500.00
11,500	Charlton Mills, Capital	8%	115	11,486.04
10,000	Devoe & Raynolds Co., Inc., 1st Pref.	7%	100	9,800.00
50,000	Eastern Mfg., Pref.	...	500	49,000.00
*1,250,000	Eastman Kodak Co., Common	8%	12,500	1,000,000.00
11,600	Flint Mills, Capital	6%	116	17,782.34

*No par value.

Schedule H (*Continued*)

Purchases and Charges during the year	*Sales and Credits during the year*	*Balance June 30, 1927*	*Accrued Interest, etc.*	*Income Received*
.....	.....	$15,000.00	.....	$900.00
$48,875.00	.....	48,875.00	$250.00	1,500.00
1,000.00	.....	1,000.00	.....	25.00
2,800.00	.....	2,800.00	.....	.....
.....	$258.00	50,000.00	.....	3,000.00
1,306.50	6.50	1,300.00	.....	32.50
49,875.00	.....	49,875.00	825.00	2,750.00
2,646.00	.....	2,646.00	.....	60.75
.....	.....	24,687.50	.....	1,375.00
.....	.....	24,645.00	.....	1,375.00
.....	.....	49,500.00	.....	2,750.00
99,500.00	.....	99,500.00	.....	361.11
15,075.00	4.00	15,071.00	4.17	93.75
95,625.00	.....	95,625.00	750.00	2,250.00
.....	.....	70,827.50	.....	3,750.00
9,202.50	16,371.50	9,191.00	48.83	750.00
258.36	4,609.86	220,332.50	.....	10,850.00
.....	.....	49,000.00	.....	3,000.00
5,250.00	18.00	5,232.00	.....	187.50
.....	73,550.00	.....	562.50	3,470.00
$575,154.56	$156,186.28	$1,620,631.78	$2,792.58	$75,080.89
.....	.....	$50,875.00	.....	$3,000.00
.....	.....	13,750.00	.....	1,203.12
.....	.....	5,900.00	.....	350.00
.....	.....	41,395.00	.....	2,250.00
.....	$8,285.50	17,000.00	.....	.....
.....	.....	47,500.00	.....	3,000.00
.....	.....	23,500.00	.....	1,750.00
.....	.....	8,183.00	....	160.00
.....	.....	1,636.60	.....	.....
.....	.....	24,500.00	.....	1,750.00
.....	.....	11,486.04	.....	920.00
.....	.....	9,800.00	.....	700.00
.....	34,000.00	15,000.00	.....	.....
.....	.....	1,000,000.00	.....	100,000.00
.....	.....	17,782.34	.....	696.00

Schedule H (*Continued*)

Par Value	*Description of Securities*	*Div.*	*Shares*	*Balance June 30, 1926*
	INDUSTRIAL STOCKS (*Continued*)			
*$300,000	General Electric Company, Capital	3%	3,000	$122,287.50
14,710	General Electric Co., Special	6%	1,471	17,350.00
*165,000	Gillette Safety Razor Co.	4%	1,650	28,437.25
10,100	Goodyear Tire & Rubber Co., Pref.	7%	101	10,100.00
250	Hutchinson, W. K. Co., Pref.	...	5	250.00
60,400	International Cement Corp., Pref.	7%	604	61,608.00
14,300	Lancaster Mills, Capital	...	143	18,882.64
29,000	Merchants' Mfg. Co., Capital	4%	290	49,300.00
50,000	Nashua Mfg. Company, Common	...	500	27,911.51
13,600	Naumkeag Steam Cotton Co., Capital	12%	136	17,136.00
7,700	Pepperell Mfg. Co., Common	8%	77	6,845.50
*8,700	Phila. Reading Coal & Iron Corp.Com.	...	87	872.93
12,600	Plymouth Cordage Company	6%	126	11,970.00
19,700	Pullman Company, Capital	8%	197	31,520.00
0,000	Quebradas Company	...	2,249	.....
6,500	Queen City Cotton Co., Capital	...	65	5,850.00
*7,500	Samson Cordage Company	8%	75	5,000.00
8,250	Southern Pipe Line Co., Capital	...	165	16,500.00
*65,000	Standard Oil Co. of California, Capital	$2.50	650	29,981.25
*26,000	Tide Water Assoc. Oil Co., Common	$1.20	260	3,255.00
10,000	Tide Water Asso.Oil Co.Cum.Con.Pfd.	6%	100	4,561.53
16,000	Union Cotton Mfg. Co., Capital	6%	160	24,000.00
*500,000	United Fruit Company, Capital	4%	5,000	212,870.00
50,000	U. S. Steel Corp., Cum. Pref.	7%	500	55,162.50
32,100	Wamsutta Mills, Capital	4%	321	32,528.00
5,000	Westinghouse Elec. & Mfg. Co., Pref.	8%	100	6,393.90
51,100	Westinghouse Elec. & Mfg. Co., Com.	8%	1,022	50,338.35
	Sold or matured during year			81,200.00
$3,093,560	*Total Industrial Stocks*			$2,262,705.34
	PUBLIC UTILITY BONDS	*Rate*	*Maturity*	
$150,000	AdirondackP'r&Lt.Corp.,1st Ref.Gold	6%	1950	$154,102.00
151,000	Am. Tel. & Tel. Co., Col. Trust	4%	1929	138,025.00
82,000	Am. Tel. & Tel. Co., Col. Trust	5%	1946	80,547.90
50,000	Appalachian Elec.P'r Co.,1st&Ref. Mt.	5%	1956	48,375.00
50,000	Blackstone Valley Gas & El. Co., Mt.	5%	1939	50,129.00
46,000	Boston Elevated Ry. Co.	6%	1933	44,100.00
5,000	Boston Elevated Ry. Co.	4%	1935	.....
100,000	Boston Elevated Ry. Co.	5%	1937	.....
3,300	Brooklyn Union Gas Co., Conv. Deb.	5½%	1936	3,300.00

* No par value.

Schedule H *(Continued)*

Purchases and Charges during the year	*Sales and Credits during the year*	*Balance June 30, 1927*	*Accrued Interest, etc.*	*Income Received*
.....	.....	$122,287.50	.....	$12,000.00
$3,000.00	$5,500.00	14,850.00	.....	1,137.60
101,850.00	.....	130,287.25	.....	6,787.50
.....	.....	10,100.00	.....	1,186.75
.....	.....	250.00	.....	4.38
.....	.....	61,608.00	.....	4,228.00
.....	16,737.64	2,145.00	.....	.....
.....	.....	49,300.00	.....	1,160.00
.....	7,911.51	20,000.00	.....	.....
.....	.....	17,136.00	.....	1,632.00
.....	.....	6,845.50	.....	616.00
.....	.....	872.93	.....	.....
.....	.....	11,970.00	.....	1,008.00
42,125.87	36,856.12	36,789.75	.....	1,576.00
.....	.....	.....	.....	5,125.00
.....	.....	5,850.00	.....	.....
.....	.....	5,000.00	.....	750.00
.....	9,900.00	6,600.00	.....	.....
.....	.....	29,981.25	.....	1,868.75
.....	.....	3,255.00	.....	312.00
.....	.....	4,561.53	.....	577.50
.....	.....	24,000.00	.....	960.00
.....	.....	212,870.00	.....	27,500.00
.....	.....	55,162.50	.....	3,500.00
.....	.....	32,528.00	.....	1,284.00
.....	.....	6,393.90	.....	400.00
.....	.....	50,338.35	.....	4,088.00
.....	81,200.00	.....	.....	4,147.50
$146,975.87	$200,390.77	$2,209,290.44	.....	$197,628.10
.....	$179.00	$153,923.00	.....	$9,000.00
$9,850.00	.....	147,875.00	.....	5,840.00
5,150.00	5,150.00	80,547.90	.....	4,162.50
.....	.....	48,375.00	.....	2,500.00
.....	11.00	50,118.00	.....	2,500.00
1,000.00	.....	45,100.00	.....	2,760.00
4,600.00	.....	4,600.00	.....	100.00
99,875.00	.....	99,875.00	.....	.....
.....	.....	3,300.00	.....	181.50

Schedule H (*Continued*)

Par Value	Description of Securities	Rate	Maturity	Balance June 30, 1926
	PUBLIC UTILITY BONDS (*Continued*)			
$185,000	Cedars Rapids Mfg.&P.Co.,1stMt.S.F.	5%	1953	$182,250.00
25,000	Chesa. & Potomac Tel. Co., S.F. "A"	5%	1943	24,500.00
50,000	Chicago City Railway Co., 1st Mtge.	5%	1927	49,750.00
5,000	Chicago Railways Co., 1st Mtg. . .	5%	1927	.....
101,000	Cleveland Elec. Ill. Co., 1st Mtge. .	5%	1939	101,616.00
120,000	Commonwealth Edison Co., 1st Mtg.	5%	1943	119,400.00
46,000	Conn. Lt. & Pr. Co., 1st Mt. S. F. "A"	7%	1951	43,324.48
52,000	Conn. Lt. & Pr. Co., 1st Mtg. "C" . .	4½%	1956	.....
150,000	Con. Gas, Elec. Lt. & Power Co., Mtg.	4½%	1935	141,475.00
50,000	Dallas Ry. & Terminal Co., 1st Mtge.	6%	1951	.....
25,000	Detroit Edison Co., 1st Mtge. . . .	5%	1933	25,198.00
141,000	Detroit Edison Co., 1st & Ref. Mt."A"	5%	1940	148,370.00
100,000	Duquesne Lt. & Pr. Co., 1st Mt., Gold	4½%	1967	.....
35,000	East. Mass. St. Ry. Co., Ref. Mt. "A"	4½%	1948	35,000.00
2,000	Elec. Securities Corp., Col. Tr. S. F.	5%	1942	1,958.75
38,000	Elec. Securities Corp., Col. Tr. S. F.	5%	1943	43,406.25
50,000	Elec. Securities Corp., Col. Tr. S. F.	5%	1956	49,125.00
25,000	Em. Gas & El. Co. & Em. Coke Co., Jt.	5%	1941	18,250.00
41,000	Georgia Ry. & El. Co., 1st Cons. Mt.	5%	1932	41,108.00
1,000	Georgia & Southern Utilities Co. . .	8%	1922	1,000.00
50,000	Great Lakes Power Co., Ltd., 1st Mt.	6%	1943	43,187.50
163,000	Hydraulic Pr.Co.of Niag.F'lls,Ref&Im.	5%	1951	155,095.00
50,000	Illinois Bell Tel. Co., 1st & Ref. "A"	5%	1956	47,375.00
7,000	Illinois Gas Co., 1st Mtge. Gold . .	6%	1933	5,460.00
25,000	Indianapolis Water Co., 1st Lien&Ref.	5½%	1953	24,000.00
100,000	Laclede Gas Lt. Co., 1st Mt. Col.&Ref.	5½%	1953	96,122.50
200,000	Laurentide Pr. Co., Ltd., 1st Mt. S. F.	5%	1946	190,730.00
100,000	Los Angeles Gas & El. Corp., Ref. "F"	5½%	1943	95,750.00
50,000	Los Angeles Gas & El. Corp., Gen'l Mt.	5%	1961	.....
200,000	Louisville Gas & El. Co., 1st & Ref. Mt.	5%	1952	184,546.25
3,000	Lynn & Boston R. R., 1st Mtge. . .	6%	1929	.....
200,000	Massachusetts Gas Co., Consolidated	4½%	1931	192,312.50
5,000	Massachusetts Gas Companies . . .	4½%	1929	.....
50,000	Milwaukee El. Ry. & Lt. Co., 1st Mt.	5%	1961	46,125.00
50,000	Minneapolis Gen. Elec. Co., Mtge. .	5%	1934	50,205.00
118,000	Mississippi River Power Co., 1st Mt.	5%	1951	114,817.50
100,000	Montreal Light, Heat & Power Co. .	4½%	1932	93,812.50
50,000	Nevada California Electric Co. . . .	5%	1956	.....
50,000	New England Tel. & Tel. Co., Deb.	4%	1930	50,066.00
50,000	New England Tel. & Tel. Co., Deb.	5%	1932	50,330.00
150,000	NewOrleansPub.Serv.,Inc.,1stRef.Mt.	5%	1952	134,375.00
60,000	New York Telephone Co., 1st Mtge.. .	4½%	1939	53,130.86

Schedule H (*Continued*)

