The Blue Hen

1913
The BLUE HEN
of the CLASS
of 1914
DELAWARE
COLLEGE

Nineteen
Thirteen
TO THE MEMORY OF
Joseph Heckart Frazer
THIS BOOK
IS REVERENTLY INScribed
IND READER we greet you. We have
endeavored in the following pages
to employ the spirit, life, and activity
that inspired the pages of your college. But to this end
we aim to keep within the limits of the
interest of our colony. We shall, as far as
possible, avoid the misprints of our mistakes, and not to know
the secret thoughts of your editors. To do the
former would ruin you, the latter might give
you the habits of pedantry.

W's misprints please the streets and in-
side your papers. These comments are not
merely for the benefit of the class of 1947.
It is our desire to help you as much as we can,
and to keep your minds on the publishers' eyes.

In conclusion, we pleasantly thank all who
have helped us in the preparation and publication
of this issue...
Salutation

KIND READER, we greet you. We have endeavored, in the following pages, to embody the spirit, life, and activities of our college. But, to this end, our aim has been neither to flash upon you all the brilliant attributes of the members of our illustrious class, nor to throw the searchlight upon their failings. To do the former would blind you; the latter might drive you to the depths of despair.

We sincerely hope the events and incidents herein recorded may contain something of interest to all. To us, the class of 1914, they hold much of interest and will ever recall to us dear memories of the happiest years of our life.

In conclusion, we heartily thank all who have aided us in the preparation and publication of our annual.

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Joseph Heckart Frazer was born at Port Deposit, Maryland, on September 30, 1882. For six years he lived with his parents on the shore of the Susquehanna until, in 1888, the family moved to Newark, Delaware. He received his first taste of school life at the Newark Academy, which he soon left for the public schools of the town. Having graduated from school in June, 1899, he entered Delaware College the following September as a student in the Civil Engineering Department. During the summer following his junior year at college, he worked for the Baltimore and Ohio Railroad. He then returned to college and was graduated with his class in 1903.

After graduation Frazer again worked for the Baltimore and Ohio Railroad under the supervision of Division Engineer William L. Sissons, spending some time with him on a preliminary survey in West Virginia.

In 1904 the Bolivian Government asked through their representative in this country for an engineer to make a railroad survey for them. Mr. Sissons was chosen for the task, and being allowed to pick his men, he selected Joseph Frazer as one to accompany him to South America. The party set out for Bolivia in December, 1904. But a short time after their arrival in "the roof of the world"—a name by which Bolivia is sometimes known—the corps was disbanded on account of the ill-health suffered by the chief engineer and some of the party in consequence of the extreme altitude of the country. All returned home except young Frazer, who determined to stick it out since he had gone so far. So he secured a position with the Andes Tin Company, for whom he worked about a year as mining engineer.

He then formed a partnership with an English business man by the name of Rumbolt, and together they set up the firm of Rumbolt & Frazer, mining engineers. When, at the end of two years they were performing railroad work, Rumbolt withdrew from the firm. His place was soon filled, however, by Mr. A. W. Yount, and with the firm now operating as Yount & Frazer, bids were given almost wholly on railroad work alone.

The first contract that the new firm received was for a railroad, fifty-five miles in length, and running from Cochabamba to Oruro. The task of constructing this railroad was difficult in the extreme; their camps had to be pitched at altitudes of from 15,000 to 16,000 feet above sea level. The success of the two young engineers on this work was remarkable and instantly brought them into prominence.
It was about the time when this railroad was completed that Mr. Frazer met his death. His fatal illness was, no doubt, due indirectly to overwork. In a poor physical condition, he went on a four days' duck shooting expedition with some friends near Lake Titicaca. Subjected to exposure and exertion he caught a severe cold, and upon going to La Paz on August 9, 1911, malignant influenza developed. He was carefully cared for in the home of a medical missionary whose wife was a trained nurse; but his case was hopeless, owing to the altitude, which affected the lungs and heart.

Much information concerning the attitude of Mr. Frazer toward his work and life in Bolivia can be gained from the following telegram which was sent by Minister H. G. Knowles to the Department of State and later transmitted by the department to the family of the deceased:

LEGATION OF THE UNITED STATES
OF AMERICA,
La Paz, Bolivia, August 21, 1911.

The Honorable, the Secretary of State, Washington, D. C.

Sir: I have the honor to confirm my cablegram of today informing the department of the death of Joseph H. Frazer. He was a citizen of the United States and his residence was with his parents, at Newark, Delaware. He came to this country seven years ago and had been following his profession of mining and civil engineering. For the past three years he had been engaged in railroad work, and as a partner of A. W. Yount, located at Oruro. He had in the last two years undertaken and performed with marked success, several large and important contracts. At the time of his death the firm was engaged as principal contractors in the construction of the railroad to run from Rio Mulatos to Potosi. They were about to close a contract for the construction of 300 kilometers of railroad in the southern part of Chile, involving many millions of dollars. He had already, at the age of 29, established a reputation on the West Coast of South America as one of the best and most reliable contractors that ever came here. He possessed unusual ability as an engineer and contractor, had an enormous amount of energy, and was a hard worker. He had marvelous influence over his workmen, all of whom preferred to work for him rather than to play for other men. He made the laborers feel that he was one of them with kindness and consideration, which had a reformatory and constructive influence even on the roughest characters. From the lowest workmen to the party giving the contract he had their confidence, admiration and esteem, which grew into an intense affection. It may be truthfully said that not another contractor in South America stood in such a favorable position and had before him such a bright career. It is the opinion of eminent men here that had he lived until 40 and continued his career, he would have surpassed the achievements and reputation of Henry Mieggs. * * * His success here is a shining example of what is possible for a young man with ability, energy, character, and ambition to accomplish in South America.
He had made all his plans to return to the United States next month to visit his family and friends whom he had not seen since he left there seven years ago. For the last five weeks his physical condition was very much run down by unbroken and overwork. It is said that three weeks ago he had several fainting spells at the dining table in his home in Oruro. The following week end—the first of this month—he went with a party of five on a duck shooting trip to the Desaquadero River.

The party spent four days there and killed 1,645 ducks. His score was next to the highest, about 500. The weather was cold and damp, and the men were in the water or wet most of the time. His physical condition, when he went on the trip, the exertion and shock incidental to firing daily, not less than 200 heavy gun charges, and the exposure for four consecutive days produced the only natural result. He contracted a severe cold and came to this city on the 9th inst. Malignant influenza developed, and one week later, the evening of the 16th inst., he died. He was buried from the legation on the afternoon of the 18th. The body was thoroughly embalmed and enclosed in a zinc-lined sealed casket, which will make it possible to send the remains out of the country within the prescribed period of two years.

I have the honor to be, sir, your obedient servant,

HORACE G. KNOWLES

It was only through the efforts of Mr. Knowles, the United States Minister, that permission was obtained from the Bolivian Government for the immediate removal of the body from the country. Concerning the difficulties encountered in transporting the body to the United States after permission had been given, much can be shown by the following letter from Rev. Gerhard J. Schilling:

THE HOMeward JOURNEY OF MR. FRAZER.

A short time after the decease of Mr. Joseph H. Frazer in La Paz, Bolivia, it was decided that his remains should be transferred to the United States. This transfer may seem to us here in the homeland a comparatively easy matter, but it is not so when you have to deal with distances and circumstances, such as I intend to outline in the following narrative.

Happily for the undertaking, the body of Mr. Frazer had been perfectly embalmed by an American physician on the day of his death; else there would have been no possibility of persuading the Bolivian Government to permit the transshipment before a term of five years had expired. As it was, the municipal statutes required that a body should remain two years in the cemetery of La Paz, before it could be exhumed.

Here, then, we encountered the first real difficulty, and the fact that it was finally overcome is entirely due to the diplomatic efforts of the Hon. Horace G. Knowles, our American Minister to Bolivia. A special session of the municipality had to be called and a number of conditions had to be met, ere we were permitted to take the coffin which contained the remains of Mr. Frazer into a second zinc
box and a third packing case for its long journey. On a Friday afternoon I finally set out on the trip to the Peruvian coast, the port of Mollendo.

