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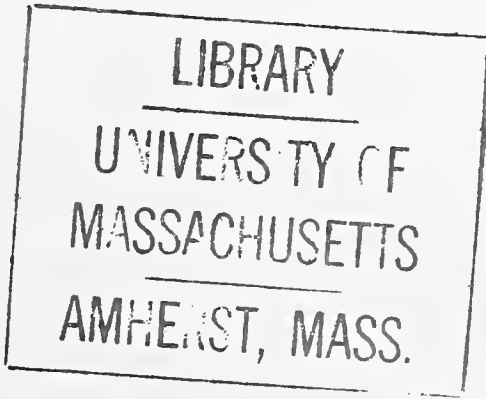
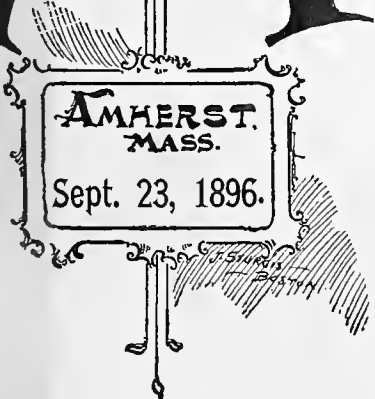






AGGIE LIFE

Massachusetts
Agricultural
College.



VOL. VII.

NO. 1.

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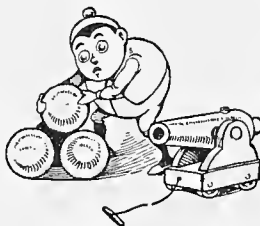
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COLLEGE OUTFITTER,
UNDER THE HOTEL.**

AGGIE LIFE.

VOL. VII.

AMHERST, MASS., SEPTEMBER 23, 1896.

NO. 1

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CARPENTER & MOREHOUSE, PRINTERS.

Editorials.

THE editors take pleasure in announcing that the LIFE is now entirely free from debt. Great credit is due the business manager, for it is largely owing to his energetic methods that the paper is now in good financial standing. This matter of making good the deficiencies of preceding boards has been a most unfortunate chapter in the history of the paper and we sincerely hope that no such difficulty may be encountered by those who may have charge of the LIFE in the future. In order that there may be no retrograde movement it is necessary that each alumnus, each undergraduate, and each member of our faculty send in his subscription as promptly as possible.

THE election of the new members of the editorial board takes place at the close of the winter term.

Heretofore the time of competition for these positions has been limited to a few weeks immediately preceding the time of election. There are many reasons why such a plan is disadvantageous, one of the principal ones being that the hurried nature of the work renders it almost necessarily of poor quality. We desire to give notice that a change will be made in the methods of selection, and that competition for positions on the LIFE board begins *now*. The vacancies that will be available to new men are as follows: two men from ninety-eight, one man from ninety-nine, and two men from nineteen hundred. No man will be considered as a candidate who does not contribute at least *three* well written articles. The selection of new members will be based solely upon the merits of the articles presented.

THE fall term opened on September third, from two to three weeks earlier than the majority of the colleges throughout the country. On returning it was pleasing to note that several much needed improvements had been made during the vacation. The papering of walls and ceilings has been carried out with regard to appropriateness and artistic effect. The papering and the liberal application of varnish causes the rooms to present a very bright and attractive appearance. It is to be hoped that the work of improvement may not stop here, and that several evils that have long needed correction may soon be remedied. The freshman class is of fair size and contains much good material, men who bid fair to bring honor to the college. It is a significant fact that only a very few of the members of nineteen hundred entered without conditions in mathematics. While we do not propose to criticise the character of the entrance examinations, the question cannot but arise in our minds, "Is it for the best interest of this college to make the entrance examination in mathematics proportionally

twice as hard as the entrance examinations in other subjects?" Experiments in the future may determine this point, yet such experiments are likely to prove costly.

ALTHOUGH the Football season of '96 has dawned upon the horizon, at Aggie, the game bids fair to remain buried under an intellectual avalanche which has recently overspread the College. It seems that the faculty have forbidden every member in college holding a condition from participating in the game, and have placed a special embargo upon the athletes in the Freshman class. In the future the men must be able to work out the different movements on the field by means of sines and cosines, and only an adept at Trigonometry need try for any team in time to come. Such is the evident intention of the faculty. Although the policy of the movement might be questioned, in view of the very limited number of men available for football under the circumstances, the Captain and Manager, in connection with the directors of the Association have decided not to place a football team on the field this fall. It is perhaps discouraging to many to feel that the campus will no more resound with the enthusiastic shouts of a well trained, athletic race of men; that the brave wearers of the College white and maroon will no more stand forth battling grandly for the support of old Aggie, yet, under the circumstances it is undoubtably best to relegate our former glory to the past, and issue in the present, in a Renaissance greater and far more valuable than the scientific investigations of Sir Isaac Newton.

FOUR EPITAPHS.

"Deep wisdom—swelled head—
Brain fever—he's dead—

A Senior."

"False fair one—hope fled—
Heart broken—he's dead—

A Junior."

"Went skating—'tis said—
Floor hit him—he's dead—

A Sophomore.

"Milk famine—not fed—
Starvation—he's dead—

A Freshman."

—*The Pennant.*

Contributed.

CRIME AND CRIMINALS.

Every evil has its cause. A thing is evil because it fails to retain its perfection. Nothing can be evil of itself for every being as such is good; therefore evil must have a cause. Vice and virtue are habits of the soul and each is acquired and increased by exercise. Virtuous habits incline a man to do good just as vicious habits incline a man to do evil. In whatever light we view moral evil we come again and again to the important truth that the voluntary depravity of the human will is the cause of all crime and if we would lessen crime in the world we must strengthen the will or remove it from all temptations.

This fact being made clear, in tracing the origin of crime we instinctively turn to the family and the home.

If the parentage and home of a child can be kept pure we may hope for much because it is probable that the child will enter the world free from inherent tendencies to crime, but if the springs are poisoned the streams that flow from those springs will not be free from the taint. To reform a man who has come into the world with the criminal blood of his parents in his veins and who has received his earliest impressions from the vilest surroundings, and who has been left to grow up neglected is very difficult and by many is believed to be impossible. There is no work more difficult than the task of straightening a warped nature and recasting a human character.

The criminal is not only the transgressor of the law and consequently the enemy of society, but he is often an out cast, hapless child the possible victim of weakness inherited from former generations. The mental and moral infirmities render the unfortunate offender deficient and deformed; deficient in will power and deformed because without a clear and positive perception of what is right.

A careful analysis of our prison records shows that the criminal classes are largely made up of the children of idle, worthless parents. Hereditary pauperism and crime can never be lessened till the homes of the people are made safe and pure.

The records also show the existence of two well defined classes of criminals, the instinctive criminal and the passionate criminal. Now the acts of an instinctive

criminal are wrong when voluntary, but often it is impossible to distinguish the deliberate intent to do wrong of the criminal, from the unconscious impulse of the lunatic. The passionate criminal is driven to crime by circumstances and sudden temptations rather than by inherent tendency. His wrongdoing is not frequent and never long premeditated. Few instinctive criminals are reformed in the sense that they can be set free without grave fears of relapse; in spite of spiritual help and moral support they will remain weak in the presence of temptations.

Of the passionate criminals, all or nearly all, could be restored to their proper rectitude if properly treated.

The increase of crime indicates that there is something wrong in society when the instinctive class increases and flourishes in spite of our progress and civilization.

Experience has shown that in order to prevent crime and to reform criminals there must be a complete change in the methods of juvenile delinquents.

Punishments may make the guilty tremble, but kindness, moral discipline and Divine help alone can make them better. Educate the child and educate the criminal we are told and you will preserve the one and reclaim the other; but in spite of our advanced systems of education crime has risen like a flood and, unrestrained, is rolling its billows over our land. Intellectual culture is no security against temptation; ignorance and crime do not always go hand in hand. Education to be truly good must be intellectual, moral and religious.

Besides vicious parentage and defective training there are three chief causes of crime.

There are Godlessness, avarice, and the unrestrained traffic in intoxicated drinks. The first we see manifested every day in our novels, magazines and newspapers and like so many grains of poison is sure to be fatal if but allowed to act.

A second cause of crime is avarice, the inordinate desire for wealth and the ambition to secure it at any cost.

"Seek money before all else?" is the golden rule of the nineteenth century. It corrupts the courses of trade; destroys honesty of legislation and the execution of justice and turns political power into fraud and robbery. Many an honest, upright man has been pulled down and his moral courage broken by being

robbed of his wages through the greed of society.

A third cause, the traffic in intoxicating drink, is a scandal and a shame, and unless brought under by the power of the people, for they alone possess the necessary power to subdue it, the ruin of our homes and of our social institutions is not far distant.

Still another cause of crime is the heartless indifference of society toward our outcast, half starved children. For some trivial offence a child is arrested and sent to the reformatory. Here he is started in the pathway of crime. Unless utterly and hopelessly depraved, a child should be spared the disgrace of being sent to some, at least, of our reformatories as at present conducted, for the moment a child enters such an institution the indelible brand of criminal is stamped upon him and the memory of that disgrace will be with him to his dying day.

The principal objection to the present management of reformatories is found in the fact that in most of these two classes of children are thrown together for it is impossible to distinguish between those not yet morally corrupt and those who are schooled in crime far beyond their years. That evil communications corrupt good manners is well exemplified here, and many of our jails and prisons are hot beds of vice and crime.

How to bring about a decrease of crime and the proper treatment of the criminal are questions that call for the exercise of the greatest wisdom and the broadest charity. First of all we must purify the home making its surroundings and atmosphere as when it first came from the hand of God. Then society should erect those safeguards that shall protect the weak and prevent their fall. Last of all the management of our reformatory institutions must be committed to men and women who are strong in faith and are animated by the spirit of Christian charity. When we have perfected these conditions we shall have progressed far in the solution of one of our most difficult social problems.

C. I. G.

DE PROFUNDIS.

Hushed are the tones of priestly voice,
The organ's notes, with sweetness long drawn out,
Have winged their flight to Heaven;
And the tread of many feet
Wending their way from cloister walls,
In lingering echoes has died away,

The calm of holy peace
 Pervades the sanctuary.
 The air seems quivering with sound of uttered prayers
 And sobs of human woe are echoing in the scented
 atmosphere.

The swallows, messengers of God,
 Wing their way through dizzy arches overhead,
 And clouds of incense float in airy waves,
 While candles shed their ghostly light on all around.
 The Virgin, clad in robes of purple,
 Clasps the Holy Babe with mother love ;
 Above the altar, nailed to the cross,
 Hangs the body of the Crucified;
 With hand uplifted and melting eye, he stands,
 And fain would cry ;—
 "Come unto me ye weary, and I will give you rest."
 O'er all, the glory of the setting sun,
 Transformed by painted windows
 Hallows all its shrines upon with beauteous radiance.
 But hark, what is that sound?
 Can it be some troubled spirit,
 Wandering from its stony couch,
 Or sorrowing angel weeping o'er the sacred shrine?
 Nay, follow the course of yon golden ray,
 Behold, it casts a sacred halo
 Round the head of one kneeling at the altar rail,
 A boyish form, clad in robes of churchly office,
 His golden head bowed in childish anguish
 Before the Virgin's chiseled form.
 "O, Blessed Virgin, Holy Mother,"
 Cries the tearful voice,
 "Have pity on thy orphan child!"
 But the statue's eyes are cold,
 And the smiling lips are dumb.
 Again is heard that wailing cry,—
 "O Mother of Jesus, have pity on thy child."
 The swallows twitter in their airy flight,
 The shadows deepen into twilight gloom,
 But the silent statue gives no sign.
 Sob after sob rends the slender form,
 Till at length, with last despairing hope,
 He turns with streaming eyes,
 Before the Risen Christ.
 Again in sweetest accents,
 Pleads the sad young voice,—
 "Jesus, Son of Mary, Hear me, I implore,
 Take thy lost, thy orphan lamb,
 Lead him by thy gentle hand,
 To thy pastures, rich and green, to thy heavenly fold."
 The stricken child, with reverent look,
 Gazes on the features of his Lord,
 And as he looks, behold!
 The sculptured eyes melt with loving tenderness,
 The stony mouth is wreathed in gentle smiles,
 While on his awed and reverential ears,
 The Saviour's voice, in accents sweet and low,
 Falls in glorious harmony divine,—

"I am the way, the truth, the life,
 Come unto me and I will give you rest,"
 The last ray of the setting sun,
 Formed a halo o'er the Saviour's head, and vanished ;
 While from the chanting choir
 Marching in with stately tread,
 Rolled to the sculptured roof above,
 The De Profundis: the echoes ringing back the words
 Like angel voices,—
 "Out of the depths have I called unto thee.
 O Lord, hear my voice!"
 The singers ceased their melody,
 The chimes rung bright and free,
 While the soul of the child
 In his Saviour's arms,
 Had gained eternal rest.

—F. E. DE L.

THE NEW COMMANDANT.

First Lieutenant W. M. Wright of the Second Infantry has been appointed Professor of Military Science here for the ensuing four years. Lieut. Wright is a man of soldierly bearing and has already won the confidence and respect of the cadets under his charge.

We take pleasure in publishing a brief summary of the Lieutenant's military career:

His appointment to the Military Academy was received while at Yale College. He entered West Point June, 1882 and resigned January, 1883. Appointed 2d Lieut. 2d U. S. Infantry, January 19, 1885, and joined at Columbus Barracks, Ohio, early in February of that year. Left Columbus for Vancouver Barracks, Washington, in May and served at Fort Sherman, Idaho, Fort Spokane, Washington, and at Lake Chelan, Foster Creek and Osoyoos, W. T. Took station at Fort Omaha, Neb., in 1887 and remained orderly there until August, 1888. From there was ordered to the U. S. Infantry and Cavalry School at Fort Leavenworth, Kansas, graduating in June, 1891. Returned to Fort Omaha in fall of '91 and was made Regimental Adjutant in May, 1892. Tour as Adjutant expired in May, 1896, and was there on leave until ordered as Professor of Military Science and Tactics at Mass. Agricultural College in August, 1896.

"Did you ever," said the fair young thing,
 As they gazed at the starlit heavens;
 "Did you ever stand on a rocky bluff?—" "You're right,"
 Said he, "I have stood on a pair of sevens."—*Bowdoin Orient.*

NINETY FOUR REUNION.

The first reunion of the class of ninety-four was held on Tuesday evening, June 15th, in Pacific hall. The class was well represented by about half its members. It was greatly regretted that the time of the reunion should have conflicted with that of the Senior promenade, but the committee was unable to make any different arrangement. After the banquet, toasts were responded to by several members of the class and letters read from others who were unable to be present. Informal speaking by each of those present followed the toasts. C. F. Walker acted as toastmaster. All necessary business was transacted, including the formal award of the class cup to Chas. P. Lounsbury, in consideration of his son, James Anderson, and the election of the next reunion committee. C. F. Walker was re-elected secretary. Barr of Northampton catered.

College Notes.

—G. F. Keenan '99 will not return to college this year.

—You haven't paid your reading room tax, yet; there are others.

—The AGGIE LIFE board was photographed at Northampton last week by Schillare.

—We see "Gold Bugs" and "Gold Hats" but where are the signs of "Free Silver" advocates?

—H. F. Allen '97 is mail-carrier for the term, and J. W. Allen '97 is bell-ringer for the year.

—Lieut. W. M. Wright, 2d Infantry, has entered upon his new duties as Commandant of the M. A. C. cadets.

—W. E. Hinds '99 is assistant to J. L. Bartlett '97, who has charge of the work of the Meteorological department conducted in the top of the tower.

—On Friday evening, Sept. 11, the Y. M. C. A. tendered its annual reception to the entering class. Quite a good number were present and a pleasant time was participated in by all.

—Prof. S. T. Maynard attended a meeting of the Massachusetts Fruit Growers' Association at Concord, Mass., Sept. 11. Nearly 100 members were present, and a very enjoyable time was reported.

—Subscribe for AGGIE LIFE.

—We have the promise of a sidewalk across the ravine bridge that leads to the boarding-house. We hope we may not be disappointed, though we are aware of the fact, that "Good things come slow."

—The entire stock of Allen Bros. was sold at auction, Thursday and Friday evenings, Sept. 3 and 4, John Marshall Barry, college auctioneer, officiating. There will probably be no emporium in college this year.

—At a meeting of the directors of the Reading-room association held Monday, Sept. 14, the following officers were elected for the term: Pres., L. F. Clark '97; vice-pres., C. F. Palmer '97; sec. and treas., J. S. Eaton '98.

—The work on the laboratory of the Hatch Experiment Station is progressing rapidly, and the extensive addition will probably be sufficiently completed as to allow of its being used early this winter. This addition will greatly facilitate the work of the station.

—Prof. Cooley has moved into the house occupied of late by Prof. Brooks, and will take charge of the work of the latter during his absence abroad. Prof. Brooks has become settled at Halle, Germany, and has joined the famous agricultural school of that place. Germany is noted all over the world for its agricultural organizations.

—The Junior class has elected the following officers for the ensuing term: Pres., J. P. Nickerson; vice-pres., J. S. Eaton; sec. and treas., G. H. Wright; class captain, R. D. Warden; reading-room director, J. S. Eaton; historian, W. S. Fisher; baseball captain, J. S. Eaton; foot-ball captain, C. G. Clark; tennis director, J. S. Eaton.

—The officers of the boarding club are as follows: Pres. and manager, R. D. Warden '98; vice-pres't, J. L. Bartlett '97; sec. and treas., J. P. Nickerson '98; other directors, C. A. Peters '97, M. H. Pingree '99, F. H. Turner '99; J. C. Burrington. Messrs. Bartlett, Pingree and Peters are to serve as an auditing committee.

—Bulletin No. 41 of the Hatch Experiment Station of the Massachusetts Agricultural College consists of an interesting report upon the use of Tuberculin. This article is a monograph written by Prof. Bang of

Copenhagen, Denmark, and translated by Prof. Wellington of the Mass. Agri. College. The subject is "The Application of Tuberculin in The Suppression of Bovine Tuberculosis."

—Officers of the Freshman class are as follows: Pres., A. L. March; vice-pres., C. A. Crowell, Jr.; sec. and treas., W. R. Crowell; foot ball capt., A. D. Gile; hist., C. A. Crowell, Jr.; base ball capt., F. G. Stanley; base ball dir., F. G. Stanley; foot ball mang., W. R. Crowell; polo capt., J. W. Kellogg; reading-room dir., H. Baker; athletic dir., W. R. Crowell; tennis dir., W. B. Rogers.

—Last year Latin was found to be the "bug-bear" to the entering class, and it was thought best to drop it from the examinations. This year the Mathematical department has put a high check on the entering class and consequently many have been found "deficient in mathematics." and so were either obliged to return home, or allowed to enter with conditions. Which is the lesser evil?

—At a mass meeting of the college held in the chapel Friday evening, Sept. 4, the reports from the various associations were given and accepted. Discussion concerning the college pin followed. It was agreed that the pin was satisfactory as a permanent thing, and notice was given that G. H. Wright, '98 would take orders for them. Students and alumni who wish pins can procure them from Mr. Wright.

—The repairing of the cold storage at the Plant House has but recently been completed, and the room is in much better condition to serve the purpose for which it was built. The walls of the room, which were originally of wood, have been torn down and rebuilt with brick, thus making the room less subject to the change of the outside temperature, and the fruit is better protected from the ravages of rats, mice and so forth.

—Last Thursday a Fire Drill took the place of the regular drill. Company A took charge of the hose-cart, Company B of the ladders, and Company C of the fire-buckets. The hose was laid and used only to prove that a new line would be necessary for efficient service, and the ladders and buckets were sadly in need of repair. All necessary repairs will be made as soon as possible, so that in case of fire the students will have proper implements for its extinction.

—The U. S. department of Agriculture has recently begun the work of making a catalogue of the Agricultural works which are found in the libraries of all the Agricultural colleges in the Union. The first college that is to contribute to this catalogue is the M. A. C., and President Goodell is at present quite busily engaged in this work. Our library is one of the best of its kind to be found at a like institution in the United States, and there are probably none better.

—The following are the officers of the Senior class: Pres., G. D. Leavens; vice-pres., J. A. Emrich; treas., P. H. Smith; sec., L. F. Clark; class captain, J. L. Bartlett; base ball directors, L. L. Cheney, J. A. Emrich; foot ball directors, J. W. Allen, H. F. Allen; tennis directors, G. A. Drew, J. A. Emrich; athletic directors, H. J. Armstrong, C. A. Peters; reading-room directors, L. F. Clark, C. F. Palmer; polo-directors, J. A. Emrich, L. L. Cheney; polo captain, J. A. Emrich.

—The Sophomore class has elected the following officers for the term: Pres., W. H. Armstrong; vice-pres., M. H. Pingree; sec., S. E. Smith; treas., W. E. Hinds; class captain, F. H. Turner; sergeant-at-arms, M. H. Pingree; historian, E. M. Wright; foot ball director, F. H. Turner; foot ball captain, D. A. Beaman; foot ball manager, W. A. Hooker; rope-pull captain, M. H. Pingree; tennis director, C. M. Walker; reading room director, H. S. Courtney; athletic director, J. R. Dutcher.

Following is a list of the men that have joined the college societies since college opened: *Phi Sigma Kappa, graduate*, R. H. Smith, '92; *undergraduates*, C. A. Crowell, Jr., W. R. Crowell, J. W. Kellogg, J. Lewis, A. L. March, A. W. Morrill, G. F. Parmenter, C. E. Risley, A. M. West, H. L. Crane; *College Shakespearean Club*, H. W. Dana, H. Baker, A. A. Harmon, E. T. Hull, M. H. Munson, A. Monahan; *D. G. K.*, J. E. Halligan, J. M. Ovalle, A. Saunders; *Q. T. V.*, W. B. Rogers, F. G. Stanley.

Professors Paige, Stone and Babson have returned from abroad, and have resumed the work in their respective departments. Prof. Paige has been abroad for the past year making scientific investigations concerning Veterinary Science, his position being filled during his absence by Prof. Lehnert, who is now practicing in South Framingham. Prof. Stone

has been studying the fungi connected with the business of grape growing, and Prof. Babson has been making a tour for the purpose of instruction and recreation.

—About nine o'clock Monday evening, Sept. 14th, when the college dormitories were beginning to assume their nightly quietness, there was noticed out East on Mt. Pleasant, a large bright blaze. Scarcely had the great tongues of fire began shooting up into the sky when an alarm was rung in down town, and soon the Fire Department was seen hurrying to the scene of the fire. The M. A. C. Chapel bell was rung and in a short time the college hose-cart was also on the road. The fire proved to be a huge brush fire, set by unknown parties.

—Now that the reading room has been fixed up, and filled with standard newspapers, magazines and college publications, let each man in college feel it a duty and a pleasure to help keep it in the best possible condition. Of late years it has been the practice of some of the students to clip from the periodicals, and carry off magazines with no evident intention of returning them. The directors have been considering the advisability of putting more chairs in the room, and it has been decided that if any person is found damaging or mutilating the papers that the name of such person will become subject to some form of exposure, but we sincerely hope no such cases will be brought to attention.

—The Woman's Congress will hold meetings at Boston, Mass., during October and a part of November. The first week will be devoted to discussions upon Agricultural subjects. There will be in attendance many prominent men and women about the country, who will contribute to the programme many interesting subjects. Among those who are expected to be present and speak are; the Secretary and Assistant Secretary of Agriculture, Committee on Education, Director of Experiment Stations at Washington, Dr. Atwater of Wesleyan and Pres. Goodell. Dr. Atwater will speak upon the subject of *Foods*, and the other speakers will have subjects relating to colleges. Pres't Goodell's subject is, "The Agricultural Colleges and their Aims." These meetings will be very interesting as are all of the meetings of *The Woman's Congress*.

Notes and Comments.

Li Hung Chang the leading Chinese statesman of to-day and by far the most progressive among his countrymen has just terminated a brief visit to the United States. Although he came in the guise of a private tourist, he was received by the president of the United States and other leading citizens as the representative of a great and important empire. During his stay his interest in the financial and educational problems of the country was most evident, and it is hoped, that together with his knowledge gained of German and English institutions and methods, he will also add some useful facts gleaned from his observations of America and American advancement. In the near future we may look for the fruits of his journey by more cordial relations and better trade facilities between the Chinese Empire and the Christian world.

* * *

It reads almost like an incredible story that there are 50000 children in New York City who cannot gain admission to the school-room owing to the fact of an insufficiency or lack of school houses. Such a condition of affairs deserves the serious attention that is devoted to other and less worthy subjects. The problem of good citizenship of the future will be solved largely by the gifts of Christian education.

* * *

The prominence in state and national campaigns this fall of college graduates as successful nominees for office calls down the time worn adage of "horned cattle versus the farmer." Even the worthy Horace Greeley might have good reason with the array of college bred lights before him to doubt the verity of his own assertion.

* * *

The rumored alliance between Italy and England for the correction of the Turkish abuses in Armenia, savors of a better spirit than the past two years of seeming indifference. London newspapers offer suggestive hints in carefully worded editorials of what might be achieved by the union of England and

United States on this question. The United States has not waited to be reminded of the days of humanity by her Anglo Saxon relation. Sympathy in our country for suffering Armenia has been both timely and tangible. However the present situation in Turkey presents a possibility in the near future of a radical change in the government and this means, if indications can be credited, justice toward the Armenians.

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In one of our weeklies it has been rumored that a prominent scientist of New York has discovered the element argentrūm which has for a long time been predicted by the periodic system. Its properties are found intermediate between gold and silver and the metal was discovered by treating silver in such a way as to form an heretofore unknown aggregation. This fact is very interesting to the scientific world and if we can believe the author, we may soon have a method for making gold.

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It is said that Kaffir corn is rapidly displacing Indian corn in Western Kansas. It is valuable both for forage and grain. Its success in Asia Minor and in Africa led to its introduction into this country in 1891. The new corn has demonstrated its superior qualities. Last year 184,198 acres were grown, valued at over a million and a half dollars. If it will grow in arid regions where Indian corn fails, or is liable to fail, it will bring prosperity where of late years there have been discouragement and suffering.

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It is said that Prof. Lewis Collins, secretary of the Tree Planting and Fountain Society of Brooklyn, has discovered an insect whose sole visible occupation is the destruction of the tussock moth, the caterpillar of which is so destructive to the shade-trees of parks and cities. This parasite fly works on the chrysalis of the moth when the latter is wrapped in its cocoon, making ready to hatch out as a caterpillar. If this is true such a fly will be welcomed.

The teacher asked, "And what is space?"

The trembling student said:

"I cannot tell at present,

But I have it in my head."

—Ex.

THE Y. M. C. A. RECEPTION.

The annual reception of the College Young Men's Christian Association to the members of the freshman class was held in Stone chapel, Friday evening, Sept. 11. The committee consisted of Armstrong '97, Fisher '98, and Turner '99. All students of the College, the faculty and alumni were invited, and a large proportion of the student body was present. Refreshments were served as usual and the occasion was one of pleasure to all. Much taste was shown in the decorations of the chapel which were furnished by the Botanic department. The association wishes to extend its thanks to the members of the faculty, the ladies and all others who assisted in making it a success.

LIBRARY NOTES.

Memoirs of Robert E. Lee, His Military and Personal History. By A. L. Long. Mr. Long served on General Lee's personal staff during one of the most critical periods of the war and was an eye witness to many of his most important campaigns. This book begins with a short history of the Lee family, then follows the movements of Robert Edward Lee through his early life and his service in the Mexican war in which he gave evidence of the noble character and the wonderful powers of leadership which made him one of the foremost generals in the Civil war. Many of his letters are printed and among these is a touching one addressed to his son who at that time was a student in Harvard. The book was presented by Herbert S. Carruth '75.

Greenland Icefields and Life in the North Atlantic. By G. Frederick Wright D.D., LL. D., F. G. S. A. and Warren Upham A. M., F. G. S. A. This is one of the best books published on Greenland and life in the Arctic regions. The causes and conditions of the Ice Age are also treated in an interesting manner.

International Bimetallism. By Francis A. Walker, Ph. D. LL. D. Everyone is concerned and interested in the great political question of the day. Shall the currency of the United States be based on gold and silver or on gold alone? During the last academic term Dr. Walker delivered a course of lectures before the fellows of Harvard University upon bimetallism. He treats the subject from the international

standpoint, giving also the history of bimetalism in other countries. These lectures he has collected into this book which is worthy of careful perusal.

The Silver Situation in the United States. By F. W. Taussig LD B., Ph. D Although entitled "The Silver Situation," this is really an argument for the golden side of the question. This is the third edition which is revised and enlarged to bring it up to date.

McCleary on Silver and Gold, Wages and Prices. This is an extract from his speech in the House of Representatives. He touches upon many different phases of the financial question and sums it all up in favor of gold.

Cape of Good Hope. Department of Agriculture. Report of the Government Entomologist. Chas. P. Lounsbury. This is the first report of one of our alumni who has taken a prominent position under the English government. He is one of the sons of whom Aggie is proud.

Alumni.

The Alumni editor desires to thank all who have so kindly assisted that department by their news contributions.

'78.—Arthur A. Brigham, who was recently called to the chair of agriculture at the Rhode Island Agricultural College, entered upon his duties at the beginning of the present collegiate year. Prof. Brigham was for several years professor of agriculture at the Sapporo Agricultural College of Japan and has of late studied extensively in Germany.

82.—Charles S. Plumb, director of the Agricultural Experiment Station of Indiana, visited the College during July.

'82.—Dr. Winthrop E. Stone, vice-president of Purdue University, was in Amherst during a part of the summer. The U. S. Dept. of Agriculture has recently issued a bulletin written by Dr. Stone on *Dietary Studies*.

'86.—Dr. Winfield Ayres has removed to 112 West 94th Street, New York City.

'90.—F. J. Smith, formerly assistant in the College Laboratory, is now chemist for the State Board of Agriculture, Gypsy Moth Department.

'91.—Walter C. Paige, for two years secretary of the Y. M. C. A. of Salem, Ore., has entered upon his duties in a similar position at Henderson, Ky. Under Mr. Paige's direction, the Association at Salem greatly increased in membership, and broadened its scope of work.

'92.—R. H. Smith has joined the Phi Sigma Kappa Fraternity.

'92.—G. Everett Taylor, of George E. Taylor & Son, owners of Shinglebrook Stock Farm at Shelburne, Mass., won in an exhibition of stock at the Bay State Fair, a large number of premiums including seven first prizes.

'92.—Henry M. Thomson married at Amherst to Miss Della Augusta Gilbert on Friday, August 14, 1896.

'94.—C. H. Higgins, D. V. S., sailed September 8th on a steamer for Jamaica.

'94.—Address of T. F. Keith is No. 477 Main St., Fitchburg, Mass.

'94.—Louis M. Barker, Transitman on Revere Beach Relocation; Boston, Revere Beach and Lynn Railroad. Address, Box 117, Station R, Boston, Mass.

'94.—A. H. Cutter was appointed Supervisor of the Medical Department of the Boston City Hospital July 11. AGGIE LIFE extends to Mr. Cutter her best wishes.

'95.—F. C. Tobey, Professor of Mathematics and Science and Commandant of cadets at West Jersey Academy, Bridgeton, N. J.

'96.—B. K. Jones has charge of the feeding experiments at the Hatch Barn. Address, Amherst, Mass.

The address of all people employed by the Gypsy Moth Department is now No. 17 Russell Street, Malden, instead of Stanwood Hall.

The Junior wrote home to his father:

"Dear Dad:

It costs a great deal to live here;

Please send some more money." He

Soon got a check,

A check on his college career.

—Ex.

Exchanges.

TOO SLIPPERY A SUBJECT.

You must be on your good behavior this evening, George, for the minister is to take dinner with us," said a Hayattsville lady to her worser half, as he got home from his office in the city last Thursday, said the *Washington Star*.

"What have you for dinner?" queried the husband.

"Well, I know he is fond of fish, so I bought quite a string of small river fish, and several larger ones from the dam."

"I'm not much at doing the honors when we have a minister at the table," said George, "but I guess we can get through with it all right."

Half an hour later they were seated at the table and a blessing had been asked by the minister. A little nervously the head of the house began dishing out the vegetables, and, turning to the guest said:

"Will you have some of the little river fish, or would you prefer some of the dam big fish?"

The warning kick from under the table from his wife was unnecessary. He knew he had blundered and cold beads of perspiration started out on his forehead.

"I mean,"—trying to repair the error—"will you try some of the dam river fish or some of the big fish?"

Worse, and more of it! His daughter slyly pulled his coat tail to bring him to his senses.

"That is, would you like some of the river fish or some of the other dam fish?"

The deep carnation spreading over the good lady's face didn't mend matters a bit, and with a gasp he plunged once more.

"Ahem! Which of the dam fish do you prefer anyhow."—*Exchange*.

"For me one hope in life I trace,
A Senior said, 'Tis this:
That I may sometime find the place
Where ignorance is bliss."

—*Ex.*

The students of the University of California recently took a day off and themselves put the university grounds in order. About \$3000 was thus saved to the institution.—*Exchange*.

A Statiscian has learned that the annual aggregate circulation of the papers of the world is calculated to be 12,000,000,000 copies. To grasp any idea of this magnitude we may state that it would cover no fewer than 10,450 square miles of surface; that it is printed on 781,250 tons of paper, and further, that if the number (12,000,000,000) represented, instead of copies, seconds, it would take 333 years for them to elapse. In lieu of this arrangement, we might press and pile them vertically upward to gradually reach our highest mountains. Topping all these, and even the highest of the Alps would reach the magnificent altitude of 490, or, in round numbers 500 miles. Calculating that the average man spends five minutes reading his paper in the day (this is a very low estimate), we find that the people of the world altogether occupy time equivalent to 100,000 years reading the newspapers.—*Commercial*.

The Legislature of Virginia has enacted a law forbidding the sale of liquors to the students of the University of Virginia. The students are very indignant at what they consider a needless and insulting precaution.

Tom—"They want me to run in the coming games with Princeton."

Jack—"What in?"

Tom—"In the usual thing—running pants, jerseys etc."—*Ex.*

CUT IT SHORT.

When you write a merry jest,

Cut it short;

It will be too long at best—

Cut it short;

Life is brief and full of care;

Editors don't like to swear;

Treat your poem like your hair—

Cut it short.

You can ride a horse to water,

But you cannot make him drink;

You can "ride" your little "Pony,"

And you cannot make him think.

—*Ex.*

She was walking with my rival,

As they chanced to homeward roam,

It was from my garret window

I was seeing Nellie home.

—*Ex.*

ALUMNI ATTENTION!

All those who have not already obtained a copy of the '97 INDEX, had better order it at once, before the supply is exhausted. Price \$1.00. Address:

JOHN MARSHALL BARRY,
Business Manager, '97 Index,
Amherst, Mass.

'Tis wrong for any maid to be
Abroad at night, alone;
A chaperon she needs till she
Can call some chap 'er own.

—The Student Record.

The conscientious Freshmen work
To get their lessons tough.
The Juniors flunk, the Sophomores shirk,
The Seniors, ah! they bluff.

—Ex.

HINCKLY & PERRY,

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PIANO AND FURNITURE MOVING.

SPECIAL RATES.

Passenger to center,	10 cents.
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Barge leave Mansion House, Northampton, at 11 o'clock every Saturday night. Price 50 cts.



Walking's Too Slow



Who wants to spend half the day going
and coming! Let the swiftness of a



Stearns Wheel



—The Yellow Fellow—



save time for you. It is known as the fast, easy-
running, much-talked-about Stearns. It is the
lightest, strongest, speediest of them all. Beauti-
fully finished in orange, or black if you prefer it.



E. C. Stearns & Co., Makers, Syracuse, N. Y.
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R. R. TIME TABLE.

BOSTON & MAINE, SOUTHERN DIVISION.

Trains leave Amherst going East for Ware, Oakdale, South Sudbury and Boston at 6.09, 8.16, A. M., 2.31 P. M., Sundays 6.09 A. M.

Returning leave Boston at 8.45 A. M., 1.30, 4.00 P. M. Sundays 1.30 P. M.

For Worcester 6.09, 8.16 A. M., 2.31 P. M. Sundays at 6.09 A. M.

Returning leave Worcester at 9.15 A. M., 2.26, 4.58 P. M.

6.09 A. M. and 2.31 P. M. connect with Ware with north bound trains on the Ware River Branch of the B. & A. and the 6.09, 8.16 A. M., and 2.31 P. M. connect with south bound trains on the same road.

Trains leave Amherst going West to Northampton at 7.55, 10.20 A. M., 12.05, 1.15, 4.40, 5.14, 7.28, 8.40 P. M. Sundays, 10.45 A. M., 5.19, 8.30 P. M.

Returning leave Northampton at 5.55, 8.00, 8.50 A. M., 12.30, 2.15, 4.20, 6.00, 8.20 P. M. Sundays, 5.55, 10.20 A. M., 7.35 P. M.

Trains connecting with the Connecticut River R. R., going south leave Amherst at 7.55, 10.20, A. M., 12.05, 1.15, 4.40, 5.14, 7.30, 8.40 P. M. Sundays 10.45, A. M., 5.19, 8.30 P. M.

Trains connecting with Connecticut River R. R., going north leave Amherst at 10.20 A. M., 1.15, 7.30 H. M.

NEW LONDON NORTHERN.

Trains leave Amherst for New London, Palmer and the south at 6.44 A. M., 12.16, 5.57 P. M.

For Brattleboro and the north at 9.08, 11.50 A. M., 8.42 P. M.

Trains leave Palmer for Amherst and the north at 8.20, 11.00 A. M., 8.00 P. M.

Trains going south connect at Palmer with B. & A., trains for the east and west.

North bound trains connect with Fitchburg R. R. for the east and west.

NOTICES.

The President will be at his office at the Library from 2 to 4 P. M. every day except Saturday and Sunday.

The Treasurer will be at his office at the Botanic Museum from 4 to 5.30 P. M. on Wednesdays, and on Saturdays from 3 to 5-30 P. M.

The college library will be open for the drawing of books from 2 to 4 P. M. and from 6-30 to 8 P. M. every day in the week except Saturday and Sunday; on Saturday from 8 A. M. to 12 M., from 1 to 4 P. M. and from 6-30 to 8 P. M.; on Sunday from 12 to 3 P. M., for reference only.

Amherst College Library will be open from 8-45 A. M. to 6 P. M. and from 6-30 to 9-30 P. M. except Sundays and the Holidays. M. A. C. students may obtain the privilege of using this library by applying to Pres Goodell.

Mails are taken from the box in North College at 7-15 and 11 A. M. and 4 and 6-15 P. M.

The zoological museum will be open daily at 2-15 P. M. except Tuesdays and Sundays.

BILLIARD AND POOL PARLORS.



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John Parnell,

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Protect your ideas; they may bring you wealth. Write JOHN WEDDERBURN & CO., Patent Attorneys, Washington, D. C., for their \$1.80 prize offer and list of two hundred inventions wanted.

10 times out of 10

The New York Journal recently offered ten bicycles to the ten winners in a guessing contest, leaving the choice of machine to each.

ALL CHOSE

Columbia
Bicycles



Nine immediately, and one after he had looked at others. The Journal therefore bought TEN Columbias at \$100 each.

On even terms a Columbia will be chosen

TEN times out of TEN.

POPE MANUFACTURING CO.
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1896 Art Catalogue for two 2-cent stamps.
E. R. BENNETT, Agent.

AGGIE LIFE.

VOL. VII.

AMHERST, MASS., OCTOBER 7, 1896.

NO. 2

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AGGIE LIFE will be sent to all subscribers until its discontinuance is ordered and arrears paid.

CARPENTER & MOREHOUSE, PRINTERS.

Editorials.

THE editors desire to call the attention of the under-classmen to the competition for positions on the LIFE Board. The conditions of the contest were stated in the last issue, and they will be strictly adhered to. Wake up, Sophomores and Freshmen, and try to do something for your respective classes!

THE recent fire at Mount Holyoke College destroyed the main building of that institution. While the work of the college will be continued, such a loss cannot but prove a serious injury to the prosperity of Mt. Holyoke for some time to come. We feel sure that all the colleges in this vicinity sympathize with their neighbor in distress. Mt. Holyoke stands high among the American colleges for young women, and this misfor-

tune on the eve of their greatest prosperity is to us a matter of sincere regret.

WE wish to call the attention of the students to the excellence of our college library, for we feel that by many it is not appreciated. The library contains over 17,000 volumes, of which 3164 volumes concern agriculture. This agricultural library, if not *the* best, is certainly *one* of the best in the country; and it reflects great credit on our president, who is also the librarian, that this agricultural library of ours has been used as a standard by the authorities at Washington in purchasing books for the library of the U. S. Department of Agriculture. There are over 940 volumes on horticulture; and of titles (not volumes, for one title often includes several volumes) there are of Chemistry, 304, Botany, 762, Entomology, 491, Political Economy, 450, Electricity, 236, Mathematics and Physics, 219, and others in like proportion. The students here as a whole seem blind to the rich treasures in our library. It is time they realized its worth, for probably never again in their lives will they have at their command a library possessing the value of this,

IT is intended to publish in succeeding issues a series of articles concerning the Senior elective courses at this institution. We believe that those outside the college do not realize the valuable courses here offered; and it is hoped that these articles may be read by such people, and that an appreciation of the advantages to be obtained here will lead to larger entering classes. We bespeak the aid of the professors in charge of the various departments in this work.

NOTWITHSTANDING that the foot-ball directors had decided not to put a team in the field at Aggie this

year, it is now assured that we shall have one. An enthusiastic mass meeting was held Monday, Sept. 21, and it was decided that to let foot-ball drop this fall would be disastrous to the game at Aggie. Even if we do not have very many games, the practice will serve to develop the material in the under classes and assure us a good team another year. We have some very good material in college now and under the able coaching of Prof. Smith we feel sure that before the season is over we shall see some good games on the campus. Every one who can do so should come out so that there will always be enough men in the field to form two elevens. This not only makes it interesting, but it creates more rivalry for the positions. No one is at any time sure of a place, so that everybody has an opportunity to make the team at some time during the season. The Manager has arranged games with strong teams, and it now remains for those who do not play to give the team the support which they deserve, in order that Aggie may win her share of victories on the gridiron this fall.

THE ANCIENT AND MODERN.

The night was cold,
 Outside the wind shivered and roared
 The suffering mercury fell
 "Tis cold enough," the student said,
 "To freeze the fires of H—."

Then he shook down his fire and threw on coal.
 And fixed the dampers right,
 Then went to bed, was soon asleep,
 And slept till morning's light.

He leaped out of bed in his light attire,
 And hastily grabbed his clothes
 And made for the room where the stove was kept,
 Already nearly froze.

But in vain for warmth and comfort he sought,
 In vain he stormed about
 For the room was as cold as the polar seas
 And the blamed old fire was out.

The air was blue for a minute or two.
 His words I'll not repeat,
 But he's moved away from the faithless stoves
 To a room where he has steam heat.

Contributed.

ORATION ON "PATRIOTISM IN PEACE,"

BY H. J. ARMSTRONG, M. A. C., '97.

For one hundred and twenty years this nation has escaped all the dangers that have threatened it and to-day it stands as one of the foremost powers in the world. We, as citizens of this great nation, have much to be proud of, for, in spite of the momentous questions that now confront us, in spite of evils that already exist, we have in many things reached a higher degree of perfection than any other power.

The privileges that we enjoy to-day, and about which we think little, have been purchased at a great cost. No one can estimate what we owe to the perseverance, the fortitude, and the noble self-sacrifice of our fore-fathers.

In our past history there have been questions which could be settled only by war; questions that involved our independence or threatened to break asunder those ties that bind us together as one nation. When war came it found men of courage and men of action to grapple with its problems.

Such men were our ancestors. We love to read the history that is full of their deeds: we admire their bravery and courage, we praise their wisdom and foresight, we honor their memory. The spirit which they showed, we say, was patriotism, true patriotism.

There is an idea prevailing to-day that patriotism is a thing of the past, something that has been intimately connected with war and its kindred disturbances. Evidence of this is seen in the time-honored custom of public speaking on such holidays as the Fourth of July, Memorial Day, or Patriots Day. When these anniversaries recur it is the custom to have, among other celebrations, a meeting of the people in some public place, and there to listen to speeches and orations by prominent men on subjects pertaining to the heroes and wars of our beloved country. The speakers, for the most part, are men who have served their country in war and have been on many a battle field. It may be that their earnest words are emphasized by an empty sleeve or a scar which we can see as we hear them tell of the horrors of war, the heroism of their comrades, or the lingering death in southern prisons. What further proof of their patriotism do we

want when we have heard them tell of their love for the old flag and the trials and privations they have undergone that it might wave to-day over every state in the Union?

It sometimes happens, however, that it is not possible to secure a war veteran to speak to us on these public holidays. The persons who have the celebration in charge, (rather than not observe the occasion) engage some one else to speak. Too often the place is not filled as it should be. The speaker may be some political aspirant who was, perchance, a member of the "Home Guards" during the war or perhaps he paid a substitute to take his place at the front when the nation's life was in danger. But that does not trouble him now, for to-day he goes about as "Colonel So-and-so, of the late war." He knows little about war and still less about true patriotism, but nevertheless he holds forth on subjects relating to both. He tells of the "Glory of war" and entreats the younger generation to be ready to fight for their country as their fathers did, and thus to show their patriotism.

Besides giving a wrong idea of patriotism, such a speech is far from elevating to the minds of young people, who do not stop to think of the terrible consequences of war. But let us see what patriotism is. The dictionary definition of the word is "Love of country" and a patriot is "One who loves and defends his country."

There is no chance to-day for men to distinguish themselves by defending their country, no chance to become as famous as General Grant or Sherman or Hooker, no chance for men to give their lives for their native land. Is there, then, no way in which we may show our love of country? Yes, there is such a thing as patriotism in time of peace,—a patriotism that is just as real and of just as much importance as that which our fathers showed when they took up arms in their country's defence. The dangers which threaten our nation to-day call for men as brave and courageous as those who have given their lives for their country.

The patriotism which we ought to show to-day is not a new kind of patriotism: it has existed in time of war. Look back a quarter of a century to the time when our nation was engaged in civil strife. Was it the soldier in the army who was the most patriotic, the soldier who endured so many hardships, who

looked death in the face in so many hard-fought battles? It may be. But let us look at another side. Remember the President of the United States, the members of his cabinet, and many other civil officers who, in the midst of the chaos, in the midst of perplexing problems and wearisome cares, stood firm through it all! Their courage and perseverance and loyalty were put to the severest test. Surely, they too were patriotic.

Men who hold office to-day have the chance to display much of the same spirit that these men showed. There are times when men are called upon to uphold some principle that has stood the test of years, times when truth and honor must be preserved. Then it is that we may show our patriotism, and by our influence, by our vote, or by any other means in our power, do what we can to make our nation a nation where right prevails and truth and honor are respected. Let us, then be as ready to serve our country in peace as in war, to serve it with our talents instead of our lives, as ready to maintain peace and order as were our fathers,—this, surely, is patriotism, true American patriotism.

NINETY-NINE MOUNTAIN DAY.

"All out. Where's the barge? Where's 'Armie'? They're coming." These remarks were heard Friday, Sept. 25, just before the noisy sophomores in company with Dr. Stone, had started on their mountain trip.

The road lay through North Amherst, the City, Leverett, and at last ended in the elevated region of Shutesbury. Here the sophomores visited a country school and thoughtfully watched the little children of the wondering natives doing their little sums and lessons. They also visited some choice patches of fruit along the way (apple trees, melon patches, etc.)

At noon the students gathered round a large bonfire and roasted ears of corn, and smoked herring, told tales, and, in fact, thoroughly enjoyed themselves. From their camp fire could be seen the distant peaks of Greylock, Monadnock, Mt. Tom, and Warner, rendered more distinct by a fine field glass brought over from Germany by Dr. Stone.

The afternoon was spent in gathering botanical specimens and playing games of foot ball and base ball to the amusement of the inhabitants. The return trip was safely made and the class voted the doctor its hearty thanks for the day's pleasure. E. M. W.

MILITARY TRAINING IN COLLEGE.

An inspection of the institutions of the country where officers of the army are detailed as instructors in military science has developed some surprising defects in the system owing to the opposition presented by faculties in many instances to the introduction of a military course for the students.

Several officers have reported that they have experienced great difficulty in perfecting the corps and in applying the ethics of warfare, owing to hostility of the professors, and frequently their objection to allotting the necessary time for proper instruction. Secretary Lamont, in order to find out just what schools are not earnestly in favor of a military course, and which should not have the benefit of an army officer's instruction, has recently sent an inspector out, whose report is now before the department for action. This report indicates a situation which may call for the relief of a number of officers from institutions and a withdrawal of the privilege granted by the Government.

Major Sanger, who submits the report, expresses the opinion that the time has arrived in the history of military instruction when adequate remedies should be applied, or the rule of exclusion strictly enforced by the recall of officers. To stimulate college pride and competition, he proposes the idea of classification of all institutions to which officers have been or may hereafter be ordered. The classification suggested by him is:

First Class—All institutions, by whatever name, conducted on a strictly military basis, these to be known officially as military academies.

Second Class—All agricultural colleges.

Third, Fourth, and Fifth Classes—All other institutions.

He proposes the arrangement of an order of merit, as determined by the inspectors and the annual reports of the military professors, on the basis of the West Point Academy. Relative to the detailing of military professors, the recommendation is made that when application is received at the War Department from a college for an original detail of an army officer, the institution shall be visited by an inspector for the purpose of ascertaining its character and condition, number of students and facilities for instruction.

Speaking of organization and administration, the

report says that to insure instruction in infantry drill the battalion should have at least four companies, an adjutant, and sergeant-major. If there is a sufficient number of cadets a quartermaster, quartermaster-sergeant, and band may be added. Music of some sort is said to be indispensable, and can almost always be had with little effort. As far as practicable the administration of the battalion and companies should conform to the practice of the army. That is, the cadet officers and non-commissioned officers should be held responsible for instruction, discipline, and the care of the arms and accoutrements. Thus they would relieve the military instructor of many details of his duty.

Whatever the system enforced may be, it seems to be the general view of college professors that cadets who stand well in the military department are more attentive to their other duties than those who do not receive military instruction.—*N. Y. Sun.*

'99—1900 ROPE PULL.

On Wednesday afternoon Sept. 23, a goodly number of students gathered on the campus to witness the usual Sophomore—Freshman rope-pull. The Freshman team weighed about 100 lbs. more than the Sophomore team, while the latter winning the toss, had the choice of ground which was very slight.

After the usual delay the men on the team took their places and Prof. Lull acting as referee, evened up the rope and gave the order to "drop". The time agreed upon for the contest was two minutes. During the first few seconds the Sophomores, by a few well ordered "heaves" gained from their opponents over a foot of rope. Soon however weight began to tell and they gradually lost to the end. The Freshman were on the losing side until a few seconds before time was called when the final heaves brought them into well earned victory with a length of only 1 1-2 inches. Had the Sophomores received less advise from the excited spectators, and more space to handle themselves in, their chances of victory would probably have been better. The contest nevertheless proved to be exciting, and was undoubtedly the closest rope-pull ever seen on the AGGIE campus. Both teams did credit to their respective classes, as well as to themselves.

BATTALION ORGANIZATIONS.

Commandant, Lieut. W. M. Wright, U. S. Army.

COMMISSIONED STAFF.

Cadet 1st Lieutenant and Adjutant, G. D. Leavens.

Cadet 1st Lieutenant and Quartermaster, J. L. Bartlett.

Cadet 1st Lieutenant and Fire Marshal,
H. J. Armstrong.

NON-COMMISSIONED STAFF.

Cadet Sergeant-Major, A. Montgomery, Jr.

Cadet Quartermaster Sergeant, J. P. Nickerson.

Cadet Color Sergeant, J. S. Eaton.

COMPANIES.

Company A.

Cadet Captain, J. M. Barry.
 " 1st Lieutenant, C. I. Goessmann.
 " 2d " G. A. Drew.
 " 1st Sergeant, L. L. Cheney.
 " Sergeant, R. D. Warden.
 " " C. G. Clark.
 " Corporal, E. M. Wright.
 " " G. C. Hubbard.
 " Privates,

C. M. Adams,
 H. Baker,
 W. E. Chapin,
 H. S. Courtney,
 W. R. Crowell, Jr.,
 W. A. Dye,
 W. E. Hinds,
 W. A. Hooker,
 J. W. Kellogg,
 H. E. Maynard,
 A. W. Morrill,
 M. H. Pingree,
 W. B. Rogers,
 C. E. Stacy,
 H. A. Thompson.

Company B.

Cadet Captain, J. A. Emrich.
 " 1st Lieutenant, J. W. Allen.
 " 2d " H. F. Allen.
 " 1st Sergeant, C. F. Palmer.
 " Sergeant, W. S. Fisher.
 " " A. Adjemian.

" Corporal, D. A. Beaman.

" " A. A. Boutelle.

" Privates,
 H. R. Atkins,
 J. C. Burrington,
 C. D. Colburn,
 H. E. Crane,
 J. A. Davis,
 A. D. Gile,
 J. E. Halligan,
 J. M. Owallle,
 G. F. Parmenter,
 C. E. Risley,
 B. H. Smith,
 S. E. Smith,
 E. H. Sharpe,
 F. G. Stanley,
 E. B. Saunders,
 A. M. West.

Company C.

Cadet Captain, P. H. Smith.
 " 1st Lieutenant, C. A. Peters.
 " 2d " C. A. Norton.
 " 1st Sergeant, L. F. Clark.
 " Sergeant, G. H. Wright.
 " " C. N. Baxter.
 " Corporal, F. H. Turner.
 " " J. R. Dutcher.
 " Privates,

W. H. Armstrong,
 H. S. Ashley,
 Y. H. Canto,
 J. C. Chapman,
 H. W. Dana,
 A. A. Harmon,
 E. T. Hull,
 C. L. Humphrey,
 N. J. Hunting,
 M. B. Landers,
 J. Lewis,
 A. L. March,
 F. E. Merriman,
 A. Monahan,
 M. H. Munson,
 C. W. Smith,
 H. E. Walker.

Cadet Drummer, C. M. Walker.

College Notes.

- "Line up".
- What position are you playing for?
- Crehore '95 visited friends at college Sept. 20.
- C. M. Adams '00 has joined the Q. T. V. fraternity.
- C. F. Palmer '97 spent a few days at home last week.
- C. A. Peters '97 spent a part of last week at home.
- Get a Lincoln Fountain Pen. Allen takes orders for them.
- The Seniors have been learning flag signalling during the past week.
- New figures have appeared on the walks since the rope-pull was lost and won.
- First foot-ball game on the campus this afternoon. All out to cheer the team on to victory.
- For convenience of reference the organization of the battalion is printed in this issue in full.
- The class of 1900 went to Northampton Friday afternoon, Oct. 2, and were photographed by Schillare.
- The Senior Mathematical division has been having practical work in the raising of the road across the ravine.
- The Freshmen's uniforms have arrived and they now present a much more military appearance on drill than formerly.
- The Senior division in Agriculture in company with Prof. Cooley attended the Greenfield Fair Thursday, Sept. 24.
- The Press Club has organized with John Marshall Barry '97 for president, and C. A. Peters '97 for vice-president.
- The drill hour has been changed from 4.30 to 3.30 on Monday and Thursday in order to facilitate foot-ball practice.
- All college exercises were suspended Wednesday Sept. 30 in order that the students might attend the Hampshire Fair.
- Company B. having become proficient in Artillery Drill, is now drilling in the Bayonet exercises, while Co. A is now taking Artillery Drill.

—A. C. True, assistant Director of the Office of Exp. Stations at Washington, inspected the various departments of station work at M. A. C. Saturday Sept. 26.

—The members of the Senior divisions in Horticulture and Landscape Gardening acted as judges of fruit, vegetables and flowers at the Hampshire County Fair.

—The Dramatic Club has elected the following officers; Pres., C. I. Goessmann; vice-pres., C. A. Norton; sec., L. L. Cheney; bus. man., J. M. Barry; stage manager, G. D. Leavens.

—The following men have been elected to serve on the '99 Index Board: W. E. Hinds, M. H. Pingree, W. H. Armstrong, E. M. Wright, F. H. Turner, J. R. Dutcher, S. E. Smith, D. A. Beaman.

—The Freshmen, who since the beginning of the term, have been drilled in the *setting up exercises*, the *marchings* and the *steps*, have now drawn rifles and are being instructed in the *manual of arms*.

—The recent fire at Mount Holyoke College whereby it suffered the loss of its main building, was plainly visible from Aggie and was anxiously watched by those who had friends or relatives rooming in the building.

—At a recent meeting of the Whist Club the following officers were elected: Pres., J. M. Barry; vice-pres., J. A. Emrich; sec., J. W. Allen; treas., L. L. Cheney; directors, H. S. Courtney, J. R. Dutcher, E. H. Sharpe.

—The officers of the Democratic Club have been elected as follows: Pres., John M. Barry '97; vice-pres., P. H. Smith '97; sec., C. G. Clark '98; treas., C. A. Peters '97; directors, C. M. Adams '00: M. B. Landers '00.

—The Republican Club has organized and elected officers as follows; Pres. J. A. Emrich '97; vice-pres., G. A. Drew '97; sec., J. L. Bartlett '97; treas., A. Montgomery '98; directors, L. L. Cheney '97, G. H. Wright '98, J. A. Davis '99, G. F. Parmenter '00.

—John Marshall Barry '97 took a flying trip to Boston, Friday Sept. 25 for the purpose of attending the Democratic State Convention on Saturday Sept. 26 and incidentally, of hearing the speeches of Candidate Bryan on the common and in Music Hall.

—The money question is the greatest question of the day. Politicians and statesmen all over the country do nothing but talk on it; the newspapers are full of it. Some want gold, some want silver; but our Business Manager will take either, so walk right up and pay your AGGIE LIFE subscription in whichever coin you prefer. No time like the present.

—The Sophomores have accepted the challenge of the Freshmen to play foot-ball on the campus Wednesday afternoon, Sept. 14. Sophomores, you have good material in your class, and if you will get out and get in some good hard practice you may be able to redeem yourselves. In consideration of the rope-pull we believe you deserve this game.

—The Horticultural Dept. is making the experiment of shipping apples to Europe in half-barrel cases. These cases are built on the general plan of orange boxes but are of heavier material and greater strength. The apples are each one wrapped in tissue paper and carefully packed into the boxes. It is expected that this will prove a very profitable method of marketing fine fruit.

The following committees have been chosen by the Senior class for commencement: Photograph com., Goessmann, Bartlett, H. F. Allen; Cane com., Peters, Drew, Smith; Senior Prom com., Norton, Cheney, J. W. Allen; Cap and Gown com., Armstrong, Palmer, Clark; Cup com., Clark, Cheney, Bartlett; Class Day com., Armstrong, Emrich, Drew; Flower Bed com., Barry, Drew, Bartlett; Senior Supper com., Barry, Leavens, Goessmann, Peters, J. W. Allen; Printing Com., Peters, Smith, Armstrong; Music com., Emrich, Norton, Cheney.

—The candidates for the college eleven are practicing daily and under the efficient coaching of Prof. Smith and Lieut. Wright are rapidly improving in their work. Every one who has a suit should make it a point to be out to practice every day, as games will soon begin and much practice is yet needed before the team will be in good training. The presence of a second eleven on the field every day is a very important consideration in the working of a winning team and every one who even pretends to be a foot ball player should come out and do his part to help give the varsity good practice.

Notes and Comments.

The United States is about to add another university title to her record, for in the immediate future Princeton, which is now a college, will take upon herself the responsibilities of a University charter.

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A noticeable fact in the various line-ups of college and university elevens this year is the number of new men that are being trained. The majority of the colleges and universities of the country have in the past lost a greater portion of old time players and in order to fill vacancies new talent must be substituted. Yale and Princeton are noticeable for this fact while many of the smaller colleges have been obliged to put new and inexperienced elevens on the field.

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The *London Spectator* has been considering the bicycle as a social factor and declares the wheel has worked a revolution in country life. Dinners are losing their popularity and lunches are taking their place, as the full dress is a drawback for a bicycle rider. Formerly the country was quiet and secluded but the spread of the bicycles has made informal visits common, and people are more neighborly than before.

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Mr. Gordon, a nephew of the late General Gordon, presented Li Hung Chang when he was in London with a bull pup of irreproachable character and considerable value, just by way of keeping up a family friendship with the great Chinaman. In due time came the acknowledgement of the gift which wound up with these words, "While his excellency Li Hung Chang himself does not eat that sort of animal, the members of his suite found it excellent for breakfast." Poor dog!

* *
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The annual exhibition of plants and of flowers by the Massachusetts Horticultural Society at Horticultural Hall opened yesterday and closed to-night. There is no more beautiful display of the choicest and

fairest gems of nature and the floriculturist's art than this, in the whole year.

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Turkey owes \$750,000,000 to very influential citizens of various European nations. The size and the judicious distributions of this debt are considerations that must not be over looked in studying the long delay in the inevitable departure of Turkey from Europe.

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When an American plant for a locomotive factory is shipped to Russia it means a good deal. Russia is outgrowing any other European country and the new Czar is pushing its growth. The young man may turn out the greatest of Czars and under him it is easily possible that Russia may build thrice as many miles of railroad as it ever built in its history before him.

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Statistics recently collected by a well known trade journal exhibit in a very striking way the parallel growth of the United States and the leading countries of Europe in trade and population. Impressed by the magnitude of our own growth we believe for a time it was unique. But this theory is no longer tenable. Although this country has grown faster than any one of the eight leading countries of Europe, nearly all show great increases both in wealth and population. Taking the United States, Great Britain, France, Germany, Austria, Hungary, Italy, Belgium, Russia and Holland in a single group, they show an increase in population between 1860 and 1890 of over 180,000,000, of which 32,000,000 belong in the United States. This represents for us almost 100% of growth, and it is the highest percentage in the group, although Russia, with a lower percentage, shows a growth of 36,000,000, Germany increased over a third, Austria and Hungary over a fourth, Italy a fifth, Great Britain not quite a fourth, France remained almost stationary. The percentage increase for the entire group is fifty four and a fourth for population, and two twenty two for trade during the last four decades. Our own trade increase in that time is well above

the average, being from \$513,000,000 to \$1,600,000,000 or more than 200%, Russia surpassed this percentage. but still remained behind us in the total volume of trade, Germany's percentage of trade increased more than double that of England. It is hard to over-estimate the significance of such figures. They show a growth both in population and wealth that is without precedent in history.

LIBRARY NOTES.

An Illustrated Flora of the Northern United States, Canada, and the British Possessions, by Nathaniel Lord Britton Ph. D. and Hon. Addison Brown.

This work which will be published in three volumes is the first complete illustrated flora published in this country, and it describes and illustrates every species that is a native of Northern North America. In all, over four thousand species are considered. The illustrations are complete and good, showing the most characteristic parts of each species and also giving the scale on which the drawings are made. Everything is classified and arranged systematically so that by aid of the index which gives both the common English and the Latin names any species can be readily found. Altogether it is one of the best works yet published on the flora of this country.

With the Fathers, Studies in the United States, by John Bach McMaster: This is a collection of essays which the author has published from time to time in some of the leading papers and magazines of the country. Among the historical questions are: "The Framers and the Framing of the Constitution;" and: "The Struggle for Territory." Among the more recent questions are: "A Century's Struggle for Silver," "Is Sound Finance Possible under Popular Government?" and "The Monroe Doctrine." There are in all thirteen chapters each of which is very interesting and instructive.

The Monroe Doctrine. A Concise History of its Origin and growth, by George F. Tucker: In this book is given a complete history of the causes which led to President Monroe's famous declaration, and of many occasions on which its principles have been applied. It gives also some of the arguments against and in favor of it.

The Monroe Doctrine. By John E. Russell This is very short and was written by Mr. Russell for the New York Times in the Spring of 1895. Mr Russell looks upon this subject in a different way from most writers.

The Origin, Meaning, and Application of the Monroe Doctrine, by John Bach McMaster. This is the most recent book on this subject and is very interesting. All writers ascribe the origin of the ideas and principles laid down in the Monroe Doctrine to Mr. Canning who at that time held the office now held by Lord Salisbury.

Alumni.

'71.—S. H. Richmond, with Cutler Dade Co. (Perriæ Grant) Florida.

'74.—E. H. Libby, president of Lewiston Water Power Co. Address Lewiston, Idaho.

'76.—John Bellamy, book-keeper for H. H. Hunt, builder and contractor. Address Webster St., West Newton, Mass.

Ex-'77.—The address of Lieut. W. M. Dickinson is Columbus Barracks, Columbus, Ohio.

'82.—B. A. Kinney, superintendent Minneapolis Paper Box Co., Cor. 3rd St. and 5th Ave. North Minneapolis, Minn.

'82.—Dana E. Perkins, civil engineer and surveyor. Address No. 5 Elm St., Somerville, Mass.

'86.—C. F. W. Felt, chief engineer of the Gulf Colorado & Santa Fe Railway Company. Headquarters at Galveston, Texas.

'87.—C. H. Watson, represents the wool dep't at Philadelphia for Swift and Company, Chicago, Ill. Address No. 100 Chestnut St., Philadelphia, Pa.

'89.—A. L. Miles, student of dentistry. Address No. 11 Glenwood Ave., Cambridgeport, Mass.

'90.—D. W. Dickinson has been recently appointed an instructor at the Harvard Dental School.

'90.—J. S. Loring, wholesale and retail milk contractor, Worcester, Mass.

'90.—John Loring—Elizabeth Bragdon Schofield, married Monday, July twentieth, 1896.

'92.—Charles S. Graham, married at Lowell, Sept. 16, to Miss Annie Jane Blanchard.

'92.—William Fletcher has recently opened a milk route from Chelmsford into Lowell under the name of Fletcher and Fulton.

'92.—Cyrus M. Hubbard will travel the coming season for the Crocker Fertilizer and Chemical Company of Buffalo, N. Y.

'93.—F. H. Henderson, in the employ of French and Bryant, civil engineers, No. 334 Washington, St., Brookline, Mass. Residence 334 Cross St., Malden, Mass.

'93.—F. S. Hoyt, principal of High School at New Milford, Ct. Mr. Hoyt has three hundred pupils and five assistant teachers under his supervision.

'93.—H. F. Staples, graduated from the Cleveland University of medicine and surgery March 20, 1896. Mr. Staples is now doing well in Solon, Ohio. The Argus, a paper published at Cleveland speaks in the highest terms of Mr. Staples, referring to him as "One of the best men who was ever graduated from the University."

'94.—H. M. Fowler, engaged in hotel business. Address Mt. Wachusett, Mass. Home address South Gardner, Mass.

'94.—Ira Chas. Greene, to be married at Fitchburg to Miss Theresa Wilhelmine Foster, Wednesday evening, Oct. 7.

Ex-'94.—F. W. Park has recently opened a supply station for "Park's Chelmsford Cream" at Chelmsford, Mass.

'94.—T. F. Keith has been appointed manager of the registration and naturalization affairs of the Fitchburg Republican City committee, for the ensuing campaign. After Nov. 1, he will be employed as chemist by the Spring Water Bottling Co., 477-479 Main St., Fitchburg, Mass.

Ex-'94.—H. J. Mann has returned from Oregon where he has been engaged in the fruit growing business since leaving College. He is now with the Boston Rubber Shoe Co, at Malden, Mass.

'95.—George A. Billings for the past year assistant in the department of Foods and Feeding of the Hatch experiment station, has taken a position in the Walker Gordon Milk Laboratory, Clardon St., Boston.

'95.—Address of H. D. Hemenway is Williamsville, Mass.

Ex-'95.—E. H. Henderson in the employ of the Metropolitan Park commission, engineering dep't. Address No. 344 Cross St., Malden, Mass.

Ex-'95.—Guy A. Hubbard has entered the employ of the Waltham Watch Co. and is a valuable addition to their celebrated military band.

'96.—A. B. Cook, farmer. Address Petersham, Mass.

'96.—H. T. Edwards with R. E. Edwards, Northampton.

'96.—A. M. Kramer, ass't cement inspector, dam and aqueduct dep't, Metropolitan Water Works, Address No. 9 Spruce St., Clinton, Mass.

'96.—J. L. Marshall. Address Lancaster, Mass.

'96.—H. W. Moore engaged in market-gardening. Address No. 25 Amherst St., Worcester, Mass.

'96.—C. A. Nutting, farmer. Address No. Leominster, Mass.

'96.—W. L. Pentecost, ass't agriculturist, Storrs Agr'l exp't. station. Address Mansfield, Conn., P. O. Storrs.

'96.—F. H. Read, teacher of book-keeping, penmanship, shorthand and typewriting at the Lyndon Institute and Commercial College, Lyndon, Vt. We quote the following from the *Lyndonville Journal*. "The Institute Commercial Department.—Mr. Fred H. Read, the new principal of the commercial department of Lyndon Institute, like the other new teachers, proves himself well qualified for the position he occupies, and will give his classes excellent work in his particular lines. He is not only proficient in ordinary business teaching, but his work also includes typewriting and shorthand."

'96.—H. H. Roper, agent for the Boston Co-operative Buyers' Association. Address East Hubbardston, Mass.

'96.—F. B. Shaw, farmer. Address So. Amherst, Mass.

'96.—N. Shultis, with Mark Shultis, shipper of grain. Address Chamber of Commerce, Boston, Mass.

Oh, talk not of the students' joy
The rapture in his look expressed;
His truest bliss is when he finds
A quarter in his cast off vest.

—Ex.

Exchanges.

A MODERN MARTYRDOM.

The Weverwend Awthur Murway Gween,

They say is verway clevah:
And sister Wuth could heah him pweach,
Fohevah and fohevah.

And I went down to hear him pweach,
With Wuth and my Annette,
Upon the bwave, hewoic deaths
The ancient mawtahs met:

And as he wepwesented them,
In all their acts and feachaws,
The ancient mawtahs, dontcherknow?
Were doocid clevah cweachaws.

But, aw deah me! They don't compah
In twue heroic bwawewy,
To a bwave hewo fwiend of mine,
Young Montmowenci Averwy.

He earned foah dollahs everwy week,
And not anothah coppah;
But this bwave soul wesolved to dwell
Pwe-eminently pwoppah.

So this was all the food each day,
The bwave young creature had—
One glaws of milk, a cigawette,
Foah cwackers and some bwead,

He lived on foahteen cents a day,
And cherwished one gweat passion:
The pwecious pwoject of his soul,
Of being dwessed in fashion.

But when he'd earned a suit entiah,
To his supweme chagwin,
Just then did shawt-tailed coats go out,
And long-tailed coats come in.

But naught could bwreak his wigid will,
And now, I pway you, note,
That he gave up his glaws of milk
And bought a long-tailed coat.

But then the fashion changed once moah,
And bwought a gwievous plight:
It changed from twousers that are loose
To twousers that are tight.

Then his foah cwackers he gave up,
He just wenounced their use:
And changed to twousers that are tight,
From twousers that are loose.

And then the narrow-toed style shoes
To bwoad-toed changed instead,
Then he pwocured a bwoad-toed pair,
And gave up eating bwead.

HINCKLY & PERRY,
Barge to and from all Trains.

PIANO AND FURNITURE MOVING.

SPECIAL RATES.

Passenger to center,	10 cents.
Passenger to Aggie,	25 "
2 passengers to Aggie,	40 "
3 or more passengers to Aggie,	each, 15 "
Passenger and trunk,	25 "
Barge leave Mansion House, Northampton, at 11 o'clock every Saturday night. Price 50 cts.	

ALUMNI ATTENTION!

All those who have not already obtained a copy of the '97 INDEX, had better order it at once, before the supply is exhausted. Price \$1.00. Address:

JOHN MARSHALL BARRY,
Business Manager, '97 Index,
Amherst, Mass.

Just then the bwoad-bwimmed style of hat
To narwow bwims gave way ;
And so his twibulations gwew,
Incweasing everwy day.

But he pwocured a narwow bwim,
Of vewy stylish set :
But, bwave, bwave soul! he had to dwop
His pwecious cigawette.

But now when his whole suit confohmed
To fashion's wegulation,
For lack of cwackers, milk and bwead,
He perished of stahvation.

Thus in owah of victowy,
He passed on to his west—
I weally nevah saw a cawpse
So fashionably dwessed.

My teahs above his well dwessed clay
Feil like the spwingtime wains ;
My eyes had nevah wested on
Such pwoppah dwessed wemains.

The ancient mawtahs—they were gwand
And glowious in their day :
But this bwave Montmowenci was
As gweat and gwand as they.

—Sir Walter Foss.



Walking's Too Slow

Who wants to spend half the day going
and coming! Let the swiftness of a

Stearns Wheel

—The Yellow Fellow—

save time for you. It is known as the fast, easy-
running, much-talked-about Stearns. It is the
lightest, strongest, speediest of them all. Beauti-
fully finished in orange, or black if you prefer it.

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San Francisco, Cal. Toronto, Ont.



R. R. TIME TABLE.

BOSTON & MAINE, SOUTHERN DIVISION.

Trains leave Amherst going East for Ware, Oakdale, South Sudbury and Boston at 6.09, 8.16, A. M., 2.31 P. M., Sundays 6.09 A. M.

Returning leave Boston at 8.45 A. M., 1.30, 4.00 P. M. Sundays 1.30 P. M.

For Worcester 6.09, 8.16 A. M., 2.31 P. M. Sundays at 6.09 A. M.

Returning leave Worcester at 9.15 A. M., 2.26, 4.58 P. M.

6.09 A. M. and 2.31 P. M. connect at Ware with north bound trains on the Ware River Branch of the B. & A. and the 6.09, 8.16 A. M., and 2.31 P. M. connect with south bound trains on the same road.

Trains leave Amherst going West to Northampton, at 7.55, 10.20 A. M., 12.05, 1.15, 4.40, 5.14, 7.28, 8.40 P. M. Sundays 10.45 A. M., 5.19, 8.30 P. M.

Returning leave Northampton at 5.55, 8.00, 8.50 A. M., 12.30, 2.15, 4.20, 6.00, 8.20 P. M. Sundays, 5.55, 10.20 A. M., 7.35 P. M.