Purchases and Charges during the year	*Sales and Credits during the year*	*Balance June 30, 1927*	*Accrued Interest, etc.*	*Income Received*
$653.85	$10,000.00	$172,903.85	.....	$9,625.00
.....	.....	24,500.00	.....	1,250.00
.....	.....	49,750.00	.....	2,500.00
3,750.00	.....	3,750.00	.....	125.00
.....	52.00	101,564.00	.....	5,050.00
.....	.....	119,400.00	.....	6,000.00
.....	.....	43,324.48	.....	3,220.00
49,465.00	.....	49,465.00	$357.50	1,170.00
.....	.....	141,475.00	.....	6,750.00
48,125.00	.....	48,125.00	.....	1,250.00
.....	33.00	25,165.00	.....	7,342.00
174.80	10,000.00	138,544.80	325.00	1,500.00
94,750.00	.....	94,750.00	318.75	.....
.....	.....	35,000.00	.....	1,575.00
.....	.....	1,958.75	.....	100.00
261.97	6,180.00	37,488.22	.....	2,200.00
.....	.....	49,125.00	.....	2,500.00
.....	.....	18,250.00	.....	1,250.00
.....	22.00	41,086.00	.....	2,050.00
.....	.....	1,000.00	.....	.....
.....	.....	43,187.50	.....	3,000.00
.....	.....	155,095.00	.....	8,150.00
.....	.....	47,375.00	.....	2,500.00
.....	.....	5,460.00	.....	.....
.....	.....	24,000.00	.....	1,375.00
.....	.....	96,122.50	.....	5,500.00
.....	.....	190,730.00	.....	10,000.00
.....	.....	95,750.00	.....	5,500.00
49,125.00	.....	49,125.00	97.22	.....
.....	.....	184,546.25	.....	10,000.00
3,000.00	.....	3,000.00	.....	90.00
.....	.....	192,312.50	.....	9,000.00
10,000.00	5,000.00	5,000.00	.....	243.75
.....	.....	46,125.00	.....	2,500.00
.....	30.00	50,175.00	.....	2,500.00
570.22	7,000.00	108,387.72	.....	6,250.00
.....	.....	93,812.50	.....	4,500.00
47,750.00	.....	47,750.00	798.61	2,500.00
.....	22.00	50,044.00	.....	2,000.00
.....	66.00	50,264.00	.....	2,500.00
.....	.....	134,375.00	.....	7,500.00
4,912.50	.....	58,043.36	.....	2,587.50

Schedule H (*Continued*)

Par Value	*Description of Securities*	*Rate*	*Maturity*	*Balance June 30, 1926*
	PUBLIC UTILITY BONDS (*Continued*)			
$1,000	Nia.,Lock. & Ont. P. Co., 1st & Ref. Mt.	5%	1955	.....
50,000	North. States Pr.Co.,1st & Ref. Mt. ...	5%	1941	$45,000.00
100,000	Oklahoma Gas & Electric Co., 1st Mtge.	5%	1950	94,750.00
50,000	Ontario Power Co., 1st Mtge. S. F. . .	5%	1943	49,312.50
75,000	Pacific Gas & El. Co., 1st Ref. Mt. "B" .	6%	1941	78,349.00
75,000	Pacific Tel. & Tel.Co.,1st Mt.Col. Tr.S.F.	5%	1937	73,915.10
50,000	Pennsylvania Pr. & Lt. Co., 1st Mt. "D"	5%	1953	49,250.00
25,000	Portland Gen. Electric Co., 1st Mtge. .	5%	1935	25,216.00
100,000	Potomac Elec. Power Co., Mtge. "B" .	6%	1953	103,228.00
25,000	Puget Sound Pr. & Lt. Co., 1st Mt. "B"	5%	1931	24,812.50
50,000	Salmon River Power Co., 1st Mtge. . .	5%	1952	47,625.00
19,000	Seattle Electric Co., Cons. Mtge. . . .	5%	1929	18,430.00
101,000	Shawinigan Wr. & Pr. Co., 1st Mt. Ref.	6%	1950	104,335.00
100,000	Southern Bell Tel.&Tel.Co.,1st Mt.S.F.	5%	1941	100,837.00
160,000	Southern Calif. Edison Co., Gen. Mtge.	5%	1939	158,125.00
300,000	Texas Power & Light Co., 1st Mtge. . .	5%	1937	291,437.50
5,400	United Elec. Rys. Co., Gen. & Ref. "A"	5%	1951	.....
100,000	United Elec. Securities Co., Col. Tr. S.F.	5%	1955	94,500.00
46,000	United Elec. Securities Co., Col. Tr. . .	5%	1956	44,557.50
50,000	Virginia Ry. & Pr. Co., 1st Mtge. . . .	5%	1936	46,375.00
100,000	West Penn. Power Co., 1st Mtge. "E" .	5%	1963	93,482.50
50,000	West Penn. Power Co., 1st Mtge. . . .	5½%	1953	51,197.00
75,000	Western Tel. & Tel. Co., Col. Tr. . . .	5%	1932	75,350.00
75,000	Western Union Tel. Co.	5%	1951	.....
	Sold or matured during year			466,832.00
$5,492,700	*Total Public Utility Bonds*			$5,308,667.59
	PUBLIC UTILITY STOCKS		*Shares*	
$262,800	American Tel. & Tel. Co., Capital . .	9%	2,628	$66,256.81
19,800	Boston Elevated Ry. Co., Common .	6%	198	16,636.00
*15,000	Brooklyn Union Gas Co., Capital . .	4%	150	8,587.50
50,000	Consolidated Gas Co. of N. Y., Pfd. .	5%	1,000	.....
50,000	Electric Bond & Share Sec. Corp. Com.	1%	500	22,833.10
2,000	Mass. Gas Companies, Common . . .	5%	20	1,540.00
5,000	Mass. Gas Companies, Preferred . . .	4%	50	4,100.00
	Sold or matured during year			68,577.21
$404,600	*Total Public Utility Stocks*			$188,530.62
	RAILROAD BONDS		*Maturity*	
$75,000	Atch. Top. & S. F., Cal. & Ariz. Lines .	4½%	1962	$73,143.75
100,000	Atch. Top. & Santa Fe, Gen. Mtge. . .	4%	1995	96,470.00
10,000	Boston & Albany Railroad Improvement	4%	1934	.....

* No par value.

Schedule H (*Continued*)

Purchases and Charges during the year	*Sales and Credits during the year*	*Balance June 30, 1927*	*Accrued Interest, etc.*	*Income Received*
$1,000.00	.....	$1,000.00	.....	.....
.....	.....	45,000.00	.....	$2,500.00
.....	.....	94,750.00	.....	5,000.00
.....	.....	49,312.50	.....	2,500.00
.....	$239.00	78,110.00	.....	4,500.00
.....	.....	73,915.10	.....	3,750.00
.....	.....	49,250.00	.....	2,500.00
.....	27.00	25,189.00	.....	1,250.00
.....	125.00	103,103.00	.....	6,000.00
.....	.....	24,812.50	.....	1,250.00
.....	.....	47,625.00	.....	2,500.00
.....	.....	18,430.00	.....	950.00
.....	145.00	104,190.00	.....	6,060.00
.....	60.00	100,777.00	.....	5,000.00
.....	.....	158,125.00	.....	8,000.00
.....	.....	291,437.50	.....	15,000.00
4,212.00	.....	4,212.00	.....	135.00
.....	.....	94,500.00	.....	5,000.00
.....	.....	44,557.50	.....	2,300.00
.....	.....	46,375.00	.....	2,500.00
.....	.....	93,482.50	.....	5,000.00
.....	46.00	51,151.00	.....	2,750.00
.....	70.00	75,280.00	.....	3,750.00
175,256.00	100,000.00	75,256.00	105.55	1,291.67
.....	466,832.00	.....	125.00	27,223.83
$613,481.34	$611,289.00	$5,310,859.93	$2,127.63	$287,407.75
$294,060.00	.....	$360,316.81	....	$19,089.00
.....	.....	16,636.00	.....	1,188.00
.....	.....	8,587.50	.....	600.00
92,950.00	.....	92,950.00	.....	610.00
.....	.....	22,833.10	.....	500.00
.....	.....	1,540.00	.....	100.00
.....	.....	4,100.00	.....	200.00
.....	68,577.21	.....	.....	2,594.00
$387,010.00	$68,577.21	$506,963.41	.....	$24,881.00
.....	.....	$73,143.75	.....	$3,375.00
.....	.....	96,470.00	.....	4,000.00
$9,450.00	.....	9,450.00	.....	200.00

Schedule H (*Continued*)

Par Value	Description of Securities	Rate	Maturity	Balance June 30, 1926
	RAILROAD BONDS (*Continued*)			
$1,000	Boston & Maine Railroad	4½%	1944	.....
25,000	Canadian Nat'l Rys. Equip. Tr. "J" . .	4½%	1937	.....
25,000	Canadian Nat'l Rys. Equip. Tr. "J" . .	4½%	1938	.....
75,000	Central New England Railways, 1st Mtge.	4%	1961	.....
50,000	Cen. Pacific Ry. Co., Short Line Mtge. .	4%	1954	$40,918.75
100,000	Chesapeake & Ohio Ry. Co., Mtge. . .	5%	1939	104,536.00
51,000	Chicago, Burlington & Quincy, Mtge. .	4%	1958	50,307.00
100,000	Chic., Burl. & Quincy, 1st Ref. Mtge. "B"	4½%	1977	.....
100,000	Chic. J. Rys. & Un. St. Yds. Mt. & Co. Tr.	4%	1940	49,250.00
75,000	Chic. J. Ry. & Un. St. Yd. Ref. Mt. & Co. Tr.	5%	1940	74,143.75
30,000	Chic. Milwaukee & St. Paul R. R. Deb.	4%	1934	23,406.25
55,000	Chic. Mil. & St. Paul, Conv. Mtge. "B"	5%	2014	55,995.00
65,000	Chicago Union Station, 1st Mtge. "A" .	4½%	1963	65,383.00
135,000	Chicago Union Station, 1st Mtge. "C" .	6½%	1963	153,762.00
100,000	Chicago & Northwestern Ry. Co., Mtge.	4%	1987	96,500.00
5,000	Chic. & N.W. Ry. Co., Equip. Tr. of 1922	5%	1928	4,936.50
5,000	Chic. & N.W. Ry. Co., Equip. Tr. of 1922	5%	1929	4,931.10
5,000	Chic. & N.W. Ry. Co., Equip. Tr. of 1922	5%	1930	4,925.70
5,000	Chic. & N.W. Ry. Co., Equip. Tr. of 1922	5%	1931	4,920.60
5,000	Chic. & N.W. Ry. Co., Equip. Tr. of 1922	5%	1932	4,916.10
5,000	Chic. & N.W. Ry. Co., Equip. Tr. of 1922	5%	1934	4,907.10
5,000	Chic. & N.W. Ry. Co., Equip. Tr. of 1922	5%	1935	4,902.90
5,000	Chic. & N.W. Ry. Co., Equip. Tr. of 1922	5%	1936	4,899.30
5,000	Chic. & N.W. Ry. Co., Equip. Tr. of 1922	5%	1937	4,895.40
200,000	Chic. & N. W. Ry. Co., 1st & Ref. Mtge.	4½%	2037	.....
25,000	Cleveland & Pittsburg R. R. Co., Mtge.	4½%	1942	25,444.00
190,000	Delaware & Hudson Co., 1st & Ref. Mt.	4%	1943	172,785.00
100,000	Delaware & Hudson Co., 20-Yr. Con. .	5%	1935	102,963.00
35,000	Fort St. Union Depot Co., 1st Mtge. . .	4½%	1941	34,825.00
50,000	Great Northern Railway Co. Gen. Mtge.	4½%	1976	.....
10,000	Illinois Central Equip Trust "J" . . .	5%	1928	9,825.00
10,000	Illinois Central Equip. Trust "J" . . .	5%	1929	9,825.00
10,000	Illinois Central Equip. Trust "J" . . .	5%	1930	9,825.00
10,000	Illinois Central Equip. Trust "J" . . .	5%	1931	9,825.00
10,000	Illinois Central Equip. Trust "J" . . .	5%	1932	9,825.00
6,000	Illinois Central Equip. Trust "J" . . .	5%	1934	9,825.00
10,000	Illinois Central Equip. Trust "J" . . .	5%	1935	9,825.00
10,000	Illinois Central Equip. Trust "J" . . .	5%	1936	9,825.00
10,000	Illinois Central Equip. Trust "J" . . .	5%	1937	9,825.00

Schedule H (*Continued*)

Purchases and Charges during the year	*Sales and Credits during the year*	*Balance June 30, 1927*	*Accrued Interest, etc.*	*Income Received*
$850.00	.....	$850.00	.....	$22.50
24,605.00	.....	24,605.00	$56.25	.....
24,575.00	.....	24,575.00	56.25	.....
56,281.25	.....	56,281.25	41.62	1,500.00
.....	.....	40,918.75	.....	2,000.00
.....	$378.00	104,158.00	.....	5,000.00
.....	.....	50,307.00	.....	2,040.00
96,750.00	.....	96,750.00	837.50	.....
45,000.00	.....	94,250.00	734.90	3,740.00
.....	.....	74,143.75	.....	3,750.00
5,000.00	11,006.25	17,400.00	.....	.....
.....	21,345.00	34,650.00	.....	.....
.....	11.00	65,372.00	.....	2,925.00
1,194.90	41,445.75	113,511.15	.....	9,824.03
.....	.....	96,500.00	.....	4,000.00
.....	.....	4,936.50	.....	250.00
.....	.....	4,931.10	.....	250.00
.....	.....	4,925.70	.....	250.00
.....	.....	4,920.60	.....	250.00
.....	.....	4,916.10	.....	250.00
.....	.....	4,907.10	.....	250.00
.....	.....	4,902.90	.....	250.00
.....	.....	4,899.30	.....	250.00
.....	.....	4,895.40	.....	250.00
284,625.00	95,125.00	189,500.00	3,887.50	5,825.00
.....	30.00	25,414.00	.....	1,125.00
.....	.....	172,785.00	.....	7,600.00
.....	371.00	102,592.00	.....	5,000.00
.....	.....	34,825.00	.....	1,575.00
46,273.00	.....	46,273.00	425.38	1,125.00
.....	.....	9,825.00	.....	500.00
.....	.....	9,825.00	.....	500.00
.....	.....	9,825.00	.....	500.00
.....	.....	9,825.00	.....	500.00
.....	.....	9,825.00	.....	500.00
.....	3,930.00	5,895.00	.....	500.00
.....	.....	9,825.00	.....	500.00
.....	.....	9,825.00	.....	500.00
.....	.....	9,825.00	.....	500.00

