

The Delaware College Review

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MAY, 1910.

NO. 8

A TRIP TO THE PANAMA CANAL

By WILLIAM E. FRANCIS, C. E., '10.

To the Editor-in-Chief and his Associates of THE DELAWARE COLLEGE REVIEW:

I take great pleasure in submitting for publication in the REVIEW, a short description of the wonderful work that is being done by the United States Government and its Engineers on the Panama Canal.

The description of the work in progress, as I viewed it during my stay of several days on the Canal, is as follows:

DETAILS OF GATUN LOCKS.

The designs for the Gatun locks have progressed considerably during the last year, and the work is now well in hand. The details of the upper pair of locks are completed, the arrangement decided upon being to make them a clear length of one thousand feet, divided into two portions by a middle gate to accommodate boats up to five hundred and fifty feet, and so to avoid the waste of time and water which would be entailed in using the entire length for the greater number of boats passing through the canal. Double gates at both ends of the locks will serve not only as a safeguard, but also further to sub-divide the length.

For emptying and filling the locks, culverts are built in the side and center walls, running the whole length near the bottom of the locks; the outside ones are to be eighteen feet in diameter, while the center one is to be flat-bottomed and of approximately the same sectional area. This latter culvert cannot, of course be used at the same time for lockages in two side-by-side chambers, but, as a matter of fact, each side culvert is of sufficient area for the five hundred and fifty foot lock, and even for the one thousand foot length, the center culvert will only be necessary just at the end of the filling.

It is calculated that the water will rise or fall at the rate of three feet a minute, so that the locks will fill or empty within a quarter of an hour, and this time could be decreased, if it were so desired, by opening all the valves at once, which might, however, be inadvisable with large boats.

From the side and centre longitude culverts radiate a number of elliptical branch transverse culverts about six feet by eight feet. These are built three feet beneath the floor level, and are practically the whole width of the locks, each of them having five vertical connections to the floor about four feet in diameter for passing the water.

The thickness of the foundations of the locks varies from 20 feet at the upper end to about three feet at the lower end, and for the greater portion of the length of the locks ordinary rails, 20 feet to 30 feet long, are fixed vertically through the foundations from five feet to ten feet apart. This is being done to prevent any possibility of the upward pressure of the water beneath causing dislodgment, and it was found by actual tests made on the spot that under the

worst conditions these rails withstood a pull of 50 tons before showing any sign of movement. (See photographs 24 and 99.)

OTHER LOCKS OF CANAL.

The two flights of locks at Miraflores and the single flight at Pedro Miguel will be practically identical with those at Gatun, and work is being proceeded with at such a rate as to allow of their completion at approximately the same date. In every case there will be two locks side by side, the main idea being that one set shall be used for up stream lockages and the other for down stream. The culverts will be constructed in an exactly similar manner to those at the Gatun locks, one being placed in each side wall and one in the wall dividing the locks.

The arrangements for building up the walls and laying the floor are somewhat different from those adopted at Gatun, transporter cantilever cranes being employed instead of Lidgerwood cableways. Some of these transporters are designed for working in the lock sites, and others for handling the concrete and delivering it to the first set of cranes, either direct by gravity or by means of trucks. The cranes in the lock basins have towers nearly 100 feet high, with a 50-foot wheel base, and travel on a truck of 50 feet gauge. The boom of each of the cranes forms a continuous run for the buckets of 197 feet; the cantilever is 112 feet 6 inches from the center of the tower on one side and 84 feet 6 inches on the other, the short arm being over the dividing wall of the locks.

The cranes for handling the concrete are similar in type and span over the cement track, on which the cement is brought up in trucks from the sheds; the rock and sand storage piles are also within the range of these cranes. Concrete mixers are arranged underneath the towers, and to these rock and sand are fed from the traveling buckets of the transporters, the cement being raised to the hoppers by means of small elevators in the legs of the towers. With some of these cranes the mixed concrete is delivered into trucks, and taken to the cranes in the lock chambers, while in others the concrete is conveyed by buckets on the handling transporter direct to the cranes in the chambers. (See photograph 18.)

PROGRESS OF EXCAVATION.

The progress of excavation of the three locks is well advanced, the upper and middle chambers being practically finished, while in the lower chambers more than half the work has yet to be done. All the arrangements for laying the concrete floors and forming the side and center walls of the locks are now completed, and the electrical power house (a steam turbine installation of 4500-kw.) is in working order. The cement receiving sheds and docks, concrete mixing sheds and accessory machinery houses are all located close to the lock site, and all the appliances for the rapid handling of material have been installed.

The cableways, which are, of course, worked electrically, have been fitted up, two complete sets being in use. One set, consisting of four duplex Lidgerwood cableways, spans the locks with a distance of some 800 feet between the towers, and this is to be employed for building up the lock walls, the steel forms for which have been erected. The other set, consisting of one simplex and two duplex cableways, is used for transporting the rock and sand from barges brought up the French canal to a suitable storage place close to the concrete

mixing sheds, where they are taken on an electric railroad to the machines.

EXCAVATION RECORD IN CULEBRA CUT.

More material was dug out of Culebra Cut during February than in any other February since the Canal work was begun. A comparison follows:

1905	75,200 cubic yards
1906	168,410 cubic yards
1907	639,112 cubic yards
1908	1,248,265 cubic yards
1909	1,215,648 cubic yards
1910	1,259,413 cubic yards

The daily average of excavation in February was 54,757 cubic yards, which is the highest daily average for this month. The average per steam shovel was also the highest of record, and the daily average of 2,203 cubic yards, made by shovel No. 214, is the best yet made.

On March 5, 1910, shovel 213, working in the Culebra Construction District of the Central Division, broke all records for daily excavation since the commencement of work by the United States. During the working day of eight hours, that shovel excavated 4,000 cubic yards of rock and earth, loading 211 Lidgerwood flats with the material removed. The shovel was under steam eight hours, was actually digging seven hours, and was waiting for cars, etc., one hour.

CONCRETE CONSTRUCTION.

It can readily be understood that the economical and expeditious laying of 8,000,000 cubic yards of concrete in structures of this magnitude called for a special plant of great size and capacity. At Gatun about 4,000,000 cubic yards of concrete will be employed. The crushed stone, the sand, and the cement for this concrete is handled in the following manner: The crushed stone comes from Porto Bello, a small hamlet about 20 miles east of Colon along the Atlantic coast. The rock is taken from the quarry by steam shovels, and sent by gravity to the giant crushers, and thence by gravity to the barges in the harbor. From this point it is carried to Cristobal, at the Atlantic entrance to the canal, and thence, via the old French channel, to the docks at Gatun. Here it is unloaded into storage bins by giant grab buckets, operated from cableways suspended between two sets of towers on either side of the channel.