Trains connecting with the Connecticut River R. R. going south leave Amherst at 7.55, 10.20, A. M., 12.05, 1.15, 4.40, 5.14, 7.30, 8.40 P. M. Sundays 10.45, A. M., 5.19, 8.30 P. M.

Trains connecting with Connecticut River R. R., going north leave Amherst at 10.20 A. M., 1.15, 7.30 H. M.

NEW LONDON NORTHERN.

Trains leave Amherst for New London, Palmer and the south at 6.44 A. M., 12.16, 5.57 P. M.

For Brattleboro and the north at 9.03, 11.50 A. M., 8.42 P. M.

Trains leave Palmer for Amherst and the north at 8.20, 11.00 A. M., 8.00 P. M.

Trains going south connect at Palmer with B. & A., trains for the east and west.

North bound trains connect with Fitchburg R. R. for the east and west.

NOTICES.

The President will be at his office at the Library from 2 to 4 P. M. every day except Saturday and Sunday.

The Treasurer will be at his office at the Botanic Museum from 4 to 5.30 P. M. on Wednesdays, and on Saturdays from 3 to 5-30 P. M.

The college library will be open for the drawing of books from 2 to 4 P. M. and from 6-30 to 8 P. M. every day in the week except Saturday and Sunday; on Saturday from 8 A. M. to 12 M., from 1 to 4 P. M. and from 6-30 to 8 P. M.; on Sunday from 12 to 3 P. M., for reference only.

Amherst College Library will be open from 8-45 A. M. to 6 P. M. and from 6-30 to 9-30 P. M. except Sundays and the Holidays. M. A. C. students may obtain the privilege of using this library by applying to Pres Goodell.

Mails are taken from the box in North College at 7-15 and 11 A. M. and 4 and 6-15 P. M.

The zoological museum will be open daily at 2-15 P. M. except Tuesdays and Sundays.

BILLIARD AND POOL PARLORS.



THE BEST IN THE CITY.

John Parnell,

13, 15 & 17 PLEASANT ST., - - NORTHAMPTON, MASS.

WANTED—SEVERAL FAITHFUL MEN OR WOMEN TO travel for responsible established house in Massachusetts. Salary \$780, payable \$15 weekly and expenses. Position permanent. Reference. Enclose self-addressed stamped envelope. The National, Star Building, Chicago.

Wanted—An Idea Who can think of some simple thing to patent? Protect your ideas; they may bring you wealth. Write JOHN WEDDERBURN & CO., Patent Attorneys, Washington, D. C., for their \$1.00 prize offer and list of two hundred inventions wanted.

10 times out of 10

The New York Journal recently offered ten bicycles to the ten winners in a guessing contest, leaving the choice of machine to each.

ALL CHOSE

Columbia Bicycles



Nine immediately, and one after he had looked at others. The Journal therefore bought TEN Columbias at \$100 each.

On even terms a Columbia will be chosen

TEN times out of TEN.

POPE MANUFACTURING CO.
HARTFORD, CONN.

1896 Art Catalogue for two 2-cent stamps.

E. R. BENNETT, Agent.

AGGIE LIFE.

VOL. VII.

AMHERST, MASS., OCTOBER 21, 1896.

NO. 3

AGGIE LIFE.

Published Fortnightly by Students of the Mass. Agr'l College.

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Postage outside United States and Canada, 25c. extra.

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BOARD OF EDITORS.

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CLAYTON FRANKLIN PALMER, '97, College Notes.

CHARLES IGNATIUS GOESSMANN, '97, Notes and Comments.

JOHN ALBERT EMRICH, '97, Exchange.

RANDALL DUNCAN WARDEN, '98, Athletics.

GEORGE HENRY WRIGHT, '98, Alumni Notes.

WARREN ELMER HINDS, '99, Library Notes.

FREDERICK HARVEY TURNER, '99.

Students and Alumni are requested to contribute. Communications should be addressed, AGGIE LIFE, AMHERST, MASS.

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Editorials.

We would call the attention of the students to the work that has been done and is still being carried on by the Natural History Society. The courses of lectures have been both interesting and profitable, and it is hoped that those of this fall and winter may excel anything given here-to-fore. While these lectures are free to all the members of the college, every student in college should make application for membership in order that he may enjoy the full privileges of the association.

It ought not to be necessary to call attention to the fact that the papers and magazines in the reading room are placed there for the benefit of *all* the students and not for the purpose of enriching the scrap books and picture galleries of a few. The mutilation of the

periodicals in the reading room is selfish and disgraceful. The expenses of the reading room are borne by the student body, and so strongly is college sentiment opposed to such conduct that were the offenders detected we believe that they would be dealt within a very summary manner.

CONSIDERABLE inconvenience has been caused of late by the taking of the electric lamps from the halls and bath-rooms in the college buildings for use in private rooms. In the majority of cases the lamps have been taken to replace burned out lamps in the study rooms. As a consequence the hall-ways are frequently shrouded in darkness at the very time when light is most needed. Students desiring to replace burned out lamps can have their old lamps replaced by new ones free of cost by applying to Mr. Wallace, the college electrician. We believe that it is ignorance of this fact that has caused the trouble in the past, and trust that there will be no necessity for complaint in the future.

DURING the recent observation tour of the market-gardening and landscape gardening divisions of the senior class, there were noted several features of landscape art that may be well developed here on the college grounds. We especially refer to the treatment of such natural depressions as our so called "Ravine." In some instances such a feature is considered so important that artificial hollows have been made to satisfy the requirements of the artist. No such labor is necessary here, for the "Ravine" of itself is beautiful. In no one locality can be found such an abundance of wild flowers. From early spring when the anemone, bloodroot, and hepatica first come forth to the autumnal season of asters and golden rod the "Ravine" is of never ceasing interest to the botanist. Its sides are well wooded, and the clearing

out of the underbrush and the construction of a few walks would make it an extremely delightful place for both students and visitors. A series of artificial cascades and one or two rustic bridges are among the possibilities. Our grounds are already among the most beautiful in the state, and we may justly feel proud of them, yet we should not rest content until we feel sure that we have made the most of the natural resources at our command. The expense of such an undertaking would be but slight, and we trust that it may commend itself to the college authorities.

DURING the past summer the additions to the Zoological Museum have not been so numerous as heretofore. There has been a slight growth, but the truth of the matter is that the room is so crowded that it is almost impossible to arrange any more specimens in the allotted space. At the time of the burning of the "Old South" dormitory many of the specimens were injured and not a few disappeared. The room that the museum now occupies contains the remnants of the old collection together with the additions made since the time of the fire. Very recently a case for the large collection of shells has been built and there has also been added an Apteryx a valuable specimen of a species of birds now nearly extinct. Not until about three years ago was any attempt at arranging in a systematic manner begun, and it is owing to the earnest efforts and hard work of Professor Lull that the museum is to-day arranged so that a visitor, without the aid of a guide, is enabled to follow easily the orders from the lowest to the highest, and to find each order and its constituents properly named. The museum was never in such excellent condition as it is to-day. The room, however, is quite inadequate, and the collection certainly needs at least twice the present floor space. There is great need of a Museum Building, one that shall contain the Zoological, Agricultural, and Botanical collections. Such a building, equipped with laboratories for work in each of the departments mentioned would be of immeasurable benefit to the college, more than doubling its present facilities for work. We believe that nothing would contribute more to the prosperity of the college than the erection of such a building. May it not be long on the way!

Contributed.

THE SENIOR COURSE IN ENGLISH.

(The first of a series of articles on the Senior Electives.)

An elective in English has this year been added to those already offered to the Senior class in the Mass. Agricultural College. What objects are sought in the work in this elective? What methods of study are adopted that these objects may be secured?

In general the aim of the work in this elective is the same as that proposed in the English of the prescribed course. This seeks to give, first, such instruction as shall assist the student to clearer and more effective expression of thought by oral and written language; second, some familiarity with American and English literature, thereby helping him to secure that cultivation and discipline which such familiarity is well fitted to give. Clearer and more effective expressions of thought, an enlarged mental horizon with the development and cultivation that result from the contact of mind with mind, these objects the elective in English aims to secure.

What methods of study are adopted in securing these objects? Such methods as bring the mind of the student under the quickening influence of those master minds that are still educating the world.

The first two years of the prescribed course in English have given the student some knowledge of the principles and practice of rhetoric. During his Junior year he has been introduced to the study of English Literature; so that his choice of English as one of his Senior studies presupposes some knowledge and appreciation of literary work. This work is pursued in accordance with the following outline:

During the first term of Senior year attention is given to writers before the seventeenth century, chiefly to Chaucer, Bacon and Milton. Some work of the author in hand is studied in the class room, courses of reading bearing upon the period of literature under consideration are marked out, and essays upon subjects suggested by what is being studied are read in the class. The principles of literary criticism are discussed and the student is constantly encouraged to become acquainted with the author through his work.

The second term of the year is given to plays of Shakespeare. The text of the play is studied in the class room, and the student is put in the way of availing himself of the results of the researches of Shakespearean scholars. During the third term, writers of the eighteenth and nineteenth centuries are studied, the plan of this work being similar to that followed in the first and second terms.

Only a few writers, it is true, of the many who are worthy of his study, can receive the student's attention during one year; but if, learning to study according to a definite plan, he can also learn to appreciate what is valuable in literature, he has a never-failing resource that may bring satisfaction and pleasure after he has passed out from the work of college into the work of business or professional life. G. F. M.

THE CAREER OF NAPOLEON BONAPARTE.

In a small town on the island of Corsica, Napoleon Bonaparte was born on the 15th of August, 1769. His parents, though of good families, were poor, and of his childhood, history tells us little. The greater part of his education was obtained, first, from the military school at Brienne, and later from a Parisian school, both of which were under French management.

As a scholar, Napoleon was bright, ambitious and of an independent mind. Among his schoolmates, and even among his closest friends, he was characterized as reticent and morose. These traits are very plainly shown throughout his life. The boy, in his case, was truly father of the man.

From his early school-days, Napoleon exhibited a remarkable taste for all manner of military manoeuvres. He was especially fond of reading books upon military science, and never tired of tracing out upon the map the campaigns of Alexander, Xerxes, Hannibal and other great military commanders who had gone to their glory before him.

As a student at Paris, Napoleon gradually unfolded before the officers of that academy his military genius. As his special taste and natural ability became recognized, he was from time to time promoted. Was this mere boy as we may call him satisfied with these advancements? No, far from it: that was not his nature. Deep in his cold, hard heart, Napoleon had determined to make himself great. His ambitions

only increased with his years; and he believed as he conceitedly thought of his frequent promotions, that he saw before him a life of great accomplishments,—a crown of glory. To further his own interests, he was prepared to resort to fair means if possible; but unjust means if necessary. His aspirations, though in many ways they were not commendable, were indeed high.

After leaving Paris academy, Napoleon, having distinguished himself as a military officer, was transferred to the army where he continued to rise in rank. That he was aware of his ability as a commander, there is no doubt. After he had been in command of large bodies of troops for some little time, he was once ordered to take charge of a portion of the army of the West. This, he felt was too much; and in disappointment and anger he left the army, and was about to leave France, when he was fortunately persuaded by his friends to return. From this time on, everything went well, and Napoleon at the age of twenty-seven was put in command of the army of Italy. Now, there was more encouragement; and the youthful general at once earnestly set to work reorganizing the army, and drilling his soldiers in readiness for the proposed campaigns. Though he was very strict in his discipline, he was nevertheless a wise and far-seeing commander, and treated his men with much respect.

In receiving command of this army, Napoleon practically obtained control of all the French troops. He was a general who could not feel satisfied until he had defeated every army that was opposing him. His plan was to engage in battle with the armies of all the principal countries of Europe. After he had defeated the armies of one country, he would effect a treaty of peace, and pass on to the next. The countries thus brought into battle by the French were respectively, Italy, England, Germany, Austria, Spain and Russia. For about fifteen years, Napoleon continued these bloody campaigns, with a heart and conscience undisturbed. His financial condition was kept good by the money which he took from the countries over which he became victorious.

Napoleon's success was mainly due to two things; well planned campaigns, and the allegiance of his soldiers, who would follow him to the ends of the earth. This man thought of nothing as unconquerable, and thus to him everything seemed possible. The Alps

were in his path; did these wild rough mountains defeat his plans? No, he built a road over them by means of which he conducted one of the most brilliant campaigns that history has ever recorded. Each victory strengthened his ambition and courage,—each defeat, though he did not often suffer one, only served to provoke in him a spirit of greater determination and audacity. In all, this general fought over sixty battles, the most important of which were with England, Germany and Russia.

In the latter part of the year 1813, soon after Napoleon's return from Moscow, the armies of England, Germany and Russia having united, offered him an option of fighting a decisive battle, or signing a treaty of peace. Napoleon having every confidence in his armies, declined to make peace. He reasoned that these allies would not engage him in battle until late in the spring at the earliest, and he knew that by that time, he could easily unite his armies. The enemy however did not wait for spring to come, but crossed the Rhine in January, surprised Napoleon and before he could collect his scattered troops, he was defeated. On the 30th of March, Paris surrendered, and Napoleon was sentenced to an exiled life on the lonely island of Elba.

This was indeed a great discouragement. He who was about to reach forth his hand to receive the laurels for which he had been fighting since a boy, was now to be exiled from his country instead. He had built up the power of France by the blood that was shed by her sons, and now by one careless move she had lost it all. For over a dozen years, he had been recklessly giving away the lives of her noble young men, by the thousands and tens of thousands and what had she in return?

At Fountainebleau, Napoleon bade farewell to the citizens of France. Among those gathered about him, were thousands of his soldiers who had followed him through victory and defeat alike: there was scarcely one whose eyes were not moistened with tears of tenderest sympathy and sorrow.

Napoleon had not been at Elba long however, before his proud ambitions began to recover, and he determined if possible to return to France, collect his scattered army, and make another desperate effort to recover his lost throne. After a great deal of hardship and privation, Napoleon by the aid of a few

ricketty vessels reached France with about one thousand soldiers. His old soldiers were overjoyed to see their leader once more, and soon his handful of men were increased to a large army. Need you ask if the French soldiers had any confidence in this man, and did they respect him?

Napoleon now went to work reorganizing and drilling his armies, for a renewal of the campaign. Up to the eve of the battle of Waterloo, however only two or three battles were fought, none of which were of any special importance. On the evening of June 17th, 1814, Napoleon, having defeated the united forces of the Allies in the battle of Quatre Bras, went into camp intending to renew the fight on the following day. In the morning began the Battle of Waterloo, one of the most decisive battles the world has ever known. The French suffered a severe defeat, and Napoleon soon afterwards surrendered himself to the British who exiled him to St. Helena.

Many contend that Napoleon should have been re-enthroned; but the English, however, seem to have thought best to have him far away from his country, and where escape would be impossible.

Napoleon's life at St. Helena is anything but an agreeable study. Though some of his best friends were with him, yet how could he enjoy such a sudden change in his surroundings? As a rule the English people about him treated him well considering the circumstances, but his title of emperor was taken away from him, and he was made to greatly humble himself before them. Most of his time was spent in writing up commentaries on his own wars; and it was then, for the first time in his life that Napoleon found time for the study of religion. Disappointed, and broken-hearted the greatest general that ever lived, died on the 5th of May, 1821. He was buried beneath a weeping willow tree on the island; but St Helena was not to be his last resting place. He had written in his will that "he wished to repose along the banks of the Seine amidst the French people he loved" and England gave back to France her dead soldier

C. F. P.

THEY PERHAPS DID.

Blushing Youth, confused—"May I see the pleasure of having you home?" Girl, startled—"Yes, I don't know." And they twain are happy.—*Ex.*

THE SENIOR HORTICULTURE DIVISION TRIP.

Several members of the Senior horticultural division in company with Professor Maynard took the opportunity about a week ago to visit the places of prominent horticulturists and obtain an insight into the practical side of this vocation. The farm of Hittinger Bros. of Belmont was the first place visited and here every courtesy that could be asked for was shown them. In company with Mr. Hittinger several hours were spent looking over the different fruit orchards and forcing houses. One could not but be impressed at the magnitude of the work that these progressive people have successfully undertaken. The orchards of apples, pears and plums were of great extent, yet notwithstanding this every available space was utilized. Currant and gooseberry bushes were planted between every row of trees and as near together as cultivation would allow. The plan of work is close cultivation and liberal application of fertilizer. The forcing houses were mostly occupied with lettuce and in these houses Mr. Hittinger explained several ingenious devices which he himself had invented for ventilating and heating the houses.

The damping off fungus which has been very troublesome to many market gardeners was here successfully combatted by the liberal use of sand and care in watering. After the party had dined at the family mansion, Mr. Hittinger took them to see other prominent gardeners in that vicinity. Varnum Frost, an old authority and successful grower of fruits and vegetables, was seen and gave many valuable hints and suggestions.

On the morning of the second day the Arnold Arboretum near Forest Hills was visited. Here was afforded an excellent opportunity of seeing the original types of fruits of all descriptions and of realizing how much has been done in perfecting apparently useless forms of vegetation into delicious wholesome fruits. The party next visited Roger Williams Park at Providence, and enjoyed the chance of seeing one of the finest pieces of landscape gardening in the country. The system of artificial lakes has been admirably carried out and the slopes that border these waters have been so artistically arranged that the scenery is varied and pleasing while none of the natural features are destroyed. Large tracts of open

lawn over which sheep were grazing gave to the scenery a pleasing aspect.

The third day of the trip was spent in visiting the market gardening farm of Budlong & Son of Providence. Here also every courtesy was shown the party. This farm occupies over 800 acres on the outskirts of the city. Many different crops are grown and each covers a vast extent of territory. Over a hundred acres are devoted to growing cucumbers for pickles all of which are put up by the firm. They were shown the pickling process from beginning to end. The large establishment that this firm possesses for the manufacture of vinegar is complete in every respect. Here were shown the various chemical processes which take place in this manufacture from the raw material,—corn, coming to the final product—white wine vinegar. All by-products are carefully saved and utilized. Some idea of the magnitude of the farm can be obtained from the fact that in summer this firm employs 800 laborers and the pay roll exceeds \$6000 per week. So great is the extent of the glass structures that if placed end to end they would measure five miles in length. This large establishment shows, to how great an extent market gardening can be carried when managed on business principles. This was the last place visited, but it was the one that could least afford to be missed.

FOOTBALL.

AGGIE VS. NORTHAMPTON Y. M. C. A.

The first game of the season was lost by the home team by the close score of 10 to 6. Unquestionably Aggie is weak. Weak in defensive play, and none too strong in the offensive, although there was hardly a chance to judge of this latter as we so seldom gained possession of the ball. Undoubtedly this was owing to the great lack of experience of the players, not a single one we believe, with the exception of Burrington, having played regularly on the 'Varsity team. However, owing to the circumstances, the team did even better than could be expected. There is splendid material, and with thorough coaching and more experience, Aggie will surely do herself credit before the end of the season.

The game opened with a kick-off by Aggie. The ball was downed on Y. M. C. A's thirty-yard line,

from whence they slowly forced the ball up the field for a touch down, Aggie being unable to stop their short quick rushes. Eastman missed goal.

Aggie again kicked-off, downed the ball on the thirty-five yard line and held for four downs. Allen, Crowell and Davis were each making gains when, on a poor pass, the ball was fumbled and knocked across the goal line where Eaton fell upon it for a touch-down. Eaton kicked goal. Score 6 to 4 in Aggie's favor. Time was called shortly afterwards.

In the second half, Y. M. C. A. had the kick-off. Canto caught the ball passed it to Eaton who punted up the field fifty yards. It is owing probably to this play that Aggie lost the game; had she retained possession of the ball, considering the success she had had formerly, it would have been undoubtedly better for her to have taken the offensive than have opened herself again to the attack of her heavier opponents; however, Y. M. C. A. got possession of the ball and by incessant hammering at the tackles made a touch-down from which Eastman kicked goal. The linesman blew his whistle shortly afterwards and the game was over. The following was the line up.

Y. M. C. A.	M. A. C.
Bias, l. e.	r. e. Chapman
Brookrup, l. t.	r. t. Eaton
Kingsley, l. g.	r. g. Adams
Nute, c.	c. Parmenter
Parsons, r. g.	l. g. Stanley
Hallet, r. t.	l. t. Beaman
Martin, r. e.	l. e. Halligan
Knowlton, q. b.	q. b. Canto, Wright
Eastman, l. h. b.	r. h. b. Capt. Allen
Couch, r. h. b.	l. h. b. Davis, Burrington
Rogers, f. b.	f. b. Crowell

Score—Y. M. C. A. 10, M. A. C. 6. Touch-downs—Eastman 2, Eaton. Goals from touch-downs—Eaton, Eastman. Umpire—Steele. Referee—Smith. Time—15m halves.

AGGIE SOPHOMORES VS. FRESHMEN.

The intense rivalry between these two classes found a vent in an exciting foot-ball game last Wednesday. The freshmen since their success in the rope-pull have had an inordinate amount of self-conceit which deservedly met with a severe check before the game was over.

The freshmen had the heavier team, and had their captain been able to play or had they not been so confident there would here have been a different

story told. As it was, the team played stupidly, and showed a misunderstanding of the signals which was deplorable.

The Sophomores had a very much poorer team than last year, but by continually directing their plays at the Freshmen's weak spot they succeeded in making the only touch-down of the game.

The best playing for the Sophomores was done by Beaman, Canto and Chapman; for the Freshmen, by Stanley, who was found at the bottom of every leap with his arms securely around his man. Crowell, Halligan and Walker also played well. The summary was as follows:

SOPHOMORES.	FRESHMEN.
Sharp, l. e.	r. e. Rogers
Turner, l. t.	r. t. Monahan
W. H. Armstrong, l. g.	r. g. Risley
Dutcher, c.	c. Parmenter
Pingree, r. g.	l. g. Stanley
Chapin, r. t.	l. t. Saunders
Hubbard, r. e.	l. e. Walker
Canto, q. b.	q. b. March
Chapman, l. h. b.	r. h. b. Adams, (acting capt)
Beaman (capt) r. h. b.	l. h. b. Halligan
Davis, f. b.	f. b. Crowell

Score—Sophomores 6, Freshmen 0. Umpire—Warden '98. Referee—Emrich '97. Linesmen—Profs. Smith and Cooley. Time—two 15-minute halves.

College Notes.

—Rah, Rah, Rah! Rah! Rah!

—H. S. Courtney, '99, has left College.

—Aggie vs. Northampton Y. M. C. A. this P. M.

—The librarian has another assistant in the person of W. R. Crowell, '00.

—A. H. Kirkland, '94, visited the College a week ago Saturday on business.

—Joseph Shohan of Boston, a Russian, has applied for admission to the College.

—W. A. Eaton, '86, spent Sunday, Oct. 11th, with his brother, J. S. Eaton, '98.

—M. H. Pingree, '99, spent Sunday, Oct. 11th, with friends in Northampton.

—The members of the Ninety-eight *Index* board are busily at work preparing that College annual for publication.

—A hot water furnace is being put into the Experiment station which is in charge of Dr. Lindsey.

—A. D. Gile, '00, who was laid up awhile ago while practicing, has appeared upon the campus again, and is doing his usual good work,

—Messrs. Fisher, '98, and Munson, '00, spent Sunday, Oct. 11th, at their respective homes, Nickerson, '98, accompanying Fisher.

—W. E. Hinds, '99, had charge of the work of the Meteorological department conducted by J. L. Bartlett, '97, during the latter's absence a few days since.

—We are glad to see Professor Lull out on the campus again. His efficient coaching is very much appreciated as is that received from one or two other members of our faculty.

—Professor Wellington, who has been in New York for the past few weeks undergoing medical treatment, has not as yet returned. His classes are conducted during his absence by Professor Flint.

—The first foot ball game of the season was played on the campus Saturday afternoon, Oct. 10th, with the Northampton Y. M. C. A. Considering the number of new men on the Aggie team and the little practice they had had, we believe the team made a good showing. The score was 10-6 in favor of the visiting team.

—Some of the members of the Senior Horticultural division, in company with Professor Maynard, recently made a very profitable trip on which they visited the grounds of the prominent fruit growers of the Eastern part of the state, as well as those of Mr. Budlong of Providence, R. I. The Junior class has decided it advisable not to undertake the usual "Junior Trip" this year.

—The Sophomore football victory of October 14th, was grandly celebrated late in the evening by that class. The campus was brightly illumined with colored fire, and in the middle there was built a huge bonfire about which the class gave an informal "pow-wow," sung songs, and sent off fire-works. The additional din was made by firing blank cartridges, giving the class yell, and then for the second time in the brief history of this illustrious class, the time-honored mortars were disturbed from their rest and persuaded to contribute to this ceremonial proclamation of victory. The members retired early (in the morning.)

—The Reading Room Association respectfully requests that all text books, note books and other literature not belonging to the association be removed from the tables and shelves in the room, and asks that students will please not leave any more such in the room. If these requests are heeded, fewer books will be lost and the reading-room will be the better for it.

—It has been customary for several winters past to have classes in dancing composed of Aggie men only. The classes have been under the instruction of Mr. A. X. Petit, who is a most excellent teacher. Classes are now forming for the coming winter, and all who wish to avail themselves of this favorable opportunity should communicate at once with Mr. Petit.

—Awhile ago some of the students rooming in South College complained because that during a few cold days there was no heat to warm their rooms, which were really uncomfortable. Now, we are pretty well satisfied with the way our rooms are heated, except in the case of cold mornings, when little or no heat is on. Could we have just enough to take the chill out of our rooms we would appreciate it very much. "Don't delay the game."

—News was received here last Sunday of the sudden death of Joseph A. Harwood of Littleton, by a stroke of apoplexy, while on the way to the railway station. Mr. Harwood had for some time past been a loyal trustee of this College, and the absence of his face will recall to the memories of his many friends, and especially to those of the board of which he was a faithful member, the excellent character of he who has but recently left them. As a man of business, Mr. Harwood was thoroughly competent, and his death will be a loss, not only to the College, but to his native town of Littleton, of which he was ever a patriotic citizen.

—One of the best class games played here in a number of years was witnessed on the campus Wednesday afternoon, Oct. 14th, between the Freshman and Sophomore foot ball teams. The game was clean from beginning to end, and the Sophomores gained a deserved victory by gradual hard work and good playing, making the only touchdown of the game towards the end of the first half. During the last half

both teams did equally as well as in the first; the Sophomores made a strong bid for another touch-down but time was called with the ball in their possession on 1900's 30-yard line. The halves were 15 minutes, and the score was 6-0.

—In our last issue we published a correct account of the Sophomore Mountain Day of October 2nd, in which the class went to Shutesbury with Dr. Stone for the purpose of collecting botany specimens for which that locality is noted. A few days, after there appeared in the *Greenfield Gazette and Courier* an article concerning this affair which did no credit to the class. The actions of the class, which were nothing out of the usual custom, were basely misrepresented and aside from this, a few statements which may properly be termed lies, were also added. We mention this incident only to suggest that some of our Shutesbury friends come to town once in a few years at least, to inform themselves as to what is going on in the world.

—At a meeting of the Natural History Society held Friday evening, Oct. 16th, it was announced that the directors had arranged for a series of lectures to be delivered before the society, by professors and students; the first of which is to be given Friday evening, Oct. 23rd. The society's membership is very good and the names of about 40 more students have been proposed to be voted upon at the next meeting. The directors have taken up the work which falls to them in a very enthusiastic spirit, and all students who are wise enough to avail themselves of these free lectures will be well repaid. Freshmen, and all other students who have not joined the society have only to attend one of these lectures to convince themselves as to the importance of being enrolled on its membership list.

APPLIED MATHEMATICS.

"My daughter," and his voice was stern,
"You must set this matter right;
What time did the Sophomore leave,
Who sent in his card last night?"

"His work was pressing, father dear,
And his love for it was great;
He took his leave and went away
Before a quarter of eight."

Then a twinkle came to her bright blue eye,
And her dimple deeper grew.
"Tis surely no sin to tell him that,
For a quarter of eight is two."

—*Lehigh Burr.*

Notes and Comments.

At last something is to be done with the murderous Turk and the initiative step will be made by the American government. The United States practice ship, Bancroft, whose departure for European waters has been the subject of profound mystery, is to play this important part in the effort of the great European powers to bring about the settlement of the Turkish question. The little vessel is to force the Dardanelles with Minister Terrell standing on her deck and if any obstacles are placed in the way by the Turkish forts the Mediterranean fleet under Admiral Selfridge, now 150 miles away will come to her assistance. The British fleet will no doubt be near at hand to back up the American commander if occasion requires it. No permission has been asked of the "Sublime Porte" and no notice will be taken of its protests. The European powers are in sympathy and will support our government.

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The bitter competition in New York journalism in which millionaires are spending money lavishly has finally driven out the *New York Recorder* which has turned over its subscribers to the *New York Tribune*. This latter paper will supply them till their subscriptions run out and hopes to hold them much longer.

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At a recent mass meeting held by Amherst college students, M. H. Tyler, '97, resigned his duty as captain of the foot ball eleven. His resignation and change of captains so late in the season will seriously effect the team and it will be very difficult to find a man as able as he was in the discharging of his duty.

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At the California State University tents will be erected on the campus to accommodate the classes that have outgrown the regular rooms. There are 1475 students in the regular and special classes at Berkley and as the freshman class numbers 481 the mathematical, modern languages and many of the scientific departments are crowded.

It would seem that Yale does not desire to play the University of Penn. this fall for she refused to accept a challenge from the later. If such a game could be arranged an exciting struggle might ensue.

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The Food Exhibit in Mechanics building is a grand success. The chief characteristic of the fair is the vast number of dishes that are cooked and served free. For the price of admission one is able to procure a square meal.

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The present campaign has given rise to a large amount of poetry. It may not be strictly poetic but it is sometimes to the point. A sample of what a prohibition genius has composed reads thus :

"There is a little drinking house
That every one can close,
The door that leads into that house
Is just beneath your nose."

Not exactly poetic this, but physiologically correct.

* *
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Wellesley college has just received a magnificent donation of \$100,000 with which she will build a chapel building. When will Aggie get her donation?

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*

It has been the custom in Harvard to allot fellowships to students who actually need them. The university is very rich in prizes of this sort some of which are reserved by the terms of their foundation to impecunious students while many others are not so limited. It is stated in the *Sun* that hereafter these prizes will be thrown open to general competition. This innovation though doubtless it will apply to a part of the scholarships only is decidedly interesting and its results will be watched with attention. The good effects which may be expected from the change are that it will give an additional incentive to all students to work and that it will make all the scholarships better worth having to men that win them.

THE GOLDEN RULE.

"Do unto others as you would
That they should do to you—"
A golden rule, but hard as steel
Unless it's worked by *two*.

LIBRARY NOTES.

A Singular Life, by Elizabeth Stuart Phelps. This is a very popular book and will be greatly appreciated by the lovers of good fiction. It was presented by Mr. R. H. Smith, '92.

Beside the Bonny Brier Bush, by Ian Maciaren. This is another very popular novel for which we are indebted to Mr. Smith.

Little Rivers. A Book of Essays in Profitable Idleness, by Henry Van Dyke. This is a delightful book on nature and contains many very pleasing sketches of some of the most beautiful rivers in the world.

Talks on Writing English, by Arlo Bates. These talks were given in the autumn of 1894 as a course in Advanced English Composition in the Lowell Free Classes. The subject is treated thoroughly and the book should be very helpful to the amateur writer.

Men of Achievement, Inventors, by Philip G. Hubert, Jr. This book is one of the "Men of Achievement" series published by Chas. Scribners' Sons. It takes up the lives and works of such men as Franklin, Morse, Edison and others. Many of our greatest inventions have not been appreciated by the world till long after the hard-working, ingenious inventor has passed beyond the reach of its gratitude; then someone else steps in and reaps the reward of years of thought and experiment.

Edible and Poisonous Mushrooms. What to Eat and What to Avoid, by M. E. Cooke, M. A., LL. D. At the present time, many people are engaged in the study of this class of fungi and great interest is shown especially in the edible varieties. It is well-known that while many species of mushrooms are valuable as food, others are poisonous. Mr. Cooke's book is handsomely illustrated with eighteen colored plates showing forty species, many of which are edible.

Our Edible Toadstools and Mushrooms and How to Distinguish Them, by W. Hamilton Gibson. This is the finest work of its kind published in this country and takes up our own native varieties. Thirty edible species are described and illustrated by fine colored plates. In the back of the book are given many recipes for the cooking of mushrooms.

WANTED—SEVERAL FAITHFUL MEN OR WOMEN TO travel for responsible established house in Massachusetts. Salary \$780, payable \$15 weekly and expenses. Position permanent. Reference. Enclose self-addressed stamped envelope. The National, Star Building, Chicago.

Alumni.

'71.—S. W. Richmond, editor "Biscayne Bay," dealer in general merchandise, surveyor and draughtsman on the Perrine Grant at Cutler, Dade Co., Fla.

'74.—A. W. Dickinson given degree of B. Sc. in '96 to take effect with the class of '74.

'86—Winfield Ayres, physician, Asst. Demonstrator of Anatomy and asst. to the chair of Genito-urinary Surgery at Bellevue Hospital Med. Coll. Address No. 112 W. 94th St., New York City.

'89—The address of C. S. Crocker is No. 10 Maple St., Pawtucket, R. I.

'89.—R. P. Sellew, traveling agent for the Cleveland Linseed Oil Co. visited college last week.

'93.—The address of F. T. Harlow is Marshfield, Mass.

'93.—E. C. Howard, teacher, out of employment. Address Wilbraham, Mass.

'94.—The address of A. C. Curtis is No. 285 Cumberland St. Brooklyn, N.Y.

'94.—F. L. Green, Landscape Gardener. Address, Southampton, N. Y., P. O. Box. 266.

'94.—C. H. Higgins., Veterinary Surgeon. Address No. 26 Harbour St. Port Antonio, Jamaica.

'94.—S. F. Howard, student at Johns Hopkins University. Permanent Address, Wilbraham, Mass. Present address Johns Hopkins University Baltimore, Md.

'95.—G. A. Billings in the employ of the Walker-Gordon Co. No. 2008 Pine St. St. Louis, Mo.

'95.—H. S. Fairbanks, instructor in Mathematics and Physics in St. John's School. Address Sing Sing, N. Y.

'95.—A. F. Burgess, is in town for a short time engaged in special work for the Gypsy Moth Department.

'95.—W. L. Morse, Civil Engineer of the Old Colony R. R. System Office at Kneeland St. Station.

'96.—M.E. Sellew, Graduate student in Mechanical Engineering with Brown & Sharp M'n'f'g. Co., Providence, R. I. Address of Brown & Sharp's M'n'f'g. Co. Providence, R. I.

'96;—F. L. Clapp, in the employ of the Metropolitan Water Co. Address, No. 197 Boston St., So. Boston.

'96.—S. W. Fletcher, Asst. at the Horticultural Dept. of the Massachusetts Agricultural College. Address, Amherst, Mass.

Exchanges.

The Harvard Athletic Committee has appointed an instructor in baseball. All students who care to may learn the game.—*Ex.*

Wellesley College has abolished compulsory attendance at the college church, and has adopted a system of College preachers, like that at Harvard. This goes into effect this term.—*Ex.*

The minister, it was expected, would spend the evening with the family, and Mrs. Williams was most anxious that her little boy should appear at his best. "Now, Willie," she said, "Dr. Schultz will ask you your name, and you must tell him it is 'Willie.' And he will ask you how old you are, and then you must say: 'Five.' And he will want to know where bad little boys go, and you must tell him: 'They go to hell.' Do you understand? Not content with a repetition once or twice, Mrs. Williams drilled him again and again in the answers.

Dr. Schultz came as expected, and, after a short conversation with the hostess, lifted the child on his knee and said: Well, my little fellow, can you tell me your name?" Imagine the surprise of the reverend doctor when, like a flash came the answer; Willie. Five years old. Go to hell."

Wanted—An Idea Who can think of some simple thing to patent? Protect your ideas; they may bring you wealth. Write JOHN WEDDERBURN & CO., Patent Attorneys, Washington, D. C., for their \$1,500 prize offer and list of two hundred inventions wanted.

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Passenger to center,	10 cents.
Passenger to Aggie,	25 "
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Barge leave Mansion House, Northampton, at 11 o'clock every Saturday night. Price 50 cts.



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Who wants to spend half the day going and coming! Let the swiftness of a

Stearns Wheel

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save time for you. It is known as the fast, easy-running, much-talked-about Stearns. It is the lightest, strongest, speediest of them all. Beautifully finished in orange, or black if you prefer it.

E. C. Stearns & Co., Makers, Syracuse, N. Y.
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R. R. TIME TABLE.**BOSTON & MAINE, SOUTHERN DIVISION.**

Trains leave Amherst going East for Ware, Oakdale, South Sudbury and Boston at 6.09, 8.16, A. M., 2.31 P. M., Sundays 6.09 A. M.

Returning leave Boston at 8.45 A. M., 1.30, 4.00 P. M. Sundays 1.30 P. M.

For Worcester 6.09, 8.16 A. M., 2.31 P. M. Sundays at 6.09 A. M.

Returning leave Worcester at 9.15 A. M., 2.26, 4.58 P. M.

6.09 A. M. and 2.31 P. M. connect at Ware with north bound trains on the Ware River Branch of the B. & A. and the 6.09, 8.16 A. M., and 2.31 P. M. connect with south bound trains on the same road.

Trains leave Amherst going West to Northampton, at 7.55, 10.20 A. M., 12.05, 1.15, 4.40, 5.14, 7.28, 8.40 P. M. Sundays 10.45 A. M., 5.19, 8.30 P. M.

Returning leave Northampton at 5.55, 8.00, 8.50 A. M., 12.30, 2.15, 4.20, 6.00, 8.20 P. M. Sundays, 5.55, 10.20 A. M., 7.35 P. M.

Trains connecting with the Connecticut River R. R., going south leave Amherst at 7.55, 10.20, A. M., 12.05, 1.15, 4.40, 5.14, 7.30, 8.40 P. M. Sundays 10.45, A. M., 5.19, 8.30 P. M.

Trains connecting with Connecticut River R. R., going north leave Amherst at 10.20 A. M., 1.15, 7.30 H. M.

NEW LONDON NORTHERN.

Trains leave Amherst for New London, Palmer and the south at 6.44 A. M., 12.16, 5.57 P. M.

For Brattleboro and the north at 9.08, 11.50 A. M., 8.42 P. M.

Trains leave Palmer for Amherst and the north at 8.20, 11.00 A. M., 8.00 P. M.

Trains going south connect at Palmer with B. & A., trains for the east and west.

North bound trains connect with Fitchburg R. R. for the east and west.

NOTICES.

The President will be at his office at the Library from 2 to 4 P. M. every day except Saturday and Sunday.

The Treasurer will be at his office at the Botanic Museum from 4 to 5.30 P. M. on Wednesdays, and on Saturdays from 3 to 5-30 P. M.

The college library will be open for the drawing of books from 2 to 4 P. M. and from 6-30 to 8 P. M. every day in the week except Saturday and Sunday; on Saturday from 8 A. M. to 12 M., from 1 to 4 P. M. and from 6-30 to 8 P. M.; on Sunday from 12 to 3 P. M., for reference only.

Amherst College Library will be open from 8-45 A. M. to 6 P. M. and from 6-30 to 9-30 P. M. except Sundays and the Holidays. M. A. C. students may obtain the privilege of using this library by applying to Pres Goodell.

Mails are taken from the box in North College at 7-15 and 11 A. M. and 4 and 6-15 P. M.

The zoological museum will be open daily at 2-15 P. M. except Tuesdays and Sundays.

10 times out of 10

The New York Journal recently offered ten bicycles to the ten winners in a guessing contest, leaving the choice of machine to each.

ALL CHOSE

Columbia Bicycles

Nine immediately, and one after he had looked at others. The Journal therefore bought TEN Columbias at \$100 each.



On even terms a Columbia will be chosen

TEN times out of TEN.

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AGGIE LIFE.

VOL. VII.

AMHERST, MASS., NOVEMBER 4, 1896

NO. 4

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Students and Alumni are requested to contribute. Communications should be addressed, AGGIE LIFE, AMHERST, MASS.

AGGIE LIFE will be sent to all subscribers until its discontinuance is ordered and arrears paid.

CARPENTER & MOREHOUSE, PRINTERS.

Editorials.

THE politics of the freshman class are in a state that may well be termed "sadly muddled." The class of 1900 seems to be determined to secure notoriety at any cost, but this time we believe they have made a mistake. A few days ago while about half the class were in recitation, the remaining members, who were enjoying a bolt, proceeded to elect officers without giving notice or warning that any class meeting was to be held. Many who were concerned in this affair have already regretted their hasty action and the division that was "frozen out" naturally feels the injustice keenly. The present officers are holding their positions against the will of the majority of the class. Such proceedings are new at Aggie and are extremely unpopular as well. We hope that the Freshmen will have spirit enough to see that this wrong is righted.

THE success that attended the M. A. C. division in the sound money parade in Boston on the evening of Nov. 2nd should prove an incentive to our men to do better work here on the drill ground. In the parade of Monday evening the Aggie men occupied the position of honor at the head of the line, and their steadiness and fine marching were the objects of attention and admiration throughout the march. We would urge upon the men the importance of thoroughness in the regular drills. There is often present a spirit of inattention and carelessness that will do great harm unless it is checked. During the years past it has been a matter of college pride to have an excellent battalion, and it rests with us as to whether or not we shall allow our standard to be lowered. Let us not forget that in the intercollegiate drill last spring Aggie was second only to Boston Tech., easily defeating Harvard and Brown. If we hope to send a prize squad next spring there must be an immediate improvement in the regular drills in order that suitable material for such a squad may be developed.

Is there not some beneficent friend of the College who will encourage the study of systemic botany by increasing the prize offered at the end of each year for the best herbarium of wild flowers entered by a member of the graduating class? A person presenting such a collection of plants must go to an expense for paper and other materials which greatly exceeds the amount of the prize, not to take into consideration the more important elements of time and labor with which a person must necessarily be very liberal. Now if some generous person should consider it expedient to offer fifty dollars for a first, and thirty-five dollars for a second, the winners might secure not only honor but also something substantial to repay them for their outlay. Such a prize would be a much greater incentive to students to do good work in this subject. The present prizes of fifteen and ten dollars

are scarcely worth the consideration of those entering collections containing eight hundred and eighty to a thousand specimens as have been those of the men taking the first prizes for the last two or three years. The prize of five dollars for the best collection of woods from our native forest is far too small to encourage the student of forestry to try for it. This prize also might well be increased. While we do not believe in doing work only for the purpose of obtaining this or that prize, we do believe that the offering of suitable prizes is beneficial in that it introduces a spirit of competition among the contestants, causing them to do more and better work.

Contributed.

THE SENIOR COURSE IN ENTOMOLOGY.

(The second of a series of articles on the Senior Electives.)

To those who are acquainted with the Senior elective courses offered by the Massachusetts Agricultural College, the department of entomology requires no recommendation. The work that this department has been doing for the past few years, speaks more of its merits than anything that can be said here: but we feel quite certain, however, that most of those outside of our College walls, and unfortunately many of our own students, have an entirely wrong idea concerning the nature and object of the work being done in our entomological laboratory.

Of the many classes of students who should make a practical use of entomology, those perfecting themselves in the branches of agriculture or horticulture should be among the first to seek this training. It is, nevertheless, a fact that many of our students who are specializing along these very lines unfortunately neglect the study of insects simply because, as we are led to believe, they consider it a waste of time, or intended only for those who expect to become scientific entomologists. They evidently do not recognize its practical application,

The economic entomologists throughout the country are carrying on a vast correspondence with those engaged in agricultural pursuits who are suffering from the ravages of insects unknown to them. They are sending specimens of these insects and calling for

information concerning them and the best methods of preventing their devastations. Would they have their sons grow up as ignorant of such matters as themselves, or would they rather see them so educated that they would know how to combat these insect enemies?

Before entering into any extended discussion on the work of this department, it would be well to first consider the object it has in view. The course is primarily intended for those young men who anticipate being farmers, market-gardeners, fruit-growers and also for those intending to pursue ornamental gardening or forestry. It is also of especial importance to those who contemplate being entomologists or teachers of biology and any who desire thorough training in these sciences.

The men are required to work on the insects themselves, employing original methods so far as it is practicable. In this way, the student is taught the lesson of observation which is of the greatest importance to successful scientific research. After much careful thought and long experience Prof. Fernald has arranged the work for the year in the systematic manner shown below. The table immediately following gives the subjects which are lectured upon in their natural order:

1. External anatomy.
2. Internal anatomy.
3. Embryology.
4. Transformations.
5. Parthenogenesis.
6. Dimorphism.
7. Insect architecture.
8. The colors of insects.
9. Luminosity.
10. Duration of life.
11. Parasitism.
12. Diseases of insects.
13. Deformities of insects.
14. Hybrids.
15. Hermaphroditism.
16. Insects fertilizing plants.
17. Economic entomology.
18. Bee-keeping.
19. Number of insects.
20. Antiquity of insects.
21. Geographical distribution of insects.
22. Phylogeny.
23. The literature of entomology.

The second table gives an outline of the laboratory work which the student carries on in connection with the above lectures as follows :

1. Dissection of a larva.
2. " " " pupa.
3. " " " an imago.
4. External anatomy of an Hymenopteron.
5. " " " a Lepidopteron.
6. " " " " Dipteron.
7. " " " " Coleopteron.
8. " " " " Hemipteron.
9. " " " " Orthopteron.
10. " " " " Neuropteron.
11. Determine a group of insects in each order.
12. Prepare a thesis.

For the first few weeks in the year the course is general and all the students take the same laboratory work; after this, each one specializes according to the following table :

1. Insects of the green-house.
2. " " " garden.
3. " " " orchard.
4. " " " field.
5. " " " forest.
6. " " " domestic animals.
7. Household pests.
8. Bee-keeping.
9. Insecticides.
10. Apparatus for applying insecticides.

Lectures continue throughout the course and are taken by all. The last subjects taken up are general and are, "Insecticides," and "The apparatus for applying insecticides." A thesis is required of each student electing the course, and the work upon it is done as regular class-work during the year. A copy of this thesis is to be deposited with Prof. Fernald before or at commencement.

Having discussed the object that this department has in view, and the work planned for the year, let us now consider the advantages for study. The entomological laboratory is situated in the north end of the spacious addition to the insectary built a little over a year ago. The laboratory is large, well lighted and ventilated, and is heated by a hot water system. Each student has a fine ash desk specially designed for entomological work, and fitted with such materials and apparatus as his work requires. In each desk is

kept a Bausch and Lomb microscope with all necessary accessories for the use of the student.

For reference, the entomological collection and the library are in the adjoining rooms and are at all times open for the use of the students. The library contains nearly 400 standard books of reference, exclusive of a large assortment of entomological bulletins and a complete collection of American Agricultural bulletins. These books or bulletins are not to be taken from the building, but the College library duplicates many of them, and contains in addition a great many other standard works. At the College library are to be found over 500 titles of entomological works, many of which are made up of several volumes, and all together comprising one of the best reference libraries to be found in the country.

The collection of insects is very large, and classified into orders, genera and species. In the zoological museum there is another large collection which in a great measure supplements the former collection, and to which students can also refer.

Many other features which space does not allow for special mention enter into the course, and valuable additions are being made constantly. Prof. Fernald has studied carefully into every detail in this department and his excellent work has succeeded in placing the Senior course in entomology where it is to-day second to none in America. G. E. P.

CONSTITUTION AND BY-LAWS OF THE MASSACHUSETTS AGRICULTURAL COLLEGE ATHLETIC BOARD.

SECTION I.

Article 1. The Board shall have control of the athletic interests of the Massachusetts Agricultural College and of any funds or income of any funds that may be intrusted to them for athletic purposes.

Article 2. The Board shall have the power to raise and collect subscriptions and in other ways to increase the athletic funds of the college.

Article 3. The Board shall have advisory power in questions of intercollegiate athletic policy.

Article 4. The Board shall appoint a resident secretary and treasurer who shall receive and deposit all moneys for athletic purposes, whether gate receipts, subscriptions, guarantees, or proceeds from benefit entertainments.

Article 5. All contracts relating to athletic objects shall be made by the treasurer or by any authorized agent in the name of and with the approval of the board.

SECTION II.

Article 1. The Board shall be composed of nine members, viz., the chief officer respectively of the base-ball, foot-ball and athletic clubs, the latter shall include all field sports except base-ball and foot-ball; three members of the faculty, and three of the alumni of the college, one of whom shall be a resident alumnus who shall also be secretary and treasurer of the board.

Article 2. The chief officer of each of the above named associations shall become a member of the board by virtue of his office and his membership shall cease upon the expiration of his term of office.

Article 3. The President of the College, at the commencement of the fall term of each year, shall appoint three members of the board from the faculty. The President shall have power to fill vacancies occurring among the faculty members of the board.

Article 4. The three alumni members shall be elected as follows:

One by the student body at a mass meeting at the commencement of the fall term of each year.

One by the faculty at their first meeting after the commencement of the fall term.

One by the associate alumni at their commencement meeting.

Article 5. The term of office of members of the board shall be one year or until their successors are chosen.

SECTION III.

The board shall have power to fill all vacancies occurring in the board not already provided for in Article 3, Section II. Members thus appointed shall hold office for the unexpired term of their predecessors.

SECTION IV.

Article 1. The board shall have the power to frame its by-laws governing time, place and conduct of meetings and its procedure in matters brought it for action.

Article 2. As soon as possible after the commencement of the fall term, the board shall be called

together by the senior faculty member for the purpose of organizing and electing a secretary and treasurer from the alumni members of the board.

Article 3. Amendments may be made to this constitution when proposed by two thirds of the board members and ratified at a college mass meeting.

BY-LAWS.

SECTION I.

The officers of the board shall be a President, Vice-President, a Secretary and Treasurer, and an executive committee consisting of five members, viz., a faculty member of the board, the secretary and treasurer of the board, and the undergraduate members of the board.

SECTION II.

The election of officers shall be by ballot at the first meeting of the board after the commencement of the fall term.

Article 2. The officers shall hold terms for one year.

SECTION III.

At the first meeting of the board after the commencement of the fall term an auditor shall be elected who shall be a member of the board but hold no other office in the board, and who shall once in a year audit the accounts of the treasurer and report to the board.

SECTION IV.

Article 1. The duties of the President shall be to call and preside at all meetings of the board.

Article 2. The duties of the Vice-President shall be to perform the duties of the President in his absence or disability.

Article 3. The duties of the Secretary and Treasurer shall be to issue by letter the call for all meetings of the board at least seven days before the hour of meeting. He shall keep an accurate record of all the votes and other doings of the board, in a book provided for the purpose, in which shall also be written the constitution and by-laws of the board. He shall record the place, time, score and expense of all official games and contests. He shall notify the chairman of each committee chosen by the board of his appointment and each individual of any duty assigned him by the board.

He shall also receive and account for all the money of the board in whatever way placed in his hands. He shall pay out money for all general purposes only on the written order of the executive committee. He shall pay out money for the expenses of the single associations only upon the written order of the manager of that association, some other member of the executive committee and the treasurer. All of his accounts shall be kept in a book prepared for the purpose, which shall be open for inspection at any time to the members of the board.

Article 4. The duties of the executive committee shall be to act upon all questions which shall require attention between the meetings of the board. They shall submit all such actions for approval to board at its next meeting. In all questions of general interest the entire committee shall act, the undergraduate members, however, having but one vote. On questions concerning the affairs of any single association, the committee shall consist of the faculty member, the treasurer of the board and the manager of the association concerned.

SECTION V.

The board shall hold one regular meeting each year as provided by the constitution. A special meeting may be called at any time by the President and two other members provided one week's notice in writing be given to each of the members.

SECTION VI.

Five members of the board shall constitute a quorum for transaction of business provided there be at least one representative from the faculty, alumni and undergraduates.

SECTION VII.

These by-laws may be added to, altered, amended or repealed by a two-thirds vote of the members present at any regular meeting, or special meeting called for that purpose, provided that the addition, alteration, amendment or repeal is left with the secretary and notice thereof given to each member one week at least before said meeting.

SECTION VIII.

No person shall be a member of any team who is not an accredited member of the college as determined by the books of the registrar.

SECTION IX.

Article 1. No manager or other official shall contract debts to a greater extent than ten dollars (\$10) without the approval of at least three other members of the executive committee.

Article 2. No manager or other official shall incur any expense after all the money subscribed has been expended until he has collected and placed in the hands of the treasurer new funds sufficient to cover expenses.

SECTION X.

Each manager shall make his returns to the treasurer within three days after a home event or on his return from a trip.

SECTION XI.

The executive committee shall have the control of the field and its appurtenances between meetings of the board. They may also appoint a director to have immediate charge of the field.

 FOOTBALL.

MT. HERMON—20 ; M. A. C.—4.

The score which Mt. Hermon rolled up against her old opponents was made during the first half. At 8 o'clock it was uncertain whether Aggie could raise eleven men to line up that day, as the men had played a hard game only two days before.

The game was called at 2 o'clock sharp, and quite a large crowd of spectators was present. Aggie has the kickoff, and Thompson makes the first kickoff of the game. Hyde of Mt. Hermon catches it and makes a small gain. By continually playing around end and through tackle, Mt. Hermon makes her first touchdown. Hyde kicks goal. The first half was a combination of this sort of thing until two minutes before time was called. For just two minutes Aggie worked hard, and kept making good gains through center, which they supposed would be the weakest point. With the ball on 'Hermon's 10-yard line, time was called. Score: Mt. Hermon, 16; Aggie, 0.

The second half was very different. The college men began to feel a little more at home, and they soon succeeded in making a touchdown. After that one touchdown was made by 'Hermon, and during the rest of the game the ball went back and forth,

although when time was called, it was in 'Hermon's territory, as in the first half. The score: Mt. Hermon, 20; Aggie, 4.

The game was a clean one from beginning to end; and, after the game was over, the opposing men were seen all around, shaking hands, and wishing they could arrange another game for this season. This was something probably never seen before between teams of this college and 'Hermon. Hyde and Pett played the best game for 'Hermon, while it is hard to say who played the best game for Aggie, as every man played in fine form. Davis made a great many fine tackles at full-back.

The line-up was as follows:

MT. HERMON.	M.A.C.
Cant, r. e.,	l. e., Chapman
Evans, r. t.,	l. t., Beeman
Finch, r. g.,	l. g., Lull
Bartlett, c.,	c., Parmenter
Monroe, l. g.,	r. g., Thompson
Baldwin, l. t.,	r. t., Stanley
Fathaway, l. e.,	r. e., Eaton
Maylott, q. b.,	q. b., Wright
McKee, r. h. b.,	l. h. b., Crowell, Gile
Pett, Capt. l. h. b.,	r. h. b., Capt. Allen
Hyde, f. b.,	f. b., Davis

Touchdowns, Hyde, 2, Fathaway, Pett, Eaton; goals, Hyde 2; umpire, Yarrow of Mt. Hermon; referee, Barry of M. A. C.

AGGIE VS. WILLISTON.

The first half of the game Aggie played well, Williston's line was unable to stand the rushes of the Aggie backs. Twice Crowell broke through the line and had a clear field before him, with the exception of Seward, by whom he was downed each time. The second half Aggie went to pieces and her opponents were able to make their distance each time.

Aggie won the toss and chose the north goal, thereby giving Williston the ball. Seward sent the ball to the fifteen-yard line on the kick-off. Then by a series of rushes by Allen, Crowell and Gile the ball was placed on Williston's ten-yard line, but there it was lost on downs. Seward then punted to the forty-yard line, but by steady work the ball was placed on the five-yard line, from which Gile carried it over for a touch-down. Eaton kicked goal.

Seward again kicked off thirty yards, but Aggie soon

forced the ball into Williston's territory, where it was when time was called, at the end of the first-half. Score 6-0, in favor of Aggie.

In the second half Thompson kicked off forty yards for Aggie, but Williston braced up, and by steady gains they worked the ball up the field for a touch-down. Seward kicked goal. Score 6-6.

Thompson again kicked off forty-five yards, but by steady gains Williston soon made a second touch-down, from which Seward kicked goal. Score 12-6, in favor of the home team.

During the remaining few minutes neither side gained any decided advantage. Aggie's best gains were made through the line, while Williston made most of its gains around left end and through left tackle.

For the visitors, Crowell, Chapman and Beaman played the best game, while Riddell and Seward did the best work for the home team.

The line up was as follows:

AGGIE,	WILLISTON.
Chapman, l. e.	r. e. Bonney
Beaman, l. t.	r. t. Davis
Stanley, l. g.	r. g. Swain
Parmenter, c.	c. Strickland
Thompson, r. g.	l. g. Tilden
Cheney, r. t.	l. t. Thomas
Eaton, r. e.	l. e. Pond
Wright, q. b.	q. b. { Curtis Day
Allen, r. h. b.	l. h. b. L. Pond
Crowell, l. h. b.	r. h. b. Riddell
Gile, f. b.	f. b. Seward

Score—Williston, 12, Aggie 6. Touch-downs—Gile, Riddell, 2. Goals from touch-downs—Eaton, Seward, 2. Umpire—Mahar. Referee—Emrich. Linesmen—Ely and Wiley. Time, 25 m. halves.

M. A. C. MEN IN BOSTON.

On the afternoon of November second a squad of fifty M. A. C. students left Amherst for Boston on a special car. The squad that was to represent the undergraduates of the college in the Intercollegiate sound money parade was under the charge of Cadet Captain Emrich, Cadet Adjutant Leavens, and Cadet Lieutenants Goessmann, J. W. Allen, H. F. Allen, and Drew. At seven thirty in the evening the detachment was formed on the south side of Commonwealth Avenue near Dartmouth Street at the head

of the procession. The line of march lay through the principal streets of Boston, and thousands of people were crowded together to watch the sound money college men march. All along the line the Aggies commanded attention and admiration by their steadiness and excellent marching. What the delegation lacked in quantity it more than equalled in quality, and the applause they received was certainly well merited. The press of the city was unanimous in its praise, and we feel that the sons of Aggie have left a most favorable impression behind them.

College Notes.

—Guard Mounting.

—H. S. Courtney '99 has returned to College.

—Several students went home to vote on Tuesday.

—Which is the more objectionable, Pelham water or sweet cider?

—Tennis seems to be as popular as usual at the College this fall.

—Company drill began for the first time this fall on Thursday afternoon, October 22nd.

—Montgomery and Wright of '98, and Crowell Brothers of '00, spent Sunday at their homes.

—G. D. Leavens '97 spent a few days of last week at his home in Brooklyn, returning Friday evening.

—It is expected that the foot ball will play Storrs Agricultural College at Mansfield, Conn., Saturday, November 7th.

—Alderman Barry and his wife of Boston visited their son John Marshall Barry at the College Tuesday, October 20th.

—The Sophomore class in French is now reading, *La Princesse De Clèves*, and the Freshmen have lately begun *Madame Thérèse*.

—The Freshman class declamations for the term end on Friday, November 6th, when each member will have appeared before the class once.

—It was announced after the chapel exercises a few mornings since, that the College would close on Wednesday, December 16th, which is one week previous to the date given in the calendar of the last catalogue.

—The bust of Hon. Justin S. Morrill that was promised the college last June, has recently arrived and is now in the library in a prominent place and such it deserves.

—Prof. F. S. Cooley delivered a very able and interesting lecture before the Natural History Society, Friday evening, October 30th, on Laws Governing the Determination of Sex.

—John Marshall Barry, '97, who has been given a leave of absence, has gone to Boston to stay for an indefinite length of time, but we feel quite sure that he will return before long.

—The Sophomore rehearsals with Prof. Babson, which were to begin on Tuesday, were postponed until the same time Wednesday, because of there being no College exercises on that day.

—The foot ball game that was to have been played with the French-American College of Springfield at that place last Saturday, was not cancelled until late in the week, so no game was played that day.

—W. E. Chapin, '99, who was so unfortunate as to break his leg in a practice game of football on October 22, is getting along finely under the good care of his friends, and will soon be removed to his home in Chicopee.

—There is to be seen at the upper College greenhouse a small but unusually fine bed of chrysanthemums this fall. Mr. White seems to be quite a successful florist, and the hot houses are prospering under his good care.

—A few days ago one of the boilers in the basement of South College was rendered unsafe for use by the water in it getting very low, and it is now undergoing extensive repairs; meanwhile, the other boiler is doing duty.

—Having defeated Aggie in her first foot ball game of the season, Northampton Y. M. C. A. refuses to play a promised return game. This trick reminds us of the small boy who after winning a few marbles from his mates, refuses to play any more, for fear he may lose them.

—The question of Junior electives is again being agitated by the Sophomore class. The matter has met with the consideration of the faculty, and it is understood that the majority of the members are in favor of this movement, in a limited degree.

—There has recently been added to the library reading-room an enlarged reproduction of a photograph of the artillery drill taken last commencement. The exposure was made just as one of the pieces was being fired, the cloud of smoke and other conditions lending to the sight that which made a very pleasing picture. The work, which is well done, is one of Prof. Babson's productions and was presented by him to the college.

—The M. A. C. team went to Northfield, a week ago Monday and was defeated by Mt. Hermon by a score of 20-4. Considering the crippled condition of the team, and the weight of her opponents, Aggie put up a good game. The best work of the game on both sides was done in the second half, when each team made one touchdown. Much credit is due Mt. Hermon for the gentlemanly way in which the visitors were treated. A clean game was played all around by both teams.

—The weeks are passing fast and as yet there has been very little competition for the positions on the LIFE board five of which will have to be filled early in March. At least three articles must be written and handed to the editor-in-chief before any student can become a candidate for a position. It is yet early in the year, and there is plenty of time ahead, but be careful lest "Procrastination" find you at the end of the time allotted with less than three contributions to the contest. Begin early, and do good work.

—Last Saturday afternoon when the College was busily engaged in making plans to take part in the Sound Money parade to take place at Boston, Nov. 2nd, a telegram was received announcing that the parade was declared off. The trip was of course given up and the college was again getting settled down from the excitement when Monday forenoon brought another telegram stating that the parade would take place in the evening. A mass meeting was soon called and the sentiment was found to be in favor of sending a squad.

—The Clark property on the hill, above the "plant house," which was bought by the College sometime ago, is being improved by the removal of many of the less attractive trees and shrubs. This piece of land has a fine location, and when to its natural features the skill of the landscape gardener is applied, this part of our grounds will be rendered very attractive. A

better view can be obtained here than is to be enjoyed from any other ground owned by the College, and the town can boast of few that are better.

—The Senior flag signaling has entirely given away to signaling by the use of the heliograph, and now on every bright drill hour, two parties are detailed from the class to manipulate these instruments. Every cadet from the class is supposed to be able to signal twenty words a minute by the use of either flag or heliograph, and to take as many from either, before his proficiency is acknowledged. "Practice makes perfect" has no exception in signaling; but if twenty words a minute is "slow," few of us can hope to be "fast" this term.

—The sidewalk at the corner of South College has within a few days been rendered quite attractive by a splendid emblem of victory, wrought by the skillful hand of '99's class artist, W. H. Armstrong, in consideration of the Freshman-Sophomore foot ball game of October 14th. The object of this attraction, is a shield shaped open work painting, the main work of which is white with maroon and white streamers, all on a black background. Diagonally across the middle is a narrow and white band on which is set a large white '99. At the top of this painting and on a scroll are the letters M. A. C. in German type, at the bottom, 1896, and on the right the score, 6-0. This is the finest thing of its kind that has ever adorned our walks, and the College may well be proud of the artist.

A canvas of the college will be made this week by some of Mr. Petit's former pupils in order to ascertain whether a sufficient number can be secured to have a good course in dancing this season at low rates. Many have already joined.

Y. M. C. A. TOPICS.

- Regular meetings are held Sundays, 4:00 to 4:45 P. M.; Thursdays, 7:00 to 7:45 P. M.
- Nov. 5. Christian cooperation. Ex. 18:8-12; Rom. 15:1.
- Nov. 8. Learning from our mistakes. Acts. 26:9-20.
- Nov. 12. Strength to stand alone. Ps. 27:1; II Timothy 4:16-17.
- Nov. 15. What is Christ to us? Gal. 3:26, 29; Col. 1:26, 27.

A cordial invitation is extended to all.

Alumni.

'83.—C. W. Minott, Supt. of the Western Division Gypsy Moth Dept. State Board of Agriculture. Address, No. 17 Russell St., Malden, Mass.

'88.—F. F. Noyes, Electrical Engineer, Gate City Electric Supply and Construction Co., No. 37 Marietta St., Atlanta, Ga.

'90.—Address of E. Gregory is Asylum Sta., Mass.

'91.—Henry M. Howard married to Miss Hattie E. Stanley at Franklin, Mass., Oct. 22, '96.

'91.—Address of W. C. Paige is Henderson, Ky. (Y. M. C. A.)

'92.—J. B. Knight, teacher out of employment. Address Belchertown, Mass.

'92.—Homer C. West, in the employ of the Waltham Watch Co., Waltham, Mass.

'93.—H. Franklin Staples, married to Miss Emily S. Millburn at Cleveland, Ohio, Sept. 29, '96.

'95.—M. J. Sullivan has been promoted to the position of superintendent of the farm of Mr. J. J. Glessmer at Littleton, N. H. where Mr. Sullivan has been employed the past season.

'96.—A. S. Kinney is at the Hatch Ex. Sta. Address, Amherst, Mass.

'96.—J. L. Marshall is filling the position of right half back on the Fitchburg Athletic Club eleven, one of the crack Club teams of New England.

—At the recent meeting of the United States Veterinary Medical Association in Buffalo, Dr. F. H. Osgood, '78 of Boston was elected president, and Dr. Austin Peters, '81 of Boston was placed on the army legislative committee. Dr. J. W. Winchester, '75 of Lawrence, read a paper on "Diphtheria in Animals."

—At the convention of the Association of American Agricultural Colleges and Experiment Stations to be held in Washington, Nov. 10th, 11th, and 12th, Dr. Lindsey, '83 and E. B. Holland, '92 will read a paper on the Galoctans, and E. W. Allen, '85 will read a paper on the Dairy. C. S. Plumb, '82 will read a paper on the subject of Agricultural Chemistry.

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LIBRARY NOTES.

Spring Notes from Tennessee by Bradford Torrey. This is a very interesting little book. It takes the reader to such historical places as Missionary Ridge, Lookout Mountain, Chickamauga, and many others. Everyone who loves Nature will enjoy Mr. Torrey's descriptions of these places.

Game Birds of North America, by Frank A. Bates. Between the covers of this neat little volume we find a series of most interesting notes upon the distribution and habits of our game birds from the pen of an observant naturalist and sportsman of wide experience. The descriptions are clear, terse and definite, the letter press excellent, while line cuts in abundance indicate the distinguishing characteristics of the species whose separation is difficult. This book will prove a most valuable addition to the library of the sportsman, bird-lover or general naturalist.

Dictionary of English Literature, A Comprehensive Guide to English Authors and their Works, by W. Davenport Adams. This will be of great assistance to students of English Literature, as they can find here the names of all prominent writers and those of special interest, the dates of their birth, and the titles of their leading works. Notes of criticism and in many cases extracts are given. The titles of the chief poems, essays, plays, novels, and works of science and philosophy, the nom de plumes assumed by authors, familiar quotations and very many of the noteworthy characters of poetry and fiction are all arranged in alphabetical order. The translations of the works of prominent foreign writers is another feature of this book.

The French in America during the War of Independence of the United States. A translation from the French, by Thomas Balch. It would seem that the great services that the French rendered the people of this country during the struggle for independence were poorly appreciated, for this is the only book published in English that gives a full account of our French allies. The first volume takes up the causes and origin of the war and its principal events up to 1781, with a complete account of the French forces up to 1783. The second volume will contain historical notices of the French regiments which came over here; biographical notices of the French volunteers

who took service under Congress and the principal officers on land and sea; and many interesting details and episodes.

Index Kewensis, by Hooker and Jackson. This is a large four volume work containing a complete list of the names and authorities of all known flowering plants and their countries. Every plant is named according to the botanist who first named that species. The wide scope of the book makes it very valuable for reference. We are indebted for this work to the generosity of one of the loyal trustees of this College, Mr. J. D. W. French.

Exchanges.

She took my hand in sheltered nooks,
She took my flowers, candy, books,
Gloves, anything, I cared to send,
She took my rival in the end.

—Ex.

The All-American base-ball team for the year ending in 1896 selected by Caspar Whitney is as follows: Pitcher, Wilson of Princeton; catcher, Murphy of Yale; 1 base, Letton of Yale; 2 base, Rodman of Brown; 3 base, Houghton of Harvard; short-stop, Ward of Princeton; left field, Greenway of Yale; centre field, Bradley of Princeton; right field, Robinson of Brown; substitutes; catcher, Dunne of Brown; pitcher, Paine of Harvard; infield, Fultz of Brown; out-field, Burgess of Harvard.—Ex.

I sat high in the window seat,
The street with glass I scanned.
I saw May's face and form so neat.
And—joy! She waved her hand.

* * *

And now my heart is all upbuoyed,
Just for that damsel's sake;
And now, for once, I'm overjoyed
That May gave me the *shake*.

—Ex.

The *Daily Democrat*, a free-silver daily newspaper, started at Frankfort, Ky., as an organ for the silverites, suspended publication October 15, after forty-four issues. The committee of silverites could not furnish money further, and the people would not support it.—Ex.

When a man has his hand wrung and his leg pulled, gets held up and then thrown down, people merely remark that he has been touched.—Ex.

Father—"Come right out in the back yard, my son. I'll make you see stars."

Son—"Are you going to make an American flag, father?"

Father—"What do you mean, you young rascal?"

Son—"Why, I'm going to provide the stars while you furnish the stripes."

Father (falling on his neck)—"Where did you inherit this brilliancy? Off with your coat, son. I must save you now or perish in the attempt."

Stranger—What is the political complexion of this vicinity?

Deacon Wayback—"Taint very clear, but judging from the number of McKinley buttons in the contribution box I rather suspect it's republican.—*Up-to-Date*.

How strange it is that when at night

My wife seeks out a spot

On my warm back for her cold feet,

Their coldness makes me hot!—*Up-to-Date*.

Junior—Who is that meek looking fellow sneaking up stairs?

Ex-Junior—Oh, that's only the editor-in-chief.

Junior—Who is that blustering fellow ordering everybody about as if he owned the place?

Ex-Junior—Sh'! Hush! That's the business manager.—Ex.

Kansas has a College Press Association—good thing. *College Life* is the organ. It is a breezy little paper, whose spice is much concealed in the abounding advertisement.—Ex.

An examination paper from a cooking class innocently informs the public that French women, in cooking, use "their own clarified fat," that a school kitchen should have "space enough to allow six or eight girls to cook at once," and that a certain dish may be "eaten cold twice."

Wanted—An Idea Who can think of some simple thing to patent? Protect your ideas; they may bring you wealth. Write JOHN WEDDERBURN & CO., Patent Attorneys, Washington, D. C., for their \$1,000 prize offer and list of two hundred inventions wanted.

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R. R. TIME TABLE.

BOSTON & MAINE, SOUTHERN DIVISION.

Trains leave Amherst going East for Ware, Oakdale, South Sudbury and Boston at 6.09, 8.16, A. M., 2.31 P. M., Sundays 6.09 A. M.

Returning leave Boston at 8.45 A. M., 1.30, 4.00 P. M. Sundays 1.30 P. M.

For Worcester 6.09, 8.16 A. M., 2.31 P. M. Sundays at 6.09 A. M.

Returning leave Worcester at 9.15 A. M., 2.25, 4.58 P. M.

6.09 A. M. and 2.31 P. M. connect at Ware with north bound trains on the Ware River Branch of the B. & A. and the 6.09 8.16 A. M., and 2.31 P. M. connect with south bound trains on the same road.

Trains leave Amherst going West to Northampton, at 7.40 10.20 A. M., 12.05, 1.15, 4.40, 5.14, 7.28, 8.40 P. M. Sundays 10.45 A. M., 5.19, 8.30 P. M.

Returning leave Northampton at 5.55, 8.00, 8.50 A. M., 12.30, 2.15, 4.20, 6.00, 8.20 P. M. Sundays, 5.55, 10.20 A. M., 7.35 P. M.

Trains connecting with the Connecticut River R. R., going south leave Amherst at 7.40, 10.20, A. M., 12.05, 1.15, 4.40, 5.14, 7.30, 8.40 P. M. Sundays 10.45, A. M., 5.19, 8.30 P. M.

Trains connecting with Connecticut River R. R., going north, leave Amherst at 10.20 A. M., 1.15, 7.28 P. M.

NEW LONDON NORTHERN.

Trains leave Amherst for New London, Palmer and the south at .05 A. M., 12.16, 5.57 P. M.

For Brattleboro and the north at 9.08, 11.50 A. M., 8.05 P. M.

Trains leave Palmer for Amherst and the north at 8.20, 11.00 A. M., 8.00 P. M.

Trains going south connect at Palmer with B. & A., trains for the east and west.

North bound trains connect with Fitchburg R. R. for the east and west.

NOTICES.

The President will be at his office at the Library from 2 to 4 P. M. every day except Saturday and Sunday.

The Treasurer will be at his office at the Botanic Museum from 4 to 5.30 P. M. on Wednesdays, and on Saturdays from 3 to 5-30 P. M.

The college library will be open for the drawing of books from 2 to 4 P. M. and from 6-30 to 8 P. M. every day in the week except Saturday and Sunday; on Saturday from 8 A. M. to 12 M., from 1 to 4 P. M. and from 6-30 to 8 P. M.; on Sunday from 12 to 3 P. M., for reference only.

Amherst College Library will be open from 8-45 A. M. to 6 P. M. and from 6-30 to 9-30 P. M. except Sundays and the Holidays. M. A. C. students may obtain the privilege of using this library by applying to Pres Goodell.

Mails are taken from the box in North College at 7-15 and 11 A. M. and 4 and 6-15 P. M.

The zoological museum will be open daily at 2-15 P. M. except Tuesdays and Sundays.

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AGGIE LIFE.

VOL. VII.

AMHERST, MASS., NOVEMBER 25, 1896

NO. 5

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Students and Alumni are requested to contribute. Communications should be addressed, AGGIE LIFE, AMHERST, MASS.
AGGIE LIFE will be sent to all subscribers until its discontinuance is ordered and arrears paid.