In the custom port of Guayaquil, yet on Bolivian soil, I found after considerable search the Peruvian Consul, who promised to send at once a cable to Puno, the port of entry in Peru, so that there would be no difficulties in landing the body the next day. Yet when I came to Puno no such instruction had been cabled. Through the courtesies of the Peruvian Railway Corporation, I was, however, permitted to proceed at once to the coast. Here new difficulties arose. The captain of the port had no official instructions regarding the matter, and as he had attended the previous night upon a firemen's ball, he felt very ill and exceedingly cross. But when the steamer was about to sail, he weakened and permitted the transfer of the precious freight to the waiting steamer. By this time I had a lot of documents about the matter and yet, on the "Oronsa" the sanitary inspector of the coast, who was a fellow passenger, pointed out to me that I had no permit to trans-ship the body from the steamer on which we sailed to another going farther north from Callao.

After a good deal of talking I persuaded that same inspector to make out for me such a permit, which he did, and through which document I had no difficulty in trans-ship the body to the "Mexico." My troubles, however, were not to be at an end as yet, for the purser of the "Oronsa" forgot to hand to the purser of the "Mexico" one of the documents, so that when we landed in Panama, the receipt which showed that the transportation of the silent passenger had been paid to New York was missing. It was really very fortunate that an experienced traveler accompanied Mr. Frazer, for else there might have been a considerable delay at this point. At last, however, even this difficulty was overcome, and we sailed from Colon on the excellent steamer "Almirante" of the United Fruit Company to New York, where Mr. Stanley Frazer awaited the incoming of the steamer. Since it was Columbus Day, we could not land the body that afternoon, but the following day the casket was shipped to Newark, Del. From the time we lifted the body out of its temporary resting place in La Paz, until it landed in New York City, it was trans-ship from cart to railway, to boats and steamers fourteen times. What a comfort to know that at last the remains of Mr. Frazer rest peacefully in the beautiful cemetery at West Nottingham in the homeland and among the members of his own family.

—G. J. S.
Delaware College

A Brief Historical Sketch and Some Information as to the Aim and Scope of the Institution

DeLAWARE COLLEGE is situated at Newark, an attractive little town of two thousand inhabitants in the northwestern part of the State. Newark is connected with Philadelphia, Wilmington, Baltimore, and Washington by the Pennsylvania and Baltimore and Ohio Railroads. It is connected with nearby towns by splendidly made macadam roads. The surrounding country is healthful and beautiful. The village is lighted by electricity and has a supply of fine water. The College occupies a charming site near the centre of the town.

Delaware College was chartered in 1833 by Act of the Delaware Legislature, and students enrolled for work in May of the following year. A succession of misfortunes forced the College to close her doors in the spring of 1859.

Eleven years later the College was again ready for students, having meanwhile been designated by Act of the Delaware Legislature as beneficiary under the Act of Congress giving to each of the several States large areas of public lands to form the basis of endowment for colleges especially devoted to the teaching of Agriculture and the Mechanic Arts, and Military Tactics. This Act of Congress, known as the “Morrill Bill,” from its originator, Senator Morrill of Vermont, declares that the Colleges made beneficiary under its provisions shall have as their leading object, “without excluding other scientific and classical studies and including Military Tactics, to teach such branches of learning as are related to Agriculture and the Mechanic Arts, in order to promote the liberal and practical education of the industrial classes in the several pursuits and professions of life.”

In consideration of the designation and establishment of Delaware College as the institution to be provided by the State of Delaware in accordance with the provisions of the Act of Congress in question, “a joint and equal interest in the grounds, building, libraries, and vested funds of the College proper,” was conveyed to the State of Delaware, and equal representation upon the Board of Trustees was given the State.

The Board of Trustees consists of fifteen members, representing the original board, and fifteen members on the part of the State appointed by the Governor,
MEMORIAL GATE, ENTRANCE TO JOE FRAZER FIELD
five from each of the three counties. The Governor of the State and the President of the College are members, ex officio.

The Delaware College Agricultural Experiment Station was established as a department of the College in 1888, by Act of the Delaware Legislature, under the provisions of an Act of Congress, approved March 2, 1887, commonly known as the "Hatch Bill," appropriating $15,000 annually for the purpose of "acquiring and diffusing among the people of the United States useful and practical information on the subjects connected with agriculture and to promote scientific investigation and experiment respecting the principles and application of Agricultural Science under direction of the College or Colleges established in each of the States and Territories" in accordance with the provisions of the "Morrill Bill."

The still further expansion of the work of the Experiment Station along lines set down by the law for the development of Agricultural Science by means of research and experiment is made possible by the "Adams Bill," approved March 16, 1906, appropriating $5,000 for the first year and increasing this amount by $2,000 a year until it reaches $15,000.

The College is beneficiary also under a further Act of Congress, known as the "New Morrill Bill," approved August 20, 1890, which appropriated for the year then current $15,000 to each State for the Land Grant Colleges, and provided that the increase should be $1,000 each year until it should reach $25,000 a year. Delaware College receives annually four-fifths of this appropriation, one-fifth, in accordance with the provisions of the bill, being applied to the maintenance and support of the College at Dover for the education of colored students.

This act was supplemented by the passage of the "Nelson Bill," approved March 4, 1907, providing for an appropriation of $5,000 for the year ending June 30, 1908, and a subsequent annual increase in appropriation of $5,000 until it reaches $25,000, thus making an annual income of $50,000 from the national government. Delaware College will receive four-fifths of this amount annually, the rest going to the College for the colored race at Dover. The appropriations provided for in this Act are to be applied "to instruction in Agriculture, the Mechanic Arts, the English Language, and the various branches of mathematical, physical, natural and economic sciences, with special reference to their applications in the industries of life, and to the facilities for such instruction."

There is also an appropriation by the State of Delaware of $2,500 yearly for the Chair of History and Economics.

Stimulated by the increased income provided by these recent Acts of Congress, Delaware College, within the past few years, enlarged her corps of instructors and increased her equipment of apparatus and appliances, so that she is now better enabled than ever before in her whole history to perform her appointed duty.

The buildings of the College include the dormitory, originally the only College building used for all purposes and still occupied, not only for lodgings, but also for laboratories and recitation rooms; recitation hall erected by the State in
1891; the wood-working and machine shops, where is found machinery and apparatus for a practical course of instruction in the Mechanic Arts; the gymnasium, splendidly fitted for its purpose. The buildings are situated in a beautiful campus shaded by fine old trees.

The Experiment Station, containing the offices, libraries and laboratories of the station workers, occupies a building on the College grounds. The station has a greenhouse, with laboratory adjoining, and several buildings used for storage and other purposes in the conduct of the various lines of experimental work.

The Legislature of 1903 appropriated $15,000, payable in two equal annual installments, by the expenditure of which the workshops have been greatly enlarged, and are now entirely adequate for the present needs of the College. The first floor is equipped with wood-working and iron-working machinery and directly adjoining are mechanical and electrical laboratories. On the second floor of the building are found large drafting rooms and laboratories.

The sum of $25,000 appropriated by the Delaware Legislature in the year 1901 for rebuilding and repairs to Delaware College, was expended mainly in repairing and enlarging the dormitory. The building was replastered throughout, and the floors were made secure by the introduction of new timbers. The sleeping rooms were made comfortable and attractive, and the Oratory was remodelled and redecorated so that it is now one of the handsomest auditoriums in the State. New fronts, corresponding in style with the Doric portico of the main entrance, were placed on the wings, and at right angles to the wings and parallel to the main structure were built three-story extensions. These improvements have increased the number of sleeping rooms, and furnished handsome apartments for recitation rooms and laboratories.

The appropriation of $15,000, which was made by the Legislature of Delaware in 1905, has been applied to the building of a drill hall and gymnasium. In the basement of the building will be found shower baths and lockers for the use of the students. The main floor serves as a drill hall and gymnasium. A balcony is suspended from the walls of the building, which is used as a running track and also by spectators.

At the session of the Legislature of Delaware of 1907, a bill was passed authorizing a commission to apply $20,000 to the purchase and equipment of a farm to be managed and conducted by the Board of Trustees of Delaware College at Newark, for experimental purposes in providing efficient instruction in agriculture and in conducting investigation and original research in connection with the Experiment Station established as a department of the College. A farm of two hundred and seventeen acres, lying a mile south of the College, has been bought. It is most attractively situated and furnishes excellent means for practical instruction in agriculture. At the last session an appropriation of $10,000, payable in two installments of $5,000 each, was made for the care of the College property, and for the support of its work along such lines as are otherwise unprovided for. Ten thousand dollars was also appropriated for buildings on the College farm.
The College buildings are heated by steam and lighted by electricity and are supplied with water by the town water works. A considerable part of the rear campus is occupied as an athletic field and affords excellent facilities for outdoor sports and games.