The sand is brought from Nombre de Dios, about 40 miles along the coast from Colon. It is taken from the sand pits by clamshell buckets, loaded into steel barges, and taken to Gatun, where it is unloaded by a process similar to that of unloading the crushed rock. The cement is now being shipped from New York. At Colon the cement is transferred to barges and taken via the old French channel to Gatun and unloaded to the storage yards. The rock and sand storage piles have a capacity of about 300,000 cubic yards, while the cement yard accommodates about 100,000 barrels. From these storage buildings the rock, sand, and cement are delivered through valves to charging cars running underneath. These cars, which are electrically operated, carry the materials to the concrete mixing machines located nearer the locks' site and discharge it direct to the machines. After the concrete is mixed, it is dumped into buckets set on flat cars, and the cars are run to position under the wide cableways spanning the locks' site, and from these cableways the buckets filled with

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concrete are swung to position on the locks under construction.

The general principles upon which the plant at the locks on the Pacific side is designed are the same as those employed at Gatun; the mechanical details have been varied to meet the local conditions.

GATUN LOCKS.

The following is a report of concrete placed in the locks at Gatun in the week ending March 5:

February 28	2,780 cubic yards
March 1	2,456 cubic yards
March 2	2,376 cubic yards
March 3	2,648 cubic yards
March 4	3,241 cubic yards
March 5	2,534 cubic yards
Total	16,035 cubic yards
Previously reported	224,031 cubic yards
Grand total	240,066 cubic yards

During the week, 2,806 cubic yards of concrete were placed in the Spillway of Gatun Dam.

An estimate of the amount of concrete necessary for constructing the locks at Pedro Miguel and Miraflores has been made in accordance with the detailed plans. The total for Pedro Miguel is 916,166 cubic yards. The total at Miraflores is 1,430,200 cubic yards. The amount estimated for the spillway and dam at Miraflores is 75,000 cubic yards.

CEMENT DELIVERIES.

Concrete laying at Gatun Locks, and in the Spillway of Gatun Dam, requires 3,300 barrels of cement daily, in order to permit the mixing plants to run at their present rate. It is estimated that 1,500 barrels of cement daily will be required in the concrete work at Pedro Miguel Locks by April 15, and that 3,000 barrels a day will be required after May 15th.

HIP FRESH, YOU HAVE THE PIP

By A. S. HOUCHIN, JR.

LAST night, after I had carefully prepared (?) my lessons for the next day, I left the warm and stuffy atmosphere of my room and sought a cooler and more comfortable seat on the Dormitory steps. I had been sitting there but a few minutes when I saw Ephsam Knolls crossing the campus. I hailed him and asked him to join me in a quiet smoke before retiring. He acquiesced and, seating himself beside me, began talking about the unjust amount of studying he had to do for tomorrow. He said he didn't know why some professors enjoyed assigning long and tedious lessons. I wanted to forget all about books and studying for the rest of the evening, and to change the subject, I asked him why, when a couple of Sophomores passed him to-day, they called out to him, "Hip, Fresh, you have the pip." He did not an-

swer me, and I repeated my question. This time he answered me, and although I realized how he must feel toward the Sophomores for twitting him, I could scarcely refrain from laughing before he had half finished his tale of woe. He began by telling me of the sprained hip he had and then he told me of the conversation he had over the phone with the doctor. I will try to quote the conversation, just as he told it to me:

"Hello, central, give me 7854 A please.—Hello, is this Dr. Mulle?" "Yes."
"Well, doctor, I slipped and sprained my hip to-day, at least, I think I sprained it, and I am hardly able to walk. However, I do not think my injury requires your personal attention, but I would like to have you advise me as to what would be a good home treatment. What would you advise, doctor?"

Just at this juncture someone else began talking on the same wire. Ephsam cried, hello several times, but received no response. Finally some one said "Hello!"

Ephsam answered, "Hello, is this you, doctor?"

"Yes," was the reply. But it was not Dr. Mulle talking now. Central had switched Ephsam on to the wrong wire, and now he was talking to a chicken specialist.

"Well, what would you advise me to do with my hip?" said Ephsam.

"With the pip, did you say?"

"Yes, my hip," replied Ephsam.

"Well, some authorities say that pip is not really a disease in itself, but merely a symptom of a diseased condition, which is liable to appear during an attack of cold or feverish indigestion. The pip is really only a dried condition of the tongue caused by the bird's hot breath passing over it. Touch the tongue several times a day with glycerine. Keep in a small coop, and administer a small dose of Epsom salts—twenty grains two mornings running. A colleague of mine recommends removing the pip with your nail or some sharp instrument, and anointing with honey and borax. Give light nourishing food for three days or a week."

When the chicken specialist had finished prescribing and had hung up the receiver, Ephsam did not know whether he was asleep or whether he had been talking to an insane man. Who ever heard of a sprained hip being a dried condition of the tongue, and the idea of trying to take medicine for two mornings while running!

The Sophomores upon learning of Ephsam's telephone episode were not slow to see the joke, and to take advantage of it by calling after him: "Hip, Fresh, you have the Pip."

Higher Education for Girls in Delaware

By JOHN V. ENNIS.

"It is not generally known by the average person that Delaware is the only State in this broad land of ours that has no provision for the higher education of its girls. Delaware, one of the thirteen original States, the first State to ratify the constitution forming the Federal Union, this old populous prosperous commonwealth stands as a lone beggar asking her sister States to care for the education of her girls. The chief cause of this condition of affairs is the presence on all sides of colleges which Delaware women may attend. These col-

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leges blind our people to the need of a home college, and to every girl unable to attend one of these outside colleges, they make a college impossible.

"Among the most convenient and popular colleges for Delaware girls are Bryn Mawr at Bryn Mawr, Pa., Wilson College, at Chambersburg, Pa., the Woman's College of Baltimore, at Baltimore, Md., and a few others. At Wilson College the expenses for board, tuition and room rent alone are \$300 a year; at the Woman's College of Baltimore, \$450, and at Bryn Mawr, \$500. These figures by no means cover all expenses. The average girl attending these colleges spends from \$700 to \$1,000 per year, and has excellent opportunities to make her expenses much greater. A number of Delaware girls are able to secure an education from these colleges, but there are a much greater number who cannot afford an education under such conditions. It is in behalf of this latter class that we would advocate an institution in our State which would place within the reach of every Delaware girl of moderate means a liberal education.