CARPENTER & MOREHOUSE, PRINTERS.

Editorials.

DR. WELLINGTON who has been seriously ill during the greater part of the term is now sufficiently recovered to attend college daily, though he has not yet resumed charge of all his classes. The doctor is extremely popular among the students, and is especially esteemed by the senior division in chemistry who thoroughly appreciate his earnest work and his kindness to the men personally. All unite in welcoming him back and in wishing that no similar misfortune may overtake him.

It is early in the year to begin to make financial appeals, and it is extremely unpleasant for us to be obliged to do so; yet it has already become a necessity. The present board having cleared the paper of debt naturally wish to keep it so. We are paying cash

for each issue and will stop the paper rather than incur liabilities that we cannot meet. We do not beg for donations, but merely ask for your subscription payment of one dollar, certainly not an exorbitant sum to charge for the LIFE. Our business-manager is seriously embarrassed by the failure of the *Alumni* to pay the amount due, and we earnestly hope and request that the *Alumni* will give the paper their prompt and substantial support,

FOR some time the sophomores have been discussing the matter of Junior Electives, and have presented their views to several members of the faculty. The objections to this are that our students at the end of the sophomore year have not reached a point where they may wisely make so important a decision, and that the corps of instructors is too small and the number of class rooms too limited for carrying on work in accordance with such a plan. We believe, however, that the arranging of a limited number of elective courses for the junior year would satisfactorily solve the problem, the advantages being so numerous as to outweigh any objections that might arise. Mathematics should be an elective in junior year, and if it could be so arranged we believe that this one change would be of greatest benefit. The system of elective courses is one with which it might be well to experiment, for while no harm can result from its adoption, it would doubtless bring us larger entering classes and awaken our students to a deeper interest in their work.

THE faculty has recently appointed an advisory board consisting of three members to have an oversight over the finances of the LIFE, the Boarding Club, the Glee Club and the *Index*. We have been unable to learn from the faculty the precise nature of the duties that this committee is to perform, and have not been able to ascertain definitely whether it is intended

to organize an advisory board on which the students shall be represented. We would call attention to the fact that the organizations mentioned above are strictly student enterprises, and that some of them already have auditors of their own. We are quite sure that the students would quickly resent the interference in their affairs by such a committee from the faculty, a committee in the selection of which the students had neither voice nor vote. On the other hand we are equally sure that the students would cordially welcome an advisory board on which at least one of the faculty should be elected by the students, and whose membership should include the heads of the various college organizations.

“How many graduation theses shall a man be compelled to write?” is a question that is just now troubling the members of the Senior class. When a man has chosen the department from which he intends to write and has begun to work upon his thesis, it is unjust to the student and unjust to his instructor for another professor to compel him to write a thesis from another department. As a result of this being done some members of the Senior class are struggling with three graduation theses. This is too much! A thesis should represent long, thorough, original work, the work of nearly the whole Senior year. When completed it should possess some merit of its own sufficient to commend it for publication. It is an utter impossibility for a man to prepare three theses of any value, and professors who compel students to such a course are making a grave error. The inevitable result will be that none of the three will be well done, and the time spent upon them will have been wasted. We sincerely hope that our faculty will consider this matter in a fair and true light, and that those who have thus overburdened students will consent to let men choose for themselves.

THE BEST.

I asked a poet, once, what single word
His soul did prize all others above;
A far-off look came to his dreamy eyes,
As, with a sigh, he softly answered, “Love.”

I put the question to a student gay.
He smiled and said, “In pencil it is writ
Along the margin of some dreary page,
It is the goodly word ‘Omit.’”

—Ex.

Contributed.

THE DEPARTMENT OF POLITICAL SCIENCE.

(The third of a series of articles on the senior electives.)

The aim of the department is to adopt both the methods of study and the subjects of investigation to the special needs of the students.

The first term is devoted to elementary work in political economy. Familiarity is gained with the facts, definitions, principles, laws, theories, doctrines and arguments which are fundamental to the science of wealth. Walker's Political Economy, abridged edition, is used as a text book, but is supplemented by exposition and criticism. The class then studies briefly the Industrial History of England and the United States, Gibbins and Wright being authorities used.

The second term is devoted to lectures upon monopolies, different phases of the labor question, money, taxation, and the economics of agriculture. During this term each student conducts original investigation of some one question of economics, under the guidance of the instructor, and writes a thesis which he reads before the class.

These are some of the topics investigated by the classes of '95 and '96: The Standard Oil Trust, The Pennsylvania Railroad Company, The Pullman Car Company Strikes, Government Ownership of Natural Monopolies, The Income Tax, Our Present Tariff, The National Debt, Coöperation, Tenant Farmers of the United States, German Socialism, The American Farmer as a Landlord, Capitalist, Enterpriser and Laborer, Money, Free Coinage of Silver, Electricity as an industrial and social force, The Economic effects of Labor Saving Machinery, Abandoned Farms, The Sugar Trust, Should the Greenbacks be retired? The Single Tax.

The student is referred to the best authorities on both sides of the question discussed. He is shown how to collect and discriminate facts; how to state different economic doctrines and theories and then criticise them, testing them by established facts and principles; how to analyze arguments and weigh proofs; how to test theories and doctrines by experience as shown in history. He learns to perceive the problem, to state it, to find a solution satisfactory to himself and to

maintain his thesis against the objections brought by others.

When the subject admits of it, he is encouraged to investigate strikes, corporations, coöperation, etc., by personal inspection of actual event and working institutions. It being taken for granted that the student must soon go into the practical world and strive to make money, the purpose is that he may go trained in the science of wealth so that he may go to work intelligently.

The last term is devoted to the study of the science of government. Lectures are given explaining fully the practical working of our complex system of government including town, city, country, state and federal government. Especial attention is given to the influence of public opinion, to our system of state boards, to elections, to taxation, and to the relation of the state to industry, trade and commerce. The purpose of all is to fit the student for efficient citizenship,

c. s. w.

RESPONSIBILITY: ITS RELATION TO MAN AS AN INDIVIDUAL FACTOR IN THE MODERN STATE.

Five hundred years ago, if you had asked your friends the meaning of the word "Responsibility," he would perhaps have answered: "Responsibility is the feeling that makes me see to it that my family and myself are well fed, and that my coffers are filled with gold pieces."

Narrow and selfish as this reply may seem, it could not be so considered when viewed in the light of public opinion existing at that distant time. "Responsibility" was then, almost entirely, a personal term. It applied to the intimate relation of man with man. Its broader meaning, as related to the existence of the state was but little thought of. Indeed it has been only within a comparatively short era that the more extended and more modern application of this term has been realized by educated humanity.

In ancient and mediaeval times, the citizen—if we can name the subject by that term—had no idea of any responsibility existing on his part toward the ruling power: That is, town and the State. Born in this or that particular part of the earth, it was his simple duty to feed himself, to keep warm, and to lift up his strong arm in defense of the mighty king who was placed

over him by the will of God. If he had any creed to govern his acts toward the ruling power it was: "My Country—always!" Patriotism indeed, blind as it may have been, was the one virtue of his *jural* existence. In his eyes the King could do no wrong. The King was divine; whatsoever that God-sent personage willed, it was always right.

It will not be necessary to dwell upon the gradual change from this ancient belief to the more recent conception of the word under consideration. Suffice it to say that in the history of nearly all nations, this theory of "the divine right of kings" became, in course of time, a useless one. As the masses, the people, grew to be a definite and powerful factor in state government, this idea passed away, and the relation of Ruler and Subject became something wherein the growing responsibility of the latter was clearly seen.

To-day, hardly a State exists where the people do not have *some* responsibility in the government. The modern republic, borrowing as it does many of the classic ideas of self-government, is based upon the proposition that the *de facto* right of existence lies in the voluntary will of the people organized into a society known as the State. Instead of centering the inherent strength in the Ruler, it is placed absolutely in the Ruled. The Rulers possess what is known as "delegated power." Thus we can see how the term "Responsibility" is to-day closely allied with the functions of the latter class. To reduce this theory to a concrete statement, we may say in a word that at the present time the Man *is* the *center* of the State.

Realizing the full meaning of this, and believing in the superiority of the republic over the monarchy, let us consider why this term "Responsibility" carries vital significance to the modern citizen.

It is generally maintained that the real foundation of the State is the Home. Let the Home be a unit perfect and pure in itself, and the State is forever secure. Over this Home the man should have a great and ever present responsibility. Not only the responsibility resulting from ties of love and kin, but responsibility arising from the clear conception that the Home is the builder and the maintainer of the strength and integrity of the larger unit, the State. Thus should the man hold himself responsible for the moral tone of his family, for its religious tendencies,

and more than everything else, for its general education. This feeling of responsibility is far in advance of that possessed by the father of families in past generations. Its horizon is broader, and its purpose nobler.

Important, however, as is the responsibility of a man over his family, the secret of the rightful conception of the duties implied in the word lies in the man's actual and personal relations toward the State, of which he is an individual and a necessary factor. What these relations should be is implied in the words of Abraham Lincoln when, upon the battlefield of Gettysburg, he spoke of the United States as "a government of the people, by the people, for the people." Such a government could not exist without the "people's" vividly realizing the full meaning of the word "Responsibility." And realizing the meaning, it becomes the duty of the "people" to do their utmost in maintaining that responsibility.

How this responsibility is to be exerted is a subject upon which volumes may be written. In the narrow scope of the present paper, however, we can point out only the most obvious duties resting upon every responsible citizen of this, or of any other country, where the power is vested in the general public.

First it is the *moral duty* of every citizen to cast his ballot. This, perhaps, is the most potent method in which he can actually show his responsibility for the State in which he exists. And casting his vote thus, he should do it, not according to a blind and ignorant support of the "platform" of this or that party; not as a "Republican," or a "Democrat," but as a man who holds honest convictions and who *believes* in the principles his ballot represents. Theoretically, therefore, he should hold himself aloof from all party. But practically, on account of causes too numerous to mention, such a procedure is well nigh impossible. If he *must* second this or that party, let him exert his strongest effort to raise that party above the mere "machine" which has in the past too often characterized such organizations.

Broader even than his relation to party, though directly connected with it, the attitude of a citizen toward public questions should be carefully noted. The citizen should acquaint himself with the general trend of public thought. Vulgarly speaking, he should be "up with the times." He should feel it his *duty* to acquaint himself with the current events of both his

own country and others, with a view to understanding the various changes in public opinion. By this means alone can he feel the responsibility resting upon him for doing his best to place the State upon a higher and better level.

We must not infer from this that a man should become what is to-day known as a "politician." It does not mean that a citizen should feel it resting upon him to enter closely into the actual legislative workings of his country. It does mean, however, that each and every intelligent subject should always keep himself in close touch with his sovereign state; that he should realize that he is a part of the whole. It means that he should say of *himself* what the great French monarch said so many years ago: "L'État —c'est moi!"

H. B.

THE RIGHT OF EMINENT DOMAIN.

During the past sixty-seven years the railroad has been born and has spread rapidly throughout all the states of the Union.

The first trial of a steam locomotive in America was at Honesdale, Penn.; thousands of curious spectators crowded together to see this wonderful trial. Wonderful it truly was and who among them thought that in a little over half a century the United States could boast of a railroad in every state and a station in every city.

One is filled with astonishment in considering how the railroads have been so miraculously increased. Not only does the steam railway cause inquiry but also the more recent electric railway, each of which "in some small way," brings upon the individual, the nation, and the whole world, a certain amount of risk, a certain amount of loss or gain, which gain has, in a large measure, helped to promote this wonderful enterprise.

The "Right of Eminent Domain" gives to a railroad company the right to go where it sees fit and where the accommodation of the public demands. No matter how neatly the landscape gardener has laid out his grounds, no matter how convenient the barn is for the farmer, if a railroad company deem it necessary to go through the grounds of the landscape gardener or to have the barn moved, they can do so.

Shouldn't there be broad exceptions to this "Right

of Eminent Domain?" Is it just for them to pay their own prices or none?

At the present day in the city of Boston, the foundation work of some of the largest buildings is being undermined. The Boston subway one of the greatest undertakings of the city is penetrating the very heart of Boston. In its course it passes through the Old Granary burying ground, and when the excavations were made, an immense crowd stood watching the process; as bones and pieces of silverware were brought to light and were removed to some more secluded spot.

The electric railway also has the right to go where it chooses.

True it is that not all citizens are effected by the requirements of transportation but surely there are many whose property has been spoiled and who have received the railroad's price, instead of the seller's.

In the West the railroad company builds its roads through the farms without putting up fences to keep the animals away. Often times the cows are killed. The result is that the owner brings suit against the company but finally loses because it is mostly railroad men that fill the jury's list.

Yet what should these dissatisfied parties do? Should they continue in complaint and discord or should they sign a document of approval when they feel and know they are not receiving the amount they deserve.

In looking over these few instances of the "Rights of Eminent Domain" we can see where the public is favored or injured as the case may be.

The means of transportation in our country are arranged more skillfully and more attractively than in any other country of the world. Great has been the expense to the company where a road is built through such places as the canon of Colorado, or where tunnels have to be dug, as through the mountains of Pennsylvania and Virginia. The track is laid and when some of the largest rivers are reached either bridges or ferry boats are used bringing an immense amount of cost to the railroad company; but when the work is finally completed and the trains move along over the rails, bearing freight and many people, is not this the time when the question of the "Right of Eminent Domain, should be discussed?"

The business men of the country are usually in a

hurry. An occasional glance at some extraordinary bit of scenery is sufficient for them and "to get there" in the "best way possible" and as "quickly as possible" remains as the only end in view.

The railroad is and should be adapted to the use of our influential men, for it is these that make the country and it is these influential business men that make the railroads.

Are we not helping the country by sacrificing for it, if we can in any way assist the men, the business men of our land?

No severe check will be received by the railroad company if a few individuals are not pleased, no severe check was experienced by the Boston subway when the people began to talk of "Digging up the dead for the wants of the living;" the subway keeps steadily lengthening and when finished, words of praise instead of insult will be heaped upon the heads of the various contractors.

Thus we see the bearings of this question of the "Rights of Eminent Domain." When each one is for it instead of being against it the severity and injustice which have been felt so strongly in the past will be lessened.

W. S. FISHER.

THE SENIOR ELECTIVE COURSE IN AGRICULTURE.

(The fourth of a series of articles on the senior electives.)

Why is it that the farm as a rule does not pay to-day? This is a pertinent question and if discussed freely might lead to the discovery of a number of causes all more or less responsible for the present state of affairs. But the great cause is the lack of business ability and a knowledge of scientific methods on the part of the farmer. This is where the agricultural department of this college and particularly the work of the senior course benefits the young man who intends to take up some agricultural pursuit as his life's work.

Owing to Prof. Brooks' absence abroad the work is being carried out by the assistant professor, and, while we recognize the fact that no two instructors can give exactly the same course even in a prescribed schedule it is the aim of the acting professor to follow the course outlined for the Senior class by Prof. Brooks.

The work planned, is, briefly stated, as follows:

FALL TERM.

1. Live Stock Breeding.
 - Principles of Heredity and Variation.
 - Atavism.
 - Special phenomena in Breeding.
 - In and In-Breeding.
 - Cross Breeding.
 - Correlation of Structural Parts.
 - Dismissal of Practical Application of Principals.
2. Dairy Farming.
 - Location, Crops, Buildings and Equipments.
 - Dairy breeds of Cows.
 - Feeding for Milk and Dairy Products.
 - Physical Properties of Milk.
 - Milk Constituents.
 - Production and Management of Milk.
 - Pasteurization, Sterilization and Sanitary Milk.
 - Cream, Butter and Special Dairy Products.
 - Practical Work.
 - Management of Milk.
 - Milk testing. For fat, total solids, etc.
 - Use of separators.
 - Cream Ripening (Use of Pure Cultures).
 - Butter Making.
 - Pasteurizing and Preparation of Sanitary milk for Market.

WINTER TERM.

- Breeds of Farm Animals.
- Origin, development, qualities and structural points of all improved breeds of horses, cattle, sheep and swine.
- Practical Work.
- Judging all classes of farm animals to scale of Points.

SPRING TERM.

- Animal Feeding.
- Principle of Nutrition.
- Composition and Digestability of Food-stuffs.
- Relation of Nutriment to sustaining Life and Producing, Meat, Work and Milk.
- Nutritive Ratio and Feeding Standards.
- Compounding Balanced Rations for Farm Animals.

The library is well equipped with books on all of these subjects and a student may, outside of the regular lectures, get a great deal of help by reading books along the line of work taken up in the class room.

During the lectures on the breeds of farm animals, models showing the representative types of each breed are used for illustration. These models were on exhibition at the World's Columbian Exposition and were imported from Germany.

The barn has a well equipped dairy furnished with the best dairy apparatus where practical work in the dairy is studied.

The work of the year has to do mainly with animal industry and forms a valuable supplement to the preceding work in general agriculture. When we realize that half the husbandry in the state is concerned with the management of farm animals and their products the need of thorough training in this important branch is evident. It is the aim of the department to give thorough theoretical and practical instruction according to the plan outlined and to fit the student for the management of any branch of animal industry or dairying.

 Y. M. C. A. TOPICS.

Regular meetings are held Sundays, 4-00 to 4-45 P. M.; Thursdays, 7-00 to 7-45 P. M.

Dec. 3. Christian Ideals. Matt. 5: 1-16, 48.

Dec. 6. How to win our country for Christ. Luke 14: 16-24.

"Hast thou a lover?" asked he.

"O maiden of the Rhine?"

She blushed in sweet confusion

And softly faltered, "Nein."

He felt rebuffed and knew not

What best to say, and then

A sudden thought came to him,

And he pleaded, "Make it ten." —Ex.

Captain Thorn of Yale has entered Lafayette University in the mining department. He will be a valuable addition to their eleven.—Ex.

G. O. Lang, the composer of the most popular song of the day. "In the Shadow of the Pines" has sent us a new song. "Say not Good-bye." We predict for it a larger sale than "In the Shadow." It is simply beautiful, easy to play, melodious, and a perfect adaptation of exquisite words to a delightful melody. We recommend our readers to send for a copy. The publishers, Legg Bros. 1008 Walnut St. Kansas City, Mo., are making a special price of 25c per copy. To any of our readers who have not already "In the Shadow of the Pines," they will send one copy of each for 50 cents.

ANNOUNCEMENT OF '98 INDEX.

The time approaches when the *Index* is again to make its annual appearance before the students and alumni of the college.

Of late years the rapid advance made by the *Index* Boards in the increased size of the book, the additions of new and striking features and the great expense incurred in providing finished artistic drawings has, perhaps, been a little too rapid, and more than the growth of the college would justify. Still, it has been a laudable desire on the part of these boards to bring their productions to as great a degree of perfection as possible, and, far be it from my purpose to argue against an ambition which is so praiseworthy.

The Class of '98 in striving to keep abreast the times, has had to meet and overcome many difficulties. Not only the smallest class, in numbers, in years, it has to bring forth its book knowing that the sales will of necessity be small owing to the present small number of students in college. Then too, the great financial stress of the country before election was keenly felt, limiting to a great extent, the advertisements upon which depends in a large measure the financial support of the book. However, The Class of Ten has felt that it must not be said that it had to drop back to the standard of ten years ago, and in the face of all difficulties it has endeavored to publish a book on a par with former volumes. How well we have succeeded we leave our readers to judge. We trust the alumni will appreciate our efforts and we look to them for the sale of those books which, in more prosperous times, might be sold at home.

We have, with the assistance of President Goodell, succeeded in compiling a thorough and strictly reliable list of alumni; we are greatly indebted to Mr. Charles L. Flint who has kindly written an alumni communication for the *Index*; and we are especially grateful to Prof. Herman Babson for a literary article.

We wish to thank President Goodell and all Alumni and friends who have in any way assisted us.

We do not wish to be forward in praising our own production, we will not mention our numerous improvements, we only trust and hope that our friends will feel sufficiently interested to send for a book and find out for themselves what we are too modest to mention,

College Notes.

—C. M. Adams '00 has left College.

—Thanksgiving was first observed in 1621.

—The Senior essays in the English department are due on Friday, Dec. 4th.

—John Marshall Barry '97 has returned from a short visit at his home in Boston.

—President Stubbs of the Washington State College visited this College last week.

—J. L. Lovell of Amherst has been chosen as class photographer for Ninety-seven.

—The Sophomore class in French have just begun their second book. The title of this new reader is "Chatrian's Le Conscrit."

—We are glad to welcome Prof. Wellington back to the College again, but sorry to learn that his health is still impaired to a considerable extent,

—A. S. Kinney '96 is at present in the employ of the Botanical department, experimenting with the effect of electricity upon the germination of seeds.

—W. E. Chapin '99 is reported to be fast recovering from his accident of a few weeks since, and expects to return to College soon after Thanksgiving.

—At a meeting held by the Springfield Horticultural society Nov. 6th, Dr. G. E. Stone lectured before a large audience upon the subject of "Plant Growth."

—Dr. Stone, at the Experiment station, department of Pathology, is preparing a series of experiments regarding the relation of nematode worms to sterilized soil.

—Rev. Mr. Lane of North Hadley occupied the College pulpit on Sunday, Nov. 22nd. while Dr. Walker in exchange preached before Mr. Lane's congregation.

—Mr. C. L. Flint '81 has been recently appointed to fill the vacancy left on the Board of Trustees of the College, by the death of Mr. Harwood, which occurred a few weeks ago.

—An advisory committee consisting of Professors Maynard, Stone and Metcalf, has been elected by the faculty to make proper investigations concerning the various college organizations,

—Hair cuts are in order now. Go early and avoid the rush.

—The Senior division in Horticulture have been receiving practical instruction in the making of currant, raspberry, grape and blackberry cuttings, also in the latest methods of grape pruning.

—At the Chrysanthemum show recently held at Northampton, the Floricultural department of the College was well represented, that department entering the best exhibit of cut flowers.

—The Senior cane committee has presented samples of sticks for the inspection of the class; the class cane has been chosen, and the committee are now ready to receive orders for the same.

—Platoon drill began on Monday, Nov. 16, and nearly all of the officers and non-commissioned officers of the Senior class have had an opportunity to show their proficiency (?) in commanding the platoon.

—The members of the Senior division in Political Economy handed in their thesis subjects to Dr. Walker yesterday. The theses will not be due until some time next term; the exact date will be given out later.

—The masons have recently finished repointing the stonework of several of the College buildings. This is a much needed improvement, not only to the appearance of the buildings but to their lasting qualities.

—The poorer electric lamps in many of the students' rooms have been replaced by new globes for which such students are duly thankful. Mr. Wallace, the College electrician, is always accommodating, and is very popular with the students.

—The boarding-house is now well lighted by electricity. Students, let this console you when you start out some evening to grope your way to that building, when it is so dark "you can't see your hand before your face," We didn't have electric lights 50 years ago.

—Mr. R. A. Buddington, secretary of the College Y. M. C. A.'s of Massachusetts and Rhode Island, gave an interesting talk before the Y. M. C. A. Sunday afternoon, Nov. 8th. The week following being the week of prayer for colleges, meetings were held in the Y. M. C. A. rooms each evening.

—In accordance with the usual custom, the faculty has been petitioned by the students for a Thanksgiving recess, which request has been granted. College will close Wednesday, Nov. 25th, at 10-30 o'clock, and open on the following Tuesday at 8 o'clock A. M. Monday will probably be made up, however, on the following Saturday.

—President Simms of a large college in Jamaica, visited this institution last week. The object of his visit was to inspect the Agricultural department of the College, with a view of establishing a like course in Agriculture at the College of which he is President. He expressed himself as very well pleased with the place, in every respect.

—The Amherst Water Company has been troubled considerably of late by the bursting of the water main in two different parts of the town. Hardly had one leak been repaired, when their attention was called to another. Many of the townspeople were greatly inconvenienced, and especially the students at M. A. C., there being no water running through the pipes for two or three days.

—It is interesting to note the various souvenirs of the Food Fair recently held in Boston, that one sees upon visiting the rooms of most of those students who attended that attraction. There are to be found samples of all sorts of food-stuffs, beverages, medicines, soaps, face powders, also a composition which is sure death to the *Blatta germanica* and numerous other articles of more or less use.

—At the annual convention of the American Association of Agricultural colleges and experiment stations held at Washington, D. C., Nov. 10th, 11th, and 12th, the following members of our faculty were present: President Goodell, Dr. Lindsey, Dr. Stone and Prof. Metcalf. Dr. Lindsey read a paper before the Chemical society, and Dr. Stone read one before the Botanical society. President Goodell served as chairman of the executive committee.

—The parade which took place in Northampton, Tuesday evening, Nov. 10th was well attended, and proved to be a very successful affair. About 75 students from the College accepted the kind invitation from the officers in charge of the demonstration, and did creditable marching at the head of the column. A special train was run to Northampton and back for

the benefit of the M. A. C. cadets and any others who wished to attend the parade. This was the second parade which the students have taken part in this fall, and was an improvement upon the generally good marching done in Boston about three weeks ago, when the students took part in the intercollegiate Sound Money parade.

—The Sound Money parade which took place in Amherst, Friday evening, Nov. 13, attracted a large crowd, both to take part in the demonstration, and to watch and cheer the long line of well arranged parties. The M. A. C. cadets did not march as it was at first expected, the reason given by some being that they were not assigned a place at the head of the column. This was not so; the students did not refuse to march on that account, but because they were placed almost at the rear of the column, and among inferior parties. We do not expect first place everywhere we go, by any means, but what we do ask for, is the place where we belong,—the place we merit as a military organization.

—The signs of the times would seem to indicate that all of the ancient Aggie spirit is not yet dead. Various manifestations of awakening life have recently been seen upon the campus. Only a few mornings ago, we were startled at the sight of a man hanging from the top of one of the football goal-posts, by means of a rope which was scientifically noosed about his neck. Upon closer examination it proved to be only an effigy constructed upon the latest mathematical principles. On the same evening the effigy "saw its finish," its exit from this world being effected by the well known formula " $K^2 + m = 0$ ". In this equation, K represents kerosene, and m the matches. Another item of importance was the incident connected with the "one hoss shay" whereby that well-known vehicle was escorted to a prominent place on the band stand. The removing of the tongue from the College bell by some of the Freshmen (?), though doubtless intended for a joke, has proved to be a matter of great inconvenience to the faculty and students, and we hope it will soon be returned.

Notes and Comments.

The first instalment of DuMaurier's serial appeared in *Harper's* for October. It is entitled "The Martian." His death proves a heavy loss to the present world of literature, an artist by instinct "there is," says one critic "the same ease, charm and familiarity about his written work as about his pen sketches, you feel at home with them. DuMaurier speaks to his readers rather than writes for them." The author left a considerable fortune, the result of his late literary successes, to his widow and children.

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The days of the Poster are numbered according to recent press comments. Like all inartistic fads, the grotesque has arrived on the scene, and in some places law and order protest against what might be termed the extreme in vulgar pictorials.

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If rumor can be credited, Mr. Bryan, the late democratic nominee for president will on December first begin a lecture tour through the country, talking on non-partisan lines. Atlanta, Ga. will be his starting point and it is said the contract involves fifty lectures with a compensation of fifty thousand dollars.

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So far the war in Cuba has not made what might be called a decisive turn. Weyler's forces are directed against Maceo's troops in the western part of the island. Spain is making a final effort which if directed rightly may banish all thought of Cuba's freedom.

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Transactions between England and the United States about the Venezuelan boundary question has been referred to the king of Sweeden, Oscar II, for settlement, his decision will be final.

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Arrangements have been completed by the State Board of Agriculture for the winter program for the annual meeting commencing December 1st and lasting three days. It is expected that there will be an exhibit of a large number of new varieties of apples, and of some interesting results of spraying by Prof.

WANTED—SEVERAL FAITHFUL MEN OR WOMEN TO travel for responsible established house in Massachusetts. Salary \$780, payment \$15 weekly and expenses. Position permanent. Reference. Enclose self-addressed stamped envelope. The National, Star Building, Chicago.

S. T. Maynard. A lecture will be delivered by Prof. F. S. Cooley entitled "Use of Pure Culture in Butter Making."

* * *

The football season of '96 is nearing its end. During the past ten weeks the interest manifested in this national game has been unprecedented; a number of new elevens have made their appearance on the grid-iron, the most prominent being the Carisle Eleven composed entirely of Indians. The tone of the game has become less brutal and accidents are not so numerous as in previous years. Let us hope that this great gain will continue its development in the right direction and relieve itself of the brutal and vicious character that it has received during former seasons.

* * *

It is stated that the powers propose to guarantee a loan of \$25,000,000, to be used in carrying out the Sultan's latest reforms. They will probably find that the old fellow is fooling them again and that he will not reform.

* * *

Poor Bacchante of Boston is doubtless very glad that she has won her law suit and can now appear in the Hub without fear of being annihilated.

Alumni.

We wish to say to the alumni that our college pin is quite the proper thing. It looks well, fits well, and wears well. A notice will appear in this paper before the next lot is ordered to notify all who wish to buy. Price \$2. All correspondence should be directed to George H. Wright, '98, No. 8 South College.

'78.—A. A. Brigham, professor of Agriculture, Rhode Island College of Agriculture and Mechanic Arts. Address, Kingston, R. I.

'91.—The address of F. L. Arnold is No. 335 Livingston St., Elizabeth, N. J.

'93.—The address of F. H. Henderson is now No. 31 Harvard St., Brookline, Mass.

'94.—William E. Sanderson, shipping clerk Washburn Mowen & Co's., Worcester. Permanent address, No. 37 Paine St., Worcester.

'95.—The address of H. D. Hemenway is No. 416 River Ave., Providence, R. I.

'96.—H. C. Burrington, assistant at the Dairy School. Address Amherst, Mass.

'96.—F. L. Clapp, in the employ of the Metropolitan Water Board. Address No 179 Boston St., So. Boston, and not 197 as was given in our last issue.

'96.—L. J. Shepard, assistant Horticulturist at the Agricultural Experiment Station of the Maine State College, Orono, Me.

'94.—A. H. Kirkland, assistant entomologist to the Gypsy Moth Commission visited college last week.

'96.—C. A. Nutting visited College last week.

LIBRARY NOTES.

A Primer of College Football. By W. H. Lewis. This is a very practicable little book and one that is sure to be appreciated by the students. Mr. Lewis used to be one of Amherst's best players and graduated from there in 1892. Since then he has taken a course in medicine at Harvard and has played on Harvard's team. He treats his subject scientifically from the very foundation of the game and also gives a chapter on training. Many of the plays are illustrated from instantaneous photographs. This book is the gift of John R. Perry, '93.

Have you heard the new song, "In the Shadow of the Pines?" It is immense! Legg Bros., of Kansas City, Mo., have it, and they are making a cut price of 25c. a copy. Take our advice and send for one.

Wanted—An Idea Who can think of some simple thing to patent? Protect your ideas; they may bring you wealth. Write JOHN WEDDERBURN & CO., Patent Attorneys, Washington, D. C., for their \$1,800 prize offer and list of two hundred inventions wanted.

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R. R. TIME TABLE.**BOSTON & MAINE, SOUTHERN DIVISION.**

Trains leave Amherst going East for Ware, Oakdale, South Sudbury and Boston at 6.09, 8.16, A. M., 2.31 P. M., Sundays 6.09 A. M.

Returning leave Boston at 8.45 A. M., 1.30, 4.00 P. M. Sundays 1.30 P. M.

For Worcester 6.09, 8.16 A. M., 2.31 P. M. Sundays at 6.09 A. M.

Returning leave Worcester at 9.15 A. M., 2.25, 4.58 P. M.

6.09 A. M. and 2.31 P. M. connect at Ware with north bound trains on the Ware River Branch of the B. & A. and the 6.09 8.16 A. M., and 2.31 P. M. connect with south bound trains on the same road.

Trains leave Amherst going West to Northampton, at 7.40 10.20 A. M., 12.05, 1.15, 4.40, 5.14, 7.28, 8.40 P. M. Sundays 10.45 A. M., 5.19, 8.30 P. M.

Returning leave Northampton at 5.55, 8.00, 8.50 A. M., 12.30, 2.15, 4.20, 6.00, 8.20 P. M. Sundays, 5.55, 10.20 A. M., 7.35 P. M.

Trains connecting with the Connecticut River R. R., going south leave Amherst at 7.40, 10.20, A. M., 12.05, 1.15, 4.40, 5.14, 7.30, 8.40 P. M. Sundays 10.45, A. M., 5.19, 8.30 P. M.

Trains connecting with Connecticut River R. R., going north, leave Amherst at 10.20 A. M., 1.15, 7.28 P. M.

NEW LONDON NORTHERN.

Trains leave Amherst for New London, Palmer and the south at .05 A. M., 12.16, 5.57 P. M.

For Brattleboro and the north at 9.08, 11.50 A. M., 8.05 P. M. Trains leave Palmer for Amherst and the north at 8.20, 11.00 A. M., 8.00 P. M.

Trains going south connect at Palmer with B. & A., trains for the east and west.

North bound trains connect with Fitchburg R. R. for the east and west.

NOTICES.

The President will be at his office at the Library from 2 to 4 P. M. every day except Saturday and Sunday.

The Treasurer will be at his office at the Botanic Museum from 4 to 5.30 P. M. on Wednesdays, and on Saturdays from 3 to 5-30 P. M.

The college library will be open for the drawing of books from 2 to 4 P. M. and from 6-30 to 8 P. M. every day in the week except Saturday and Sunday; on Saturday from 8 A. M. to 12 M., from 1 to 4 P. M. and from 6-30 to 8 P. M.; on Sunday from 12 to 3 P. M., for reference only.

Amherst College Library will be open from 8-45 A. M. to 6 P. M. and from 6-30 to 9-30 P. M. except Sundays and the Holidays. M. A. C. students may obtain the privilege of using this library by applying to Pres Goodell.

Mails are taken from the box in North College at 7-15 and 11 A. M. and 4 and 6-15 P. M.

The zoological museum will be open daily at 2-15 P. M. except Tuesdays and Sundays.

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AGGIE LIFE.

VOL. VII.

AMHERST, MASS., DECEMBER 16, 1896

NO. 6

Published Fortnightly by Students of the Massachusetts Agricultural College.

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Editorials.

WE take pleasure in presenting to our readers the Christmas number of the AGGIE LIFE. We have striven hard to make the issue one of the best in both size and quality, and trust that our efforts may meet with your approval.

THE fall term of 1896 has closed, and in glancing back over the time that has elapsed since college opened in September we cannot but be impressed with the fact that the college year has had a most auspicious beginning. Several events have occurred to interrupt college routine, yet the men have always returned to college punctually, and have resumed their work in a studious spirit. We believe that the students have succeeded in drawing public attention to the college by the creditable work done in the parades in Boston and Northampton during the recent political campaign. The students as a whole are beginning to take a deeper interest in the welfare of the college. The spirit of grumbling and fault finding that was so prominent during the fall term of '95 has disappeared, we hope, never to return. An "Era of

good feeling" has dawned upon us, and from Senior to Freshman all are intent upon their work with a cheerful spirit. The system of Senior electives is giving greatest satisfaction, and encouraged by this success certain classes are beginning to make a movement toward Junior electives. This is a matter that should not be hurried, yet in due time we hope to see such a system in vogue. There have been one or two occurrences during the term that have tended to disturb the general feeling of good will. A slight difference of opinion between two members of the faculty and the students as to the justice of a certain matter, led to one or two harmless demonstrations upon the campus. If these members of our faculty will remember that "there are two sides to every shingle, however thin it may be," we believe that nothing of the sort will occur in the future. With this exception students and faculty have worked in closest harmony. Now after a term of close application, the Christmas holiday comes like an oasis in a desert. For a time books are forgotten, and the Yule-tide spirit takes possession of our lives. As you go home take with you a copy of the AGGIE LIFE with its best wishes for a Merry Christmas and a Happy New Year.

As the greatest holiday of all the year approaches, and as you leave your college halls to go to your homes, you are probably asking yourselves. "What are we going to give to our friends for Christmas?" It is a most worthy characteristic of our race that we plan as to what we shall give before we conjecture as to what we shall receive. At this season, if at no other time, we hear the precept ringing in our ears that "it is better to give than to receive."

Among your friends,—and this remark is addressed to every student in college,—let not one be forgotten. Remember her who in future years will stand as your closest friend—your own Alma Mater.

What can you—Senior, Junior, Sophomore, Freshman—what can you give to Old Aggie? Have you ever seriously thought of that? Has it ever occurred to your mind that your college stands in need of a gift that will make her prospects brighter, a gift that will enable her to place herself in the social and educational society to which she belongs? And has it ever occurred to you that such a gift will be the grandest thing that has ever been given to the college?

What is this gift?

It is the gift of *your loyalty*. Give your college that loyalty, freely and gladly. And with that loyalty, give her also your active support. Do what you can for her advancement; speak a good word for her in other localities; influence your friends to come here with you; and last of all, treat her as she deserves to be treated—as the Mother who is fitting you to become citizens of a century yet unborn.

There is one other point for you to consider:

We hear a great deal now-a-days about *reform*. Are there not one or two things right here in college that you can reform? Is it not possible that, in past years, you have been a little careless? If you give your college the gift just mentioned, can you not do something for yourselves, too? New Year's Day follows closely upon the heels of Christmas. Can you not let your gift to Old Aggie be followed by a reform along certain lines?

Ask yourselves a few questions; and answer them throughout the year of 1897:

1. Are you, or are you not making the most of your opportunity?

2. Is your standard of scholarship what you think it ought to be?

3. Is your general deportment outside of the classroom what you would wish it?

4. Are you retreating, marking time, or marching onward?

REVIEW OF THE '98 INDEX.

It is a pleasure to take up a copy of the new *Index* and to speak a word in its praise. It is fresh from the printer, as we learn from the fact that the cover is rather sticky as we turn the volume over. The editors guarantee that there is not a "dry page" in it.

The book is neatly bound in red cloth, the front cover bearing the title "*Index '98*" in a graceful design executed in aluminium. Here, as elsewhere, it seems to have been the aim to combine simplicity with artistic effect. This tendency is especially noticeable in the illustrations, which, though rather limited in number as compared with those in preceding volumes of the *Index*, are extremely well done, reflecting great credit upon the artist of the board.

In dedicating this volume to Professor Mills the editors have certainly struck a popular chord among the students, and have honored a man who is an honor to our college. The portrait of Professor Mills which appears as frontispiece is one of the finest specimens of half tone work that we have seen in any college publication.

The present volume contains the usual class and society lists, a correct list of alumni, and pictures of college teams, glee club, and editorial boards.

The book is conspicuous for its lack of severe "grinds" and "roasts," the local hits being of a very mild character; yet arranged in such a judicious manner as to prove highly amusing.

The literary features are certainly of a high order: Prof. Babson's story "A Breeze from Old Ocean," and Dr. Flint's short essay on "Alma Mater," being the leading features. "A Breeze from Old Ocean" is bright and original and has the genuine flavor of a sea story. The unusual amount of verse is an indication of a budding poetical genius among the editors.

Turning to the editorials we find ably written articles upon such timely topics as "Changing the Name of the College," "The Need of Athletic Training," "Intercollegiate Drills," "The Two Years Course," "The Winter Dairy School," and "Loyalty to Our College Paper." We especially commend these to our faculty, our *Alumni* and the trustees.

We cannot refrain from saying that the letter from "A Freshman" would have been in better taste in a less prominent place in the book.

The typographical work is generally good, though we are of the opinion that the use of a uniform size of type throughout the book would have been preferable to the system adopted.

The large number of ads. shows clearly that the business manager is possessed of great tact and persuasiveness and would seem to indicate a financial success.

As a whole the present volume of the *Index* is deserving of the highest praise. We commend its careful perusal to students, to faculty, to alumni and to all who are interested in the welfare of the college.

Contributed.

A CHRISTMAS CAROL.

O'er the silent meadows,
 O'er the sleeping town,
 O'er the murmuring forest
 Pours a radiance down ;
 'Tis a starry splendor
 Glorifying night ;
 Shepherds, kings, and sages
 Wonder at the night.

See, O kings and shepherds,
 Magi from afar,
 Cradled in a manger,
 Israel's morning star !
 And through parted heavens
 Lo ! the angelic throng
 Voice their adoration
 In triumphant song.

O'er the silent meadows
 Floats the joyful strain,—
 O'er the murmuring forest,
 List ! it comes again :
 " Glory in the highest ! "
 Hark ! O sleeping town,
 " Peace, good will,"—the blessing
 Still on earth comes down.

Still the starry wonder
 Of that long past night
 Gleams adown the ages,
 Filling all with light ;
 And all Nature, joining,
 Swells the anthem still :
 " Glory in the highest,
 On earth, peace, good will."

HARRIET BREWER.

A CHRISTMAS IN AUSTRALIA.

A TRUE STORY.

He always spoke the truth. You would have thought so. Yes, that tall, handsome, globe-trotting cousin of mine never smiled at his own tales for they were always true. Even my grandmother believed them until he told the flying-fish story. Then she doubted all. But to-day he would tell us one we could not question. So we all gathered round him in front of the fireplace and listened as he began :

" No doubt you all have heard much of Australia, but I am quite certain you do not know everything about that far-away country. You do not know that there you may find trees with leaves growing vertical to the earth ; there, stones grow on the outside of cherries ; there you find the *kiwi* (a wingless bird now almost extinct), that flies backward into its nest ; and there, even your beloved Yule-tide comes in the heat of summer. Two years ago, one sultry Christmas, ten young fellows and myself were prospecting for gold, way back in the western interior. The craze had struck us, and we had led our pack-mules through forest and cane-brake into a rocky region, eighty miles from a settlement and three hundred miles from a railroad. We strung our tent at the foot of a cliff overlooking the claims where rumor said we should find the yellow metal. Day after day, we toiled with pick and sieve, and for three months we had worked from morning till night with only an occasional find to keep up our spirits. When one would find a three-ounce nugget—and how rare they were—we would work like beavers for several days, but the between-times were long and dull.

" At mess, each man had to take his turn as *pakeha* (cook). It was a tough job, and the worst part of it was that no water was to be found within nine miles, and after going that far for it, we had to pay a shilling per gallon. A sharp witted half-breed had found the only well in the section, and Onawe Pah dispensed water like your medicine-man in America. My week as *pakeha* was out the night before, and Jack Daintrey had taken charge of the hams and bacon. Early Christmas morning, we found that the water in the barrels was almost gone, and Jack started to go for a fresh supply. 'I'll be back by noon, boys,' he said, and mounting one of the 'ponies,' he rode away, gaily whistling 'The Girl I Left Behind Me.'

"The rest of us had taken a day off, and the morning passed slowly enough as we lounged about the camp, smoking our pipes, and longing for a cool drink.

"At twelve o'clock, we had seen no sign of Jack, and at one, we had begun to feel anxious. 'You don't suppose anything could have happened to him, do you?' asked Tom Digby as he picked up his repeater and began pushing cartridges into the magazine. No sooner had he spoken than we heard in the distance the reports of several pistol shots followed by a hubbub of coarse cries and yells.

"Hastily grabbing our guns, we ran down the trail, keeping an eye open for an ambush. We had not gone far before we met one of the mules tearing down the road with an arrow stuck in its flank. The trail entered a deep ravine, and on turning a sharp bend we suddenly came upon a mutilated body with an assagai through the breast, lying prone in the path. It was Daintrey. Stooping over the body I heard a whir and involuntarily ducked my head, barely escaping a deadly boomerang. Looking up we saw at least a hundred murderous Maori and Ponaturi rise from their ambush and rush upon us. Retreat was impossible. We were surrounded on every side. For a moment we stood stupefied, but in less time than it takes to tell it, we were behind a friendly barricade of rocks. On came the savages yelling like demons. What were ten Englishmen against ten times their number? We proceeded to show them in a most convincing manner. Crack! crack! crack! went our Spencers. Whir! whiz! came a shower of spears and arrows. They were climbing over among us. A huge *rangitera* (chief) dashed at me with uplifted weapon, but I shot him before the keen *hau* left his hand. Bob Barker was in the grasp of a giant Maori whose eyes gleamed like fire, as in the nick of time, Digby's knife reached his breast. Bob fought desperately, and while the blood flowed from a wound in his head he used his clubbed rifle with terrible effect. Still they came, backed by numbers. The fight was long and fierce; and to us it seemed an age. The strain was terrible. But at last they were forced back where we could use our guns. A few more rounds, and they wavered and scattered. Their first attack had failed.

"None of us were seriously injured; one-half their

number had fallen. We rested while we could, for we knew they would be at it again. They held a powwow and suddenly swept upon us in a mass. We were ready for them. This time every shot told. They piled themselves up in heaps before us; they stumbled over the dead, struggled towards the wall but got no farther. In this second assault they were cut to pieces. Not a soul lived to tell the story.

"That night, on the spot where he fell, we buried our dead comrade and erected a pile of stones over his grave. In him we lost a tried friend, but we had the satisfaction of knowing that in payment for his life, there in the ravine lay the bodies of a hundred warriors."

Ernest paused, and for a moment we were silent. Then my grandmother laughed in her peculiar way, and quizzingly asked, "And did *all* the donkeys escape?"

E. M. W.

A BIT OF FANCY.

Something was certainly the matter. The ivy leaves were excitedly whispering to one another. An early spring had brought forth many leaves, some of which had attained considerable size and strength, while others were just peeping from under the coverings of their cozy, winter beds. The trouble was this:—cruel Winter had not yet gone as they thought he had. He was only having a flirtation with gentle Spring. Spring in her soft and winning voice, with her warm breath and charming smile had won hard Winter for a time only. He was at first fascinated by her, but, repenting in his fickle old age, he returned to rule with his icicle scepter. He came from the north with a whistle, driving his wind steeds before him. The ivy leaves felt him and began to tremble and to sigh.

Among them were two leaves, a large and small one, close together. The small leaf rustled from itself a plaintiff little sigh and shivered as the chilling air rubbed against its tender face. The large leaf heard and pitied him. She took advantage of the next blast of wind to softly place herself over her tiny neighbor. The night came on; the cold was severe. She shivered and shook, and shook and shivered and froze the tips of her fingers. Many times she thought she must give up, but every time as a drowsy feeling

came over her, she would think in time and exert a new effort. Toward morning she certainly would have had to yield had not a warm ray from the rising sun just then bathed her chilled form.

Thus Winter spent his strength. Next day, welcome Spring came tripping back, laughing to herself because she had again gained a victory over winter. Spring with her healing balms and refreshing showers soon restored the larger leaf to strength and nearly to her former beauty. Yet she could not wholly undo what that night's exposure had done. The little leaf which had received no injury, in a short time became large and strong. The great kindness which had been done him was ever on his mind and it was always his concern that no harm should come to her.

While the spring and summer were passing, they never tired of telling each other of the flowers, which grew at their feet; of the birds that lit in their branches; of the fairies who brought them good tidings every night; of Robin Goodfellow and his many pranks; and of the secrets of lovers, who rested beneath them. How happy they were! They confided all to each other and never a cross word passed between them.

In happiness they passed the spring and summer, but as the autumn approached they began to think of what they should do. They counselled together long and earnestly. Said one to the other, "What shall we do? Winter is coming."

"Yes, I know it," answered the other. "Hard to think of it, isn't it? What are you going to do?"

"That is what I was thinking of when I spoke. You remember that you kindly sheltered me, one night last spring, during a heavy frost. I would have frozen if you had not for I was young and weak. But now I am large and strong; larger and stronger than you. Let me return your goodness; let me protect you from the cold."

"No," replied the other. "No, you must let me cover you. You are large and beautiful. I am homely and deformed. You must not be so, too."

Even as they were talking the air grew decidedly colder. The beautiful, strong leaf looked at his companion and saw that she was growing weak. He was moved with anxiety for her welfare and spread himself over her and soothed her with calm assurances. But the night was Oh, so cold! He shivered and

shook, and shook and shivered, till it seemed that he would roll from his place. He felt himself failing fast, already his face and finger tips were frozen to a dull red. He exerted himself to the last and when he felt himself becoming numb and falling, he softly bent forward and kissed her, who had once been his protectress, but who was now his care, and fell to the ground.

When she awoke and found her dear friend was gone her grief was terrible. She sighed and sighed. Nothing could pacify her. The fairies and all the forest nymphs brought warm breezes and bathed her swollen face. But it was of no use. Once, while in a passionate outburst, he lost her hold and she too fell to the ground. Thus their short lives ended, each having lived for the other.

You who may read this idle dream, think, whenever you stroll in the woods of an autumn day in search of prettily colored leaves and you find one dark red and another beautifully marked, think how the one protected the other.

C. A. C., JR.

EXTRACT FROM THE WRITINGS OF A DISTINGUISHED ESSAYIST OF THE 36TH CENTURY.

In the year 35—while on my annual tour of the planets, I chanced to be delayed during the Christmas holidays at Go-Go-UI-Osee on the great Ba-Ba canal of Mars. I was seeking at the time for the final element which was then necessary to complete the Periodic System devised by Newlands almost 2000 years before.

In the Americas it is now so common to refer to the inhabitants of Mars as our "missing link" that I shall be obliged hereafter to speak of them as such when I have occasion to refer to them in what follows, though I much prefer the name Kohl-Mahonkais, recently given to these interesting people by our modern American writers.

It is perhaps unknown to many that the true explanation of the presence of this strange people in the planet Mars is owing to a collision which at one time took place between Earth and Mars. It happened just at that stage in the evolution of life when the animal kingdom had reached a degree of development represented, as was supposed by the "missing link" which for thousands of years was wanting to complete a

theory of evolution expounded by the ancient Darwin, and which was sought after for many years upon the Earth. The jar caused by the collision simply shook this animal off the Earth over upon Mars which moved off carrying with it some of Earth's atmosphere and water. The loss of these, accounts for the many deep depressions now found upon the surface of the Earth. In the process of ages, man finally made his appearance on the Earth, coming out of the sea where all life has originated, but the "missing link" had found a resting place on another planet.

But to return, I took up, while at my leisure on Christmas day, an old book written in 1896 and in it I found some very interesting scientific views on the subject of what the writer calls "The Canals of Mars." These old writers are quite interesting and it is amusing to read their quaint presentation of subjects put forth as unquestionable facts, but which appear to us extremely ludicrous in their absurdities. This writer cannot account for the annual appearance or of what he believes to be canals. He suggests that possibly they may be a system of irrigation which the inhabitants of the planet are obliged to use to aid in the growth of vegetation. How very wide of the mark he comes! And yet what masterly logic he uses to arrive at his conclusions! What astonishment would be his could he catch a glimpse of the present! He would look in vain for that little Isle which furnished the style and fashion to the mimicing fops of his own time and country. The ocean of the Atlantic and her sister seas have long since engulfed beneath their angry waters the continents of the eastern hemisphere. His United States has been for centuries the mighty power of the United Americas. The bloomer girl and the masculine wife—jokes in his time—have had their day and have passed away as have the ages that separate him from our present time. No, he could never believe that his canals were but openings into the interior of Mars by which these people ventilate their peculiar habitation.

The story of the removal of this people from the surface to the interior of Mars is as follows:

After being shaken from the Earth onto this planet, they found for some time great difficulty in breathing. The air was much rarer and cold was experienced to an alarming degree. They found they were apparently much lighter than they had been upon the Earth.

When one made a step he found himself four times as far as he intended to advance. If he should jump he went so high and so far it made him dizzy. Running was so swift that the eyesight could scarcely follow the pace. In fact no one could arrive at the place he was endeavoring to reach and many serious accidents resulted. When lovers attempted to kiss each other, they would come together with alarming force and a nose would be battered in or a tooth knocked out and the unhappy creatures would go sprawling on their backs. Finding that the surface of their new home was of a somewhat different character from that of the Earth and much softer and more easily worked, they conceived the idea of excavating a home beneath the surface where gravity would be greater and cold less severe.

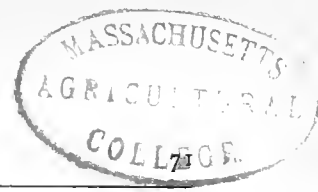
To-day these *bizarre* people enjoy in an original way the bounties of nature. Five miles beneath the surface there is a complete excavation of the planet. Supports at the regular intervals hold the outer crust in position. Here and there are openings to the outer world to allow the entrance of air, but except at stated intervals, these are kept closed and the air is compressed to the proper density by mechanical contrivances. Here are canals, rivers and lakes. Great electrical machines take the place of the sun in carrying forward the processes of the development and growth of plants. Vegetation is vigorous and luxuriant and the climate is delightful.

The beauty of this world cannot be imagined. Art and nature have combined to make the home of the Kohl-Mhonkais the quaintest and most exquisite little garden imaginable, the ideal home of a peace loving people.

THE SENIOR COURSE IN VETERINARY SCIENCE.

(The fifth of a series of articles on the Senior Electives.)

Of all the elective studies offered in the Senior year by the Massachusetts Agricultural College, none is of more importance and value to the student than the study of Veterinary. It is especially valuable to two classes of students: First, those who intend to follow farming as their occupation; second, those who intend to pursue further study in this line to fit themselves for the profession of Veterinary Medicine and



AGGIE LIFE.

also Human medicine. To the first class, this course gives a general knowledge of Veterinary, that will enable the farmer to give all animals under his care such treatment, as shall tend to prevent the occurrence of disease, to acquaint him with the causes, symptoms and prevention of contagious diseases and their relation to the public health. Since more than one half of the farm products are derived from the animal industry, we cannot fail to realize the importance of a general knowledge of Veterinary to the farmer and dairyman.

To the second class, those who intend to study Veterinary as their profession, the course here furnishes a general knowledge of the subject, which will give the student a firm foundation on which to base further study. It is not the intention of the department to turn out Veterinarians for practice, for this is impossible with only one year's study. The aim is to furnish such knowledge as will be of practical use to the farmer and also to the student of Veterinary science.

There is no line of business or any profession in this country which affords as great an opening as the Veterinary profession. During the last fifteen years, this science has made enormous strides in advancement and yet it is still far in the rear of the Veterinary Science in Europe. It is true that the profession has been degraded, by the so-called Veterinarians, who have taken a course of lectures from some "quack" and have had D. V. S. attached to their name; and have then been allowed to impose on the public by practices often more harmful than beneficial. Such people are a disgrace to any profession, and the law ought and undoubtedly will in the near future put a stop to their practice. The government should require that the practicing Veterinarian should be a graduate of a good reliable Veterinary College. The colleges teaching Veterinary in this country are of a very high standard although they lack the scientific training given by European colleges.

The duties of the Veterinarian are very wide. To him is intrusted the care of the animal industry of this country, and also the public health in so far as it is related to the health of animals. It has been found that many of the contagious diseases are common to both man and animals and may be transmitted from one to the other directly by contact, or indirectly

through their products. The work of the Veterinarian is to prevent all this and the government should pass laws for the inspection of all animal products by reliable Veterinarians. Undoubtedly in the near future, the United States, like European countries, will need many good Veterinarians to fill positions for the government; such as inspectors, in connection with boards of health in large cities, etc. Dr. Paige, who has charge of this department, graduated from this College in 1882 and McGill University in 1888. He then practiced for three years in Northampton. He took the professorship of Veterinary Science at this College in 1890. He spent the past year in study abroad, making a specialty of the study of Bacteriology. The thorough knowledge and wide experience in Veterinary Science which Dr. Paige possesses, enables him to make this study one of the most valuable Senior electives offered by the Massachusetts Agricultural College. Dr. Paige has adopted the following plan of study for the Senior year in Veterinary.

I. Hygiene: This includes measures relating to the preservation of health. Under this head we take up the special topics of water supply, ventilation, stable construction, foods and feeding, grooming, clipping, management of feet, etc.

II. Anatomy, including osteology and myology with especial reference to the anatomy of the organs of locomotion.

III. General Pathology, dealing with general causes, symptoms and significations, diagnosis, prognosis, prophylaxis and general treatment of disease. The physiology of the blood, circulation and respiration precede a consideration of the subject of inflammation, its causes, the changes brought about by it in the affected organ, the various terminations and general principles of treatment.

IV. Materia Medica, including the mode of administration of drugs, form of administration, compounding of drugs, prescription writing; together with a study of the sources, preparation, action and uses of those remedies usually employed in the treatment of the more common diseases of domestic animals. Experiments illustrating the actions of drugs are frequently made.

V. Special Pathology. Under this head a study is made of such diseases as are of frequent occurrence

and of importance to the practical farmer and stock breeder. These may include diseases of the digestive tract, including determination of age, diseases of the respiratory organs, the organs of locomotion, diseases of bones, inflammation of muscles, ligaments, joints, etc. Such diseases as are of especial economic importance, due to parasitic or microbic invasion, and contagious disorders of farm animals that are of interest from a sanitary point of view are also considered and methods of prevention suggested.

In all cases when practicable, the work in the classroom is supplemented by clinical demonstrations, some of which are obtained from the College farm and some cases from outside are brought in for treatment or for operation. In so far as possible the objective form of teaching is employed. The museum is well supplied with models, skeletons, and also illustrations of many diseased organs taken from the common domestic animals, which are used for illustration. It is intended to provide a course in laboratory work this winter to acquaint the student with the form, life-history, etc, of the common animal parasites and pathogenic (disease producing) bacteria.

The need of room for laboratory work is greatly felt by the department, and it is hoped that there will soon be a laboratory fitted up for this department, in which the study of Bacteriology and also clinical demonstrations, may be carried on to a greater advantage, than under the present cramped conditions. With a good laboratory fitted up with good microscopes and other necessary apparatus, a great deal of work could be carried out, which would be of much benefit to both the students and the farmers of this state. Specimens or work could be sent in from any where in the state and both the professor and the students could work on them and report results to those who sent them in. We hope to see this much needed improvement carried out in the near future. Dr. Paige, himself has made a special study of Bacteriology and has collected many pure cultures of bacteria both here and abroad.

The College library furnishes us with most all of the standard Veterinary works for reference. The collection of works on this subject is only surpassed by those at Washington and McGill University. It is the aim of Dr. Paige to have the books of reference here so complete and so clearly surpass all other libraries

that in the future, writers on Veterinary science will come to the library of this College for reference, rather than go elsewhere.

The young man will do well to bear in mind, if he wishes to enter into a line of work that offers a good opening for him, that there is none better than the Veterinary profession; and to this end the Senior course in Veterinary science at the Massachusetts Agricultural College, furnishes a good foundation for future work in that Science.

L. L. CHENEY.

THE CLOSE OF THE FOOTBALL SEASON.

OUR NEW FOOTBALL CAPTAIN.

The meeting held Monday, Dec. 7, for the election of a new football captain and manager, closed the football season for the year 1896. Daniel A. Beaman '99 was elected captain to succeed J. W. Allen, and R. D. Warden '98 was elected manager to succeed Charles I. Goessmann.

At the beginning of the season it was thought that there would not be enough men who would play to make a team; but later, an eleven was hurriedly formed, and practice began. Taking everything into consideration the men did well; and, if there were any mistakes made, it was on account of the fact that there was not sufficient time to get into trim for the hard work that was to follow. Many of the men, who are excellent players, could not get out for trial practice because of their studies.

It is sincerely hoped the many obstacles which arose last fall to prevent our success will have been removed next year, so that nothing will hinder us from having a well-trained eleven.

Mr. Beaman's effective work for the team last fall and his generous and manly spirit have won for him the distinction he so well deserves. His being chosen meets the hearty approval of all.

Let it be said that although handicapped in many ways by unavoidable difficulties, much credit is due Capt. Allen for his efforts in trying to get up a good team.

As Mr. Beaman takes upon himself the responsibilities of his new position, he may feel assured that the best material the College affords will respond to the call for players in 1897.

We wish him success and trust he will lead our eleven to many victories on the gridiron.

College Notes.

—Index.

—Merry Christmas.

—A. F. Frost of Monmouth, Me., has entered 1900.

—The Sophomore class completed their declamations last Tuesday morning.

—Chapin '99 is again able to attend to his college duties, by the aid of a pair of faithful crutches.

—For the past two weeks, warnings have constituted an important factor in the college mail, and yet the students will "cut."

—Dr. Walker has completed a series of lectures before the Senior class in Political Economy, on the subject of "Trusts."

—Several of the students were entertained at the home of Prof. Maynard, Thanksgiving eve. A pleasant time was reported.

—Several of the students attended Gorton's Minstrels in the town hall last Tuesday evening. The local hits were pretty good.

—A. F. Frost and N. J. Hunting both of 1900 have joined the *College Shakespearean Club*, and Adjemian has joined the *D. G. K.*

—Is the tongue of the famous bell that has of late ceased to speak, in the bottom of the pond, or is it on its way to Boston to be made into souvenir watch charms and paper weights?

—On account of injuries received while playing in a football game on Thanksgiving-day, Sharpe '99 has not been able to attend college since, but will probably return early next term.

—The campfire held at the Town Hall a few evenings ago, under the auspices of the G. A. R., proved to be very interesting; many of the students from the college were in attendance.

—W. H. Armstrong will have charge of the Freshman class in free hand drawing next term. Mr. Armstrong is a good artist, and no doubt the class will find him an able instructor.

—The first skating of the season was enjoyed on the pond Wednesday afternoon, December 2d, by a fair sized party. The two days following were also witnesses of the sport, polo coming in incidentally.

—Governor Wolcott has accepted the resignation of Dr. F. H. Osgood '78, who was chairman of the Massachusetts State Board of Cattle Commissioners.

—The petition sent in to the Faculty by the Senior class, asking that the usual department theses be omitted from the commencement stage was not granted, much to the dissatisfaction of the class.

—The contract to furnish class canes to the Seniors was given to Hubbell of Northampton. The canes have arrived and been distributed to members of the class who are pretty well satisfied with their choice.

—Many of the students spent the Thanksgiving vacation at their respective homes, others with relatives or friends and the remaining students enjoyed themselves at the college as best they could, the most of them faring very well.

—For the past two weeks the cadets have been having battalion drill in the drill hall. The hall is smaller than could be wished for such formations as are made, but with the exception of now and then a pinched line the space does very well.

—Now that Christmas is almost here, and everyone is trying to look cheerful and be happy, why cannot some of our delinquent alumni pay their subscriptions to *AGGIE LIFE*, and by so doing make the business manager happy and confer a great favor upon the board.

—College closes for the Christmas vacation on Wednesday morning, December 16, and the winter term begins on January 6, three weeks from that date. In accordance with the 85% system quite a number of the more fortunate students were allowed to leave last Friday.

—The first dancing lesson of the winter was given to a number of students in the drill hall last Friday evening, by Prof. A. X. Petit. The class which is quite large already, promises to grow considerably and by the time the next term is well started, it will probably be one of the college attractions.

—We are glad to note that the newly elected football management has done its first duty—that of removing the goal posts from the gridiron—and at the proper time. Last year the posts spent the long wintry months on the campus, where from time to time they would remind one of the season that was past, pleasant perhaps—but not appropriate.

—Because of breaks in the water mains, no water has come to the college buildings on several occasions and the Amherst Gas and Electric company has furnished lights to the buildings two or three times lately, and will probably begin to fulfill their contract with the college at the beginning of next term.

—The crop of celery raised by the horticultural department this past season was as large as usual, and the average quality is perhaps a trifle higher than on most years. The warm weather which came about Thanksgiving time injured it somewhat, but there is yet a fine lot of it in storage, though it is being sold quite fast.

—From among the students remaining at the college during Thanksgiving, two foot-ball teams were chosen, Cheney and Eaton acting as captains, and an interesting game followed on the morning of that holiday. The latter's team came out victorious by a score of 8-0. The halves were 25 minutes each, and there was not a bit of "scrapping."

—The Senior debating in charge of Prof. Mills will begin early next term, and some interesting discussions are looked forward to. The subject of the first debate is, Resolved, "That Canada should be annexed to the United States." The speakers for the affirmative are H. F. Allen and J. L. Bartlett; for the negative, C. I. Goessmann and P. H. Smith.

—We wish you a merry Christmas and a very happy new year. May you return in 1897 determined to put forth greater effort for the accomplishment of far better and grander results, to the satisfaction of your professors and especially for your own emolument. "It is never too late to learn," but the sooner one learns useful things the better, for the days are flying fast.

—Some of the Seniors have been aiding Prof. Maynard in laying out the road ways for the prospective gardens on the hill about Prof. Cooley's house. The work on these plots will begin early next spring and most of the young fruit trees are now ready to be transplanted to their future location where, as types, they will serve as correct illustrations of the various types of practical and ornamental trees.

—At the winter meeting of the State Board of Agriculture held at Greenfield, December 1st, 2d, and

3d, Prof. F. S. Cooley read a paper on "Uses of Pure Cultures in Butter Making," and Prof. S. T. Maynard had on exhibition a fine lot of new varieties of apples, which attracted considerable attention. Some of the members of the faculty were present, and also a number of the students.

—M. H. Pingree '99 while riding a wheel near the college a few days ago was bitten by a dog. As he passed the cur, it sprang and tore his trousers leaving purple teeth marks on his leg, and though the bite did not prove to be anything serious, it was a slightly unpleasant thing to think of, as the dog was thought to be in the first stages of hydrophobia, and was soon afterwards shot by a student.

—At a recent meeting of the football association the following officers were elected for next season: Foot-ball captain, D. A. Beaman '99; foot ball manager, R. D. Warben '98. Though the team was not as successful during the past season as we had hoped it would be, there is no doubt that Captain Allen faithfully discharged the duties entrusted to him, and we believe he succeeded in producing a very good team, considering the many difficulties which were necessarily encountered. The prospects for next season are on the whole more encouraging for various reasons

—Saturday, December 5th, the Senior division in Botany accompanied by their genial professor, Dr. Stone, visited Smith College and were cordially received by Dr. Ganong, who is at the head of the Botanical department of that institution. The work of the young ladies in the Senior botany class was carefully inspected, and the neatness and accuracy with which they made apparatus for physiological experiments received worthy comment from the division. The well kept green-houses were also attractive features of the visit, and on leaving, each student was generously presented with a fine specimen of *Mimosa strigillosa*. The visit was on the whole both interesting and instructive.

—In the early part of the term now so fast drawing to a close, the *Boston Evening Transcript* gave birth to an idea which has in the past few weeks grown fully up to all expectations. Each Wednesday evening's issue of that popular paper contains a department

which is given up entirely to notes concerning nearly all the more important colleges and universities in New England. The paper has as a special correspondent in each of these institutions some person who is directly connected with such, and the material he or she submits is published under the name of the institution the latter represents. These contributions contain, in general, the more interesting and important features of the work being done in the various colleges, and altogether adding an important feature to the paper. Prof. Babson who has charge of the space allotted to the M. A. C. has been keeping up his part of the department in a very creditable manner, and gives the college the prominence it deserves, though it may not receive it elsewhere as often as it might.

—The beginning of the winter term, Jan. 6, 1897, will mark the opening at the M. A. C. of the short winter courses which have proven so successful and profitable at other Agricultural Colleges. These courses are intended to take the place of the two years' course, recently dropped, and beginning on the above date will continue for eleven weeks. They are designed to give the greatest good to the greatest number, in a short time, by such thoroughly practical instruction as will be most helpful to the farmer, and every effort is being made to make them a success. The dairy course is expected to prove especially popular, since so many farmers in this state are engaged in that branch of agriculture, and a very practical and thorough course has been arranged. The well equipped dairy rooms offer exceptional facilities for practical instruction and individual practice which is so valuable in teaching a subject of this nature. A thoroughly competent corps of instructors has been selected to give the necessary instruction, and the students entering this course may be assured of being taught none but the best and most up to date methods of dairying, such as will fit them for conducting the business on a scientific and profitable basis. A certificate of good character is required of each applicant, but no entrance examinations are required, and no tuition will be charged except to those living outside the state. Great credit is due to Prof. Cooley as Director of the Dairy School, for his untiring efforts in making preparations for the opening of the course next term.

PROJECTED IMPROVEMENT ON THE COLLEGE GROUNDS.

The past four years have witnessed many important changes in college life. New ideas, new methods, have been introduced; the curriculum broadened, the faculty strengthened. Never has the course of instruction been so complete. With the introduction of electives comes the opportunity for specialization in that branch of science which the student wishes to make his lifework. With the judicious and systematic growth of the college library, comes the opportunity to ground oneself in the practical and theoretical principles of his calling.

Opportunities—but a synonym for college life—grand opportunities now are offered to the man who is ready to work and eager to learn. It has been a record of progress.

Not alone in its educational features has the college shown a marked advance. Of late, an effort has been made towards the permanent improvement and embellishment of the college grounds and buildings. The new barn and entomological laboratory already attest this spirit of progress, while plans are being perfected for other structures to accommodate the influx of students which *must* come in response to the *opportunities* here offered. Furthermore, evidence is not wanting that the college authorities will use every possible means to develop and perfect the great natural beauty of our college home. But we must be patient.

In the Horticultural department, plans for a number of important improvements are afoot. Chief among these is that of a "Massachusetts Garden," which has been agitated without fulfilment for several years. In brief the plan is this.

That portion of the college estate bounded on the north and east by the road leading from the Plant House to Mt. Pleasant from the old creamery and on the west of the quince orchard and cultivated land shall be devoted to a Massachusetts garden, or collection of all the trees and shrubs indigenous to this state. It is hoped to illustrate here the highest aim of ornamental gardening—an artistic blending of artificial groups to secure a natural and pleasing effect. Those familiar with the contour of the land can readily see how easily it might be transformed into a beautiful and elaborate park. Somewhere at the hill-crest, on

the rolling slope, in the cosy ravine, will be found just the place for each plant to do its best. A turf drive winds along the ridges crossing the ravine by a rustic bridge just above the old dam. The latter can be utilized for aquatics.

This is the plan, whether or not it materializes, depends upon the judgment of the trustees and the generosity of the state legislature.

In pursuing the study of fruit culture, the students have hitherto labored under a great disadvantage because of the scattered locations of both varieties and species about the Plant House grounds. It is proposed to remedy this evil as follows:

The land east of the vineyard (a well-known landmark) and formerly occupied by the pear and peach orchard is to be devoted exclusively to the varieties of fruits, specimens of each variety being planted on the introduction. The student will then have an opportunity for comparison. Again, the land directly south of that above mentioned and formerly occupied by the old peach orchard, is to contain specimens of all known species of each fruit, from which our cultivated varieties have originated. New species and hybrids will be set out as introduced. An effort will be made to make this plot ornamental as well as educational, by turf drives, borders and artistic grouping of species. The value of such a collection to the student of horticulture, can be measured only by the advantages he loses without such aid.

Finally the Col. Clark property on Mt. Pleasant, our recent acquisition, is rapidly assuming something of its former beauty. The old pasture on the northern side, comprising some seven acres, has been freed from scattering timbers, thoroughly fitted, and sown to rye. Next spring it will be ready to serve its purpose; that of a representative commercial orchard of all the larger fruits. Only such varieties as are deemed most profitable for general market will be planted, and will furnish the field for such experiments in culture as may be undertaken.

The remainder of the Mt. Pleasant property, comprising about thirteen acres, will, for the present, remain substantially the same, but renewed and remodeled. It already contains a large number of very fine specimens both of trees and shrubs, though now suffering sadly from neglect. The old apple and pear orchard is being removed and also such trees as crowd

or interfere with desirable specimens. The double row of pines extending from the old creamery to the gate and from thence northward has also been disposed of thus extending the range of vision from the Mount.

As yet no definite plans as to the arrangement of this charming spot, have been formulated. Three ideas appear to have been uppermost in the minds of those who promoted the purchase: first, that it be retained for a permanent park as a portion of the college grounds; second, that it be held for the erection of dwelling houses by members of the faculty; and third, that in case our sisters should see fit to share with us this legacy from wise statesmanship, it might furnish a desirable location for an annex; to which end may it be speedily proscribed. But be its use what it may, Mt. Pleasant cannot but prove a valuable investment. These are signs of growth.

THE CHARACTER AND INFLUENCE OF CHIVALRY.

Among the many influences which come to us from the past, there is none, perhaps, which has taken so great hold on our imagination and sentiment as the influence which comes from chivalry. Existing as it did in an age of constant emotion, and in a time when historians were few in number, it has come about that many of our ideas in regard to this old institution are derived from mere traditions that have been handed down to us through the many years which have passed since chivalry ceased to exist.

Chivalry was properly an institution belonging to the middle ages as it existed in the period between the tenth and fifteenth centuries.

The word *chivalry* comes from a French word meaning horse. Thus we see how it came to mean "a body of warriors serving on horseback;" and later, applied in a general way, it meant an order of the higher classes having a certain code of morals, religious training, and social relations by which they were governed.

Every knight in this order was obliged to undergo a very severe and protracted course of training which began at the age of seven or eight and lasted until his twenty-first year when he received his title of knight. For the first seven years of this training the boy was called a *valet*. His duties were waiting on the lord

and lady of the castle in which he lived, and perfecting himself in all the military and athletic exercises then known, such as the use of the bow, lance, sword, and battle-ax. The only weapon he was permitted to wear as a valet or page was a short dagger.

At the age of fourteen the valet advanced a step and was made a squire. After numerous religious ceremonies, he was led to the altar by his parents and there received a military belt and sword. His training as a squire became more and more severe; great feats of strength and endurance were required of him without which he could never hope to become a knight. He generally accompanied his lord on the chase or on the battle-field, carried his weapons for him and often took part in the fight himself, especially if he saw his lord in danger. The few amusements which were allowed him consisted in music, dancing and chess together with such outdoor sports as hunting and fishing. So much for his physical training, which was under the direction of the knight of the castle.

The young knight's religious and social training was under the direction of the ladies of the family, and was as diligently attended to as his physical training. He was taught a high regard for the female sex, purity, devotion to religion, promptness, dexterity, and above all,—obedience.

So rigid was this whole course of training that it is said that even the best knights generally sent their own sons to other nobles to be trained for fear that if they kept them, at home they might be tempted to indulge them and thus perhaps prevent them from becoming model knights. It thus came about that a knight who was more noble or wealthy than his neighbors would have several of the sons of his acquaintances under his charge.

At the age of twenty-one the squire was made a knight at the end of religious ceremonies which lasted two or three days. He was then ready to set out in search of adventure or to go into battle with his friends.