Mr. and Mrs. Eben B. Frazer and their son, Mr. J. Stanley Frazer, of the class of '04, have provided, as a memorial to Joseph H. Frazer, '03, for the grading, draining, and otherwise fitting up of the athletic grounds of Delaware College. The grounds are enclosed by a substantial tile and concrete wall. A running track, a quarter of a mile in length, and grounds for baseball, football, tennis, and other sports have been laid out.

The Board of Trustees have accepted this gift as a memorial to a graduate of the College and have named the field the "Joe Frazer Field."

Tuition is free to all students from the State of Delaware, so that the College constitutes a part of our system of free public instruction. She places within reach of the young men of the State a thorough collegiate training with no other cost than that of living and the provision of necessary books and a few incon siderate fees to cover expenses incurred by the institution. Her work is laid out upon broad lines, and the culture of liberal learning and the practical usefulness of the applied sciences are equally emphasized in her scheme of education. While, in pursuance of the special aims of her organization, stress is laid upon those departments which build up good citizenship and useful manhood, the place so wisely provided in the foundation of the "Land Grant" Colleges is given to the refining graces and amenities of the older learning.

THE DAIRY BUILDING
Since the reorganization of the College on the Land Grant foundation, Agriculture has always been a prominent feature of the College catalogues. The courses, as described, have been excellent and, in print, would compare favorably with those in other land grant institutions.

At the beginning, there was offered only a three year course which did not lead to a degree, as did those in the other sciences and the classics. A study of the early records reveals the fact that, from the time of the reorganization of the College in 1870 until 1892, no students were enrolled in this department. It is evident, however, that from the beginning the trustees were anxious to make Agriculture popular. This is shown by the fact that in 1873 it was made a prescribed study in the first two years of the Scientific Course. In 1883 a Standing Committee of the Trustees on Agriculture was appointed, and this has been one of the Standing Committees ever since.

Those who are familiar with the system of agricultural education today can readily appreciate the difficulties that obtained in popularizing this work in the early seventies. With no text books, but few trained teachers, no apparatus or other equipment really adapted to the subject, it was utterly impossible to at-
tract students. Furthermore, at that time all the other vocations open to a college graduate offered greater inducements. In consequence, the better equipped departments, which led to a so-called learned profession, drew all the men entering college.

In spite of the fact, however, that there were no students in this subject, there was always a Professor of Agriculture. The first incumbent of this chair was Edward D. Porter, A. M. Prof. Porter was evidently a man of parts, as he was not only Professor of Agriculture, but of Physics and Civil Engineering as well. He was also, at least during a part of the time that he held this chair, Principal of the Newark Academy, an institution that was perhaps better known at that time than the College itself. Prof. Porter furnished the College with a farm, which offered practical work for students and was used for demonstration and experiment, as well as for an agricultural laboratory. In the catalogue of 1877, Prof. Porter published the results of his experiments in growing sugar beets, which was the first scientific experimental work done in Delaware. Prof. Porter was a great organizer, and it was not long before he was called to the University of Minnesota, where he was for some time the Director of the Experiment Station of that state. From there he went to the University of Missouri, and directed for a number of years the Experiment Station in connection with the University of Missouri.

His successor in Delaware was Prof. Reinhart, who was in turn followed by Prof. Farrington, now Assistant Chief of the Bureau of Animal Husbandry in the
U. S. Department of Agriculture. Prof. Farrington was followed by Wesley Webb, now Corresponding Secretary of the Delaware State Board of Agriculture. Like his predecessors, Prof. Webb also held the chair of Physics and Civil Engineering, and in addition was, for a part of this time at least, instructor in Military Tactics.

The College opened in 1886 with Prof. Frederick D. Chester, B. S., an early Cornell graduate, occupying the chair of Geology and Agriculture. Under Prof. Chester’s regime a Bureau of Information for farmers was established. The catalogue states in this connection: “Letters of inquiry with stamp for answer should be addressed to the Agricultural Department of Delaware College.” A feature which would be considered rather unusual today is a statement in the catalogue for 1886 under the heading, “Agricultural Society of Delaware College.” “All students in the Agricultural Course will, upon entrance, become members of the above society, and all duties connected with it will be strictly enforced. The objects of the society are the reading of papers upon agricultural topics, and the discussion of matters relating to husbandry. The society will endeavor to secure lecturers from among our best farmers, and thus practical views from practical men may have their full representation.”

In the catalogue for 1886, Dr. Wolfe, as State Chemist, published the tabulated analyses of commercial fertilizers sold in the state, thus giving a little agricultural tone to the catalogue in lieu of students.

In the College announcement of 1888, the Chair of Agriculture was vacant, but a new Chair of Horticulture and Entomology was established, with M. S. Beckwith as Professor. The Experiment Station was organized during that year, with a Director, not yet appointed, Prof. Chester as Botanist, Prof. Harter as Meteorologist, Prof. Beckwith as Horticulturist and Entomologist, Prof. Penny as Assistant Chemist, and a Veterinarian not then appointed.

The next catalogue, for 1888-89, shows that the Chair of Agriculture was still vacant, but that Dr. Neale had been appointed Director of the Experiment Station.

In the catalogue for 1890, under the heading of Admission, it is stated that, “The Agricultural Course is a three-year special course established in accordance with the Act of Congress, July 7, 1862, and an Act of the General Assembly of the State of Delaware, passed March 14, 1867, in which it is required that the leading object of the Agricultural College is to teach such branches of learning as are related to Agriculture and to Mechanical Arts, without excluding other scientific and classical studies, and including Military Tactics.” It would seem from this quotation of the statute that the Agricultural Course was at that time considered a sort of necessary evil. Under the heading of Degrees we find that, while all of the other courses led to a degree and were four years in length, the Agricultural Course was still only three years long, and, at its completion the student was rewarded by “a certificate of graduate” in Agriculture.

In 1891 Dr. H. P. Eves, D. V. S., of Wilmington, was made Professor of
Veterinary Science, and W. H. Bishop, B. S., a graduate of the Amherst Agricultural College, was appointed Professor of Agriculture. In 1895 Biology was also taught by him.

The year 1891 marked a new era in the history of the College. In the fall of that year Delaware obtained her first regular student in Agriculture. The course had been extended to four years, and led to the degree of Bachelor of Agriculture. The distinction of being the first student to be graduated in Agriculture at Delaware College belongs to Mr. Brooks Ross of Seaford, who, having completed the Freshman and Sophomore years of the Scientific Course, changed to the course in Agriculture in his junior year. Mr. Ross was graduated in June, 1893, with the degree of B. Agr., the first one to receive this honor in the history of Delaware College.

In 1893 the Winter Short Course was established, five students availing themselves of this opportunity offered by Delaware College. This course seemed to be adapted to the conditions obtaining in Delaware, and those interested were much pleased by the way it was accepted by the constituents of the College. The next year this course was attended by five students, two of whom had taken it the winter previous. In the winter of 1895-96 but three attended the winter course. This number, however, was increased to six in 1896-97, but went to three again in 1897-98, and numbered four in 1898-99, and two in 1899-1900, and none in 1901. In 1901, however, William P. Naudin of Marshallton, Del., completed the four year course in Agriculture, and was graduated with the degree of B. S. (Agricultural Course). During a period of 31 years this was the second time this degree had been conferred at Delaware College.

In 1902-03 there were four students enrolled in the four year course in Agriculture, and one in the short course. In 1903 the late Lucien Green was graduated from the four year course in Agriculture, making the third student upon whom this honor had been conferred. During these years, for various reasons, the equipment for the course in Agriculture had not been increased to any extent. The College was unable to provide a farm with modern equipment, or modern laboratory facilities for instruction in this important subject. No demand had been made upon the course in Agriculture offered by the College, and, as the resources were limited, the trustees felt justified in strengthening the other department of the College upon which there had been a strong demand.