"The question here arises, 'Is it important that the average girl of to-day should receive a college education?' There was a time when this question would have been answered in the negative, but that time is past. The great experienced educator, Matthew Vassar, who founded Vassar College, the first exclusively woman's college in the world, has given us some excellent ideas on this subject. In giving his reasons for founding the college which bears his name, Mr. Vassar says:

" 'It occurred to me that woman having received from her creator the same intellectual constitution as man has the same right as man to intellectual culture and development.

" 'I consider that the mothers of a country mold the character of its citizens, determine its institutions and shape its destiny.

" 'It also seems to me that if women were properly educated, some new avenues to useful and honorable employment might be opened to her.

" 'And now, influenced by these and similar considerations, after devoting my best powers to the study of the subject for years, after duly weighing the objections against it and the arguments that preponderate in its favor, I have come to the conclusion that the establishment and endowment of a college for the education of young women is a work which will satisfy my highest aspirations and will be under God, a rich blessing to this city and State, to our country and the world.'

"These convincing statements show clearly the attitude of Mr. Vassar toward the education of our young women.

"Many other prominent and experienced educators have expressed these same views and have agreed that a college education is certainly essential, if not necessary to the highest development of our young women. It is by no means true, however, that only college women possess those peculiar traits and characteristics which go to make up a womanly woman.

"There are numerous young women who have never attended a college who from their inherent nature and their acute sense of propriety, outrank many of our college graduates in womanly accomplishments. But had these same young women enjoyed the privilege of a college training, their present accomplishments would have been greatly increased. There is no reason why the same influences which raise man from his natural state of savageness will not tend to perfect the noble and beautiful in woman. All other things being equal, the woman with the superior educational training attains more easily and ap-

proaches more nearly the ideal state of perfect womanhood.

"With this high aim of perfect womanhood in view, we now come to the problem of how we shall best provide for the education of Delaware girls. The three most important of a number of proposed solutions for this problem are:

"First, the establishment of an independent college for girls somewhere in Delaware.

"Second, a renewal of co-education at Delaware College.

"Third, the establishment of a woman's college affiliated with Delaware College.

"An independent college would be by far the best solution to the problem, but the establishment of such an institution at present is impractical because of its great expense. During the last few years, co-education at Delaware College has been advocated by a number of able men. Since there is always more or less dissatisfaction in such institutions the adoption of Co-education at Delaware seems hardly advisable, except as a final resort. If there were no better plan, co-education would certainly be preferable to no education.

Under present conditions the best plan seems to be the establishment of a college for women affiliated with Delaware College. By affiliated, we mean an entirely separate college, governed by the same trustees, with the same president, and, as far as possible, with the same faculty. Between the students of the two colleges there would be no more relation than would exist between those of entirely independent institutions similarly situated.

"That such a college is possible is shown by Radcliffe College, affiliated with Harvard, Barnard affiliated with Columbia. The Women's College in connection with Brown University and several others. Such an institution would cost little more than the preparation for co-education at Delaware. The students would receive practically the same attention as at "Delaware" and the same objectionable feature of co-education would be entirely eliminated. This institution would be much cheaper than an independent college since it would save the expense of a separate president and other members of the faculty. It would also receive a part of the national aid now given to Delaware College. This aid approximately speaking, amounts to about \$70,000, \$30,000 of which must be devoted to agricultural work alone. This leaves about \$40,000 which could be used as readily for a girls college as it is at present for Delaware. In addition to this aid a small annual appropriation from our State legislature would be sufficient to meet the running expenses of the two colleges.

"Perhaps some of the friends of 'Old Delaware' are wondering what effect the adoption of this plan would have on our present college. Of course time alone can answer this question definitely, but we cannot see at present that it would be any great detriment to 'Delaware's' welfare. We fully appreciate that the new institution would take a portion of our funds, would disturb for a few years the equilibrium of our college, and would doubtless cause increased responsibility on our faculty and trustees. But is not our end worthy of our labor? Is not the education, the protection, and the uplifting of the young women of our State worthy of some sacrifice and toil? As dear as is 'Old Delaware' to me, as deeply as I feel my indebtedness to her, I had rather see her proud lindens dug out by the roots, I had rather see her every building razed to the ground, aye, and her destruction as complete as was that of Carthage of old, than to know that my Alma Mater refused to lend her aid to the higher education of Delaware girls.

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"This is a question vital to the future welfare of our State. Every year girls go forth from Delaware to cheer a foreign flag to victory, to give their happy enthusiasm, their loyalty and their patriotism to another State, while our own State of Delaware receives the criticism and scorn of women who realize that they are being denied a God given privilege. Yet our educators, our statesmen, and our newspapers are silent on this question, preferring to quibble over the unimportant question of who owns the buildings of Delaware College. What does it matter, except as a mere technicality, whether the State, the old board, the new board, or some other board of trustees own Delaware College, so long as the college is managed judiciously. Of vastly more importance is the establishment of a college which will work for the intellectual welfare of the future wives and mothers of this State. An institution which will enable our women to take their place among the most noted in this land and which will develop more fully in them those beautiful characteristics which make a noble woman the greatest handiwork of God."



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John Vaughn Ennis—Died May 26, 1910—An Appreciation

Mr. Ennis was born near Dover, Delaware, on September 7, 1888. His early boyhood days were spent on his father's farm, amid characteristic scenes of rural beauty and industry—a simple form of early nature school from which Delaware has ever drawn heavily for her successful men. Thus he grew to be a strong, willing lad, ambitious to gain moral strength and knowledge. His mode of living assured the realization of the first ambition; and time offered to satisfy the second. He was soon enrolled as a student in the Dover Academy, from which he was graduated with honors in 1907.

In the fall of the same year Mr. Ennis entered Delaware College as a member of the Class of 1911, matriculating as a classical student. His instructors soon recognized the diligent, honest, and straightforward manner in which their new pupil conducted himself and his work. Nor were his classmates long in discovering in him a good leader, upright, kindly, generous—a champion of truth and honor.