Schedule H (*Continued*)

Par Value	Description of Securities	Rate	Maturity	Balance June 30, 1926
	RAILROAD BONDS (*Continued*)			
$5,000	Illinois Central R. R. Co., Ref. Mtge. .	4%	1955	.....
75,000	Illinois Central R. R. Co., Sec. Gold . .	4%	1952	$67,875.00
59,000	Ill. Cen. R. R. Co., Wes. Lines Mtge. .	4%	1951	54,526.25
9,000	Ill.Cen.R.R.Co.,West. Lines Mt.(Reg.)	4%	1951	8,291.25
50,000	Ill.C.R.R.&C.S.L.&N.O.Jt.1stRef.Mtge.	4½%	1963	.....
50,000	Indianapolis Un. Ry. Co., Gen. Mtge. .	5%	1965	49,468.75
125,000	Kan.City,Ft. Scott & Mem.R.R.Co.,Mt.	6%	1928	126,519.00
8,500	Kan. City, Mem. & Birm. R. R. Co., Mt.	4%	1934	8,287.50
37,000	Kan. City, Mem.&Birm.R.R.Co.,In.Mt.	5%	1934	34,225.00
75,000	Kansas City Terminal Co., 1st Mtge. .	4%	1960	65,437.50
90,000	Lake Shore & Michigan South. R. R. Co.	4%	1931	84,087.50
50,000	Long Island R. R. Co., Unified Mtge. .	4%	1949	48,068.75
50,000	Long Island R. R. Co., Un. Mtge. (Reg.)	4%	1949	48,068.75
75,000	Maine Central R. R. Co., 1st Mtge. . .	4½%	1935	75,040.00
100,000	Minn., St. Paul & S. St. Marie Ry. Co. .	4%	1938	93,425.00
10,000	Minn.,St.Paul & S.St.Marie Ry.Co.Gold	5½%	1949	7,438.10
21,000	Miss. & Ill. Bridge & Belt R. R. Co., Mt.	4%	1951	13,650.00
10,000	New London Northern R. R. Co., 1st Mt.	4%	1940	.....
41,000	N. Y. C. & H. R. R.R.	4%	1934	30,225.00
22,000	New York Central Lines Equip. Trust .	4½%	1928	21,478.36
43,000	New York Central Lines Equip. Trust .	4½%	1929	41,822.36
42,000	New York Central Lines Equip. Trust .	4½%	1930	40,702.79
15,000	New York Central Lines Equip. Trust .	4½%	1932	14,439.21
14,000	New York Central Lines Equip. Trust .	4½%	1933	13,434.36
7,000	New York Central Lines Equip. Trust .	4½%	1935	6,674.50
9,000	New York Central Lines Equip. Trust .	4½%	1937	8,536.50
4,000	New York Central R. R., Equip. Trust .	7%	1928	4,063.00
18,000	New York Central R. R., Equip. Trust .	7%	1932	19,292.00
6,000	New York Central R. R., Equip. Trust .	7%	1933	6,504.00
11,000	New York Central R. R., Equip. Trust .	7%	1934	12,050.00
25,000	New York Central R. R., Equip. Trust .	4½%	1936	24,702.50
52,000	New York Cen. R.R. Co., Cons. Mt. "A"	4%	1998	46,046.65
100,000	New York Connect. R. R., 1st Mtge. . .	4½%	1953	98,625.00
31,200	N.Y., N.H. & H. Co., Con. Deb. (Reg.)	6%	1948	33,695.00
8,000	N. Y., N. H. & H. R. R. Co., Deb. . . .	4%	1955	.....
75,000	No. Pacific R. R. Co., Prior Lien Ry. . .	4%	1997	67,875.00
332,000	No. Pacific Ry. Co., Ref. & Imp. . . .	6%	2047	96,500.00
84,000	Oregon R. R. & Nav. Co., Cons. Mtge. .	4%	1946	82,668.25
50,000	Oregon Short Line R. R. Co., Ref. (Reg.)	4%	1929	48,500.00
14,500	Oregon Short Line R. R., Cons. Mtge. .	5%	1946	15,060.00
18,000	Pennsylvania R. R. Co., Cons. Mtge. .	4½%	1960	18,495.00
15,000	Pennsylvania R. R. Co., Equip. Trust .	5%	1928	14,910.00

Schedule H (*Continued*)

Purchases and Charges during the year	*Sales and Credits during the year*	*Balance June 30, 1927*	*Accrued Interest, etc.*	*Income Received*
$4,700.00	.....	$4,700.00	.....	$100.00
.....	.....	67,875.00	.....	3,000.00
.....	.....	54,526.25	.....	2,360.00
.....	.....	8,291.25	.....	360.00
48,687.50	.....	48,687.50	$6.26	.....
.....	.....	49,468.75	.....	2,500.00
.....	$1,519.00	125,000.00	.....	7,500.00
.....	.....	8,287.50	.....	340.00
.....	.....	34,225.00	.....	1,850.00
.....	.....	65,437.50	.....	3,000.00
4,862.50	.....	88,950.00	.....	3,500.00
.....	.....	48,068.75	.....	2,000.00
.....	.....	48,068.75	.....	2,000.00
.....	5.00	75,035.00	.....	3,375.00
.....	.....	93,425.00	.....	4,000.00
.....	.....	7,438.10	.....	550.00
.....	.....	13,650.00	.....	840.00
8,600.00	.....	8,600.00	.....	200.00
9,600.00	.....	39,825.00	.....	1,440.00
.....	.....	21,478.36	.....	990.00
.....	.....	41,822.36	.....	1,935.00
.....	.....	40,702.79	.....	1,890.00
.....	.....	14,439.21	.....	675.00
.....	.....	13,434.36	.....	630.00
.....	.....	6,674.50	.....	315.00
.....	.....	8,536.50	.....	405.00
.....	63.00	4,000.00	.....	280.00
.....	258.00	19,034.00	.....	1,260.00
.....	84.00	6,420.00	.....	420.00
.....	150.00	11,900.00	.....	770.00
.....	.....	24,702.50	.....	1,125.00
.....	.....	46,046.65	.....	2,080.00
.....	.....	98,625.00	.....	4,500.00
.....	119.00	33,576.00	.....	1,872.00
6,320.00	.....	6,320.00	.....	.....
.....	.....	67,875.00	.....	3,000.00
257,520.00	183.50	353,836.50	.....	12,960.00
.....	.....	82,668.25	.....	3,360.00
.....	.....	48,500.00	.....	2,000.00
.....	30.00	15,030.00	.....	725.00
.....	15.00	18,480.00	.....	810.00
.....	.....	14,910.00	.....	750.00

Schedule H (*Continued*)

Par Value	Description of Securities	Rate	Maturity	Balance June 30, 1926
	RAILROAD BONDS (*Continued*)			
$15,000	Pennsylvania R. R. Co., Equip. Trust	5%	1929	$14,901.00
5,000	Pennsylvania R. R. Co., Equip. Trust	5%	1931	4,961.50
100,000	Pennsylvania R. R. Co., Gen. Mtge.	4½%	1965	100,888.00
117,900	Pere Marquette Ry., 1st Mtge. "A"	5%	1956	104,719.59
37,500	Pere Marquette Ry. Co., 1st Mtge. "B"	4%	1956	37,500.00
51,000	Rio Grande Western Ry. Co., Mtge.	4%	1939	49,935.00
1,000	Somerset Ry. Co., 1st & Ref. Mtge.	4%	1955	850.00
25,000	So. Ry. Co., Dev. & Gen. Mtge.	4%	1956	21,425.00
25,000	So.Ry.Co.,St.Louis Div.,1st Mt. (Reg.)	4%	1951	24,875.00
100,000	Term. R. R. Asso. of St. Louis, Mtge.	4½%	1939	100,205.00
100,000	Un. Pac. R. R. Co., 1st Mtge. & L. Gr.	4%	1947	100,758.00
10,000	Western Pacific R. R. Co., 1st Mtge. "A"	5%	1946	8,000.00
50,000	Winston Salem South. Ry. Co., Mtge.	4%	1960	43,875.00
	Sold or matured during year			49,408.90
$4,476,600	*Total Railroad Bonds*			$3,565,502.02
	RAILROAD STOCKS	*Div.*	*Shares*	
$33,600	Atchison, Topeka & Santa Fe Co., Pref.	5%	336	$25,200.00
100,000	Atchison, Topeka & Santa Fe Co., Com.	7%	1,000	95,291.55
50,000	Atlanta, Birmingham & Coast R. R., Pfd.	5%	500	.....
35,000	Baltimore & Ohio R. R., Common	5%	350	16,100.00
50,200	Boston & Albany R. R. Co., Capital	8¾%	502	94,883.25
19,200	Boston & Maine R.R. Co., Class A, 1st Pf.	...	192	5,699.00
*2,300	Boston & Maine R. R. Co., Prior Pref.	7%	23	576.00
20,000	Chicago & Northwestern Ry., Common	4%	200	16,975.00
103,200	Delaware & Hudson R. R. Co., Cap.	9%	1,032	126,604.00
12,500	Del., Lack. & Western R. R.	6%	250	35,050.00
72,500	Great Northern Ry. Co., Preferred	5%	725	62,815.00
8,400	Illinois Central R. R. Pref. "A"	6%	84	8,400.00
44,000	Illinois Central R. R. Co., Capital	7%	440	47,400.00
115,000	Louisville & Nashville R. R.	7%	1,150	99,251.04
31,600	Maine Central R. R. Co., Capital	...	316	9,500.00
17,600	Minn., St. Paul & S. St. Marie Co., Pref.	4%	176	9,680.00
33,500	Norfolk & Western Ry. Co., Common	7%	335	38,860.00
33,000	Northern Pacific Ry., Capital	5%	330	26,523.75
33,800	Old Colony R. R. Co., Capital	7%	338	39,612.50
65,000	Southern Pacific Co., Capital	6%	650	58,500.00
100,000	Union Pacific R. R., Common	10%	1,000	142,573.13
30,000	Vicksburg, Shreveport & Pacific Rwy. Co.	5%	300	.....
$1,010,400	*Total Railroad Stocks*			$959,494.22

*25% Subscription.

Schedule H (*Continued*)

Purchases and Charges during the year	*Sales and Credits during the year*	*Balance June 30, 1927*	*Accrued Interest, etc.*	*Income Received*
.....	.....	$14,901.00	.....	$750.00
.....	.....	4,961.50	.....	250.00
.....	$24.00	100,864.00	.....	4,500.00
.....	.....	104,719.59	.....	5,895.00
.....	.....	37,500.00	.....	1,500.00
.....	.....	49,935.00	.....	2,040.00
.....	.....	850.00	.....	40.00
$21,242.50	21,425.00	21,242.50	$264.11	1,000.00
.....	.....	24,875.00	.....	1,000.00
.....	17.00	100,188.00	.....	4,500.00
.....	38.00	100,720.00	.....	4,000.00
.....	.....	8,000.00	.....	500.00
.....	.....	43,875.00	.....	2,000.00
.....	49,408.90	.....	.....	2,111.50
$956,136.65	$246,981.40	$4,274,657.27	$6,309.77	$183,130.03
.....	.....	$25,200.00	.....	$1,680.00
.....	.....	95,291.55	.....	8,500.00
$50,000.00	.....	50,000.00	.....	1,354.17
.....	.....	16,100.00	.....	2,187.50
.....	.....	94,883.25	.....	4,392.50
.....	.....	5,699.00	.....	1,440.00
.....	$0.99	575.01	.....	52.39
.....	.....	16,975.00	.....	800.00
.....	.....	126,604.00	.....	9,288.00
.....	.....	35,050.00	.....	1,750.00
.....	.....	62,815.00	.....	3,625.00
.....	.....	8,400.00	.....	504.00
.....	.....	47,400.00	.....	3,080.00
.....	.....	99,251.04	.....	8,050.00
.....	.....	9,500.00	.....	316.00
.....	.....	9,680.00	.....	704.00
.....	.....	38,860.00	.....	3,517.50
.....	.....	26,523.75	.....	1,650.00
.....	.....	39,612.50	.....	2,366.00
.....	.....	58,500.00	.....	3,900.00
.....	.....	142,573.13	.....	9,087.50
29,250.00	.....	29,250.00	.....	1,500.00
$79,250.00	$0.99	$1,038,743.23	.....	$69,744.56

Schedule H (*Continued*)