In spite of the fact that in other states the Agricultural courses were beginning to attract hundreds of students, it was the opinion of many, some of whom were trustees, that, owing to the close proximity of our large cities and the demand for men trained in the engineering courses, young men of Delaware could not be attracted to the Agricultural Course in Delaware College.

In 1903 Prof. Bishop resigned, and James A. Foord, B. S., M. S. A., was elected to the Chair of Agriculture. Prof. Foord was a young man who had received his Bachelor's degree from the Agricultural Department of the N. H. College of Agriculture and Mechanic Arts, and his Master's degree from Cor-
nell University. He had had considerable experience as a teacher and investigator, was energetic and enthusiastic, and was highly recommended for the work that he was to undertake as Professor of Agriculture in Delaware College. When he came to Newark to take up his work there were two students taking the four year course in Agriculture, and he had a class of four in the winter course in 1904. The following year three members of the Freshman class elected Agriculture, and the winter short course numbered two. This indicates that some interest was beginning to be felt in Agricultural education, although the course was badly handicapped from lack of equipment.

At the Commencement in June, 1905, Charles Walter Collins of Harrington, and Jacob Leonard Soper of Magnolia were graduated from the Course in Agriculture, making a total of five who had taken the Bachelor's degree in Agriculture. In April, 1906, Prof. Foord, somewhat discouraged by the conditions that obtained in Delaware and by the lack of equipment for teaching Agriculture, resigned to accept a position in the Agronomy Department of the Ohio State University. At the present time he is at the head of the Department of Agronomy in the Massachusetts Agricultural College, and is most successful as a teacher in that well and favorably known institution.

Prof. Foord's successor was not named at once, and at the Commencement in June of that year Dr. Neale resigned as Director, but was elected as Animal Husbandryman and Agronomist in the Experiment Station. Pursuant to the determined effort of the Trustees to give especial attention to the advancement of Agriculture, Dr. J. L. Hilles, Dean of the Department of Agriculture and Director of the Experiment Station in the University of Vermont, was chosen Director of the Delaware Experiment Station and Professor of Agriculture in the College to succeed Dr. Neale and Professor Foord. The sincerity and wisdom of the Trustees under the conditions that obtained at that time cannot be doubted by anyone who is conversant with the facts in the case. The Trustees of the University of Vermont feeling that the resignation of Dr. Hilles would greatly impair the work of that institution, prevailed upon him to decline the invitation to come to Delaware. Whereupon Harry Hayward, a graduate of Cornell University, and at that time Director of the Agricultural Department of the Mount Hermon School, was elected Director of the Experiment Station and Professor of Agriculture.

Professor Hayward began his work in Delaware in October, 1906, and immediately asked the state, through the Trustees, for a farm on which experiments in orcharding, agronomy, and animal husbandry could be carried out, and which would maintain illustrative material for teaching Agriculture. So marked was the revival of interest in Agriculture throughout the state that the General Assembly, in 1907, passed by an almost unanimous vote an act providing for the issuance of bonds to the amount of $20,000 for the purchase of a farm for the use of the College, to be owned by the State. This was promptly
done, through a commission named by the General Assembly, and possession was given the College April 8, 1907.

This really marked a new epoch in the history of the College. With the possession of a farm, began a reorganization of the whole department of Agriculture. This was made possible in part by the purchase of the farm, in part by the passage by Congress of the Adams Act appropriating $15,000 per year to the Experiment Station, and in part by the action of the Trustees in making every possible effort to place this department upon a footing that would compare favorably with the Agricultural Departments in many of the other land grant colleges of the country. To this end the work of the department was differentiated, new divisions created in both College and Experiment Station, the course of instruction very much enlarged, and considerable equipment purchased for the laboratories, class rooms, and for the farm. Apple, peach, and variety orchards were set, and the Agronomist began extensive experiments and demonstrations with field crops.

In 1908 the first Farmers’ Day was held. This is now an annual event, and serves as an excellent medium for bringing the constituents of the College in touch with its work. Through the Granges and Farmers’ Institutes, opportunities have been offered the Department of Agriculture to get close to the farmers and to discuss with them the problems of their own farms. The Department of Agriculture has also made it a practice to exhibit live stock, grain, forage crops, and fruit, at the State Fair, and for a number of years had made an exhibit of various breeds of live stock at some of the larger fairs on the Eastern Shore of Maryland.

Under the new organization students came slowly at first, and it was not until 1911 that any considerable number elected the Agricultural Course. In that year about one-third of the entering class chose Agriculture, and this proportion was about the same in 1912.

In 1911 the Legislature passed a bill appropriating $4,500 per year for two years to establish a division of Agricultural Extension. This has seemed to round out acceptably the scope of the work of the Department of Agriculture and materially to increase its efficiency. At the present time there are seven well equipped divisions in the Agricultural Department, including Agricultural Extension. The heads of all of these and their assistants, with the exception of the chemists, occupy dual positions as teachers and investigators in their respective branches. The work of the head of the division of Chemistry, and his two assistants, is confined entirely to research.

About forty students have been enrolled in Agriculture for the present collegiate year.

The department has under its direction a farm containing something over 200 acres. On the farm there are one of the finest peach orchards in the state, over 550 varieties of fruit, 14 breeds of live stock, and almost innumerable varieties of wheat, corn, soy beans, and other grain and forage crops. The farm
is one of the principal attractions of the College, and is visited every year by thousands who are interested in some phase of Agriculture. The services of the members of the agricultural staff are in great demand from numerous sources, which shows the interest that is being manifested in Agriculture by the public.

It is felt by those most closely connected with this department of Delaware College that it is now in a position to render effective service to the state in developing its agricultural resources, and in helping the farmers of the Peninsula to become more efficient.

The Agricultural Department gratefully acknowledges the help and support it has received from the people of the State, who have made liberal appropriations in expression of their faith in its usefulness. The Department is under special obligations to the Board of Trustees for the interest it has shown, and for the hearty support it has given to its activities. Only by this support has the development of the Agricultural Department been made possible.
The Corporation
Trustees of Delaware College

His Excellency Governor Charles R. Miller, ex officio
Geo. A. Harter, Ph. D., President of the College, ex officio

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1912

June 10-14
Annual Examinations.

June 16
11 a.m. Sunday Sermon for Young Men’s Christian Association.
8 p.m. Baccalaureate Sermon.

June 17 Monday
Farmers’ Day at College Farm.
3 p.m. Class Day Exercises.
8 p.m. Address before Phi Kappa Phi Fraternity.

June 18 Tuesday
11 a.m. Meeting of the Board of Trustees.
2.30 p.m. Inter-class Field and Track Meet.
8 p.m. Joint Anniversary of the Delta Phi and Athenæan Literary Societies.

June 19 Wednesday
10.30 a.m. Commencement Exercises.
2 p.m. Meeting of the Alumni Association.
3 p.m. Exhibition Drill.

June 21-22
Examination of Candidates for Admission.
beginning Friday, 9 a.m.

SUMMER VACATION

FIRST TERM

Sept. 10-11
Examination of Candidates for Admission,
beginning Tuesday, 9 a.m.

Sept. 12 Thursday
Classes organized, College Work begins.

Nov. 28 Thursday
National Thanksgiving.

Dec. 20 Friday
4.30 p.m. Christmas Vacation begins.

1913

Jan. 6 Monday
8.40 a.m. Christmas Vacation ends.

Jan. 28 Tuesday
11 a.m. Meeting of the Board of Trustees.

Jan. 27-Feb. 1
Mid-year Examinations.

SECOND TERM

Feb. 3 Monday
Second Term begins.

Feb. 22 Saturday
Washington’s Birthday.

Mar. 30 Thursday
4.30 p.m. Easter Vacation begins.

Mar. 31 Monday
8.40 a.m. Easter Vacation ends.