At the beginning of the current collegiate year he was elected President of the Junior Class and Commissary of the Boarding Club. By his sad demise on May 26 a firm support was withdrawn from these two organizations. The REVIEW has also lost a faithful Associate Editor-in-Chief, and former Local Editor. The Athenaeum Literary Society has been deprived of its most active member, and the college Y. M. C. A. has lost its newly elected President. The

- Elec. world and Eng., June 25, '04, Vol. 45, p. 1194.
Electrician (London), July 22, '04.
3. Calibration of Voltmeters and Ammeters, by L. A. Freudenberger;
Elec. World and Eng., Feb. 11, '05, Vol. 45, p. 502.
 4. The Choice of Signs in Wattmeter Problems, by L. A. Freudenberger;
Elec. World and Eng., Feb. 18, '05, Vol. 45, p. 346.
 5. Single Wattmeter on Edison Three Wire System, by L. A. Freudenberger;
Elec. World and Eng., Apr. 15, '05, Vol. 45, p. 717.
 6. Note on some Centrifugal Experiments with Colloidal Solutions, by W. S. Franklin and L. A. Freudenberger. Read at the Eighth General Meeting of the American Electro-Chemical Society, September, 1905.
 7. Reversible and Irreversible Polarization, by W. S. Freudenberger and L. Freudenberger
Proc. Am. Electro-Chemical Society (Boston Meeting), Apr. '05.
Abstracted, Electro-Chemical Industry, May, '05.
Proc. Am. Electro-Chemical Soc. (Bethlehem Meeting), Sept., '05.
Abstracted, Electro-Chemical Industry, Oct., '05.
 8. Alternating Current D'Arsonval Galvanometer, by W. S. Franklin and L. A. Freudenberger, Elect. World and Eng., Sept. 22, '06, Vol. 48, p. 569.
 9. Factors Determining the Design of Needle Galvanometers, by L. A. Freudenberger, Elect. World and Eng., Sept. 29, '06, Vol. 48, p. 607.
 10. New Type of Alternating Galvanometer, by W. S. Franklin and L. A. Freudenberger, Elect. World and Eng., Oct. 13, '06, Vol. 48, p. 718.
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 12. Estimation of Armature Diameter, by L. A. Freudenberger, Elect. World, Jan. 19, '07, Vol. 49, p. 144.
 13. A New Type of Alternating Galvanometer of High Sensibility, by W. S. Franklin and L. A. Freudenberger, Physical Review, Jan. '07, Vol. 24, p. 37. Abstracted, Elect. World, Jan. 19, '07, Vol. 49, p. 150.
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Abstracted, Elect. World, Oct. 12, '07, Vol. 50, p. 704.
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 15. A New Type of Sextant, by L. A. Freudenberger.
Physical Review, March, '08.
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Engineering News, Sept., '08, Vol. 60, No. 12.
Revista Maritima, Brasileira, Aug., '08, Vol. 28, No. 2.

Prof. Freudenberger was well known among engineering investigators, and Prof. Franklin predicted a brilliant future for him. With the students he was ever ready to help or explain any difficult matters and his teaching has done much toward the present high standing of Delaware's course in Electrical Engineering.

Resolutions in Memory of John Vaughn Ennis, Adopted at a Special Meeting of the Class of 1911, May 27, 1910

Resolutions in memory of John Vaughn Ennis, adopted at a special meeting of the Class of 1911, May 27, 1910:

Whereas, It has seemed best to an All Wise Providence to remove from our midst our esteemed President and classmate, John Vaughn Ennis;

Whereas, Delaware College has lost a firm supporter and champion of truth and honor,

Be It Resolved, That we, the Class of 1911, Delaware College, do extend to his family in this manner our heartfelt sympathy for their great bereavement.

That we hereby express our grief at the loss of one so deeply interested in our College activities, and one who served to promote the time honored ideals of our institution.

Be it further Resolved, That a copy of these resolutions be sent to the family of our late comrade, and that a copy of the same be printed in the DELAWARE COLLEGE REVIEW.

On behalf of the Class of 1911,

CHARLES E. McCHESNEY, Chairman;

ARTHUR B. EASTMAN,

CLARENCE E. TAYLOR,

DUDLEY G. FRAZER, Committee.

Resolutions on the Death of John V. Ennis by the Athenaeon Literary Society

Whereas, Almighty God, in His infinite wisdom has seen fit to call from our midst our dearly beloved fellow-member, John Vaughn Ennis, we the members of the Athenaeon Literary Society of Delaware College, do hereby express our deep sorrow and sense of loss in his death.

Whereas, The deceased by his untiring efforts in behalf of this society has won our highest respect and admiration;

Be it Resolved, That in the death of John Vaughn Ennis, the Athenaeon Literary Society has lost an earnest and gifted member, and furthermore

Be it Resolved, That in his death the student body of Delaware College has lost a sincere friend, whose influence for good was felt in all phases of college life. To express our sympathy further,

Be it Resolved, That resolutions of respect be sent to his bereaved family, and also that a copy of these resolutions be printed in the DELAWARE COLLEGE REVIEW.

THOMAS B. TINNEY,

ELMER E. BLADES,

ROBERT G. HILL, Committee.

W. A. REYNOLDS, '12

TWELFTH GAME

On April 23rd, the Blue and Gold aggregation journeyed to Collegeville, Pa., to try conclusions on the diamond with the Ursinus College team. Delaware played good ball and only lost on errors. The individual records are lost. The score by innings:—

										R.	H.	E.
Delaware	0	0	0	0	0	0	1	1	0	2	4	3
Ursinus	0	0	2	1	0	1	0	0	8—4	5	0	

M. A. C. 3; DELAWARE, 2.

The Mt. St. Joseph's game scheduled to be played in Baltimore was cancelled by Delaware because of a disagreement between the two teams. The Manhattan and St. John's games scheduled to be played in New York, were cancelled by the Blue and Gold because of lack of finances. The Susquehanna game was cancelled because of the poor condition of the Delaware diamond.

LAFAYETTS. 4; DELAWARE, 1.