Par Value	*Description of Securities*	*Rate*	*Maturity*	*Balance June 30, 1926*
	Real Estate Bonds			
$15,000	Cent. Mfg. Dist., 1st Mfg. R. E. Imp.	5½%	1928	$14,925.00
10,000	Cent. Mfg. Dist., 1st Mfg. R. E. Imp.	5½%	1931	9,925.00
4,000	Cent. Mfg. Dist., 1st Mfg. R. E. Imp.	5½%	1940	3,970.00
9,000	Cent. Mfg. Dist., 1st Mfg. R. E. Imp.	5½%	1941	8,955.00
14,000	Ellicott Sq. Co. of Buffalo, 1st Mtge.	5%	1935	.....
456,000	Equitable Office Bldg. Corp., 35-Yr. Deb.	5%	1952	466,000.00
5,680	Equitable Real Estate Co., Gold Notes	6%	1930	5,702.00
4,400	Equitable Real Estate Co., Gold Notes	6%	1931	4,420.00
20,000	Equitable Real Estate Co., Gold Notes	6%	1932	20,108.00
50,000	43 Exchange Pl. Bldg., 1st Mtge. S. F.	6%	1938	49,625.00
50,000	Steiger Bldg., 1st Mtge. Gold	5½%	1952	.....
700	Technology Club of New York W. F.	5%	....	700.00
98,000	Trinity Bldg. Corp. of N. Y., 1st Mtge.	5½%	1939	94,750.00
	Sold or matured during year			6,947.50
$736,780	*Total Real Estate Bonds*			$686,027.50
	Real Estate Stocks	*Div.*	*Shares*	
$58,800	Alaska Building Trust	4%	588	$58,251.22
20,000	Boston Cham. of Com. Realty Tr., 1st pf.		200	19,200.00
68,000	Boston Real Estate Trust Capital	5%	68	71,661.64
$146,800	*Total Real Estate Stocks*			$149,112.86
	Bank Stocks			
$26,000	First Nat'l Bank of Boston	16%	260	$82,650.00
12,400	Guaranty Trust Co. of New York	12%	124	24,375.00
3,600	National Shawmut Bank, Capital	12%	36	8,640.00
$42,000	*Total Bank Stocks*			$115,665.00
	Mortgage Notes	*Rate*	*Maturity*	
$16,000.00	Beta Nu House Corporation	5½%	1929	$18,000.00
4,500.00	E. V. and C. H. Bigelow	5%	....	4,500.00
40,000.00	Cambridge Tobacco Co.	5½%	1930	40,000.00
70,000.00	Charles H. Connelly	5½%	1927	70,000.00
40,000.00	F. J. Holderried (2 at $20,000 each)	6%	1930	40,000.00
7,000.00	N. & V. Lomusico	5%	....	7,000.00
25,500.00	Frank E. O'Donnell	5%	1928	26,500.00
21,000.00	Theta Chi	5½%	....	22,000.00
$224,000.00	*Total Mortgage Notes*			$228,000.00

Schedule H (*Continued*)

Purchases and Charges during the year	*Sales and Credits during the year*	*Balance June 30, 1927*	*Accrued Interest, etc.*	*Income Received*
.....	.....	$14,925.00	.....	$825.00
.....	.....	9,925.00	.....	550.00
.....	.....	3,970.00	.....	220.00
.....	.....	8,955.00	.....	495.00
$13,580.00	.....	13,580.00	.....	350.00
.....	$10,000.00	456,000.00	.....	23,300.00
.....	7.00	5,695.00	.....	340.80
.....	5.00	4,415.00	.....	264.00
.....	22.00	20,086.00	.....	1,200.00
.....	.....	49,625.00	.....	3,000.00
49,875.00	.....	49,875.00	91.66	.....
.....	.....	700.00	.....	35.00
.....	.....	94,750.00	.....	5,390.00
.....	6,947.50	.....	.....	224.50
$63,455.00	$16,981.50	$732,501.00	$91.66	$36,194.30
.....	.....	$58,251.22	.....	$2,352.00
.....	.....	19,200.00	.....	.....
.....	.....	71,661.64	.....	3,400.00
.....	.....	$149,112.86	.....	$5,752.00
.....	.....	$82,650.00	.....	$3,820.00
$16,529.00	.....	40,904.00	.....	1,358.00
.....	$1,435.14	7,204.86	.....	432.00
$16,529.00	$1,435.14	$130,758.86	.....	$5,610.00
.....	$2,000.00	$16,000.00	.....	$948.75
.....	.....	4,500.00	.....	225.00
.....	.....	40,000.00	.....	2,200.00
.....	.....	70,000.00	.....	3,850.00
.....	.....	40,000.00	.....	2,400.00
.....	.....	7,000.00	.....	350.00
.....	1,000.00	25,500.00	.....	1,312.50
.....	1,000.00	21,000.00	.....	1,194.85
.....	$4,000.00	$224,000.00	.....	$12,481.10

Schedule H (*Continued*)

Par Value	*Description of Securities*	*Balance June 30, 1926*
	REAL ESTATE	
$205,632.55	Avon St. Land and Building (11–13)	$205,632.55
385,364.53	Franklin St. Land and Building (64–70)	385,364.53
100.00	Dorchester Land	100.00
15,000.00	No. 7 Central St., Winchester, Land and Building	15,000.00
$606,097.08	*Total Real Estate*	$606,097.08

RECAPITULATION, GENERAL INVESTMENTS

		Per cent of Total 1927	*Per cent of Total 1926*	
$1,691,000.00	Government and Municipal Bonds	9.30	10.80	$1,858,365.98
1,642,250.00	Industrial Bonds	8.80	7.00	1,201,663.50
3,093,560.00	Industrial Stocks	11.90	13.35	2,262,705.34
5,492,700.00	Public Utility Bonds	28.50	31.00	5,308,667.59
404,600.00	Public Utility Stocks	2.70	1.10	188,530.62
4,476,600.00	Railroad Bonds	23.20	20.80	3,565,502.02
1,010,400.00	Railroad Stocks	5.60	5.60	959,494.22
736,780.00	Real Estate Bonds	4.00	4.00	686,027.50
146,800.00	Real Estate Stocks	.80	.87	149,112.86
42,000.00	Bank Stocks	.70	.68	115,665.00
224,000.00	Mortgage Notes	1.20	1.30	228,000.00
606,097.08	Real Estate	3.30	3.50	606,097.08
$19,566,787.08	*Total General Investments*	100.00	100.00	$17,129,831.71

Schedule H (*Continued*)

Purchases and Charges during the year	*Sales and Credits during the year*	*Balance June 30, 1927*	*Accrued Interest, etc.*	*Income Received*
.....	.....	$205,632.55	$4,374.31	$10,942.95
.....	.....	385,364.53	15,371.24	36,609.50
.....	.....	100.00	84.85	.....
.....	.....	15,000.00	3,341.80	1,620.00
.....	.....	$606,097.08	$23,172.20	$49,172.45
$55,229.88	$209,341.88	$1,704,253.98	$225.00	$90,808.01
575,154.56	156,186.28	1,620,631.78	2,792.58	75,080.89
146,975.87	200,390.77	2,209,290.44	.....	197,628.10
613,481.34	611,289.00	5,310,859.93	2,127.63	287,407.75
387,010.00	68,577.21	506,963.41	.....	24,881.00
956,136.65	246,981.40	4,274,657.27	6,309.77	183,130.03
79,250.00	0.99	1,038,743.23	.....	69,744.56
63,455.00	16,981.50	732,501.00	91.66	36,194.30
.....	.....	149,112.86	.....	5,752.00
16,529.00	1,435.14	130,758.86	.....	5,610.00
.....	4,000.00	224,000.00	.....	12,481.10
.....	.....	606,097.08	23,172.20	49,172.45
$2,893,222.30	$1,515,184.17	$18,507,869.84	$34,718.84	$1,037,890.19

Schedule H (*Continued*)

Par Value	*Description of Securities*	*Rate*	*Maturity*	*Balance June 30, 1926*
	GOVERNMENT AND MUNICIPAL BONDS (EASTMAN CONTRACT)			
$115,000	Great Britain & Ireland	5½%	1937	$121,815.00
25,000	Imperial Japanese Govt. Ext. Loan	6½%	1954	23,125.00
30,000	Manitoba, Province of	4½%	1945	28,650.00
70,000	Manitoba, Province of	5%	1944	70,826.00
100,000	Montreal, City of	5%	1958	101,588.00
100,000	Montreal, City of	5%	1963	101,702.00
150,000	Ontario, Province of	5%	1942	152,109.00
50,000	Ontario, Province of	5%	1952	50,900.00
40,000	Ottawa, City of	5½%	1932	41,233.00
5,000	Ottawa, City of	5%	1933	5,043.00
36,000	Ottawa, City of	5%	1934	36,320.00
35,000	Ottawa, City of	5%	1940	35,435.00
25,000	Ottawa, City of	5%	1945	25,303.00
25,000	Ottawa, City of	5%	1946	25,313.00
29,000	Ottawa, City of	5%	1954	29,653.00
100,000	Quebec, Province of	4½%	1950	97,000.00
200,000	Winnipeg, City of	4½%	1944	189,000.00
	Sold or matured during the year			50,000.00
$1,135,000	*Total Government and Municipal Bonds*			$1,185,015.00
	INDUSTRIAL BONDS (EASTMAN CONTRACT)			
$200,000	Armour & Co., Real Estate 1st Mtge.	4½%	1939	$175,116.25
100,000	Cheney Bros.	5%	1927	99,875.00
50,000	Chile Copper Co., Gold Deb.	5%	1947	.....
300,000	Consolidation Coal Co., 1st & Ref. S. F.	5%	1950	268,806.25
25,000	Dominion Iron Steel Co., Ltd.	5%	1939	16,500.00
98,000	Indiana Steel Co., 1st Mtge.	5%	1952	102,265.00
50,000	National Tube Co., 1st Mtge.	5%	1952	51,093.00
50,000	Swift & Co.	5%	1932	.....
190,000	Western Electric Co., Deb.	5%	1944	188,288.75
50,000	Woodward Iron Co., 1st & Cons. Mtge.	5%	1952	42,750.00
	Sold or matured during the year			199,875.00
$1,113,000	*Total Industrial Bonds*			$1,144,569.25
	INDUSTRIAL STOCKS (EASTMAN CONTRACT)	*Div.*	*Shares*	
*$1,875,000	Eastman Kodak Common	8%	18,750	$1,875,000.00
180,000	Eastman Kodak Preferred	6%	1,800	198,000.00
21,000	International Match Co., Part. Pfd.	3.20	600	21,454.20
$2,076,000	*Total Industrial Stocks*			$2,094,454.20

* No par value.

Schedule H (*Continued*)

Purchases and Charges during the year	*Sales and Credits during the year*	*Balance June 30, 1927*	*Accrued Interest, etc.*	*Income Received*
.....	$682.00	$121,133.00	.....	$6,325.00
.....	.....	23,125.00	.....	1,625.00
.....	.....	28,650.00	.....	1,350.00
.....	49.00	70,777.00	.....	3,500.00
.....	52.00	101,536.00	.....	5,000.00
.....	48.00	101,654.00	.....	5,000.00
.....	141.00	151,968.00	.....	7,500.00
.....	36.00	50,864.00	.....	2,500.00
.....	247.00	40,986.00	.....	2,200.00
.....	8.00	5,035.00	.....	250.00
.....	46.00	36,274.00	.....	1,800.00
.....	34.00	35,401.00	.....	1,750.00
.....	17.00	25,286.00	.....	1,250.00
.....	17.00	25,296.00	.....	1,250.00
.....	25.00	29,628.00	.....	1,450.00
.....	.....	97,000.00	.....	4,500.00
.....	.....	189,000.00	.....	9,000.00
.....	50,000.00	.....	.....	1,500.00
.....	$51,402.00	$1,133,613.00	.....	$57,750.00
.....	.....	$175,116.25	.....	$9,000.00
.....	.....	99,875.00	.....	5,000.00
$48,500.00	.....	48,500.00	.....	.....
.....	.....	268,806.25	.....	15,000.00
.....	$4,500.00	12,000.00	.....	.....
54.70	2,189.70	100.130.00	.....	4,950.00
.....	44.00	51,049.00	.....	2,500.00
48,975.00	.....	48,975.00	.....	1,250.00
.....	.....	188,288.75	.....	9,500.00
.....	.....	42,750.00	.....	2,500.00
.....	199,875.00	.....	.....	7,500.00
$97,529.70	$206,608.70	$1,035,490.25	.....	$57,200.00
.....	.....	$1,875.000.00	.....	$150,000.00
.....	.....	198,000.00	.....	10,800.00
.....	$2,742.90	18,711.30	.....	1,920.00
.....	$2,742.90	$2,091,711.30	.....	$162,720.00

Schedule H (*Continued*)