May 30 Friday
Memorial Day.
June 9-14  Annual Examinations.
June 15  Sunday  11 a.m.  Sermon for the Young Men's Christian Association.
          8 p.m.  Baccalaureate Sermon.
June 16  Monday  Farmers' Day at College Farm.
          3 p.m.  Class Day Exercises.
          8 p.m.  Anniversary of the Athenæan Literary Society.
June 17  Tuesday  11 a.m.  Meeting of the Board of Trustees.
          2.30 p.m.  Inter-class Field and Track Meet.
          8 p.m.  Anniversary of the Delta Phi Literary Society.
June 18  Wednesday  10.30 a.m.  Commencement Exercises.
          2 p.m.  Meeting of the Alumni Association.
          3.30 p.m.  Exhibition Drill.
June 20-21  Examinations of Candidates for Admission, beginning Friday, 9 a.m.
Presidents of the College

Eliphalet Wheeler Gilbert, D. D., 1834-1835
Richard Sharp Mason, D. D., 1835-1841
Eliphalet Wheeler Gilbert, D. D., 1841-1847
James P. Wilson, 1847-1850
William Augustus Norton, 1850 (Jan. 24 to Aug. 19)
Rev. Matthew Meigs, 1850-1851
Rev. Walter S. F. Graham, 1851-1854
Daniel Kirkwood, 1854-1856
Rev. E. J. Newlin, 1856-1859
William H. Purnell, LL. D., 1870-1885
John H. Caldwell, 1885-1888
Albert N. Raub, Ph. D., 1888-1896
George A. Harter, M. A., Ph. D., 1896 to date
The Alumni Association

President—FRANK COLLINS, White River Junction, Vt.
Vice-President—GEORGE McINTIRE, New Castle, Del.
Secretary—E. C. JOHNSON, Newark, Del.
Treasurer—C. A. SHORT, Newark, Del.

The ALUMNI ASSOCIATION was organized in 1846. The Association has met each collegiate year since that time. The annual meeting is held each year at the College on Wednesday of Commencement Week. A banquet is held during the collegiate year and a dinner is always given at the annual meeting during Commencement.

At the mid-year banquet the needs of the College are always discussed. Plans for improvement are proposed and general enthusiasm prevails. This year the banquet was held at the new Hotel DuPont, Wilmington, on Saturday evening, February 22d. The speakers with their subjects follow: Dr. G. W. Marshall, '74, "Delaware College in the Seventies;" Herman M. Sypherd, '95, "How Should the State Support Delaware College?" Everett C. Johnson, '99, "Delaware College and the State."

The Alumni created in 1910 a fund from which the sum of $500 is to be turned over to the College for five successive years. This money is to be expended for immediate needs.

Three prizes are also offered by the Alumni Association to encourage literary work among the students. Two of the prizes, amounting to $20 and $15, are awarded to the best two debaters in an annual contest; and the third prize, $15, to the best orator in a contest open only to Sophomores and Juniors.

The Association awards to the class which wins the inter-class track meet for three successive years a silver trophy cup.


Many members of the Alumni have reached the zenith of their respective professions, and others hold positions of trust and honor in affairs, both State and national. Among those who have won distinction are:

W. S. Graham, '36.
Dr. D. Hayes Agnew, '36, famous surgeon.
Hon. Edward G. Bradford, '38, Judge of the U. S. District Court.
Dr. Thomas McCann, '42.
Victor du Pont, '45.
Dr. William H. Purnell, '46, President of Delaware College, 1870-85.
Rev. Epher Whitaker, '47, poet, author and historian.
Dr. George C. Harlan, '55.
Edward S. Joyner, '49, Professor of Languages, South Carolina University.
Author of French and German texts.
General Adam King, '56, Consul-General to Paris, 1890.
Hon. John C. Higgins, '56, ex-Consul to Scotland, Trustee of Delaware College.
N. F. C. Lupton, President University of Alabama.
Prominence in national affairs—H. Greely Knowles, '84; Dr. L. Heisler Ball, '82; William H. Heald, '83; James R. Lofland, Anthony Higgins, John G. McCullough, Edward L. Martin.
George A. Harter, M. A., Ph. D.
President of the College
The Faculty

GEO. A. HARTER, M. A., Ph. D.
President

R. HARTER was born near Leitersburg, Washington County, Maryland, November 7, 1853. He received his early education in the county schools and the Normal School at Lebanon, Ohio. In the fall of 1874 he entered the Freshman Class of St. John’s College and graduated in 1878. Immediately after graduation he was made Assistant Professor of Latin and Mathematics. During the collegiate year 1878 he pursued a postgraduate course in early English, etc., with Dr. Garrett and Dr. Hopkins, and Mathematics with Professor Johnson. From St. John’s Dr. Harter also received the degrees of M. A. and Ph. D. In 1880 he was elected Principal of the Hagerstown High School at Hagerstown, Maryland, where he labored successfully for five years. In 1885 he was elected to the Chair of Mathematics and Modern Languages at Delaware College. From 1888 until 1896 he was Professor of Mathematics and Physics. Upon the resignation of Dr. Raub, in 1896, he was called to the presidency. Under his wise administration the registration has been nearly doubled, several new buildings have been erected and needed additions made to the original plant, and the standard of the College has been greatly increased.
PROFESSOR ROBINSON was born at Wilmington, Delaware, on August 28, 1850. His early education was received in the Wilmington public schools and later in the William A. Reynolds' Classical and Mathematical Institute, Wilmington, Delaware. After graduating he taught mathematics and English in the latter institute, in this way earning the money with which to pay his way through college. In 1875 he was graduated from the Polytechnic College of the State of Pennsylvania with the degree of B. C. E., winning the prize for the best graduating thesis. In 1883 he received from the same college the degree of C. E. Since his graduation he has occupied the following positions: Assistant Engineer, Pittsburgh Division of Pennsylvania Railroad; Assistant Professor and Professor of Mathematics, Polytechnic College; Draftsman, Edge Moor Bridge Works, Edge Moor, Delaware; Assistant Engineer and Chief Engineer, Department of Engineering and Surveying, Wilmington, Delaware; Instructor in the Wilmington Drafting School; member of the firm of Canby & Robinson, Civil Engineers and Surveyors, Wilmington, Delaware; Assistant Engineer in the corps of the Maryland Division, P. & W. R. R.; since 1891 Professor of Civil Engineering, Delaware College, and since 1896 Secretary of the Faculty. He has written some verse, literary and scientific essays, and a portion of a text-book on surveying. He is a member of the religious society of Friends, Young Men's Republican Club of Wilmington, (honorary) Alumni of Friends' School, Wilmington, and of Delaware College; Phi Kappa Phi Fraternity, and the Society for the Promotion of Engineering Education.
ELISHA CONOVER, M. A.
Professor of Latin and Greek

Professor Conover was born at Harrisonville, N. J., on August 14, 1860. After being prepared at Pennington Seminary, N. J., he entered Dickinson College, from which he was graduated in 1884, receiving the degree of B. A. In 1887 he received the degree of M. A. from the same college, and in 1887-88 he took up graduate work at Johns Hopkins University. He taught for several years in Vermont and in the lower counties of Delaware and Maryland. He was principal of the Georgetown Academy, 1884-85; principal of Oxford, Md., High School, 1886-87; taught Latin and Greek at Dover Academy, 1888-91; taught Latin and Greek at Montpelier Seminary, Vt., 1891-95. In 1895 he was elected to his present position as Professor of Ancient Languages at Delaware College. Professor Conover is a member of the Phi Kappa Psi Fraternity, the Phi Kappa Phi Fraternity, and the American Philosophical Association.
EDWARD LAURENCE SMITH, M. A.
Professor of Modern Languages

PROFESSOR EDWARD L. SMITH was born at Newark, Del., March 19, 1877. He entered Delaware College in 1892 and was graduated in 1896 with the degree of B. A. He then took a post graduate course of two years in Latin, French, German, Spanish, and Italian. From 1898 to 1899 he was a university scholar in Romance Philology and student of the Romance and the Germanic languages and literatures at Columbia University. He received the degree of M. A. from Delaware College in 1899. During the college year of 1899-1900, he was University Fellow in Romance Philology at Columbia University. He then went abroad and during 1900-1901 he was a student of Romance Philology and Literatures at L'Universite de Paris, College de France, and Ecole des Hautes Etudes at Paris. Upon his return to the United States he became instructor in German, French, and Spanish at the Brooklyn Polytechnic Institute, and student of old Provencal, Columbia University, 1901 to 1902. He was elected instructor of Modern Languages at Delaware College in 1902, and promoted to professor in 1904. Professor Smith is a member of the Modern Language Association of America, the Kappa Alpha Fraternity, and secretary and treasurer and a regent of the Phi Kappa Phi Fraternity.
MERRILL VAN GIESEN SMITH, M. E.
Professor of Mechanical and Electrical Engineering

Professor SMITH was born at Montclair, N. J., where he received his early education in the public schools. After graduating from the Stevens High School he entered the Stevens Institute of Technology and was graduated in 1896 with the degree of M. E. Following his graduation he held positions on the editorial staff of the Railroad Gazette, as instructor in Mechanical Engineering at the University of Pennsylvania, and as Professor of Mechanical Engineering at the Thomas S. Clarkson School of Technology. In 1904 he was elected to his present position at Delaware College. Professor Smith is a member of the Phi Kappa Phi Fraternity.
CLINTON O. HOUGHTON, B. A.
Professor of Zoology and Entomologist in Experimental Station

Professor Houghton was born at Helena, N. Y., April 7, 1873. He was prepared for college at the Potsdam State Normal School, from which he was graduated in June, 1890. The following September he entered Cornell University, from which he was graduated with the degree of B. A., in June, 1902. During the same year he came to Delaware as Assistant Professor of Zoology and in 1907 was made Professor of Zoology.