On Saturday, May 21st, the Blue and Gold nine journeyed to Easton, Pa., and was defeated by the Lafayette College nine by the small score of 4 to 1. A

severe thunder storm cut the game short in the sixth inning, and prevented the continuance of the game even after the rain had ceased. Score:

Delaware.	R.	H.	O.	A.	E.	Lafayette.	R.	H.	O.	A.	E.
Haley, 3b	0	0	0	0	0	Matson, rf.	1	1	2	2	0
Edgar, 1b	0	0	0	1	1	Benson, 2b	0	0	0	0	0
Marshall, c.	0	0	8	2	0	Kelly, 2b	0	1	2	0	0
Dunn, 2b	0	0	2	2	0	Swank, lf.	1	1	0	0	0
Ward, rf.	1	0	1	4	2	Demott, cf.	0	1	0	0	0
Taylor, lf.	0	1	0	0	0	Fager, p.	0	0	0	0	1
Harvey, ss.	0	0	3	2	0	Long, p.	0	0	0	0	1
Knapp, cf.	0	0	1	0	0	Denher, 1b	0	0	5	0	0
Jolls, p.	0	0	0	0	0	Williams, 3b	1	1	0	1	0
						Conover, c.	0	0	6	1	0
Totals	1	1	15	11	3	Ateshir, rf.	1	1	0	0	0
						Strekel, ss.	0	0	0	1	0
						Totals	4	7	15	6	1
Delaware	0	1	0	0	0	0—0					
Lafayetts	0	0	2	0	1	1—4					

The games with Eastern College at Newark, Western Maryland College at Westminster, Md., and Mt. St. Mary's College at Emmittsburg, Md., were cancelled out of respect to the late Prof. L. A. Freudenberger.

TRACK

MUHLENBERG COLLEGE, 74; DELAWARE, 52.

At a dual track meet on Saturday, May 7, between Muhlenberg College and Delaware College on the Muhlenberg Field at Allentown, Pa., the Blue and Gold was defeated by the score of 74 to 52. Summaries:

100-yard dash—Won by Shelly, Muhlenberg; Eberle, Muhlenberg, second; Kidd, Delaware, third. Time, 10 4-5 seconds.

880-yard run—Won by Toebke, Muhlenberg; second, Bisler, Muhlenberg; third, Sawden, Delaware. Time, 2:10 1-2.

16-pound shot put—Won by Slean, Muhlenberg, 35 feet 3 inches; Haley, Delaware, 30 feet 11 inches; Hagner, Delaware, 28 feet 8 1-2 inches.

220-yard hurdle—Won by Kleckner, Muhlenberg; Hagner, Delaware, second; Taylor, Delaware, third. Time, 20 1-5.

Discus throw—Won by Slean, Muhlenberg, 107 feet 3 inches; Eliason, Delaware, 95 feet 8 inches; Snyder, Muhlenberg, 85 feet 2 inches.

Two-mile run—Won by Reiler, Muhlenberg; Janke, Muhlenberg, and Jacobs, Delaware, tied for second. Time, 11:25.

Running broad jump—Won by Harvey, Delaware, 19 feet 5 1-2 inches; Eberle, Muhlenberg, 19 feet 4 inches; Shelley, Muhlenberg, 18 feet 6 1-2 inches.

440-yard dash—Won by Kidd, Delaware; Ennis, Delaware, second; Toebke, Muhlenberg, third. Time, 57 1-5.

Running high jump—Won by Eberle, Muhlenberg, 5 feet 3 3-4 inches; Holben, Muhlenberg, second, 5 feet 1 inch; Halley and Harvey, Delaware, third, 5 feet.

220-yard dash—Won by Kidd, Delaware; Shelley, Muhlenberg, second; McCafferty, Delaware, and Quinn, Muhlenberg, third. Time, 25 seconds.

16-pound hammer throw—Won by Eliason, Delaware, 98 feet; Skean, Muhlenberg, 87 feet; Snyder, Muhlenberg, 82 feet 9 inches.

120-yard hurdle—Won by Kleckner, Muhlenberg; Wunder, Muhlenberg, second; Hagner, Delaware, third. Time, 16 4-5.

Pole vault—Eberle, Muhlenberg, and Harvey, Delaware, tied for first, 9 feet 5 inches; Keever, Muhlenberg, second, 8 feet 4 inches.

Mile run—Won by Watts, Delaware; Sawden, Delaware, second; Reiter, Muhlenberg, third. Time, 5:04 1-5.

In the annual field events on Franklin Field in Philadelphia, Delaware finished fourth in the relay races.

TENNIS

The Delaware Tennis team consisting of Watts, '11, Harvey, '12, and Davis, '11, played the Swarthmore College trio at Swarthmore, Pa., on Tuesday, May 24th, and were defeated in both the single and double matches.

The annual meeting of the Athletic Association was held in the College Oratory on Friday, May 24, for the purpose of electing officers for the coming collegiate year. The officers-elect are as follows:

Manager of Base Ball Team—"Chippy" Bell, '11.

Assistant Manager of Base Ball team—E. L. Rice, '12.

Manager of Track Team—Harry Garrison, '11.

Assistant Manager of Track Team—George W. Sawin, '12.

Manager of Tennis Team—Harry Vandergrift, '11.

Assistant Manager of Tennis Team—Mark Gwilliam, '12.

Manager of Football Team—Orton Marshall, '11.

Assistant Manager of Football Team—Samuel Tammany, '12.

Manager of Basket-ball Team—George Patterson, '11.

Assistant Manager of Basket-ball Team—D. Bayne Ayerst, '12.

President of the Athletic Association—L. Irving Handy, Jr., '11.

Vice-President of the Athletic Association—Carl Schaeffer, '11.

Treasurer of the Athletic Association—Harrington Heisler, '11.

Secretary of the Athletic Association—D. Rankin Davis, '11.

The Treasurer submitted his report for the past year, and all the business for the present year was concluded except the awarding of the base ball and track D's.

The Scrub base ball team has thus far played two games this season and won both of them. In the first game the losers were the players of Nottingham Academy by the score of 4 to 2. The second team to meet defeat at the hands of the scrubs was the Wilmington Conference Academy nine. Score, 12 to 2.

The inter-class base ball series have been started, but the time for the conclusion of the same can not be agreed upon by the captains of the two victorious teams. The Sophomores defeated the Freshmen by the score of 15 to 2. The Seniors defeated the Juniors by the score of 8 to 6. The detailed line-ups of the games cannot appear in this issue of the REVIEW, owing to the

tardiness of the publication of the periodical; consequently the misplacement of the detailed accounts of the games.

The Freshman Class team has played four games this season, with foreign schools and have won one and lost three. They were victorious in the Selasianum game, but lost two games to the Wilmington High School and one to the Goldey College nine.