Although at the beginning of chivalry knights were only those who had undergone this course of training, it sometimes happened as time went on that men were made knights and recognized as such on account of their valor in battle, or because of some special deed of bravery. It seems likely that this was one of the causes that led to the decline of true chivalry, for on account of this new custom men were placed in

positions which their limited means would not allow them to support, unless they took to plundering, as such men too often did.

In an age so nearly barbarous in many of its customs it is, perhaps, hard to account for the presence of such an institution as chivalry. Very little, in fact nothing, is certainly known of its origin, although several theories have been advanced. Of this, however, we may be reasonably sure: It did not arise from any sudden and radical change in society, but resulted from a certain condition of things out of which it grew slowly, as many other institutions before and since have grown.

Looking back in history for the first traces of chivalry, we find that it sprang up among the Teutonic nations who settled in central and western Europe near the close of the fifth century and shortly after what is known in European history as "the great movement of peoples" had taken place. Not until near the middle of the tenth century, however, do we find any account of chivalry existing as a distinct and organized institution.

As early as we are able to find any traces of chivalry, we find existing with it another institution with which it undoubtedly had a close connection; this institution was known as the feudal system and must have been in general use some time before chivalry came to be known. It is easily seen how this came about. After the Teutons had overrun and conquered Europe, naturally the first thing that was done was to divide up the land among the knights and nobles of the conquering hosts. Each knight then proceeded to take his allotted land and erect upon it a suitable castle, if such did not already exist there. Here he gathered round him his servants and followers who, in return for his protection, paid taxes upon the land that was let out to them. It was this arrangement that enabled the knight to maintain his position; and it was these knights and their descendants that afterwards composed "the flower of European chivalry." Throughout all the years in which chivalry was growing and reaching its height, the political and social affairs of Europe were in anything but a settled state. During this period many religious and civil wars took place, and also those great religious military enterprises known as the Crusades, in which the greater part of the warriors in central and western Europe

participated.

Besides these wars in which the knights took part, there were other ways in which they might distinguish themselves, and the most popular of these presented themselves in the *tournament*. The tournament was a kind of open-air entertainment under the direction of the nobility and included feats of strength, sham battles, and more often personal combats between the knights which, though generally begun in a friendly spirit, sometimes ended with bloodshed and hostility. An ambitious knight, then, could find plenty of opportunities for distinguishing himself, and thus gain the object he desired, whether it was political power or the hand of some fair lady.

We are enabled to understand in some degree from the foregoing that chivalry was a large and powerful institution of the times in which it flourished and it follows that as such it must necessarily have had considerable influence. What this influence was, and in what direction it was exerted, it is not easy to determine. By observing its connection with other organizations, and the effects which it produced, not only upon its followers but upon all who came in contact with it, we may, however, get some insight into its real value.

While chivalry existed it was at all times an order of the nobility and its influences were felt by the higher classes rather than by the lower ignorant classes. It has been said that while the feudal system represented the political side of the Middle Ages, chivalry represented the social side.

The influences upon the followers of chivalry were many and we are enabled to get some idea of them from the customs and usages of chivalry. The main idea of chivalry seems to have been this: to produce and nourish a select class of sturdy, vigorous people and to instill into their minds the importance of such moral and religious virtues as, integrity, faithfulness, courage, devotion to religion, purity, a high regard for the female sex, and especially a willingness to take the part of the weak and afflicted and to right such wrongs as existed about them.

In looking among the followers of chivalry for evidence of this idea we meet with many exceptions and inconsistencies. While many of the knights and nobles in this order were loyal to their youthful training we have in history examples of men who were far from being what their training taught them they should

be. We cannot wonder at this, however, for by observation we know that in this respect human nature is the same to-day as it was in the Middle Ages; and we should not make the mistake of judging the influence of chivalry by the deeds of the few who are noted in history for their wickedness. Whatever may be said against chivalry, let us remember and give to it all that it merits as an institution which, linked with Christianity, stood for all that is true and good in an age that was so full of commotion and strife.

H. J. H.

Alumni.

The Massachusetts Agricultural College Club of New York will hold its Eleventh Annual Family Reunion at the St. Denis Hotel, Broadway and 11th streets, Monday evening, December 21st, 1896, at 8-30 o'clock under the Presidency of Dr. Joseph E. Root '76 of Hartford. President Goodell, Professor Parker, Lieutenant Totten and others will be present as guests. The Choragus, Professor Harrington, will have charge of the music. Dinner tickets, three dollars; please remit on or before December 16th.

ALVAN L. FOWLER, '80.

Sec. Treas., 137 Center St., New York.

'76.—William H. Porter was elected Representative at the recent election for the ensuing year.

'82.—Died, Nov. 24, Ellen Bigelow, beloved wife of John Ashburton Cutter, M. D., of New York, and daughter of the late Benj. Wright of Hubbardston, Mass., and Mrs. Sarah Hartwell Wright of Worcester, Mass. Interment in New York.

'82.—The Agr'l Experiment Station of the Purdue University has recently published a bulletin edited by C. S. Plumb giving a full description of the external and internal anatomy of the udder of the cow. Dr. Plumb treats the subject in a very complete manner and any body interested in dairying will find this a valuable guide.

'88.—The address of R. B. Moore is No. 324½ Franklin St., Elizabeth, N. J.

'91.—The address of E. P. Felt is No. 15 Elberon Place, Albany, N. Y.

'91.—Henry J. Field who graduated last June from the Cornell University Law School has been admitted to the Hampshire County Bar and will open a law office at Greenfield, Mass.

'92.—The address of J. E. Deuel is Togus, Me.

'92.—The marriage of Elliott Rogers to Miss Mary Hackett Thompson is to take place at Kennebunk, Maine.

'93.—The address of E. H. Lehnert is No. 28 Church St., Clinton, Mass.

'94.—A. C. Curtis, Instructor in Higher English in Cheltenham Military Academy, Ogontz, Pa.

'94.—E. T. Dickinson, a Junior in the Harvard Dental School has been appointed president of his class.

HOW CAME THE HOLLY BERRIES RED?

'Twas long ago, the legends say,
 Sir Roderick gave a party gay
 On Christmas night at Lynden Hall;
 And ladies fair and gallants tall,
 And lord and matron old and gray,
 Came, one and all,
 To Roderick's Hall.

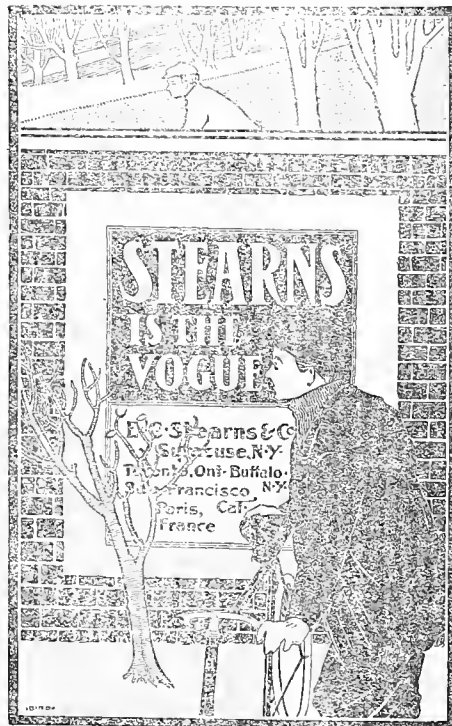
The Yule log blazed and burned and roared,
 And flames and sparks up chimney soared;
 In festoons gay the holly swung,
 The mistletoe demurely hung
 From arches o'er the festal board,
 And shyly clung
 Where bright lights hung.

The holly berries, pale and white,—
 And not, as now, so red and bright,—
 Were woven with the mistletoe,
 And hung just where—now you must know
 What surely haps on Christmas night
 If maiden go
 'Neath mistletoe.

And when beneath this magic spray
 Fair Gladys' happ'd perchance to stray,
 Up quickly stepped a gallant knight,
 And kissed her there, as was his right;
 And all the legends truly say
 That ne'er did knight
 Give kiss so light.

The holly berries overhead
 Grew rosy, and turned crimson red;
 For when they saw the rosy hue
 On Gladys' cheek, what could they do
 But droop and blush? So rosy red,
 In blushing too,
 The holly grew.

—CHARLES W. E. CHAPIN, JR.



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AGGIE LIFE.

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Editorials.

DURING the past two seasons the Military Ball given by the secret societies of the College has been the brilliant social event of the winter. The social side of a student's life should not be neglected, and such events as the military ball aid greatly in social culture. We bespeak a hearty coöperation of students and faculty in this matter, in using their combined influence to make the affair this winter a grand success.

THE attention of the students is called to the constitution of the Advisory Board, printed in another column. This constitution will shortly be brought before the student body at a mass meeting, and its insertion in the LIFE will enable every man in college to read it carefully before the question of its adoption shall be put to vote. The necessity for such a board has been felt in the past, and while no one can possibly question the integrity of the managers of the various student enterprises, the plan to have an auditing committee is certainly a commendable one.

ONE of our most important student organizations is the Natural History Society. This society was founded in 1884, by Messrs. Stone, Flint, Leary, Goldthwait, and Phelps, and since then its growth, though not rapid, has been sure. Two of the founders now occupy prominent positions on our faculty, Dr. Flint as professor of Chemistry, and Dr. Stone as professor of Botany, and also the head of the Department of Vegetable Pathology at the Experiment Station. The society has always made a special feature of its winter Course of Lectures, and the series arranged for this term is certainly one of the best. The opening lecture was given by Lieut. Wright on the evening of Jan. 15. and his treatment of his subject. "The Strategic Relations of the United States to England," was both instructive and interesting. The lectures will continue at the rate of one a week throughout the remainder of the term. Among the speakers are, President Goodell, Dr. Goessmann, Professors Lull, Stone, Flint, Mills, Babson, Paige, and Wellington. The mere mention of these names is a sufficient guarantee of the excellence of the lectures, and no student should allow himself to miss them.

THE opening of the year 1897 finds the Massachusetts Agricultural College better equipped for work than at any previous time in its history. Great progress has been made in all departments, and the outlook at present is highly encouraging. Among the improvements that the past year has witnessed are the completion and equipment of the new portion of the Insectary, the large addition to the Experiment Station, the purchase of the Colonel Clark estate on Mt. Pleasant, the establishment of the Dairy School, and the short Winter Course, the establishment of several departments of the Gypsy Moth Commission at the College, and the renovation of the dormitories. All the courses of study have been strengthened, and "Progress" is the watchword of the hour. Never before has the Commonwealth of Massachusetts offered such advantages to her sons. Students, try to show your Alma Mater that you appreciate what she is doing for you, and see to it that your part be done faithfully. Young men of the state, the educational advantages of this college may be yours for the asking! Can you afford to let such a grand opportunity pass unnoticed?

It has always been a matter of pride among the students to keep the work in the Military Department on as high a plane as possible. An opportunity is now presented for some of our cadets to win distinction in a new field, that of Military Rifle Shooting. In May, 1897, the various institutions in which military instruction is given, will engage in a rifle contest that will determine for the year the relative standing in marksmanship of the various schools and colleges participating. At all these institutions throughout the country the shooting will be under the direction of the officer stationed there, and an entirely disinterested person will also be present at the contest. The scores will be telegraphed immediately to some staff officer of the United States Army, and the telegram will be followed by a detailed written report. Each college will have a team of ten men, and Lieutenant Wright, our commandant, intends to do his utmost to turn out a winning team. We have plenty of good material, but it is undeveloped. It will take long and patient practice to become proficient, but we urge upon every cadet the importance of such training, and the honor that will accrue to himself, to the team, and to the college, should we win in the competition. Let every man do his best!

Contributed.

ENGLAND AND RUSSIA.

It is well said that man is a rational being. He possesses that which we call mind and which may be the key-note of his success in life. His success or failure may depend upon the strength or weakness of this great power. It is hidden, not visible to the naked eye, yet its existence is as certain as the light of day. So long as man exists it will exist with him do its miracles when its normal power is unrestrained.

But besides this power, man is the possessor of what we call passions. The latter by their tempting power have influenced human life more than the former. So far as facts go, notwithstanding the calamities which ensue by yielding to these passions, out of 100 human actions 80 have been prompted by these passions. It was not until the beginning of the present century that man led by his higher nature stepped forth and proclaimed his freedom in thought and acts. Past events are enough to show that man not only is a free being but that he must live free. But is man free? I am sorry to say that the condition of nations as a whole will prove the contrary. The ambition and avarice of man overpowering their moral and higher nature have robbed their fellowmen of the right to live. Individuals, societies and nations failing to recognize man's right to freedom and being exhausted by devastating wars have consented to an apparent peace. But the question did they succeed? That international feeling which brought Europe together against Napoleon Bonapart as a tyrant and oppressor seems to have lost all its vital energy in the chaos of the past. It never gives signs of showing itself again against another form of tyranny which is rising gradually and will become more dangerous than that of Bonapart,

But what did after all result from the fierce struggles of European nations? Concentration of power in the hands of two nations, England on the western side of Europe threatening with her fleet and Russia on the eastern side of Europe menacing with her vast force. Let me ask again has the mind of man overcome the weapons of his passions after these desperate struggles? We must not be moved by the riches and the strength of a nation and on that account sympathize with her but watch the principles which she follows.

A partial and unselfish examination is necessary in order to lay here the tendency of a nation and the character of her people. We well know that nations are made up of societies and these in turn of individuals. The success and power of a nation depend upon the individuals whom a nation produces. Some of these may be stronger in their passions and armed with shrewdness may for a time put themselves and their nation above the ordinary level. But I beg you have patience and wait to the end. What became of the heroes of the Roman empire? Where has gone the very empire itself? Where are the invading armies of Alexander the Great? What became of the Assyrian, Persian and Grecian empires? All lost in the chaos of the past leaving only their records. We applaud their good works which satisfy our mind and look with contempt at other actions, performed only for the satisfaction of passion. Why is it that the modern scholar likes to deal with the life of Socrates, Plato, Virgil rather than with those victors whose aim was only to invade? It is clear that any nation which gives birth to heroes rich in moral views concerning man as man that nation not only will be the queen of her time but leave a lasting effect on the pages of history. Russia may have shrewd statesmen who being strong in passions may succeed in overpowering other nations. But is not that the dictum of passion to grow strong at the expense of the other? Russia has produced men who have been great in one sense of the word. But has Russia ever produced philanthropists who are interested in man as man? You may say that England has shown the same tendencies and may mention the wars between her and this country or between some other nations. But would your conscience allow you to put England on the same footing with Russia? Would you do justice in concealing that great work which English mind has done for civilization? Remember her heroes such as Wilberforce and others in the past and Gladstone at the present, who is the admiration of the foreigner and the glory of his country. In conclusion I will add that we are living at a time when indifference will be a curse to the human race. Let us not be like the Levite and the priest; but be the Samaritan. Put aside the idea that so far as Russia does not interfere with America or as she seems friendly you must agree with her policy and mode of action. Watch her works and judge whether

they are conducted for the welfare of man as man or aim at the glory of the invader. You must be sure that a government in protecting the rights of her people can do good work also to man in general. If you find that the motive is the birth of Ambition then give your verdict and think how to stop the rushing flood which one day may sweep your country too!

ADJEMIAN.

THE '98 INDEX.

It is now over a month since the '98 *Index* was placed on sale. During that time the twenty-six classes that have been graduated from Aggie have bought thirty-nine books, or an average of three books to every two classes. The Editors made a special effort to have the book published on time and this is their reward—eight books sold to each one hundred graduates.

The '98 *Index* contains the latest correct list of the alumni—in fact it is the only complete list which is available to M. A. C. graduates, but in view of the fact that the receipts for the sale of the books do not repay the money and labor expended in obtaining such a list, it seems advisable that future boards shall not attempt to sell their publication to the alumni.

All graduates have received an announcement that the '98 *Index* is on sale. Possibly this fact has slipped their minds; if so it is hoped that this appeal will again remind them that if the publication is to be a success more books must be sold.

There are also many undergraduates who have not yet obtained an *Index*. Let every one buy at least one copy and in future years he will have something to remind him of his life at Aggie.

CONSTITUTION AND BY-LAWS OF THE MASSACHUSETTS AGRICULTURAL COLLEGE ADVISORY BOARD.

SECTION 1.

Article 1. The object of the Massachusetts Agricultural College Advisory Board shall be the promotion of the financial interests of the following organizations,—the M. A. C. Boarding Club, the Reading Room, the AGGIE LIFE, the *Index* and the Glee and Banjo Club.

SECTION 2.

Article 1. The Board shall consist of two members of the faculty of the Massachusetts Agricultural College—one of whom shall be the presiding officer, and the other the secre-

tary of the board,—to be elected by the student body at a mass-meeting to be held at the beginning of each collegiate year,

Article 2. The term of office of said members of the Board shall be one year or until the election of their successors.

Article 3. Vacancies occurring in the Board shall be filled by election, by the student body. Members thus elected shall hold office for the unexpired term of their predecessors.

SECTION 3.

Article 1. The duty of the Board shall be to act with the President, Treasurer or Business Manager, and Auditors of each of the five above mentioned organizations (See Section 1, Article 1) independently, upon all questions pertaining to the proper keeping of books, accounting of funds and auditing of accounts, thus acting solely as an advisory committee without assuming in any way the direction of or responsibility for the management of said organizations.

Article 2. Said Advisory Board shall meet with the above mentioned officers of each of the aforementioned organizations at the beginning and close of each term and at such other times as may be deemed advisable by the Advisory Board.

Article 3. The accounts and vouchers of each of the organizations shall be open at all times to the inspection of the Advisory Board and its own officers.

BY-LAWS.

Article 1. The duties of the President shall be to call and preside at all meetings of the Board.

Article 2. The duties of the Secretary shall be to keep a full record of all proceedings of the Board in a book to be provided for the purpose, in which shall also be inscribed the constitution and by-laws of the Advisory Board. The Secretary shall also perform the duties of the President in the latter's absence or disability.

Article 3. This "Constitution and By-Laws" shall be published in AGGIE LIFE and submitted for ratification, thereafter, to the student body of the Massachusetts Agricultural College, assembled in mass-meeting, and if approved by majority vote of said student body, the proceedings of said mass-meeting shall be entered in the records of the Advisory Board.

NATURAL HISTORY LECTURE COURSE.

FIRST LECTURE BY LIEUT. W. M. WRIGHT, SECOND UNITED STATES INFANTRY.

A very able and interesting lecture was given last night by Lieut. W. M. Wright before the Natural History Society. A large and attentive audience was present. The lecture was on the "Strategic Relation between the United States and England." The Lieutenant first spoke of the relation of the two countries in general. He then went on to say that so long

as nations are separate there will be war.

War affects all the people throughout the country, not a home or family escapes without some loss or affliction. Sovereigns no longer control wars. Most of the great modern wars were fought against the approval of the rulers. First in considering the result of war we must take into consideration the strength and state of affairs at the frontier. In case of war, with England most of the work would be along the Atlantic coast and the Canadian boundary line. The Canadian Pacific Railroad has opened up the country north of the boundary line to a great extent, and is in a measure a military road. Before the completion of the railroad all troops and munitions of war had to be carried around Cape Horn to get them at Vancouver or along the western border line. The managers of the Canadian Pacific now claim that they can transport troops and munitions of war, from Halifax to Vancouver in seven days.

But for all this, England cannot protect her boundary along the frontier from Montreal to Columbia by the Canadian Pacific as the roads run through a large unsettled tract of land and could be easily destroyed by burning bridges and tearing up rails in places. The eastern part of the boundary is much better protected by fortifications and the ease with which warships might be placed on the Great Lakes and rivers. There are also a number of large canals built connecting the necessary bodies of water together so as to form a continuous navigable space of water, from Atlantic to Great Lakes. There is a great deal in these lines when naval engagements mean so much.

Canada to-day is in a much better condition for war than the United States, as it has better fortifications, more armed ships on the lakes and more men at its immediate disposal. There is no doubt but that the lakes could be defended much more readily than the canals, which could be blown up in a very short time and thus stop the passage. Quebec is the strongest fortified site in Canada. In every war it has been the great object to take this fortification. In the future if a war should be fought with England one of the first objects would be, in all probability, to take Quebec.

There are a number of lines along which this capture might be carried out. One of the most feasible

would be to first reduce Montreal and then make either a quick attack on Quebec, with picked soldiers and light cannon, or to reduce the fortification by starvation, a much more tedious process. Besides the Canadian boundary, there is the long stretch of Atlantic coast to defend. Whenever the attack might be made our methods of to-day would in all probabilities be defensive. The United States has a good navy but it is inferior to that of England in size. England has the control of the sub-marine cables. It has been mostly English capital which has laid them. She has very good coaling stations quite near the United States, for instance Halifax and some of the West Indies.

In conclusion the lecturer said, that while the conquest of Canada might not be an impossibility to the United States, it would not be so easily achieved as we commonly suppose, as England is in many points better prepared for war than we.

THE SENIOR COURSE IN CHEMISTRY.

(THE SIXTH OF A SERIES OF ARTICLES ON THE SENIOR ELECTIVES.)

To the under classmen, but more especially to the Juniors, the subject of rightly choosing Senior electives is one of great importance. It is an easy matter for those who have arrived at some definite conclusion in regard to their future work in life, to choose their Senior electives, but to those who are as yet undecided as to what they will do after graduating, this is a difficult matter.

The German students differ from the American students in that they use the college course as a work-shop or preparatory course for their business. The result is self-evident. When they graduate they step right into their life work and achieve wonderful success in all the industries. Most American students, on the contrary, go through college with no definite end in view. They graduate and are compelled to take the first position which they can get in order to live.

Thus we see it is a great advantage to choose a calling, and then, to use the college course as a means of bringing one near to his life work.

Prof. Clark Bell, an authority on all points connected with Chemistry once said, "Chemistry is the prolific mother of all the world's wealth." Although this at first may seem to be an absurd statement, if

one will only look around and think of the various occupations of man he will soon arrive at the conclusion that most of them are at least benefited by a knowledge of Chemistry, while to the graduates of an agricultural college it is of the greatest importance.

The study under question is in the hands of a competent professor and one who has had a vast amount of experience in this line of work. Prof. Chas. Wellington graduated from the college in 1873. He then took a post-graduate course of three years in Chemistry. He received his degree of Ph. D. from the University of Göttingen in 1885, and has been Associate Professor of Chemistry at the college (M. A. C.) since that time. He is a great favorite with the students, and by his kindness and earnest, persistent work he makes the course both interesting and instructive.

In the elective course the end sought is two-fold: first, to all students is taught the meaning of Chemistry, its position as a science, as a disciplinary study, and as an art; secondly, those who intend to be active as chemists, or as workers in any allied industry, are instructed either in the processes of work carried on in connection with the great industries of agriculture and manufactures, or in the methods of investigation and teaching. Special attention is given to training in accurate qualitative and quantitative analysis.

The time given to the study is two hours per day four days in the week, during the entire course.

The equipment of the department consists of a well-furnished laboratory and a large collection of the best books and journals.

The subjects are taken up as follows:

1. General analysis.
2. Chemical preparations.
3. Special analysis, including that of water, fodders, milk, urine, rocks, soils, fertilizers, raw and manufactured products of all sorts.
4. Critical study of current Chemical literature.
5. Presentation, with the discussions, of reviews of Chemical progress. These are presented to the class by individual students, and much benefit may be derived from this work.
6. Excursions to industrial establishments, with reports.
7. Connection with the American Chemical Society. Two members of the present

Senior class have already become associates.

During the course there are lectures on the subjects closely connected with the work and on which examinations are held.

A student interested in any line of work may pursue the same as long as he wishes and perhaps reveal new truths to the chemical world.

Such is the account of the course in Senior Elective Chemistry and it would pay every one who possibly can do so to take this study, which brings its students into intimate knowledge of actual industrial life; and which unites the college laboratory with that of the farm and the factory, and with the lifework of the business man, the teacher and the investigator.

C. A. NORTON.

NOTES ON THE SHORT TERM COURSE.

The College is to be congratulated on having secured H. C. Burrington '96 as instructor and separator man in the Dairy School. Mr. Burrington adds to his college and dairy training and practical experience with separators, a keen interest in his work and a happy faculty of imparting his enthusiasm to the men under his direction.

Among the new apparatus put in at the Dairy School is a Moseley & Stoddard steam turbine Babcock milk tester. The machine is of copper, and is fitted with reverse steam jet, a steam-gauge and speed indicator. This is one of the most complete and effective milk testers made.

The Vermont Farm Machine Co. has sent to the Director of the Dairy School a full line of United States cream separators, billed at \$400. These machines are on exhibition in the Dairy building and are to be used in demonstration work.

A trial of the various *pure-culture starters* is to be made in the winter course in butter making this term. Prof. Cooley has arranged for comparisons between Conn's Bacillus 41, Douglass' Boston Butter Culture, Hansen's Lactic Ferment, and natural starters. Samples of the butter made from cream so ripened are to be scored by leading expert judges. The students in the regular course as well as the Dairy students will be interested in the reports of these tests.

Mr. Fred J. Carpenter of Waupun, Wis., who is giving practical and theoretical instruction in butter-

making this term is a graduate of the Wisconsin Dairy School, and a former instructor there. Mr. Carpenter comes highly indorsed by Profs. Henry and Farrington of Wisconsin and appears to be the right man in the right place here.

The P. M. Sharples Separator Co. have offered to loan the college one of their separators for use in the Dairy course. Other machines will doubtless be secured before the close of the term so that comparisons of the merits of each of the leading types may be made.

About 1000 lbs. of milk is brought to the college daily to give the short course men practical work in the manufacture of its products. It reflects rather adversely on the college herd that with such abundance of fodder and room, only a very small part of the necessary milk is produced at home.

Phillip Smith '97 is giving instruction in milk testing to the dairy students.

APPROPRIATIONS FOR M. A. C.

At a meeting of the State Legislature held at Boston a short time ago, and in which matters appertaining to the Massachusetts Agricultural College were considered, the following resolution was adopted.

"Resolved, That there be allowed and paid out of the treasury of the Commonwealth, a sum not exceeding twelve thousand dollars, to be expended at the Massachusetts Agricultural College under the direction of its trustees, for the following purposes, to wit,—for providing adequate water supply and protection from fire by the purchase and laying of six thousand feet more or less of six-inch cast iron water pipes, with the gates, hydrants, and hose required, a sum not exceeding five thousand, eight hundred dollars; for constructing a reservoir to be used in emergencies, and laying the necessary pipes and gates, a sum not exceeding two thousand, five hundred dollars; for renovating and enlarging the greenhouse for the study of plant diseases, a sum not exceeding one thousand and five hundred dollars; for enlarging the laboratory and providing the necessary facilities for teaching botany, a sum not exceeding one thousand dollars; for painting, repairing and raising the roofs of the greenhouses, a sum not exceeding one thousand dollars."

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The above appropriations have been needed for some time and are sure to be appreciated by all connected with the college. We have a good corps of instructors, but without necessary room and apparatus no professor can do himself justice in his attempts to give a good knowledge of his subject. Of these increases in the facilities for study, probably the appropriation for the benefit of the Botanical department in charge of Dr. Stone will meet with the heartiest approval of the students, while that concerning the water supply, though of an entirely different nature from any of the others, will be accepted with pleasure and it will be a great improvement to have our water supply extended as much as it now appears likely to be. After these improvements are made we shall be pretty well situated.

College Notes.

—Skating again.

—Have you broken any of your New Year's resolutions?

—The Senior class has voted not to adopt the cap and gown for Commencement.

—Kellogg 1900 has not as yet returned to College because of an attack of measles.

—Rev. George J. Newton of Belchertown exchanged pulpits with Dr. Walker last Sunday.

—The *College Shakespearean Club* was photographed last Saturday by J. L. Lovell of Amherst.

—J. R. Dutcher will not return to College this term on account of the illness of his father.

—Several of the seniors are taking a course in Rural Law under Judge Lyman of Northampton.

—Professors Maynard, Wellington and some others are to join the Amherst Grange at the next meeting.

—The Farm Department was cutting ice on the pond last week. It will take four or five more days to fill the ice-house to its full capacity.

—On account of illness Lieut. Wright was not able to be present at military drill last Monday and Captain Barry conducted the exercises in his place.

—One of our popular members of the Faculty, who rides the "Yellow Fellow" was thrown from his wheel last Saturday, quite severely bruising his knee.

—Pres't Goodell was in Boston during the first few days of the term attending to business matters concerning the College. Prof. S. T. Maynard acted as president during his absence.

—Prof. James B. Paige is very busy just now, his time, outside of College hours, being occupied by attending to the veterinary practice of his brother, who has been taken to the hospital on account of severe illness.

—Some of the students from the College attended the concert given by the Mount Holyoke Glee club at the Congregational Church in South Hadley last night, and returned home early this morning after a very pleasant drive over the mountain.

—The sophomore class in English will continue their work this term in Prof. Genung's *Outlines of Rhetoric*. The subjects, Description, Narration, Exposition and Argumentation will be supplemented throughout the term by lectures by Prof. Babson.

—Last Friday evening the members of the Natural History Society, together with a number of others, listened to a very able and instructive lecture by Lieut. Wright on the subject "The Strategic Relations of the United States to Great Britain."

—The State Legislature has dealt very reasonably with the college in consideration of the needs of the coming year, as will be seen in another column in this issue. What we want now is money, for the purpose of fitting up our gymnasium; and that will probably be given to us later.

—Lieut. W. M. Wright, 2nd Infantry, U. S. A., and commandant of cadets at M. A. C., has been appointed aide-de-camp on the staff of Gen. Horace Porter who is to be the chief marshal of ceremonies at the inauguration of President-elect McKinley which takes place at Washington, D. C., March 4th.

—A few days since, the trustees of the College listened to President Goodell's Annual Report. He spoke quite favorably concerning the growth of the institution during the past year, and the good quality of work being done by the students. A brief review of Agricultural education since the passage of the Land Grant bill in 1862, providing for the establishment of Agricultural colleges in every state, proved to be an interesting feature. The annual catalogue of the college will probably appear before long.

—At a meeting of the M. A. C. Boarding club held at the close of last term the following officers were elected for this term: Pres't, R. D. Warden '98; vice-pres't, J. L. Bartlett '97; sec. and treas., J. P. Nickerson '98; directors, C. A. Peters '97, M. H. Pingree '99; F. H. Turner '99 and C. A. Crowell 1900.

—At a business meeting of the Natural History Society held Friday evening, Jan. 8th, the resignation of its president, P. H. Smith '97 was tendered and accepted. Mr. G. D. Leavens '97 was elected to fill the vacancy and Mr. H. J. Armstrong '97 was elected to fill the latter's position on the board of directors.

—During the past few days the Seniors have been practising flag-signalling, the Juniors have been instructed in the sabre drill; some of the Sophomores have been taking Artillery Drill, and the Freshmen, have been receiving personal instruction under Lieut. Wright as to the proper way to aim and shoot with the Springfield Rifle.

—The Freshman class has elected officers for the term as follows: Pres't, A. D. Gile; vice-pres't, M. B. Landers; sec. and treas., A. M. West; class captain, F. G. Stanley; polo captain, J. W. Kellogg; base base captain, J. E. Halligan; reading-room director, H. Baker; athletic director, W. R. Crowell; sergeant-at-arms, G. F. Parmenter.

—Prof. Lull has kindly consented to lecture before the Natural History Society Friday evening. His subject will be, "The Antiquity of Man." Prof. Lull will undoubtedly handle his subject in a very able manner and every student should be present, not only to show his appreciation of our instructor's interest in the society, but to get what good he may from the discourse.

—At an examination held by the Civil Service Commission at Springfield, Massachusetts, a short time ago, the College was represented by two resident graduates both of the class of Ninety-five. Mr. R. A. Cooley took the examination for the position of assistant entomologist, and Mr. E. A. White took the examination for the position of assistant floriculturist. Both have recently received notice that they have successfully passed their examinations, but no appointments had been announced up to the end of last week.

—The plan of leaving the guns and equipments in the armory each night after drill has lately been adopted. It has been thought best that the Quartermaster have charge of them rather than have each student care for his rifle himself outside of drill hours. Each student has his own rack with name and number of rifle attached, from which he takes before, and to which he returns his equipments after each drill.

—The Gypsy Moth committee from the State Board of Agriculture has recently presented its report to the Legislature. The report shows the great amount of work that the commission has been doing in the last season, and it is made clearly evident that if this insect pest is fought during the coming season to any advantage, that the state must appropriate liberally to the support of the officers in charge of the Gypsy moth districts.

—The resignation of Prof. Leonard Metcalf from the chair of the Mathematical department has been accepted by the Trustees of the College. The resignation does not go into effect, however, until the first of July, and the College will be fortunate if it succeeds in obtaining in his position the services of as able an instructor as Prof. Metcalf. It is understood that he will enter into business with Mr. William D. Wheeler, M. A. C. '71, who is a successful hydraulic engineer and a trustee of the College.

—The question of Junior electives has again been agitating the minds of our faculty. During the past few weeks more than ordinary attention has been put upon this subject and it is understood that '99 will next year enjoy that for which the college has been asking for the past few years. The efficacy of this new alteration in the college curriculum will be discovered only after a few years trial. But if this scheme is to be put into practice why not allow the present Junior class to elect studies next term and thus make some preparation for their next year's work?

—It again becomes our duty to throw a little light on the matter of removing electric lamps from the hallways in North College. During the past week five lamps have been taken out of the entries of this building, presumably to replace those burned out in the students' rooms. It is evident that at least some of the students do not yet know the rules made by the

college and the privileges allowed by the same. If your lamps become burned out, notify Mr. Wallace and he will replace them with new ones free of cost. If you will do this hereafter you will have better lights for your rooms and confer a great favor upon the electrician.

—The short winter course of eleven weeks which has been recently incorporated into the curriculum of the College is already well begun. Perhaps we might wish for a larger number of students in this course, but we can scarcely expect a stronger manifestation of interest and appreciation of advantages from that which is in its infancy. Time will prove the value of this course and attract all the attention that it justly deserves, more than this it is far outside of our sphere to criticise the work being done in this its first term. We can only say that the College has liberally supplied a corps of able instructors and wish the course all success.

—The dancing class under Prof. Petit is progressing quite rapidly and now numbers about twenty-five. On account of the Natural History society lectures which are held on the same evening, the time set for class is each week delayed until after the above meeting. A piano has been placed in the drill hall and lessons are by its use much more easily taught. Upon the success of this class depends the question whether we will have a military ball this winter. There is no reason why this popular event should not take place this year with as great success as it has for the past two years, and we look forward to it with considerable pleasure.

—The annual reunion and dinner of the Massachusetts Agricultural College Alumni Club of Massachusetts will be held at the United States hotel, Friday, Jan. 22, at 7 P. M. By special invitation of the committee of arrangements the College will send a quartet to sing. The quartet will consist of the following men: J. A. Emrich, G. D. Leavens, S. E. Smith and C. A. Norton. The AGGIE LIFE will be represented by the largest delegation that has ever been present at one of these meetings. It will be composed of G. D. Leavens, J. M. Barry, J. A. Emrich, and C. I. Goessmann. These alumni dinners are looked forward to with great pleasure by the members, and this year's reunion promises to be one of the best ever held.

—While we do not care to meddle with the Business Manager's affairs, and put "ads" in the columns devoted to "College Notes," it seems proper to say just a few words of commendation concerning the 1897 catalogue recently issued by W. W. Rawson & Co. of 34 South Market St., Boston, Mass. We mention this pamphlet of useful information because of the special value it possesses for those who are interested in any branch of Horticulture or Floriculture. The catalogue is larger and their stock is more nearly complete than ever before. In addition to the large list of seeds for sale the book contains fine engravings of the more important portions of the different fields and buildings. It is well worth the slight trouble of applying to the above firm, from which it may be obtained free of cost.

—Since the beginning of the term the College has been supplied with electricity, during the whole of the night time. The Amherst plant furnishes the lights now, and as there is no switch board at the power station the lights cannot be turned out at the College until the town lights are turned out. During the daytime, the electricity has been turned on for the use in the dairy school so we have had abundance of electricity, though of course the lights in the College buildings are turned off. The town current is somewhat stronger than that which should be used for the lights, and consequently about five lamps more per night are burned out above the number that were used up when electricity was furnished from the College plant. The lights are 104 volt, and the average current is 116 volts. If this strong current continues we will have to make a special contract with some electric works to furnish us with lamps. A new switch board is being made, however, and then we will have lights only up to twelve o'clock.

—A short time ago the college received a challenge from Storrs Agricultural College to play a game of Polo at the latter's pond; the time to be in the near future and to be agreed upon between the two colleges. So far this year very little polo practice has been had and if we do decide to accept this challenge, we must not expect victory unless good faithful practice is resorted to. Whether we receive challenges from other colleges or not we surely have material enough to make up a good team and should make it our business as it is our duty, to have some interesting

games before skating is a thing of the past. The Polo Association has held one meeting and it looks now as though the spirit of enthusiasm were spreading in a way that will bring about the accomplishment of something. It has been voted to levy a tax of twenty-five cents upon each student in college. This will bring into the treasury enough to purchase necessary implements and a guarantee for one game. Time will tell more than we can prophesy here, but we hope to see the matter pushed for what there is in it.

—The first of a series of debates, arranged by Prof. Mills for the Senior English division, was listened to by the members of that class, last Friday morning. The question, "Resolved, That Canada should be annexed to the United States," was well discussed on both sides. The affirmative was represented by Messrs. J. L. Bartlett and H. F. Allen; the negative by Messrs. C. I. Goessmann and P. H. Smith. The judges, Messrs. L. L. Cheney, L. F. Clark and C. A. Norton, retired and after a brief consultation tendered their decision of the merits of the debate in favor of the negative. The class then voted that the merits of the question were with the negative. It was the general opinion of the class however, that the merits of the debate were with the affirmative. The arguments brought forth by both sides proved very interesting and instructive and many new ideas were advanced. The debate taken all together was well prepared and many thoughts were brought out that were well worth consideration. The next debate of the series will take place next Friday morning. The question is "Resolved, That Hawaii should be speedily annexed to the United States."

—Since the beginning of the term the department of the Gypsy Moth Commission which has to do with the scientific investigations has been transferred from Malden to the Insectary where the assistants will be better enabled to co-operate with Prof. Fernald. The Insectary is well fitted for such work and it will without doubt be easier to carry on the work here than in Malden. Of course the varying work carried on by this commission will necessitate frequent visits to the infested districts and especially during the breeding season of this insect. The upper rooms in the Insectary have been especially fitted up and the work in this additional department is being carried on by Ass't Entomologist A. H. Kirkland '94 and A. F. Burgess

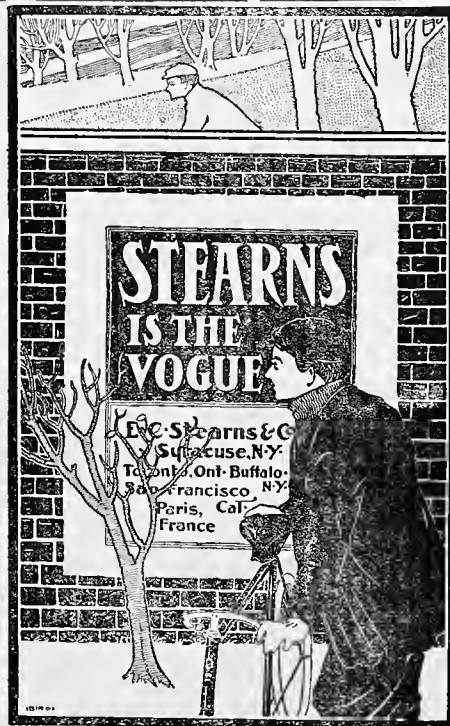
'95, another assistant, and the department of Chemistry by F. J. Smith '94. During the winter there will be prepared and sent to all post-offices in the state cases showing the various stages in the the life history of the Moth and the broken cases will be replaced. Mr. Smith is conducting a series of experiments looking forward to discovering some insecticide which will be cheap and effectual and leave the foliage in a healthy condition. Most poisons heretofore discovered have been effectual but are costly and badly burn foliage of the vegetation sprayed. The results of these experiments are to be published soon in a convenient form.

—We are all of us at this time more or less interested in and concerned with the appointing of the future Cabinet of President-elect McKinley. But as students of a college whose worthy President has been popularly acknowledged as one of the possible candidates to the honorable office of secretary of agriculture, we are especially interested in the make-up of the Cabinet. In Mr. Hoard and Mr. Brigham, President Goodell has rivals against whom to compete would be an honor enjoyed by few men of this country. Mr. Hoard is an ex-Governor of Wisconsin and editor of the well known and popular *Hoard's Dairyman*. Mr. Brigham is a man of quite wide reputation and is Master of the National Grange. Both are very able and strong men to run against. While we are well aware of the abilities of these two honorable gentlemen we cannot but feel that Pres. Goodell with his valued experience would be a more able and desirable man for this high position. The President is a friend of Major McKinley and both have many close friends in common. We hope and trust that the latter will bring their influence duly to bear upon this important subject for we believe that they will not only be honoring their esteemed friend but place in the national chair of agriculture a man who will be a credit to the position. President Goodell is highly esteemed by the college and faculty and though they would be sorry to have him leave the institution, they would nevertheless rejoice to see him filling the position in question.

—There has recently been posted upon the North College bulletin board the notice of a Civil Service examination to be held at Albany Feb. 2. The position to be competed for is that of Station Librarian and editor of the New York Experiment Station bul-

letins. The station is located at Geneva, New York, and the salary is \$1,800 per year. In a short time another examination is to be held under the Civil Service commission at Springfield, Mass. The vacancy to be filled is that of Assistant Chemist to the Department of Agriculture at Washington, the salary being the same as that of the above position. Perhaps it would not be out of place to say just a few words here concerning the appointing of persons to these positions. As would be expected Massachusetts has always taken a lively interest in these civil service examinations, and is generally represented by a goodly number of worthy candidates. Moreover, the old Bay state has supplied as many if not more young men to these positions of trust, honor and skill than any other state in the Union, and M. A. C. has certainly furnished her share. There is one thing concerning this examination however that it becomes our duty to mention and even to justly criticise. During the past few years these examinations have been conducted, as usual, and the usually large number of young men from the state have competed, probably more each year, but for some reason

better known to the officers of the civil service commission than to ourselves, many of them have been disappointed and perhaps slightly provoked with some such notice as "You have passed as good an examination as any one, but owing to the fact that so many young men have been already appointed from Massachusetts we think it would be unjust to the other states of the Union to appoint any more from that state etc." This seems to us to be a positive violation of the object intended in the establishing of this commission which was to fill vacancies with men of the best ability, nothing being intimated in its constitution in any way concerning the state from which such candidates should or should not come. This is a subject in which all as loyal patriots should consider in an important manner, knowing that if these positions are filled with the best men the country in general reaps the benefits and not the state that fills most of these offices. If Massachusetts men pass these examinations as successfully as do any others there is no reason why they should not be appointed to these positions as well as men from other states.



Alumni.

NOTICE.

On the evening of Jan. 22d at 7 P. M. the Mass. Agr'l College Alumni Club of Mass. will hold its annual meeting at the United States Hotel of Boston. After the meeting at which it is hoped there will be a large attendance there will be a banquet. A new feature of the occasion will be the college quartet which will be in attendance and furnish music throughout the evening.

The Gypsy Moth Commission has moved its headquarters to Amherst, consequently a number of graduates can be found in their offices at the Entomological Laboratories at the college, Kirkland '94, Burgess '95, F. J. Smith '90, are among the number.

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AGGIE LIFE.

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THE AGGIE LIFE desires to express its gratitude to the *Alumni* for the large number of subscription payments received during the past two weeks. It is particularly gratifying to the business department to receive this support after the struggle of the past few months. This sudden enlargement of the heart we regard as a most favorable symptom, and we earnestly hope that it may extend to all our delinquent subscribers.

Again we would call attention to the fact that it is extremely trying for individual members of the senior class to be burdened with the preparation of several graduation theses. When a man has commenced his thesis work in some particular department, it is extremely discouraging to be told that he *must* prepare theses from other departments whether he wishes to or not. The invariable result will be that the student will be unable to concentrate his energy and attention upon any one piece of work and none of the theses will be well done. We leave it as an open question as to whether or not a thesis that shall embody the results of a year of original work be not of more value than two or three superficial essays.

In our last issue we called attention to the military rifle contest to be held early in the spring, and we feel sure that great interest will be taken in the prize drill to be held in Boston next May. The conditions of the contest will be similar to those last year, and it is intended to send a large squad to represent the college. The good work done last year should be an incentive to our men to make a creditable showing in this contest. Last year we captured the silver medal and this year we must have the gold one. Practice and skill will tell and we urge upon every cadet the importance of thorough work in the military department.

THE advisory board, consisting of two members of our faculty, has assumed its duties, and the cordial relation that exists between them and the management of the various student organizations is proof that the old spirit of antipathy between the students and the faculty is dead. It is a significant fact that the students have gladly welcomed such a board and that they appreciate the spirit that prompted its formation. It might well be called "The Student's Protective Board," as under this system every contributor to a

college enterprise may feel absolutely sure that his money will be used for the sole purpose for which he intended it. The present tendency of the students and faculty to coöperate in matters relating to the welfare of the college shows that whatever Aggie may lack in numbers, there is no lack of genuine loyalty and college spirit.

For several years it has been felt that the annual report of the college, combined as it has been with the report of the experiment station, has not possessed such features as are best suited to induce students to choose the M. A. C. for their *Alma Mater*. The report of the college while correct and complete was often well nigh lost among the voluminous records of experiment station work and financial statements. It is now intended to issue a handsomely illustrated catalogue of the college that may give to the reader an adequate conception of the excellent equipment and grand opportunities for study furnished here. In this new catalogue each department will be described, and an outline of the work taken up given. The illustrations are being prepared especially for this purpose, and no effort will be spared to make this catalogue as complete and artistic as possible. We wish the enterprise success, and earnestly hope that it may serve its purpose, that of bringing large and strong classes to our beloved *Alma Mater*.

Contributed.

SENIOR COURSE IN CHEMISTRY UNDER DR. GOESSMANN.

(The Seventh of a Series of Articles on the Senior Courses.)

This most important and interesting course embraces both agricultural chemistry or the chemistry of plant food, and organic chemistry, with reference to its application in agriculture and the arts. No student who is interested in either theoretical or practical chemistry can afford to miss these lectures. The life and enthusiasm that Dr. Goessmann puts into this work may well serve as an inspiration to the undergraduate, for it should be remembered that our worthy doctor is one of the greatest chemists in the world.

A few words as to Dr. Goessmann's career may be of interest. He was graduated from the University of Göttingen with the degree of Ph. D. in 1853. From 1852 to 1857 he was Assistant Chemist in the University of Göttingen. It was in 1857 that he assumed the position of chemist and manager of a large Philadelphia Sugar Refinery, traveling extensively in Cuba and the South in the interests of the Sugar Industry until 1861. In 1861 he became chemist to the Onondaga Salt Company, which position he held up to the year 1868. It was during this time that the doctor made his celebrated investigations of the saline resources of the United States and Canada. From 1862 to 1864 the doctor was also Professor of Chemistry in the Rensselaer Polytechnic Institute. He has been professor of Chemistry in the M. A. C. since 1868, and from 1882 to 1894 he was Director of the Massachusetts Agricultural Experiment Station, also serving as Analyst for the State Board of Health since 1884. In 1888 he received the degree of LL. D. from Amherst College.

No man has been more loyal to the College than has Dr. Goessmann, and the association of his name with this institution has been of greatest benefit to the College.

The course offered consists of three lectures a week, and, although especially inaugurated as a senior elective, is open to all who desire to attend.

The subjects discussed are as follows :

CHEMISTRY OF PLANT FOOD.

1st. Term.

1. History of Agricultural Chemistry.
2. Resources of Plant Food ; Atmosphere and soil.
3. Occurrence and Description of Commercial Articles of Plant Food ; Nitrogen, Sulphur, Phosphorus, Potassium, Sodium, Calcium, Magnesium, and of their Chemical Composition and Commercial Relations.
4. Home Resources of Manurial Substances,—Barnyard Manure, Compost, Sewage, etc.
5. Preparation of Commercial Fertilizers, Superphosphates and Compound Fertilizers.
6. Analysis of Commercial Fertilizers.
7. Soil and Soil Analysis.
8. Position of Commercial Fertilizers in a Rational System of Farm Management.

9. Laws for the Regulation of Trade in Commercial Fertilizers.

10. Description of Field Experiments carried on by the Department at the Experiment Station.

ORGANIC CHEMISTRY.
2nd. and 3rd. Terms.

With special reference to Agriculture, and is treated in the order adopted by H. C. Roscoe in 1893.

1. History of Organic Compounds and Calculation of the Formulae, etc. From this on, lectures are given on the various types of organic substances, and every class is represented by its type.

In connection with the Hatch Experiment Station of the College, Dr. Goessmann is charged to superintend the Official Inspection of commercial fertilizers, and the direction of a series of field experiments inaugurated by him in previous years, and students are welcome at all times to visit field or laboratory for information.

Such a course as outlined above cannot but be of great benefit to any student, and the fact that it is conducted by so eminent a man makes it one of the greatest privileges of our College course. L.

SENIOR CLASS DAY APPOINTMENTS.

The class of '97 has made the following appointments for the class day exercises at commencement:

- Master of Ceremonies,
George Davison Leavens, Brooklyn, N. Y.
- Class Oration,
Herbert Julius Armstrong, Sunderland, Mass.
- Campus Oration,
John Marshall Barry, Boston, Mass.
- Pipe Oration,
John Albert Emrich, Amherst, Mass.
- Class Poem,
Charles Ignatius Goessmann, Amherst, Mass.
- Campus Poem,
James Lowell Bartlett, Salisbury, Mass.
- Ivy Poem,
Harry Francis Allen, Northboro, Mass.
- Presentation of Gifts,
George Albert Drew, Westford, Mass.
- Historical Review,
John William Allen, Northboro, Mass.
- Master of Music,
Charles Ayer Norton, Lynn, Mass.

COMMUNICATION OF THE ADVISORY BOARD.

ESTABLISHMENT OF THE BOARD.

The readers of AGGIE LIFE are aware of the existence, in the college, of various organizations which were created and are conducted for the promotion of various interests here. Each of these, must necessarily have a financial department, for in this world nothing can exist *sans argent*. Unfortunately for all connected with the college, some of these financial departments have, in the past, not been conducted according to strict business rules. In consequence of this, much complaint has been heard and dissatisfaction felt.

In order to bring about an improvement, the college authority drew up the "Constitution and By-Laws of the Massachusetts Agricultural College Advisory Board."

This was adopted by the Faculty, was published in these columns on Jan. 20, 1897 and was adopted by the student body, assembled in mass-meeting. The document is self-explanatory. According to one of its provisions an election of the first advisory board has been made and the undersigned to whom this trust has for the present been committed, now make to the students and the public their first statement, concerning the business in hand. Several sessions of the board have been held. The affairs of the organization in question have been examined, in part and a general plan of procedure, in harmony with the provisions of the above mentioned document, has been adopted. In order to avoid misunderstanding it should now be noted, that the functions of this board extend only to the five organizations mentioned in the trust. Sec. 1. Art. 1. Various other bodies in college are classed under the title "Athletic Organizations" and their affairs come under the jurisdiction of an entirely distinct committee or the Faculty. We now make a brief statement concerning AGGIE LIFE.

The editor-in-chief and business manager of this very important publication, have shown to this board the recent history and present condition of its finances. A full report of this examination cannot here be given. We desire, however, in the interests of all to call attention to the following facts. About nine months ago the present management assumed its charge. The full meaning of that statement, it would be difficult to make clear in a few words. It then assumed

a very heavy money debt, which for such an enterprise was well nigh crushing, a demoralized subscription list, and a bad financial credit. Those who know the history of the paper during several weeks of last spring can testify as to its outlook at that time. This was almost hopeless. It was most fortunate that at this juncture, Mr. Leavens with his excellent executive ability, and editorial capacity was elected to the chief editorial position and that Mr. Barry with his business foresight, self denial, hard work, and push was chosen as business manager. The situation through their efforts has been reversed in every respect. Before creditors, literary critics, friends, and enemies the results now stand in clear light. In recognition of this faithful work in the interest of the students, and the alumni of M. A. C., may we not be allowed to ask every one who reads these lines to do what he *can* by literary contribution, by subscription and in other ways in support of this efficient bulletin of the college and college life.

The Advisory Board } C. WELLINGTON, President.
 } G. E. STONE, Secretary.

THE LIBRARY AND PRESIDENT GOODELL.

In looking up some investigations in a particular line of agricultural chemistry I had occasion to consult practically all of the works in English, French and German which are of any particular value. After exhausting the resources of our own library and that of Brown University, I spent a few days at the Library of the Bussey Institution and not finding there all that I sought turned next to that of my Alma Mater. It gives me pleasure to state that I found our library was no longer such as many of us remember as located in the northwest corner of North College, but in the line in which I was particularly interested it probably has but few equals in the country. I can only say that no one who knew the College prior to 1884 has the faintest conception of its great value to the students who are now occupying our places. For the wonderful change which has taken place the College is not alone indebted to the generosity of many of the Alumni but particularly to the untiring devotion of President Goodell who in the midst of his multifarious duties never forgets to do all he can for the development of the Library.

H. J. WHEELER '83.

THE ANTIQUITY OF MAN.

SECOND LECTURE IN THE WINTER COURSE UNDER THE
 DIRECTION OF THE N. H. S.

On Jan. 22, Professor Lull gave a lecture before the Natural History Society, on The Antiquity of Man. He presented the subject of evolution in a very interesting and instructive manner. Professor Lull then said, that of man in prehistoric times, we can not speak with any degree of accuracy. We know that he lived ages ago, dwelling in caves, making weapons from stone, first with a rough surface, and later with a smooth. After a time, man found out how to use iron, gold and copper in making ornaments and weapons. At first iron and stone heads were used, being held in the hands; but as an advance was made in education these rude devices were attached to the ends of sticks of wood, and were then used as spears and arrows, making a much more formidable weapon.

Many of the prehistoric races were cannibals as is proven by marks on human bones, exhumed. They also practised cremation. There are very few remains of prehistoric man in America, the mound-builders being the earliest. Men in early times did not have domestic animals, or eat vegetable food. The early type of man was very low for a creature that walked. If man was from a common pair, they must have been of great antiquity, probably originating in Bomer, Japan. No one claims that human beings came from the ape, but that they both came from the same class.

There are two ways in which man could have come to America, across Behring Sea or in floes in the glacial period or on the chain of islands which connected South America with Asia. The theory of evolution is so well borne out in the lower animals that it must hold true in regard to man. There is a missing link connecting man with the ape which scientists have been trying to discover for a long time. They have found from time to time skulls and human bones which they tried to prove belonged to the missing being, but without success.

Professor Lull also explained how climate, owing to changes brought about by the glacial period affected man in early stages.

After the lecture he showed many primeval weapons, casts of skulls, carvings, etc.

THE GYPSY MOTH.

THIRD LECTURE IN THE N. H. S. COURSE.

A very interesting and instructive lecture was delivered before the members of the N. H. S. on Friday evening, Jan. 29, by Mr. A. H. Kirkland, '94.

The speaker is the assistant State entomologist, and his subject was "The Gypsy Moth." Mr. Kirkland has had a great deal of practical experience with this insect pest, and his lecture which was well appreciated was something as follows:

First of all the female moth lays her eggs—usually about an average of five hundred in number—on a tree, rock, or some other available place, all in a single nest. During the act of laying the eggs, she involuntarily brings her body in contact with their sticky surface, thus depositing over them a protective coating of hair. Occasionally a single nest will bring forth a thousand or more young caterpillars, which having hatched at the end of two or three weeks' time, proceed at once to the tender foliage, where they feed and grow rapidly.

At first these caterpillars eat only small holes in the leaves, but as they grow larger they become more voracious, and when present in great numbers, often entirely strip the trees of their foliage. From the first of May until about the middle of July, the caterpillars cast their skins three or four times, much as a snake sheds its skin. Soon after its last molt, the caterpillar retires to some unexposed place and after a period of two or three weeks emerges as a full grown moth.

The male moth is of a darkish brown color with irregular markings, while the female is of a light creamy color with dark markings, and somewhat larger than the male.

The female moth though provided with wings does not fly, but emits a distinct odor which attracts the male moths to her and after fertilization lays her eggs for another brood.

The literature that has been published concerning this moth since 1720 has furnished a great deal of useful and interesting information.

Outside of the United States, the countries that have suffered the most from the ravages of this insect are France, Germany and Russia.

The manner in which this insect was introduced into this country is rather interesting. In 1868 Trou-

velot, a French astronomer was exiled to this country. Soon afterwards he imported some eggs of the Gypsy Moth from Europe, anticipating making a cross between the gypsy moth and the silk worm. His object in doing this was to obtain a hardier insect than the latter and still have one that would spin a fairly good quality of silk. His experiment proved a failure and more than this the screen enclosing the experimental insects was blown away one night distributing the moths to the four winds of heaven. Thus did the gypsy moth gain footing in this country.

For over five years the state has been at work, studying how to rid itself of the gypsy moth. From large portions of the infested parts, this pest has been practically wiped out.

Across the waters this insect is held in check by its multitude of parasites. But here it is not so, for we have only one or two species that would be of any value in this line.

In an ordinary breeze a male will detect the characteristic odor discharged by a female at a distance of nearly half a mile. The larva of the Gypsy Moth feeds only during the night, and is on this account harder to combat.

At the end of his lecture Mr. Kirkland stated that the students of this College have opportunities and advantages for the study of entomology second to no college in the world.

M. H. MUNSON.

*THE SCIENCE OF LANGUAGE.*FOURTH LECTURE IN THE N. H. S. COURSE. SPEAKER,
PROF. GEORGE F. MILLS.

It is not possible to determine positively the origin of man and still more difficult to determine the beginning of language. If we believe the Scriptural version of the beginning of mankind we must conclude that language was an original endowment of man! If we accept the evolution theory we must regard language as a gradual development. Language is a science. Science presupposes facts and consists of classified knowledge and language fulfills these conditions. Language consists of certain sounds put together in certain ways and used for the expression of ideas. We put certain sounds together to make a word and agree among ourselves that this word shall stand for a certain object. Sounds are represented to the eye by letters and in this way we get written language. Since

language consists of the utterance of oral sounds our first study should be to learn how these sounds are used. This leads to the study of the vocal organs and thus language is entirely connected with the science of physiology. We have studied these organs and learned many facts concerning them in the production of sound and these facts go to make up the science of Phonetics.

Just how the invisible and immaterial mind expresses itself through the physical vocal organs we cannot understand. The child has little control over his vocal organs at first but he gradually acquires the power of speaking words by hearing others speak them.

Phonetic spelling consists in using characters which represent the sounds in a word. If this system were adopted the spelling of our words would be greatly modified. The fact that the spelling of many of our words differs so from the sound is explained by the fact that the pronunciation of words is easily changed but the spelling is not and consequently words which were originally pronounced according to their spelling have changed in pronunciation which their original spelling has been retained.

In studying language, as in studying any science, we must consider materials and structure. In language, materials are the words and structure is the grammar. Language grows, not like a plant by the development of some internal living force, but by outside accretions. Science progresses, new discoveries are made and new words are needed and are coined to suit the occasion.

Words are tools which we must use for we cannot get along without them. If new truths are discovered they are of value only when expressed in words. Words are of value not only in science but in every day life for we cannot get along without them.

The study of language may proceed along several lines as origin, history, derivation and composition. The origin and meaning of words is a very interesting study and those who find time to devote to it will derive not only pleasure but profit, for a knowledge of the history of words enables us to use them intelligently and the ability to use words intelligently may prove of great value to us in many ways.

—The Sophomore class under Prof. Metcalf, has recently taken up the subject of Surveying.

POLO NEWS.

AMHERST, 2; M. A. C., 0.

A very interesting game of polo was played on the M. A. C. pond Saturday, Jan. 30, between the Amherst and Aggie polo teams.

It was the first time in the history of the two colleges that such a game had taken place, and although the game was hotly contested, no unpleasant features were noticeable and we hope in the future to see advantage taken of our pond for the mutual benefit to the playing of both teams.

Amherst won through superior team work, Russell and Franklin's work of passing and driving for goals being of high order.

Individually Aggie played well, but lack of practice and the absence of the regular first rush materially interfered with their team work. Rogers and Hooker played the best game for M. A. C.

The following was the line-up:

AMHERST.		M. A. C.
Russell (Capt.),	1st Rush,	Rogers
Franklin,	2d "	Hooker
Gibbs,	Centre,	Eaton (Capt.)
Foster,	Half,	Hinds
Fosdick,	Goal.	{ Montgomery, 1st half { Emrich, 2d half.

Goals—Russell (2). Time—20 m. halves. Referee—Warden, M. A. C., '98. Umpire—Smith, Amherst.

CLASS GAMES.

After the heavy snow of two weeks ago the manager of the polo team had a large portion of the pond cleared of snow, and since then the pond has been enjoyed by all those who love the excitement of polo. Several of the classes have seized the opportunity to have a friendly contest and incidentally to prove the superiority of their respective classes. '98 defeated '00 by the score of three to one in a game marked by poor team work on both sides.

The following was the line-up:

'98.		'00
Eaton,	1st Rush,	Rogers
Baxter.	2d Rush,	Stanley
Warden,	Centre,	Gile
Wright,	Half,	Kellogg
Montgomery	Goal,	Crowell

Goals—Eaton (2), Baxter (1), Rogers.

On February 4th, '99 defeated the Freshmen amid great excitement by the score of three to nothing.

The Sophomores had by far the better team, and only for the efforts of Stanley the score would have been considerably greater.

The following was the line-up :

'99.		'00
Maynard,	1st Rush,	Stanley
C. W. Smith,	2d "	Crowell
Hooker,	Centre,	Gile
Hinds,	Half,	Kellogg
Turner,	Goal,	Walker

Goals—C. W. Smith (2), Maynard (1). Referee—Emrich, '97. Umpire—Warden, '98.

HOW THEY PLAY.

In choosing for the different positions on the polo team the material is so evenly divided that one would find hard work to pick out from the whole the five best players.

The following is a short criticism of the best players:

Capt. Eaton is playing a good game at centre but is too much of an individual player and is inclined to play too much of a rush game and not remain in his position. Rogers is a good player and is excellent in driving for goals but is a little slow on his feet. He displays more knowledge of the game than any of the rushers.

Hooker is an all-round player, playing equally well rush, centre, or half. He is the surest of the players on a drive for goal, but has not been out regularly for practice and his playing has suffered materially thereby.

Charmbury's work on last year's team could not be excelled but his long sickness has left its effect and he has not yet struck his former gait.

Hinds at half is a stone-wall. Sometimes carelessness is to blame for a misplay but on the whole he is all a half-back should be.

Emrich at goal plays a steady game and he and Hinds together form a guard that rushers find hard work to pass.

Maynard and C. W. Smith are the rushers on the '99 team and are not far behind the others in general good playing. The two together play strong team work and form a pair that in an emergency could step in and fill the positions of the regular rushers without the team suffering in any degree.

THE DINNER.

What Hamlet said as to the "Play" may at times be true, but at this season of the year, among College men and women the "Dinner's the thing." In Boston and in New York, as well as elsewhere, the alumni of our universities, colleges and schools hold their annual winter dinners. Somewhere in one or the other of these towns may now be heard on almost any evening the joyous songs and shouts of men or women assembled to enjoy the feast of reason and the flow of soul as only those can whose hearts are wedded to a common purpose. They are all loyal children of Alma Mater. However, far apart may be their feelings in other matters of human interest, they are one in devotion to the evolution, development, and improvement of mankind. On other days, or nights, they may be high church or low church or no church, they may be autocratic or democratic but to-night they are *e pluribus unum*. This is the noble democracy on which rest human hopes. One section of this body, the "Former students of M. A. C." celebrated their winter feast at the United States Hotel in Boston on Friday evening, Jan. 22. The only criticism of the occasion, which we will allow, is that expressed in the statement of the number present, sixty-five, the old boys and the young being about equally represented. We will hope, that next winter, they'll all be there. But there was a feast of enthusiasm. After the indispensable indigestibles came a sound talk from Secretary Sessions, a ringing speech from President Goodell, a genuine "digester" from Dr. Root '76 of Hartford, Conn., a talk with a kernel in it by Col. Dickinson '74 of Jersey City, a most helpful, enthusiastic address by Mr. Carruth '75 of Boston and a telling speech by Dr. Lindsey '83 of Amherst, Mr. Leavens '97 of Brooklyn, gave an inside view of the College and an instructive demonstration of the need of more active support by "former students" of the undergraduate enterprises. The manner in which the AGGIE LIFE and the annual *Index* is neglected by the "post graduates" was brought to light. It is believed that the echo of this address, will resound until active and permanent support for these enterprises shall be secured. Mr. Barry '97 of Boston made statements concerning the management of the AGGIE LIFE, which were very interesting and which must have won friends for the paper.

The wise man told us :

Who does not love laughter and song,
He is a fool his whole life long.

Of each there was a delightful measure at this alumni dinner. The songs by the College Quartette were heartily enjoyed by all present. And for their delightful harmonies, thanks are extended to Messrs. Emrich, Leavens, and Norton of '97 and Mr. S. E. Smith '99 in the name of many former students.

ALUMNUS.

College Notes.

—Heap, much wet.

—Kalthessesauerkrautkneipereiangelegenheit.

—J. R. Dutcher '99, has returned to college, and is resuming his studies.

—The Senior Class Day appointments will be found in another column.

—John Marshall Barry '97, of Boston, has joined the *Phi Sigma Kappa Fraternity*.

—Pres't Goodell was in Washington last week on business connected with the college.

—The Sophomores defeated the Freshmen in a polo game last Thursday, by a score of 3-0.

—The theses from the Seniors in the Political Economy division will be due Monday, Feb. 15.

—During the past two weeks, the cadets have been drilled in the Bayonet Exercise, and the Manual of Arms.

—At a recent meeting of the polo directors, J. S. Eaton '98 was elected captain, and L. L. Cheney '97 manager.

—The students of the short winter course were pleasantly entertained at the home of Professor and Mrs. Maynard last Friday evening.

—The Senior class in required English has recently finished reading some of Milton's best representative works, and will now take up Dryden.

—Prof. Geo. F. Mills delivered an able lecture before the members of the Natural History Society, last Friday evening, his subject being, "The Science of Language." One might surmise from the subject that the lecture would be "dry," but it was handled in a way that made it both interesting and of an instructive nature,

—Some of the Freshmen, in charge of Lieut. Armstrong, are having rifle practice in the shooting-gallery, and some good records are already being made.

—A bronze statue of Judge Henry F. French, the first president of the M. A. C., has recently been presented to the College by his son, and will soon be placed in the library.

—During the illness of the Commandant, Lieut. Wright, the military drill has been conducted in a very creditable manner by Cadet Captain Barry and Cadet Adjutant Leavens.

—The Senior division in Political Economy under Dr. Walker, have recently finished the study of Gibbins' "Industrial History of England," and will now proceed to make a study of some phases of the money question.

—Mr. E. J. Wood of West Newton, and Mr. James Draper of Worcester, trustees of the college, inspected the institution while here a short time ago. During their stay in town, they were entertained at the home of Professor and Mrs. Maynard.

—Judge Robert W. Lyman, Lecturer on Law at M. A. C., delivered an interesting and practical lecture before a large number of Hampshire County Grangers, at Pacific Hall in this town last Thursday afternoon. His subject was, "Rural and Farm Law."

—The Senior class has elected officers for the term as follows: Pres't. G. D. Leavens; vice-pres't, J. L. Bartlett; treas., H. J. Armstrong; class cap't, G. A. Drew; reading-room directors, L. F. Clark and C. F. Palmer; polo directors, L. L. Cheney and J. A. Emrich.

—Every two weeks somebody comes around and asks us "When will AGGIE LIFE be out?" This grows rather tiresome after a few months, so we will answer that question now, once for all. We are out now (about \$50.00). If you don't pay that subscription we will be out more yet, and soon won't be able to be out at all.

—Pres't Goodell addressed the members of Hampden Harvest club at West Springfield, Mass., Jan. 26. He gave an interesting talk concerning the work, and present needs of the college. Such talks will probably accomplish more for the college than the present newspaper advertising, and without doubt, have more influence upon average persons.

—The members of the Senior class spent a pleasant evening at the home of Prof. Maynard a short time ago, and had the pleasure of meeting two of the trustees of the college. It is understood that the latter have received a more correct impression of the college during their recent visit, and that they are also well pleased with the manner in which the various departments are conducted.

—The students in the Senior Political Economy division have chosen the subjects for their theses as follows: H. F. Allen, "Protection;" J. W. Allen, "How shall the United States be provided with money?" L. F. Clark, "National Banks;" G. A. Drew, "International Bimetallism;" J. A. Emrich, "Trusts;" C. I. Goessmann, "State control of Foodstuffs;" J. F. Hammar, "Coöperation among Farmers;" C. F. Palmer, "Immigration."

—Seated at my desk and busily writing College Notes the other night I was surprised to find myself in utter darkness which came as quick as a flash. I thought to myself, "Where was Moses when the light went out?" I didn't say anything out of the way, but it would be doing us a great favor if the electric company would have the lights "flashed" once or twice about ten minutes before they turn off the electricity. Light on retiring is, to us, indispensable.

—At the last meeting of the directors of the College polo association, a tax of 25 cts. was levied on each student. It is to be regretted that the students do not pay up their taxes more promptly. The manager of the team, Mr. Cheney, has had excellent success in arranging games with other colleges. The men have already witnessed two games on the pond, and we still have three more games to come. Now, every man ought to feel it his duty to pay his tax, and help support the team, for we cannot play games without money.

—The Senior debate of Friday, Jan. 29, was upon the question, "Resolved, That Hawaii should be speedily annexed to the United States." Affirmative, J. W. Allen, and J. M. Barry; negative, J. A. Emrich and G. D. Leavens. The judges, H. F. Allen, J. L. Bartlett and P. H. Smith, Jr., reported the weight of the argument in favor of the affirma-

tive; the merits of the question were decided in favor of the negative. The question for debate on next Friday morning is, "Resolved, That party allegiance is preferable to independent action."

—One of our more active and up-to-date professors, Dr. Wellington, has set aside the following hours for the benefit of any who care to consult with him either on matters of business or for social entertainment: In the Senior chemical laboratory, Monday and Tuesday, at 3-15 o'clock, or at his home, 34 Amity St., on Wednesday evenings from 7 to 9. This is undoubtedly a good plan, and would probably be used by more members of our faculty, only for the fact that not enough students would take advantage of the opportunities to warrant the setting aside of such "office hours."

—The next lecture held under the auspices of the Natural History Society, will be delivered in the Stone Chapel at the Mass. Agr'l college next Friday evening by Prof. Babson. The subject which the lecturer has chosen is "A 'Bull's eye' view of Europe," and it will be finely illustrated by a large assortment of views which Mr. Babson took during his extended tour abroad last summer. The lecturer has gone to a great deal of trouble and expense in taking these photographs, and especially in having them prepared upon slides ready for the use of the stereopticon. It is unnecessary for us to say that the lecture will be interesting for it will without doubt be one of the best things that the course will be able to offer. The small sum of admission, twenty-five cents, should not for a minute leave a shadow of a doubt upon the mind of any person wishing to make a good investment.

—On Thursday, Jan. 28, twenty-five deputies from Granges in the state visited the college. Accompanied by Pres't Goodell, Dr. Walker, Dr. Wellington, Prof. Cooley and Dr. Stone, they began a tour of inspecting the different departments. Beginning at the Entomological department where they were shown around by Dr. Fernald they proceeded to the Botanical department, and thence to the main buildings. Though their visit was accompanied by the hardest snow storm of the season they gained a good insight into the work being done here, and were well pleased with the college. Soon these officials of the granges

will prepare lectures concerning the college and deliver them before their different organizations and we trust that they will give us our just dues. There is a general feeling among the officers and students of the college that our Agricultural population is not aware of the advantages offered here, and the work of these deputies will probably prove a great benefit to the college.

—Amherst College is conducting a course of lectures, the general subject of which is "College Thought and Public Interests." On the evening of Friday, Feb. 5th, Dr. Albert Shaw, editor of the *Review of Reviews* spoke upon "The New City Life in England and in the United States." Dr. Shaw is well known as an eminent authority upon political science and political economy, and his lecture was of deepest interest to all. On the evening of Washington's birthday, Feb. 22d, Rev. Charles H. Parkhurst, D. D., will speak upon "Civic Righteousness in the New City." These lectures are held in Amherst College Hall, and while the centre aisle is reserved for Amherst students up to ten minutes of eight, all other seats are free, and no seats are reserved after that time. It is earnestly hoped that our students may avail themselves of this valuable educational feature.

—On Tuesday morning, Jan. 26, a mass meeting of the students was called to order by G. D. Leavens, president of the Senior class. The constitution and by-laws of the Massachusetts Agricultural College Advisory Board—as printed in the last issue of *AGGIE LIFE*—was read and adopted. Dr. Wellington and Dr. Stone were elected from the Faculty to serve on this board. The above representatives of the Faculty have examined the accounts of the business manager of the *LIFE* and expressed themselves as satisfied and well pleased with the manner in which the paper has been managed and also with its present condition. This is the first time in the history of the college that this scheme of having an advisory board has been tried and though the board has not been serving long, it is the general opinion of the students that they will be able to cooperate with its Faculty members in a way that will be for the best good of the organizations for which the Advisory board was established. The accounts of the other college organizations will be examined soon.

MY LOVE.

My love in fancy flies.
 Like moonbeams bright
 Over land and skies,
 Twinkling on the shades of night.
 Is it a star
 I see afar
 Thrills my soul and makes it glow
 With a longing, Ah! a blissful calling,
 For the girl I know!
 I sit for hours alone,
 The old tower clock
 With a heavy tone
 Dispels a dream of a face that mocks.
 I know not why,
 I would die
 But for a look, a shady nook,
 A place to woo, Ah! What wouldn't I do
 For the girl I know!

W.

Notes and Comments.

At a meeting of the Yale Alumni Association at New York a resolution, of which the following is the substance, was adopted: "That Yale is willing to go to any extent to resume athletic relations with Harvard providing the conditions named by Harvard do not interfere with the faculty rules of Yale University." If Harvard is unwilling to meet Yale under such conditions then there seems to be no way by which athletic relations can be resumed.