Professor Houghton is a member of the Sigma X and the Alpha Gamma Societies, the American Association of Economic Entomologists, the American Entomological Society and the American Association for the Advancement of Science.
DOCTOR SYPPERD was born in Cecil County, Maryland, 1877. He prepared for college in the Snow Hill High School, Snow Hill, Maryland. In the spring of 1893 he entered Delaware College and was graduated in 1896 with the degree of Bachelor of Arts. From 1896 to 1898 he was principal of the public schools of Port Penn, Delaware. He entered the junior class of the University of Pennsylvania in 1898 and was graduated in 1900 with the degree of Bachelor of Science. In 1901 he received the degree of Master of Arts from Harvard University. From 1901 to 1903 he was Instructor in English at the University of Wisconsin. In 1906 Harvard conferred the degree of Ph. D. on him. In the same year he was chosen Professor of English and Political Science at Delaware College. In 1911 he was made Professor of English at Delaware. In the summer session of New York University, 1910, he gave three courses in English Literature. He is the author of several articles in American philological journals. “Chaucer’s Eight Years’ Sickness” appeared in Modern Language Notes in December, 1905; “Old French Influence on Middle English Phraseology” appeared in Modern Philology in July, 1907; “Le Songe Vert and Chaucer’s Dream Poems” appeared in Modern Language Notes in 1909. He is also author of “Studies in Chaucer’s House of Fame,” 1907, “A Handbook of English for Engineers,” 1913, and joint author “Specimens of English Prose Composition,” 1913.
HARRY HAYWARD, M. S.
Dean of the Agricultural Department and Professor of Animal Husbandry of Delaware College

Professor Hayward was born on a farm near Lewiston, N. Y., in 1869. He attended the district schools and worked on his father's farm until 17 years of age, when he entered the Mount Herman School, Mass., and fitted for college. In 1890 he entered the College of Agriculture of Cornell University, from which he was graduated with the degree of B. S.

After graduation he became manager of a large farm in northern Indiana. A short time after he accepted a position as land agent in northern Delaware. His next position was at State College, Pennsylvania, where he organized and was at the head of the Department of Dairying for eight years. From there he went to the New Hampshire College of Agriculture and the Mechanic Arts as Professor of Dairying and Animal Husbandry. From there to the Department of Agriculture at Washington as Assistant Chief of the Dairy Division. From Washington Professor Hayward went to the Mount Hermon School, where he organized and for three years directed the Department of Agriculture at that institution.

In 1906 he was invited to Delaware College as Director of the Experiment Station and Professor of Agriculture. In 1907, on account of differentiation of the work in agriculture, he was made Professor of Animal Husbandry and Dean of the Agricultural Department.

In 1901 Cornell University conferred upon Professor Hayward the degree of M. S. He has taken special work in the University of Minnesota, Harvard, Reading College, England; and some of the agricultural institutions in Germany. He is a member of the Kappa Sigma Fraternity, and the honorary fraternities of Sigma Si and Phi Kappa Phi. He is a member of the Delaware State Board of Education, the American Farm Management Association, the American Society of Animal Nutrition, and is in "Who Is Who in America."

He is the author of a number of bulletins on agricultural subjects, and has had a wide experience as a lecturer before various agricultural organizations.
PROFESSOR SHORT was born near Georgetown, Del., July 2, 1873. After receiving his education in the public schools of Sussex County, in September, 1889, he entered Delaware College, where he remained one year. During the next three years he taught school near Laurel and at Shortley, Del. He re-entered Delaware College in April, 1893, and was graduated in 1896, valedictorian of his class, with the degree of B. C. E. He has since occupied the following positions: Commandant of Cadets and Professor of Mathematics and History at Worthington Military School, Lincoln, Neb., 1896-97; Professor of Civics, History and Higher Mathematics at Hartt's School for Boys, Burmingame, Cal., 1897-98; Professor of Mathematics, Commercial Branches and Rhetoric at Fayetteville Military Academy, Fayetteville, N. C., 1898-99; Principal of North Carolina Military Academy, Red Spring, N. C., where he taught Mathematics and English; Instructor in Mathematics and Engineering, Delaware College, September, 1903, to March, 1904; Assistant Professor of Mathematics and Engineering, Delaware College, March, 1904, to 1908, when he was made a full professor. In the summer of 1904 he took a special course in Mathematics and Civil Engineering at the University of the South, Sewanee, Tenn. In June, 1905, he received from Delaware College the M. S. degree. Professor Short is a member of the Sigma Nu Fraternity and the Phi Kappa Phi, Honorary Fraternity. He is also Major and Inspector General on the General Staff, Organized Militia of Delaware.
CHARLES A. McCUE, B. S.
Professor of Horticulture

Professor McCUE was born near Cass City, Michigan, May 29, 1879. His early life was spent upon the farm and his primary education was obtained in the rural district schools. In 1897 he was graduated from the Cass City High School. The following fall he entered the Michigan State Agricultural College and was graduated with his class in 1901. Immediately after his graduation he entered the employ of the then Bureau of Forestry of the United States Department of Agriculture. In October, 1903, he resigned from the Federal service and took up post graduate work in Horticulture at Michigan State Agricultural College. In April, 1904, he was appointed Instructor in Horticulture at the same college. In March, 1907, he was elected Professor of Horticulture at Delaware College and Horticulturist of the Delaware Agricultural Experimental Station.
ARTHUR ELLIOT GRANTHAM, A. B., B. S. A.
Professor of Agronomy

Professor Grantham was born at Ladoga, Indiana, June 1, 1878. He was reared on a farm and prepared for college at the Lafayette (Ind.) High School. He entered the University of Indiana and in 1903 was graduated with the degree of A. B. From 1898 to 1900 he was a student at De Pauw University, and from 1900 to 1901 and 1902 to 1903 he was Assistant Principal of the Stockwell, Indiana, High School. During the year 1903-1904 he was a student in the College of Agriculture, University of Illinois; 1904-1905, Assistant in Agriculture, Missouri Agricultural and Experimental Station; in 1905 he received the degree of B. S. A. from the University of Missouri; from 1905 to 1907 he was Instructor in Agronomy at the Missouri Experimental Station. In 1907 he came to Delaware as Professor of Agronomy and Agronomist to the Experimental Station. Professor Grantham is a member of the Kappa Psi Fraternity, and the Alpha Zeta, Honorary Agricultural Fraternity.
R. ROWAN was born in Philadelphia, and received his early education at the public schools of Chester, Pa. In 1887 he entered Lafayette College, graduating in 1891 with the degree of A. B. He became a member of the Phi Delta Theta Fraternity. In 1894 he received from his alma mater the degree of A. M. He entered the Theological Seminary at Princeton, New Jersey, and graduated in 1894. He was ordained and installed pastor of the Broadway Presbyterian Church of Baltimore on June 17, 1894. In September, 1899, he accepted a call to the Presbyterian Church of Newark. In 1902 he was elected Instructor in Philosophy and Oratory in Delaware College, and in 1907 was made Professor of Rhetoric and Oratory. While in Baltimore he studied under Hon. W. H. Purnell, LL. D., for many years President of Delaware College, and at that time President of New Windsor College, Maryland. Dr. Rowan presented theses on the Andria of Terence, colloquial Latin, and the three precursors of the Protestant Reformation, Wiclif, Huss and Savonarola, for which work he was given the degree of Ph. D.
CHARLES L. PENNY, M. A.
Professor of Chemistry, Mineralogy and Geology