Agricultural Notes

Edited by R. G. HILL, '13.

Dr. Cook visited the dewberry fields near Viola recently. He is investigating the disease known as Double Blossom, which has done so much damage and driven so many berry growers out of business in that section. Dr. Cook has found a remedy for this disease that is simple, and will do a great deal towards reviving the dewberry industry in Delaware.

Prof. Hayward and a number of his class in Animal Husbandry attended the famous Cooper Sale of Jersey Cattle at Coopersburg, Pa., on Decoration Day, and saw the rather unusual event of a single animal selling at public auction for over \$11,000.

The new dairy barn at the College Farm is rapidly nearing completion. The frame is up, and by the close of the term will be entirely under roof.

The department is having a number of photographs made at the farm. These will be used as half tones in the publications of the department.

Dr. Cook and Prof. McCue have recently discovered the potato black leg in a potato field near Middletown. This disease is very serious in Maine, but it is hoped that it can be kept under control in this State.

Prof. McCue is conducting some experiments in spraying on orchards near Middletown and Brenford.

Mr. George H. Stevenson, Secretary and Treasurer of the National Corn Exhibition, and Prof. Wesley Webb, who formerly occupied the Chair of Botany at this institution, and who is at present Secretary of the State Board of Agriculture, were recent visitors at the Experiment Station.

Prof. Hayward has been invited to judge live stock at a June exhibition near Harrisburg.

Kirby, '11, will spend his vacation on a large stock farm in Delaware county, N. Y. Hill, '13, will recuperate on the famous Penshurst Stock Farm, near Philadelphia.

Kirby, '11, recently went to Pennsylvania for some horses for the College Farm.

The Agricultural Club held its first annual banquet in the cub rooms on Monday evening, May 23rd. The affair was a decided success. The work of the past year was talked over, and plans for the future were discussed. Mr. Jean Shallcross was the toast-master of the evening.

Locals

Edited by J. G. LEWIS, '12, and G. P. MILLINGTON, '12

It is with the deepest regret that we announce the deaths of Lewis A. Freudenberger, Assistant Professor in the Department of Mechanical and Electrical Engineering, on Wednesday, May 25 at eleven fifteen a. m., and of John Vaughn Ennis, President of the Class of 1911, on Thursday, May 26. Both men were extremely popular with both Faculty and student body, and the gloom cast over the college by their departure from this life, will not be easily shaken off. It is not for us to enter into an attempt at giving either a character sketch or an appreciation of the departed men, as that will be left to other columns of this paper, but we would like to say that the sentiment of the whole student body may thus be expressed in a few words: The loss of these men, two of our brightest members of faculty and student body, respectively, is an irreparable one, and the deepest and most heartfelt sympathy of every student goes out to the aching hearts to whom these men were so dear.

The following expression is peculiarly synonymous with the name, Chippie Bell:—"I love my fancy table-covers, but oh, you doilie."

We noticed one morning this month an unusual display of tombstones on the front campus. Professor Robinson, Doctor Sypherd and Mr. Maxfield were the unfortunate victims of the Dormitory "loons." The epitaphs were rich, rare, spicy, and savory, but the real part of the joke was to see Prof. Hazo Barton climbing a ladder to get into the Recitation Hall. Awfully good-natured, those four "birds" of ours—Mr. Lovett, Hazo Barton, Shorty, and George James, especially so are they when they have to spend two hours in repairing the damage done in less than three minutes.

Dutch Maier's derby has at last taken its way into the land of departed spirits. So did Fred's spirits when he saw the remains of his "dome-piece."

It has just been announced that one of the most prominent girls at Vassar College has been made a Fellow.

A BULL.

Scene: Chemistry Class. Characters—Prof. Penny and Sam Knopf. Dialogue.

Prof. Penny—"Mister Knopf, how do you get gold?"

Knopf—"By—by—by—by—just by—"

Prof. Penny—"Well, yes, if you are rich enough."

The Kappa Alpha Fraternity held their annual dance in the Newark Opera House on Friday, April 29.

She (friend of Walls, '13)—"Oh, just look at the cadets coming, and my, every one of them is out of step, except Carleton."

Since in the last ten months the following epitaph has not appeared, we deem it wise to resurrect this delightful bit of mythology. We do so for the benefit of those who for any reason do not appreciate our best jokes and at the same time to those who are quicker and more appreciative we offer an apology for

the offense. Well here goes: "If Rutgers should steal Delawares' New Jersey, what will Delaware." (Tears of remorse.)

Overheard at Dover, May 26: First Farmer—"What be your son steddying fer up to college?"

Second Farmer—"Wall, I dunno; I jest got a letter from the perfesser, and he wanted to know what he wa'nt steddying fer."

Another one:—"My brother took a whole box of pills last Saturday, and he's in an awful way."

"Well, well."

"No, sick, sick."

Schaefer and Wainer, both members of the Junior Class (put that down, you may need it later) went out surveying the other day. They took a level with them and were just about to run the proposed line, when Schaefer suddenly realized (?) that they had no plumb-bob. He accordingly and accommodately walked all of the way back to college to find Professor Short and ask him for a plumb-bob.

Professor Short gave the Sophomores a hunch the other day that Newark is the backbone of the world. Guess from that some of us had better hump ourselves. Some coherence in that line of reasoning.

Mr. Maxfield, in discoursing on early drama explained that many of the actors, in order to make a more realistic act, inflicted wounds, some few even committing suicide. Carswell breathlessly interrupted—"Did the ones who committed suicide do it for a living?"

Shipley, looking at a full-size portrait of Samuel Clemens—"Why—why—down home I saw one in Uncle Ev's drug store that had Mark Twain's name under it."

Lieutenant, in one of his reminiscences—"Yes, when I was stationed at Fort — I once saw five weeks sleighing in May!"

Ayerst, imagining that he had at last stalled one of the Professors—"But, Lieut, there are only four weeks in May."

Lieutenant Stayer, quite unruffled—"But this happened in Vermont, where Mr. and Mrs. Weeks were sleighing with their three children."

Lancaster, ex-'13, in Wanamaker's store—"I should like to get a pair of those russet shoes that Bob Levis got here last week."

We suggest to Harvey Voshell, '10, that if he cares anything about home ties he should most certainly get a pair of carpet slippers.