*

* *

It would seem that the state of Massachusetts was not far in arrears in doing her share towards furthering the establishment of a national park system. Already earnest steps have been taken to secure Mt. Tom and a share of the Holyoke range, two unparalleled sites, for this purpose. If this scheme of parks proves successful the department of Forestry will receive a great boon.

*

* *

The present sharpshooter's badge on the front of the collar of the service blouse would not designate the sharpshooter to an officer who was directing fire from the rear and, moreover, it is too small to be seen any great distance, hence the inspector-general

of rifle practice has introduced a new design that may be placed on the sleeves like chevrons and thus be seen from the rear or flank. The device is a strip of scarlet cloth three inches long and wider at the ends than in the middle and upon this there is a rifle embroidered handsomely in yellow silk. This device will be issued to all sharpshooters during the current season except to commissioned officers and will be worn on the left sleeve a few inches below the shoulder seam. In the devices issued to distinguished marksmen the rifle is embroidered in gold and a line of gold thread outlines the scarlet cloth. Members of regimental teams will have the numbers of their regiment embroidered above the device, sharpshooters in silk and distinguished marksmen in gold.

Alumni.

TO THE ALUMNI.

When putting in the crops for 1897, let every loyal son of *Mac* so plan as to permit his presence, *here*, during three, two, or at least one day of next Commencement. This is to be a very important harvest. The end of her first thirty years of usefulness will then be celebrated. Of the ten hundred sons now living, we expect then to meet here at least four-fifths. No one can now reckon the pleasure in store for that occasion. It will be the greatest gala day thus far experienced by our noble alma mater. At the grand gathering of "former students" we hope to provide 1000 seats. May *none* be vacant.

WELLINGTON '73.

'73.—James H. Webb, instructor of law, Yale University. Address No. 69 Church St., New Haven, Conn.

'75.—The address of J. F. Barrett is No. 27 Beaver St., New York City.

'78.—Sandford D. Foot, Sec'y Kearney & Foot Co., Paterson, N. J.

'81.—The address of Chas. L. Flint is No. 25 Congress St., Boston, Mass.

'81.—E. D. Howe, Master of the State Grange. Address, Marlboro, Mass.

'82.—W. H. Bishop, Professor of Agriculture and Biology at the Delaware College. Address Newark, Del.

'82.—Herbert Myrick, No. 151 Bowdoin St., Springfield, Mass. Editor-in-Chief of the *American Agriculturist*, *New York* and *New England Homesteads* and *Farm and Home*.

'83.—The address of S. M. Holman is Attleboro, Mass.

'83.—We wish to call attention to an article in this issue of AGGIE LIFE by H. J. Wheeler, Ph. D. chemist of the Agricultural Experiment Station at Kingston, R. I.

'85.—Joel E. Goldthwait, M. D. Address No. 398 Marlborough St., Boston, Mass.

'85.—Address of E. W. Allen is No. 1718 Corcoran St., Washington, D. C.

'87.—The address of T. F. Meehan is Room 345 Tremont Building, No. 73 Tremont St., Boston, Mass.

'88.—Herbert C. Bliss with Bliss Bros., Attleboro. Address No. 17 Maple St., Attleboro, Mass.

'88.—F. F. Noyes, of the firm Noyes, Hollis & Moore, electricians. Address, General Delivery, Atlanta, Ga.

'88.—Address of W. M. Shepardson is Middlebury, Conn.

'90.—Address of T. P. Felton is West Berlin, Mass.

'90.—Address of J. S. West is Geneva, Neb.

'90.—F. O. Williams, Proprietor Mt. Toby Dairy and Vegetable Farm. Address Sunderland, Mass.

'91.—The address of W. A. Brown is City Engineer's Office, Water Commissioners' Block, Bridge St., Springfield, Mass.

'92.—J. L. Field, with Jenkins, Kreer & Co., Dry Goods Commission Merchants. Address 211 Jackson St., Chicago, Ill.

'92.—The address of Cyrus M. Hubbard is Sunderland, Mass.

'93.—Born, in Milford, Mass., Jan. 8. to Dr. H. D. and Mrs. Clark, a daughter, Grace Marian.

'93.—The address of F. H. Henderson is No. 31 Harvard St., Brookline, Mass.

'94.—Chas. H. Higgins, D. V. S. Address Dover, Mass.

'94.—E. H. Lehnert, D. V. S. Office No. 28 Church St., Clinton, Mass.

'95.—The Address of C. L. Stevens is Sheffield, Mass.

'95.—Wright A. Root, recently foreman of a gentleman's farm in Onondaga, N. Y., is to take a course at a theological seminary at Auburn, N. Y. Present address is South Onandaga.

'96.—Poole Bros., address North Dartmouth, Mass.

'96.—The Address of A. B. Cook is Petersham, Mass.

'96.—The address of H. T. Edwards is Port Chester, N. Y.

'96.—The Hatch Experiment Station at the Massachusetts Agricultural College has recently issued a bulletin on Electro-Germination by A. S. Kinney. The experiments have been very carefully conducted by Mr. Kinney, and in the opinion of experts the results are accurate. The work is a credit both to the subject and to Mr. Kinney. This bulletin will be sent free, on application, to any one interested in the subject.

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AGGIE LIFE.

VOL. VII.

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Editorials.

ANOTHER proof of the loyalty of our alumni comes in the form of two prizes to be awarded at the next commencement. Twenty-five dollars is to be given to that member of the Senior class who shall prepare the best graduation thesis, and twenty-five dollars will also be given to that member of the Senior class who shall present his thesis or oration in the best manner upon the commencement stage. There are great difficulties to be met in the awarding of such a prize, since the papers presented will be of such a widely varying nature; yet we feel sure that these difficulties will be overcome, and the award made in a most judicious manner.

It is believed that in the organization of the "Kollege Kemical Klub," of which an account appears in another column, has been found the solution of a perplexing problem. The opportunities for cultivating the social side of the student's nature have been very rare; and though many experiments have been tried, none have proven successful. The "K. K. K." aims to supply the social element that is so sadly lacking here,

and at the same time to stimulate a deeper interest in chemistry and the kindred sciences. A "kneipe" is to be held every two weeks, and once or twice during each term a "kommers" is to be given to the entire college. Dr. Wellington has been the prime mover in the affair, and his efforts have been ably seconded by Dr. Flint and Dr. Lindsey. The first "kneipe" proved a great success, and a prosperous future seems assured.

WE wish to urge upon our contributors, and especially upon those who are competing for positions upon the LIFE board, the importance of promptness in the preparation of their articles. After the greater portion of the paper is in press it is extremely trying to find that some piece of work previously assigned has not been prepared. Such delays and failures are a great inconvenience to us and to the printer, and greatly interfere with the "make-up" of the paper. The LIFE is a bi-weekly publication and Wednesday is the day upon which it is generally issued. All "copy" intended for publication in any number must be in the hands of the editorial board on the preceding Friday. Each contributor is also requested to sign his name in

full, and to place beneath the name a statement of the number of words contained in the article submitted. By regarding these suggestions contributors may aid us very materially in our work for the paper.

In a recent issue of the *New Hampshire College Monthly* we were pleased to note an editorial concerning intercollegiate debates. It is suggested that a debate or series of debates might be arranged between the New Hampshire State College, the Rhode Island College, and M. A. C. The suggestion is a good one, and we trust that some definite action may be taken in the matter. At present the institutions mentioned know but little of each other and of the work being done. We believe that the debate would aid in bringing the colleges into a closer relationship with each other, and in establishing a bond of friendship between them. We assure our New Hampshire brethren that we are willing to meet them half way, and that we will gladly coöperate with them in making any arrangements for such a contest. Here is an opportunity for some of our "invincible" debaters to try their powers in a new direction and to win fresh laurels for M. A. C.

As loyal American citizens we naturally take great interest in the history of our own country, and we believe that the thorough teaching of our national history should form one of the most important branches of modern education. It is but natural, therefore, that we should be interested in the recent criticisms, by the *New York Sun* and other newspapers, of the text books of American history employed throughout our southern states. These criticisms were directed against those books recently recommended by the Confederate Veteran's Association, and southern journals have not been slow to reply. The *Literary Digest* for Feb. 20 gives extracts from these papers, and an impartial reader will admit the justice of their assertions. Says the *Baltimore American*, "The southern people were fighting for a principle. They now and have for a quarter of a century admitted that the question has been settled, and settled adversely to their contention, and they acquiesce in that settlement; but they naturally object to teaching their children that they were traitors and rebels. Partizanship is no better on one side than on the other. It is only the truth which will make us whole." Speaking of the histories now used in northern schools, the *Atlanta*

Constitution says, "Without giving the South credit for patriotic devotion to the principles of the Constitution or even for honesty in espousing the great cause to which she consecrated her treasure, these histories taught our children to look with disdain upon southern heroism and statesmanship. In order to correct these evils, therefore, the South has been driven into writing history. Without reviving buried issues or proclaiming a single doctrine which the arbitrament of war has settled, our southern historians have merely pictured in its true light the great internecine drama of 1861-65. . . . Since the issues of the great sectional conflict are forever settled, shall the South in addition to her sufferings be denied the meager privilege of teaching her children that the cause for which she struggled, although unsuccessful, was at least patriotic and honest? Surely there can be no reluctant or negative answer to this question." We are all well aware that the majority of our northern histories certainly show a partisan spirit in their discussion of our great Civil War, a spirit that is as foolish as it is wrong. First impressions are always lasting, and the erroneous ideas on this subject received by a person while in school too often are never eradicated in later life. It is high time that fair and impartial histories should be placed in our schools. We should not hesitate to give honor where honor is due, nor should we be reluctant to credit our southern brethren for the honesty of purpose and bravery of action that characterized their conduct throughout the whole of our unfortunate conflict. American history, as taught in our schools, should have for its object not the arousing and encouraging of sectional spirit, but the creating and fostering of true and unflinching loyalty to our united nation, and the development of steadfast American citizens.

IMPORTANT NOTICE.

Some of the members of the College have been considering the matter of promoting good will and sociability among the different parts of our institution. They invite everyone connected with the educational part of the college to a social meeting with light refreshments in the college boarding house on Friday, March 12, at 8-30 P. M. It should be carefully noted this invitation includes *all* students of the college, *all* of the faculty, the *entire* experiment station corps, and *all* graduates and former students of the college to

whom this may come. It is particularly requested that notice of proposed attendance be given to Dr. E. R. Flint. To cover necessary expenses a nominal fee of fifteen cents will be collected of those who attend. A good time is assured, and it is earnestly hoped that all will endeavor to cooperate in making the affair a grand success.

Contributed.

THE COLLEGE AND BUSINESS MAN.

The question is often asked ; " Does a college education pay the business man ? " Mr. Andrew Carnegie says, " The college man has not the slightest chance of entering business at twenty, against the boy who swept the office or who began as shipping clerk at fourteen." Peter Henderson, the well known authority on all matters relating to practical garden work makes the statement, " I believe a fairly educated youth would have far better chances for success in life, if the four or six years spent under the different professors of an agricultural college were spent in actual work of ten hours a day in a well conducted farm or garden." These statements are of great importance to us as agricultural college students. If they are true are we acting wisely in pursuing our course of study? I, for one, doubt the truthfulness of them.

The college is the instrument to train the man. It is not designed to turn out merchants or manufacturers. Business and agriculture are arts and as such must be learned by practice. The graduate thus often appears at a disadvantage on leaving college ; but let us look at him a few years later.

Suppose two men at the age of eighteen decide to start in business. Each has about the same ability. James enters college, while Henry starts as clerk in a store. Four years later James is graduated and enters the same store. In six months James has acquired as much business ability as Henry acquired in the first year. In two years he has outstripped Henry and will continue to do so as time goes on. In hundreds of cases this statement holds true, and the reason for it is not hard to see. James was taught to see, to think, and to judge for himself. If you were to choose between raw undisciplined soldiers and well-trained men, both being equally brave, you would select the latter every time. If you were to decide between the

well trained athlete and untrained strength, you would decide in favor of the athlete.

The advantage which a business man receives from college is greater to-day than ever before. There were never so many consolidations and systems as now. A man can measure tape and sell stoves if he has never seen the inside of a college, but to run a big business concern the more training a man has the better are his chances of success.

Not many years ago colleges offered students Latin, Greek and mathematics. Now the college graduate may know more about things outside of these three, than he does about them.

Example as well as reason is against Mr. Carnegie's statement. Out of sixty-five graduates living in New York city eighteen were found to be bankers, fifteen railroad managers, ten manufacturers, seven presidents of insurance companies and five well known publishers. Mr. Depew says that hundreds of college men have begun in these last years, at the bottom in railroad work, and have soon distanced the uneducated boy and man. To attempt a catalogue of the men who have thus worked their way up would be to name leading men in every department of life.

For many years Germany has not only furnished a general education, but has offered opportunities for higher commercial instruction. What is the result? She has acquired skill and experience to-day in mercantile training that have no equal in France, England or America. A noted Frenchman said : " The Germans are taking our places everywhere, and are ever getting ahead of the English. If we do not awake from our drowsiness they will annihilate us." No one claims that the Americans are by nature inferior to the Germans. The question is not that at all. It is a fierce contest the mastery in which, is to remain with the one who is the most fully equipped.

If, as I believe, general training is the most important factor in an education why may not a man select such studies as will prepare him for life's special work? If he is to be a merchant let him by the beginning of the junior year apply himself to political economy, finance, and certain kinds of law. He need not fear becoming narrow. His previous training will more than counteract this result.

What every graduate of this college ought to be able to say is this : " Not only have my four years at

Aggie disciplined my mind; but they have contributed to my health and happiness, and have enabled me to support a family with ease."

PHANTOM HANDS.

Long years ago—

I watched two hands glide o'er the keys,
They moved so slow but yet with ease,
And in each sound there was a strain
Which spoke of sorrow and of pain;
A wail of hearts with care oppressed,
Who sighing lived and longed for rest.

Each chord was blended rich and rare,
By these two hands long, ghostly fair,
I nearer drew to lay my own
Upon the keys, but they were gone,
And in their place I heard this strain—
No heart can live without some pain.

I bowed my head upon the keys,
While around me moved the gentle breeze,
And whispered in my listening ear—
The heart that wins must never fear.
I raised my head and gazed around—
I saw no form nor heard no sound.

Yet on the keys beside my own
Two phantom hands were pressed alone.
And, spirit like, with mine they draw
From out the keys a reverie now,
Which seemed to me like sighing breeze
When rustling in the poplar trees—
Like uncaning waves on ocean side,
As voices speaking in the tide.
They rested quiet then moved away—
I raised my eyes, 'twas break of day
And they were gone.

*CONSTITUTION AND BY-LAWS OF THE MASS.
AGRI. COLLEGE CHEMICAL CLUB.*

ARTICLE I.

SECTION 1. The name of this body shall be the Kollege Kemical Klub, represented by the initials, K. K. K.

The objects of this organization shall be the study of chemistry and the social advancement of the college.

SECTION 2. The offices of this club shall consist of an honorary president, an active president, two vice-presidents, a secretary, a treasurer and an executive committee of three members.

ARTICLE II.

SECTION 1. The club shall meet once a month and on such dates as may be advised by the executive committee. Ten members shall constitute a quorum.

SECTION 2. The meetings shall be divided into two parts. Part one shall be devoted to business and scientific discussion. Part two shall be devoted to social entertainment.

BY-LAWS OF THE K. K. K.

SECTION I.

ARTICLE 1. The duty of the honorary president shall be such as become an honorary member.

ARTICLE 2. The duty of the active president shall be to call and preside at all meetings.

ARTICLE 3. The duty of the first vice-president shall be to preside at meetings in the absence of the president.

ARTICLE 4. The duty of the second vice-president shall be to preside at meetings in the absence of the president and first vice-president.

ARTICLE 5. The duty of the treasurer shall be to collect all dues and keep an accurate account of all receipts and expenditures, and to render a report of the same when called for.

ARTICLE 6. The duty of the secretary shall be to keep a record of all meetings and post notices by order of the president.

ARTICLE 7. The duties of the executive committee shall be to make necessary provisions for all meetings, to be the active managers of the same.

SECTION II.

ARTICLE 1. One of the vice-presidents shall be elected from the Exp. Station corps.

ARTICLE 2. Those eligible for membership shall be all men practically connected with the study of chemistry, and all chemical students of M. A. C. above the second term of the junior year. Such persons may be elected to membership at any regularly appointed meeting by a three-quarter vote of the members present and voting.

ARTICLE 3. All expenses shall be met by a tax levied on the members as occasion may require. No initiation fee or other regular fee shall be levied.

THE "KNEIPE."

A genuine German "kneipe" was held in the library reading-room on Friday evening, Feb. 12th. The invitations had been issued about a week previous by Dr. Wellington who deserves great praise for his enterprise in starting the organization, and whose generosity in entertaining is well known. The reading-room was beautifully decorated, The walls were draped with smilax, the fire-place and mantel were banked with flowers, and palms and azaleas were massed in the corners.

The long table presented a most attractive appearance, an indication of the sumptuous repast to follow. After singing "Deutschland über Alles," the company were assigned to their seats, and proceeded to do justice to the series of German dishes that were placed before them. Frankfurters, Kaltsauerkraut, and Schewerzkerkäse were the most favored, while Kaviar and Deutscher Salat were abandoned after a struggle. All were unanimous in their appreciation of the mysterious "Fluorfrappe." and it disappeared with marvellous rapidity.

More German songs followed the supper, and then came toasts and speeches. Dr. Wellington explained the nature of the proposed "Kemical Klub," and his remarks were greeted with greatest enthusiasm. The proposition was that a "Kollege Kemical Klub" be founded with the object of promoting the social and intellectual side of student life here, and it was suggested that a "kneipe" be held every two weeks, and a "kommers" given to the entire college at least twice a term. The "Klub" membership is intended to include the senior chemists, the chemists at the Experiment Station, and all members of our faculty connected with chemistry." Dr. Flint ably seconded the remarks of Dr. Wellington, and a general discussion followed. Temporary officers were elected and instructed to prepare a constitution. This has been done, and the permanent officers have since been elected. A list of the present officers will be found in another column of the LIFE.

More German songs were sung, and at ten minutes before the midnight hour the company disbanded. The "kneipe" was one of the most enjoyable social events ever held at the college, and thanks are due to Dr. Wellington whose generous hospitality made this success possible.

POLO NEWS.

AMHERST 4.—AGGIE 2.

O! fickleness of man's wisdom! O! brevity of mortal foresight! O! unfaithful prophecy! Our much vaunted stone-wall has fallen and under the ruin lies buried the reputation of the sporting editor as an authority on players and their merits; and yet before the fall, how fair and strong to look upon was that wall, a little slim perhaps, but who would have taken it for a rail fence?

Seriously, the last game between Amherst and Aggie would have been exciting and close but for the poor work at half and in goal on our team. The rushers were quick and out played the opposition in individual and team work. Capt. Eaton played a fast game and the way the ball was passed back to him at center by the rushers then up the field again throwing the opposing rushers off the scent was a goodly sight to look upon. Charmbury was back in the game with his old time form. No one could say that he had his equal in that game either as an aggravating dodger, a tantalizing interferer, or as a vicious driver for goals. Only the phenominal work of Foster at goal whose walking development seems to be on a hinge which revolves at the will of the operator, prevented a heavy score.

Amherst was weakened at half and center by the absence of Fosdick and Gibbs and this prevented Russell from playing his usual brilliant game, being forced to play on the defensive and to remain close to his own goal.

The play was sharp and interesting, only for the abominable ease with which our guards stood still and allowed one man unaided to make goals on them. The following was the line-up:—

AGGIE 2.		AMHERST 4.
Emrich,	goal	Foster,
Hinds,	h. b.	Clark,
Eaton (capt).,	c.	Porter,
Charmbury,	2nd' r.	Franklin,
Rogers,	1st. r	Russell,

1st Half.—Rush by Rogers, goal by Russell; rush by Charmbury, goal by Rogers; rush by Eaton, goal by Franklin. 2nd. Half.—Rush by Russell, goal by Franklin; rush by Russell, goal by Charmbury; rush by Russell, goal by Franklin. Time, two 20-minute halves. Umpire, Cheney, M. A. C. '97. Referee, Kellogg, M. A. C. 1900.

THE SENIOR COURSE IN HORTICULTURE.

(THE EIGHTH OF A SERIES OF ARTICLES ON THE SENIOR ELECTIVES.)

Of all the courses that our institution offers there is none, perhaps, so widely known throughout the state as that of horticulture. In beauty of location, and in extent of grounds, no institution can compare with ours; and in thoroughness of instruction we have but few equals.

The first three years in this department are devoted to fruit culture, market gardening, and landscape horticulture, it being the aim of the department to lay a broad foundation for future study in each of these subjects.

In the senior year a course is offered in which a more thorough study of these subjects can be made.

Horticulture is divided into four general heads: pomology, the art and science of growing large and small fruits; olericulture (market gardening), the art and science of growing garden vegetables; floriculture, the art and science of cultivating ornamental plants; landscape horticulture, the art and science of growing ornamental trees and shrubs with regard to landscape effect,

While all of these are in a certain sense distinct, they are in reality all more or less connected, and whoever desires to be proficient in one must have a considerable knowledge of the others. There is, however, such a wide field of study and investigation, that in order to do justice to one branch in the limited time afforded in a college course, it is necessary to divide the work into two divisions: pomology and market gardening in one, floriculture and landscape horticulture in the other.

POMOLOGY AND MARKET GARDENING.

Pomology.—In this branch it has been the aim of the department to combine theory and practice. In the first place a careful study is made of the various fruits, their method of propagation, culture, and fertilization. Injurious insects and fungi, with their methods of prevention and cure, are considered in a practical way. The best varieties and their adaptation to soil and localities are discussed. In all cases field observation is part of the instruction. The orchards, vineyards, and experimental plots, afford opportunities for study and acquirement of practical knowledge second to none in the state.

Market Gardening.—Under this head all of the garden crops are studied. The best methods of cultivation and marketing are taught in the class room and illustrated by field methods. Under this head greenhouse construction is taught. The various methods of heat and ventilation of greenhouses and cultivation of crops under glass are discussed, frequent visits being made to our own model greenhouses, where almost all of the various appliances are placed for illustration and afford a rare opportunity for anyone interested in this line of work.

LANDSCAPE HORTICULTURE AND FLORICULTURE.

Landscape Horticulture.—The central idea in this work is to have the students become familiar with all the trees, shrubs, plants, and other materials used in the decoration of home grounds. The propagation and treatment required to grow these trees and shrubs to their greatest perfection is duly considered. The students study the laying out of grounds, making and caring for lawns, locating and making roads and walks, grouping of trees and shrubs, and pruning and training the same. Students are required to collect and mount specimens of as many trees, shrubs and plants used for ornamental purposes as possible. The equipment for this work consists of a large and well-grown collection of trees and shrubs, which are planted in a manner to illustrate as many points as possible.

Floriculture.—In this work glass structures of all kinds are carefully studied as to construction, heating, and ventilating. A good knowledge of the characteristics, methods of propagation and growth of all plants grown under glass for commercial purposes, is insisted upon, and students are encouraged to spend as much time as possible in obtaining the skill necessary to enable them to successfully grow the plants and flowers. Insect and fungous pests are studied in a practical way, together with methods of prevention or extinction of the same.

In this brief outline I have attempted to describe some of the most important features of the course in horticulture. Only one remains to be mentioned. At the head of this department is Professor Maynard, whose services, rendered valuable from his long experience in this work, the college is fortunate to obtain.

It is his object to combine the theoretical and prac-

tical branches of these subjects in such a way as to render the course of greatest interest and profit to the student. The professor is untiring in his efforts to place this department upon a high plane, and by the men who have chosen these branches for special study, his efforts are greatly appreciated.

G. A. DREW.

A "BULL'S EYE" VIEW OF EUROPE.

Fifth lecture in the N. H. S. course. Speaker Prof. Herman Babson, Feb. 12th, 1897.

Despite the stormy weather, the illustrated stereopticon lecture entitled A "Bull's Eye" View of Europe given by Professor Herman Babson before the Natural History Society was a pronounced success and the hit of the season.

Mr. Babson is one of the younger professors of the College who has been here but a short time and yet is extremely well liked. His lecture Friday evening was an excellent piece of composition, and his delivery was in that pleasing tone which always charms an audience and holds their attention.

During his extended tour abroad last summer, our enterprising professor with his camera procured over a hundred new and striking views of the scenery along the way.

At the request of the N. H. S., he very kindly had these views mounted upon slides and prepared a most entertaining description to supplement them.

Starting from a covered pier this side of the Atlantic, he takes us on board a Cunard liner and out upon the deep blue ocean. The pictures "People in Steamer Chairs," "The Bow," "Seasick," "The Stokers," give one a clear idea of the comforts and discomforts of a sea voyage. Typical of the nature of the water are "The Ocean" and the beautiful tinted "Sunset at Sea," and "Off Ireland" which next come up before our eyes. Reaching Liverpool, we take a trip to the celebrated English Lakes. One of these—Lake Windemere—reminds us of our own placid Lake George. The cities of Great Britain are much like ours, but their cathedrals and other buildings are of much greater historic interest. Crossing the Channel, we reach Amsterdam. Here everything is different, foreign, queer signs, queer people, queer language, queer trains of cars, etc. Then begins the most beautiful part of the journey, through the valley of the Rhine. How

the very mention of this river brings back to our minds the old, old legends and songs of the Fatherland! To Amsterdam, Cologne, Bonn—the birthplace of Beethoven—we give a passing glance. Along the way we see the old mediaeval castles and ancient cathedrals. The ruins of these crumbling fortresses are something grand. "Rheinfels Castle," the "Mouse Tower," with its grewsome legend, and "Weidelburg Castle," the most famous and the largest ruin of its kind in all Europe, are good examples.

Next comes picturesque Germany with its quaint old towns and wide-famed universities. "The Luther House," "Potsdam," "Brocken," the exquisite valley of the Pegnitz, "Nuremberg," "Munich" and its fine shops;—all these absorb our attention.

Four hours ride from Munich is Lake Constance. Crossing this clear lake, we reach Thursis, the starting point of one of the grandest excursions in the entire Alps: Namely to Splugen, over the "Splugen Pass," down to Chiavenna, a mountain town in northern Italy.

Leaving Thursis, we enter a wonderful gorge at the bottom of which the turbid Nolla roars and plunges over massive boulders, and, at last, falls into the Rhine. On each side of the road we see precipitous lime-stone cliffs rising to the height of nearly two thousand feet. Here is the Colorado of Europe! Safely descending the pass we reach at the very floor of the valley, Chiavenna, a typical Italian town noted for the peculiar garlic-like odors that pervade the air. Our route now takes us back into Switzerland to Eugano, while here we ascend a huge dome-like mountain, St. Salvatore. The air at its summit is so clear and sparkling that we are able to see the needle-point of the Matterhorn, sixty miles away, and the dim outlines of Mt. Blanc, a hundred miles from us. Returning, we leave Luzano for Lake Lucerne over the St. Gotthard railroad, one of the most stupendous pieces of engineering in the world. At Airolo, it enters a tunnel to emerge from it nearly ten miles farther south.

After a delightful passage across the lake in a commodious steamer, we land in the city of Lucerne. Here, carved in the side of a well of solid rock is the renowned "Lion of Lucerne," erected to the memory of the Swiss guard that fell in the defense of the Tuileries. The dying lion, twenty-eight feet long,

reclining in a grotto, transfixed by a broken lance, and sheltering with its paw the Bourbon lily, is hewn out of natural sandstone after a model by the celebrated Danish sculptor, Thorwaldsen.

To complete the trip, we make a visit to the "Upper Glacier" near Grindillwald. At its terminal moraine we enter and follow up a tunnel over three hundred feet long, hollowed out of the gigantic mass of greenish blue ice.

At the mouth of the glacier, breathing the clear air of the Wonderland and filled with thoughts of the Fatherland, the lecturer left us.

E. M. WRIGHT.

BACTERIA. HOW THEY CAUSE AND CURE DISEASES.

Sixth lecture in the N. H. S. course. Speaker Dr. J. B. Paige.

Those who attended the meeting of the Natural History Society on Friday evening, listened to a very practical lecture on the subject of Bacteria by Prof. Paige. In brief the lecture was as follows:—

"It is the peculiarity of living matter that it does something. This is called a function. No matter how simple or complex the structure it consists of parts called cells. A study of a substance is the study of its parts. Take for example an amoeba which is the lowest form of animal life and place it on a slide. If the slide is heated its movements become more lively; cool and its movements are more sluggish. We may see him feeding. He surrounds and absorbs the food. The residue left he throws out at the most convenient point. He does everything that he needs to do but still he consists of but one cell. The human body consists of similar cells but each has its special process and special function. Taken together they are more complex than the amoeba in which one cell does everything.

Bacteria are unicellular vegetable organisms referred to as germs, microbes, micro-organisms, etc. They are like the amoeba except that they are vegetable. There are a few classes of bacteria which it might be well to mention.

Cocci=have rounded form.

Micrococci=have special rounded form.

These two are very similar and are often hard to distinguish.

Diplococci=arranged two together.

Streptococci=from little chains which stained and examined under the microscope show beautiful colors. This chain-like effect is caused by a budding process of reproduction.

Staphylococci=plump like arrangement like the grapes on a stem.

Bacillus anthracis=bamboo like.

Bacillus tuberculosis=long, narrow with round ends.

The Spirillae are very beautiful under the microscope having a cork screw form. The bacillus which causes Asiatic Cholera is believed to be a form of Spirillae.

These bacteria are classified as to how and what they live on; as motile and non-motile. The motile form have cilia which enable them to move. It is hard nevertheless to classify the genera. The lines are not sharply drawn since by environment we may change one of the above into the other. For all this they remain unaltered as to identity. We cannot inoculate an animal with one disease germ and get another different disease. Bacteria reproduce easily and rapidly, and can live under almost any circumstances as they are very hard to kill.

Bacteria have definite functions. They are endowed with life and do all their own work. We use the products of bacteria in many industries, as in the fermentation of wine, manufacture of butter, etc. In preparing soil for plants the bacteria bring about the decomposition of the organic matter.

Thus we see that many are not harmful but less than a score are dangerous. These are called pathogeni or disease producing bacteria, and are widely distributed usually, occurring where man is. Many diseases have been studied and their causes have been ascertained, but the causes of the simpler diseases have as yet been undiscovered.

Bacteria cause disease in several ways.

I. Bacteria excretion or secretion forms a poison which has a slight or serious effect on the tissues or the blood. Many deaths resulting from eating canned food are from this source.

II. Bacteria occur in the digestive tract. Some think they are necessary. When they multiply to such an extent that poisonous products are formed and absorbed we get disease and death.

In the treatment of disease several methods have been tried.

I. This arises from the fact that if bouillon be inoculated with 4 or 5 kinds of bacteria and examined after three or four weeks only one kind of bacteria is found. One has destroyed the others. It was thought to use this in the prevention and cure of disease, but it has not proved practicable. In the laboratory it is successful, but in the human body there are other conditions to be dealt with, and the experiments have proved a failure.

II. Use of Bacteria excretions has not been a success. The principle discovered by Prof. Koch depends on the fact that cultures in laboratories die out in time. The theory was that bacteria excrete certain products poisonous to themselves. Koch's idea was to extract the poison from the cultures and then to use it as a preventive of disease. It succeeded in certain cases but the only practical result was its use in diagnosing tuberculosis in cattle.

III. Inoculation with blood serum gives best results. The effect depends on the fact that the blood of animals not susceptible to certain diseases has something poisonous to germs, and that we can bring about an artificial immunity by getting a weak culture so that the serum produces a poisonous action and so neutralizes the poisonous excretion of the germ.

IV. This is best illustrated by the treatment of hydrophobia. This is done by injecting into the patient each day a stronger virus than on the preceding day until virus of great strength has no effect.

The study of the bacteria has almost revolutionized medical theories but much more can be learned, and the man who makes some new discovery in this line of work is bound to win distinction."

C. A. NORTON.

—The polo contests upon the pond have been of unusual interest this winter. So far there have been played two games with Amherst College, two class games, and twice we have been disappointed because of the failure of a team to "show up". We were to have played a game with Storrs College on the pond last Saturday, but owing to the illness of their captain, the team did not come. It is expected that the latter will play their return game with us soon, and at Amherst.

College Notes.

—Dry, dryer, Dry-den.

A. M. Kramer '96 visited friends at college last Sunday.

—C. A. Peter's '97 has been spending a few days at his home in Worcester

—The Junior class is taking extra work in Electricity under Prof. Hasbrouck.

—Last Monday being Washington's birthday all college exercises were suspended.

—Dr. Leonard W. Bascom of Norwich, Conn. will speak before the Y. M. C. A. at Commencement.

—A. X. Petit gave an informal reception to his M. A. C. dancing class, in Pacific Hall, Wednesday evening.

—Lieut. Wright is able to be about again by the aid of crutches. He has been confined to the house for some time, and the cadets are glad to see him at drill once more.

—On account of the absence of a number of the students from college to spend Washington's birthday with friends and relatives, last Sunday's services were suspended.

—Dr. J. B. Paige '82, gave a very interesting lecture before the Natural History Society last Friday evening. He took for his subject, "Bacteria; how they cause and cure diseases".

—The proof for the next catalogue of the college has been corrected and is now in the hands of the printer for the make-up of what will be one of the most complete and best illustrated bulletins of the college ever issued. The report will probably be out in a few weeks.

—We are pleased to note that one of our Alumni, Myrick '82, has taken a decisive stand for the protection of our sugar industries. Mr. Myrick who is a wide awake man and a prominent editor, is a strong supporter of the beet sugar industry, and we hope to be able to give a description of his work in detail in our next issue.

—The "K. K. K." have elected the following officers: Honorary pres., Dr. C. A. Goessman; active pres. Dr. Wellington '73; first vice-pres., H. D. Haskins

'90 ; second vice-pres., C. A. Norton '97 ; sec., C. I. Goessmann '97 ; treas., C. A. Peters '97 ; executive committee, Prof. E. R. Flint '87 ; G. D. Leavens '97 ; J. M. Barry '97.

—Professor and Mrs. Maynard's home on the " terrace " was the scene of a very pleasant party last Friday evening. The occasion was a reception tendered to the Freshman class. After the collation the usual progressive games were played. The festivities were graced by the presence of several charming young ladies which added materially to the pleasures of the evening. The thanks of the Freshman class are extended to Prof. and Mrs. Maynard for their kind entertainment.

—The matter of Junior and Sophomore electives has been decided by the faculty, though to what satisfaction to the present Sophomore and Freshman classes, we will not say. Hereafter the Sophomores will have the option of electing German in addition to their prescribed studies, and the Juniors will spend two thirds of the time given up to Physics, in the laboratory, thus obtaining better opportunities for the Senior year's studies. Under the existing circumstances it has not seemed wise for the faculty to grant the college Junior electives.

—On the evening of Wednesday Feb. 17th. the *Phi Sigma Kappa Fraternity* was very pleasantly entertained by its senior members. The large college " pung " was hired for the occasion, and the party drove to Northampton, where they made Hotel Hampton their headquarters. At eight o'clock there was served an excellent supper to which the hungry students did ample justice. After the repast came brief speeches and toasts. Returning, the party reached college just before the lights went out. A very pleasant time was reported.

—Prof. Babson delivered a very interesting and attractive lecture before a large number of students at the chapel, a week ago last Friday evening. The professor is a first class amateur photographer, and his illustrated treat was " A ' Bull's Eye ' view of Europe ", which was well brought out by the aid of the stereopticon. Mr. Babson has also added to his popularity of late, having submitted a " Two-step " which he has recently composed, and which has been accepted by one of our largest music publishers as a

work of considerable merit. The title of this piece of music is " The Commencement March ". and is dedicated to his *Alma Mater*.—Amherst College.

—In our last issue we properly threw out a hint to the officers of the Town Electric works to the effect that if the electric lights at the college could be " winked " once or twice about ten minutes of twelve o'clock, it would be a great favor to the students. A short time afterwards, one of the accomodating directors talked the matter over with one of our editors and has kindly brought about the desired results. About a quarter before twelve o'clock the change of dynamos at the plant causes the lights to grow perceptibly dim for a few seconds after which bright light will continue until the current is shut off, ten minutes after twelve. The students appreciate this favor very much.

—A bill has recently been passed by both houses of the Legislature appropriating \$150,000 for continuing the work of exterminating the Gypsy Moth. The Commission having the work in charge, asked that \$200,000 be appropriated, but the House cut it down to \$150,000, and the senate showed a strong disposition to take off \$50,000 more, but finally passed the bill as it came from the House. Dr. Fernald spent several days at Boston in consultation with the committees having the bill in charge and it is largely owing to his endeavors that the bill succeeded in passing. There was considerable opposition in both houses, there being many who do not understand the destructive nature of this formidable pest, and who do not appreciate the excellent work that the commission is doing.

—A few mornings ago our attention was called to " a little seecret " whereby we could avoid being late at the morning chapel exercises; but there still seems to be a lack of punctuality. It is useless to expect the students to get to chapel or recitations promptly when the college bell is not rung, and each person has to depend upon the varying reliability of his individual time piece. Besides it is no uncommon occurrence for professors to hold their classes a few minutes over time, and of course this causes delay in getting to the next recitation. The restoration of the old custom of ringing the bell would greatly diminish these evils and would be of great benefit to both students and

professors who have suffered inconvenience too long already as a result of a foolish joke perpetrated by a few thoughtless students. It is not just that the whole college should suffer because of the misdeeds of a few of its members. We sincerely believe that the offenders are convinced of the folly of their joke ? and that if a new tongue is placed in the bell, it will not be disturbed again and our old custom of bell ringing will be appreciated more than ever. Considering that this was the first offense of the kind we feel justified in asking that we may be allowed another trial.

Alumni.

'71.—William Wheeler, Civil Engineer, Boston, is about to open a partnership with Prof. Leonard Metcalf who has recently resigned from the chair of Mathematics at the Mass. Agricultural College.

'71.—Occasionally the life of the Business Manager is made happy by a cold cash gift from some loyal and enthusiastic alumnus. This time it is Mr. Edgar E. Thompson of No. 37 Wellington St., Worcester, Mass., that has helped to make the day brighter and to him the editors extend their hearty thanks.

'72.—The address of S. C. Thompson is No. 950 East 166th St., New York City.

'72.—Charles O. Flagg, Director R. I. Experiment Station, has charge of the Junior course in Agriculture at the Mass. Agr'l College, the specialty being Field Crops.

Ex-'72.—Arthur H. Nash, Downey, Cal.

Ex-'74.—W. H. Barstow, 113 Devonshire St., Boston, Mass., with Bowker, Gay & Wells, Real Estate Dealers.

Ex-'75.—E. A. Cowles, Peru, Florida, Fruit Grower.

'77.—H. F. Parker has removed his Patent Offices to 220 Broadway in the new twenty-five story, St. Paul building.

Ex-'77.—James K. Mills, Plymouth, Mass., Acto.

Ex-'80.—C.T. Pease, 2059 Downing Ave., Denver, Col., Civil Engineer.

'82.—Dr. John A. Cutter visited friends at the College on Feb. 26 and 27.

'83.—Dr. Lindsey of the Mass. Hatch Experiment Station will give a course of lectures to the short winter course on Agriculture.

'86.—D. F. Carpenter, teacher of Mathematics and English, has changed his address from 266 Carlton Ave. to 251 Seventh Ave, Brooklyn, N. Y.

'88.—C. S. Crocker of the Darling Fertilizer Co. of Pawtucket, R. I., was in town last week.

'88.—The address of Jonathan E. Holt is Andover, Mass.

'90.—The address of A. N. Stowe is Hudson, Mass.

'91.—J. B. Hull, Jr., Great Barrington, Mass., coal dealer.

'91.—Henry M. Howard, address Arlington Heights, Mass.

'91.—The home address of A. H. Sawyer is Sterling, Mass. Business address, Northboro, Mass.

'91.—Walter C. Paige, general secretary and physical director of Y. M. C. A. Address, Henderson, Ky.

'92.—Judson L. Field, formerly with Marshall Field & Co., now traveling salesman for Jenkins Kreer & Co., dry goods commission merchants, 207, 209 and 211 Jackson St., Chicago, Ill."

'93.—The address of Edw. J. Walker is Clinton, Mass.

'93.—The sad intelligence reaches us that Mr. G. B. Woodbrey ex-'93 is confined at his home, 19 Winthrop St., Waltham, a consumptive and beyond the hope of recovery.

'93.—F. H. Henderson has removed from Malden to 31 Harvard St., Brookline.

'94.—Wm. E. Sanderson has returned to the firm of W. W. Rawson & Co., 34 So. Market St., Boston, Mass. Mr. Sanderson is clerk of the Alumni Club of Mass. which is shortly to hold its annual banquet in Boston.

'94.—H. J. Fowler, Scout for the Gypsy Moth Department, State Board of Agriculture. Address, 229 Boylston St., Brookline, Mass.

'94.—Elias D. White, removed to Albany, Ga.

'94.—Fred G. Averell is in the Insurance business at Northampton. Address, Amherst, Mass.

'94.—A. H. Kirkland, married on Feb. 2d, to Miss Clara B. Rice of Malden. The ceremony was performed by Rev. Mr. Hughes.

'95.—W. C. Brown, Omaha, Neb., care of Arthur Pindar.

Ex-'95.—Alfred Davis, Pawtucket, R. I., reporter on Pawtucket *Times*.

'96.—The many friends of Fred H. Read will be glad to hear of his speedy recovery from a serious sickness from which he has been suffering for the past two weeks. Mr. Read has so far regained his former health as to be able to resume his classes at the Lyndon Institute and Commercial College of Lyndon Center, Vt.

'96.—The address of Harry H. Roper is East Hubbardston, Mass.

"DREAMS OF OLD KENTUCKY,"

March (Two Step) by G. O. Lang, composer of "In the Shadow of the Pines."

A characteristic plantation hit, with visions of the old Kentucky home that make us wish we were there. We do not hesitate to claim for it that it is the prettiest Two Step published. All readers of our paper will receive a copy from the publishers, "LEGG BROS.," Kansas City, Mo., at half price. Send 25c. for Piano copy, 25c. for Band and 30c. for orchestra.

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AGGIE LIFE.

VOL. VII.

AMHERST, MASS., MARCH 17, 1897

NO. 10

Published Fortnightly by Students of the Massachusetts Agricultural College.

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CARPENTER & WAREHOUSE, PRINTERS.

Editorials.

Now that the speedy development of the electric road running between Amherst and Sunderland is assured, LIFE begs leave again to call attention to the fact that if the road could be induced to enter the grounds at the point where the drive to the College leaves the County road near the Insectary, and passing the College again meet the County road at the experiment station it would not only be a great accommodation to the student body but the increase in trade occasioned by such a convenience would more than repay the extra expense incurred by the lengthening of the route.

THE faculty has recently adopted a new system by which the senior commencement appointments are to be made, and we believe that the system is one that will commend itself to every student. Six men will appear upon the commencement platform, three of whom will be chosen for excellence of scholarship during their entire college course, and three for their ability in composition and oratory. The men appointed

will be free to present whatever they see fit, an oration or an abstract of a thesis being equally acceptable. Such an arrangement has many advantages over the methods of selection employed in the past, and it would seem that it might prove an incentive for work during the whole four years. The '97 commencement promises to be an unusually interesting one, and the several new departures to be introduced will be watched with interest.

THE present issue is the last that will appear under the direction of the '97 editors. With the next issue a new board will assume control of the paper, and we shall have become a thing of the past. The outlook for the paper was never more encouraging than at present. During the past year the paper has been freed from all indebtedness, and a handsome surplus will be turned over to the new manager. We have endeavored to strengthen the LIFE in every department, and some of our efforts have been successful. We have made many errors, but we trust that our readers have been charitable, and that these faults have been forgiven. We believe that the coming year

will be the best that the paper has ever seen, and to the new board we extend most cordially the wish that success may attend all their efforts. The paper should be one of the best representatives of our College, and in all things it should seek to glorify our Alma Mater.

COMPETITION for positions on the LIFE editorial board closed at five o'clock on the afternoon of Friday, March 12, but owing to the large amount of material to be examined the election of new men cannot be held for several days. It is a matter of regret that while other classes have been striving faithfully for positions there has been almost no competition from members of the sophomore class. So excellent has been the work done by the freshmen that it may be thought best not to increase the numerical strength of the sophomore delegation upon the board, supplying the deficiency by electing an additional freshman member. This would be a radical departure from the customs of the board, yet there is nothing in the LIFE constitution that might oppose it, and we are aware that it has been recommended in many other colleges. It would certainly seem that real merit should win whether the contestant be freshman or sophomore.

PREPARATIONS for the prize drill are going forward, and every cadet is interested. Concerning the prize drill we would offer at least one suggestion concerning a matter that we believe is extremely important. We have been informed that it is intended to send a squad of only ten men, six to enter the individual drill, and four to act as substitutes. We wish to urge upon those having the matter in charge the advantages to be gained from taking an entire company of picked men, from which the six men to enter the individual drill can be selected. This drill before thousands of people in Boston is one of the best possible means for bringing our College prominently before the people of the state. Those who heard the ringing cheers that greeted our picked company last year know that the public are not slow to appreciate the superior work of the M. A. C. cadets, and it seems a pity that only ten men should be sent this year. Such a small representation would convey an impression of weakness that would be extremely injurious to our College, and we trust that arrangements may be made for the sending of an entire company. There need be no worry concerning expense, for the railroad companies

will give reduced rates, and other expenses may be reduced to a minimum. If fifty men were willing to pay all their expenses to Boston and return for the purpose of marching in a political parade last fall, we feel sure that there will be no difficulty in getting the cadets to bear their share of the cost of the prize drill company's visit to the "hub."

REPORT OF THE BUSINESS MANAGER OF
AGGIE LIFE,

For the year ending March 17, 1897.

LIABILITIES.	RESOURCES.	None.
Cash on hand,		\$ 57 00
Money due from advertisers,		104 00
Bicycle.		50 00
Money due from students,		4 00
" " " alumni subscribers,		124 00
" " " reading room association.		75
" " " foreign subscribers,		2 50
" " " town subscribers,		14 00
		<u>\$356 25</u>

The above may be termed first class resources.

In addition to the above we have \$88.25 worth of bills that have been handed us by previous boards. These bills are now in the hands of the Publishers' Adjusting Agency, and we have hopes of being able to collect a part of the same.

The total resources of the paper amount up to \$444.50, of which \$356.25 is collectable money.

Estimated expenses to carry the paper through to the end of June would be \$170.00 thus leaving \$274.50 for the new board with which to begin the next collegiate year. This board also desires to have the alumni know that the debt that had accumulated from the previous Boards of editors, has been paid up, and at the present time the AGGIE LIFE owes nobody.

(Signed)

JOHN MARSHALL BARRY, Business Manager.

The above statement of the financial condition of AGGIE LIFE is correct,

C. WELLINGTON, President, } Mass. Agr. Coll. Advi-
G. E. STONE, Secretary, } sory Com. of the Faculty.
Amherst, March 17, 1897.

This is to certify that all bills of this office against the AGGIE LIFE have been paid in full to date including the cost of the present issue.

CARPENTER & MOREHOUSE.

GREAT SUCCESS!

First Kommers ever held in an American College!

An Enthusiastic Meeting of Loyal Alumni, Students and Professors!

RINGING SPEECHES OF LOYAL COLLEGE MEN!

For the past few weeks expectation has been running high. Recently a German "Kneipe" was held by the K. K. K. (Kollege Kemical Klub,) which was so great a success that it was deemed desirable to hold a grand "Kommers." This ancient German custom is a gathering of different societies into one grand merry-making.

This event seemed more feasible on account of the many graduates of the German Universities, who are connected with our institution. All united in making the evening a typical German affair. The Boarding Club Hall was the scene of festivities, and was prettily decorated with cut flowers and potted plants. Part of the hall was screened off by plants, for the college banjo club, which furnished music for the occasion. The tables were profusely decorated with flowers, and the students were seated by classes. The repast was of a decidedly German flavor, Saour Kroaut, Black Bread, Rye Bread, Schweitzerkase, Frankfurter wurst, Coffee, Lemonade, but nothing stronger.

All the student-body and many alumni and undergraduates were present. President John H. Washburn of the Rhode Island state agricultural college was the guest of the evening. Dr. Wellington as toastmaster, and as a true and loyal son of his Alma Mater, was the moving spirit of the occasion, and he requested the company, in the words of the German proverb to "orient themselves" and to pass into the land of the morning sun. Dr. Wellington further remarked that,

while it was the duty of every man to bring as many freshmen as possible to the institution, there had recently arrived a freshman whose entrance to the college he himself opposed, then called on the first speaker of the evening, Dr. Lindsey, Sr. Amid great applause the jovial speaker rose and after relating several incidents of his college days, among which was the serious mishap of the loss of five teeth, in his former connection with the old Boarding Club, Dr. Lindsey made an eloquent and urgent plea for loyalty, and love of our mother college, and in ending, the Doctor requested the company to rise and join with him in the old "Aggie" yell.

The banjo club here rendered a selection, "The Amphion March" after which the toastmaster introduced a Rhode Island "Johnnie Cake" to the company. President Washburn who is an alumnus of the college, has spent several days in examining the methods of instruction in the different departments and expressed himself as wonderfully surprised at the advancement made since the days of seventy-eight. He spoke in words of praise of the work that President Goodell is doing and has done for the institution, and paid a touching tribute to his old professor, Dr. Goessmann.

Notwithstanding the fact that Dr. Goessmann had delivered a lecture before the N. H. S. in the early part of the evening and had positively refused to speak to the assembly, the call was so urgent for the genial

Doctor that he had to respond. At this point the members of the Kemical Klub rendered "Zu-Lauterbach," Doctor Goessmann's favorite song.

The last speaker of the evening, Prof. Mills, in an eloquent address spoke of the many advantages to be gained from our curriculum. The study of life in the plant, in the animal, from the lowest to the highest stages, is the grandest, noblest occupation of man and when we look upon the great work which has been accomplished in this century by the scientific men of the whole world, we should feel an increased interest in the great mission that the Massachusetts Agricultural College is destined to fulfill. In closing, the Professor begged to offer the sentiment—Alumni and undergraduates of the Massachusetts Agricultural college, may they always conserve youth in manhood.

From time to time throughout the evening the K. K. K. entertained the Kommers with singing German songs, and at the close the entire assemblage rose and united in singing the good old song, "Here's to Aggie college" after which the first Kommers in the history of America was at an end.

The following is a list of alumni and professors present: Prof. C. O. Flagg, '72; Dr. Wellington, '73; Pres. Washburn, '78; Dr. J. B. Paige, '82; Dr. Lindsey, '83; E. A. Jones, '84; Dr. Flint, '87; Prof. F. S. Cooley, '88; David Barry, F. W. Mossman and F. J. Smith, '90; R. H. Smith, '92; R. E. Smith, A. H. Kirkland and J. H. Putnam, '94; R. A. Cooley, A. F. Burgess and E. A. White, '95; H. C. Burrington, S. W. Fletcher, J. F. Hammar, B. K. Jones, A. S. Kinney and F. H. Read, '96. Dr. Goessmann, Dr. Walker, Professor Mills, Professor Babson, and Professor Hasbrouck.

THIRTY-FOURTH ANNUAL REPORT OF THE
MASSACHUSETTS AGRICULTURAL
COLLEGE.

The Annual Report or Catalogue of the college has been issued and is now in the hands of the legislature. It will be distributed among the students and the public in a short time. The Catalogue is unquestionably the best the college has ever issued, both as regards contents and arrangement. The report of the college appears in the same volume with the Ninth Annual Report of the Hatch Experiment Station, but the first

one hundred pages are very appropriately devoted to the college. Thus the old complaint that it was impossible to find the portion of the book relating to the college is silenced most effectually.

Some of the most prominent features are the Calendar, Report of the Trustees, Review of Thirty Years, and the Catalogue of Officers and Students. Special elective courses in botany, entomology, floriculture, fruit culture, market gardening, and dairying are offered to women; and it is believed that the exceptional advantages for study offered in these departments will bring many young women students to the college.

The outline of the work for the Winter Course shows how much can be accomplished in a comparatively short time, and its success this year is indicative of greater prosperity in the future.

The reports of the various departments are far more interesting than in previous years, and as a whole the catalogue represents the college in the way that we have long hoped to see it represented, in a way that is sure to bring us a goodly number of students.

The monograph on the Spruce Gall-Louse (*Chermes abietis* Linn.) is extremely well done, and reflects great credit upon the department of Entomology.

The Report of the Experiment Station is so full of good things that it is only possible to mention a few of them. The report of the botanists Dr. Stone and Professor Smith treats of such practical subjects as, "A Bacterial Disease of the Strawberry," "Stem Rot of the Cultivated Aster," "Leaf-Spot on Ficus Elastica," "A Leaf-Spot Disease of the Date and Similar Palms," "A Leaf-Spot of the Begonia," "The So-called Black Spot of the Rose," "The Leaf Blight or Anthracnose of the Cucumber," "The Asparagus Rust," "The Tomato Mildew," "Chrysanthemum Rust," "'Drop' of Lettuce," "Wilt of Maple Leaves," and "Top-burn of Lettuce." We believe that this is the most interesting and valuable report of this nature ever issued from our station.

In the report of the Chemist of the Department of Foods and Feeding appear two articles by Dr. Lindsey and Mr. Holland on "The Distribution of Galactan," and "The Philoroglucin Method for the Estimation of Pentosans." This is work in a comparatively new field.

The Report of Dr. Goessmann who has charge of

the department of Fertilizers contains in addition to the usual interesting tables, etc., reports of a series of "Experiments with 'Nitragin,' a Germ Fertilizer for the Cultivation of Clover and Clover-like Plants—Leguminous Crops. The problem of inoculating the soil with the nitro-bacterium suited for each special leguminous crop is now well nigh solved. Those who have studied this subject will realize the value of this work.

As was said of the College Report, so may we say of the Report of the Station, it is the best issued for years.

THE SPINNING WHEEL'S STORY.

I was visiting my sister in one of the fashionable quarters in Boston with my four and a half year old child. My husband had been obliged to go to the city on a business trip, and as I had not been well, he took us with him thinking the change would do me good. The house was very handsomely, but not extravagantly furnished. I had not visited my sister since she had moved two years before to her new home. She was very glad to see me and did everything to make my visit pleasant. I shall always remember the trip and its associations, but above all, I shall remember the spinning-wheel's story. Whenever I think of my vacation that story comes up in my mind.

One pleasant afternoon five days after my arrival, I had gone, with my child, into the sewing room to read. I chose this room partly because it was more homelike and partly, I suppose, by chance. I can not say how long I had been there when I heard a queer noise from the corner where the spinning-wheel stood. I looked; the spinning-wheel was turning furiously. I listened; Did my ears deceive me? Was it really speaking?

"Things have changed so! Oh, what a lazy, dreary life! How pleasant it used to be long, long ago! Dear, dear, dear! I have seen much of this world, more than you would think. I am rusty and stiff and tied up with all sorts of bows and stuff. Things are so different! Dear, dear, dear!"

It lapsed into a thoughtful silence. I pitied the lonely old spinning-wheel,—it looked so out of place here, living in another era, long after most of its kind had gone to ruin; gone to that element from which they had come. I had listened a few minutes, but as

it did not speak, I expressed my sorrow for its condition, and offered a few words of sympathy. The spinning-wheel did not answer me immediately, it seemed to be reflecting upon the past; living in another century. Presently beginning to turn again it told me this story:

"I was made many years ago,—long before you were born, by an old village carpenter. When I was finished a young man came for me and carried me away. He had but lately been married, and I soon learned that I had been made for his wife. When he reached the old farm-house where they lived, he carried me into the sunny living room, and, having carefully placed me in a corner, went to the hall door and called, while I looked around me. I could see at first glance that the lot of this couple was far from the lot of those who live here. I do not mean to say the house was not pleasant, for it was. Everything was neat and tasteful and plainly showed that somebody tried to make home what it ought to be even if money was not very plentiful. In a moment the young wife was at her husband's side and both were praising me. I see her still, as though it were but yesterday, as she stood there before me. She was not what one would call pretty, but she had a pleasing face, it expressed so much. From the first I liked her and we spent many happy hours together, she singing merrily while she spun the flax, I whirring an accompaniment to her song.

"One day, long after I had first come to the house, she was sitting near me sewing upon some dainty pieces of clothing. I studied her face a moment and read there that a new soul was expected in the household, and she, like a true mother, was preparing for its coming, thinking meanwhile of the joy and the courage to do and the strength to forego it would bring. At first her face was radiantly bright and then I saw a shadow flit over it and her eyes well up. I saw that in all her happy expectations there was a vein of anxiety. Fluttering hopes and doubts—hopes as a love as yet unknown to her; doubts of her remaining upon earth to enjoy that new delight—divided her breast. Among the echoes then, there would arise the sound of footsteps at her early grave; and thoughts of the husband who would be left so desolate and who would mourn her so much swelled to her eyes and broke like waves."

" Days, months and years passed. The household had been brightened by the coming of five little souls and darkened by the going of one of them. There had been many changes, some for the better, some for the worse. Time had silvered the heads of the husband and wife and the children had grown up and married and left the homestead, all except the youngest, a son, who had brought home his wife and was caring for the old folk.

" Then came the death of the old man. It was a pitiful sight, I never care to think of it, to see the old lady mourn the death of her husband. All her joy was gone; she seemed to care no more for this world. But she did not have long to bear her sorrow, for in a little less than a year, she too, was sleeping that sleep ' that knoweth no awakening. "

" After her death came the division of the property, which wasn't much, only the house and farm. Two of the children wanted the home to remain, two wanted the place to be sold so that they might have their portions. As the two who wished the homestead to remain could not buy the shares belonging to the other two, it was sold. Every thing was taken away except one or two other things and myself. Then began for me a life of idleness and neglect. For a long time I had not been used much, only now and then by the old lady. Inventions and factory cloth had taken my place. Old, rusty and despised, I was banished to the attic with the rest of the rubbish, and then it was that I realized what a bitter thing it is to outlive one's usefulness.

" In a few weeks strangers came to the farm. They were a shiftless lot, a father and mother, four boys and two girls. They had lived there two years, or a little over, when one day I heard an unusual stir down stairs. Later in the day, about noon, I heard an auctioneer selling the house. I knew instinctively what had happened,—a poor crop and no money with which to pay the interest on the mortgage.

" No one lived in the house after that. I saw nobody, and nothing disturbed the solitude, except once in a while a mouse or a bird. So years passed, I know not how many, until, last summer, a party of city people were out in the country for a pleasure ride. They spied the old house, came in and went over it as far as they cared to. They were on the point of leaving when one of their number a vivacious young

girl, saw the trap-door leading into the attic and curiosity getting the better of her, she clambered up, two others following. She found me and took me downstairs, telling the rest that she was going to take me home. ' Spinning-wheels are all the fad,' she said. Now I am——."

" Celia! Celia! Don't you see this child? " I sat up with a start. It was my sister calling me.

" What is it? " said I, rising and at the same time dropping my book.

" Can't you see? This young one has been playing with my spinning-wheel and I bought it only last month. He has been ' playing bicycle ' so he says. He has almost ruined it. I should think you might take better care of him than that. "

I went over to where the wheel lay. I really could not help laughing. All of a sudden my dream, for such it must have been, came over me. I stopped, looked around sort of dazed and then laughed again. I tried to tell the little fellow that he had been very naughty and must not do it again, but I fear I did not scold him much. Somehow I couldn't.

At dinner that day my sister told her husband about the spinning-wheel and how it had been used for a bicycle, and said she in concluding, " She took him away without so much as scolding him. She will spoil him. "

When my sister had finished her story, I told them my dream. My brother-in-law thought the whole thing a good joke and laughed heartily.

C. A. C., JR.

TRUSTEE'S REPORT.

Pres. Goodell in the annual report of the Trustees to the Governor, goes back over the history of the foundation of agricultural colleges, calls attention to the broad and liberal spirit shown by the Hon. Justin S. Morrill in his bringing forth the idea of the Land Grant as a source of furnishing a College of Agriculture and Mechanic Arts, with the means to begin its existence, and the successful efforts of Mr. Morrill to further endow these colleges.

Pres. Goodell shows, very plainly and conclusively, the opportunities offered here, for obtaining the best education at the least expense. He further shows by the responsible positions held by our graduates as presidents and professors in other colleges, that the

students do avail themselves of their privileges while in college. Then follows a more detailed description of facilities for work in chemistry, botany, entomology, veterinary, and our other strong departments.

The death of Hon. Joseph A. Harwood caused a vacancy on the board of trustees, which was filled by the appointment of Chas. L. Flint of Brookline, and upon the resignation of Francis H. Appleton, Nathaniel I. Bowditch of Framingham, was appointed to serve the remainder of his term. The matter of the inadequate water supply due to the rusting of the pipes connecting the college with the town water mains is considered, the present situation is shown very clearly by Prof. Leonard Metcalf's report, which states that the water supply and pressure necessary to protect any of our buildings from fire is lacking, and recommends the appropriation of \$8,300 to be expended in new and larger pipe, hydrants, and other necessities for an available defense from fire, including a reservoir to be erected on the hill by the plant house, the water from which could be used to tide the College over those periods of danger when town water is shut off because of some break in its main, as such breaks have been quite frequent during the past. Appropriations recommended are \$1,500 for renovating the greenhouse in the experimental department of plant disease, \$1,200 for increasing the educational facilities for teaching botany by providing laboratory room \$1,000 for painting and renovating the old greenhouse.

The report shows the College to be in a most excellent condition and when the recommended improvements have been made the equipment for educational work will not be surpassed by any other agricultural college in the country.

P.

GERMAN STUDENT LIFE.

THE EIGHTH LECTURE IN THE N. H. S. COURSE.

SPEAKER, DR. WELLINGTON.

Friday evening, March 5th, was the occasion of the eighth lecture in the Natural History Course delivered by Dr. Wellington, and the large number of students present, departed heartily satisfied with the time spent in listening to the entertaining and popular lecturer.

College men are always interested in college remi-

niscences. This was especially true on this occasion when the incidents in the speaker's own experience were detailed in a manner both pleasing and instructive.

The speaker described his first experience in Hamburg and Leipsic, giving in detail the surprises which he met with on his first four Sundays in the Saxon city. Attention was then called to a half-dozen epochs of the Christian Era and the causes which led to the establishment of the earlier universities. After noticing the formation of the great Austrian, Italian, Spanish, English and French universities, the long list of German universities was examined, and attention called to the large numbers of their teachers and students.

Then followed a description of a German university, its government, division of labor, and the work which it accomplishes. Anecdotes illustrative of the lives of professors and students were given. The students mensur was briefly described and illustrated by photographs and its source traced to the old Teutonic code of honor. The social organizations received brief attention especially those known as the color bearing societies, such as the corps, which had their origin in the old Mannschaften of the different component parts of the German Empire. In the olden time these rendered efficient service in the struggle for freedom and unity. The Burschen Schaften, which represents a more democratic portion of the student body, and further, the non-dwelling Christian associations, chief among which is the Wingolfian.

A general view of the German student life was then taken, in which it appeared that the university with all its apparent freedom and laxity of discipline is made to follow, in the German system, a long course of years of severe mental and moral discipline. It would seem to be the idea of those in charge of German youth to offer in the university a crucial test to the ripening student, in order to determine before entrance upon the serious work of life the young man's fitness to withstand temptations, and his adaptability for the arduous service of the state.

Appearances about a German University are apt to mislead the incautious observer from abroad, and while the seeing of lazy well fed corps students lolling about the streets with nothing to do but pull at a long pipe or follow the lead of the favorite Hund it must be

remembered that only one-twentieth of the total number of students belong in these ranks. The other nineteen-twentieths consist of the dregs, the plodders, the hard persistent workers, who are to develop into the future statesmen, scholars and investigators of the Deutscher Vaterland.

READINGS BY MARY FRENCH FIELD.

A number of M. A. C. students attended the readings by Miss Mary French Field March 1, given in College Hall for the benefit of the Grace Church Organ Fund. The program:

PART I.

Ghost Patrol, Readings:	Mandolin Club
Jus' 'fore Christmas. The Bow-Legged Boy. Sometime. Mother and Child. Suppose. Long Ago.	

PART II.

Don't be Cross, Readings:	Mandolin Club
Seein' Things at Night. Father's Way. Little Boy Blue, The Dutch Lullaby. The Lyttel Boy. The Lamentations of Youth.	

Miss Field's readings from her father's beautiful poems, especially before an audience among whom he had lived for years, were at once specially appreciated. Her enunciation is natural, unaffected and in its simplicity and charm produces the very effects the author desired.

SENIOR COURSE IN BOTANY.

THE NINTH OF A SERIES OF ARTICLES ON THE SENIOR ELECTIVES.

Go where you will and do what you may, still you are always surrounded by some influence directly dependent upon plant life. Be it country or city the same bacteria threatens you, the same grass grows, and the same trees shelter you from the sun,

One of the strong departments of the College, whose recent development is largely due to the efforts of the professors in charge, is the department of Botany, at the head of which is Dr. George E. Stone, a graduate of the University of Leipzig.

Before going into detail about the Senior Elective Course an idea of the preliminary work of the first two years under Prof. R. E. Smith will be of interest. The Freshman during his first term at College studies Morphology, or the gross anatomy of plants. Starting with the embryo the development is traced from germination to the complete formation of root, stem, leaf, flower and fruit. The student is furnished with actual specimens, and his work is accompanied by lectures. In the spring term analytical work is begun which includes the collecting of an herbarium of one hundred specimens of our common plants. Fertilization, especially cross fertilization, is studied in its many phases of usefulness. The Sophomore again takes up the collecting, grasses, trees, and shrubs are given the most attention and an herbarium of forty grasses is required. During the winter of the second year the student begins laboratory work in Histology, corresponding in general to the course in Morphology followed the first year. Here the student learns the microscopic anatomy of the root, stem, flower, and other parts of the plant, is taught the physiological differences of Phloem and Zylem and is also given a taste of the fascinating study of micro-chemical reactions. With the above work for a foundation, those students especially interested in Botany, begin, in their Senior year, with the study of the lowest forms of plant life and, during the fall and winter, work up through the Myxomycetes, Algae, Spyrogyra, Protococci, Bacteria, Characeae, etc; Fungi, including moulds, smuts, rusts, and mildews which attack many of our common plants and are injurious to a great degree, among which may be mentioned Phytophthora infestans, (blight of potato) Ustilago Zea-Mays (corn smut) Phragmidium mucronatum, (rose rust) Puccinia graminis, (wheat rust) Peronospora viticola, (downy mildew of the grape) and Uncinula spiralis, the (Powdery mildew of the grape) mushrooms, both edible and poisonous, Mosses, Liverworts, and now coming to the vascular cryptogams, Ferns, Lycopodiaceae and Horsetails; next the Phanerograms, including the Conifers, (dines) endogenous Angiosperms, (lilies, grasses, etc.); then the Dicotyledonous plants which completes the chain and brings the student back to the flowering plants where he began his work in the Freshman year.

The last term of the Senior year is devoted to that

part of the science to which is now given so much prominence, Physiological botany. The student now, by actual experiment endeavors to determine and prove the laws governing the growth and development of plants. The effects of gravity, light, moisture, electricity, heat, chemicals on protoplasm, or the irritable tissue of the plant is studied under the heads respectively of Geotropism, Heliotropism, Electropism, Thermotropism and Chemotropism. To aid in the Senior work the laboratory is supplied with microscopes, of such make as, E. Leitz, Zeiss, Queen, Bausch and Lomb, and Tolles: microtomes for cutting microscopic sections, clinostats, micro-photographic apparatus, and many original ingenious devices, designed by Dr. Stone, for showing the phenomena connected with vegetable physiology. Further assistance is found in the Plant House which furnishes the various plants and plant diseases required during the course. The Knowlton Herbarium of 15000 specimens in the Museum, can be used by the student at any time for reference. A collection of Fungi equally large, recently gotten together, and systematically arranged by Dr. Stone, is placed in the Botanical department of the Experiment Station and contains abundant material for study. A collection of specimens mounted in formalin, handsomely preserved, show a great variety of natural phenomena, and is extremely useful in illustrating points out of season. Of our library and its botanical equipment we will not go into detail, as the works of Frank, Tubeuf, and other recent German writers speak for themselves.

A science giving the student more knowledge of nature in general, does not exist, while the original work done in this department during the last two years, shows that the feature of specialization has not been neglected.

C. A. PETERS.

THE SALINE RESOURCES OF THE UNITED STATES AND CANADA.

NINTH LECTURE IN THE N. H. S. COURSE.

SPEAKER, DR. GOESSMANN.

Dr. Goessmann delivered before the M. A. C. Natural History Society on the evening of March 12 an exceedingly interesting lecture, entitled "Saline Resources of the United States and Canada." The Doctor, who is a recognized authority in the chemical world, was during the earlier part of his life employed

by a salt company at Syracuse, N. Y., as chemist, so that actual experience made the lecture still more valuable and instructive.

The salts of any country are of great importance to the chemistry in that country. In this country we have immense deposits of substances interesting from a chemical point of view principally salines, coal, and lime. In many cases the salines are scattered so that transportation would consume a large part of the profits.

The first establishment was begun at Syracuse, N. Y., and was at one time owned by Indians. Later the State of N. Y. controlled the salt enterprise and taxed the output and plants. Other factories were started here but to obtain uniformity in their product united themselves into one corporation. The Syracuse brine comes from the Upper Silurian strata in connection with blue clay and schales of alluvial origin, and is covered with gravelly deposits.

The brine is recovered by boring tubes and the salt is thus forced up in solution, sometimes from a depth of 350 ft. It is then evaporated in two ways, viz., solar heat and by boiling. The Syracuse brine contains besides common salt, calcium chloride, magnesium chloride, calcium sulphate, bromine, and iodine combinations, and protoxide of iron. The two objectionable salts are magnesium chloride and calcium chloride and they must be reduced as much as possible.

Solar evaporation i. e., by heat of the sun is very slow. Calcium and magnesium chlorides being so hygroscopic must be protected from moisture of atmosphere, so that during the night time and in rainy weather covers are placed over the long, shallow vessels containing the brine. The turbid appearance of the brine is due to sesquioxide of iron and later the needle-shaped crystals of gypsum appear. The clear supernatant liquid is drawn into another vat, and the iron and gypsum left behind in large amounts. The magnesium and calcium chlorides do not separate but increase in relative per cent. These substances interfere with the solubility of the salt and gypsum. Alum is used to remove the calcium chloride, and the glauber salt will produce the same effect, by forming gypsum and common salt. The magnesium chloride can be half precipitated by sal soda in a neutral solution, and then a washing with concentrated sodium

chloride and sodium carbonate solution will yield a reasonably pure product. A brine of 28% solids may not contain over 12% common salt.

Brine must be evaporated uniformly and slow evaporation is better than rapid because it gives the crystals a better chance to form perfectly and free from mother liquor. Whatever the quality of brine a good, careful process of manufacture will give a good reliable product.

Ocean brine will produce a good salt, often fit for table use. The salt water near the shore is richer in salines than that in mid-ocean. The Mediterranean sea is extremely rich in salines because of its narrow outlet, warm climate causing rapid evaporation, and close proximity to surrounding countries rich in salines.

Rapid evaporation is carried on in large iron kettles of 500 gallons capacity—by heat derived from bituminous coal. The crystals are imperfect owing to their adherence to mother liquors. The dairy salt should be of the purest quality or it will impart an objectionable flavor to butter. The dairy salt must be free from the chlorides of calcium and magnesium and all other salts. Our best dairy salt is manufactured in England by slow evaporation by aid of steam in large pans holding the brine so that the crystalization is almost perfect.

Saline deposits are supposed to be the result of the invasion of marine waters in the various ages of the earth's formation. The so-called mineral springs are in close resemblance to the mother liquors of the saline evaporation. The lime was due to the presence of dolomitic lime stones. The old ocean was supposed to have contained chloride of calcium hence its appearance in the saline deposits. The presence of sea water in the interior cavities of the earth caused chemical changes with the earthy minerals hence the variety of compounds met with. It was thought to have taken no less than 16000 years under the natural conditions in the earth for the brine so held to evaporate and crystalize in the manner in which it is found in Stassfurt, Germany.

Saline deposits and brine wells were discovered in Canada across the Lake Huron from Michigan, containing from 25% or more of actual sodium chloride in solution. Examination proved it to be continuous with the U. S. deposit and the mother liquors of the factory and the natural spring across the

lake were, chemically speaking, identical.

In Michigan a bounty of 2 cents was given to manufacturers, and in N. Y. there was a tax of 2 cents on salt, so that the Michigan salines were worked to a great capacity in some places.

The saline deposits in Nebraska show a far different treatment than any others in the United States. There is no chloride of calcium in Nebraska brine which proves that the deposit must have been the most recent as it is like our present ocean which contains no chloride of calcium. Other saline deposits are found in Pennsylvania, Virginia, Ohio, Kansas, and Kentucky, and yield products of uniform oceanic composition. The only salts in the Nebraska brine were gypsum and sodium chloride.

In Germany the salts on the upper layers of the deposit were discovered accidentally by a chemist to contain 15% or more of actual potash. This fact having been realized, the government at once started the great fertilizer business so characteristic of that country and from which the United States draws her supply.

With a few concluding remarks the speaker closed, and the meeting adjourned. H.

A MODEL GREENHOUSE, BUILT FROM PLANS BY PROFESSOR MAYNARD.

Henry L. Pratt of Worcester has recently completed a new greenhouse and gardeners' lodge, built from plans drawn by our professor of Horticulture, S. T. Maynard. The house combines every feature of excellence which an experience in practical floriculture and greenhouse work could suggest. The lodge consists of basement, the main room above and the attic. In the lower story is the Gorton hot water heater used to warm the house. Above this an attractive room 20 feet wide by 25 feet in depth, which furnishes an ideal place for a whist party or other entertainment, while leading out of this room to the south is the house proper, consisting of three sections, two 20 feet square, and the third 20 by 25 feet. Each compartment is fitted to be run at a different temperature, thus making it possible to accommodate tropical and ornamental plants requiring considerable warmth as well as the tender lettuce requiring a much lower temperature. Benches, and frame of Cypress, a double span roof, 15x20 inch glass, and floors of polished cement complete the data and make a house both highly ornamental and extremely practical.