Par Value	*Description of Securities*	*Rate*	*Maturity*	*Balance June 30, 1926*
	PUBLIC UTILITY BONDS (EASTMAN CONTRACT)			
$50,000	Adirondack P'r&Lt. Corp., 1st&Ref. Mt.	5½%	1950	$49,875.00
200,000	Alabama Power Co., 1st Mtge. "A"	5%	1946	191,501.25
200,000	Am. Tel. & Tel. 35-Yr. Deb.	5%	1960	190,000.00
100,000	Cedars Rapids Mfg. & P'r Co., S. F.	5%	1953	99,875.00
50,000	Ch.N.Sh.&Mil.R.R.Co.,1st&Ref.Mt."A"	6%	1955	49,000.00
49,000	Cleveland Elec. Ill. Co., 1st Mtge.	5%	1939	49,395.00
75,000	Cohoes P'r & Lt. Corp., 1st Mtge.	6%	1929	76,500.00
50,000	Columbus Elec. & Pow. Co.	5%	1929	.....
200,000	Consolidated Gas Co. of N. Y.	5½%	1945	202,835.00
100,000	Consolidated Gas & El. Lt. & Pr. Co.	4½%	1935	96,500.00
200,000	Consumers Power Co., 1st & Ref.	5%	1936	199,000.00
55,000	Cumberland County P'r&Lt.Co., 1st Mt.	4½%	1956	.....
500,000	Edison Elec. Ill. Co., Boston Notes	4½%	1928	495,300.00
10,000	Hydraulic Pr. Co. of Niagara Falls	5%	1951	10,062.00
50,000	Illinois Pr.&Lt.Corp., 1st&Ref.Mt. "B"	5½%	1954	48,500.00
100,000	Montreal Lt., Heat & Pr., 1st Mtge.	4½%	1932	98,750.00
100,000	Nebraska Power Co., 1st Mtge. "A"	5%	1949	98,750.00
100,000	Pacific Gas & El. Co., 1st Ref. Mt. "B"	6%	1941	104,200.00
50,000	SanJoaquinLt.&Pr.Co.Un.&Ref.Gold"D"	5%	1957	.....
50,000	Sierra Pacific Elec. Co., Gold	5%	1929	.....
50,000	Syracuse Lt. Co., Inc., 1st&Ref. Mtge.	5½%	1954	50,698.00
50,000	Tenessee Pr. Co., 1st Mtge.	5%	1962	46,625.00
100,000	Western Union Tel. Co.	5%	1951	.....
	Sold or matured during the year			152,615.00
$2,489,000	*Total Public Utility Bonds*			$2,309,981.25
	PUBLIC UTILITY STOCKS (EASTMAN CONTRACT)	*Div.*	*Shares*	
$50,000	Central Illinois Pub. Ser. Co., Pref.	6%	500	$42,937.50
28,600	Edison Electric Ill. Co., Capital	12%	286	50,062.50
50,000	Knoxville Pr. & Lt. Co., Pref.	7%	500	49,375.00
50,000	Memphis Pr. & Lt. Co., Pref.	7%	500	49,375.00
50,000	Public Service Elec. & Gas. Co., Pref.	6%	500	47,250.00
$228,600	*Total Public Utility Stocks*			$239,000.00
	RAILROAD BONDS (EASTMAN CONTRACT)	*Rate*	*Maturity*	
$50,000	Chic., Rock Is. Pacific, 1st&Ref. Mt.	4%	1934	$42,406.25
100,000	Delaware & Hudson, 1st & Ref. Mtge.	4%	1943	89,500.00
50,000	East Penn. Ry. Co., 1st Mtge.	5%	1936	46,875.00
100,000	Florida East Coast Ry.Co.,1st&Ref.Mt.	5%	1974	95,633.75
11,000	Illinois Central R. R. Equip. Trust "K"	4½%	1931	10,876.51
4,000	Illinois Central R. R. Equip. Trust "K"	4½%	1932	3,948.40

Schedule H (*Continued*)

Purchases and Charges during the year	*Sales and Credits during the year*	*Balance June 30, 1927*	*Accrued Interest, etc.*	*Income Received*
.....	.....	$49,875.00	.....	$2,750.00
.....	.....	191,501.25	.....	10,000.00
.....	.....	190,000.00	.....	10,000.00
.....	.....	99,875.00	.....	5,000.00
.....	.....	49,000.00	.....	3,000.00
.....	$33.00	49,362.00	.....	2,450.00
.....	750.00	75,750.00	.....	4,500.00
$49,875.00	.....	49,875.00	$243.06	2,500.00
.....	159.00	202,676.00	.....	11,000.00
.....	.....	96,500.00	.....	4,500.00
.....	.....	199,000.00	.....	10,000.00
51,837.50	.....	51,837.50	240.63	2,475.00
.....	.....	495,300.00	.....	22,500.00
.....	3.00	10,059.00	.....	500.00
.....	.....	48,500.00	.....	2,750.00
.....	.....	98,750.00	.....	4,500.00
.....	.....	98,750.00	.....	5,000.00
.....	300.00	103,900.00	.....	6,000.00
49,125.00	.....	49,125.00	277.78	.....
49,802.50	.....	49,802.50	416.66	1,250.00
.....	26.00	50,672.00	.....	2,750.00
.....	.....	46,625.00	.....	2,500.00
100,000.00	.....	100,000.00	416.67	2,500.00
.....	152,615.00	.....	.....	7,768.25
$300,640.00	$153,886.00	$2,456,735.25	$1,594.80	$126,193.25
.....	.....	$42,937.50	.....	$3,000.00
$7,740.00	.....	57,802.50	.....	3,000.00
.....	.....	49,375.00	.....	3,500.00
.....	.....	49,375.00	.....	3,500.00
.....	.....	47,250.00	.....	3,000.00
$7,740.00	.....	$246,740.00	.....	$16,000.00
.....	.....	$42,406.25	.....	$2,000.00
.....	.....	89,500.00	.....	4,000.00
.....	.....	46,875.00	.....	2,500.00
.....	.....	95,633.75	.....	5,000.00
.....	.....	10,876.51	.....	495.00
.....	.....	3,948.40	.....	180.00

Schedule H (*Continued*)

Par Value	*Description of Securities*	*Rate*	*Maturity*	*Balance June 30, 1926*
	RAILROAD BONDS (EASTMAN CONTRACT) *Continued*			
$4,000	Illinois Central R. R. Equip. Trust "K"	4½%	1933	$3,943.20
5,000	Illinois Central R. R. Equip. Trust "K"	4½%	1934	4,922.50
11,000	Illinois Central R. R. Equip. Trust "K"	4½%	1935	10,818.05
27,000	Illinois Central R. R. Equip. Trust "K"	4½%	1936	26,524.02
21,000	Illinois Central R. R. Equip. Trust "K"	4½%	1937	20,606.71
12,000	Illinois Central R. R. Equip. Trust "K"	4½%	1938	11,762.28
5,000	Illinois Central R. R. Equip. Trust "K"	4½%	1939	4,895.79
50,000	Kansas City, Ft. Scott & Memphis Cons.	4%	1936	41,243.75
50,000	Kansas City Terminal Ry., 1st Mtge. .	4%	1960	42,750.00
200,000	Minn., St. Paul & S. S. Marie Ry. Co. .	4%	1938	175,710.00
100,000	Missouri, Pacific Ry.Co.1st&Ref.Mt."F"	5%	1977	.....
50,000	New York, Chicago & St. Louis Ry. . .	5½%	1974	47,350.00
200,000	Northern Pacific Ry. Co., Ref.&Imp."B"	6%	2047	215,715.00
5,000	Penn. R. R. Equip. Trust "A"	5%	1932	4,959.00
50,000	St. Louis Iron Mt. & Southern Ry. . .	4%	1933	42,290.00
50,000	St. Louis, San Francisco Ry., Prior Lien	5½%	1942	47,258.75
50,000	South. Ry. Co., Dev. & Gen. Mtge. . .	4%	1956	37,492.50
100,000	Terminal R.R. Asso.of St.Louis Gen. Mt.	4%	1953	83,860.00
100,000	Union Term. Co. of Dallas, 1st Mt. S. F.	5%	1942	99,673.75
200,000	Virginian Ry. Co., 1st Mtge. "A" . . .	5%	1962	191,737.50
	Sold or matured during the year . . .			100,000.00
$1,605,000	*Total Railroad Bonds*			$1,502,752.71

		Div.	*Shares*	
	RAILROAD STOCKS (EASTMAN CONTRACT)			
$20,000	Bangor & Aroostook R. R., Pref. . . .	7%	200	$19,000.00
110,000	New York Central R. R., Capital . . .	7%	1,100	107,188.53
100,000	Pere Marquette Ry. Pr., Pref. Cum. . .	5%	1,000	80,024.40
$230,000	*Total Railroad Stocks*			$206,212.93

		Rate	*Shares*	
	MISCELLANEOUS (EASTMAN CONTRACT)			
$4,000	First National Bank of New York . .	100%	40	$104,328.00
60,000	Old Colony Trust Co. of Boston . . .	12%	600	110,878.76
300,000	Gannett Co., Inc., Note	5%	...	300,000.00
$364,000	*Total Miscellaneous*			$515,206.76

Schedule H (*Continued*)

Purchases and Charges during the year	*Sales and Credits during the year*	*Balance June 30, 1927*	*Accrued Interest, etc.*	*Income Received*
.....	.....	$3,943.20	.....	$180.00
.....	.....	4,922.50	.....	225.00
.....	.....	10,818.05	.....	495.00
.....	.....	26,524.02	.....	1,215.00
.....	.....	20,606.71	.....	945.00
.....	.....	11,762.28	.....	540.00
.....	.....	4,895.79	.....	225.00
.....	.....	41,243.75	.....	2,000.00
.....	.....	42,750.00	.....	2,000.00
.....	.....	175,710.00	.....	8,000.00
$99,750.00	.....	99,750.00	$208.34	.....
.... .	.....	47,350.00	.....	2,750.00
... ..	$131.00	215,584.00	.....	12,000.00
.....	.....	4,959.00	.....	250.00
.. ...	.....	42,290.00	.....	2,000.00
. ....	.....	47,258.75	.....	2,750.00
.....	.....	37,492.50	.....	2,000.00
.....	.....	83,860.00	.....	4,000.00
.....	.....	99,673.75	.....	5,000.00
.....	.....	191,737.50	.....	10,000.00
.....	100,000.00	.....	.....	5,520.83
$9,7950.00	$100,131.00	$1,502,371.71	$208.34	$76,270.83

.....	.....	$19,000.00	.....	$1,400.00
.....	.....	107,188.53	.....	7,700.00
.....	.....	80,024.40	.....	5,000.00
.....	.....	$206,212.93	.....	$14,100.00

.....	.....	$104,328.00	.....	$4,000.00
$21,000.00	.....	131,878.76	.....	6,120.00
.....	.....	300,000.00	.....	15,000.00
$21,000.00	.....	$536,206.76	.....	$25,120.00

Schedule H (*Continued*)

Par Value	*Description of Securities*	*Per cent of Total 1927*	*Per cent of Total 1926*	*Balance June 30, 1926*
	RECAPITULATION, EASTMAN CONTRACT INVESTMENTS			
$1,135,000	Government and Municipal Bonds.	11.90	12.50	$1,185,015.00
1,113,000	Industrial Bonds	10.80	12.00	1,144,569.25
2,076,000	Industrial Stocks	22.00	22.00	2,094,454.20
2,489,000	Public Utility Bonds	26.00	24.40	2,309,981.25
228,600	Public Utility Stocks	2.60	2.50	239,000.00
1,605,000	Railroad Bonds	15.80	15.80	1,502,752.71
230,000	Railroad Stocks	2.10	2.20	206,212.93
364,000	Miscellaneous	5.65	5.45	515,206.76
300,000	Cash Reserve	3.15	3.15	300,000.00
$9,540,600	*Total Investments (Eastman Contract)*	100.00	100.00	$9,497,192.10

INVESTMENTS, MALCOLM COTTON BROWN FUND

		Rate	*Maturity*	
$15,000	Metro. West Side Elev. Ry. Co., Mtge. .	4%	1938	$6,750.00
10,000	Metro. West Side Elev. Ry. Co., Mtge. .	4%	1938	4,100.00
$25,000	*Total*			$10,850.00

INVESTMENTS, FRANK HARVEY CILLEY FUND

			Shares	
$10,000	New York, City of, Corp. Stock	4¼%	1964	$10,360.00
8,000	United El. Sec. Co., Col. Tr. 42d Series	5%	1956	7,760.00
5,000	St. Louis Iron Mt. & So. R.R. Mtg. (Reg.)	4%	1933	4,812.50
5,000	Chic. & Northwestern Ry. Co. Equip. Tr.	5%	1938	.....
2,500	Boston Elev. Ry. Co., 2d Pfd.	7%	25	2,600.00
5,900	Edison Electric Ill. Co., Capital	12%	59	11,166.77
7,500	Mass. Gas Companies, Pref.	4%	75	6,825.00
1,250	Springfield Ry. Companies Pref.	8%	25	2,125.00
7,800	Boston & Albany R. R. Co., Capital	8¾%	78	12,589.50
*600	B. & M. R. R. Prior Preference	7%	6	150.00
5,000	B. & M R. R. Co., Class A, 1st Pref.	....	50	1,500.00
1,000	Boston & Providence R. R. Corp.	10%	10	1,700.00
1,600	Mortgage Notes, Isabella Aznive	6%	....	1,600.00
2,400	Mortgage Note, E. and A. Orlogski	5%	....	2,400.00
$63,550	*Total*			$65,588.77

* 25% Subscription.