We submit a suggestion to the milliner's congress, recently convened, that there should be a limiting claws regarding the wearing of the Chantecler hat. This is suggested on the spur of the moment. However, it is a very ticklish thing when we consider the feathers.

We heartily congratulate Company E on its final inspection, and sincerely hope that the remainder of the meetings will be for pleasure only.

Found—An oyster in one of T. Mullin's stews at the Hotel de la Powell. Owner may have same by proving property.

Ayerst—"Look at the penny I had sent to me."

Dunbar—"Why, that's a Canadian half-dollar."

Ayerst—"Well, it was sent to me."

In several letters addressed to this department we have been asked what is the best spark plug. All things considered, we think the ordinary horse on a country road is undoubtedly the best.

Jacobs, seeing Prof. Robinson walking down the path—"What does that man do here?"

Jacobs and Armstrong, commonly termed the "Man and Wife", recently had a severe argument in the midst of which Jacobs, in a moment of passion, broke the bow of Armstrong's violin. Annie, lenient girl that she is, pardoned "the missing" and sued for alum o'ny.

We learn with pleasure of the formation of a Glee Club at Delaware College. Bacon, '10, first tenor; Shipley, '10, second tenor; Tody Spruance, '11 baritone, and Big Nath Hutchinson, '13, as the lusty basso. Success to the Glee Club (?)

At a recent meeting the following men of the class of 1912 were elected members of the Junior Annual Board:—Howard Taylor Ennis, editor-in-chief; George Walker Sawin, George Pancoast Millington, Douglas Bayne Ayerst, Fred Long Maier, James Gilpin Lewis, Benjamin William Ward, Samuel Tammany, and Samuel Knopf, department editors.

The Delaware College Agricultural Club closed its season with a luncheon and addresses by several of the members.

Prof. Smith—"Let's see—ah—I wonder where's Mister String Bean?"

Some cabbage head remarked—"I don't know; let us look for him and perhaps he'll turn up."

A few days ago, Kirby, the new commissary, while in the kitchen, discovered an egg with the following chirography thereon—"Myrtle Wharton, Grand Rapids, Michigan, age 16, please write. Will exchange postals."

Kirby, imagining that some romance might spring up, immediately wrote to the above address, inserting his usual amount of "bull." Imagine his surprise, then, and that of the members of the Boarding Club, when he received in reply, in a crabbed hand-writing, the proposal of marriage of an old lady of eighty-five summers!

An Italian, who appeared to be in trouble, was recently approached by one of the student-body. On being asked what was the matter, he said:—"Oh, some son of a gun handed me de lema."

The whole battalion seemed to be of the opinion that the photography on Inspection Day was snappy work. However, some few have formed a clik, and are rebelling against the possibility of another such exposure.

Raughley, '13—"Who wrote William Tell?"

Shipley—"George Barr McCutcheon, of course."

Spruance is still in doubt as to whether William and Mary is co-ed, because it has a man's and woman's name.

Rice, seeing Danforth's wagon standing at Fourth and Market streets, the

horses covered with blankets embellished with a "D"—"Why do they wear that 'D', Haley?"

"Oh, I guess it's because they make the team."

Davis—"Lieutenant, I want to be excused for missing drill last Friday; my aunt was sick."

"Lieutenant—"How did you like the 101 Ranch?"

By way of lengthening our column, we might advise the Freshmen who are not wise to it, that in order to get some change, they might walk around the bank. There's money in it.

De Alumnis

Edited by R. C. LEVIS, '12

The Kappa Alpha Fraternity gave their annual dance on Friday evening, April 29th, 1910, in the Newark Opera House. The function was declared a great success by all who were present.

The marriage of F. B. Evans, '05, of Elkton, to Miss Eliza H. Hance, of Baltimore, took place at the bride's home on the evening of April 30th. The couple are now residing in Elkton, where Mr. Evans is practising law.

J. C. Smith, '07, Second Lieutenant U. S. M. C., has returned from Cuba, and is stationed on the U. S. Battleship Rhode Island, which is stationed at New York.

G. A. Papperman, '09, was a recent visitor at the College.

Isaac Gibbs, '09, has been appointed road engineer for Kent county, Md., by Governor Crothers, of Maryland.

C. H. Ruth, ex-'10, who has recently been employed in the engineering department of Oklahoma City, is at present with "Moore & McClure," the largest civil engineering and general constructing firm in the Southwest.

L. E. Major, ex-'10, has a position as road engineer with the Good Roads Commission of Maryland. Mr. Major is now stationed at Annapolis, Md.

W. Francis, '08, has returned from a pleasure trip to Panama. Mr. Francis has an excellent position with the Dupont Powder Co., of Wilmington.

Exchanges

EDITED BY T. F. WATTS, '10

In taking up the work of editing the Exchange Column of the REVIEW, we wish first to state the conception of our duties which we hold and expect to follow during the ensuing year. We believe that the exchange department of a college paper should be so conducted that the paper will help and be helped by just criticism; and we condemn any article which is written for purposes of retaliation, for the very sufficient reason that it tends to destroy those friendly relations with other papers without which the exchange column is a failure. We

shall criticize other college publications regardless of what opinions they have passed on the REVIEW, and we trust that our work will be discussed with the same spirit.

It seems necessary to remind the exchange editor of the Washington Collegian that criticism may be favorable as well as adverse. He assumed a would-be caustic air in his observations on our last issue, which was marred somewhat by a mishap; but on other occasions when fortune has not been quite so severe on us, he has been noticeably silent. Why hasn't he discussed some of the earlier issues of the year? We would like to hear from him every month. However, we do not find so much fault with what he says as with how he says it. He expresses himself very awkwardly. In fact, the first two or three sentences in his May exchange column convey no thought at all. The meaning can only be surmised. We are very sorry not to be able to praise the May number of the Washington Collegian. The plots of the stories are very commonplace, and "At the Masquerade Ball," although we do not compare it with poetry of a very high standard, is certainly a poor piece of poetry. However, our criticism of the issue as a whole, like that of the exchange column, bears not so much on the thought it contains, as on the manner in which that thought is expressed.

We are sorry the exchange editor of the Western Maryland College Monthly has taken offence at some criticism in our last issue. There was certainly no intention of hurting his feelings. However, we are glad to say that we do not feel constrained to be so severe on his paper this time. "Adam's Rib" is at least humorous, and "The Woman Hater" is not a bad story.

Inter-Collegiate Notes

Edited by B. W. WARD, '13.