PROFESSOR PENNY was born at Lewisburg, Pennsylvania, in 1857. He
was graduated from Bucknell University in the class of 1879 with the
degree of B. A., and received the degree of M. A. from his alma mater
in 1882. He taught several years in public schools and in a State
Normal School of Pennsylvania, and later studied chemistry at Heidel-
burg University. He was elected chemist of the Delaware College Experiment
Station in 1888 and held that position until 1907, when he went to Pennsylvania
State College. He returned to Delaware in 1909 as head of the Department of
Chemistry, Mineralogy and Geology. Professor Penny is a member of the Phi
Kappa Phi Fraternity.
THOMAS MAYO ROBERTS, M. A.
Professor of Electrical Engineering

PROFESSOR ROBERTS was born at The Dalles, Oregon. He received his college degree of A. B. at the University of Oregon in 1893. For one year thereafter he was Instructor in Mathematics at the University. During a three months' vacation he was appointed Deputy Surveyor of Whitman County, Washington. He took the electrical engineering course at the Massachusetts Institute of Technology, graduating in 1898 with the degree B. S. The Master's degree was given him three years later. After the Spanish-American War, he was employed for one year in the U. S. Engineer Corps in fortification of the harbor of Portland, Maine. He was one year with the New England Structural Company and two years with the Edison Electric Illumination Company of Boston, in general power station work. From 1902 to 1912 he was assistant engineer with the General Electric Company in a wide variety of constructive engineering throughout New England. In addition to his other engineering work, for two years previous to coming to Delaware College, he taught industrial electricity at Franklin Union, Boston, Mass. He is a member of the Society for the Promotion of Engineering Education, member of the American Society of Mechanical Engineers, and member of the American Institute of Electrical Engineers.
George A. Koerber, E. E.
Professor of Electrical Engineering

Professor Koerber received his early education in the schools of Hazleton, Pa. In 1894 he was graduated from the Hazleton High School and in 1895 from the Bloomsburg State Normal. During the next eight years he taught in the public schools of Hazleton. He then entered Lafayette College, from which he was graduated in 1908. After graduation he taught at Lafayette for four years in the departments of Physics and Electricity. In January, 1913, he left the General Electric Works at Pittsfield to accept his present position at Delaware College. Professor Koerber is a member of the Phi Beta Kappa, Honorary Fraternity, and of the Sigma Nu Fraternity.
LIEUTENANT FRANCIS BUCK EASTMAN, UNITED STATES ARMY
Professor of Military Science and Tactics and Commandant of Cadets

LIEUTENANT EASTMAN was born August 27, 1878, at Wilmington, Delaware. He enlisted in Company A, First Delaware Infantry, in 1897, and was honorably mustered out in December, 1898. He then re-enlisted for the Regular Army, and served in Company D, Seventeenth Infantry, as private, corporal, sergeant and sergeant-major. He was commissioned Second Lieutenant, Tenth U. S. Infantry, February 2, 1901, and First Lieutenant June 15, 1906.

In January, 1899, he went to the Philippine Islands and took part in the defense of Manila to May 10, and in engagements at San Luis and Calumpit, May 17-19; before San Fernando, May 25, June 16, 22, 30, July 4, 11 and August 9; Dolores, September 1-5; Angeles, October 11-16; Magalang, November 5; Bamban and Santa Rita, November 11-12; northern advance, General McArthur's Division, November 5-19. He was wounded in action before San Fernando, August 9, 1899. Returned to the United States, September, 1903, with stations at San Francisco, Cal., and Seattle, Wash. Commanded refugee camps at the San Francisco fire and earthquake disaster, April, May, June, 1906. In July, 1906, went to Alaska and performed important research work in the Yukon river region for the United States National Museum. Returned June, 1908. Stations, Indianapolis, Indiana, and Cincinnati, Ohio, to June, 1911. At Delaware College from July 15, 1911, until February 10, 1913.
EARNEST VAN COURT VAUGHN, A. B., A. M., Ph. D.
Professor of History, Political Science, and Economics.

Professor Vaughn was born in Shelbyville, Missouri, September 30, 1877. After graduation from the Malon District Academy, Clarence, Mo., he entered the University of Missouri in the fall of 1896. From this institution he received the A. B. degree in 1900 and the A. M. degree in 1904. During the years 1900-1904 he was Instructor in History in the Columbia, Mo., High School. He was then elected Superintendent of the Milan, Mo., Public Schools, which position he held until called to the University of Missouri as Instructor in History. His service here continued until his acceptance of the Professorship of History in Delaware College in 1911. For two years, however, 1908-1910, he was on leave of absence for advanced study at the University of Pennsylvania, which institution conferred upon him in 1910 the Ph. D. degree. Professor Vaughn is a member of the American Historical Association and is the author of a work on the "Early English Universities to the Close of the Thirteenth Century," and also of "Trading Expeditions Into Asia Under Authority of the Muscovy Company," recently published in the University of Pennsylvania studies in the History of Tudor Commerce.
RAYMOND CLINTON REED, Ph. B., D. V. M.
Professor of Bacteriology, Hygiene, and Veterinary Science

R. REED was born in Tompkins County, New York. He received his early education in the public schools and the Ithaca High School. After completing the High School course he entered Cornell University. He was graduated from Cornell in 1896 with the degree of Ph. B.; and in 1901 he received the degree of D. V. M. from the same college. While in college he was elected to membership in the Sigma Xi, an honorary society. From 1896 to 1902 he was Instructor in Pathology and Bacteriology at Cornell. From 1902 until 1909 he was City Bacteriologist at Elmira, N. Y., and during the same period (1903-1912) he was Inspector in the New York State Department of Agriculture. Dr. Reed is a member of the Phi Sigma Kappa Fraternity and is a Fellow of the American Association for the Advancement of Science. He also belongs to the Society of American Bacteriologists, Society for the Prevention of Tuberculosis, International Congress on Tuberculosis, American Veterinary Medical Association, New York State Veterinary Medical Association, and Delaware Veterinary Medical Association.
FIRMAN THOMPSON, B. S.
Chemist, Experimental Station

PROFESSOR THOMPSON was born in New Castle, Ohio, in 1874. In 1897 he was graduated from the University of Michigan with the degree of B. S. in Chemistry. He was appointed Assistant Chemist of the New York Agricultural Station in 1897. During the years 1899 and 1900 he was Assistant Chemist of the Sugar Planters' Experimental Station in Honolulu, Hawaii. He was First Assistant Chemist of the Bureau of Sugar Experimental Station, Queensland, Australia, during the years 1901 and 1902. In 1903 he returned to Hawaii and until 1907 held the position of Assistant Chemist of the Sugar Planters' Experimental Station in Honolulu. During the year 1908 he was Assistant Professor of Chemistry in North Dakota Agricultural College. In the same year he came to his present position as Chemist of the Delaware College Experimental Station.
THOMAS FRANKLIN MANNS, M. S.
Soil Bacteriologist and Plant Pathologist

PROFESSOR MANNS was born in Logan, Ontario, on November 7, 1876. Early in the spring of 1880 his parents moved to Jamestown, North Dakota, where he began his schooling. In 1883 he moved with his parents onto a farm 20 miles southeast of Jamestown, where he had the opportunity of attending a high grade district school. In 1895 he took out a teacher's certificate and for several summers taught in district schools and in winters attended the North Dakota Agricultural College. In 1901 he received the degree of Bachelor of Science and in 1903 the degree of Master of Science. From 1903 to 1904 he was Assistant in the Department of Botany at the North Dakota Agricultural College. From 1904 to 1907 he was Principal of Provincial High Schools in the Philippine Islands. In 1907 he went to the Ohio Agricultural Experiment Station, Wooster, Ohio, as Assistant Botanist. From 1911 to 1912 he was Soil Bacteriologist at the same station. In 1912 he came to the Delaware Experiment Station as Plant Pathologist and Soil Bacteriologist.
HAROLD EDWARD TIFFANY, M. S.
Assistant Professor of Chemistry