Schedule H (*Continued*)

Purchases and Charges during the year	*Sales and Credits during the year*	*Balance June 30, 1927*	*Accrued Interest etc.*	*Income Received*
.....	$51,402.00	$1,133.613.00	.....	$57,750.00
$97,529.70	206,608.70	1,035,490.25	.....	57,200.00
.....	2,742.90	2,091.711.30	.....	162,720.00
300,640.00	153,886.00	2,456,735.25	$1,594.80	126,193.25
7,740.00	.....	246,740.00	.....	16,000.03
99,750.00	100,131.00	1,502,371.71	208.34	76,270.80
.....	.....	206,212.93	.....	14,100.00
21,000.00	.....	536,206.76	.....	25,120.00
.....	.....	300,000.00	.....	9,000.00
$526,659.70	$514,770.60	$9,509,081.20	$1,803.14	$544,354.08
.....	.....	$6,750.00	.....	$600.00
.....	.....	4,100.00	.....	400.00
.....	.....	$10,850.00	.....	$1,000.00
.....	$10.00	$10,350.00	.....	$425.00
.....	.....	7,760.00	.....	400.00
.....	.....	4,812.50	.....	200.00
$5,000.00	.....	5,000.00	.....	.....
.....	.....	2,600.00	.....	175.00
1,505.00	4.68	12,667.09	.....	624.00
.....	.....	6,825.00	.....	300.00
.....	.....	2,125.00	.....	137.50
.....	.....	12,589.50	.....	682.50
.....	.....	150.00	.....	13.65
.....	.....	1,500.00	.....	375.00
.....	.....	1,700.00	.....	100.00
.....	.....	1,600.00	.....	96.00
.....	.....	2,400.00	.....	120.00
$6,505.00	$14.68	$72,079.09	.....	$3,648.65

Schedule H (*Continued*)

Par Value	*Description of Securities*	*Rate*	*Maturity*	*Balance June 30, 1926*
	INVESTMENTS, EBEN S. DRAPER FUND			
$16,000	Georgia Ry. & Elec. Co., 1st Mt. S. F.	5%	1932	$16,090.00
20,000	New York Tel. Co., 1st & Gen. Mtge.	4½%	1939	19,395.00
20,000	Wilmington City Elec. Co., 1st Mtge.	5%	1951	19,600.00
20,000	Chicago, Mil. & St. Paul, Conv. Gold	5%	2014	20,352.00
24,000	Indianapolis Un. Ry. Co., Gen. Mtge.	5%	1965	23,880.00
$100,000	*Total*			$99,317.00
	INVESTMENTS, HENRY C. FRICK FUND			
$50,000	Commonwealth Elec. Co., 1st Mtge.	5%	1943	$47,937.50
51,000	Cumberland Tel. & Tel. Co., 1st Mtge.	5%	1937	50,305.75
48,000	New York Shipbuilding Corp. 1st Mt.	5%	1946	38,400.00
50,000	Province of Ontario Deb.	4½%	1934	48,314.30
25,000	Southern Ry. Co. Dev. & Gen. Mtge. "A"	4%	1956	.....
16,000	U. S. Cold Storage Co., 1st Mtge. R. E.	6%	1945	.....
*37,000	Cerro de Pasco Copper Corp.	4%	370†	18,870.00
170,000	Chic. & Northwestern Ry. Co. Com.	4%	1700†	93,500.00
.....	Taxes Advanced	....	....	.....
	Sold or matured during the year			32,450.00
$447,000				$329,777.55
	INVESTMENTS, JOY SCHOLARSHIP FUND			
$5,000	Cedars Rapids Mfg.&Pr.Co.1st Mt. S.F.	5%	1953	$4,075.00
5,000	Mass. Hospital Life Insurance Co.	5%	....	5,000.00
$10,000	*Total*			$9,075.00
	INVESTMENTS, RICHARD LEE RUSSEL FELLOWSHIP FUND			
$2,000	Trinity Build. Corp. of N. Y., 1st Mt.	5½%	1939	$2,000.00
	INVESTMENTS, SUSAN H. SWETT SCHOLARSHIP FUND			
$10,000	Mass. Hospital Life Insurance Co.	5%	....	$10,000.00
	INVESTMENTS, JONATHAN WHITNEY FUND			
$25,000	Montreal, City of, Canada	5%	1936	$25,000.00
25,000	New York, City of, Corporate Stock	4¼%	1964	25,958.00
25,000	American Thread Co., 1st Mtge.	6%	1928	25,312.00
25,000	Swift & Co., 1st Sinking Fund	5%	1944	22,625.00
30,000	U. S. Steel Corp., S. F.	5%	1963	30,293.00
28,000	Western Electric Co., Deb.	5%	1944	27,720.00

* No par value.
† Shares.

Schedule H (*Continued*)

Purchases and Charges during the year	*Sales and Credits during the year*	*Balance June 30, 1927*	*Accrued Interest, etc.*	*Income Received*
.....	$18.00	$16,072.00	.....	$800.00
.....	.....	19,395.00	.....	900.00
.....	.....	19,600.00	.....	1,000.00
.....	4.00	20.348.00	.....	.....
.....	.....	23,880.00	.....	1,200.00
.....	$22.00	$99,295.00	.....	$3,900.00
.....	.....	$47,937.50	.....	$2,500.00
.....	.....	50,305.75	.....	2,550.00
.....	.....	38,400.00	.....	2,400.00
.....	.....	48,314.30	.....	2,250.00
$21,425.00	.....	21,425.00	.....	1,000.00
16,360.00	$20.00	16,340.00	.....	480.00
.....	.....	18,870.00	.....	1,850.00
.....	.....	93,500.00	.....	6,800.00
.....	.....	.....	4,202.13	.....
.....	32,450.00	.....	.....	.....
$37,785.00	$32,470.00	$335,092.55	$4,202.13	$19,830.00
.....	.....	$4,075.00	.....	$250.00
.....	.....	5,000.00	.....	250.00
.....	.....	$9,075.00	.....	$500.00
.....	.....	$2,000.00	.....	$110.00
.....	.....	$10,000.00	.....	$500.00
.....	.....	$25,000.00	.....	$1,250.00
.....	$26.00	25,932.00	.....	1,062.50
.....	312.00	25,000.00	.....	1,500.00
.....	.....	22,625.00	.....	1,250.00
.....	8.00	30,285.00	.....	1,500.00
.....	.....	27,720.00	.....	1,400.00

Schedule H (*Continued*)

Par Value	*Description of Securities*	*Rate*	*Maturity*	*Balance June 30, 1926*
	INVESTMENTS, JONATHAN WHITNEY FUND (*Continued*)			
$25,000	Detroit Edison Co., 1st Mtge.	5%	1933	$25,180.00
25,000	Georgia Rail. & Elec. Co., 1st Mtge.	5%	1932	25,210.00
25,000	N. Y. Tel. Co., 1st & Gen. Mtge.	4½%	1939	24,150.39
21,000	United Elec. Securities Co., Tr. S. F.	5%	1940	21,054.00
25,000	Western Tel. & Tel. Co., Co. Tr.	5%	1932	25,235.00
25,000	Atch.,Top.&S.F.,Cal.&Ar.Lines, 1st Mt.	4½%	1962	24,381.25
35,000	Chicago Union Station, 1st Mtge.	4½%	1963	35,207.00
25,000	Illinois Cen. R. R. Co., Sec. Gold	4%	1952	22,625.00
50,000	Kansas City Terminal Ry. Co., 1st Mt.	4%	1960	42,750.00
25,000	Maine Cen. R. R. Co., 1st & Ref. Mt.	4½%	1935	25,011.00
9,000	New York Central Lines, Eq. Tr.	4½%	1936	8,558.10
5,000	Penn. R. R. Eq. Tr. "A"	5%	1936	4,950.00
150,000	Mortgage Note, M. I. T. Dormitory	5%	....	150,000.00
$603,000	*Total*			$591,219.74
$30,467,937.08	Grand Total, All Investments (*Schedule D*)			$27,744,851.87

RECAPITULATION, ALL INVESTMENTS

	Per cent of Total 1927	*Per cent of Total 1926*	*Book Value June 30, 1927*
Government and Municipal Bonds	10.10	11.40	$2,947,463.28
Industrial Bonds	9.70	9.15	2,828,492.03
Industrial Stocks	14.80	15.70	4,319.871.74
Public Utility Bonds	27.60	28.40	8,069,296.82
Public Utility Stocks	2.70	1.60	775,795.50
Railroad Bonds	21.00	19.05	6,109,468.83
Railroad Stocks	4.40	4.60	1,263,020.66
Real Estate Bonds	2.50	2.50	732,501.00
Real Estate Stocks	.50	.65	149,112.86
Bank Stocks	1.25	1.20	366,965.62
Mortgage Notes	2.30	2.45	678,000.00
Real Estate	2.10	2.20	606,097.08
Cash Reserve	1.05	1.10	300,000.00
	100.00	100.00	$29,146,085.42

Schedule H (*Continued*)

Purchases and Charges during the year	*Sales and Credits during the year*	*Balance June 30, 1927*	*Accrued Interest, etc.*	*Income Received*
.....	$30.00	$25,150.00	.....	$1,250.00
.....	42.00	25,168.00	.....	1,250.00
.....	.....	24,150.39	.....	1,125.00
.....	4.00	21,050.00	.....	1,050.00
.....	47.00	25,188.00	.....	1,250.00
.....	.....	24,381.25	.....	1,125.00
.....	6.00	35,201.00	.....	1,575.00
.....	.....	22,625.00	.....	1,000.00
.....	.....	42,750.00	.....	2,000.00
.....	2.00	25,009.00	.....	1,125.00
.....	.....	8,558.10	.....	405.00
.....	.....	4,950.00	.....	250.00
.....	.....	150,000.00	.....	7,500.00
.....	$477.00	$590,742.74	.....	$28,867.50
$3,464,172.00	$2,062,938.45	$29,146,085.42	$40,724.11	$1,640,600.42

SCHEDULE J

EDUCATIONAL PLANT

Land, Buildings and Equipment

Land, Boylston, Clarendon and Newbury Streets, Boston	$1,500,000.00
Rogers Building, Boylston Street, Boston	204,534.76
Walker Building, Boylston Street, Boston	150,000.00
Land, east of Massachusetts Avenue, Cambridge	1,125,766.67
Land, west of Massachusetts Avenue, Cambridge (new)	619,380.64
Main Educational Building Group, Cambridge	4,071,492.13
Pratt School of Naval Architecture, Cambridge	674,971.70
Mechanic Arts Building, Cambridge	83,658.89
Power Plant (inc. Machinery and Equipment), Cambridge	262,026.08
Educational Equipment, Cambridge	2,011,414.29
Steam and Electrical Distribution System, Cambridge	155,448.64
Gas Engine Laboratory, Cambridge	26,301.88
Automotive Laboratory	11,000.00
Compression Laboratory	31,000.00
Tractor Garage	6,400.00
Service Garage, Cambridge	5,981.54
Athletic Field, Cambridge	24,815.14
Summer Camp, East Machias, Maine	120,558.00
Summer Camp, Dover, New Jersey	35,000.00
Walker Memorial Building, Cambridge	575,111.50
Walker Memorial Building, Equipment	139,475.52
Dormitories (1916) ($331,357.67 less mortgage $150,000)	181,357.67
Dormitories (1916) Equipment	26,967.85
Dormitory, Class of '93	185,718.91
Dormitory, Class of '93, Equipment	9,518.04
New Service Building, Cambridge	42,988.20
Boathouse, Cambridge	22,500.00
Squash Courts	29,042.54
Homberg Infirmary (under construction)	4,691.34
Miscellaneous	317,081.79
Total, June 30, 1927 (Schedule D)	$12,654,203.72

SCHEDULE K

PRINCIPAL GIFTS AND APPROPRIATIONS FOR EDUCATIONAL PLANT

George Eastman, for New Buildings	$3,500,000.00
Maria A. Evans, for Dormitories	161,192.55
Class of 1893, for New Dormitory	100,000.00
Appropriation, Maria A. Evans Fund	169,080.60
T. C. du Pont, Donation for Land	625,000.00
T. C. du Pont, Donation for Dormitories	100,000.00
T. C. and P. S. du Pont, Charles Hayden, for Mining Building	215,000.00
Pratt Fund, for School of Naval Architecture	675,150.00
Alumni Fund, Equipment, Dormitories and Walker Memorial	622,119.38
Walker Memorial Fund, for Walker Memorial	167,303.96
Improvement Fund for Walker Memorial	24,491.04
Appropriation of Emma Rogers Fund, for Equipment	528,077.06
Estate of F. W. Emery, for New Equipment	126,423.80
Appropriation of Charles C. Drew Fund	305,171.52
Appropriation of Lucius Tuttle Fund for New Equipment	50,000.00
Appropriation of Frank E. Peabody Fund	52,238.89
Appropriation of Nathaniel Thayer Fund for New Equipment	25,000.00
Appropriation of French Fund for New Equipment	100,843.34
Appropriation of George B. Dorr Fund for New Equipment	49,573.47
Land in Boston, Grant of Commonwealth (estimated)	1,500,000.00
Appropriation of A. F. Estabrook Fund for New Land	85,000.00
Appropriation of Ida F. Estabrook Fund for New Land	20,000.00
Appropriation of Miscel. Unrestricted Funds for New Land	151,697.89
Subscriptions for New Land	125,525.00
Sale of Land and Buildings in Boston	656,919.45
Equipment from Buildings in Boston (estimated)	500,000.00
Other Funds, Donations, etc.	2,021,204.43
Total, June 30, 1927 (Schedule D)	$12,657,012.38