C. A. P.

COLLEGE SPIRIT.

We have heard much of late about that excellent accompaniment of college life known as "college spirit." The writer feels that he must beg leave of his fellow students to say a word in its praise. We, as an institution, are standing on firm ground. There is no longer that feeling of unrest, the "college blues," which has been so noticeable here during the past few years. It is a thing to be proud of, this happy, jovial, goodfellowship feeling which has come among us. From whence this beneficent power came we cannot positively say, but how and why it came are very evident. It has been the result of the combined, unrelentless efforts of our faculty and some of our most influential men. They have done nobly and are still doing nobly in fostering that loyal feeling which is so necessary for success. We as a body and individually are grateful to them. The reason why we are entering upon so prosperous an era is plain. After every storm there must be a lull, after every battle, peace, and after every panic, calm and prosperity. So we have passed through our ordeal and are now gliding smoothly on our course.

Of the many things which have had their influence in dispelling the clouds of unrest, the writer can not say too much in commendation of the excellent course of lectures the professors have delivered this year. If any member of the faculty may feel that his efforts have not been appreciated let it suffice them if I repeat a remark which I have heard from many of the students:—"I wish we might have lectures twice a week." Comment is unnecessary. May the good work continue.

Another influence for good is the request of our faculty that an advisory board be appointed by us from among their number to confer with the heads of the various college organizations. The result of such an act has been felt even at this early day in the impetus which "boys a little older grown" have given us.

Before this article shall have appeared we shall know what a "Kommers" is and what we think of it. I will say but little in regard to it, but refer you to another column of this issue. The writer must say though, that, as the name signifies, it is of German origin, that its aim is high and honorable and that he thinks there is no better way to promote loyal college spirit than by assembling the men and having a good time.

But there is one association of our college in which the fellows and faculty ought to take a little more interest, and that is the Athletic association. We have good material, but from the lack of training and concentrated work we have gained almost nothing. We have, nevertheless, a bright outlook. Our men are doing excellent work practising base ball at even this early season. It is the duty of every man to add his little in bringing our team to as high a degree of perfection as is possible. No man, who can play at all, has a right, if he can possibly assist them, not to do so. He ought to feel that the team cannot do without him. If we could all have the ambition to aid this organization, the results would far over-reach our most sanguine hopes. Men, do your duty by your college! Make every minute you are here tell!

Never before has the college stood on so firm a basis. Everything is in a prosperous condition. We now lack only quantity, not quality, of students. Do you ask how this state of affairs can be changed? The only one sure way of correcting the circumstances is by individual pioneering. No amount of advertising can ever accomplish the result and fill our dormitories. That method is good and necessary but nothing is so powerful as personal work. This must be done by every man, wherever he may be, and wherever he can. Go home this vacation and let people know where you come from. Tell your friends of the unexcelled scientific education we offer at so moderate a cost; and in every way, by every means prevail upon them to give us a consideration. Stop! for a moment, men, and think. If each man when he goes home will appoint himself as a committee of one to solicit at least one to try the examinations next spring, think what the result would be! I entreat you to use your influence to build up your Alma Mater and make this glorious institution still more glorious. If we do not speak the praises of our own college, who will? Will men from other colleges? No! Then it lies with you! You make the college what it is! You will make the college what it is to be! You are responsible for its prosperity! Men, I appeal to your manhood and your love for your Alma Mater, to make this most worthy institution occupy the place it deserves among the schools of learning in this state! If this college does not prosper let every man consider that the fault was his. Let our watchword be "Long live our Alma Mater!"

C. A. C., JR.

*A SHORT SKETCH OF THE LIFE OF PROF.
HENRY DRUMMOND.*

Henry Drummond was born in 1851 in Sterlingshire near the battlefield of Bannockburn, and there spent the early days of his life amid influences which tended to develop the finest qualities of character.

His father was a wealthy merchant of great culture. The two were wrapped up in each other, until four or five years ago when death carried the father off, at the age of seventy-eight. The father's hope was that Henry should be an ordained minister in the Free Scottish church, and if those who had been in the habit of calling him an ordained minister should hear it denied, they would be greatly surprised. Yet such was the case, he was never ordained, although he had completed a theological course. He felt that he could do more good in the world by some other means than preaching all the time.

His education began in his native town and from there he went to Crieff Academy. After receiving this course of study he entered the University of Edinburgh and from here he went to the University of Turbingen in Germany. He studied theology and science together, and besides this he did a great deal of active religious work among his fellow students and later among the poor classes in the British towns.

His desire for investigation led him to study the construction of theology and geology. When twenty-two years old, he made his first appearance before the new College Theological society of Edinburgh and read a paper on Spiritual Diagnosis in which he indicated a point thoroughly characteristic of his subsequent teaching. He declared that regular work of the pulpit ought to be supplemented by constant dealing with individuals with reference to their spiritual life.

When Mr. Moody first went to Edinburgh he soon recognized Drummond's power, and persuaded him to accompany Mr. Sankey and himself on an evangelical tour through the United Kingdom. For two years he shared the labors with them, and the benefits of that experience, revealing as it did to the young man all sides of human nature, cannot be too highly estimated.

At the end of the two years he returned to his studies at Edinburgh University. That summer he went on a geological expedition, and while there he assisted a friend in holding meetings; although not a professional

teacher of theology, he was as good as he was on natural science.

In 1877 he made his first visit to this country, his object being a geological tour through the Rocky Mountains. In 1883 he made his famous African expedition. In 1887 he visited this country again, to assist in the meetings held during the "World's Student Conference held in Northfield, and it was at this time that he aroused the student body of the United States to such a high degree, that the student volunteer movement was started, which now has the names of thousands of men and women signed to follow up Christian work.

In 1893 he again visited this country to help Mr. Moody in his evangelical campaign held in Chicago during the World's Fair. Although a sick man at the time, he came over to try to spread the gospel to all people of the world, and the amount of good he accomplished can never be estimated. This is just one incident to show the character of the man, for if he could do good he was never wanting.

Ten years ago his most famous book, "Natural law in the Spiritual World" was published. A great many people shook their heads as they read parts of it and would tell other people of its weak points. Nevertheless it seems as though everyone has read this book, for every little while a new edition has to be rushed out as quickly as possible.

Professor Drummond took up evolution where Darwin left off, and he was about the only man to-day who was an authority on the subject. His chief line of work was in biology, and he was quoted everywhere on this subject.

He was a very modest man. It was almost impossible to get him to talk on his favorite topic, but if one wished to get knowledge from him, they only had to take him off for a walk on the mountains, and there he would begin unintentionally and talk of the different rock formations, and of botany. He once told me that the finest region for study he had ever visited was from the Holyoke mountain, up the Connecticut river valley to Brattleboro. The finest glacier marks he ever saw, he said were on the ledge of rock in front of Congregational church in Northfield. He found some of his finest geological specimens in Leverett.

On Thursday, March 11th, he passed away after a life full of love, and usefulness. He had been sick for three or four years suffering from a broken down constitution. In him the world loses one of the noblest and purest lives of the century. S.

College Notes.

—For a year, we, too, have held our own.
Good seed in season, we have sown,
We've had our fun, and now we're done,
May the LIFE still prosper when we're gone.

—What's the matter with the "Kommers"?

—Two of the trustees, Messrs. French and Bowditch visited the college a few days ago.

—We understand that there is a new Freshman at the home of one of our popular resident alumni.

—The college pulpit was occupied last Sunday by Rev. J. F. Gleason of South Amherst in exchange with Dr. Walker.

—Fisher '98 was called home suddenly last Thursday because of an unfortunate accident in which his father suffered quite severely.

—Baxter '98 was obliged to leave college for a few days, a short time since, on account of illness; he has however, returned, and is resuming his studies.

—Dr. Walker has been delivering some very interesting lectures before the Political Economy division during the past week on "The Economics of Agriculture."

—The members of the Senior division in Horticulture are making some elaborate drawings of greenhouses, paying especial attention to the modes of construction.

—The members of the Natural History Society listened to a very able lecture given by Dr. Goessmann in the chapel last Friday evening on the subject, "The Saline Resources of the United States and Canada."

—An emporium has again been opened in college, and the students are beginning to give it quite a reasonable patronage. The genial proprietor of this new establishment is J. F. Lewis '00. Mr. Lewis is increasing his stock rapidly, and finds ready purchasers.

—The Committee on Farm and Horticultural Departments from among the Trustees, will meet at the college on Friday, March 19; the Committee on the Experiment Station Department on the following day, after which,—and on the same day,—there will be a full meeting of the Board.

—There are at present about forty cadets drilling as candidates for the squad that is to represent the college in the competitive prize drill to be held between several New England Colleges and Universities, at Boston some time in May.

—Mr. W. H. Armstrong '99, who has very satisfactorily conducted the course in free hand drawing offered to the Freshman class the past term, has been engaged by the faculty to take charge of this department next year. Mr. Armstrong is a man who has excellent ability along this line, and the class under his method of teaching has done some very good work.

—While we are always glad to note any change in the character of a student for the better, we cannot but suggest to those students occupying the back rows of seats at Chapel, that they omit their recent demonstrations of piety at morning prayers. The chapel is not the place for the development and execution of the humorous side of a student's nature.

—Mr. Wallace has begun the work of furnishing the entrances to our college buildings with incandescent lights. Two have already been put up and the work will probably be completed when we return next term. Our buildings will then present a much pleasanter appearance at night, and the need of these lights is sure to make their convenience appreciated by the students.

—The candidates for the base-ball team under Capt. Emrich are putting in some good practice in the drill-hall six days in the week. Lieut. Wright has kindly consented to coach the men three days each week, and with good training the material on hand ought to be capable of forming a good base-ball team. However, it is a trifle early in the season to say, with any degree of certainty, just what success is in store for Aggie for the coming season on the diamond.

—One of the members of our Faculty suggests to the formation of a college law and order league, for the purpose of suppressing some of the harsher of jokes perpetrated by some of the students. Whether such a movement is necessary or not, we will not say but we hope the gentlemen who borrowed the case of "soda" from Mr. Boynton's wagon a few days ago will return the empty bottles with money for the missing contents of the same, and it will be all right for this time only. It is no more than right that, "he who dances should pay the fiddler."

—The Y. M. C. A. has elected the following officers for the ensuing year: Pres't, W. S. Fisher '98; vice-pres't, F. H. Turner '99; rec.-sec., H. Baker '00; corr. sec., W. E. Chapin '99; treas., M. H. Pingree '99.

—On Thursday evening, March 11, Mr. and Mrs. A. H. Kirkland tendered an informal reception to the *Phi Sigma Kappa fraternity*, of which Mr. Kirkland, of the class of '94, is a member. The happy young couple were pleasantly surprised at the presentation to them of a valuable gift, which came from the fraternity. Music was followed by a collation, and the party departed at a proper hour all having spent a very pleasant evening. Miss Kirkland, a sister of the above, assisted in receiving and entertaining the young men.

—The last Senior debate of the term was held in the President's recitation room last Friday morning, March 12. The question was, 'Resolved, That the Jury System should be Abolished.' P. H. Smith and H. F. Allen spoke on the affirmative, and G. D. Leavens and J. W. Allen on the negative. The debate proved to be one of the most interesting held by the class during the term. The judges reported the weight of argument in favor of the affirmative, and the class voted on the merits of the question, in favor of the negative. The first debate of next term will be on the question, "Resolved That the Government should own and operate the Railroads."

—During the past two terms there has been more or less work for the Faculty in deciding questions relative to Senior electives. It is unfortunate that a student should not have selected, by the end of his Junior year, the studies that he will pursue his Senior year, and be of the most use to him in after life. But the fact is, that this is frequently the case, and the Faculty are thus brought in the matter and after some trouble along this line the faculty has made the following rule: In special cases change from one elective to another may be made by Seniors not later than the end of the first month of the fall term. This is subject to the consent of the faculty.

—On the evening of Saturday, March 13, the Senior division in Botany, together with those post-graduates who are pursuing courses in this study, were delightfully entertained by Dr. Stone, who is at the

head of the department. The party went to Springfield where they repaired to a private room at Hotel du Henking, and were treated to an excellent dinner in which the celebrated German dishes played an important part. Later, the party attended the Court Square theatre where they witnessed Chas. Hoyt's latest and best play, "A Stranger in New York." The party returned on the special evening train, after a most delightful and entertaining time through the kindness and generosity of the Doctor.

—Pres't Washburn of the Rhode Island Agricultural College, who is a loyal son of Aggie and a member of the class of '78, visited his *Alma Mater* during the latter part of last week. The main object of his visit was for the investigation of the several departments of the college, for any good methods which he might consider of advantage to our younger sister institution. During his visit at the college the students had the pleasure of listening to a few words of Mr. Washburn. It is indeed encouraging to those connected with the college in any way, to hear such words of commendation and words indicative of the rapid progress of our institution as came from the lips of one of whom Aggie is justly proud. Pres't Washburn carries back to his college the good will of his *Alma Mater* and leaves behind him new inspiration for Aggie.

—Lieut. Wright has purchased some new and valuable instruments, and we now have a Drum and Bugle corps of twelve cadets, six drummers and six buglers. As might be supposed, the practice upon these instruments, and especially the bugles, necessitates the tearing of the air and the floating through it of a great deal of music (?). Realizing this, the Lieutenant has set aside for practice upon the corps instruments the hours from 12 until 1, and from 6 until 7 each afternoon. Notwithstanding this commendable action on the Lieut's. part, the buglers blow themselves and their instruments at nearly any and all times of night and day. This noise out-of-hours is exceedingly annoying to those who have studying to do, and it would be obliging the students very much if the practice could be confined as above ordered.

—Prof. S. T. Maynard attended the third annual meeting of the Massachusetts Fruit Growers' Association, held in Worcester, last Wednesday and Thurs-

day, March 10 and 11. This association, though only in its infancy, is already doing a great deal to further the interests of the fruit growers of the Old Bay State. There was a large attendance at the meeting, growers being present from all parts of the state, and some very interesting discussions concerning fruits followed. Prof. Maynard introduced before the meeting a resolution against the proposed legislation concerning the disease of the peach tree so familiar to all growers, and as well known as the "yellows." The object of the above bill is for the purpose of eradicating all trees affected with this disease. This would oblige all owners of such trees to cut down and burn the same. It is unnecessary to say that it would be a very hard measure to impose upon our fruit growers, and it would also be an unjust measure. This peculiar affection of the peach tree has been known to occur in America for at least a century, and during that time it has ravaged many, and in fact most of the finest orchards of the country. Not until the germs of this disease can be isolated and seen under the microscope can it be proved contagious, and this has never been done. After this disease is proved to be contagious, there will be time enough then to consider its dangers.

OUR LIBRARY BOOKS BY CHAS. ABBOT.

If ever a man's name should become immortal, it should be one who has used his every effort to advance nature.

For this reason alone, I would ask that his life and books be read, circulated, and acted upon by every reader who is interested in such works. Although nearly a complete set of Abbot's works is in our library, I will mention only a few of them.

In the spring of 1889 Abbot published "Days Out of Doors." The chapters number twelve, which represent the months of the year. In the first chapter "Anixi gischuch" or the "Squirrel Moon," as the Indians called it, beautifully describes the habits of the winter birds and animals, then the spring months come when everything is bright and fresh from the April showers. From the croaking of frogs to the shrill whistle of the Whip-poor-will, summer is thus hailed by every pleasing detail; the petals of the spring flowers are carefully observed and the insects that visit them are described in a very interesting and delightful manner.

The rustling corn and the amusing times of husking it represents, November, December with its flurries of snow and hanging icicles, leaves a reader with a very favorable impression. In fact, it surprises one to see how finely such a subject can be polished.

Five years later the book entitled "Travels In a Tree Top," where from a real tree top this very author sees and describes the surrounding objects, but particularly the birds; crows, hawks, and such little "friends" as came near him.

The variety is ever changing. From different situations, an immense amount of pleasing literature is ever coming before the reader's eyes. From the coming of the birds in spring to the dead leaves of autumn, one finds the book very fascinating.

His last book "Notes of the Night" has been recently added to the library. The book itself is a thing of beauty, bound in a neat, attractive manner. Like the preceding books, the author closely confines himself to nature.

Difficult it is to give one an idea of such an author, and more difficult it is to bring one into an intimate acquaintance in a few words, and the books stand as a proof of themselves.

In closing, a few more books might be mentioned. "A Naturalist's Rambles About Home," "Outings at Odd Times," and "A Colonial Wooing."

PALAEONTOLOGICAL EVIDENCE OF THE EVOLUTION OF THE CEPHALOPODS.

SEVENTH LECTURE IN N. H. S. COURSE. SPEAKER, DR. E. R. FLINT.

Dr. Flint, as one of the original founders of our N. H. S. society, stands very intimately related with the interests and purposes of the society and of course as an old member his lecture was of more than usual interest. Dr. Flint is, moreover, a scholar of wide range. Not confined to the realms of chemistry, he takes pleasure in the fascinating researches of the naturalist and especially, as a student in geology, he has worked with the best teachers of Europe. But Dr. Flint's greatest delight is the study of the Chinese language.

The lecturer chose as his subject for the evening, evidences of an evolution in the Cephalopods which are established from the remains of shells and fossils

in the various geological periods of the world's history. And from this evidence, derived from a highly organized invertebrate, we are able to form another strong link in the great theory of evolution.

Dr. Flint first explained a misconception of the theory which is very often conceived. Evolution does not teach the change of one form into another but, a separation of one generalized form into several specialized forms.

The origin of life has been discussed for ages and evolution, though faulty in many places and too often broken from the direct line to be anything but a theory, is however, the one theory which has withstood the test of scientific investigation. The law of heredity is its most powerful opponent and one must therefore turn back to the very beginning of life and trace the extremely slow process of the various changes.

Cephalopoda, meaning "head-footed" and represented to-day by the Devil fish, Cuttlefish, Nautilus, and Squids are of a very early origin and at one time probably were the most abundant creatures in the ocean attaining a length of six feet or more. Occasionally specimens have been found of this creature, which resembles in a measure the modern Squid, preserved in the rocks with the ink sack and contents intact, and drawings of these extinct animals have actually been made with their own ink,

In tracing the evolution of the Cephalopods from the meagre proofs spared to us from the various upheavals which the surface of the earth has passed through, we first notice that the animals bore a shell or outside bony covering and also that this shell was divided by simple septae having a ventrally placed tube or syphon running throughout the shell. As we follow on down the line of progression we perceive that the septae grow more and more complex and that the syphon moves up to occupy a dorsal position, moreover, the shell, which was at first straight, begins to curl until finally the coils coalesce. Following on down to our present day we find that many of the forms have lost their original outside shell and have grown instead an internal bony structure. This is conclusive evidence of an advance in type and shows one of the many evidences which are found in geology of an evolution of form and variety.

The lecture was pleasingly illustrated by specimens, which Dr. Flint has gathered, for the most part, himself and pointed out clearly the various changes through the succeeding geological periods.

It is perhaps interesting to know that the modern Cephalopoda are rapidly becoming extinct and scientists are compelled to seek now-a-days for the half digested specimens in the stomach of the whale.

CONGRATULATIONS, CRITICISMS, AND SUGGESTIONS.

MESSRS. EDITORS:—The writer has been an interested reader of almost every number of *AGGIE LIFE* since its first appearance, and he desires to express his satisfaction with the present high standard of the paper, and to congratulate the present board of editors upon the courage they have shown in the face of many discouragements, and upon the success which has attended their efforts. The disposition shown at one time to find fault with everything and everybody connected with the college, has been stamped out, I trust, forever, and in its place one notices honesty of purpose, an earnest effort to advance the true interests of the entire student body, and a thorough loyalty and genuine enthusiasm for the best good of our *Alma Mater*.

The writer has been thinking how the field covered by the present paper might be enlarged and improved, and begs leave to offer a few thoughts for the consideration of the incoming board of editors.

In the first place, it seems to the writer that the paper ought to reflect, rather more than it does, the agricultural character of the institution. While it is not claimed that our College is in any sense a purely technical school of agriculture, it must be acknowledged that agriculture occupies a prominent place in the curriculum of the institution, and that at least a portion of the students are desirous of securing the full advantages of the agricultural instruction. One very seldom notices however, any agricultural topics discussed, or any references made to agricultural investigation, in the columns of the *LIFE*. Endeavor to talk with students in the advanced classes relative to the work of our own or other experiment stations, and their minds appear to be perfectly blank on the subject.

It might be claimed that a knowledge concerning work of this character is not to be expected of undergraduate students. This however, I must deny. It certainly is not to be expected that such students will be able to possess a thorough mastery of the work accomplished or in progress along any line of agricultural investigation. I believe however that the young men in the advanced classes, should have a general knowledge of the work undertaken by the experiment stations of our country, and furthermore that they

should possess in a greater degree, a *desire to become familiar with the advanced agricultural thought of the day*. I would suggest as a step in the right direction, that an agricultural department be established in connection with AGGIE LIFE to be in charge of a student, who is especially interested in agriculture. Let the bulletins of the experiment stations, the experiment station Record and other pamphlets issued by the Department of Agriculture, as well as the catalogues of the different agricultural colleges of the country, come to his table. I do not mean to say that he will have time to read all of these publications. He will be able at least to note the many different lines of investigation undertaken by the experiment stations, and the character of the courses of study offered by institutions similar to our own. Whenever he sees an investigation that in his judgment would prove especially interesting, let him read and master it, and then put the gist of the work into small space for the college paper. It is very important that he master the experiment, and be able to tell its character and results in his own language, otherwise he will get no benefit himself, and the article will fail in its effect upon the reader. The young man who undertakes such work, will be surprised at the benefit he receives. It will teach him to *think for himself*, which after all is the true aim of education. It will also give him the spirit of investigation, and enable him to impart it to others. The editor of this department should endeavor to induce his fellow students to aid him in the work by writing brief reviews of sundry articles and investigations. The corps of workers at our local experiment station most certainly ought to assist in this work. I am free to confess that in time past many of those workers have fallen far short of the ideal scientific investigator, having been utterly lacking in scientific enthusiasm, I believe we are now witnessing the dawn of a different spirit among undergraduates, post-graduates, and experiment station workers, a spirit which cannot fail to be of permanent good to everyone.

J. B. LINDSEY, '83.

EXPERIMENT STATION WORK IN THE DEPARTMENT OF "FOODS AND FEEDING."

This department of the Experiment Station is under the supervision of Dr. Lindsey. There is a barn which is devoted to this work, and also a laboratory. Two assistants are needed continually to carry on this work.

The chemical work is divided into two divisions—A, Control work, B, Investigation.

By "control work" is meant the analyses of cattle feeds, dairy products, and waters sent by farmers and others to the station for examination. Such substances

are tested free of cost, and results reported, and also such information as considered advisable.

By "Chemical Investigation" is to be understood the comparative study of different methods employed in analyses, as well as inquiries into the more exact nature of various organic substances existing in different agricultural plants.

Studies in three directions of work are in progress, and investigations into the most reliable method for the estimation of true starch, as distinct from substances of a similar nature.

Considerable time is also being given to methods for the determination of Pentosans, for their occurrence in agricultural plants. Many digestion experiments have already been, and others soon will be carried out for the purpose of ascertaining the amounts of these substances that ordinary farm animals are able to digest. Two experiments in this direction have already been published in scientific journals.

Galactan, a hemi-cellulose, closely allied to the pentosans has been known to exist in various agricultural plants for a considerable length of time, but until the recent investigations carried out by this department, its quantitative estimation in all the more common agricultural plants had never been undertaken. This work recently completed by Mr. E. B. Holland, a graduate of the College and a very able chemist, has shown this substance to have a much less distribution than the pentosans. As high as 10% however has been found in seeds of white clover, and also in the seeds of the blue lupine, as high as 15% has been found.

Both pentosans and galactans belong to the carbohydrates and are deposited in the cell walls of plants and seeds. They are included under the general head of "Non-nitrogenous extract matter." The object of this work is to find out the individual substances included by this term. While the work is by no means complete, considerable light has already been thrown upon the true nature of such substances. Work of this character is meant to reveal the nature and peculiar characteristics of many carbohydrates which have been heretofore unknown and which exist in ordinary agricultural products.

A series of experiments relative to the value of cotton seed feed has just been completed at the feeding barn. This feed is a mixture of hulls and cotton seed meal, which is fed quite extensively in the South as a substitute for hay. Southern shippers have been endeavoring to place it in the Massachusetts market, and it became the duty of this department to carry out some experiments to test its value as compared

with hay. While results as yet have not been worked out, observations make clear that it will produce nearly as much milk as an equal quantity of hay. It probably would not be wise for the average farmer to purchase this as a hay substitute, but milkmen in the vicinity of our large cities who have to buy all their feed, might find it to their advantage to use a portion of this material in place of hay.

Some experiments have been recently started for the purpose of ascertaining the value of salt hay. It is found in large quantities on the salt marshes along our Massachusetts coast, especially along the shore towns of Essex, Plymouth, and Barnstable counties. This material can be purchased for one half the cost of English hay, and farmers desire to know its feeding value as compared with English hay, as well as the best methods of feeding it. Ten tons were shipped to the Experiment station last autumn, comprising five distinct varieties. A sample of each lot has been analyzed, and comparative tests are now being made on a herd of twelve cows. An effort will be made to note the flavor, if any, which this material imparts to butter and milk, and how best to feed to reduce the flavor to a minimum.

Digestion experiments with sheep are also in progress in order to ascertain the amount of the several ingredients in salt hay that animals are capable of digesting, for it is a recognized fact, that other things being equal, feeds have a nutritive value in proportion to the amounts of the several ingredients which animals are capable of digesting and assimilating. When these tests are completed it is hoped that a more exact knowledge will be had of the value of this hay.

At least six months will be required before any positive results can be expected, so that the experiments will not be completed until early summer.

S.

Alumni.

'74.—Dr. J. M. Benedict, No. 81 North Main St., Waterbury Conn.

'74.—A. W. Dickinson, of the company Dickinson, Thompson & McMaster, No. 1 Exchange Place, Jersey City, N. J.

'78.—Dr. John H. Washburn, president of the Rhode Island state agricultural college, spent several days of last week in studying the methods under which the different departments of our college are working. Dr. Washburn joined us in the "Kommers" of last Friday evening and gave a few short anecdotes of events which happened while he was a student here, which were heartily appreciated by all.

'82.—Dr. John A. Cutter of New York made a flying visit at his Alma Mater a short time ago.

'82.—Up to the present time there have been no reliable books on Tobacco Culture, and outside of tobacco growing regions, there exists only a vague idea of that industry. Herbert Myrick, M. A. C., '82 and editor of several agricultural journals, has in company with Dr. J. B. Kiillebrew, prepared a complete treatment of the subject under the title of "Tobacco Leaf." This book consists of over 500 pages and is profusely illustrated by 150 original engravings. It describes everything connected with tobacco, (except the habit), from the origin of the plant to the finished product found in the cigar shops. The facts set forth in this work are based on careful and accurate experiments and are not merely guesses. It discloses more secrets of the trade in all its branches than were ever before published. This volume will without doubt be of great benefit to all tobacco growers.

'88.—Address of Francis H. Foster is Andover, Mass.

'91.—The address of H. M. Howard is changed from Arlington Heights to West Newton, Mass.

'93.—H. C. Davis, R. P. C., Atlanta, Ga.

'94.—Address of A. J. Morse is St. Austins School, W. New Brighton, N. J.

'94.—On Feb. 27, C. F. Walker read a paper on the "Application of Iodic Acid to the Analysis of Iodides" before the Chemical club of Yale University.

'95.—C. W. Crehore, Chicopee, Mass.

'95.—The address of C. B. Lane is Agricultural Experiment Station, New Brunswick, N. J.

'95.—The good old class of '95 will be able to boast of at least one minister. Wright A. Root is going to take a course in the Theological seminary at Auburn, N. Y.

'96.—F. H. Read has been spending a part of his vacation in Amherst.

Exchanges.

The Tripod is an interesting publication.

The Oak, Lily and Ivy contains some good editorials.

The Recorder has a number of able and instructive articles.

We are always pleased to receive, *The Concord High School Voice*.

Would that we had more exchanges like *The Reflector*.

The University Cynic is a very wide awake and up to date paper.

The Vermont Academy Life contains an interesting story, "His First Love."

The Golden Rod has a very complete exchange department and is worthy of imitation.

The Beech Grove Oracle, issued by the students of the Berkshire School is a neat little sheet.

We are glad to receive *The Brunonian*, especially as it always contains some very original stories.

Each department of the *McGill Fortnightly* is well filled with good material.

The Holy Cross Purple is a nicely gotten up monthly which we are glad to have on our exchange list.

The Senior is published by the Senior class of the Holyoke High school. It is one of the newest of our exchanges and we welcome it with pleasure.

One of our most attractive appearing exchanges is *The Student's Pen* and its contents are fully in keeping with its appearance.

EXCHANGE LIST.

The Milton Orange and Blue, Milton, Mass.

The High School Record, Ellsworth, Wis.

Tid Bits, Cohoes, N. Y.

Journal, Pittsburg, Mass.

Phi-Rhonian, Bath, Me.

Vedette, Janesville, Wis.

The Times, River Falls, Wis.

The Budget, Salem, Mass.

Tabula, Oak Park, Ill.

Egypti, Cairo, Ill.

High School Register, Omaha, Neb.

Pulse, Aurora, Ill.

The Journal, Dexter, Me.

Monthly Visitor, Haverhill, Mass.

The Academy, Troy, N. Y.

High School Advance, Salem, Mass.

High School Opinion, Ottawa, Kans.

Sagamore, Brookline, Mass.

D. H. S. Item, Dorchester, Mass.

Cherry and White, Williamsport, Pa.

High School Recorder, Brooklyn, N. Y.

The Olio, Jacksonville, Fla.

The Tattler, Port Huron, Mich.

High School Argus, Harrisburg, Penn.

High School Junto, Easton, Penn.

Holy Cross Purple, Worcester, Mass.

The Ephor, Beloit, Wis.

Panorama, Providence, R. I.

The Spectrum, Fargo, No. Da.

N. H. College Monthly, Durham, N. H.

The Cantonian, Clarinda, Ia.

Epsilon, Bridgeport, Conn.

Essex School Journal, Lawrence, Mass.

The Chronicle, Hartford, Conn.

The Wisconsin Times, Delavan, Wis.

The Flash Light, Delavan, Wis.

The Quill, Hinsdale, N. H.

High School Record, Sioux Falls, Ia.

Santa Maria, Freeport, Ill.

The Lake Breeze, Sheboygan, Wis.

Talks and Thoughts, Hampden, Va.

The Seminary Opinator, Kingston, Pa.

Normal Thought, Buffalo, N. Y.

The Calendar, Buffalo, N. Y.

The Stule Review, Dayton, O.

High School Advocate, Needham, Mass.

High School Bulletin, Dedham, Mass.

The Gem, Springfield, Mass.

The Arms Student, Shelburne Falls, Mass.

Latin and High School Review, Cambridge, Mass.

Earlhamite, Richmond, Ind.

High School Gleaner, Pawtucket, R. I.

Western University Courant, Allegheny, Penn.

The Recorder, Springfield, Mass.

Dorchester High School Item, Dorchester, Mass.

School Visitor and Library Bulletin, Worcester, Mass.

Concord High School Voice, Concord, Mass.

Colby Academy Vocie, New London, N. H.

Chauncey Hall Abstract, Boston, Mass.

E. H. S. Recorder, Lynn, Mass.

The School Record, Newburyport, Mass.

Beech Grove Oracle, Pittsfield, Mass.

Pendulum, Bernardston, Mass.

Reflector, New Britain, Conn.

Distaff, Boston, Mass.

Viewpoint, Hopedale, Mass.

Academic, St. Albans, Vt.

Oracle, Bellows Falls, Vt.

Golden Rod, Quincy, Mass.

H. S. Bulletin, Lawrence, Mass.

Lyman School Enterprize, Westboro, Mass.

Tuftonian, Medford, Mass.

The Cadet, Nashville, Tenn.

The Radiator, New Haven, Conn.

The Fence, New Haven, Conn.

High School Review, Hartford, Conn.

The Oracle, Bangor, Me.

The Calendar, Buffalo, N. Y.

The Clarion, Oxford, Me.

Riverview Student, Poughkeepsie, N. Y.

Springfield Recorder, Springfield, Mass.

The Tabular, Torrington, N. Y.

The Skirmisher, Bordertown, N. J.

Polytechnic, Brooklyn, N. Y.

Phoenix, Swarthmore, Penn.

Delaware College Review, Newark, Del.

Phreno-Cosmian, Mitchell, So. Da.

The Spectrator, Columbia University, N. Y. City.

Boston Law School Magazine, Boston, Mass.
High School Styles, Brockton, Mass.
E. H. S. Record, Boston, Mass.
The Racquette, Portland, Me.
The Tripod, Roxbury, Mass.
Oak, Lily and Ivy, Milford, Mass.
The Senior, Holyoke, Mass.
The Minute Man, Concord, Mass.
The Tech., Boston, Mass.
The Clarion, Boston, Mass.
Latin School Register, Boston, Mass.
University Cynic, Burlington, Vt.
College Life, Emporia, Kans.
The Amulet, West Chester, Pa.
Lynn High School Gazette, Lynn, Mass.
Student's Penn, Pittsfield, Mass.
The Review, Lowell, Mass.
High School Herald, Westfield, Mass.
French American College, Springfield, Mass.
Roxbury Enterprise, Roxbury, Mass.
Amherst Student, Amherst, Mass.
The Breeze, Ashburnham, Mass.
Brunonian, Providence, R. I.
Hermonite, Mt. Hermon, Mass.
The W. P. I., Worcester, Mass.
Mt. Holyoke, South Hadley, Mass.
Vermont Academy Life, Saxton's River, Vt.
Willistonian, Easthampton, Mass.
The I. A. C. Student, Ames, Ia.
The Philosophian Review, Bridgeton, N. J.

LIBRARY NOTES.

The Nut Culturist, by Andrew S. Fuller. This is the first work of its kind ever published in the United States. It contains illustrated descriptions of all common nut-trees and many new varieties, the conditions under which they flourish, and the best methods of propagation.

Why should not these valuable nut-bearing trees be planted upon roadsides or wherever shade or ornament is desired, and become a practical source of profit to the owner?

A History of Inventions, Discoveries and Origins; by John Beckmann, translated from the German by William Johnson. The value and popularity of this book is shown by the fact that this is its fourth edition. It is written in a style to interest both the casual reader and the student. It was first published in the latter part of the eighteenth century. In the last edition many additions and corrections were made to bring it up-to-date, so that in this direction, it is now as it has been for the past century, the standard.

Parakites. By Gilbert Totten Woglom. A treatise on the making and flying of tailless kites for scientific purposes and for recreation. Kiteflying is one of the oldest of pastimes having been practiced nearly three thousand years. It is probably of Malaysian origin. During the past few years many people in this country have been experimenting with tailless kites or parakites as they are called. The author of this book, who is a druggist in New York city, has taken up the study of kiteflying during his leisure hours and has been one of the most successful of these experimenters. He has made kites which have risen to the height of six thousand seven hundred feet. At the time of the dedication of the Washington Memorial Arch in New York on May 4, 1895, a flag ten feet in length was suspended in the air at an altitude of one thousand feet. The future seems to hold many interesting possibilities in this direction.

Economic Entomology. For the farmer and fruit-grower, and for use as a text book in agricultural schools and colleges. By John B. Smith, Sc. D. Being one of the latest and most practical works on this subject, this book will find an important place in preparing a foundation upon which more extended study may be based. It will be especially useful to those who, not having time to go deeply into the study of insect pests, still wish to obtain some practical knowledge of their structure, classification and habits, as well as the most effectual means of checking or destroying them.

Grasses of North America. By W. J. Beal, M. A., M. S., Ph. D. The second volume of this valuable work has just been added to our library. Although it is now nearly ten years since the first volume was published, the delay is compensated for by the recent additions and extensions made to this part. All grasses found in the United States and northward and many in Mexico are classified and fully described. Each genus is also illustrated. In all, nine hundred and twelve species are included, making it the best and most complete thing of its kind yet published. In the back of this volume is a chapter on the geographical distribution of grasses.

A History of American Literature. By Fred Lewis Pattee. It is interesting to study, in such a book as this, the rise and development of the literature of a nation. Such a study requires a knowledge of the fundamental principles governing or influencing its production. A true estimate of a writer cannot be formed by simply reading one or two of his productions; so a history of this kind, however complete, needs to be supplemented by general reading along the lines which the wide experience of the author indicates.

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I stand in life's gloaming,
Watching brave youth sublime,
Striving to make footing
Upon "the sands of time."

As waves of the ocean,
Dash in upon the rock;
Life's cares with fiercest motion
Surge in with ceaseless shock.

And some who seem ablest
The tempest to withstand,
Are swept with the feeblest
Out upon the quicksand.

A hard sand for footprints—
Is the sand of the sea;
And our mortal imprints,
Make but faint marks to see.

—Sabaneeter.

Editorials.

GENTLEMEN, we make our bow. For the first time—well no—we have often taken off our hat to some overly critical feminine friend who, perchance, happened to be looking the other way and therefore cut us dead; but, to the general public however, we stand on a high bluff and bow very low for the first time. It is customary for each new editorial board to do this, only some do it in a different way; to wit:—With this issue of THE LIFE a new board assumes the control of affairs. It shall always be our endeavor to keep up the excellent standard set by our predecessors who, etc. This is one way, ours is another. We like our way because it is honest. We are going to be an experiment, may be we shall keep up the standard and may be we shall not; be that as it may let us state at the outset that we are true and loyal sons of the M. A. C., and though younger sons, still, we shall always stand up for the college which we believe to be not second to any of its kind. If this sentiment does not strike a popular chord we are prepared to argue it at any time after June 23, after which date we shall be found, who knows where. Gentlemen, you will notice a few changes in passing over LIFE's pages. We have taken her for better or worse and we propose to exhibit her frailties fortnightly so long as we are able to furnish her with pin-money. She will sometimes be adorned with stories—often perhaps, rather far fetched, which shall simply represent the stretch of her imagination. Sometimes she will be in a merry mood, but this only when her income has been increased either through the charity of a liberal patronage, or a considerable rebate of his wage by the printer's devil. Occasionally she will be sad and then in subdued strains, the smouldering passion of her heart will burst forth in slow, musical rhymes which won't create any disturbance or make any noise and

if you are not fond of these outbreaks just remember what we have to bear. This, then, is a forerunner of what you may expect; we don't claim to be good, we don't set before us any standard to which we shall endeavor to attain, but when we are gone let them put on our tombstone—gone up in the combustion of burned out endeavor.

DURING the Easter vacation we had the pleasure of being present to observe the maneuvers of the "Tech" battalion in its armory in Boston. While we should hesitate to pick the winners, at this early date, of the battalion prize drill in May, still, we cannot but notice the improvement over last year at this time. The men apparently are more earnest and painstaking in their work and the officers are unquestionably better qualified to command; and yet, we have a high regard for Brown "Regulars" and we await the outcome with no little interest. So far we can permit ourselves to stand on the outside and look on with unjealous eyes. But as competitors for the individual prizes at the May drill we are deeply concerned. Last year we had the good fortune to capture the second individual prize, surely our ambition should be for a higher honor this spring. It is hardly needful to mention the time, the careful training, and the unbounded enthusiasm necessary to present a suitable standard of excellence in the manual of arms and bayonet exercise, such as will compare favorably with Harvard, Brown, and "Tech" drillers. We hope and expect that the men who are chosen to represent the college in this event will do their best for themselves and their Alma Mater. The drill is not to be so long and uninteresting as last year. The battalion maneuvers are to be in close order, and the individual squads representing each college are to be cut down to six men, thus allowing more time for music and dancing. All things taken into consideration, everything seems to point to a grand success and good time at the Intercollegiate Prize Drill this year.

AN illustrated catalogue, in addition to the regular college catalogue, has this year made its appearance for the first time. We wish to make known our appreciation of this endeavor on the part of the authorities to accomplish a great need, which has never, heretofore, been successfully overcome. We

believe that the beneficial results of this venture will be evidenced from the start. That the importance of placing before the public a condensed and concise catalogue containing information such as will be of direct interest to the young men seeking after a college training, will be recognized, the venture found to be a success, and the success repeated; the present catalogue is a very comprehensive piece of literature containing articles from each of the departments in college, setting forth the aim of the department, and the methods adopted to accomplish results. We would direct the attention of our readers (especially our alumni) to the fact that a careful perusal of this catalogue by members of the graduating classes in the high schools would undoubtedly result in an increased respect for the work the M. A. C. is endeavoring to accomplish, and might result in enlarging the loyal band of Aggie "rooters." The book is fully illustrated with line and half-tone engravings, containing pictures of several of the college teams and organizations. Pictures of many of the college buildings are also among the illustrations, which together with a brief mention of the organizations and enterprises of the student body make a very attractive budget of information.

ANCIENT AND MODERN LEARNING.

In a book published in London last week, some remarkable claims on behalf of Hindu science and civilization are made. The author, a learned prince of India declares that in the "Science of Life," which is the oldest Brahmin book on medicine, nearly all the best modern methods of medical diagnosis and surgery are described. Some of the grandest discoveries of the western world, such as vaccination, anaesthesia and all antiseptic surgery were practised many centuries ago. The circulation of the blood as well as abdominal and cranial operations performed only within the last fifty years are described as having been done in the land of Buddha.

Such claims tend to shake our self esteem as the wisest and most highly inventive people of the world. It is our boast that "we are the heirs of all the ages in the foremost files of time." It is not an old thing however, for us to be told that light travels from East to West. We speak of Asia as the cradle of the race

and so it undoubtedly was. We need not be surprised therefore, if, as Asia becomes better known and its antiquities are more closely examined, we should find that much of the knowledge of the West was familiar when the world was young.

There are certain lines on which we acknowledge the ancients as our superiors. These are poetry, painting, sculpture, architecture, the drama, and almost everything that relates to beauty. Tell a poet that his lines remind one of Homer and he becomes your friend forever. Or say to a painter that his work compares well with that of Raphaels' and he considers it the greatest compliment possible. Cinderella and her slipper and many other nursery rhymes are as old as history itself. Of the forty odd plays of Shakespeare ten are historical. The remainder he did not stop to invent but took them from the Italian novelists who in turn had borrowed them from the East.

A few years ago it was thought that there had been no ancient glass factories, but the Pompeian excavations have revealed a workshop full of ground glass, window glass, cut glass and colored glass. These inhabitants of Pompeii could do even more than this. They were able to melt and pour glass and make it of such consistency that when thrown against stone, it would not break but merely bend and could afterwards be hammered into its original form.

Microscopes of immense power were known in Egypt. The Greek pirate Mauritius had a marine telescope by means of which he could sweep the entire sea to the very coast of Africa. Pliny states that Nero had a ring, the gem of which he used in observing the sword play of the gladiators in the Arena. This is a style of opera glass unknown to us moderns.

It is impossible for modern artists to mix paints that will hold their color for one hundred years. Pompeii has been buried for eighteen hundred years. Yet when the walls of one of its houses are dug out the royal purple flames out with a far richer color than any we can produce.

Sheffield steel is an English boast, but it will not bear the atmosphere of India. The Damascus blades, used in the Crusades, are as bright and keen to-day as they were eight centuries ago. Hindus throw handfuls of floss silk into the air and cut it in pieces with their fine-edged sabres. There is no steel in western work shops of that quality.

There are huge blocks of stone in the pyramids so heavy that our machinery can not take them from their position and deposit them on the ground, so extremely hard that our modern instruments can not cut them. The Egyptians quarried them and carried them one hundred and fifty miles through the sand apparently, without difficulty.

Railroads date back to Egypt. We find, also, a painting of a ship filled with machinery which scientific men say was propelled by steam. Four hundred years ago the first spinning wheel was introduced into Europe. There is conclusive proof that it existed 2000 years before.

Solomon's Temple was situated on an exposed hill and was guarded by a system of lightning rods similar to Franklin's.

We plume ourselves on our canals, but Ancient Palestine had many magnificent ones. It is doubtful whether, notwithstanding Macadam, we build any better roads than the Romans built. We have not yet discovered a perfect way of ventilating either our public buildings or our private houses; but the exploration of the pyramids in Egypt shows that those Egyptian tombs were ventilated in the most scientific manner.

We are forced to admit that the chemistry of the most ancient period had reached a point that we have not approached at the present day. Of one hundred developments of this wonderful science known to the Nineteenth century, ninety-nine have been anticipated by the ancients. Our chemistry, however, is not hidden in the cellar or dungeon, nor is it seeking to turn everything to gold. We have a chemistry, laboring with the farmer, and assisting the miner to separate the gold from the dross.

The ancient Egyptian and Hindu learning was monopolized by the priests. They wove together the real and the unreal pursuing the rainbow and disdaining the priceless gems which abound in the earth beneath. Their mistake may have been natural but it was the error that paralyzed the world. To-day we seek a more noble learning, a learning concerning the whole living universe of God. A learning that conquers nature, liberates mankind from the drudgeries of endless toil, bringing with it a spirit of general inquiry and a hope of a great and grand improvement of mankind.

APRIL THOUGHTS.

I.

O listen to the patter of the gentle April showers,
Arousing all the grasses, resurrecting all the flowers,
Awakening all nature with their heaven-given powers.

II.

For April fair has come again, a livelier season bringing,
We see the grass grow green again, we hear the birds a-singing,
And all the world is happy now, with joy and gladness ringing.

III.

We see the little scaly buds, all turning into leaves,
And Nature wears a sunny smile, while granting her reprieves,
And nothing is unhappy now, and nothing mopes or grieves.

IV.

There's a warm and pleasing fervor, smiling in the jolly sun,
And he seems to feel complacent when his daily work is done.
For he knows he's made earth brighter while his lengthening course he run.

V.

There's a new and freshening vigor in the clear and balmy air,
And the breezes soothe our senses with a fragrance rich and rare,
And we love to watch earth's features as she daily grows more fair.

VI.

We see the rapid changes now, transforming all the trees,
The tender leaves unfolding and a-waving in the breeze,
They seem to know our pleasure and they seem to try to please.

VII.

And birds in every tree and bush are pouring forth their notes,
They sing the joys of spring-time as if they'd burst their throats,
Through every pasture, field and wood their cheering music floats.

VIII.

And grass and flowers are springing up in every nook and glen,
And many a noble blossom waves in haunts unknown to men,
There's a new surprise awaiting us in every field and fen.

IX.

We hear the merry ripple of the over-flowing rills,
As they rush along the upland or tumble down the hills,
To seek the distant ocean and to turn a thousand mills.

X.

Then turn thy thoughts to nature's joys, all care and trouble scorning,
Wake with the birds, go out and see the glories of the morning,
Rejoice with me on all these charms, this pleasant world adorning.

XI.

Where grass is green and skies are blue and all is joy and gladness
Should man alone exception be and burdened be with sadness
Thinking of sordid, weighing cares which drive men's minds to madness ?

XII.

The truest measure of success is neither wealth nor fame,
For happiness is more than power or celebrated name.
Then let us make true happiness our highest noblest aim.

ON THE STOCK EXCHANGE.

"Gambling—well yes, but to the rise of a couple hundred shares of stock, I owe the beginning of my success and in a measure, the reputation for shrewdness and foresight which I am credited with to-day."

So spoke uncle Jack, seated before our cosy fireplace one evening, out at college, where he had incidentally dropped in to learn why I had sent up to the city so many unreceipted bills. "And my foresight," jokingly continued my uncle, "tells me Harry, that unless you spend a great deal less on some little maid up here you will land shortly some where in the city with a high desk before you and a pile of ledgers to keep in order."

"Oh! well how about that couple of hundred," asked my room-mate, poking the fire. "Well, young men," said my uncle, slowly lighting a cigar, "if I relate this incident to you, it shall be with the express understanding that under no consideration must you act in the future with the belief that you too will make a lucky strike as I did. Let me give you the advice of twenty years on the stock exchange, and let me say that I have seen men, many men happy in the love of a true and loving family come upon the floor of the exchange and howl and cry in the strength of their young manhood and I have seen these same men in a few weeks or months or possibly a few years, old, gray, ruined, begging on the streets. Why man think of it, think of those poor children and of that ruined happy home. I tell you no man has any business with the pit unless he is unmarried with no one to care about him or what he does or what becomes of him," and uncle gradually dropped into a deep reverie. I thought of something I had once heard spoken of when I was a child, but presently uncle broke out, "why, I was going to tell you of my first brokerage deal wasn't I? What an old fool I am, but honestly boys, keep out of stock broking."

"I was at that time one of the clerks of the old Bentley Banking Co., and was employed in going to and from the office to the exchange with memoranda for our broker. This was before the day of the 'ticker' and all information had to come through the office."

"One day old Bentley called me up hastily and said,—'Take these two hundred shares over to the exchange and tell Dobbins to get rid of them at 49.

They're not worth the paper they are on.' They were some P. Q. & S. shares that the bank had taken on an old debt, and rumor had it that the old road was bankrupt and was shortly to close down."

"Well, I reached the exchange safely and was awaiting for Dobbins when my eye fell on a scrap of paper lying at my feet, mechanically I stooped to pick it up. You bet I was wide awake in a moment!"

"Buy in P. Q. & S. at low figures.

(Signed) CHRITTENDEN."

"It flashed upon me in a moment what the railroad magnate's intentions were. When Dobbins came up a little later I told him to watch P. Q. & S. and find out who was buying it up if he could, and then I hastened back to the bank and rushed into old Bentley's private office all out of breath. 'Why, what's up,' said the old man, 'anything wrong?' No but I want you to hold on to these shares of P. Q. & S. for thirty days and I'll be responsible for the result, I replied."

"Well, well, what are your reasons? Can you offer us any explanations? This stock is utterly worthless yet Dobbins tells me that there is some poor fool buying it in at 49, and if we miss this opportunity we shall never realize a cent on the old Platt debt."

"Not being willing to give the source of my information, I just said, Mr. Bentley, I am convinced that in thirty days you can sell this stock out at 80. I am not prepared to give my reasons, but may I ever be disgraced if my information proves incorrect. 'All right, all right, it will save some poor devil from squandering his money on worthless stock at any rate,' and Bentley took the stock and put it away."

"The anxiety and wretchedness I passed through during the next two weeks is a burden on my memory; it was increased by the fact that Dobbins was unable to find who was buying up the P. Q. & S. though the fact that some one was buying it at a very low rate made me feel confident that what I had seen was no hoax."

"Well, at the end of thirty days P. Q. & S. began to rise. Slowly at first then with a jump it went up to 90. Bentley & Co. sold out at this figure."

"A few days afterwards old Bentley sent for me. Well boys its time for you to turn in," and uncle rose to go. "I'll say good-by now as I go up on the early train to-morrow."

"Say, won't you kindly give us the rest of that little deal," and my room-mate planted his six feet two of bone and brawn, in front of the door.

"O! the old man handed me a check for two thousand and promised me a raise the first of the month. Goodnight, gentlemen."

Notes and Comments.

Some time ago challenges for a triangular athletic meet to be held this spring between the State Agricultural colleges of Rhode Island, Connecticut and Massachusetts were accepted by us. The time is passing rapidly, still we have seen no evidences of any preparations for such a contest. Some organization must be made and the sooner good earnest training is begun the better will be our showing at the meet.

* * *

The Commandant, Lieut. Wright, has very recently received an invitation from Major General Grenville M. Dodge, Grand Marshal of the Grant Monument Inaugural Parade, for the battalion of Clark Cadets to take part in the exercises in New York City on the morning of April 27. We thank the General very sincerely for the honor conferred upon us and would like exceedingly to help him if we could in this matter. It would no doubt be a great addition to his forces could he number the Aggie battalion among his regulars. However, as we are all to have our hair cut within a few days General, it would be imprudent for us to leave home, lest we become exposed to the hot winds of Long Island.

* * *

The outlook for baseball this year is bright with promise. More interest is taken in the game than there has been for some time. This was shown by the large number of students who devoted most of the day April 10 to improving the condition of the diamond. Our thanks are also due to Mr. Jones, the Superintendent of the farm, for his generous assistance with teams. Now that all turf has been removed from the diamond we may look for better work and fewer errors from our infield. Lieutenant Wright has signified his willingness to coach the team and we hope now that he has returned from the South he

will at once take the team in charge. At the present time, we see no reason why our team should not be considerably stronger than that of last year. Many of last year's players are on hand and they should profit by their experience. We want to see more competition for the team. Let everyone come out and practice and so help the team and develop his abilities. A man doesn't know what he can do until he tries. Let us go on the diamond this year to win!

* * *

The Eastern question is a volcano stored with an unextinguishable fire that has never ceased to emit its lava and threaten its surroundings with horrors. It has been the question that has exhausted Europe and yet remains without a solution. It has represented itself to the world in different epochs and caused great damage to the progress of civilization. One day it is the question of a single nation, at another of a number of nations. We are watching day and night the clouded horizon and never see a sign of the coming sun. Crete to-day is the theatre of the scene. Aided by Greece she is trying even at a great cost to come out of the chaos into which she has been crippled. Long ago Crete made efforts to be independent. The island is inhabited by a tribe which is purely Greek in religion and blood. On account of the last troubles, disappointed by the uncertain and dangerous policy of Europe they applied themselves to arms, and made an appeal to Greece to come to their help. Greece listened to their cry and her step brought about the present crisis. Now the volcano is again on fire threatening with great danger. Europe will do well to make a call to her good and unselfish sense which is the only remedy of moderating the eruptions and saving thousands of human lives.

BASEBALL SCHEDULE.

The following games have been arranged, and still more are expected for the first half of May if satisfactory arrangement can be made:

April 24, Hadenville at Amherst.
 April 28, Northampton Y. M. C. A. at Northampton.
 May 5, Northampton Y. M. C. A. at Amherst.
 May 8, Williston at Easthampton.
 May 17, Mt. Hermon at Mt. Hermon.
 May 26, Williston at Amherst.
 May 29, Worcester Polytechnic Inst. at Worcester
 June 5, Worcester Polytechnic Inst. at Amherst.

"BLUE EYES."

A CONTINUED STORY.

"Did I ever have a serious accident? Well, yes, once, when I was brakeman on No. 613. "Blue Eyes" was running then. Poor fellow! It broke him all up. I'd like to know where he is now."

This was the answer to my query, "Did you ever have a serious accident?" that a brakeman on an east bound train gave me. We had been delayed some twenty minutes by a hot box, and during the time it took to cool and repair it, I picked up a conversation with him. He was a pleasant, talkative fellow and seemed not indisposed to a social chat.

Of course I did not know who "Blue Eyes" was, but I thought that he must have referred to an engineer, so asked—"Blue Eyes" did you say? Who was he may I ask? "Oh, yes" replied he, "No certainly you would not know him. He was an engineer, as you guessed rightly, on No. 613 and it was he that caused the accident, or rather, it was the sight of a woman."

"A woman," said I, by this time thoroughly interested.

"Yes, a woman. If you would like to know about it I'll tell you."

"Yes, yes," said I, "I would like to hear it very much."

"All right, but I'll have to go back to when I first saw "Blue Eyes," so that you will understand. But it's dirty and noisy out here, let's go inside, the back seat is empty, and we have a long run before the next station."

Acting according to his suggestion we went within. By this time the train had got well under way and was going at a fair rate. We had been standing on the rear platform of the last car, and the cinders and noise were very disagreeable. After we had become seated he began:

"I think it was seven years ago when I first saw "Blue Eyes,"—yes, seven years ago this March for I was on No. 67 then. His right name was Harvey Abbott, but we never called him that. At first we boys called him "Blue Eyes" in derision and afterwards when we came to know him better we called him by the same name from habit. Queer how a nickname will stick to a fellow even after he has outgrown it.

"We, that is those of us who were waiting for our trains, were sitting around the car-house seven years ago, when a tall, well-built fellow, of twenty-two came in. He seemed taken back a little at first sight of so many of us, but he pulled himself together and said to a fellow sitting next to me, "Where is the 'boss'?"

"'Out,' says Jim curtly.

"'When will he be in?' he asked.

"'In a few moments; sit down and wait.'"

At that moment the 'boss' came in and Jim says to him, nodding his head towards the 'super,' "'There's yer man.'"

"The fellow went over to where he was directed and began to talk to the 'super.' We had a fine chance to see him. He was tall, broad-shouldered with a dark complexion, all except his eyes which were blue. I had never seen a fellow with such eyes before. They were handsome. They may have been that way naturally, or it may have been because of his black hair, black eye-brows, and mustache, that made them look so blue. We could not help speaking of them and many of us joked about the 'man with baby eyes.'

"We learned next day that he was to run No. 594 in Tom Hurley's place. This made us mad. We knew it was Tom's fault, he had no business to get drunk, but Tom was a favorite and a union man, this fellow was not. So you see "Blue Eyes" from the start was left in the cold and made the butt end of many a joke. He aggravated us by his sort of indifferent air, taking all the jokes in a matter of fact way and passing them off with a good natured remark.

"Things had gone on in this way for about a year when one morning as we were sitting around the car-house talking. Billy Sawyer, "Blue Eyes" stoker, spoke up and says, 'Is "Blue Eyes" here?' No, he seldom comes in with us now-a-days.

"'Boys,' continued Billy, 'We're treating him d—mean! I see more of him than you do and I tell you he's the best fellow I know of. He's mighty good to me; I believe he'd do my work for me if he could. He feels it, boys, and it isn't fair play. Tom Hurley was to blame, not him. I, for one, am going to stop right here and treat him like a man, that's all there is about it.'

"Billy walked slowly across the room with his hands in his pockets and went out by the rear door."

" Nothing was said, but I know some others felt the same way as Billy felt. One by one we got up and went out to do some work that didn't need to be done.

" Truly we had treated the fellow mean. I don't believe any of us, 'cepting Billy, ever spoke to him first, or at all if they could help it, leastwise I didn't. He hadn't done anything to us, we had nothing against him only that he took Hurley's place. I guess, though we were a little jealous because he was thought to be as trustworthy a man as the company had.

" Next morning as we came around, for we were running day trains, " Blue Eyes " came up as usual and passed on to his cab. He never came into the waiting-room now. At the same time one of the men came from the opposite direction and greeted him with a sheepish ' good morning.' I bet " Blue Eyes " was surprised for Joe was his worst enemy. Joe colored some and looked around out of the corners of his eyes to see if any one was looking.

" All went well for five or six days and we were just beginning to know " Blue Eyes " when one morning he did not show up.

[To be continued.]

College Notes.

—Baseball!

—See my new golfies?

—The drum and bugle corps is improving (?)

—'97 have had their military picture taken by Lovell.

—Hubbard '99 has been absent for a few days on account of sickness.

—Lieut. Wright has returned from his trip South, greatly improved in health.

—Several undergraduates have applied for positions on the Gypsy moth field force.

—The members of the Junior class have been elected as members of the K. K. K.

—Our base ball field has had its annual overhauling, and we are now waiting for the game.

—Again our College bell calls us to our duties and let us trust this tongue will ne'er be swiped.

—C. A. Boutelle, brother of A. A. Boutelle '99 passed successful entrance examinations for next fall.

—'99 kindly sent a representative to court for violating the bicycle law.

Yours truly,
For Five Dollars.

—Pipes for laying the water main have come. A. F. Cadwell, New Britain, Conn., has been given the contract.

—Prof. S. T. Maynard is planning several Horticultural trips for the Senior division in Horticulture this spring.

—Prof. Cooley lectured before the Blackstone Valley Agricultural Society Saturday, April 10, on the Ensilage System.

—Milton Whitney, Chief of Division of Soils, will aid the College in a few weeks to start several scientific experiments.

—Prof. Brooks has engaged passage for his returning trip. He will leave London August 16, arriving home about the 25.

—Prof. F. S. Cooley has bought the Albert Ball farm comprising 36 acres. This land adjoins C. H. Kellogg's farm on the north.

—The Amherst officials would gladly make one more of our popular Profs. suffer could they only find the owner of the yellow wheel.

—The Junior class has elected the following officers: Pres't, C. G. Clark; vice pres't, C. N. Baxter; sec. and treas., A. G. Adjemian.

—C. A. Smith, Leach and Howes of the short winter course, having secured the highest three marks of the class were awarded certificates.

—W. S. Fisher attended the conference of the presidents of the Y. M. C. A. of Eastern United States held in Boston from April 8-11.

—George H. Wright, owing to the recent death of his sister has been obliged to leave College but hopes to resume work with his class next fall.

—The Junior Flint six have been chosen as follows: A. G. Adjemian, C. N. Baxter, W. S. Fisher, J. P. Nickerson, A. Montgomery and R. D. Warden.

—The bust of Henry Flagg French which was presented to the College by his son has been mounted in a conspicuous place in our Library reading-room.

—The Senior six that speak Commencement time are G. D. Leavens, H. J. Armstrong, H. F. Allen, J. L. Bartlett, C. A. Peters and C. I. Goessmann.

—The Junior class made an investigation trip to the Amherst Gas works April 13. A good time was experienced as well as valuable instruction received.

—The free hand drawing exhibitions are proving quite attractive. Great credit is due Mr. Armstrong and the Freshmen for this remarkable advancement.

—The Seniors have elected the following class officers: Pres't, J. L. Bartlett; vice pres't, C. F. Palmer; secretary, L. F. Clark; treas., H. J. Armstrong.

—At a recent meeting of the Senior class it was voted to add a new officer, that of class policeman. Mr. L. L. Cheney of Southbridge was elected to this worthy office.

—The Sophomore ten who are to speak before the faculty are W. H. Armstrong, J. R. Dutcher, W. E. Hinds, G. C. Hubbard, H. E. Maynard, B. H. Smith, S. E. Smith, F. H. Turner, C. M. Walker and E. M. Wright.

—The Sophomores have elected the following officers: Pres't, D. A. Beaman; vice pres't, B. H. Smith; sec'y, C. W. Smith; treas., C. E. Stacy; class captain, M. H. Pingree; sergeant-at-arms, A. A. Boutelle.

—The Freshmen ten who are to speak before the faculty are A. L. March, F. G. Stanley, C. A. Crowell, Jr., A. C. Monahan, W. R. Crowell, H. Baker, A. L. Frost, N. J. Hunting, G. F. Parmenter, and J. W. Kellogg.

—The Senior debate for last Friday was: Resolved, that the Federal Government should own and operate the railroads of the U. S. Affirmative, C. I. Goessmann, L. F. Clark; negative, J. M. Barry, C. F. Palmer. The debate was won by the affirmative.

—At the last regular meeting of the M. A. C. boarding club R. D. Warden resigned and J. S. Eaton was elected his successor. Also the following directors: Vice pres't and 2nd director, J. L. Bartlett; sec'y and treas. 3rd " J. P. Nickerson, 4th " C. A. Peters, 5th " M. H. Pingree, 6th " F. H. Turner, 7th " C. A. Crowell, Jr.

—"Sad to relate" but nevertheless true that the bicycle law is to be enforced to the letter by request of (?) the citizens. Therefore when two of our Profs. suffer we wish to remind them,—that they have our deepest sympathy.

—A new orchard is to be started by several members of the Senior Horticultural division. It is to take the place of the old peach orchard. It will consist of all the latest varieties of fruits. Between every few rows driveways well be made.

—The Senior flower-bed committee consists of John Marshall Barry, chairman; George A. Drew, James L. Bartlett, John W. Allen and Herbert J. Armstrong. The committee have prepared elaborate plans and it is understood that they will have an excellent design.

—The Dingley Tariff which has placed a duty on books and apparatus from foreign ports has caused a protest of forty-eight colleges represented by Pres't H. H. Goodell. The ways and means committee have been so notified and Mr. Gillett has been sent in person to see that the duty be withdrawn.

—The committee on farm voted to keep on with the experiment with the western cattle, to breed up a healthy herd and to develop a milking herd. They also voted to sell ten, and not to exceed fifteen animals and to replace by grades of milking strains; these to be kept isolated from the western herd.

—The trustees chose at their recent meeting in Amherst the site for the emergency reservoir between the cellars of the barn and the house of the Colonel Clark property. The reservoir is to contain 150000 gallons. It is to be of circular form 50 feet in diameter and 10 feet in depth. Plans for laying the water pipes as prepared by Prof. Metcalf were accepted and he was appointed engineer for the College. The following committee was appointed to oversee the work and also the building and repairing of the green houses: Pres't H. H. Goodell, W. R. Sessions, W. Wheeler, E. W. Wood. The engineer was authorized to advertise for bids at once.

Harvard has furnished 75 college presidents. Of this number 22 have been presidents of their alma mater and four have presided over the sons of old Eli.

Hatch Experiment Station

DEPARTMENT OF AGRICULTURE.

THE SUCCESS OF THE GERM FERTILIZER NITRAGIN.

One of the most important fertilizers for leguminous plants is the germ fertilizer nitragin. This fertilizer is a pure culture of the bacteria which live on roots of leguminous plants.

Hellriegel and others have given information concerning the growth of clovers, beans, etc.

It is very important for the farmer to make certain that he has enough of these bacteria in his soil; otherwise he will have to buy fertilizers. If these bacteria are absent from the soil the plant cannot use atmospheric nitrogen. Hence this is the reason why every leguminous plant can thrive without manures.

The original way of applying this nitragin before pure cultures were made in the laboratory, was to collect a certain amount of earth from soil bountifully supplied with these bacteria, (which could be told by the thriftiness of the previous crop) and inoculating them in the new field.

It must be remembered that each leguminous crop has its own particular species of bacteria; so that by simply inoculating with earth you get a number of strange bacteria some of which might be unsuited to the crop. The pure cultures made in the laboratory avoid this. Each species of bacteria are grown separately in a nutrient medium of legumes so they can be applied to the individual crops to which they belong without any difficulty. Therefore better results are obtained.

This pure culture is brought into contact with the seed that is thoroughly soaked with the nitragin.

The moistened seed is put in condition to sow by mixing it with dry sand. These bacteria are harmless; that is, they will not produce disease.

Buying a bottle of this culture does not place one at such a disadvantage as handling a large amount of soil containing the germs. Special attention must be taken to use the germ fertilizer (for the species of Legumes) specified on the bottle. At present our supply of nitragin comes from Germany. The most reliable manufacturer is, Farbwerke Vorm, Meister Lucius & Bruning.

RULES RELATING TO EXAMINATIONS: AMENDED, APRIL 9, 1897.

1. When a student is admitted with conditions to the Freshman Class or to any advanced class on entrance examinations, he shall be examined, in those studies in which he is conditioned, at the middle of the term of such entrance and, if he fails to pass, he shall be re-examined two weeks before the end of the term. If he fails to pass the last examination he may be dropped from the college at the end of the term, but such action shall not be taken without a vote of the Faculty.
2. When a student's average in each of four or more studies in the term falls below 65 per cent. he shall be dropped back into the succeeding class.
3. When a student is conditioned in one, two or three studies at the end of a term he must be examined, upon the study or studies in which he is conditioned, on the day preceding the opening of the term following that in which the condition was imposed. If he fails to pass this examination he must, at the appointment of the instructor take another examination; but this examination must take place within two weeks after the opening of the term. Meanwhile the student must attend all college exercises, and recitations in all studies in which he is not conditioned, his attendance upon those in which he is conditioned being at the option of his instructor. If he fails to pass his examination he may be dropped back into the succeeding class, but such action shall not be taken without a vote of the Faculty.
4. When a member of the Senior Class is not able, because of illness or for any other reason, to pass one or more of his examinations before Commencement, his degree shall be withheld until all his conditions are made up.
5. Any student who absents himself from an appointed examination without sufficient cause will not be entitled to another examination.

C. S. WALKER,

Secretary of the Faculty

Alumni.

- '78.—Chas. E. Lyman, Middlefield, Conn.
- '83.—C. W. Minott, 17 Park Ave., West Somerville, Mass.
- '91.—John B. Hull, Jr., formerly of Stockbridge, Mass., has changed his address to Great Barrington, Mass., where he is in the coal business.
- '92.—W. Fletcher, Chelmsford, Mass.
- '92.—Congratulations are sent by Geo. E. Taylor, Jr. to the retiring Board of Editors of the LIFE on their meritorious work and the excellence which the paper has attained.
- '94.—P. E. Davis. Address changed to 28 County St., Taunton, Mass.
- '95.—Maurice J. Sullivan, married to-day at Milford, Mass., to Miss Margaret A. Dronney of Milford. The couple will move to Littleton, N. H. where Mr. Sullivan has the entire charge of the farm of J. J. Glessner of Chicago, Ill.
- '96.—W. B. Harper, Manager of The Specialty Advertising Association, 44 Nahant St., Wakefield, Mass.
- '96.—Present address of James L. Marshall is Worcester, Mass., care of Osgood, Bradley & Son.
- '96.—F. E. DeLuce spent a few days in town last week.

Exchanges.

- The *Lake Breeze* has a large exchange list.
- The *W. U. Courant* has a very handsome souvenir number.
- Some of our exchanges cannot imagine what gave rise to our name AGGIE LIFE.
- "Pop's Little Girl" and the other bright articles makes the *March Mount Holyoke* an unusually interesting number.

He called her Lily, Pansy, Rose,
And every other flower of spring;
Said she, "One in his senses knows
One person can't be all of those,
Hence, you must Lilac everything."

—Ex.

At a recent meeting of the student body at Williams it was decided to put the management of athletics in the hands of a committee of nine, composed of three faculty, three alumni and three undergraduate members.

In summer she's beside the sea;
Her skirt but reaches to the knee,
Her lissom limbs disporting free.
Save for a stocking.

In winter when the crew runs by,
With blushing cheek and downcast eye
She turns her head and whispers, "My!
How shocking!"

—Yale Recrd.

The pensive light
Of a Cuban night
Is in her languorous eyes;
And in her smile
The tortured isle
Recalls its captives' sighs!
A Cuban queen—
Uncrowned as yet—
She looks across the sea,
Where shall forever rise or set
Her star of Liberty!

—Four O'clock.

LIBRARY NOTES.

Round the Year, a series of short Nature Studies. By Professor L. C. Miall, F. R. S. The subject matter of this book was suggested by interesting natural events which came under the notice of the author during the year of 1895. It will be of interest not only to every student of Natural History but to the casual reader as well. Common subjects are taken which have never before been treated in a popular way. While much practical and scientific information is given, it is written in such a free and easy style as to make it extremely interesting.

Life in Ponds and Streams. By W. Furneaux, F. R. S. G. S. In this we have another interesting work on Natural History taking up the aquatic representatives of Entomology and Zoölogy. But little attention has been given by naturalists to these forms of life; something more conspicuous and attractive being preferred. Still nearly all the great divisions of the animal world have their freshwater representatives. It is evident that in a small book but a few of the most typical species of these groups can be dis-

cussed. The text is very fully illustrated by over three hundred illustrations besides eight fine colored plates.

Degeneration. By Max Nordau. This book is translated from the Second Edition of the German work, and is dedicated to Caesar Lombroso professor of psychiatry and forensic medicine at the Royal University of Turin. The author was a student under the eminent scholar and professor and has in his work broadened the subject into a vast field of research. This book has created more comment than any other published for a long time.


Vegetable Gardening. By Samuel B. Green, author of Amateur Fruit Growing. Professor Green is a graduate of Mass. Agricultural college in the class of 1879 and is now professor of horticulture in University of Minnesota. He wrote this treatise primarily as an aid in his classroom work. It is one of the first books published on the subject of Agriculture of the Northern Mississippi Valley and being illustrated is a very complete manual. Most of the illustrations are original and are taken from photographs made by Mr. R. S. Mackintosh of the Minnesota Experiment Station.

The Reds of the Midi. An episode of the French Revolution translated from the provincial of Felix Cras by Catharine A. Janvier. In all French history there is no more inspiring story than the march to Paris, and doings in Paris of the Marseilles Battalion, made up of brave and resolute men. The leading motive of the author is to do justice to a body of men that history has treated very unfairly. The Marseilles Battalion which took such a prominent part in the French Revolution has been generally slandered and described as a band of cut-throats. And so the author has tried to bring out in his novel the hidden bravery of this band of men.

The College Year-Books and Athletic Record for the Academic Year 1896-97 has just been published. It is compiled and edited by Edward Emerson, Jr. The Year book contains an alphabetical catalogue of all American universities, colleges and schools, conferring a degree and enumerated in the report of the U. S. Bureau of Education. Under the name of each college is given the number of professors, students, record of athletics, fraternities, publications, college yells, colors and in fact all matter concerning each college.

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AGGIE LIFE.

VOL. VII.

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On the river of life
 Are you loafing,
 Simply floating, floating, floating
 With the tide.

In the springtime of youth
 Are you sighing,
 Only trying, trying, trying
 To be sad.

The world is not dreary,
 Life is moving,
 Ever proving, proving, proving
 Bright and gay.

All creatures of the earth
 Are a'singing,
 Voices ringing, ringing, ringing
 Clear and loud.

Come, arise, move onward,
 Time is flying,
 You are dragging, dragging, dragging
 On behind.

SABANEETER.

Editorials.

RAISE the flag-staff!

SENIOR Prom. this year?

"DRILL ye terriers, drill!"

ALL out for Track Athletics!

GENTLEMEN, in our maiden issue I believe we promised to be funny whenever circumstances were rife, but, on further consideration we have decided that at present it is entirely unnecessary on our part to attempt humor so long as the intensely amusing, ridiculously humorous and intensely funny class of '00 graces this institution with their presence. If you have thus far failed to make their acquaintance, lie low and wait your opportunity. Commonly your best chance for meeting them socially is at 1 A. M., which, we understand is their hour at home.

WE would like to impress upon those who are graced above the ordinary with an ability for writing humor or poetry; or, who have some old manuscript stories lying about which have been repeatedly returned—with thanks—by unscrupulous magazine editors, that we, recognizing the degeneration of the modern magazine, would be pleased to print anything sent in to us for the improvement of literature in general and for our own reputation and good in particular. We make this appeal hoping that it will be taken in the right spirit and that it will succeed where heretofore argumentation or persuasion have always failed.