R. TIFFANY was born in November, 1879. He received his early education in the Wilkesbarre, Pa., public schools and at Keystone Academy, Factoryville, Pa. He then entered Bucknell University and was graduated from that place with the degree of B. S. While at Bucknell he was an honor student, winning the Hallopeter prize in Chemistry. Following his graduation he taught in the Everett, Mass., High School, and later spent some time doing research work in chemistry at Harvard University. He came to Delaware in 1905. Mr. Tiffany is a member of the Sigma Phi Epsilon Fraternity, the Boylestown Chemical Club of Harvard University, the American Chemical Society, and the American Association for the Advancement of Science.
HOWARD KENO PRESTON, C. E.
Instructor in Mathematics and German

R. PRESTON was born in Trenton, N. J., May 11, 1888. After graduating from the Trenton High School he entered Lafayette College. He was graduated from Lafayette, in 1909, with the degree of Civil Engineer. After leaving college he was employed by the Delaware, Lackawana and Western Railroad at Syracuse, N. Y. In September, 1910, he went to Lafayette as Instructor in Mathematics and Drawing. He held that position for two years, resigning in 1912, when he came to Delaware. Mr. Preston is a member of the Alpha Chi Rho Fraternity.
Z. HARRY SRAGER, B. S.
Instructor in Mechanical and Electrical Engineering

R. SRAGER was born in Plainfield, N. J., in 1886. His early education was obtained in the public schools of his native town, and upon graduation he entered Rutgers in 1904. He was graduated in 1908 with the degree of B. S., and immediately joined the firm of Herding and Son, Hillsdale, New York. In the spring of 1909 he was appointed principal of the Union High School, Union, New York. In the fall of 1909 he became Instructor of Mechanical Drawing at Gainsburg, Ill. In the fall of 1910 he came to Delaware as Instructor in Mechanical and Electrical Engineering.
R. DUTTON was born at Seaford, Delaware, in 1881. He received his preliminary training in the Seaford High School. In the fall of 1899 he became a student at Delaware College and was graduated with the degree of B. A. in 1904, having been absent from college most of the preceding year on account of typhoid fever. During the academic year of 1904-1905 he taught English and Latin in the North Carolina Military Academy, Red Springs, North Carolina. From 1905 to 1908 he was a graduate student in English, Spanish, and Philosophy at Johns Hopkins University. From 1908 to 1910 he was Instructor in English at the University of Missouri. In 1911 he received the M. A. degree from Harvard University. He was then appointed Instructor in English at Delaware College. He is the author of an unpublished paper on "The Relation of John Fletcher's Plays to Their Spanish Sources," and joint author of "Specimens of Prose Composition."
REEVES D. STRING
Instructor in Shop Work

R. STRING was born in Camden, New Jersey, in 1870. He attended school in his native town and was graduated from the High School, where he obtained a good manual training education. After graduation he obtained work as a patternmaker for the Baldwin Locomotive Works of Philadelphia, Pennsylvania. Here he worked for five years, until he finally accepted a position with the Camden Iron Works, Camden, New Jersey. From there he went to Pittsburgh, Pennsylvania, where he accepted a position with the Westinghouse Air Brake Co. His next position was with the Remington Machine Co., of Wilmington, Delaware. In 1909 he came to Delaware as Instructor in Shop work.
WM. J. McAVOY, B. S.
Physical and Athletic Director

R. McAVOY was born at Hazleton, Pa., October 16, 1884. He was graduated from the Hazleton City Grammar School. While at the grammar school he began his career as an athlete, being captain of both the baseball and football teams. He prepared for college at the Bloomsburg State Normal School, where he also took a leading part in football, baseball and basketball. He is still the holder of the school shot put record. He entered Lafayette College, where he soon became prominent as an athlete. He played on the Lafayette varsity football and baseball teams for three years, and was captain-elect of the football team for the season of 1907. For three successive years he was chosen fullback on the All-Pennsylvania State Team, and during the same time he received honorable mention three times in the selection of the All-American Football Team. After his graduation from Lafayette he coached the Delaware football team and played professional baseball. In September, 1909, he accepted a permanent position as Physical Director at Delaware.
JACOB J. TAUBENHAUS, M. S.
Assistant Plant Pathologist, Delaware Experiment Station

Mr. Taubenhaus was born in Palestine in 1884. He prepared for school at Jaffa, Palestine, and the Agricultural School at Smyrna, Asia Minor. When coming to this country he entered the National Farm School at Doylestown, Pa., whence he graduated in 1904. From that place he came to Delaware College, where he studied from 1904 to 1906. He then entered Cornell University where he received the B. S. in 1908 and the M. S. in 1909. After graduation from Cornell he entered his present position at Delaware College. While attending to his present position, he has registered (in 1911) at the University of Pennsylvania for his Ph. D. degree, which he is to receive in June, 1913.

Last winter Mr. Taubenhaus refused an offer of Chief Plant Pathologist to the Government of the Argentine Republic, which position carries with it a salary of $3,000 per annum American gold and traveling expenses.

Mr. Taubenhaus is consulting Plant Pathologist for the American Sweet Pea Society, the National Association of Gardeners, and the Horticultural Society of Central New York. He is also contributing editor to the Gardeners' Chronicle of America. He has contributed a number of papers on original research to scientific magazines. He is a member of the American Association for the Advancement of Science, the American Phyto-Pathological Society, and the Natural History Society of Delaware.
HENRY H. MORGAN, JR.

R. MORGAN was born in October, 1878, in Sussex County, Delaware. He specialized in Chemistry, Physics, and Metallurgy at Cornell University, 1902-1904. Metallurgical chemist and later control chemist for La Gran Fundicion Central Mejicana (copper and lead smelter) of the American Smelting and Refining Company, Aguascalienks, Mexico, 1904-1909. Assistant chief chemist at the Grasselli Chemical Company's East Chicago Works, 1909-1910. He came to Delaware College Agricultural Experiment Station in August, 1910.
ARTHUR CRAIG WHITTIER, B. S.
Research Chemist

R. WHITTIER was born at Farmington, Maine, March 6, 1881. After completing the grammar and high school work he entered the University of Maine. In 1905 he was graduated with the degree of Bachelor of Science. During 1905 and 1906 he was assistant chemist at the Massachusetts Experiment Station. He held the same position at the Maine Experiment Station in 1906-1908. From 1908 to 1911, he was chemist in the Nutrition Department of the Ohio Experiment Station. He came to the Delaware Experiment Station in 1911. Mr. Whittier is a member of the American Chemical Society.
R. PENCE was born at Converse, Ind., August 15, 1887. He spent his early life on a farm, attending the nearby country schools. He was graduated from the Converse High School in 1904. During the next year he taught in the graded schools. He was graduated from Purdue University in 1911, after having completed the Agricultural Course. While at Purdue he specialized in Agronomy. In 1911 he was an assistant in the Indiana Soil Survey, resigning to take up his present work in the Extension Department of the Delaware Experiment Station. He will leave Delaware in the spring of 1913 and engage in farming in Indiana. Mr. Pence is a member of the Alpha Zeta Fraternity.
WARD CLEVELAND PELTON, B. S.
Assistant Horticulturist and Instructor in Horticulture

R. PELTON was born August 27, 1888, at Erie, Pa. He was educated in the public schools of Erie and was graduated from the Erie High School in 1907. He received the degree of Bachelor of Science in Horticulture at Pennsylvania State College in 1907. He came to the Delaware College Agricultural Experiment Station during the fall of 1911 as Assistant Horticulturist and Instructor in Horticulture.
CARL CHRISTOPHER, M. S.
Assistant in Animal Husbandry

R. CHRISTOPHER was born at Auburn, Illinois, on January 20, 1886. He was educated in the Auburn Public Schools. He attended Illinois Wesleyan University in 1905-1906. He entered the University of Illinois in the fall of 1906. He received the degree of Bachelor of Science in Agriculture in 1909 and the degree of Master of Science in Animal Husbandry in 1911. He was assistant in Animal Husbandry at the University of Arkansas in 1910-1911. During 1911-1912 he was Professor of Animal Husbandry at the same place. At present he is assistant in Animal Husbandry at Delaware College. He was recently appointed agent for the U. S. Department of Agriculture, Office of Farm Management.