SCHEDULE P

ENDOWMENT FUNDS FOR GENERAL PURPOSES

Restricted Funds	*Funds, June 30, 1926*	*Investment Income*	*Other Income*	*Expended or Transferred*	*Funds, June 30, 1927*
George Robert Armstrong	$5,000.00	$275.00	.....	$275.00	$5,000.00
Charles Choate	35,858.15	1,980.00	.....	1,980.00	35,858.15
Eben S. Draper	100,000.00	3,900.00	.....	3,900.00	100,000.00
*Eastman Contract . . .	5,446,053.90	542,550.94	.....	242,550.94	5,746,053.90
George Eastman (Building)	2,500,000.00	137,500.00	.....	137,500.00	2,500,000.00
Educational Endowment	7,560,549.74	415,965.00	6,756.98	415,965.00	7,567,306.72
Martha Ann Edwards . .	30,000.00	1,650.00	.....	1,650.00	30,000.00
William Endicott	25,000.00	1,375.00	.....	1,375.00	25,000.00
Francis Appleton Foster .	1,000,000.00	55,000.00	.....	55,000.00	1,000,000.00
Jonathan French	25,212.48	1,375.00	.....	1,375.00	25,212.48
Henry C. Frick	329,493.07	15,627.87	226,353.70	15,627.87	555,846.77
General Endowment. . .	1,527,549.00	84,012.50	.....	84,012.50	1,527,549.00
James Fund	163,654.21	9,020.00	.....	9,020.00	163,654.21
Katharine B. Lowell . .	5,000.00	275.00	.....	275.00	5,000.00
M. I. T. Alumni Fund (Bal.)	1,068.09	60.50	116.00	.....	1,244.59
Kate M. Morse	25,000.00	1,375.00	.....	1,375.00	25,000.00
Richard Perkins	50,000.00	2,750.00	.....	2,750.00	50,000.00
J. W. and B. L. Randall .	83,452.36	4,565.00	.....	4,565.00	83,452.36
Wm. Barton Rogers Mem.	250,225.00	13,750.00	.....	13,750.00	250,225.00
†Saltonstall Fund	53,353.85	2,915.00	.....	2,186.25	54,082.60
Samuel E. Sawyer . . .	4,764.40	264.00	.....	264.00	4,764.40
Andrew Hastings Spring .	50,000.00	2,750.00	.....	2,750.00	50,000.00
Seth K. Sweetser	25,061.62	1,375.00	.....	1,375.00	25,061.62
William J. Walker . . .	23,663.59	1,320.00	.....	1,320.00	23,663.59
Albion K. P. Welch . . .	5,000.00	275.00	.....	275.00	5,000.00
	$19,324,959.46	$1,301,905.81	$233,226.68	$1,001,116.56	$19,858,975.39

Unrestricted Funds					
Edmund D. Barbour . .	.....	$25,685.00	$743,580.00	$51,027.03	$718,237.97
William L. Chase	$11,590.09	638.00	.....	8,138.00	4,090.09
Charles W. Eaton . . .	.....	3,960.00	170,854.50	3,960.00	170,854.50
Arthur F. Estabrook (Bal.)	10,000.00	550.00	.....	550.00	10,000.00
Ida F. Estabrook	.....	66.00	2,157.51	66.00	2,157.51
Walter L. Frisbie	7,614.98	418.00	.....	418.00	7,614.98
Charles Hayden	42,700.76	2,348.50	.....	2,348.50	42,700.76
Industrial Fund	59,612.26	3,987.50	29,193.96	3,987.50	88,806.22
Hiram F. Mills	10,175.00	550.00	.....	550.00	10,175.00

* Income added to Fund. See also Special Deposit Funds.
† One-fourth Income added to Fund.

Schedule P (*Continued*)

Unrestricted Funds (Continued)	*Funds, June 30, 1926*	*Investment Income*	*Other Income*	*Expended or Transferred*	*Funds, June 30, 1927*
Albert H. Munsell . . .	7,908.28	$440.00	.....	$440.00	$7,908.28
Margaret A. Munsell . .	1,105.32	60.50	.....	60.50	1,105.32
Moses W. Oliver	11,220.49	605.00	.....	605.00	11,220.49
Frances M. Perkins . . .	13,272.68	715.00	.....	715.00	13,272.68
Robert E. Rogers	7,680.77	423.50	.....	423.50	7,680.77
Horace W. Wadleigh . .	2,143.14	115.50	.....	115.50	2,143.14
Kenneth F. Wood . . .	.....	913.00	25,000.00	913.00	25,000.00
	$185,023.77	$41,475.50	$970,785.97	$74,317.53	$1,122,967.71

SCHEDULE Q

ENDOWMENT FUNDS FOR DESIGNATED PURPOSES

Special Deposit Funds					
New Dormitory, General.	.....	$5.50	$596.00	.....	$601.50
Class of '88 Dormitory .	.....	22.00	1,225.00	.....	1,247.00
Class of '92 Dormitory .	$1,027.27	192.50	7,250.00	.....	8,469.77
Class of '01	.....	962.50	40,525.00	.....	41,487.50
†Geo. Eastman (due under contract).	4,050,000.00	.....	.....	$300,000.00	3,750,000.00
Endowment Reserve . .	470,650.00	36,532.43	84,257.96	132,745.83	458,694.56
*Anonymous (1924) . . .	1,167.10	66.00	.....	.....	1,233.10
1923 Endowment	.....	.....	1,260.23	1,173.25	86.98
*1923 Endowment Reserve	692.35	60.50	2,094.82	1,326.29	1,521.38
1924 Endowment	554.95	33.00	92.16	.....	680.11
*1924 Endowment Reserve	55.52	33.00	1,550.96	1,330.74	308.74
*1925 Endowment . . .	105.46	16.50	252.60	.....	374.56
1925 Endowment Reserve	.....	22.00	398.94	420.94	.....
1926 Endowment Reserve	813.95	49.50	628.99	1,026.45	465.99
M. I. T. Teachers' Insurance	.....	.....	17,263.62	17.045.55	218.07
Class of '98 Loan	.....	16.50	2,460.00	.....	2,476.50
1927 Endowment	.....	.....	25.00	.....	25.00
Gen. Elec. Co. VI and VIII	.....	.....	23,052.00	.....	23,052.00
Pension Plan Reserve . .	25,109.09	330.00	.....	‡25,439.09	.....
Special (Avon Street) . .	2,330.81	19.42	.....	2,350.23	.....
Undergraduate Dues, Reserve	5,201.82	275.00	500.00	201.82	5,775.00
	$4,557,708.32	$38,636.35	$183,433.28	$483,060.19	$4,296,717.76

* Income added to Fund.
† See also Funds for General Purposes (Eastman Contract)
‡ Paid over to M. I. T. Pension Association.

Schedule Q (*Continued*)

	Funds, June 30, 1926	*Investment Income*	*Other Income*	*Expended or Transferred*	*Funds, June 30, 1927*
FUNDS FOR SALARIES:					
Samuel C. Cobb For General Salaries . . .	$36,290.00	$1,980.00	.....	$1,980.00	$36,290.00
Sarah H. Forbes For General Salaries . . .	500.00	27.50	.....	27.50	500.00
George A. Gardner For General Salaries . . .	20,000.00	1,100.00	.....	1,100.00	20,000.00
James Hayward Professorship of Engineering	18,800.00	1,034.00	.....	1,034.00	18,800.00
William P. Mason Professorship of Geology .	18,800.00	1,034.00	.....	1,034.00	18,800.00
Henry B. Rogers For General Salaries . . .	25,000.00	1,375.00	.....	1,375.00	25,000.00
Nathaniel Thayer Professorship of Physics .	25,000.00	1,375.00	.....	1,375.00	25,000.00
	$144,390.00	$7,925.50	.....	$7,925.50	$144,390.00
FUNDS FOR LIBRARY, READING ROOMS AND GYMNASIUM:					
Walter S. Barker.	.....	$220.00	$10,000.00	$195.59	$10,024.41
Ednah Dow Cheney	$14,974.30	825.00	2.44	943.02	14,858.72
Frank Harvey Cilley	69,869.06	3,648.65	.....	1,761.34	71,756.37
Charles Lewis Flint Library .	5,129.10	275.00	.....	258.22	5,145.88
William Hall Kerr Library .	2,394.53	132.00	.....	12.72	2,513.81
Arthur Rotch Arch. Library	5,000.00	275.00	.....	275.00	5,000.00
Technology Matrons' Teas .	6,608.16	363.00	.....	354.54	6,616.62
John Hume Tod	2,692.41	148.50	.....	130.06	2,710.85
Theodore N. Vail	24,687.50	1,540.00	12,236.00	1,540.00	36,923.50
	$131,355.06	$7,427.15	$22,238.44	$5,470.49	$155,550.16
FUNDS FOR DEPARTMENTS:					
Architectural Department .	.....	$5.50	$250.00	.....	$255.50
William Parsons Atkinson .	$13,082.20	715.00	.....	$715.00	13,082.20
Frank Walter Boles Memorial	15,456.14	825.00	.....	823.16	15,457.98
William E. Chamberlain . .	7,309.77	401.50	.....	401.50	7,309.77
Chemical Engineering Practice	257,772.97	14,190.00	.....	14,190.00	257,772.97
Crosby Honorary Fund . .	.....	.....	806.99	105.64	701.35
Susan E. Dorr	95,955.67	5,280.00	.....	5,280.00	95,955.67
George Eastman	400,000.00	22,000.00	.....	22,000.00	400,000.00
George Henry May	5,000.00	275.00	.....	275.00	5,000.00
Forris Jewett Moore	.....	385.00	25,000.00	81.50	25,303.50
Edward D. Peters	5,072.73	275.00	.....	.....	5,347.73
Pratt Naval Architectural .	391,949.12	21,560.00	.....	21,273.31	392,235.81
Arthur Rotch	25,000.00	1,375.00	.....	1,375.00	25,000.00
*Edmund K. Turner	224,330.23	12,540.00	4,459.95	9,912.50	231,417.68
	$1,440,928.83	$79,827.00	$30,516.94	$76,432.61	$1,474,840.16

One-fourth of net income added to fund.

Schedule Q (*Continued*)

	Funds, June 30, 1926	*Investment Income*	*Other Income*	*Expended or Transferred*	*Funds, June 30, 1927*
FUNDS FOR RESEARCH:					
John E. Aldred	.....	$4,207.50	$101,850.00	$4,207.50	$101,850.00
Samuel Cabot	$71,951.18	3,960.00	.....	3,248.61	72,662.57
Ellen H. Richards	17,762.39	973.50	.....	746.57	17,989.32
Charlotte B. Richardson	39,059.79	2,145.00	.....	1,600.00	39,604.79
Technology Plan Research	7,146.57	275.00	.....	4,602.00	2,819.57
Edward Whitney	52,582.62	2,915.00	.....	327.36	55,170.26
	$188,502.55	$14,476.00	$101,850.00	$14,732.04	$290,096.51
FUNDS FOR FELLOWSHIPS:					
Arkwright Club	.....	$44.00	$2,000.00	.....	$2,044.00
William Sumner Bolles	$22,174.26	1,210.00	568.83	.....	23,953.09
Malcolm Cotton Brown	13,408.00	1,000.00	.....	$1,000.00	13,408.00
Collamore	12,505.61	687.50	.....	500.00	12,693.11
Dalton Graduate Chemical	6,286.75	346.50	.....	300.00	6,333.25
du Pont Fellowship	750.00	.....	750.00	750.00	750.00
Rebecca R. Joslin	1,747.82	93.50	.....	.....	1,841.32
Moore	7,114.62	390.50	.....	.....	7,505.12
Williard B. Perkins	6,399.89	352.00	.....	.....	6,751.89
Proprietors Locks & Canals	.....	.....	2,000.00	.....	2,000.00
Henry Bromfield Rogers	22,967.95	1,265.00	.....	800.00	23,432.95
Richard Lee Russel	2,416.57	110.00	.....	.....	2,526.57
Henry Saltonstall	10,692.24	588.50	.....	537.50	10,743.24
James Savage	11,646.36	638.00	.....	300.00	11,984.36
Susan H. Swett	11,595.45	500.00	.....	500.00	11,595.45
Gerard Swope	1,500.00	.....	3,500.00	2,500.00	2,500.00
Louis Francisco Verges	10,257.11	561.00	.....	500.00	10,318.11
	$141,462.63	$7,786.50	$8,818.83	$7,687.50	$150,380.46
FUNDS FOR SCHOLARSHIPS:					
Elisha Atkins	$5,338.27	$291.50	.....	$300.00	$5,329.77
Billings Student	51,429.66	2,805.00	.....	2,920.00	51,314.66
Jonathan Bourne	10,821.03	594.00	.....	600.00	10,815.03
Harriet L. Brown	6,975.47	385.00	.....	300.00	7,060.47
Nino Tesher Catlin	.....	44.00	1,000.00	.....	1,044.00
Lucius Clapp	5,209.26	286.00	.....	300.00	5,195.26
Class of 1896	4,635.77	253.00	.....	.....	4,888.77
Lucretia Crocker	74,290.40	4,070.00	.....	1,125.00	77,235.40
Isaac W. Danforth	5,419.97	297.00	.....	300.00	5,416.97

Schedule Q (*Continued*)