How quickly fashion changes. Last year we were accustomed to see the Seniors each Sunday afternoon, when the sky was fair, sail out in all their glory with

skirts flying like a full-rigged schooner out of ballast. This year the fad seems to have run its course and the only remains of a once popular cap and gown is observed in the special styles of female adornment which are occasionally seen on attractive visitors on Sunday afternoons. We are glad that this is so because we admire the cap and gown of the present, while we cannot but feel sorrowful for the man or men who would add to their dignity and impressiveness by means of this awkward and what would seem to us rather *passé* custom of an earlier period of civilization.

AGAIN, again, and again. Why will they always persist in mixing up the M. A. C. with Amherst? We are unaware that the Amherst students are accustomed to call themselves "Aggies," and we are very sure that we do not wish to be known as Amherst men, not but what we have all due respect for our neighbors, but, that we wish to reserve for ourselves alone the honor of being one of the very best drilled battalions from among the various intercollegiate military departments. To whose blunder the mistake of printing Brown, Amherst, and M. I. T. upon the intercollegiate drill poster is owing we are unable to ascertain, but we wish to call particular notice now, and in the future, that it is the Massachusetts Agricultural College which is interested in this Boston Prize Drill affair, and not Amherst. Amherst has no military department whatever connected with the institution and we feel sure that if the public would recognize this fact it would save much confusion and ill feeling between the two colleges. The town of Amherst has located within its vicinity two colleges, widely differing in name and purpose. Amherst College, known chiefly as a classical institution and supported by private funds is located centrally in the main part of the town, while the Massachusetts Agricultural College which is a state institution founded and supported by the commonwealth of Massachusetts, and which deals with the natural sciences, is located one mile from the center of the town in as beautiful a spot as is perhaps to be found anywhere in the Connecticut valley. It is unfortunate possibly that the two colleges should have been located in the same town, but under the circumstances there is no reason whatever for the names so often being confused.

"BLUE EYES."

A CONTINUED STORY.

"That seemed strange because he was always so prompt. He did not come the next day nor the next. We began to get worried and Billy was sent to see what was the matter. In fact we did not know where he lived but Billy happened to remember that 'Blue Eyes' had spoken of a certain street once, so he went there and inquired of many houses before he found the right one.

"It seems that he had gone home on the night we last saw him, and, as the mistress said, appeared all right, ate his supper and went down for the mail. She said that she did not see him when he came back, but she thought that he must have returned about an hour later. He did not come down to breakfast the next morning, so she went up to see what was the matter. She found him tossing on his bed in a high fever and sent for the doctor. When the doctor arrived and questioned him, all he would say was, 'I have received very bad news.'

"For two weeks he lay there on the verge of insanity. Something, evidently, was troubling his mind. He talked of such strange things; sometimes he was making love to some one, sometimes he would curse and swear, then he would cry and moan. He had absolutely no appetite and it was almost impossible to get him to take anything.

"But of course this could not continue forever. At the end of a month he was back to work, a little paler and sadder, yet to the boys he was 'Blue Eyes' just the same although the name had a new meaning, now. From this time on he was our truest friend; he helped us in every way that a man could.

"It was about five years from the time when 'Blue Eyes' first began to run an engine for us, or four years from the time of his sickness, that the accident part of my story comes in. We had stopped at a station in southern Vermont, the twenty-second of October two years ago, when all of a sudden the train gave a fearful bound. At the time I was helping a woman to the platform. We were knocked in every direction, a young man near me got his leg crushed under the wheels, and a girl was cut severely about the head. All was excitement; there was the train speeding away at a fearful rate, here were we with many injured passengers. I was so amazed and horror-

stricken that I could do nothing but gaze helplessly, first at the fast disappearing train, then at the confused scene around me. As I stood there undecided just what to do, I saw, to my great surprise, the train slowly backing around the curve up to the station. All of us who could rushed to the cab to see what had been the cause of the runaway. We found 'Blue Eyes' in a high state of excitement. We questioned him, and so did the officers, but it was of no use, all he would say was that he had had a fainting spell.

"Billy had stepped upon the platform for something, I forget what, when the accident occurred and was left behind with the rest of us. Thus, you see, there was no witness of the cause.

"We could do nothing. Poor 'Blue Eyes' was taken away by the sheriff to await his trial, which, when it came off, let no more light upon the subject than we already had. When he was asked to give his story, he said, 'I do not know how it happened except that I suddenly felt faint and reeled. Before I fell I had the lever in my hand and I must have let on the steam by my fall. I got right up, though, but it took me some minutes to realize what had happened and to stop the train; then I came back.'

"As they could not prove that it was anything more than mere accident for which he was not really responsible, he was acquitted. The company offered to take him back, in consideration of his past services, but he positively refused saying, 'No, I can never run an engine again; I have lost all confidence in myself. It is of no use.'

"We saw very little of him after that. He seemed to have something on his mind and did not care to talk with any one. One day, though, we were much astonished to see him come around in the morning as he used to, and come over to us and say, 'Well, boys, I think I'll try my luck somewhere else. You've all been good to me. Goodby.'

"With an attempt at a smile and with tears filling his big, blue eyes, he shook hands with us all and left. I have never seen him since and it may be that I shall never see him again."

The brakeman took off his cap and ran his fingers thoughtfully through his hair.

"It was always a mystery to me, the cause of that accident," went on the brakeman after a pause, "until

one night, a year later, as Billy and I were talking it over, he said to me. 'Did you ever know why "Blue Eyes" had that fainting spell?'

"No," says I, 'Do you?'

"Yes, he told me about it one day just after the trial. We were talking together when he burst out suddenly with, 'Bill, I've been thinking I'd like to tell you something. I have never told anybody yet, but if I could tell you I think I'd feel better. My home is in Maine near Bar Harbor. I used, when a boy, to go over there every day and sell vegetables to a large hotel. I kept this up till I was twenty, when something happened that has made my life what it is, oh, so lonely!'

"I always went over about seven o'clock, and returned about eleven o'clock in the morning. It was a pretty hard pull from our shore, especially if the tide wasn't running right. I generally towed behind me another boat full of stuff.

"One day as I was rowing slowly back, I heard a loud crash behind me and at the same time felt a sharp pain in my head. What happened next I do not know, in fact I did not know what had happened until many hours afterwards.

"The next thing that I remember was the sound of a woman's voice. I tried to rise, but the attempt caused a severe twinge of pain and I uttered a cry. Then I heard that same voice say, 'He has come to.' At the same time I felt a firm yet gentle hand placed upon my forehead and heard a man say, 'Do not move, be calm. You are all right now, you have had a little accident, that's all.'

"My mouth was so dry that I could hardly speak; but I managed to murmur, 'Water, water!' Immediately a spoon was at my mouth. I took the contents, at the same time looking up. I shall never forget that face. Oh, that I had not seen it! Her eyes were tear stained, but they had such a look in them that they touched me deeply. No girl had ever bent over me with such a tender look of sympathy. Never before had I seen a face so full of compassion, nor do I expect to again.

"I was very weak and could not talk much, and after asking a few questions, I fell asleep from exhaustion, from which sleep I did not awake until the next morning.

“ ‘When I awoke I was alone. It took me some moments to collect my senses enough to recall the things the doctor had said. I could not have been awake more than a minute or so, when the door opened softly and the doctor, the girl, and my uncle came in, followed by another man, whom I afterwards learned was the girl’s father. He, not noticing that I was not asleep, said, ‘Doctor, how is he?’ For answer the doctor pointed to me.”

“ ‘Then my uncle stepping forward, gently brushed back my hair, saying, ‘Well, well, Harvey, hard luck my boy! You had a narrow ‘scape of it.’”

“ ‘I tried to smile, and said in a weak voice, ‘What—is—the—matter.’”

“ ‘We were watching the bathers,’ said the girl’s father, ‘and I did not see you till it was too late. I tried to steer clear of you, but could not. We struck your boat amidships, and the prow of my yacht hit you on the head. You went right over like a stone, but as good luck had it, my man caught you and hauled you in. If he had not had presence of mind enough for that you would have drowned. We brought you here and called a doctor. You are at the hotel and this is my room. I am,’—but I guess I won’t mention his name,—‘and this is my daughter.’”

“ ‘As he spoke the word ‘daughter’ he placed his hand on the girl’s shoulder, and as she glanced shyly at me, a beautiful blush spread over her cheek, fading slowly as she dropped her eyes.

“ ‘Three days later I was carried home. I really hated to go for I enjoyed the young girl’s company very much. She was in and out continually, asking if there was anything she could do for me. But I did not lose her entirely as I thought I should for next morning she came over to see how I was, she said, and to inquire if the journey had proved too much for me. And not only did she come that morning but she came nearly every morning while I was sick.

“ ‘After I got well her father forbade her to see me. She was a rich man’s daughter; I was a poor boy. But, ah, it was too late; the mischief was already done. She cared for my company and I was unhappy without hers. When we found we could not see each other openly, we saw each other secretly. Our trysting place was the open sea, and scarcely a day passed that we did not meet each other; she in her

little row-boat, I in my skiff. And thus we spent many happy hours. As long as we saw each other we were happy and we cared little for what others might say.

“ ‘All went smoothly for two months and our friendship deepened into love, when our happiness was suddenly blighted by her father getting wind of her lonely trips. He became thoroughly angry and came in search of me. He found me in the garden in my old clothes, and if he had tried he could not have caught me looking worse.

“ ‘I need not repeat what passed between us, but suffice it to say, that, before he left he told me never to see his daughter again.

“ ‘I did not obey him, though, for I saw her next day, as we had agreed the day before. We planned a future in which we were both to take a very active part. She promised to be mine, and I in return, told her I would be true and as soon as I got a position, would come for her.

“ ‘But all our plans have come to naught. As soon as she got home she was sent to a boarding school for a year, and then abroad for another year.

“ ‘I did not progress as rapidly as I had hoped to, and besides it was not until a month before my sickness that I located her. Then I sent a friend with a letter to her. I, somehow, could not go myself, and I did not care to send it by mail fearing that it might be intercepted.

“ ‘The letter was never delivered, for my messenger learned that she had just been married. His was the sad letter that caused my sickness.

“ ‘No doubt you wonder what all this had to do with my fainting turn four years later. It was this: while we were there at that station I saw her. She flashed upon my thoughts so quickly and unexpectedly that a most terrible, sickening sensation passed through me. I lost my control and pulled the lever.

“ ‘That is all, you know the rest. At times I can hardly bear my own thoughts, especially when I think that she believes me false.’

“ ‘That, sir, is a sad story, you’ll agree,” said the brakeman in conclusion, “and that is the only accident with which I was ever connected.”

Aggie Verse.

OVER THE HILLS.

I.

Up from the plain sweeps the southern breeze,
And my cheek its warmth and freshness feels,
And I watch it sway the new-leaved trees,
And the languor of summer over me steals,
And I sit and dream and gaze to-day
Over the hills and far away.

II.

The story I meant to read is forgot,
And the lessons I ought to learn, cast aside,
And the hours pass by but I heed them not,
And still in the selfsame spot I abide,
And I sit and gaze for my thoughts to-day
Are over the hills and far away.

III.

Over the hills and far away,
The great world stretches, mysterious, unseen,
With its bustling towns and its cities gay,
And its rivers and mountains and valleys serene;
O, there's many wonderful things they say,
Over the hills and far away.

IV.

Over the hills and far away,
I read of the glorious things that are done,
'Tis the place where the great and the learned stay,
And where fame and fortune and power are won.
And I'm not content, for I long to stray
Over the hills and far away.

V.

But time rolls by and the world moves on,
And the years of youth will soon be past,
And the longed-for day at last shall dawn,
And my longed-for chance shall come at last.
And then I shall pass to the fields that lay
Over the hills and far away.

VI.

Over the hills and far away
There's a world of sorrow and sadness and pain,
There's many to worry and trouble a prey,
And many who struggle a crust to gain;
O, there's many a one who is tired of the fray,
Over the hills and far away.

VII.

And the great and the wealthy, where are they,
Are not they happy, not they content?
Over the hills and far away,
With their loads of care they are bowed and bent,
And they fret and fume each weary day,
Over the hills and far away.

VIII.

Over the hills and far away,
I shall play my part as others have done,
And I shall be weary and tired as they,
When fame or fortune or power is won,
For I then shall be wrinkled and old and grey,
Over the hills and far away.

IX.

Over the hills and far away,
When age comes on and my work is o'er,
I shall love to linger on boyhood's day,
When I had no care or trouble to bore,
And to think of the time ere I longed to stray
Over the hills and far away.

X.

Over the hills and far away,
Each willing man has a duty to do,
There's a part that is given to each to play
And his will must be strong and his heart must be true,
But if his work be faithful the Lord will repay,
Over the hills and far away.

H. F. ALLEN.

They say the tax they've put on bikes,
Arouses wheelmen's choler,
Deep in their pocket-books it strikes
And clutches many a dollar.
The man that writes such nonsense
Is very weak on fac's,
What causes all their kickin'
Is the other kind of tacks.

H. F. A.

'Tis now the frowning batsmen at the watchful pitcher glare,
'Tis now they send the leather sphere a'whizzing through the
air,
And as amidst the wild applause; they round the bases roam,
They think of that old saying "There's no place like home."

H. F. A.

BASEBALL.

AT AMHERST, APRIL 27; HAYDENVILLE 5, M. A. C. 4.

The first practice game of the season has been played and now we have had a chance to test our strength as a team and to see our weak points. Several of the men were playing their first game and so were handicapped by inexperience, nevertheless, they did some good work.

Neither side did much at the bat and this seems to be our weakest point. Errorless playing may keep the score low, but it alone can never win the game. We need lots of good solid batting practice.

Eaton had scarcely recovered from a two weeks sickness, still he pitched a good game as several of Haydenville heaviest batters can testify to their sorrow. But the strain told on him in the last two innings. We must remember that last year this same team defeated us by a large score while in this game they won only after a hard struggle.

HAYDENVILLE.

	R.	B.	P.O.	A.	E.
Till 3b.	1	1	0	1	2
McCarty c.	0	0	10	1	0
Moakler 2b.	1	0	4	2	0
Ryan 1b.	1	0	11	3	1
Kating s.s.	0	0	0	2	2
Hennessey l.f.	1	0	1	0	0
Dumphrey r.f.	1	2	1	1	0
Murphy m.	0	0	0	0	0
Sheehan p.	0	0	0	11	0
Total	5	3	27	21	5

M. A. C.

	R.	B.	P.O.	A.	E.
Emrich 2b.	1	2	3	1	1
Warden 3b.	0	1	4	2	1
Hinds l.f.	0	0	1	0	0
Chapman s.s.	0	0	0	1	1
Eaton p.	0	0	2	11	1
Hooker m.	1	1	0	0	0
Halligan 1b.	1	0	7	1	0
Rogers r.	1	0	1	0	0
Crowell c.	0	0	9	3	1
Total	4	4	27	19	4
Haydenville	0	0	2	0	0
M. A. C.	1	2	0	0	0

Northampton Y. M. C. A. and hard luck proved to be a little more than our team could handle on April 28. Great disappointment was expressed when it was learned at the last moment that Hooker could not be on hand; for besides being a good reliable fielder he was one of our best batters. There can be little doubt that if he had been present the game would have been ours. Then in the sixth inning

Warden had the misfortune to strain his ankle in trying to reach home and he was obliged to leave the game. Eaton's pitching did not compare with that of the previous game. Warden, Chapman and Eaton did the best work for Aggie and Tobin and Carver for Northampton.

NORTHAMPTON Y. M. C. A.

	R.	B.	P.O.	A.	E.
Kelley c.	0	0	13	1	4
Tobin r.f.	1	1	1	3	1
Spooner s.s.	0	0	1	3	1
Clark r.f.	0	0	1	1	1
Carver 3b.	2	1	0	1	1
Sheldon l.f.	0	2	0	0	0
Couch m.	0	0	0	0	0
Preston 1b.	0	0	7	2	0
Phelps p.	1	1	0	1	1
Total	4	5	23	12	7

M. A. C.

	R.	B.	P.O.	A.	E.
Emrich 2b.	0	2	1	3	0
Warden 3b.	1	0	2	1	2
Rogers 3b.	0	0	0	1	0
Chapman s.s.	1	1	2	1	0
Hinds l.f.	0	0	0	0	0
Crowell c.	0	0	6	1	3
Eaton p.	1	1	2	8	1
Rogers r.f.	0	0	0	0	0
West r.f.	0	0	0	0	0
Halligan 1b.	0	0	10	3	1
Stanley m.	0	0	2	1	1
Total	3	4	25	19	9
Y. M. C. A.	0	0	0	1	0
M. A. C.	1	1	0	0	0

The game with Mt. Hermon on Monday was the poorest exhibition given thus far this season by the college team. Through the first and until the fifth inning our team was in the lead and indications were that Aggie was going to win out at a gallop but in the last of the third, with five runs to the good, the ever distressing combination of unfortunate mis-plays commenced and before the Hermonites had finished their picnic five runs were safely balanced opposite our lead on the score cards. This is the record of the inning: A base on balls, a stolen base, a sacrifice, two hits to right, a foul catch back of first, a passed ball, a base on balls, a two bagger, a wild throw to first, and a fly out to left.

After this the boys still had an opportunity to win. In the fourth Aggie scored one run and Mt. Hermon went out in order. In the fifth one more run was added to our total but in the last half Hermon made five runs on errors, a two-bagger, a hot grounder, a base on balls, a two-bagger, and an error. In the

sixth after two were out Hermon scored three runs on two bases on balls, a hit, an error, and a hit. The inning closed with a high fly to third.

The remainder of the game was but a continuation of the agony except in the first of the eighth when we would have had at least one run but for a mistaken decision of the umpire. With Emrich on second, Chapman lined out a beauty about six feet inside the right foul line, but the umpire would not allow it and fortune did not smile on us again.

Eaton was hit the hardest of any game he has ever pitched, striking out only two men. For Aggie Crowell, Emrich and Halligan did the best batting while Stadie, Fowler and Maylott played best for Mt. Hermon.

AGGIE.						
	A. B.	R.	l. B.	P. O.	A.	E.
Emrich	5	1	3	6	2	1
Warden	5	1	2	4	1	5
Chapman	6	0	1	2	4	4
Hinds	5	1	1	2	0	0
Colburn	5	0	0	0	1	1
Crowell	5	1	4	4	1	0
Eaton	5	1	1	0	1	0
Rogers	5	1	0	0	0	0
Halligan	5	1	2	7	1	1
Total		7	14	24	11	12

MT. HERMON.						
	A. B.	R.	l. B.	P. O.	A.	E.
Thompson	6	0	0	2	1	3
Maylott	6	2	1	1	5	0
Robertson	5	1	0	6	2	1
Stadie	5	3	3	2	0	0
Riggs	5	3	1	3	2	0
Fowler	5	3	3	4	2	1
Poole	5	0	1	0	0	0
Miller	5	2	2	0	0	0
Conklin	5	3	1	9	0	1
Total		17	12	27	12	6
Mt. Hermon	0	0	5	0	3	2
Aggie	2	1	2	1	0	0

PLEASE EXPLAIN.

A maiden fair—a comely youth—
 He spoke his love and lo!
 The maiden straightway "sat on" him,
 And her reply was "no."

Another maiden—another youth—
 His love he did confess:
 The maiden soon did sit on him,
 But her reply was "yes."

—Williams Weekly.

College Notes.

- Extra drill!
- Herbariums for sale cheap.
- Chapman '99 has joined the D. G. K. Society.
- J. S. Eaton was sick during the Easter recess.
- S. W. Fletcher '96 has returned from a visit at home.
- W. S. Fisher spent Easter and Patriot's Day at home in Ludlow.
- Mr. Wallace was in Boston a few days during the third week in April.
- P. H. Smith attended Easter services at the North church, Springfield.
- E. F. Desmond of Springfield visited B. H. Smith during the Easter recess.
- C. F. Palmer and H. F. Allen went on a horticultural trip to Mr. Palmer's home last week.
- The Phi Sigma Kappa had their annual fraternity picture taken the twenty-seventh by Lovell.
- Prof. Babson lectured before the "Traveller's Club" last Saturday evening on his European travels.
- Mr. Butler of Sunderland exchanged pulpits with Dr. Walker last Sunday. He was very interesting and those who heard him would gladly hear him again.
- Six more specimens have been added to the Zoological museum lately. Five were donated and one was purchased. Mr. C. G. Clark '98 presented two of the birds.
- A public telephone has been placed in the reading room under the charge of the Reading Room Association—a good way to save postage providing the other end pay the bills.
- The B. U. application blanks are being issued by the President to those members of the Senior class desiring them. All these must be filled out and sent in with the usual fee on or before May 20.
- The College base ball team did itself credit with Haydenville the 24th. Although the score 5-4 was in their favor, it was one of the best games played on the diamond for the opening season.

—Mr. S. M. Sayford, who was to speak before the Y. M. C. A. the 25th, was suddenly called out of town by telegram the Saturday previous.

—The tennis courts have received their annual over hauling. Now, the tournament is in order. A great deal of interest was taken in the game last spring and we would urge the directors to hurry the thing along.

—Sunday walks seem quite the thing of late. Although the Freshmen cut church too, the Seniors were absent first. Doubtless these walks are very pleasant although rather tiresome the last half as they sometimes measure over thirty miles.

—In the New England *Homestead*, dated April 24, 1897, is to be found the familiar photograph of Dr. Goessmann. In the the same issue the subject of "Ins and outs of the Analyses of Fertilizers," is treated through correspondence with H. T. Faure of Spencer.

—Still another game brings great credit to our College base ball team. The game with Northampton Y. M. C. A. was a good one resulting 4-3 in their favor. The game seemed ours but time told, and again we lost a victory, but we have great hopes for the future.

—College exercises were suspended during Easter and Patriot's day, there being no church services held Sunday except the Y. M. C. A. in the afternoon. Some went out of town, others visited the neighboring churches, while others made it a day of rest and recreation.

—At a College mass meeting held last Thursday morning the plans of the athletic meet with Storr's were discussed. Mr. J. S. Eaton was elected Captain and Mr. J. J. Armstrong was elected business manager. Prof. R. S. Lull has generously offered his services in training the men for the coming meet.

—The Senior debate last Friday was, "Resolved, that intercollegiate football promotes the best interests of colleges." The affirmative were: L. L. Cheney, C. A. Peters; negative, J. A. Emrich, H. J. Armstrong. The judges appointed by Prof. Mills were C. I. Goessmann, L. F. Clark and J. L. Bartlett. Their decision was that the negative brought out the best points on the question.

—Hon. Milton Whitney from the department of Agriculture in Washington, D. C. lectured before the College on "Relation of Climate to Soils," illustrating the lectures with stereopticon views. Thirty-two plates were used showing diagram drawings and the proportions of soil grades throughout the different states.

—Mr. Asa Kinney, who has been experimenting with electricity on plants, has received very favorable criticisms on his bulletin in *Electrical Review*, *Electrical Engineer*, *Scientific American*, *Popular Science Nature*, *California Fruit Grower and the Garden and Forest*—a good way to make Aggie known to the world.

The Chapel bell was ringing
As some freshmen started out,
On a Sabbath morn in April
To catch a string of trout.
Yet something in their outfit
Seems to queer them for a time
For instead of trout to please them
They had bug juice on their line.

—Freshmen! Freshmen! "When will ye cease your tortures." Your minds seem to be full of wheels, and to perch them in some lofty place seems to be your only wish. When it comes to spoiling a two hundred dollar (?) chaise and two seventy-five dollar wheels, it seems as if you would cease to be such an annoyance, to say nothing of getting "fired."

And it won't be very long
Before we hear the little song
Of the electric as it goes a humming on.

Yes, we are living in hopes that our Commencement will be made more pleasant by electrical transportation for our tired and aged friends. How convenient the electrics will be to bring up our trunks when the terms open.

—A preparatory competitive drill was held Thursday afternoon, April 22. Eighteen cadets were chosen to practice for the drill in the Tech. Brown and Aggie military contest. Lieut. Wright has offered the sum of ten dollars for the Aggie student who wins first prize, and five dollars to the winner of the second, and if we get both the prizes the Lieutenant will give fifteen dollars. Drill practice will be held every Wednesday and Friday evenings at seven o'clock.

—Wagons have gone up lately.

—Rather than to shock our commencement friends and alumni too much, the College note editor takes great pleasure in announcing that the interior of the "Hash-house" has been papered and painted. Into our renovated dining rooms will be ushered, manners and politeness which shall hold permanently. Here such gatherings as the "Kneipe" will be held, and here we shall also expect all our friends to eat with us commencement time.

—A most beautiful and perfect picture of Rev. Wm. H. Hatch has been presented to the Hatch Experiment Station Library. Representatives Hatch was the prime mover in the passing of an act by which Congress—since March 2, 1887—has granted \$15,000 yearly for support of Agricultural colleges and since 1890 another bill was passed to increase this amount \$1000 per year till it amounted to \$25,000, from this time there should be appropriated, \$25,000 annually.

—The farm department has recently bought of the American Implement Harrow Company a combined corn-cultivator, harrow, grain-drill and grass seeder. With the present tests it has proved valuable; a machine that no farmer can afford to do without. A Syracuse Swivel Sulky plow has also been purchased of the Syracuse Co., also a new fertilizer distributor with modern improvements which works more satisfactory than farm implements of its class usually do, bought of M. Morse & Co. A three horse cutaway harrow has also been added to the present list of new implements, bought of Higganum Mfg. Co.

PROGRAM OF COMMENCEMENT EXERCISES.

June 20, Sunday, Bacclaireate sermon by Dr. Chas. S. Walker. Address before College Y. M. C. A.

June 21, Monday, Flint prize oratorical contest, Junior class. Burnham prize speaking, Freshman and Sophomore class.

June 22, Tuesday, Tri-decennial day, 9 A. M. Salute of 30 guns. 10 A. M., Drill. 2 P. M., Tri-decennial exercises. 8 P. M., Reception by President and Trustees. 10 P. M., Comers of Alumni and Students in Drill Hall.

June 23, Wednesday, Commencement Exercises.

June 24—25, Thursday and Friday, Entrance examination.

Hatch Experiment Station

DEPARTMENT OF METEOROLOGY.

A brief description of some of the instruments in use at the observatory:

The Barometers. Two barometers are in use at the station, the Standard and Draper self-recording barometers. By the former tri-daily observations are made of the pressure of the atmosphere, while the latter gives a continuous record for one week. The characteristic feature of the Draper barometer is the fact that the axters of the barometer, instead of being rigidly fixed are supported by spiral springs fastened to the frame to which is also attached the top tube, the upper end of which is enlarged somewhat. The recording pencil is attached to the lower cistern and by it fluctuations in the barometric pressure reduced to freezing are directly recorded on the chart which has a uniform lateral motion and is actuated by clockwork. An increase in pressure causes some of the mercury to run from the lower cistern up into the inverted tube thus decreasing the weight of the lower cistern which with the recording pencil is consequently automatically raised by the tension of the springs, while a decrease in pressure has the opposite effect.

Thermometers. Space prevents our giving a detailed account of the thermometers, which latter consist of standard, wet and dry bulb, and maximum and minimum thermometers.

The Anemoscope records automatically the direction of the wind and consists essentially of a weather vane to the lower end of it and attached to a cylinder carrying a chart. Against this chart rests a small pencil actuated by clock work which thus traces the variations in the direction of the wind.

The Aerometer. The total wind-movement in miles is recorded by a cup aerometer, the revolving hemispherical cups being at the upper end of a vertical shaft extending through the roof of the tower while the recording apparatus and reducing mechanism is at the lower end, in the room.

The Sun Thermometer. The daily sunshine is obtained by means of a metallic thermometer on the roof, which by a system of multiplying levers gives an automatic record in the room below.

The Rain Gauges. The rainfall is obtained by means of standard United States signal service rain gauges.

Alumni.

'71.—Jabez F. Fisher, employee at Parkinson Manufacturing Co.

'75.—The gift which Herbert S. Carruth has given to the college library is two of the latest works on Washington, by Wilson in which he endeavors to idealize the ideal man and the other by Ford who takes just the opposite view.

'76.—News has been received of the death of Mr. George Urner from fusion of blood on the brain.

'81.—Dr. Chas. E. Boynton, 501 Larkin St., New York, N. Y.

'79.—Samuel B. Green, Professor of Horticulture in Univ. of Minn., has just issued a very valuable book on the growing of vegetables for marketing and home use.

Ex-'82.—Frank E. Chipman, Salesman, Boston Book Co., 15 1-2 Beacon St., Boston.

'82.—Fred'k G. May, real estate, 66 Adams St., Dorchester.

'84.—Luciano J. de Almeida, Planter, Estacao de Formosa. E. T. Rezende a Bocaina, E. S. Paulo Brazil.

'88.—Vicount Yatara Nishima is now employed in the Foreign Dep't of Imperial Japanese Telegraph Co., Tokio, Japan.

Ex-'88.—James S. Parker, Professor of Mathematics, St. Paul's School, Concord, N. H.

'94.—A. H. Kirkland has just issued a very interesting work on the life and habits of the toad and its usefulness for the destruction of injurious insects.

'95.—Stephen P. Toole, Gardener and Florist, estate of G. H. Flint, Brighton.

'95.—Harold Frost was in town last week, Office 21 South Market St., Boston.

Ex-'96.—Alfred Glynn, Jr., who was recently killed in Worcester, Mass., was a member of the class of '96, School of Agriculture.

'96.—Harry T. Edwards, now in the office of Houghton, Mifflin & Co., Publishers, Boston.

'96.—The present address of Francis Edmund de Luce is 256 President St., Brooklyn, N. Y.

Ex-'97.—Charles A. Ranlett is now with John Wallace, Real Estate and Insurance Agent, 53 State St., Boston.

Exchanges.

THE PRIZE.

He won, you say; the other lost.
 But what is it to gain,
 And what to lose?
 Can that which brings but pain
 Be counted as a victory?
 And is it loss to choose
 A humbler path that leadeth to the door
 Where man finds happiness
 Forevermore?

—*Dartmouth Literary Monthly.*

A DISTINCTION.

A pious-looking stranger came
 To Grave-Yard Gulch one day;
 He preached a sermon, stole a horse,
 Then quickly went away.

They caught him; strung him up, and then
 (As though 'twere not enough.)
 They said they had not killed a man,
 But simply "hung a bluff."

—*University Cynic.*

"THEM BLOOMERS."

Said a biker to a farmer,
 "Did a lady wheel this way?"
 Said the farmer to the biker,
 "I'll be hanged if I can say,
 From the outfits they are wearing
 From the mountain to the sea,
 Whether the biker is a woman,
 Or whether 'tis a he."

—*Ex.*

NOT THIS TIME.

What shall we drink? she sweetly said;
 Name it yourself my pretty maid.
 Champagne, I guess, will do for me;
 Oh guess again, my dear, said he.

Brunonian.

LIBRARY NOTES.

The Birds of Montreal. By Earnest D. Wintle, associate member of the American Ornithologists Union. This list of birds has been published after a study for the past fifteen years of the bird life on the Island of Montreal and a few of the neighboring islands. Up to this time there has been no complete list of the Avifauna of this part of the country. The description of each bird contains a complete history in brief of its life from time of arriving until it leaves.

Principles of Plant Culture. An elementary treatise designed as a text book for beginners in Agriculture and Horticulture. This treatise is published by E. S. Goff, Professor of Horticulture in the University of Wisconsin. This book has grown out of the author's experience in the lecture-room and laboratory and is intended for students who have had only a limited instruction in Botany. The book is illustrated with many fine engravings.

English Essays from a French Pen. By Woodrow Wilson and illustrated by Harvard Pyle and Harry Fenn. The frontispiece is an engraving from the famous Athenaeum portrait of Washington by Gilbert Stuart. This life is written in story form and although fully portraying the life of this great man it is not hard reading as so many historical lives are.

The Relation of Literature to Life. By Charles Dudley Warner. This paper which gives the name to the book was prepared and delivered at several of our universities of introductory to a course of five lectures which insisted on the value of literature in common life. While some of the others may have been published in some of our large magazines they have been revised by the author and published in this interesting book.

The True George Washington. In every country boasting of a history, there may be observed a tendency to make its leaders or great men superhuman. The author in this work has portrayed Washington as a great man, a great American. In many cases the descriptions are from the pen of Washington himself, taken from old records and manuscripts. This life by Paul Lincoln Ford is fully illustrated and is one of the best lives ever written of Washington.

R. R. TIME TABLE.

BOSTON & MAINE, SOUTHERN DIVISION.

Trains leave Amherst going East for Ware, Oakdale, South Sudbury and Boston at 6.09, 8.16, A. M., 2.31 P. M., Sundays 6.09 A. M.

Returning leave Boston at 8.45 A. M., 1.30, 4.00 P. M. Sundays 1.30 P. M.

For Worcester 6.09, 8.16 A. M., 2.31 P. M. Sundays at 6.09 A. M.

Returning leave Worcester at 9.15 A. M., 2.25, 4.58 P. M.

6.09 A. M. and 2.31 P. M. connect at Ware with north bound trains on the Ware River Branch of the B. & A. and the 6.09, 8.16 A. M., and 2.31 P. M. connect with south bound trains on the same road.

Trains leave Amherst going West to Northampton, at 7.40 10.20 A. M., 12.05, 1.15, 4.40, 5.14, 7.28, 8.40 P. M. Sundays. 10.45 A. M., 5.19, 8.30 P. M.

Returning leave Northampton at 5.55, 8.00, 8.50 A. M., 12.30, 2.15, 4.20, 6.00, 8.20 P. M. Sundays, 5.55, 10.20 A. M., 7.35 P. M.

Trains connecting with the Connecticut River R. R., going south leave Amherst at 7.40, 10.20, A. M., 12.05, 1.15, 4.40, 5.14, 7.30, 8.40 P. M. Sundays 10.45, A. M., 5.19, 8.30 P. M.

Trains connecting with Connecticut River R. R., going north, leave Amherst at 10.20 A. M., 1.15, 7.28 P. M.

NEW LONDON NORTHERN.

Trains leave Amherst for New London, Palmer and the south at 7.05 A. M., 12.14, 5.57 P. M.

For Brattleboro and the north at 9.08, 11.50 A. M., 8.05 P. M.

Trains leave Palmer for Amherst and the north at 8.20, 11.00 A. M., 7.10 P. M.

Trains going south connect at Palmer with B. & A. trains for the east and west.

North bound trains connect with Fitchburg R. R. for the east and west.

NOTICES.

The President will be at his office at the Library from 2 to 4 P. M. every day except Saturday and Sunday.

The Treasurer will be at his office at the Botanic Museum from 4 to 5.30 P. M. on Wednesdays, and on Saturdays from 3 to 5-30 P. M.

The college library will be open for the drawing of books from 2 to 4 P. M. and from 6-30 to 8 P. M. every day in the week except Saturday and Sunday; on Saturday from 8 A. M. to 12 M., from 1 to 4 P. M. and from 6-30 to 8 P. M.; on Sunday from 12 to 3 P. M., for reference only.

Amherst College Library will be open from 8-45 A. M. to 6 P. M. and from 6-30 to 9-30 P. M. except Sundays and the Holidays. M. A. C. students may obtain the privilege of using this library by applying to Pres Goodell.

Mails are taken from the box in North College at 7-15 and 11 A. M. and 4 and 6-15 P. M.

The zoological museum will be open daily at 2-15 P. M. except Tuesdays and Sundays.

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As the winds blow, thoughts blow,
Over the land and the sea ;
Giving the Universe
Knowledge, gloriously free.

As the sun shines, love shines,
In the hovel and the court ;
And the humblest lover
Laughs, and enjoys the sport.

As the rains fall, cares fall,
On every weary soul ;
Sorrow follows sorrow
Through life, ending with the goal.

But as after each rain,
The buds and the flowers.
Are brighter and fresher,
With nature's dowers.

So sorrows and cares,
Shall eft-soon depart,
Leaving the sufferer,
A softer, mellow heart.

Sabaneeter.

Editorials.

A General Catalogue of the officers and students of the Massachusetts Agricultural College since the opening of its doors in 1867 has recently been issued by Pres. Goodell. It contains a complete list of all persons connected with the institution, during the thirty years of its existence, with their present occupations and addresses. The book has been compiled with the utmost care and contains more than seventy pages of names and addresses. Illustrations of the present college buildings, are plentiful, and are sure to be of especial interest to the old graduates. A summary giving the total number of graduates and non-graduates living and dead, and a classification of the men found in the different walks of life are of especial interest. We are sure that this little volume will prove of inestimable value to all friends of the college.

THE track team under the able coaching of Professor Lull has made considerable improvement during the past week. The short and long distance runners were given a few valuable hints by Professor Nelligan of the Amherst track team, who has very kindly offered the use of Pratt field for training purposes. Several of the men who have come out show considerable ability so far and, with careful training, should break some of the college records. Perhaps the most promising of these are : Saunders, '00, who is reputed to be very fast on the bicycle ; Dutcher, '99, Gile, '00, and Emrich, '97, on the dashes ; and Capt. Eaton, '98, and Maynard, '99, on the long distances. There are several promising shot and hammer men, and to these Coach Lull is giving a great deal of his attention. In the jumps, Capt. Eaton, Goessmann and Emrich, '97, are making the best showing and should make some new records. Definite arrangements have been made with Storrs for the meeting at Willimantic, and, from the present outlook, we would venture to predict a successful meet, with a fair share of the prizes falling to Aggie contestants.

Do you belong to the K. K. K.? Well! You should have attended the "Kneipe" several evenings back. It was a great treat, one that few people are fortunate enough to have in the course of their natural existence. A Chinese "Kneipe" or banquet composed entirely of Chinese dishes; and not only dishes, but food also was served to the assembled company gathered around Pres. Wellington. It is largely owing to the efforts of Dr. Flint, who is an epicure on Chinese food, that the society was made acquainted with the various dishes which are common with our Celestial cousins over the sea. The first part of the evening, according to custom, was given over to subjects of interest to science, while later the party was entertained by Chinese selections rendered by Dr. Flint on a queerly constructed Chinese instrument. We shall refrain from any attempt to name the various dishes served, but we unite with the prevailing sentiment of the assembled K. K. K. in pronouncing "chop soi" and other "soi's" very palatable dishes. We have dried pumpkin seeds, "li-che" nuts and Chinese incense on exhibition at this office. Open to all the curious.

ON to Boston, is the watchword! Friday night we shall look from the galleries round the great Mechanics Hall auditorium and we shall hope to find, not only our dearest friend, but a large enthusiastic and eager crowd of loyal Aggie students and alumni. Last year what was more encouraging to the little band of Aggie soldiers, sweltering amid the parries and lunges, alone with the enemy on the vast floor of the hall, than the sharp, crisp and inspiring Rah! Rah! Rah-rah-rah! A-g-g-i-e! sounding loud above the cheer and echoing back and forth from gallery to gallery, infusing confidence and strength in our gallant little band. We hope this year that there will be even a larger body of loyal supporters than last. There is every indication of a greater success than that which was gained last May. Two first and two second prizes are to be given. Again, Harvard has failed to enter this year, leaving only three competitors for the four prizes. And the squad under the able direction of Lieutenant Wright has reached a high point of efficiency and has made an improvement over the work of last year. While there will be in all probability only six competitors chosen from the present squad yet after

careful consideration the officers in charge have decided this to be a fair representation for the various colleges, and so the rest of the squad which goes from here will have the honor of representing the M. A. C. battalion in the "Dress Parade" where they shall be the center of attraction for all eyes. It is, therefore, no little honor to be chosen as a representative for the College, whether in the larger squad, or one of the fortunate six, and worthy of every effort on the part of the men to become competitors for military honors for the glory and aggrandizement of their Alma Mater.

We are fast approaching the close of the third decade of the existence of our grand old college with her beautiful green velvety lawns and fine old elms which cast their shadows across them; and at the approaching commencement season we are about to celebrate its thirtieth anniversary. These have been years of growth and progress. Rapid strides have been made in all departments of science, and at the present time we can truthfully say "there is no institution in the land which affords better facilities for obtaining a more thorough general and scientific education than this. Her faculty is composed of men most thoroughly fitted for their positions and we are proud to read the names of Prof. Goessmann, one of America's best chemists, Prof. Fernald, famous as an entomologist, and of Prof. Stone our great botanist and biologist. Fortunate in her strong faculty, we are proud to read that 75% of her children have become men of prominence in all parts of the world. We must not forget to mention our genial President who has so acceptably filled this important position for eleven years. All honor is due to the man who has stood at the helm longer than any other president save one. Much has been said and written in recent years of new departures. It is proposed to inaugurate a new departure at this approaching commencement. It has to do with that banqueting hour when after satisfying the demands of the inner man there is supposed to be a feast of reason and a flow of soul. Instead of the usual alumni dinner there will be given a German "Commerz" which will be served at 10 P. M. June 22. At this festive hour College and class songs and yells will be given and patriotic speeches will be the order of the evening. It is hoped that by this

means a stronger bond of sympathy may be formed between the old graduates and those who are soon to join their ranks : that greater patriotism and a stronger feeling of loyalty shall be encouraged for the grand old college which has done its work so faithfully.

W. H. A.

WHY THE COUNTERFEITER WAS NOT
ARRESTED.

" Do you know him ? "

" Yes. "

" All right, there won't be any need then of my stopping him now, but I may want him by and by. "

" Aren't you going to give that back to him ? "

" Maybe, after I use it for awhile. "

" What's up now ? You don't think you have a clue ? "

" That's just it. See this coin here has an imperfect stamp upon it and furthermore I don't believe the government made it. "

" You don't ? "

" No I do not. I've had it in my mind right along that there was some swindling going on and I'm going to trace where this came from if I can. This is the third one of these imperfect half-dollars that has fallen into my hands. You know I had some experience with a counterfeiter some years back. "

" Say, old chap, you're a smart one, that's all I can say. "

" Smart or no smart I'm going to stop this thing if there is anything in it. "

The foregoing dialogue took place between two brother detectives as they were walking down one of the main streets of New York City. To the outside world they were reporters ; but to the circles of detective secrecy they were two of the ablest detectives in that great metropolis.

The conversation had been caused by the picking up of a half dollar which a man had just dropped in passing by. The finder, a detective, held it for a few moments in the palm of his hand and then carefully placed it in his pocket with the question with which this story opens.

When the detective reached home that evening he made notes, as was his custom, upon the occurrences of the day and then read them over to himself. " Hum " said he in conclusion, " we didn't do much

today ; but I think that find a lucky one. I wonder if I had better see that fellow Randolph, who dropped it. Yes ; no, I don't believe I had. Yes, I'll go and see him but I won't say anything about the coin till I sound him : he might know more about it than he'd care to tell. Let me see,—I want a house don't I ? " and he chuckled to himself at the thought.

Having come to this conclusion, he locked up his diary in a little safe in which he kept a few other valuables,—detective outfits, detective letters, reports, and the like,—and went to bed.

Eleven o'clock the next morning found him walking leisurely towards the firm of Ralph P. Randolph, Real Estate and Broker. He intended to become acquainted with the man in a business way : that is he was going to pretend he wished to buy or lease a house out of town.

With this aim in view he entered the office and asked if Mr. Randolph was in.

No, Mr. Randolph was not in ; but he was expected back every moment. Would the gentleman be seated and wait ?

Yes, the gentleman would wait and so sat down in the proffered chair. Nothing could have pleased him better. Now he could, perhaps, get some idea of the business of the man he was to track.

A half hour elapsed before Mr. Randolph returned. In the meantime five other persons had come in, two of whom were still waiting ; the other three apparently business men, went out, saying they would return later. As the broker entered, the detective stepped up to him and said :

" Mr. Randolph, I believe. "

" Yes, " said he.

" I wanted to know, " continued the detective, " if you had a good, out-of-town house to lease or sell. "

Certainly, he had many houses both to lease and sell and was only to glad to make arrangements to show them to him. They decided that they would first go to lunch and then to see the houses.

During the drive out the detective had an excellent chance to become acquainted with the broker. He even learned a little of his private life. They saw three houses, two of which did not suit the detective, but the third he thought deserved his consideration. He would think it over and call upon the broker the next day. Thus he not only had an excuse for seeing

him the next day, but also for many days following.

He watched the broker carefully and after a week, or a little over, had about reached the conclusion, that the man had not come by the money illegally, when one day he learned something that made him change his mind and alter his course a little. It was the fact that Mr. Randolph when a boy was apprenticed to a silver-smith; but, as the occupation proved rather distasteful to him, he turned his attention to the more congenial employment of brokerage and real estate.

"Ha, ha" thought the detective, "you do know something about silver after all. Perhaps I may still find out that you know a thing or two about that coin.

I guess I'll look at one or two more houses,—just for a little diversion."

The detective kept on the alert for any stray word or look which might indicate that he was on the right track. It was slow work; but he had a great deal of perseverance. Something, moreover, told him that he was pursuing the right course. It was not, however, till after about six months had passed that he considered he had sufficient evidence to make an arrest. But on that night preceding the day on which he was to perform the painful duty of accusing the broker of counterfeiting, other and greater deeds had taken their effect.

As the detective, at eight o'clock the next morning was riding to the police headquarters to take out a warrant for an arrest, he bought a morning paper. On opening it the first thing that met his eye was the glaring headline:—

"Tragedy and Robbery in High Life.

One of New York's First Business Men Commits Suicide.

Alleged that he has embezzled \$100,000.

Last night the well known and respected broker, Mr. Ralph P. Randolph, of this city committed suicide by strangulation. Little is yet known of his affairs and the reasons for such an act; but it is illeged that he has used other people's money to the amount of \$100,000. Mr. Randolph leaves a wife and three children, two girls, aged sixteen and twenty-one, and a son aged nineteen. He and his family have moved in the first society of New York and "etc. etc.

"Whew" whistled the detective, "you don't say! No need of arrest now. His folks will have enough disgrace to bear without my showing this up. There

is no need of making their suffering any worst even if they may have been somewhat to blame."

On entering the office he went up to the captain and said, showing him the paper. "Here Cap." read this?"

"Yes," replied the captain. "Was he any relation to the fellow you're to call on to-day?"

"The very same one."

"What, you don't say! Well, well, well."

"I don't think," continued the detective, "I'll carry this any farther."

"No," answered the captain laughing, "he wouldn't give you much satisfaction now, I'll admit."

"Seriously, captain it won't do any good to do anything about it now, and it would only be a cruel blow to his family and I can't do it. It is bad enough to accuse the man himself, let alone his family; but now he is gone, what is the use of tormenting his wife and children with the fact that he was a counterfeiter also?

No, I won't do it. I have a wife and girl at home and I know what it would be to them if I was to go wrong."

"You're right, Phil; keep it to your self and nobody will be the wiser" said the captain thoughtfully. "God knows they have enough to bear without our making it worse. Yes keep it to your self."

And he did.

BASE BALL.

AGGIE FRESHMEN, 12; AMHERST HIGH SCHOOL, 11.

The first Freshman game was played on the campus, May 5, and resulted in a victory for the home team.

With few exceptions the game was well played. Both sides batted heavily and errors were common. The game was exciting from the start, and at the end of the fourth inning it looked as though the Freshmen were going to lose as the score stood 6-10 in the High School's favor. In the next inning the Freshies pounded Clutia all over the lot, scoring six runs. Then in the sixth inning with three on bases and none out, High School only succeeded in scoring one run, owing to the quick fielding of the freshmen college nine. Only six innings were played as the varsity then took the field.

The features of the game for Aggie were the field-

ing of Gile, the batting of Baker and the all around playing and base-running of Capt. Halligan and Crowell. For the High School Pomeroy and Fisher played well.

AGGIE FRESHMEN.							
	A.B.	R.	1B.	S.B.	P.O.	A.	E.
Baker, I	4	3	4	0	0	0	2
Crowell, c	4	3	4	1	3	3	1
Halligan, 2	4	3	3	2	2	3	1
Atkins, r	4	1	3	0	0	0	0
Parmenter, m	4	1	2	0	0	0	1
West, p	4	0	1	0	1	3	1
Gile, I	3	0	1	0	0	1	0
Rogers, 3	3	1	2	0	0	1	2

AMHERST HIGH SCHOOL.							
	A.B.	R.	1B.	S.B.	P.O.	A.	E.
Atwood, 3	5	1	1	0	0	2	1
Pomeroy, c	5	1	2	0	1	1	3
Clutia, p	5	1	2	0	0	3	1
Phillips, I	4	1	1	0	6	0	0
Baker, r	4	2	2	0	0	0	1
McCoy, 2	4	1	2	0	0	2	1
Faneuf, I	4	2	3	0	0	0	2
Fisher, s	4	2	3	0	0	2	3
Morse, m	4	0	0	0	0	0	2
Aggie Freshmen,			1	2	3	4	5
Amherst High			2	1	3	0	6
			0	2	2	2	4

AGGIE, 9 ; WILLISTON, 7.

The fourth game of the season was played at Williston, May 8 and resulted in a victory for Aggie.

In the first four innings Williston made all her runs, making four in the first and one in each of the succeeding three innings. Emrich began the fun in the third by cracking out a beauty single. He stole second and was advanced to third by a wild pitch, scoring on Crowell's fly to right. Hinds received a base on balls and then came a pretty double steal by Crowell and Hinds. Chapman came to the bat and lined the first ball pitched for a two-bagger between centre and left sending Crowell and Hinds home.

Several Williston players tried to steal second, but owing to Crowell's superb throwing they were nailed in their tracks. Emrich was beautifully backed up on these throws by Chapman and Peters. Chapman received great applause by a beautiful catch over Emrich's head which would have meant a run had he not been there. Peters made two pretty stops over second.

Emrich again started the fun in the seventh by making a single and stealing second. Warden was presented with a base on balls; Crowell made a sacrifice forcing Warden at second and advancing Emrich to third. Hinds was the next man up. He had a determined look on his face and he was equal to the occasion for he cracked out a three bagger between centre and right, which would have been a

home run but for the tennis courts in the lower part of the field. This hit brought in two runs making the score 6-5 in favor of Williston. Chapman's turn came next and he hit the ball to short. Ely the first baseman muffed the thrown ball. Chappy stole second and third, for the catcher and third-baseman were easy. Clark fanned the air three times and Halligan made a base hit over third sending Chappy in. He also stole second and third and was left there as Peters could not connect with the ball.

After this inning Eaton's arm became limbered up and he pitched his usual steady game. Williston's heaviest batters were retired in one, two and three order.

In the ninth with three men on bases and only one out Flower came to the bat. He hit the ball to short and Chapman picked it up and threw it home, and Crowell threw to first executing a neat double play which ended the game.

The features of the game were the batting of Hinds and Chapman, the steady pitching of Eaton, and the all around work of Capt. Emrich and Warden.

In justice to our own team we would say that the work of Umpire Rosa was far from satisfactory and that he played a very important part in several of the strike outs and plays.

AGGIE.							
	A.B.	R.	1B.	S.H.	P.O.	A.	E.
Emrich, 2	5	2	2	0	4	1	2
Warden, 3	5	0	1	0	5	3	1
Crowell, c	5	2	1	0	2	5	2
Hinds, I	5	2	2	0	2	0	0
Chapman, s	6	2	2	0	0	1	3
Clark, r	5	0	0	0	0	0	2
Halligan, I	5	1	2	0	9	0	0
Peters, m	5	0	0	0	2	0	1
Eaton, p	4	0	0	0	0	2	1

WILLISTON.							
	A.B.	R.	1B.	S.H.	P.O.	A.	E.
Pond, p	5	2	3	0	1	3	1
Riddell, r	5	2	3	0	0	0	1
Taylor, m	5	1	2	0	3	0	1
Flower, 2	5	2	0	0	2	2	1
Roberts, 3	4	0	1	0	0	1	4
Tuttle, s	4	0	1	0	2	3	2
Ely, I	4	0	1	0	6	0	3
Goodrich, I	4	0	0	0	2	0	0
Milton, c	4	0	1	0	6	2	4
	1	2	3	4	5	6	7
Aggie,	0	0	3	1	0	4	0
Williston.	4	1	1	1	0	0	0

AGGIE, 8 ; MT. HERMON, 7.

On Monday May 17, Mt. Hermon vs. Aggie, the latter winning in a closely played game.

In the first inning Aggie made five runs. Emrich started the ball rolling by making a single between short and third. Warden flied out to centre. Hinds

cracked out a base hit putting Emrich on third. Then Hooker rapped out a single scoring Emrich and driving Hinds to third. Then Chapman stepped to the plate and '99 gave him a cheer. Two strikes were called on him and the next ball pitched he drove to centre. Luckily this ball went through the centre fielder's legs, scoring Hinds and Hooker, and by this time Chappy was holding down third base. Crowell was out to first on a grounder, Chappy scoring on a throw to first. Halligan kept up the fun by making a single over third and Peters closed the inning by a hit to Conklin.

In the first two innings Mt. Hermon did not succeed in scoring any men but in the third, they made a run on a two bagger by Fowler, a base on balls to Robertson, and by Stadie's fly to Hooker. Then came the fatal fourth inning.

Thompson opened up the inning by a corking two bagger along the third base line. Then Fowler came to the bat and placed the ball to right garden for a base hit. Robertson flied out to Hinds and Stadie banged the ball to Hooker who muffed it after a hard run. Thompson and Fowler scored. Riggs proved to be a good waiter and was given a base on balls. Ketchum cracked out a single between short and second scoring Stadie. The next three men—Miller, Hurst, and Conklin—were presented with a base on balls, scoring Riggs, Miller and Hurst. The score now stood 7-7.

In the second inning we scored two runs. Emrich hit the ball to right garden for a base. Warden sent up a high foul to Robertson. Hinds made a base hit and Hooker landed the ball over second, scoring Emrich and Hinds. We made a run in fifth by a hit to third by Halligan, Fowler throwing wild to first and Halligan crossed the plate making the score 8-7.

After this inning no runs were made by either side, there being some great fielding done by both teams. The features of the game were the steady playing of the team at critical moments and the absence of errors.

AGGIE.		1B.	S.B.	P.O.	A.	E.
A-B	R.					
Emrich, 2	4	2	2	0	3	3
Warden, 3	4	0	2	0	3	2
Hinds, 1	3	2	2	0	1	0
Hooker, m	4	1	2	0	2	0
Chapman, s	4	1	1	0	1	5
Crowell, c	4	1	0	0	3	0
Halligan, 1	4	1	3	0	11	1
Peters, r	4	0	1	1	0	0
Eaton, p	4	0	2	0	1	7

MT. HERMON.		1B.	S.B.	P.O.	A.	E.
A.B	R.					
Thompson, 2	5	1	1	0	4	1
Fowler, 3	4	1	3	0	1	3
Robertson, c	4	0	0	0	2	5
Stadie, 1	5	0	2	0	1	0
Riggs, s	4	1	2	0	0	0
Ketchum, m	4	1	2	0	3	0
Miller, r	3	1	0	0	0	0
Hurst, 1	2	2	1	0	7	0
Conklin, p	3	0	1	0	1	2
Aggie,	1	2	3	4	5	6
Mt. Hermon.	5	2	0	0	1	0
	0	0	1	6	0	0

Notes and Comments.

We are more than pleased to see the unusual flood of college spirit which is now manifesting itself among the students. It comes with a melodious (?) accompaniment of tooting horns, rattling drums, singing bells, and booming guns which stirs the latent enthusiasm in the heart of every hearer. It is an element in our college life which is essential to the success of our teams and to the prosperity of our *Alma Mater*. We believe that one of the legitimate results of this will be seen in larger entering classes, for just as surely as enthusiasm wins for itself followers in the business world, so surely will it attract more young men to this institution. Let everyone take a personal interest in the success of our teams, let them have your earnest, whole hearted support and then will we more frequently win the victories for which we are striving.

* * *

Last Friday the Committees on Agriculture, Education, and Military of the state legislature made their annual visit for the inspection of the college. This visit is always lamented (?) by the students because it deprives us of the privilege, so dear to the heart of each of us, of attending recitations on that day but we are consoled by the fact that these visits are always in the end, productive of good to us. There is no more forcible way to impress upon our legislators any need of our college than to have them come here and see what we are doing with our present facilities and the greater opportunities for better work which would be opened up to us by the addition of some needed equipment. Accordingly, President Goodell signified to his visitors his intention of calling upon them soon for an appropriation to provide a suitable laboratory

for the study of Veterinary Science together with a building in which diseased animals could be confined while being studied.

* * *

Our new water system is an improvement which has long been needed and we are sure that it will be greatly appreciated when it is fully completed and in running order. Much inconvenience has been caused in the past by the sudden and sometimes wholly unexpected cessation of our regular water supply. So we have willingly jumped ditches and seen our grounds dug up, thinking only of the good time coming when we will no longer be obliged to go without water for more than two days in succession nor to go down to the brook to perform our morning ablutions. The reservoir on Clarke Hill has ample capacity for all probable demands and in case of fire when the Pelham supply is shut off it would be of inestimable value.

College Notes.

- Commers !
- Hurrah for the Freshman base ball team.
- Seniors were well represented at Chapel last Sunday, Why ?
- W. R. Crowell '00 and S. E. Smith '99 suffered severely from ivy poison last week.
- N. J. Hunting '00 is sick with the measles. "How many times have you had 'em ?"
- W. E. Chapin '99 spent Sunday with his friends in Chicopee.
- The flag pole has been recently painted and once more the "Stars and stripes" float over the College grounds.
- C. M. Walker '99, a former member of the Amherst High School '97 assisted in the musical program in the entertainment last Wednesday night.
- On account of the rain last Wednesday the base ball game with Northampton Y. M. C. A. was postponed until sometime later.
- The new rooms of the Phi Sigma Kappa fraternity have been finished and the first meeting in their newly extended quarters was held last Saturday night.

—Rev. Dr. Leonard W. Bacon of New Haven will address the Young Men's Christian Association, Sunday evening at eight o'clock, of commencement week.

—The Senior class is fortunate in securing Rev. Calvin Stebbins to preach the Baccalaureate sermon as he is one who will adapt himself to the circumstance in an able manner.

—The executive committee of the K. K. K. has chosen John Marshal Barry as business manager of the Commers which will take place Tuesday night of Commencement week.

—The eighth day of May records a victory for the Aggie baseball team in a game with Williston. The score being 9-7. The game, though full of errors was an exciting contest from beginning to end.

—Several of the students have worried fearing that the College grounds will not look as neat as usual, on account of the laying of waterpipes, but the work is nearly completed and will be finished at the time stated by the contractor.

—The catalogue of all the students who have ever been connected with the College, since its origin, has been issued within the last few days, and great praise is due President Goodell for his untiring efforts to make it such a valuable directory.

—The Freshman base ball team defeated Amherst High School team, May 7, by a score of 12-11. The game consisted of eight innings and was very exciting, especially in the few last innings. With a little encouragement the team would develop a good deal.

—Rev. Calvin Stebbins addressed the College students last Sunday. An unusual large attendance was present. Mr. Stebbins held the attention of all in an interesting manner and undoubtedly some of the impressions will remain lodged in our memory for some time.

—The Wild West Exhibition, which will be given at Holyoke, Sat. May 22, is divided into three distinct departments, each one important and extensive enough to be a complete show in itself. They are the reproduction of scenes and incidents from actual life among the Indians, cowboys and pioneer frontiersmen, a Congress of the Rough Riders of the World and a Military Alliance of the picked cavalrymen of England, Germany, France, Russia and the United States.

—Mr. J. M. Barry has also been on a practical gardening trip. His work covered fifteen acres in the vicinity of Buzzard's Bay and through reports, Mr. Barry did very excellent work, both in the selection of varieties of shrubs, and also in the elaborate designs in which the shrubs were placed.

—Prof. Maynard seems quite partial to his Horticultural division. Last Friday in company with Mr. Leavens, Mr. Barry, Mr. Drew and Mr. Bartlett, the professor visited the grounds of Dr. Goessmann paying particular attention to the ornamental trees and shrubs. Several trips previous to this one, have been taken.

—Immediately after the drill last Friday morning, two picked nines, known as "Hot Dogs" and "Trilby-ites" played an eighth inning game. The battery for the former was Eaton and W. R. Crowell, for the latter E. M. Wright and R. D. Warden. Lieu't. Wright umpired. The delicate footed nine won by a score of 12-6.

—The 1900 caps made their appearance the first Friday in May after the victory over the Amherst High School base ball team. They are dark blue in color with two red zero's on the front. The hat is of pleasing style, pretty and neat in appearance and serviceable. We congratulate "naughty naught" on their good taste.

—The following Freshmen spoke before the faculty last Friday afternoon: Howard Baker, Charles A. Crowell, Warner R. Crowell, James W. Kellogg, Allen L. March, Arthur C. Monahan, George F. Parmenter, Francis G. Stanley. From this list C. A. Crowell, A. L. March, G. F. Parmenter and F. G. Stanley were chosen to speak on the Burnham Prize Four next commencement. James W. Kellogg was chosen as substitute.

—A week ago Monday two terrible windstorms came upon the College. The first one was about two o'clock and lasted for a few minutes only, but the velocity of the wind was great enough to bend the Meteorological flag staff and blew over a tree near the Drill Hall. The speed of the wind was 65 miles an hour. The second storm came in time to dismiss us half an hour early from drill. The rain came down in torrents and although the wind was strong, no particular damage was done.

—Decoration Day this year, will truly mean a holiday to every Aggie Student. In previous years we have marched beneath the boiling sun until we were nearly baked and so thirsty we could hardly drink soda(?) In spite of the honor and congratulations,—we feel this year like seeing the rest drill. Out of the whole battalion only one responded as willing to go and thus it seems advisable that we let others share in the heaps of honor that are so certain to be brought upon those who participate in the parade.

—The Sophomores who spoke before the faculty last Thursday afternoon to contest for the Burnham Four were: W. H. Armstrong, J. R. Dutcher, W. E. Hinds, G. C. Hubbard, H. E. Maynard, B. H. Smith, S. E. Smith, F. H. Turner, C. M. Walker, E. M. Wright. Those who were chosen by the Faculty are: W. H. Armstrong, W. E. Hinds, H. E. Maynard, E. M. Wright. This was the choice made by the faculty, though unquestionably but for a technical decision of the judges Mr. Dutcher's rank as a speaker would entitle him to first place.

—Bearing in mind that there was no military ball last winter and fully realizing that the Seniors are not to have their usual Commencement promenade, "a few of the desirous" held an "Assembly" in the Drill Hall on the evening of May 6. The patronesses were Mrs. H. D. Haskins and Mrs. E. A. Jones. Smith College, as usual was well represented as also was the Amherst High School, Miss Buffum's School and ladies in the neighboring vicinity. The dance order included twenty dances with waltz and two-steps alternating. The main object of the affair was to have a pleasant social time, and secondly to give the financial profits to the athletic association. At a late hour the dance order was completed and the electric light warning capped the climax to the third extra.

Last Friday the legislative committee made their annual visit to the College. About eight o'clock, the usual time for morning prayers, the committee assembled with the students in the chapel. Following this exercise the military department turned out its prettiest, consisting of battalion drill, signaling with flags and heliograph and execution of the manual and bayonet exercises by the Boston Preliminary Prize Squad. The visitors seemed especially pleased with the firings executed by the battalion which truly did do itself credit,

Several visited the meteorological department and later a trip was taken to the barn. The committee seemed well pleased with all that they saw and if they were thoroughly pleased with our President's remarks at Chapel time we trust they will see that we have the Veterinary building suggested by him, if they get into the legislature next year.

Hatch Experiment Station

DEPARTMENT OF FOOD AND FEEDING.

EFFECT OF FEED UPON THE QUALITY OF MILK AND BUTTER.

BY J. B. LINDSEY.

During the past winter season, a series of milk experiments have been in progress at this station with salt-marsh hay, to determine its value when compared with a good quality of English hay. The marsh hay has a distinct salt-sea flavor and smell. Animals as a rule will take one feeding a day with evident relish. In addition to the above experiments, which are still in progress, we have endeavored to note whether this hay imparted any objectional flavor to the milk and butter.

The experiment was divided into three periods of about 9 days each, and each of the 12 cows were fed as follows: First period, 5 pounds of wheatbran, 2 1-2 pounds of Chicago gluten meal, 2 pounds of corn meal, and a good quality of first cut English hay ad-libitum. After a week had elapsed, the cream was churned from three successive days. In the second or salt hay period, 12 pounds of black grass (salt) were substituted for a like amount of English hay. Another variety of salt hay was used in place of the black grass in the third period.

The salt hays were fed after milking. Precautions were taken to keep the milk as clean as possible, and it was removed to the dairy room immediately after being drawn from each cow, and cooled by being immersed in ice water.

Three different parties to whom the milk was submitted could detect no objectional flavor. Samples of each of the 9 lots of butter were sent to Mr. O. Douglas of Boston, who together with another party, scored them as follows:

	English hay period.			Black grass (salt) period.			Fox grass (salt) period.			
	Standard.	SAMPLES.			SAMPLES.			SAMPLES.		
		I	II	III	I	II	III	I	II	III
Flavor,	50	47.5	47	48	44	47	47	48.5	49	47
Grain,	25	25	25	25	25	25	25	25	25	25
Salt,	10	10	10	10	10	10	10	10	10	10
Color,	10	10	10	10	10	10	10	10	10	10
General appearance,	5	5	5	5	5	5	5	5	5	5
Total,	100	97.5	97	98	94	97	97	98.5	99	97

Mr. Douglas comments as follows on the butter received from the third or fox grass period: "I scored this butter myself, and had several good judges score after me, and the majority decided in favor of it as slightly the best of the three samples." "You must have had some new milch cows to have been able to make any such butter at this season of the year."

The facts were that 9 of the 12 cows had been in milk from 6 to 10 months, and the other three about 3 months. The cream was raised by the Cooley process. Mr. F. W. Mossman took charge of the cream, and made the butter.

While no one will deny that certain feed stuffs are liable to impart an objectional flavor to dairy products, the above experiment serves as an illustration of what can be accomplished by using proper precautions in feeding, and by the application of scientific principles in the care and manipulation of the resulting product. The writer is of the opinion that by far the larger part of the bad flavor gets into milk or butter after milking rather than during the progress of milk formation.

TO ALUMNI AND FORMER STUDENTS.

The coming commencement at the college promises to bring together a large number of former students. The exercises of commencement week will possess more than ordinary interest, The baccalaureate sermon is to be preached by the Rev. Calvin Stebbins of Worcester, a clergyman widely known for his large views of life, as well as for his ability as a preacher. Tuesday, tri-decennial will assuredly be full of interest to everyone. The military drill will take place in the morning contrary to the general plan of recent years. At 2 P. M. occur the tri-decennial exercises. A speaker of recognized ability will deliver the principal address. Every loyal M. A. C. man should attend this gathering.

It is understood that the graduating class are pre-

paring a novel program for their class day exercises at 3-30 P. M. Class reunions will take place between 5-30 and 8 P. M. to be followed by the President's reception. Alumni! We should show our appreciation of the grand work accomplished for our institution by President Goodell, by our personal presence. The Commers at 10 P. M. will be a fitting climax to the day's exercises. This will probably bring together the largest number of former students ever witnessed here. Trustees, faculty, alumni, non-graduates and undergraduates will unite in kindling a mighty wave of enthusiasm for the future good of M. A. C.

Old students should come back to see what the college is capable of doing to-day. The younger men should return bringing with them the enthusiastic spirit of their college days. Every one should make an effort to stand on Aggie soil once again, and renew his allegiance to his Alma Mater.

J. B. LINDSEY, '83.

The latest and perhaps the silliest college yell is that adopted by a college at Ouachita, Ark. It is as follows :

“ Boom-a-lacka, boom-a-lacka,
Bow, wow, wow,
Ching-a-lacka, ching-a-lacka,
Chow, chow, chow.
Boom-a-lacka, ching-a-lacka.
Who are we ?
Who's from Ouachita ?
We, we, we.
Whoo-ra, whoo-roo,
Dipla, diploo,
Ri, siki, hi,
Hot, cold, wet or dry,
Get there Eli.
Ouachita fly high.”

The Buffalo Kindergarten has caught the craze, and has evolved the following “ yell ” :

“ B, a, bay ; B, y, bee ;
Muzzer's precious kids are we !
Enie, meenie, minie, mo !
Kindergarten ! Buffalo ! ”

—N. Y. D. T.

“ Queer things will happen sometimes ” he said,
As low he bent over the lass ;
But she answered quickly with twinkling eye,
“ That explains how you came to pass. ”

—*Harvard Lampoon.*

Alumni.

'70.—Granville A. Ellis. Publisher, 53 Chauncery Lane, London W. C. Eng.

'72.—Julio J. Delano, Merchant, Esmeralda 11, Santiago, Chili, S. Amer.

'75.—Richard S. Stearns, Lawyer 224 Wash. St., Boston.

'85.—Isaac N. Taylor, employ, San Francisco Gas and Electric Co., 229 Stevenson St., San Francisco, Cal.

'86.—C. F. W. Felt Chief Engineer of the Gulf Colorado and Santa Fe, Ry. 1088 miles of road, Galveston, Texas, March 3, was elected member of the American Society of Civil Engineers, being the first M. A. C. graduate to secure this honor.

'86.—Joseph F. Daniels, Art Instructor State Normal School, Greeley, Col. Address 1202, 11th St., Greeley, Colorado.

'87.—Wm. H. Cadwell, sec. and treas. of the American Guernsey Cattle Club. Treas. for Petersboro Creamery Co., Proprietor of “ Clover Ridge Farm,” Petersboro, N. H.

'89.—Mark N. North, M. D. T. Harvard Vet. School '95, Vet. Surgeon, Corner Bay and Green Sts., Cambridge.

'90.—George B. Simonds, Student, Eastman's Business College, Poughkeepsie, N. Y.

'91.—Willard W. Gay, Landscape designer and planter, Melrose.

'91.—Frank L. Arnold, 351 Turingston St., Elizabeth, N. J.

'92.—Edward T. Clark, Farmer, Granby.

'95.—Harry E. Clark, Farm Supt., Agawam.

'95.—Charles M. Dickinson, Seattle, Washington, S. A. C.

'95.—H. D. Hemenway, Mt. Auburn, Mass.

'95.—E. A. White has accepted a position as Landscape gardener on the estate of C. C. Grissem, Haverford, Penn., under the supervision of Mr. W. H. Manning of Boston.

'96.—F. E. DeLuce, Employ of G. P. Putnam & Son, Book dealers, N. Y. City. Address 256 President St., Brooklyn, N. Y.

LIBRARY NOTES.

A History of American Literature, by Fred Lewis Pattee. Professor of English and Rhetoric in the Pennsylvania State College. This work is designed as a text-book for schools and colleges. In the preparation of this history of the use and development of American literature the author has traced clearly the influence of race, environment and time, on the people of our country.

Ice Work Present and Past, by T. G. Bonney Professor of Geology at the University College London and fellow of St. John's College. Books of this kind seem to be written in most cases, more with a view to advocating some particular interpretation of the facts, than of describing the facts themselves. But in this work of Professor Bonney, he describes and gives greater prominence to the fact of glacial geology. This work is illustrated by sketches by the author.

The Science of Nutrition, by Edward Atkinssyn Ph. D. The author has studied the subject very carefully and has also invented a contrivance which he calls the Aladden Oven. In this treatise he fully describes the workings of this oven and its slow cooking in relation to nutritive values of food material. Diagrams of this oven are given and tables of value showing workings of same.

The Mind of the Master, by John Watson D. D. (Ian Maclaren) Those who have read *Beside the Bonnie Brier Bush* and *The Upper Room* will be particularly interested in this work of so popular an author. In this book he gives us a very simple and interesting description of the mind and character of our Lord.

A Text-Book of Pathological Anatomy and Pathogenesis, by Erest Ziegler, Professor of pathological anatomy in the University Tribingen. This work is translated for English students by the scientist Donald MacAlister M. A. M. D. This very valuable work is combined from three volumes into one large one and is very valuable as a reference book. It is fully illustrated from microscopic sketches.

A History of Gardening in England. This is a complete History of Gardening from a very early date down to the present time by the Hon. Alicia Amherst. The author describes gardening in the thirteenth century in a very interesting way and continues down to the present time. The book is very fully illustrated with old cuts as well as engravings of some of the modern gardens of note.

IF.

If you ask a maiden for a kiss
And she tells you "no,"
Kiss her twice
Or even thrice
E'er on your way you go.

But if you ask her for the same,
And she tells you "nit,"
'Twere better far
Than peace to mar,
To take your hat and "git."

—Yale Record.

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AGGIE LIFE.

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NO. 14

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Remember June 22!

Come to Commencement!

Commers Tuesday Night!

Editorials.

LAST week we had a little variation from our usual drill. When it comes to real fighting, the question is not "Can the men execute the manual without an error," but, "Do they know how to conduct themselves while under fire so as to expose themselves to the least risk while making the most of every possible opportunity to advance on the enemy." So the formation of "Extended Order" seems to be of more than ordinary utility.

WE understand that there is some prospect of a football association being formed between the New England state colleges. Delegates from all these institutions met in Boston a short time ago to discuss plans and see what could be done in the matter. We hope that arrangements may be perfected in time for next season. It would undoubtedly be a good thing and we are sure that as far as Aggie is concerned it would prove a great benefit. It would give us a regular series of games to play, which would stimulate our efforts on the gridiron. It would strengthen the existing bonds of brotherhood and bring us more closely in touch with our sister colleges, and this we need. If the football union should prove a success, as we hope, the plan might be extended so as to include baseball and track athletics.

THE college year is fast drawing to a close. Just two weeks and then good-bye to books, good-bye to professors and good-bye to the old college. Most of us shall return again in the fall; but one class will leave the old familiar scenes never to return again as students. Henceforth they must educate themselves in the great open school of the world. Then they will find that their most diligent instructor is the great teacher experience, experience which is so often sharp and severe in her teachings. Four years have passed away among scenes which necessarily must have grown dear to the men continually surrounded by their potent charms, they certainly must have impressed themselves more or less familiarly upon their beholders, and thus it is with no small feeling of regret that every graduating class departs from its college home, feeling that sentiment of love which in after years is to make true and loyal alumni. Surely every one will unite in a toast of good luck for the future happiness and prosperity of the class of '97.