Owing to the steady increase in the student enrollment in the colleges and universities throughout the country, it was necessary from time to time, either to make new buildings or additions to the old ones, and to improve and add to the equipment. The reports from various institutions show that the present age is an age of improvement. The University of Colorado is about to begin the erection of three buildings, including Mackey Auditorium, \$280,000; heating and power plant, \$370,000; and two wings to Hale scientific building, \$36,000. The University of Cincinnati will erect an engineering college, \$300,000; a gymnasium, \$100,000; a heat and power plant, \$150,000. The city of Cincinnati will issue bonds to cover the amount. Many other institutions are making important improvements.

Professor William Moore, of Cornell, has received an appointment to a chair in the faculty of the British Agricultural College in the Transvaal. He expects to leave soon for a three year term there.

Professor W. R. Orndorf, of Cornell, recently delivered a series of lectures on "Chemistry in Every-Day Life" at Virginia Institute.

Yale University Dramatic Association has a new theatre building fund

amounting to \$10,629, besides cash on hand of \$1,159.

Wake Forest College, North Carolina, lays great stress on elocution and public speaking. One of the principal features of college work there is the work in the literary societies. The meetings form a part of the students' routine of work. A great amount of money is spent, too, in keeping the societies in good condition for work. One society alone spent \$1300 last year, on the improvement of the interior of its hall.

Y. M. C. A. Notes

Edited by H. T. ENNIS, '12

At the annual election held recently the following officers were elected for the ensuing year:—President, J. V. Ennis; Vice-President, Frank Gilbert; Treasurer, S. W. Tammann; Corresponding Secretary, H. T. Ennis; Recording Secretary, H. S. Garrison.

Owing to the fact that the newly organized Pocono Pines Students Conference is to be held during our Commencement Week, we will send our delegates to the Northfield Conference as heretofore.

The annual sermon for the Y. M. C. A. on Commencement Sunday, will be delivered by the Rev. Robert Watt, D.D., of Smyrna. The subject is "The Work and the Way of a Christian Life."

This Association greatly laments the death of its newly elected President, J. V. Ennis. In him it has lost a faithful member, an energetic worker, and a competent leader. It has lost one who has always had the best interests of the Association at heart, and one who has given his best efforts to advance those interests. It has had taken from its ranks a promising student, a zealous worker and a Christian. We, the members of this Association, extend our deepest sympathy to his bereaved.

Military Notes

Edited by C. C. KIDD, '11

The inspection on April 27th was a success in every way. The inspector, Captain P. D. Lochridge, arrived about ten o'clock. The battalion in charge of Major S. R. Corkran, was waiting on the drill field. After an inspection of the arms and equipment, the cadets were put through all of the movements that any battalion could be expected to do. Some of the movements were battalion drill, company drill, extended order, advance and rear guard. The show ceremonies were kept for the afternoon, when the visitors could see them. Captain Lochridge was the first inspector who ever examined the cadets as to their knowledge of first aid to the injured. In the afternoon the ceremonies were performed before a large crowd. Parade, escort to the colors, guard mount, Butts manual with music and terminating with a sham battle, in which the companies marched to the end of the athletic field, formed battle front and

came charging down the field. This was the most popular thing of the day. The inspector unofficially stated that the inspection was excellent. He even intimated that we could get into a higher class with St. Johns and P. M. C., if we desired. There would be very little advantage in this, and it is hardly likely that it will be accepted. Much of the credit of this inspection is due to Lieut. E. S. Stayer, and the cadet officers. When Lieut. Stayer came here three years ago the military department was in a rather neglected state. Now, in his third year, he has brought us up to the top of the colleges of our class. By request of the faculty and students, the Lieutenant will be here next year, although this year was to have been his last. The class from which the officers will be drawn next year, were Freshman, when he came, so that he will have had them for the entire four years. Next year we look for an even better inspection, if such a thing is possible. Here, farewell and best wishes to Major Corkran and the cadet officers. May their other inspection be as good as this one was!

On account of the Company E range near Newark not being in shape, the rifle team has not had much of a chance to practice. Some of the boys were on the New Castle range a few Saturdays, and made very good scores. There is a little doubt about a team being sent to the inter-collegiate shoot this year. The conditions of the match are very unfavorable to us.

The competitive drill on Commencement Day will be a pretty exhibition. There is considerable rivalry among the companies. Company B has held the medal for five or six years straight and claim that their first sergeant will be wearing it next year. The other companies are not talking much, but they have an opinion of their own as to who will win the medal.

The battalion was present at the funeral of Professor Freudenberger, who died on Wednesday, May 25, at eleven fifteen, after an attack of typhoid fever. The funeral was held on Saturday morning, May 28. It was not compulsory to attend the funeral and coming as it did, on a Saturday, the number of cadets who turned out was surprising. The battalion formed in funeral formation at 8 a. m. The band marched in front, followed by Company C, the firing company, with their guns. Behind Company C the officers, non-commissioned officers and privates were formed in single ranks. The escort marched around and formed a single line in front of the house with the line of officers three paces in front. Company C formed a single rank on each side of the path leading to the hearse. When the casket came out Company C came to present arms, and the cadets stood with bared heads. With the band playing the Dead March, the battalion marched to the Episcopal Church, where the services were conducted by Rev. H. B. Phelps. The casket was taken to the station and placed on the platform, where Company C fired three volleys over it and Sergeant Fisher played taps. The cadets were only too glad to show, in this small manner, their sorrow for the man who was loved and respected by all. Until the end of the college year the officers will wear crepe on their swords and the color will be draped.

A few hours after the news of Professor Freudenberger's death, word was received of the death of John V. Ennis, of Dover. Ennis had been sick for about a month, but was thought to be getting better, and the news of his death came as a great shock. He was a Junior, a Sergeant in the battalion and interested in many other college activities. A complication of typhoid and pneu-

monia caused his death. A number of the cadets and the faculty attended the funeral at Dover on Sunday, May 20th, at 3 p. m. A firing squad, in charge of Sergeant Bell, fired three volleys over the grave, and Sergeant Fisher played taps. The men composing the squad were Sergeant Shakespeare, Corporals Darlington, Carswell, Whittingham, Lewis, Rossel and Reynolds, and Private Blades. A number of the other cadets were at the funeral, but not in uniform. In Ennis, the college lost one of its most promising young men, and the students lost one who was the friend of every one.



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