	Funds, June 30, 1926	*Investment Income*	*Other Income*	*Expended or Transferred*	*Funds, June 30, 1927*
Ann White Dickinson	$42,465.31	$2,310.00	.....	$2,300.00	$42,475.31
Farnsworth	5,534.17	302.50	.....	300.00	5,536.67
Charles Lewis Flint	5,522.19	302.50	.....	300.00	5,524.69
Sarah S. Forbes	3,641.07	198.00	.....	180.00	3,659.07
Fuel and Gas Scholarship	.....	.....	$700.00	700.00	.....
George Hollingsworth	5,249.62	286.00	.....	300.00	5,235.62
T. Sterry Hunt	3,263.56	181.50	.....	180.00	3,265.06
William F. Huntington	5,433.98	297.00	.....	320.00	5,410.98
Joy Scholarships	16,361.12	901.50	.....	.....	17,262.62
William Litchfield	5,464.70	302.50	.....	300.00	5,467.20
Elisha T. Loring	5,474.49	302.50	.....	300.00	5,476.99
Lowell Inst. Scholarship	2,503.72	137.50	.....	50.00	2,591.22
George Henry May	6,045.93	330.00	.....	300.00	6,075.93
James H. Mirrlees	2,651.37	143.00	.....	140.00	2,654.37
Nichols Scholarship	5,423.71	297.00	.....	300.00	5,420.71
Charles C. Nichols	5,464.99	302.50	.....	300.00	5,467.49
John Felt Osgood	5,394.71	297.00	.....	300.00	5,391.71
George L. Parmelee	18,802.28	1,034.00	.....	1,100.00	18,736.28
Richard Perkins	54,984.07	3,025.00	50.00	3,500.00	54,559.07
John P. Schenkl	21,518.46	1,182.50	.....	1,300.00	21,400.96
Thomas Sherwin	5,453.70	297.00	.....	300.00	5,450.70
Samuel E. Tinkham	2,377.78	132.00	.....	125.00	2,384.78
F. B. Tough	414.12	22.00	.....	.....	436.12
Susan Upham	1,149.00	60.50	.....	50.00	1,159.50
Vermont Scholarship	6,054.87	330.00	.....	300.00	6,084.87
Ann White Vose	62,918.56	3,465.00	.....	3,990.00	62.393.56
Arthur M. Waitt	10,279.63	561.00	.....	520.00	10,320.63
Louis Weissbein	4,342.73	236.50	.....	240.00	4,339.23
Frances Erving Weston	1,291.98	71.50	200.00	450.00	1,113.48
Samuel Martin Weston	452.43	27.50	200.00	440.00	239.93
	$480,054.08	$26,361.00	$2,150.00	$24,730.00	$483.835.08
FUNDS FOR PRIZES:					
Robert A. Boit	$5,291.71	$291.50	.....	$250.00	$5,333.21
Class of 1904	408.82	22.00	.....	.....	430.82
William C. Hunneman	.....	.....	1,050.00	.....	1,050.00
James Means	2,750.36	148.50	.....	440.00	2,458.86
Arthur Rotch	5,750.73	313.50	.....	200.00	5,864.23
Arthur Rotch, Special	7,149.41	385.00	.....	200.00	7,334.41
	$21,351.03	$1,160.50	$1,050.00	$1,090.00	$22,471.53

Schedule Q (*Continued*)

	Funds, June 30, 1926	*Investment Income*	*Other Income*	*Expended or Transferred*	*Funds, June 30, 1927*
FUNDS FOR RELIEF:					
Architectural Society	$1,448.88	$77.00	.....	.....	$1,525.88
Edwin Austin	440.243.43	24,200.00	.....	$23,152.50	441,290.93
Thomas Wendell Bailey	2,543,15	137.50	.....	140.00	2,540.65
*Charles Tidd Baker	23,131.82	1,265.00	.....	500.00	23,896.82
Levi Boles	10,945.92	605.00	.....	600.00	10,950.92
Bursar's Fund	7,269.61	423.50	$5,361.03	4,829.31	8,224.83
Mabel Blake Case	26,939.35	1,485.00	.....	1,500.00	26,924.35
Dean's Fund	1,278.26	104.50	1,727.48	550.00	2,560.24
Carl P. Dennett	.....	.....	500.00	370.00	130.00
Dormitory Fund	3,829.71	209.00	.....	200.00	3,838.71
Norman H. George	93,793.39	5,170.00	.....	4,995.00	93,968.39
Summer Surveying Camp	.....	.....	500.00	.....	500.00
Teachers' Fund	112,101.98	6,160.00	.....	3,890.00	114,371.98
Samson R. Urbino	.....	11.00	1,000.00	.....	1,011.00
Jonathan Whitney	594,475.83	28,867.50	.....	25,344.50	597,998.83
Morrill Wyman	75,603.44	4,180.00	.....	5,910.00	73,873.44
	$1,393,604.77	$72,895.00	$9,088.51	$71,981.31	$1,403,606.97

RECAPITULATION OF FUNDS:

FOR GENERAL PURPOSES					
Restricted	$19,324,959.46	$1,301,905.81	$233,226.68	$1,001,116.56	$19,858,975.39
Unrestricted	185,023.77	41,475.50	970,785.97	74,317.53	1,122,967.71
FOR DESIGNATED PURPOSES					
Special Deposit Funds	4,557,708.32	38,636.35	183,433.28	483,060.19	4,296,717.76
Salaries	144,390.00	7,925.50	.....	7,925.50	144,390.00
Libraries, etc.	131,355.06	7,427.15	22,238.44	5,470.49	155,550.16
Departments	1,440,928.83	79,827.00	30,516.94	76,432.61	1,474,840.16
Research	188,502.55	14,476.00	101,850.00	14,732.04	290,096.51
Fellowships	141,462.63	7,786.50	8,818.83	7,687.50	150,380.46
Scholarships	480,054.08	26,361.00	2,150.00	24,730.00	483,835.08
Prizes	21,351.03	1,160.50	1,050.00	1,090.00	22,471.53
Relief	1,393,604.77	72,895.00	9,088.51	71,981.31	1,403,606.97
Total (Schedule D)	$28,009,340.50	$1,599,876.31	$1,563,158.65	$1,768,543.73	$29,403,831.73

One-half of the income added to the principal.

SCHEDULE R
MINOR FUNDS

Name	Balance June 30, 1926	Income	Other Increases	Salaries and Expenses	Balance June 30, 1927
Aeronautics (Wind Tunnels)	$2,123.21	$8,013.75	.....	$12,901.99	*$2,765.03
Aldred Lectures	2,673.81	.....	[3]$211.80	1,743.28	1,142.33
Alumni Dormitory Committee	4,709.13	.....	[1]10,000.00	4,383.54	10,325.59
No. 215 Lectures	211.80	.....	.....	211.80	.....
Alumni Office	86.23	25,198.44	.....	24,801.00	483.67
American Petroleum Institute	.....	4,354.16	.....	4,167.52	186.64
Am. Tel. and Tel. Fund	3,940.00	78.80	.....	.....	4,018.80
Arch. Dept. Special Scholarship	.....	1,000.00	.....	1,000.00	.....
Bench Mark No. 454	1,500.00	.....	.....	.....	1,500.00
Biology, Special (F. and F.)	4,032.10	10.00	.....	2,091.00	1,951.10
Boat House Equipment No. 346	3,100.00	6,283.00	.....	7,959.55	1,423.45
Born's Atomic Dynamics Account	*1,647.85	694.33	[4]1,083.96	130.44	.....
Burton Portrait Fund	.....	1,283.00	.....	623.55	659.45
Chemistry, Special	768.03	15.36	.....	.....	783.39
Civil Eng., Special Apparatus 314	541.50	.....	[1]67.10	608.60	.....
Civil Eng. Camp No. 476	.....	.....	[1]600.00	543.05	56.95
Course VI-A Fund	4,880.00	80.00	.....	1,421.79	3,538.21
Course VI-A Tax	41.00	287.70	.....	259.00	69.70
Course XV	480.20	119.70	.....	98.50	501.40
E. H. Cox Fund	124.00	2.48	.....	.....	126.48
De Donder Book Account	.....	.....	[1]900.00	854.04	45.96
Dining Service Reserve	10,774.68	[2]4,979.05	.....	5,842.83	9,910.90
Division Fund	1,590.60	31.80	.....	.....	1,622.40
Div. of Mun. and Indust. Research	.....	16,194.37	[1]4,207.50	22,725.97	*2,324.10
Division of I. C. and R. No. 2	1,572.96	16,831.85	.....	12,001.13	6,403.68
Dormitory Tax	17.50	910.00	.....	611.47	316.03
Edison Elec. Ill. Co., Com. Res.	.....	3,500.00	.....	3,719.24	*219.24
Dynamometer No. 506	.....	.....	[2]2,610.00	1,350.00	1,260.00
Electrical Eng., Special 400	28.50	.....	.....	28.50	.....
Elec. Eng., Special 468	.....	.....	[1]15,000.00	120.20	14,879.80
Gen. Elec. Co., Courses VI and VIII	22,600.00	452.00	.....	[5]23,052.00	.....
General Library — New Stacks	.....	.....	[1]23,720.00	.....	23,720.00
Hale Spectroscopic	2,964.36	59.28	.....	.....	3,023.64
Health Education Research	827.77	133.52	[1]1,500.00	1,318.43	1,142.86
Historic Memorials Committee	425.38	.....	.....	123.91	301.47
Horowitz Building Construction	.....	10,000.00	.....	7,853.45	2,146.55
Hydraulic Laboratory No. 241	1,480.51	.....	.....	.....	1,480.51
Journal of Mathematics and Physics	84.11	250.00	[2]2,250.00	2,564.25	19.86
Liquid Soap Account	.....	.....	[6]1,420.00	1,382.98	37.02
Mech. Eng. Dept., No. 482	.....	.....	[1]1,450.00	.....	1,450.00

(*Continued*)

* Overdraft.
[1] Appropriation from Current Funds.
[2] Transfer from Dining Service ($4,874.55).
[3] Transfer from No. 15 Lectures.
[4] Charged to Profit and Loss (Schedule S).
[5] See Special Deposit Funds.
[6] From General Expense.

Schedule R (*Continued*)

	Balance June 30, 1926	*Income*	*Other Increases*	*Salaries and Expenses*	*Balance June 30, 1927*
Medical Department, Special. . .	$1,625.81	$197.00	.....	$411.00	$1,411.81
Model Great Court	.....	.....	[1]$1,710.00	.....	1,710.00
Min. Eng., Sum. Camp (Con. 1926)	535.12	.....	.....	535.12	.....
Motion Picture No. 342	1,000.00	.....	.....	1,000.00	.....
National Res. Com. on Indus. Ltg.	64.36	14,143.85	.....	14,208.21	.....
Nutrition Research	992.41	19.94	.....	.....	1,012.35
Ore Dressing Laboratory.	*762.49	.....	[5]2,571.23	501.08	1,307.66
Paper Ins. Cable Research	*108.44	3,049.73	.....	3,473.91	*532.62
Photographic Service	.....	1,495.60	.....	4,827.53	*3,331.93
Photostat Account	.....	4,401.46	.....	3,791.99	609.47
Presidents	50.41	.....	.....	.....	50.41
Prize Song Fund	200.00	.....	.....	200.00	.....
Public Health.	742.53	14.85	.....	.....	757.38
Research Lab. Applied Chemistry .	19,944.96	161,030.79	[4]10,848.61	171,907.62	19,916.74
Research Lab. Industrial Physics .	4,181.20	795.00	.....	867.70	4,108.50
Res. Lab. Phys. Chem. (Royalties).	473.12	476.40	.....	100.00	849.52
Research on Explosives, No. 34161.	1,680.27	.....	.....	33.20	1,647.07
Roentgen Ray	1,741.09	34.83	.....	.....	1,775.92
Sargent Fund.	211.80	4.23	.....	.....	216.03
Short Wave Research	*3,168.36	10,518.00	.....	5,641.53	1,708.11
Single Cyl. Crank Case 535 . . .	.....	.....	[1]5,000.00	.....	5,000.00
Special Research No. 13101a . . .	1,926.86	.....	.....	608.31	1,318.55
Squash Courts	25,000.00	.....	[4]4,042.54	29,042.54	.....
Steam Table Research.	*3,004.60	.....	.....	2,645.57	*5,650.17
Travel. Fellowship in Architecture	2,375.00	.....	.....	2,375.00	.....
Universal S. C. Engine No. 463 . .	.....	.....	[1]6,250.00	73.15	6,176.85
Walker Memorial (Library App.)	599.22	.....	[3]1,476.06	1,537.97	537.31
Total	$126,229.80	$296,944.27	$96,918.80	$390,274.44	$129,818.43
		(Schedule B)		*x* (Schedule C)	(Schedule D)

* Overdraft.
[1] Appropriation from Current Funds.
[2] Appropriation from W. B. Perkins Fund.
[3] Appropriation from Cilley Fund.
[4] Appropriations: Cabot Fund, $3,248.61; Richardson Fund, $1,600; Current Funds, $6,000.
[5] Appropriations: $2,000 Current Funds; $571.23 from Mining Department.
x Amount carried to Schedule C reduced by $31,901.78 already included in Payments from Special Funds and Special Appropriations. (Schedules C-10 and C-16.)

SCHEDULE S

Current Surplus

Balance, June 30, 1926	$32,121.16
Net Increase (Schedule A)	22,296.53
Balance, June 30, 1927 (Schedule D)	$54,417.69

Detail of Profit and Loss Account

Losses and Charges:

Students Accounts (previous years), charged off	$709.16
Publication of *Born's Atomic Dynamics* (1925-6)	1,083.96
Total Losses	1,793.12

Gains and Credits:

Students' Fees and Deposits (previous years)	$282.95
Dining Service (1925–1926)	529.00
Total Gains	$811.95
Profit and Loss. Net Loss (Schedule A)	$981.17

T.P.-4-28-1000