CERTAINLY it is no small pleasure with which we welcome the beginning of a new era in the future development of track athletics at this institution. Now that our track team has won her first victory on the field of the cinder path, let it mark the beginning of an annual victory over sister colleges in an annual athletic meet. Let it be the means of commencing a new and determined agitation among our alumni for the completion of our own athletic field which is so essential to the future success of all branches of athletic sport at the M. A. C. The college is under great obligation to Prof. R. S. Lull who has spent every effort to have the team well trained for the several events. Much is also due to the kindness of Professor Nelligan and to the members of the Amherst track-team, who very generously allowed our men the privileges of their track and the benefits of their experience in training. The meet was practically a walk-over for Aggie the team winning eight firsts and seven seconds with a total of sixty-nine points out of a possible one hundred and eight. Unfortunately most of the dashes were run in the rain and on a muddy track which accounts for non-appearance of the official time.

At the competitive prize drill in Mechanics Hall, Boston, Friday night, May 21, the soldier boys from Brown scored a victory over Technology and M. A. C. In the very opening of the program one of their boys captured the first prize in the competitive drill in the manual of arms and firings. In the next event, the bayonet drill the same man took the second prize. And then to make a clean sweep they took the chief issue of the evening, the battalion drill.

The evening opened with music by the Salem Cadet Band, followed by the individual competitive drill in the manual of arms and firings. Six Brown boys, who drilled according to the new manual of arms and firings, were the first to take their stand upon the floor. After them came twelve men, six from Technology and six from M. A. C., who drilled according to the old manual of arms and firings. All did good work but it seemed as though the Aggie boys had a little the advantage of their opponents in the snap with which they executed the commands. The boys then went out amid the cheers but returned immediately, there being two left in the squad from

each college. There was an intense interest shown in this part of the drill and "this round" to quote a Boston newspaper, was a hard struggle for supremacy between Adj. Williams of Brown and 2nd. Lieut. C. A. Norton of Amherst. The former won.

During the intermission which followed the Salem Cadet Band rendered another selection. Then came the bayonet drill in which we were undoubtedly roasted, various reasons were given such as our man's positions being incorrect and so forth, but Norton's work was excellent here, and it seems too bad that he could not have gotten a prize for his positions were according to competent judges absolutely correct.

The next performance of the evening, the battalion drill, was a grand sight, and one in which we could not take part. Brown first made her appearance headed by their excellent university band. They made a splendid show and their soldierly appearance deserves praise.

When the "Tech" boys came in the difference between the two battalions was at once visible in that they lacked that prompt and snappy obedience to orders which the Brown boys possessed. But it would be unfair to say that they did not do well for they most certainly did.

The drill of the evening was completed by the presentation of the prizes by his excellency, Gov. Lippitt of Rhode Island, who spoke of Adj. A. R. Williams in high terms, as being a direct descendant of Roger Williams.

The six men from this college who drilled, were: C. A. Norton, Hinds, Peters, Warden, Montgomery and Emrich.

Our boys did excellent work and deserve much credit for their efforts.

The successful ones of the drill are as follows:— First prize, Manual of Arms and Firings, Adj. A. R. Williams, Brown; second prize, Lieut. C. A. Norton, M. A. C.

First prize, Bayonet Drill, Sergt. L. H. Turner, Technology; second prize, Adj. A. R. Williams, Brown.

Battalion Drill was won by Brown.

The judges were: Capt. Frank H. Edwards, 1st. infantry, U. S. A.; 1st Lieut. E. St. J. Greble, 2nd artillery, U. S. A.; and 2nd Lieut. Johnson Haywood, 2d, artillery, U. S. A.

The professors of military science in the competing colleges are : Capt. C. H. Murray, 4th cavalry, U. S. A., Brown University ; Capt. John Bigelow, Jr., 10th cavalry, U. S. A., Massachusetts Institute of Technology ; Lieut. W. M. Wright, 2d infantry, U. S. A., Massachusetts Agricultural College.

THIRTY YEARS AGO

next October 2d, this college began in the words of its founders, ' first, to make intelligent, thoroughly-educated men, and secondly, to make practical agriculturists.' The institution then consisted of a faculty of four, namely, William S. Clark, Levi Stockbridge, Ebenezer S. Snell and Henry H. Goodell, 27 freshmen, 383 acres and the following four buildings, the chemical laboratory, then about one-third its present size, South College, the plant house, and the botanic museum.

That date falls near the beginning of a vigorous forward movement in education. The teachings of Tyndal and Huxley and Darwin were agitating all intelligent minds. Every true Philistine wanted to know *for certain* whether his ancestor used to *hang up* by an elongated coccyx, or, as he himself did, by his neighbor's ledger. Liebig had just finished his life work and had placed the study of agriculture on a scientific basis. His chemical laboratory at Giessen, the first of its kind, had been copied in every seat of liberal learning. People were fast relinquishing the idea that a certain border line had been fixed by the Creator, beyond which no man might venture in his study of Nature's secrets, " Life-force," the bug-a-boo of ages had become a mere fiction, and although even until some years later than our " commencement," a much respected teacher reiterated to us " of the *real life-force* we can know nothing," the boys believed " he meant it for a joke."

As a result of the new teachings, and of increasing competition in all the industries, there was, thirty-years ago, east and west, an imperative demand for a deparature from the stereotyped methods of education. Attempts were repeatedly made to introduce the study of crops, of animal industry, field culture, the chemistry of every-day-life, mining and practical mechanics, into colleges already established. But those institutions generally preferred to turn away from the actual demands of the situation, and to spend

their energy in the good old way of declining and conjugating defunct words, and of repeating a priori imaginings, rather than to soil their fingers in the dissecting room, the tilled acre, the laboratory or the work shop, and by such means to lay foundations for actual life.

The reform was bound to come, no opposition could restrain it, and so separate institutions were rapidly established in which the *new education* should be given. Among them were the Agricultural Colleges of the United States, founded by the act of Congress whose purpose was " *to promote the liberal and practical education of the industrial classes in the several pursuits and professions in life.*"

The youth of to-day can have little idea of the long and severe struggle which this end necessitated. The beginning was really with the man " first in war, first in peace, and first in the hearts of his country-men" and many an American nobleman has assisted in the work. In 1850 the president of the Massachusetts senate, Marshall P. Wilder, procured a state commission for Dr. Edward Hitchcock, president of Amherst College, to visit the agricultural institutions of Europe and to report upon them. Soon afterward and as a result of his work the Massachusetts Board of Agriculture was established.

In 1856 the " Massachusetts School of Agriculture " was incorporated. Lack of funds prevented its development until 1860, when it received a vigorous impulse and was located in the city of Springfield. At this juncture the civil war broke out and smothered the project. In 1862 the United States Congress gave to each state 30,000 acres of public land for every one of its members of congress, for the endowment of colleges of agriculture and the mechanic arts. Our college was founded on this act. Its beginning and its success are admirably told in the college circular and the general catalogue recently issued by President Goodell. In the catalogue, a beautiful souvenir of the college and the product of great labor, every former student will find a brief record of his attendance here, and his present situation. It is hoped that every man who has ever been connected with the institution will read these two pamphlets and then plan to spend Tuesday, June 22, at Amherst. This day has been set apart, to be celebrated in a manner entirely new to the college. It is to *Tri-decen-*

nia] day and will mark the progress in industrial education of a third of a century. The program has been widely published, in so far as it can be, but the proof of the pudding is in the eating and it cannot be eaten unless you are here.

On this day *all the boys* will be present. Old times will be discussed and old friendships renewed. New times will be planned and many new friendships formed. The men of this college are "a peculiar people, zealous of good works." "Ye are a chosen generation" appointed to exemplify the results of one of the most notable experiments in modern education, established on the doctrines of the great teachers of the century. It will pay you to come back and compare notes with the old boys, exchange new ideas, and see how the new boys live. Levi Stockbridge hopes to give the grip to every mother's son who has ever been here, and to tell them all about old times. You will surely not be the one to disappoint him.

C. WELLINGTON.

AN OLD HOUSE.

Along the shores of Long Island, bordering the sound, are many homesteads, long since gone to ruin. Only the rotten tumbled down buildings, over grown with briars and underbrush, remain, of the early settlers who shortly abandoned the sandy, unproductive soil of the Island for the main land.

While knocking about one vacation among these relics of the hand hewed, hand pegged architecture of our forefathers, I chanced one day to stumble upon one of the most antiquated structures it was ever my fortune to meet. It lay in a gully almost impregnable from its over growth of poison ivy, grape vines and cat briar. From its situation it offered a study to the imagination and gave evidences of mystery. The gully wound around a hill and opened upon the sound with as pretty a little harbor, secret hidden among the rocks, as the most skeptical of free-booters could wish for. I recalled the traditions of Capt. Kidd, who it is said buried a great part of his treasures among the rocks and gullies which line this coast.

Led on by a natural curiosity, I forced my way through the tangled undergrowth and stood before a low building in the last stages of decay. There were evidences of a once well beaten path running in the direction of the sound, and just below the house were

the remains of a small landing which indicated that there was at one time a water communication between the house and harbor. I tried the door. It was fastened, but yielded with a rusty creaking sound to a slight force. Shaded as it was by the tangled wilderness of nature, silent, musty and decayed, the old house made an impression on my nerves such as I suppose is an indication of the supernatural, or, as formally called, spirits and ghosts. I seemed to feel the wrath of Kidd and his crew as they danced hither and thither waving their ghost like weapons. The very air seemed full of the curses of the disturbed spirits. However as I was bent on discovering gold, if there was any to be found, I made a tour of inspection of the old hovel, and this is what I found; Money? Well no, or I shouldn't be found round here, but I did find a collection of curiosities or a curious state of affairs, which ever you like. The house was empty and evidently had not been inhabited for many years. I climbed to the garret without finding anything beyond the natural accumulation of odds and ends which always accompany a long existence. In the garret the first thing that caught my eye was a delapidated tackle arrangement for hoisting signals through a trap door in the roof. This, said I to myself is becoming interesting, let us investigate; so I cast about in the dark recesses of the garret for other indications of a past history for the old house. Not far away between the joists and an old chimney I discovered a rusty old spy glass. Ha! said I, more proof.

Mounting a rickety ladder to the trap-door, I pushed up the cover and stood with my head just above the ridge-pole. Here was a clear view of the sound for miles and miles, and I could imagine old Kidd with his spy glass sweeping the horizon hour after hour awaiting the approach of some richly laden merchantman and then running up the signals of warning to his faithful followers hidden in the cosy little bay.

I went down into the cellar confident that I should find a keg of money, or at least some indications of buried treasures; but the cellar appeared much as other cellars, except that the former occupants evidently had been accustomed to use their cellar as a storage place for boats.

Recalling the evidence which I had found outside of a water communication between the house and the

bay, I made a careful investigation, and found, sure enough, that boats had been floated by means of a set-back from the sound, at some former time, right up to the cellar door. Here was another link of evidence and now if I could only find a cave opening out of the cellar for the storage of contraband goods, I should have a clear case that this had once been the abode of Kidd or of his associates.

I returned late that afternoon with all the exultation of a man who has made a new discovery. I felt sure that I had unwittingly stumbled upon an ancient retreat of a band of Pirates and hoped with the assistance of one or two of the neighbors to return in the morning and investigate the premises, feeling sure that our efforts would be rewarded by the discovery of gold.

With this intention I called on Mr. V. early in the evening and told of my afternoon's experience and asked if he knew anything of the old house.

"That house," said he, "has had a story." "Old John." (John was an Indian who had lived in the V. family for years) "remembers hearing many stories from his people about mysterious happenings up in the old ravine.

But now-a-days the house has lost its mystery. Lately it has been empty, but six or eight years ago there was an old gentleman from Brooklyn who came up here in the summer and lived in the old house. He was very fond of the water and kept a small dory which at high tide could be floated from his cellar door down to the sound.

You must come around sometime and hear some of John's stories."

[To be continued.]

THE PROPOSED ATHLETIC LEAGUE BETWEEN THE STATE COLLEGES OF NEW ENGLAND.

As a result of a movement started by members of the athletic board of this college a meeting was held at Young's Hotel, Boston, on May 29, to consider the matter of forming a league in athletic sports between the state colleges of New England. The colleges of New Hampshire, Massachusetts, Rhode Island and Connecticut were represented. Maine had also intended to be represented but owing to unavoidable circumstances her delegate was unable to be present. After a general discussion as to the advisability of forming a league, the following agreement was formu-

lated for submittal to the various colleges. This it was thought, would be sufficient for the first year at least, after which, if the league proved a success, a regular organization and constitution could be arranged. If a majority of the colleges ratify this proposed arrangement, then football and baseball games will be arranged and, if possible, a track meet.

Title. This organization shall be known as the "Athletic League of New England State Colleges."

Membership. The following institutions shall be eligible to membership: University of Maine, New Hampshire College of Agriculture and the Mechanic Arts, University of Vermont, Mass. Agricultural College, Rhode Island College of Agriculture and the Mechanic Arts, and Storrs Agricultural College.

Government. The affairs of the league shall be governed by a committee composed of one representative from each college. This committee shall meet at such times as may be mutually agreed upon and transact all necessary business.

Eligibility to Athletic Teams. No man shall take part in any league game or contest who is not a regular student at the institution which he represents. Previous to every such game or contest the manager of each of the opposing teams shall furnish the other with a list of the members of his team, together with a certificate from the president of the college that all such members are regularly enrolled students of the institution.

Officials. No person shall act as referee or umpire or fill any important official position in any league game or contest, who is in any way connected with either of the contesting colleges. This rule may be disregarded, however, by mutual agreement, in the case of linesmen and other subordinate officials. Arrangements for officials for each game shall be made by the contesting colleges.

Expenses, Gurrantees, etc. Guarantees and similar financial arrangements shall be made for each game between the contesting teams, it being understood that the home team will pay the entire expense of the visiting team so far as possible. Calculations of expenses shall be made on the basis of 15 men for a foot ball team and 12 for base ball (including manager). Any manager who desires to carry a larger number than this must do so entirely at his own expense,

Schedule of Games for Foot Ball and Base Ball.

1. Conn. vs. R. 1.
2. Maine vs. N. H.
3. Mass. vs. winner of 1.
4. Winner of 2 vs. winner of 3.

Rules. The usual intercollegiate rules shall govern all games and contests.

◆
BASEBALL.

The game between Williston and Aggie on the campus May 26, resulted in a defeat for the home team by a score of 22 to 8.

Owing to the lack of practice, Aggie played a very loose game. In the first inning Aggie succeeded in making three runs: Emrich waited for a base on balls, Warden made a hit over second and Hinds followed with a hit to right. Hooker flied out to left, scoring Emrich. Chappy knocked a light fowl which Whiton squeezed. Then Crowell lined out a single over second sending Warden and Hinds home. Halligan fanned the air three times, retiring the side. After this inning Aggie could not seem to find the ball.

Williston played a loose game in the field, and, had the home team been playing their usual game, they would have won easily.

Crowell played a fine game behind the bat, while Ely, Tuttle and Goodrich played the game for Williston.

The score:

WILLISTON.

	A.	B.	R.	1 B.	S. B.	P. O.	A.	E.
Pond, 1b	7	2	1	1	3	12	0	1
Riddell, r	7	3	2	0	0	0	0	1
Taylor, m	7	5	1	0	1	0	0	0
Roberts, 3b	7	3	2	0	0	0	1	1
Tuttle, s	7	3	2	0	5	3	3	1
Ely, p	7	2	2	0	0	0	6	1
Goodrich, l	7	2	2	0	0	0	0	1
Whiton, c	5	2	2	0	4	3	3	1
Livermore, 2b	4	1	0	0	4	3	3	3

AGGIE.

	A.	B.	R.	1 B.	S. B.	P. O.	A.	E.
Emrich, 2b	5	1	0	0	3	5	5	4
Warden, 3b	5	1	1	1	3	5	3	3
Hinds, l	5	3	2	0	0	0	0	0
Hooker, m	5	1	1	0	4	0	0	0
Chapman, s	5	1	1	0	3	2	5	5
Crowell, c	4	0	3	0	2	1	1	1
Halligan, 1b	4	0	1	0	12	0	2	3
Peters, r	4	0	0	0	0	0	3	3
Eaton, p	4	1	0	0	0	0	2	0
Innings,	1	2	4	5	6	7	8	9
Williston,	0	1	0	0	2	1	6	9
Aggie,	3	0	0	2	0	1	2	0
								3-22
								0-8

The freshman looked into the sky,
And slowly shook his head,
"When one looks at those other stars,
How shall one feel," he said.

—Harvard Lampoon.

✓
ATHLETICS.

On Monday, May 31, our athletic team defeated the Storr's team by a score of 69 points to 39. The summaries:

100 YARD DASH.

- 1st, Dutcher, M. A. C.
- 2d, Mansfield, S. A. C.

220 YARD DASH.

- 1st, Dutcher, M. A. C.
- 2d, Mansfield, S. A. C.

HURDLE RACE.

- 1st, Eaton, M. A. C.
- 2d, Gile, M. A. C.

MILE RUN.

- 1st, Maynard, M. A. C.
- 2d, Bidwell, S. A. C.

HIGH JUMP.

- 1st, Webb, S. A. C.
- 2d, Eaton, M. A. C.

BROAD JUMP.

- 1st, Beardsley, S. A. C.
- 2d, Emrich, M. A. C.

ONE MILE BICYCLE RACE.

- 1st, Saunders, M. A. C.
- 2d, Colburn, M. A. C.

SHOT PUT.

- 1st, Eaton, M. A. C.
- 2d, Stanley, M. A. C.

THROWING 16 LB. HAMMER.

- 1st, Stanley, M. A. C.
- 2d, Baker, M. A. C.

POLE VAULT.

- 1st, Webb, S. A. C.
- 2d, Mansfield, S. A. C.

MILE WALK.

- 1st, Smith, S. A. C.
- 2d, Cheney, M. A. C.

440 YARD DASH.

- 1st, Eaton, M. A. C.
- 2d, Beardsley, S. A. C.

EXPENSES AT COLLEGE.

The following is a true statement of the expenses for four years of 52 weeks each of a recent graduate of this college :

FRESHMEN YEAR.

Fall Term.

Board,	\$43.13
Room Rent,	14.48
Term Bill (text books, etc.),	6.90
Subscription to College Paper,	1.00
Sundries,	7.53
	<hr/>
	\$73.04

Winter Term.

Board,	\$26.07
Term Bill,	2.47
Room Rent,	6.00
Sundries,	8.42
	<hr/>
	\$42.96

Spring Term including summer vacation.

Board,	\$60.70
Room Rent,	9.49
Term Bill,	3.25
Sundries,	14.49
Freshman Night Excursion,	5.00
	<hr/>
	\$92.93

Total \$208.93

SOPHOMORE YEAR.

Fall Term,

Board,	36.04
Room Rent and fuel.	9.50
Term Bill,	2.35
Pocket lens for plant analysis in Botany,	5.00
Subscription to College Paper,	1.00
Instruments for Mechanical Drawing,	8.00
Furniture,	7.50
Sundries,	24.06
	<hr/>
	\$93.45

Winter Term.

Board,	\$42.21
Room rent and fuel,	14.18
Term bill,	1.90
Drawing instruments, etc.,	5.66
Sundries,	21.58
	<hr/>
	\$85.53

Spring Term through summer vacation.

Board,	\$42.46
Room Rent,	5.05
Term bill,	2.00
Sundries,	19.24
	<hr/>
	\$68.75

Total \$247.73

JUNIOR YEAR.

Fall Term.

Board,	\$37.45
Fuel,	3.00
Index publication, special tax,	8.00
Class excursion in Market Gardening,	6.30
Sundries,	29.66
	<hr/>
	84.41

Winter Term.

Board,	\$28.41
Term bill including room rent, lights, laboratory taxes, text-books, etc.,	32.86
Sundries,	17.53
	<hr/>
	\$78.80

Spring Term through summer vacation.

Board,	\$62.30
Term bill,	29.52
Sundries,	28.85
	<hr/>
	\$120.67

Total \$283.88

SENIOR YEAR.

Fall Term.

Board,	\$41.22
Term bill,	7.00
Fuel,	5.25
Subscription to college paper,	1.00
Sundries,	43.97
	<hr/>
	\$98.44

Winter Term.

Board,	\$29.08
Term bill,	12.13
Sundries,	12.39
	<hr/>
	\$53.60

Spring Term to Commencement only.

Board,	\$27.50
Term bill including college diploma	21.32
Boston University diploma,	10.00
Class photographs,	9.00

Class photograph album,	9.00
Cap and gown for use at Commencement,	6.25
Special class taxes for Commencement exercises,	14.00
Sundries,	17.31
	\$114.38
Total \$266.42	
Freshman year,	\$208.93
Sophomore year,	247.73
Junior year,	283.88
Senior year,	266.42
	\$1,006.96

College Notes.

—"It's all up with'em now, boys!"

—"Rumors of war are in the air."

—What are you going to take next year '98?

—The Senior vacation commences next week.

—Prof. F. S. Cooley spoke before the Y. M. C. A. two weeks ago last Sunday.

—Rev. Mr. Gaylord addressed the students last Sunday in exchange with Dr. Walker.

—Mrs. Maynard is intending to give a lawn party to a few of the students next Friday afternoon.

—S. E. Smith went home two weeks ago to assist in the singing at the ordination of his home minister.

—G. C. Hubbard '99 was initiated into the Alpha chapter of the Phi Sigma Kappa fraternity last Saturday night.

—C. F. Palmer has also been a victim of dogwood poison. "Guess it would be a good idea for us to learn just what dogwood is."

—Prof. Mills addressed the pupils of the Amherst High School last Thursday morning on "The advantages of being citizens of Amherst."

—In spite of the stormy evening a week ago Thursday night about forty assembled to enjoy the "Charity Ball." The usual persons were present and every one had a fine time.

—At a joint athletic meet with Amherst a week ago Friday afternoon, the Aggie team won three firsts. E. B. Saunders won first in the bicycle race, breaking the Amherst college record by twenty seconds. J. R. Dutcher won the remaining two victories, in the 100 yard dash and 220 yard dash,

—The bug nets have again made their appearance and the art of catching bees and wasps without getting stung has practically commenced, yet several specimens have made their fortunate escape.

—The Boston prize squad of the Aggie delegation went to Boston two weeks ago Friday in charge of J. M. Barry. The second medal was awarded to C. A. Norton in the execution of the manual and firings.

—The Sophomore Burnham four have selected the following declamations: W. H. Armstrong, Surrender of Burgoyne; H. E. Maynard, Patriotism; W. E. Hinds, Battle of Monmouth; E. M. Wright, Webster's Speech.

—Prof. King of the Wisconsin Univ. who has just issued a very interesting work on "Soils," and Mr. Adams their superintendent were sent here this week by the trustees of the University to look at our library and barn buildings.

—The speakers of the Burnham four and the titles of their declamations are as follows: C. A. Crowell, American Flag; A. L. March, Assault on Fort Wagner; G. F. Parmenter, Speech of Titus Quinticus to the Romans; F. G. Stanley, Spanish Armada.

—Mr. Wallace desires to give notice once more that all students in the college dormitories should bring their burned out lamps to him, for an exchange of new ones, as the old ones can be made over at one-third the cost thus saving quite an item of expense.

—Once more the Senior flower bed graces the grounds in front of South College. The bed is of a very artistic and pleasing design. In the center is '97 in large plant numerals. It is unquestionably the best design that has ever adorned this sacred spot.

—Another electric light has been placed on the outside of South College. This one is directly over the middle entrance on the south side while another one has been placed over the president's entrance on the east side. North College also has one at the west entrance.

—W. S. Fisher attended the Springfield Pomona Grange meeting at Granby last Wednesday afternoon. The subject of the afternoon session being "The benefits derived from the Mass. Agricultural college. The debate was all on the affirmative side and the time devoted to this discussion was well taken up.

—This year our representative to the Boston University was sent on the basis of the best scholarship during the four year's course. Mr. G. D. Leavens was the honored person and a week ago today addressed an audience of 6000 at the B. U. commencement exercises on "A Practical View of Education."

—According to Webster, the word "roast" has the following definition: "To cook by exposure to radiant heat before a fire; to cook by surrounding with hot embers," but the sense in which the Prize Drill at Boston brings it into use is, that the Aggie squad were not judged by their merits and that we deserved far more than we received.

—The Junior class have about finished their Flint prize orations. The following is a list of the speakers with their subjects: Avedis Adjemian, "Europe and Her Rulers"; Charles Baxter, "George W. Curtis"; Willis Fisher, "A Gift of the Nineteenth Century"; Alexander Montgomery, "Gen. U. S. Grant"; John Nickerson, "Cuba"; Randal Warden, "Arbitration."

—The Y. M. C. A. are making an extra effort to get a large number of delegates at Northfield to the World's Student Conference this year than ever before. It seems that we ought to be able to get at least ten men to attend this conference for the whole length of time (June 25 to July 4). The expense to the delegate will be small and may it be that the desired number will go.

—The college reservoir is at last completed. President Goodell made a final inspection last Friday. The pipes are all laid with the one exception where it crosses the brook leading into the Aggie pond. Nothing at present will be done about making the connection with North College. The work when finished will furnish to the college a great accommodation, especially when the town water is shut off.

—The new M. A. C. flags consist of the three white letters placed on maroon felt. The flags are very attractive, being twenty-four inches long and 10 inches wide, and are made to tie on to a cane in cases of emergency. W. H. Armstrong '99 deserves the praise of getting them out. A very brief notice of the College commencement was given in the *New England Homestead* two weeks ago. By such means all alumni should hear of our elaborate commencement plans and feel it their obligation to help carry these plans out.

—Two weeks ago President Goodell in company with Prof. Fernald and A. H. Kirkland went to Somerville to inspect a moth which has recently broken out as a great pest. The name of the insect is *Euproctis chrysoorrhoea*. The committee immediately reported to the Board of Agriculture on the Gypsy moth, birds and insects. An interview with Governor Wolcott was also granted. The committee with Dr. Howard (who is Chief of the Entomological Department at Washington) after the hearing, desired that they should send to him a paper setting forth the facts regarding the moth and recommending what ought to be done. The following day the paper was sent in asking for \$10,000 with which to destroy the pest.

COMMENCEMENT 1897.

The unusual attractions offered this year added to the annual ones promise to bring a very large number of men back to the College. Means are being taken to make every man feel welcome and fully repaid for his trouble in coming. It is needless to mention here, all the features, but a few may be noticed.

President Goodell, Doctor Goessmann, and Professor Maynard will offer a cordial greeting to all. The new men of the faculty will be glad to meet all former officers and students. An examination of the improvements in building, and grounds, especially the recent ones, is alone worth a trip across the country. The latest one, a most excellent system of water works is just completed. Professor Stockbridge of Amherst and President Atherton of State College, Pennsylvania, are to speak on Tuesday on the old and the new in education. These addresses will be of very great interest. An unprecedented number of class and fraternity reunions will be held. The alumni meeting on Wednesday morning will be a very important one.

A special feature is to be the singing by former and present M. A. C. students. Former musical organizations are expected to re-organize and to execute their old programs.

The banquet on Tuesday evening will bring together *the largest number of M. A. C. men ever assembled*. Tickets to this have been placed at a very low figure, so that no undesirable margin of profits may remain. There are a few seats still untaken, but in order to

secure one, application should at once be made to Mr. Nickerson. On the arrival of all through trains at the B. & M. station, an agent of the Associate Alumni will be present, who will impart information to all inquirers concerning exercises, board and lodging, transportation and so forth. An information office, a free parcel room and reception rooms will be found at the College. Do not forget that Amherst now has an electric street railway. The first trips were made last Friday. Direct conveyance can be had by this means to all points on Pleasant street, between the B. & M. station, and Factory Hollow in North Amherst. The college boarding club offer meals at low rates, and a well furnished café will be situated in South College. Dan Hart will receive at the usual place.

CHANGE IN THE COMMENCEMENT PROGRAM.

1st The baccalaureate sermon, Sunday, June 25, will be preached by some one outside of the faculty, Rev. Calvin Stebbins of Worcester having been selected. His sermon will be on "The duties a man in the present owes to the future."

2d The President's address to the senior class, Monday morning will be omitted.

3d The battalion drill will be held on Tuesday morning instead of the afternoon, and class day exercises will occupy its place on the general program.

4th Instead of an alumni dinner, with its formality and set speeches, there will be a commers in the evening directly after the usual reception. It will be an occasion of bringing together trustees, college and former members. Let mirth, fraternity and song prevail.

Alumni.

'72.—We wish to correct a mistake in our last issue regarding the appointment of C. F. W. Felt '86, chief engineer of the Colorado & Santa Fe Railroad, as being the first M. A. C. graduate to receive the honor of being a member of the American Society of Civil Engineers. S. C. Thompson was first to receive this honor being elected Feb. 8, 1889 and is still a member of high standing.

'75.—Francis G. Parker, was reported as

drowned. Can any one supply date of his death? If so kindly forward it at once.

Ex-'80.—Dr. Wm. E. Walker, Practicing Physician, Springfield, Utah.

'82.—Charles S. Plumb sailed for Europe, June 4, where he is to visit the Agricultural Experiment Stations of the continent, also, those of England and the Island of Jersey.

'85.—The last number of the *New York Medical Record*, contains an abstract of a paper by Dr. Joel E. Goldthwait, Boston, on the treatment of "Deformities of the Knee, resulting from 'Tumor Albus.'" This paper was read at the Congress of American Physicians and Surgeons held in Washington, D. C., May 4, 5, 6, 1897.

'86.—The Appalachians to the number of twenty or thirty visited college last week and also this week. Among them was Richards B. Mackintosh of Peabody, and his wife.

'89.—Robert P. Sellw, who has been acting agent for The Cleveland Linseed Oil Co., has now charge of the business, represented by that firm in the Eastern states.

'91.—Invitations of the wedding of Walter A. Brown to Miss Stella H. Price of Iowa City, Ia., have been received.

'92.—Announcement was made June 2 of the marriage of H. E. Crane to Miss Charlotte E. Sargent, both of Quincy, Mass.

'92.—H. B. Emerson and Miss Elizabeth Ellen Sutliff were married June 7, at Schenectady, N. Y.

'92.—G. B. Willard, Waltham, Mass.

'94.—H. Preston Smead, Box 990, Hartford, Conn., employed at the Handicraft Farm.

'94.—The *American Journal of Science* contains an article by C. F. Walker on the "Application of Iodic Acid to the Analysis of Iodides.

'95.—H. B. Read, Westford, Mass.

'95.—Arthur B. Smith, 177 La Salle St., Chicago, Ill., Insurance Agent, Hammond, Fay and Sheldon.

'95.—Harry E. Clark, Superintendent of Farm at Agawam, Mass.

'96.—W. L. Pentecost has been appointed Assistant Agriculturist at Storrs Agricultural Experiment Station.

THE ALUMNI AND THE COLLEGE.

A college is of little value or much, according to whether it is supported by a few indifferent friends or by a strong and aggressive body of backers. Which kind of a college shall ours be during the next decade? This question shall be answered by the alumni.

The work of trustees, president, faculty and students must be supplemented by their coöperation. It is often said that the alumni are interested in the college, but they can give it no special thought because of their own business interests which must receive their undivided attention.

The life of a man is of little worth, at the summing up, save for what he has done toward the elevation of his race, for the education of himself and his fellows. Whatever other interests may engage the intelligent citizen, that which should be paramount with him, is education. *Every man should have a college* to which he gives loyal and *constant* support. Any business must be advertised by peculiar methods adapted to the particular end in view. *A college must be advertised by its alumni.* If each former student, or even one in every ten, would take the slight trouble of directing the attention of the young men in his vicinity to his own college, it would be successfully advertised. An excellent field for such work is among the scholars of the high schools. Any information can be quickly obtained by sending a postal card to the college. The results which some of the alumni have accomplished in this way are most praiseworthy. *What the College now needs is 100 just such men* among its former students in this state who will send one man each to M. A. C. next September.

FORMER STUDENT.

Exchanges.

A recent bulletin, issued by the Dairy Department, advises that during a thunder storm, milk be placed in the smallest refrigerator in the house, so that it will not have room to turn.—*Cornell Widow.*

There was once an old salt from Dundee,
Who had both legs shot off while at sea;
But he'd say with a wink,
"One advantage, I think
Is my trousers can't bag at the knee."

—*Life.*

There are in the German universities 2000 foreign students, of whom more than 400 are American, a larger number than of any other country except Germany.

In an address before the students of Harvard recently, Mr. Lehmann said in regard to university training: The office boy doubtless earns more money at twenty-one than the Master of Arts does at twenty-five. But look at him at forty, with a listless attention, a mind vacant of all material of amusement, and not one thought to rub up against another, while he waits for the train.

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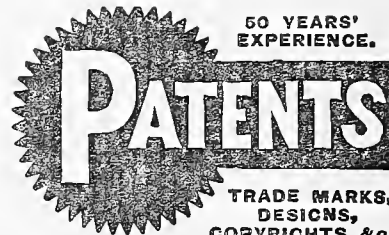
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AGGIE LIFE.

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Remember June 22!

Come to the Commers!

Commers To-Night!

Editorials.

WITH this issue of the paper the Editors close their sanctum for a long summer's rest, rest that shall consist for the majority of ten hours of labor for the PATER. Probably those who are compelled to read this organ of college news and sentiment will be pleased to hear this, feeling that they will thus be spared for a time the monotony of our diction. However, we shall bear no ill will because this is so, but

only beg to remind that it makes us tired occasionally to send out several hundred slips,—your subscriptions are due—and get so very few plunkers in return. Nevertheless now that all the old alumni are back once more amid these familiar scenes, we shall endeavor to wake up and probably can be materially aided in keeping awake, next year, by a renewal of your subscription to the LIFE, and a purchase of the '98 Index, in which publication we are also deeply interested.

It always gives us great pleasure to hear of any successes which our graduates meet with in the performance of their various duties. Recently our notice has been called to the *Toledo Weekly Blade* which quotes as follows: "One of the very best bulletins yet issued by any Experiment Station is No. 46 of the Hatch Experiment Station of the Mass. Agr'l College on the food, habits, and economical value of the American toad, prepared by A. H. Kirkland." Also the *Electrical News* contains a tribute to the exhaustive series of experiments on Electro-Germination recently made at the Mass. Agricultural College by Asa Kinney. It goes on to say, "Nowhere else have experiments been so extensively and carefully carried out and we shall hope at an early date to publish a resumé of this interesting work." August de Candolle in a private letter, speaks of the very interesting and remarkable paper on Electro-Germination and publishes an abstract of it in the "Archives des Sciences Physiques et Naturelles." From the *Agricultural Journal*, Cape Town, Africa, comes the note, "We hail with pleasure the first report of our entomologist, Chas. P. Lounsbury. It abounds in just the information needed." And so it goes, too innumerable to record. The scientific works of our graduates contained in books and pamphlets would reach, in numbers, into the hundreds.

A VERY valuable specimen has recently been brought to our notice, a specimen that is very rare and aged. It comes from a collection of curiosities now in the possession of President Goodell, but formerly belonging to his father. Although it is not preserved in alcohol it is something generally a boon companion of the bottle, and at first sight would be a bad recommendation for its former honorable possessor. Now-a-days it is often said, if a college man is found with playing cards in his hands you may be sure he is on the road to damnation. A playing card is just what this is and President Goodell informs us that this was with his father in Dartmouth college in 1816. On one's inspecting the card as it is handed to him he sees a queen of diamonds which is very similar to the queen of diamonds of to-day. He idly turns it over, and on the back becomes initiated to the mysterious rites of the old playing card. It seems that in the days when Webster and all our great statesmen attended college it was customary to print the schedule of exercises on the backs of playing cards. This one reads :—

Lectures
on
Surgery, Medicine, Anatomy,
and
Chemistry, By
Nathan Smith, M. D.
Cyrus Perkins, M. D.
Reuben D. Mussey, M. D.
Dartmouth College, Oct. 1816.
For Mr. William Goodell.

Have we made any advance over the customs of eighty years ago? We leave our grandmothers and the new woman to fight it out.

THE college team has just closed one of the most successful seasons of its history. The team began practicing in the Drill Hall about the middle of the winter term and continued until the vacation. It has been as strong as any for several years and has made a very creditable showing, having won three out of the seven games played. Aggie opened the season by playing the strong Haydenville team and were only beaten after a hard struggle by a score of 5-4. Most of the games played were closely con-

tested and had we had any kind of luck the number of games won would be much larger. The batting and the base running of the team was noticeably weak; while the fielding was very good, we out-fielding most all our opponents. One fault of this season's work was that there were not enough games played and they were played at such intervals that the team lost interest. If more games could be arranged for next season and have them played about twice a week, greater interest would be shown and we think the men would practice more. If we are going to play ball why not play with college teams instead of semi-professional teams as we have done this year? There is no credit in beating a minor team; in fact, it lowers the standard of the college. Now if we play college teams even if we are beaten, it extends the name of the college among other students. Next season we should develop a good team as only one member is going to leave. Class games seem to be of great interest and they seem to afford more pleasure than college games. Now why can't we arrange a series for next spring not only to see which is the championship class but to develop material for the college team? We have good material for next year, and let every man come back determined to stand higher in his class than ever before, and to raise the standard of our athletics in every way he can.

AN OLD HOUSE.

[Continued.]

One evening about ten days later, not knowing just what to do with myself, I took advantage of Mr. V.'s invitation and called on him to hear some of the old Indian's stories. I have always taken a great deal of interest in the traditions of that fated race, and, except roaming in the woods, nothing ever gives me greater pleasure than to talk to any stray Indian who chances to stroll into our neighborhood. I remember that when a boy, an old Indian and his squaw pitched a tent about a mile from our house. I used to watch them by the hour at their fascinating work of basket making.

But I have wandered from my story. When I reached Mr. V's house, who should I meet but old John himself.

"Ugh," said he with a broad grin, "How, how."
"Hello John," said I, "Where is Mr. V.?"

He answered in a mixed dialect of English, French and Indian, which I shall not try to repeat, that his master was in the yard back of the house, and pointed at the same time with his long, bony forefinger in that direction.

I went as he directed and found Mr. V. seated in a chair, tipped back against the house, leisurely smoking a cigar.

"Oh, 'tis you, is it?" said he. "Come take a seat and have a cigar."

"No," said I drawing some of the weed from my own pocket, "don't believe I will, Thank you just the same. I'll have a seat though."

"Yes, and this is a good comfortable place too." Then after a few remarks upon the weather and so forth, I said:

"You remember that a week or so ago I spoke to you about an old house I ran upon, and that you told me to come around sometime and hear a few of John's stories, don't you?"

"Yes, and so that's what you've come for I wonder where the old fellow is."

"I saw him as I came in."

"All right, we'll have him here in a few minutes. He'll be only too glad to wag his tongue, if he is in the right mood, but if he is not, one might as well try to make a dummy speak. Ho, John!"

"Ye-es." came the answer. "Come here, I want you." Immediately the old fellow made his appearance.

"Here John," said Mr. V. "This gentleman wants to hear some of your stories."

The old Indian literally grinned from ear to ear and wrinkled his face in such a manner that his little black eyes could hardly be seen. I offered him a cigar, which he refused, but instead drew forth a large home-made pipe from one of his capacious pockets, squatted upon the ground and began to fill it.

"Come, come John," said I, "I want a story."

"Ugh," grunted he, evidently pleased. "How about that old house in the cove?" asked I for a starter.

"That house," replied he, in his broken dialect between the puffs of smoke, "has been there as long as I can remember, and that is seventy years and over. I once lived there a few weeks. I don't know much about it; but my people say that the evil spirit

has the place, and that once or twice there had been seen coming up the harbor a boat which would vanish as suddenly as it had appeared.

"One who saw the boat once told me that it hove in sight around the bend and made straight for the shore under full sail. When it was two hundred yards from land he heard a rushing sound on board the ship as the furling of sail, and at the same time the mast of the ship were as bare as the day she left the docks. The craft came on and landed safely on the low sandy beach. He started down the shore to take a look at the vessel; but it was no longer to be seen; every part of the beach was clear.

"I never saw the phantom ship myself, but I have sometimes heard rollicking songs and loud laughter in the old cove when out fishing at night on the sound.

"One night while I was living at the old house, I heard a noise outside and started out to see what was the trouble. From the door I saw a line of seven men coming towards the house. As they neared the door I stepped back and grabbed a knife. They did not notice me but marched quietly by into the house. I heard them go down cellar and that was all I ever saw or heard of them. Next day I searched the house; but everything was the same."

"Say John," said I, "what did you have to drink that day?"

He looked at me blankly for a moment as if he did not catch my meaning, then his eyes snapped and, clinching his fists he mumbled something in an under tone to which Mr. V. and my self laughed boisterously much to the discomfiture of the old Indian.

No amount of persuasion would induce him to continue, nor would he ever again finish his story.

BASEBALL.

The game between Aggie and Bay State on the campus, June fifth, resulted in a victory for the home team by the score of 16-9. It was a very uninteresting game the fielding of the visiting team being loose.

The home team batted remarkably well; in fact, it was the best that has been done so far this season.

The fielding of Aggie was not as good as usual and had we fielded well the number of runs scored by the Bay State team would have been considerably less.

	AGGIE.					E.
	A.B.	R.	1B.	P.O.	A.	
Emrich, s	6	4	2	2	2	2
Warden, 3b	6	4	2	3	2	2
Hinds, l	5	3	2	1	0	0
Hooker, m	5	2	2	1	0	0
Courtney, 2b	5	1	0	3	0	2
Crowell, c	5	0	2	1	1	3
Halligan, 1b	5	0	1	8	2	0
Peters, r	5	0	1	2	0	0
Eaton, p	5	2	2	0	2	0

	BAY STATE.					E.
	A.B.	R.	1B.	P.O.	A.	
McCarthy, s	5	2	1	0	2	4
Purcell, c	5	1	2	4	0	0
Meehan, 2b	5	2	1	2	2	2
Foley, r	5	1	2	0	0	0
Martin, 3b	5	2	0	1	0	0
Cantwell, m	5	1	0	0	0	0
Hennessy, l	5	0	0	2	0	0
Laundry, 1b	5	0	1	6	0	2
Wall, p	4	0	0	0	4	0

N. Y. M. C. A. 9, AGGIE 8.

Aggie met Northampton Y. M. C. A. at the Driving Park, Friday June 11, and was defeated by the above score.

The game was very closely contested throughout and it was not until the last inning that the game was out of doubt.

We played a steadier game than usual and the team work was very apparent. The base running and the batting was a great deal better than in the previous games.

The features of the game were the steady playing of Aggie and the pitching of Phelps for Northampton.

	AGGIE-					E.
	A.B.	R.	1B.	P.O.	A.	
Warden, 3b	5	2	1	4	0	1
Dutcher, r	5	0	1	3	1	0
Chapman, s	5	0	0	2	1	0
Hinds, m	5	1	3	1	0	0
Eaton, p	5	1	1	0	4	0
Crowell, c	5	1	2	5	1	0
Halligan, 1b	5	1	1	6	0	0
Courtney, 2b	4	2	0	1	0	1
Colburn, l	4	0	0	2	0	0

	NORTHAMPTON Y. M. C. A.					E.
	A.B.	R.	1B.	P.O.	A.	
Tobin, 2b	5	2	2	1	1	0
Rolley, l	5	1	2	2	0	0
Keach, m	5	0	1	1	0	0
Burke, c	5	1	0	7	0	1
Phelps, p	5	3	1	0	1	0
Crooks, 1b	5	0	1	7	0	2
Carver, r	5	1	1	2	0	0
Spooner, s	5	1	3	1	4	1
Frawley, 3b	5	0	1	0	1	1

Notes and Comments.

As the term draws to a close, the interest shown by the students in certain departments of the college takes a sudden boom. The Freshmen have worked hard all through the term in the preparation of their herbariums, and especially during the past week or two have they been collecting some of the most lus-

cious specimens imaginable from a limited area somewhere in front of the Stockbridge house. But these never appear in their herbariums. Then the Sophomores have been studying horticulture and they are naturally deeply interested in the largest, best, and most toothsome varieties of early berries. They have undoubtedly heard the old saying that "Experience is the best teacher." Probably nowhere in the state is there a larger collection of the most luscious of berries and so the task of selecting the best is eagerly welcomed by the members of this class. Still we fear their well-meant efforts are not fully appreciated by some of those who have charge of this work. Finally the Juniors, for of course the Seniors never indulge, have been searching in all conceivable places for rare species of bugs and beetles of bright colors. It is really remarkable how many big red specimens of the family *Rosaceae* they have found beneath the spreading leaves of the forbidden strawberry bed.

* *
*

The evening singing in front of South College is something new and deserves to be continued. What can be more pleasant than to sit there in the waning twilight and sing rollicking college songs or songs of home and country. It will be one of the most pleasant recollections of our college course.

* *
*

As the ocean is never still, but is continually rising and falling in long heavy swells, and when your boat is in the trough of one wave, you know that the crest of the following one will soon bear you aloft, so it is with the course of every college. There come to it seasons of prosperity and seasons of adversity. One cannot always ride on the crest of the wave. While we have been weakened numerically during the past few years, we have been continually strengthened in educational facilities and opportunities. We believe that our friends must agree with us that the course of studies here has never been so broad; that our equipment has been very greatly increased and that our faculty has never been stronger. These things can have but one result: the prosperity of our college. There are unmistakable signs that the tide has turned in our favor. One of these is the large number of applications which have been made for examination this week. Another is the

spirit that to-day prevails among the students and alumni. We all feel it, and realize that a new day is dawning for AGGIE.

* * *

To-night AGGIE is to hold her first commencement commers and we must all appreciate the novelty of the affair when we know that this is the second gathering of this kind ever held in this country. Extensive preparations have been made to make it a ringing success and to show our Alumni and friends that we are still very much alive. This is the first of the great gatherings of AGGIE men and we hope it may be repeated often in the future. It is in a large measure due to the tireless, self-sacrificing work of Dr. Wellington and Dr. Lindsey that such an event is possible, and for their generous efforts we thank them.

MILITARY APPOINTMENTS.

Massachusetts Agricultural College
Headquarters Clark Cadets.

Orders }
No. 34 } Amherst, Mass., June 22, 1897.

I. The following appointments and promotions of cadet officers and non-commissioned officers are hereby made and will be obeyed and respected accordingly.

- 1. Cadet Sergeant, Randall D. Warden, to be Cadet Major.
- 1. Cadet Sergeant Major, Alexander Montgomery, Jr. to be Cadet Captain Company "A."
- 2. Cadet Sergeant George H. Wright to be Cadet Captain Company "B."
- 1. Cadet Sergeant Willis S. Fisher to be Cadet 1st Lieutenant and Adjutant.
- 2. Cadet Quartermaster Sergeant John P. Nickerson to be Cadet 1st Lieutenant Company "A."
- 3. Cadet Sergeant Charles N. Baxter to be Cadet 1st Lieutenant Company "B."
- 1. Cadet Sergeant Clifford G. Clark to be Cadet 2d Lieutenant Company "A."
- 2. Cadet Color Sergeant Julian S. Eaton to be Cadet 2d Lieutenant Company "B."
- 1. Cadet Sergeant Avedis G. Adjemian to be Cadet Color Sergeant.
- 2. Cadet Corporal Frederick Harvey Turner to be Cadet Sergeant Major.

- 1. Cadet Corporal Edwin M. Wright to be Cadet 1st Sergeant Company "A."
- 2. Cadet Corporal Dan Ashley Beaman to be Cadet 1st Sergeant Company "B."
- 1. Cadet Corporal John R. Dutcher to be Cadet Sergeant Company "A."
- 2. Cadet Corporal George C. Hubbard to be Cadet Sergeant Company "B."
- 3. Cadet Corporal Albert A. Boutelle to be Cadet Sergeant Company "A."
- 4. Cadet Private Warren E. Hinds to be Cadet Sergeant Company "B."
- 1. Cadet Private Melvin H. Pingree to be Cadet Quartermaster Sergeant.
- 1. Cadet Private B. H. Smith to be Cadet Corporal Company "A."
- 2. Cadet Private Howard E. Maynard to be Cadet Corporal Company "B."
- 3. Cadet Private William A. Hooker to be Cadet Corporal Company "A."
- 4. Cadet Private Howard S. Courtney to be Cadet Corporal Company "B."
- 5. Cadet Private James W. Kellogg to be Cadet Corporal Company "A."
- 6. Cadet Private George F. Parmenter to be Cadet Corporal Company "B."
- 7. Cadet Private Alfred D. Gile to be Cadet Corporal and Drum Major.
- 8. Cadet Private Warren R. Crowell to be Cadet Corporal and Chief Drummer.
- 9. Cadet Private Arthur F. Frost to be Cadet Corporal and Chief Trumpeter.

Cadet Officers recommended from the Senior class of the Massachusetts Agricultural College by W. M. Wright, 1st Lieutenant U. S. A., to the Adjutant General U. S. Army and to the State Adjutant General: Cadet 1st Lieutenant and Adjutant, Geo. D. Leavens. Cadet 1st Lieutenant, H. J. Armstrong. Cadet 2d Lieutenant, H. F. Allen.

NOTABILITY

When lips are cherry-red,
When eyes are blue,
"Visions of loveliness"
I think, don't you?

When eyes are cherry-red,
And lips are blue,
"Some one's been on a bat"
I think, don't you?

—Columbia Morningside.

DEVELOPMENT OF SCIENCE AT THE COLLEGE AND EXPERIMENT STATIONS.

The work in which the college has taken the most active part naturally distributes itself in the departments of agriculture, botany, chemistry, horticulture, and entomology, and the men who have led the way in research and whose names have become household words in this State are William S. Clark, Levi Stockbridge, Charles A. Goessmann, Samuel T. Maynard and Charles H. Fernald.

After the lapse of nearly a century and a half, President Clark took up the investigation of Hales in regard to the circulation of sap. By an ingenious arrangement of mercurial gauges devised by Prof. S. H. Peabody, he was enabled to measure the sap, finding that in the case of a black birch it represented, at its maximum, the pressure of a column of water 84.77 feet in height. His most notable experiment, however, was the measuring of the expansive force of the growing cell in plants. Seeds of the mammoth yellow Chili squash were sown in the plant house, and its roots carefully measured. They were found to aggregate more than eighty thousand feet in length, and for over a month must have increased at the rate of one thousand feet per day. A growing squash was then placed in an iron semi-cylindrical harness or basket of strap iron firmly riveted together. Upon the top of the harness, and parallel with the axis of the cylinder and the squash, was fastened a bar of iron with a knife edge to serve as the fulcrum of a lever for the support of the weights by which the expansive force was to be measured. The following table shows the weight of iron lifted by the squash in the course of its development :

August 21,	60 pounds.
“ 22,	69 “
“ 23,	91 “
“ 24,	162 “
“ 25,	225 “
“ 26,	277 “
“ 27,	356 “
“ 31,	500 “
September 11,	1100 “
“ 13,	1200 “
“ 14,	1300 “
“ 15,	1400 “
“ 27,	1700 “
“ 30,	2015 “
October 3,	2115 “

“ 12,	2500 “
“ 18,	3120 “
“ 24,	4120 “
“ 31,	5000 “

The experiment was terminated by the weight of two and one-half tons breaking through the rind. The squash weighed at the close 47 1-4 pounds; its rind was three inches thick and unusually hard and compact. Never was the growth of a squash watched with greater interest. Thousands came from all parts of the country to see it. One enthusiastic professor sat up nights with it, another was moved to make it the subject of a poem, and the late President Seelye declared that he positively stood in awe of it. These experiments are all matters of record, and have been described at length in the college reports.

Levi Stockbridge published in 1879 and 1880 the results of extended experiments and observations made for determining the relations between soils and water. By means of a lysimeter (an instrument for measuring drainage) built in the field, he secured figures showing the amount of water which the soil loses by drainage. The amount was proved to be insignificant in most soils.

In the same year he showed that the average temperature of the soil is about 6° F. higher in the night time than that of the air above it; and as a consequence the formation of dew, at least on objects near the earth, results from the condensation of vapor of water from the earth instead of from the air, as was previously believed.

On the basis of analysis of crops, previously made, he constructed formulas for fertilizers for each of the common crops. He then demonstrated that if a given acre unfertilized would produce a stated amount, by the application of the special manure for that crop, a definite increased yield could be guaranteed. The publication of these statements revolutionized the use of fertilizers, leading the farmers to a more extensive use of all kinds, and to a more intelligent application of them.

Samuel T. Maynard's best work is in the men he has trained and put into the field. Twenty-five market gardeners and twenty-eight florists and landscape gardeners may fairly be placed to his credit. His bulletins on testing of fruits and vegetables and his spraying calendars—telling how and when to spray to

keep off the attacks of insect pests and fungous diseases—are eagerly sought, and an extra edition is almost invariably required to supply the popular demand.

Charles H. Fernald has always been at the front in every emergency. Twenty-three thousand copies of his bulletin on bovine tuberculosis, when the question of legislation was first agitated, were disseminated among the farmers. When the gypsy moth so unexpectedly made its appearance, he identified it at once as a European pest of an unusually destructive character, and forty-five thousand copies of his bulletin, carefully describing it and making known the proper remedies, were put into the hands of the tax payers of the then infested district. He has already sounded the alarm respecting the brown-tailed moth and will soon issue a descriptive bulletin. His pupils are already taking first rank. One is entomologist to the Gypsy Moth Commission; a second is assistant to the State Entomologist of New York, and a third has been selected by the British government to go to Cape Town, Africa, as an economic entomologist.

Charles A. Goessmann has been connected with the College for nearly thirty years, joining the faculty a few months after it was opened for the admission of students. He very soon called attention to the success of the beet sugar industry in Germany and France, and as the result of a series of experiments on the College grounds, made the prediction that "with care in selecting good seeds and with a fit soil, it is quite apparent that the sugar beet promises with us as good results as in Europe." From the success already attained in California and Nebraska, and the agitation now going on looking towards the extension of the industry, it is becoming evident that this prediction will be realized in the near future, and the United States will become a producer of its own sugar.

In the Tenth Report of the College (1872) he gave an elaborate exposition of the past and present knowledge of plant nutrition. The results of analyses of various fertilizing substances sold in Massachusetts were presented, and attention was called to the need of a fertilizer law for the control of the sale of these materials. Mainly through his efforts this law was secured, and in 1873 the first report made to the State Board of Agriculture. A successful farmer has recently said that, had the College done nothing

more than protect the farmers from fraud in the sale of these articles, it would still have been worth a large part of what it has cost the State.

Professor Goessmann instituted a series of investigations on the salt marshes in the vicinity of Marshfield, and demonstrated that with the sea water once diked out, and with a suitable system of drainage—in order to remove the excess of saline deposits—many of these tracts of practically waste land could be made to produce large crops of hay and other farm crops.

He has devoted much attention to the chemistry of fruits. A great many varieties have been analyzed, and these results together with many actual experiments have proved that potash, especially in the form of sulphate, has a very beneficial effect, not only in increasing the quantity but also the quality of the resulting product. This teaching has now a very general application among fruit growers. More recent experiments have also called attention to the advantage of particular combinations of plant food on the growth and character of vegetables and tobacco; also to the most economical way of supplying farm crops with the costly element nitrogen, and to the value of different forms of phosphoric acid. Numerous other experiments have also given the farmers of the State a vast deal of information relative to the value of different fodders and concentrated food stuffs in the economical production of beef, milk, and pork.

At the request of the Department of Agriculture at Washington, the meteorological division has undertaken a series of observations on the relation of soil temperatures and moistures to the growth of corn, which promise to be of great interest. The temperatures are taken with mercurial thermometers at different depths—from two inches to six feet—below the surface. The soil temperature and moisture are determined by an electrical instrument specially devised for the purpose, depending upon the well known principle that with decrease in moisture contents the electrical resistance increases.

Since the establishment of an agricultural experiment station in the State, there have been published twenty-one annual reports and two hundred and two bulletins on a great variety of subjects, aggregating 1,700,000 copies and 106,722,000 printed pages. These have all been distributed without cost, in accordance with the law of Congress establishing experiment stations.

College Notes.

—Professor William P. Brooks resumes his work in the fall, after a year spent in study in Germany.

—Mr. C. F. Walker '94 graduated and received the degree of Ph. D. in the post graduate course at Yale.

—The Q. T. V. fraternity will hold its annual reunion and banquet in its remodeled rooms in North college.

—The class that graduated last year expect at least twenty men back. Their reunion will not be held until next year.

—The class of '95 expects fifteen men to its reunion which will be held in Pacific Hall Tuesday afternoon at half past five.

—The class of '82 will hold its reunion this year. They will meet at the home of Dr. Paige, Tuesday afternoon at half past five.

—The D. G. K. society held its annual reunion and banquet at their society house Monday night directly after the speaking.

—The Aggie baseball team played their final game with Northampton Y. M. C. A. a week ago Friday and were beaten by the score 9-8.

—The College Shakespearian Club held its annual reunion and banquet at Pacific Hall after the Burnham prize speaking, Monday evening.

—J. F. Barrett, who graduated in the class of '75, and who is at present a traveling salesman, will be toastmaster at the Commers Tuesday night.

—Announcement is made of the marriage of Prof. Hasbrouck to Miss Carrie Van Valin of Poughkeepsie, N. Y., to take place, June 30, at 6 o'clock P. M.

—Mr. E. H. Sharpe who has been at home on account of poor eyesight has returned to college and will take up his work with his class next year.

—The '97 quartet furnished the music at the services last Sunday morning; the regular quartet singing at the Y. M. C. A. exercises in the evening.

—A very fine lot of strawberries is being picked this year. More land than usual has been given up to this crop and probably we will have the largest amount of berries that we have had for years.

—The class of '92 has had a plate mounted over the fireplace in the library reading room with the following inscription: "Tower Clock Presented by '92,"

—Prof. Fernald will soon publish a bulletin on the brown tail moth (*Euproctis chrysohœa*), the European caterpillar pest in the eastern part of the state.

—The electric cars made their first trial trip last Wednesday. Owing to the debris and dirt on the tracks the journey was made very slowly yet successfully.

—The Phi Sigma Kappa fraternity held its annual reunion and banquet in its newly extended quarters last Monday night. About forty of the graduates were present.

—We are glad to see so many of our alumni back this commencement, yet we trust that they will have such an experience as will cause them to come back every commencement.

—Nearly all of the Seniors remained at college during the Senior vacation and rested(?). Some continued work on their studies and others were occupied at the plant house.

—Mr. Charles S. Howe '78, who is professor of Mathematics in the Case School of Applied Science at Cleveland, Ohio, made a visit at the college a week ago last Sunday and Monday.

—Prof. Herman Babson was married last Thursday night. Prof. Hasbrouck will be married during the vacation and both professors will bring their wives here at the opening of the new year.

—One of the severest rain storms since 1869 visited this vicinity a week ago Thursday. About four and one quarter inches of rain fell nearly equal to the total amount of fall during the entire month of May.

—The new feed law will go into effect July 1. During the summer the old position of the chemical laboratory will be remodeled in order to accommodate the increased work involved in the analysis of concentrated feed products.

—The photographs of the six Presidents of our Agricultural Colleges in New England very neatly adorns the outside page of the *New England Homestead* dated June 12, '97. Pres't Goodell is among them and has a most excellent likeness.

—The library during the last year has increased seven hundred and sixty-five (765) volumes. It now numbers 18,065, and forms a most excellent working library in the sciences. It is particularly strong in entomology, botany, agriculture and veterinary.

—The faculty for next year remains the same, with the exception of Professor Leonard Metcalf, who withdraws in order to re-enter the profession of civil engineering in Boston. His place has not yet been filled. In him the college loses a gentleman and a professor who is at the top of his profession.

—Although every one will notice the fine stone bridge crossing the brook east of the college, the paper would not do itself justice to let this matter pass by unnoticed. It is certainly a great improvement and some marble ornament mounting this stone structure would be a worthy present of some generous class.

—The Freshmen had a splendid time June 11, when they experienced their first mountain day. The trip extended to Mt. Tom. Prof. R. E. Smith accompanied them and many valuable specimens were found. The class reached home about seven o'clock, fully repaid for the loss in recitations and other college duties.

—The class of '98 enjoyed their Junior supper in "Hamp" a week ago Saturday night. A. B. Call catered. The trip over and return was taken in a barge, and could the generous donors, the Freshmen, have seen them, they would have been very favorably impressed with their appreciation of keeping up this "good old time" custom.

—An entire new water system has been laid through the college grounds, more than a mile in extent, furnishing all the buildings with adequate protection from fire, and an emergency reservoir holding 150,000 gallons of water has been constructed on the property formerly owned by President Clark and recently acquired by the college.

—Colonel Hughes inspected the college battalion June 8. The Senior class were examined in the morning. In the afternoon the drill consisted of extended order movements and the inspection of the entire battalion. Col. Hughes asked nearly every cadet some questions relating to the war department which were answered, as a whole, quite satisfactorily.

—The Y. M. C. A. is to be represented at Northfield by more members than usual this year. The following men are expected to attend the conference: W. S. Fisher, A. G. Adjemean, S. E. Smith, W. H. Hooker, W. H. Armstrong, E. H. Sharpe and E. F. Hull. The class and college banners will greatly assist in the making of a good showing.

—The following Seniors will speak upon the commencement stage Wednesday morning on the following subjects: Charles I. Goessmann, War in its Influence upon Progress; George D. Leavens, A. Practical View of Education; James L. Bartlett, Roads,—a measure of civilization; H. F. Allen, A Perplexing Problem; Herbert J. Armstrong, Public Parks.

—The department of Foods and Feeding has recently received for chemical analysis a sample from a lot of butter made at the Conway Massachusetts Creamery and shipped by the department of agriculture to England. It is the object of the secretary of agriculture to place upon the English markets representative lots of American butter put up in different forms and sizes in order to call the attention of the British public to the quality of the American article. This lot of butter will also be scored by experts.

—A lawn party was held June 11 at the home of Mrs. Prof. S. T. Maynard. About four o'clock in the afternoon the friends and invited guests began to arrive. Several games were played. The most important being archery, tennis, and croquet. Between five and six o'clock cake and ice-cream was very neatly served. Later a trip was taken to Mt. Pleasant to view the sunset. The delegation consisted of M. A. C. students and members of Smith College and Amherst High. About fifty were present.

—Mr. W. H. Armstrong has offered a set of Bryce's Commonwealth to that member of the Freshmen class who will present the best freehand drawings at the end of the year. An exhibition was held last week and the work shown represents hard work and some natural ability. The judges were: Prof. C. H. Fernald, Prof. L. Metcalf, Dr. G. E. Stone, Dr. J. B. Paige, Pres. H. H. Goodell, and Prof. R. S. Lull, R. E. Smith, P. B. Hasbrouck and S. N. Taylor of Purdue University. After due deliberation the prize was awarded to E. K. Atkins 1900.

—The LIFE would call the attention of the visiting alumni to the library. Since you were here there has been presented a handsome bust of Senator Morrill, who assisted in getting the land grants for the agricultural colleges; also a picture of Mr. Hatch which has been mounted over the books pertaining to the Hatch Experiment Department; the bronze bust of President French in the library reading room also deserves attention. A valuable list of books might be given yet a little inspection will show wherein advancements have been made.

—Gifts received during the year worthy of especial mention have been, seven volumes of the Jeypore Portfolio of Architectural Details, presented by His Highness the Maharajah of Jeypore; seven volumes of Hough's Mounted Woods; a bust of Senator Justin S. Morrill, author of bill establishing colleges of Agriculture and the Mechanic Arts; portrait of Colonel Wm. Hatch, who was the author of the bill establishing agricultural experiment stations in the country; and a bronze bust of Judge French, first president of the college, modelled by his son, the noted sculptor, Daniel C. French, and by him presented to the college.

—The June numbers of the *Review of Reviews* contains a very interesting article concerning the college. The title of the subject that attracts our attention being "An Agricultural Editor." Mr. Herbert Myrick '82 well deserves the praise "that he has made a place in journalism and has gained influence through the exercise of native energy and a rare talent for organization." Four allied agricultural papers are edited or conducted by Mr. Myrick namely, *The American Agriculturist*, the *Orange Judd Farmer*, *N. E. Homestead* and the *Farm and Home*. In connection with the article is a picture of Mr. Myrick as he is viewing over some of his publications.

—We are always interested in the welfare of our professors and especially so in vacation time. Dr. Walker will be present at the graduation of his son at the Yale commencement. The remaining part of the vacation he expects to be at home. Prof. Lull goes soon after commencement to Cold Spring Harbor, Long Island, where he will study in the Biological Laboratory and also do some collecting for the same. Dr. Goessmann expects to be at home most of the time during the vacation. Dr. Flint goes to Clifton

soon after commencement, for his vacation. Prof. Mills expects to be in Amherst during most of the vacation except two or three weeks in August. Directly after commencement Dr. Wellington will go to New Hampshire for two or three weeks' rest and then expects to be at home the rest of the time.

—At the Chemical Department of the Hatch Experiment Station the control work on official fertilizers has now commenced, and throughout the summer months the work of analyzing fertilizers will be pushed as rapidly as strict adherence to the best chemical methods will permit. The fertilizer law of Massachusetts has been in operation for nearly twenty-five years and the practical results of it to the farmers of the state cannot be estimated. When originally passed by the Legislature it formed a protective measure that has been copied in substance by states throughout the Union. From time to time, as occasion has demanded, the Massachusetts law has been altered and revised to suit the needs of the times, and to-day it stands as one of the most perfect of its kind in the United States. Under this law samples of fertilizers are collected each spring comprising the various brands sold in the state. During the present season about four hundred fertilizers have been collected, the collections being made in every section of the state, Springfield, Worcester, North Adams, Lowell and Taunton might be named as the centers of the trade. But let it not be understood that fertilizers are only sold in the larger towns, for hundreds of agents are found among the farmers all through the country towns and villages. A glance into the fertilizer room of the Station laboratory is sufficient to show what the practical working of our law means. Ranged about the four sides of the room are narrow shelves, one above the other, all closely packed with small glass jars filled with fertilizer samples to be used for analysis. These jars are labeled, a careful record made of the contents of each, and when analyzed the results are published in special bulletins. The analyses of these fertilizers are made with the utmost care. Only methods of recognized excellence are used and the "short cuts" in chemical analysis that are sometimes resorted to in fertilizer manufactories where only approximate results are cared for are never countenanced in our laboratory work. Every chemist, however, is allowed freedom in the manipulation of his

work so long as it does not effect the method principle and therefore often brings slight changes into his work that are peculiar to himself. But the analysis of commercial fertilizers does not alone constitute the work of the Chemical Department. Each year several hundred samples, comprising ashes, by-products, and all kinds of material that might be of value as fertilizers are received, carefully recorded and analytical determinations made upon them. Besides this considerable special work is done on lines of investigation. A large part of the past winter has been spent in the study of the inorganic constituents of the tobacco leaf as affected by different systems of fertilization. Complete inorganic analyses have been made of between thirty and forty samples of tobacco leaf and considerable work has been accomplished on the fire holding capacity and the burning qualities of the same. The results have been most interesting and instructive and are of great value to tobacco growers in this vicinity. This work closes a series of experiments that have been conducted by the Station for several years, the results having been recently published in Bulletin No. 47.

The following is a list of books written by former graduates of the college:

- John C. Cutter '72
Beginner's Anatomy, Physiology and Hygiene.
Comprehensive Anatomy, Phosiology and Hygiene for schools, colleges, etc.
- Edward G. Howe '72
Systematic Science Teaching.
- Samuel T. Maynard '72
Practical Fruit Grower.
Landscape Gardening as applied to Home Decoration.
- Frederick A. Ober '72 "Knockabout Club Series."
Camps in the Caribees.
History of Mexico.
Travels in Mexico.
The Silver City.
Montezuma's Gold Mines.
Adventures in the Everglades.
Adventures in Spain.
Adventures in the Antilles.
Adventures in North Africa.
Adventures on the Spanish Main.
Adventures in Search of Treasures.
In the Wake of Columbus.

- Frederick A. Ober '72
Life of Empress Josephine.
About 200 magazine articles.
- David P. Penhallow '73
Botanical Collector's Guide.
Mechanism of Movement in Cucurbita, Vitis, etc.
Trees and Shrubs of Northern Japan.
Tables for the use of students and beginners in vegetable histology.
- Cecil C. Peabody '75
Thermo-dynamics.
Steam Boilers.
- Horace E. Stockbridge '78
Rocks and Soils, their origin, composition and characteristics,
- Samuel B. Greene '79
Amateur fruit growing.
Vegetable gardening.
- Henry E. Chapin '81
Biology.
- Levi R. Taft '82
Green-house construction.
- William N. Tolman '87
Manual of Guard mounting.
- Frederick H. Fowler '87
Synoptical and Agricultural Index of the Agriculture of Massachusetts, 1837-1892.
- Charles P. Lounsbury '94
Monograph on the Orthezia.
- Clarence D. Warner '81
Mensuration.
- Herbert Myrick '82
How to co-operate.
Money crops: how to grow and how to feed them.
Sugar.
- Charles S. Plumb '82
Biographical Index of agricultural scientists.
Indian Corn Culture.

Alumni.

- '82—Julio Delano, Merchant Esmeralda, II Santiago, Chili, S. A.
- '82.—D. C. Dana, Brick Manf., Lancaster, Mass.
- '85.—Isaac N. Taylor, with San Francisco Electric Co., 229 Stevenson St., San Francisco, Cal.
- '85.—Edwin W. Allen, Ph. D., Univ. of Goettingen '90, Vice Director, Office of Experiment Stations, Dept. of Agr., Wash., D. C. 1718 Corcoran St., Washington, D. C.

- '85.—Joel E. Goldthwait, M. D., 378 Marlboro St., Boston
- '85.—Benoni Tekirian, Chemist and Partner Y. T. Matzoon Co.; 51 Rush St., Chicago, Ill.
- '85.—Chas. S. Phelps, Prof. of Agr'l., Storrs Agr'l. College, Vice Director Agl. Experiment Station, Storrs, Conn.
- '87.—Fred. H. Fowler, Chief Clerk, Sec. of Board of Agr. Commonwealth Building, Boston.
- '87.—Wm. Tolman, Civil Engineer, 20 Court St., Boston.
- '87.—Firmino de S. Torelly, Stockraiser, Cidade de Rio Grande de Sul, Brazil, S. A.
- '87.—John J. Shaughnessy, Lawyer, 175 Main St., Marlboro, Mass.
- '87.—Herbert J. White, Pastor Bethany Baptist church, Roxbury, residence 79 West Cottage St., Roxbury, Mass.
- '88.—Edward H. Belden, Elec. Engineer, Supt. of Meter Dept., Suburban Light & Power Co., 1 Mulberry St., Roxbury, Mass.
- '88. B. Luther Shimmer, Stockraiser, Mt. City Park Farm, Bethlehem, Pa.
- '88.—George W. Cutler, M. D., Prof. of Physical Culture, University of Missouri, Columbia, Mo.
- '88.—Francis Foster, Civil Engineer, Mass. Highway Commission, Andover, Mass.
- '88.—Frank E. Noyes, Elec. Engineer, Noyes, Hollis & Moore, Atlanta, Ga.
- '88.—George E. Newman, Supt. of Creamery, Compoo, Barbara Co., Cal.
- '88.—Yataro Mishima, Imp. Jap. Post and Telegraph Office, Mita Shikokumachi, Shiba Tokyo, Japan.
- '90.—Chas. H. Jones, Asst. Chemist, Agr'l Exp. Station, Burlington, Vt.
- '90.—Henri D. Haskins, Asst. Chemist, Hatch Exp. Sta. M. A. C., Amherst.
- '90.—John S. West, Clergyman, Geneva, Neb.
- '91.—Walter Brown, Civil Engineer, City Engineer's Office, Springfield, Mass.
- '91.—Charles S. Crandall, Botanist and Horticulturist Agr'l. Exp. Station, Fort Collins, Cal.
- '92.—Sam'l O. Towle, D. V. S., Harv. Med. '92, Veterinary Surgeon, Needham, Mass.
- '92.—Royal P. Davidson, Commandant of Cadets, Sec. and Treas. Northwestern Military Academy, Highland Park, Ill.
- '92.—R. H. Smith, Asst. Chemist at the Hatch Exp. Station, M. A. C. Amherst, will start for Germany to begin studies at Goettingen in the fall.
- '92.—Charles Tyng, Metallurgical chemist, Victoria, Texas.
- '93.—Luiz F. Tinoco, Sugar Planter. Campos Rio Janeiro, Brazil.
- '93.—Kohachi Yamamura, Yehimeken, Japan.
- '94.—John Austin, studying Theology and Philosophy, Paris, France.
- '94.—H. J. Fowler, Scout, Gypsy Moth Dep't of Mass. State Board of Agr'l., 229 Boylston St., Brookline.
- '94.—Thaddeus F. Keith, Chemistry, Spring Water Bottling Co., 477 Main St., Fitchburg, Mass.
- '94.—Archie H. Kirkland, M. S., M. A. C., '96 Entomologist. Gypsy Moth Dep't, Board of Agr'l, Amherst.
- '94.—Saburo Ono, address Ono, Echezen, Japan.
- '94.—Erastus J. Starr, Teller, 1st National Bank, Spencer, Mass.
- '94.—Dana W. Robbins, Ass't Civil Engineer, Town Engineer's Office, Brookline, Mass.
- '94.—George E. Smith, State Cattle Commission, Pittsfield, Mass. Address, Sheffield.
- '95.—D. C. Potter, Landscape Gardner, Fairhaven, Mass.
- '95 School of Agriculture.—E. W. Capen, Manager Stony Brook Poultry Farm, Stoughton, Mass.
- '95 School of Agriculture.—Announcement was made June 3, of the marriage Williams Eaton to Miss Clara A. Weeks of Amherst.
- '95.—Shiro Kuroda, Buyer of Japanese Goods, Motoshige Chi, Nagoya, Japan.
- '96.—Newton Shultis, with Mark Shultis, Grain Shifter, Chamber of Commerce Building, Boston.
- '96.—George Tsuda, Editor of *The Japan Agriculturist*, Azabu, Tokyo, Japan.
- '96.—S. W. Fletcher won, over fifteen applicants, a Fellowship in Horticulture at Cornell University. He will begin his studies in fall.
- '94.—C. F. Walker, who will receive the degree of Ph. D. from Yale University the coming Commencement, has been appointed Assistant in Chemistry in the Academic Department of Yale. Address, after October 1, Kent Chemical Laboratory, New Haven, Conn.







